Rittal – The System.

Faster – better – worldwide.

Catalogue 33
Edition 2011 / 2012

Rittal. Power and Vision!

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

FRIEDHELM LOH GROUP

Enclosures from page 23

Small enclosures ... 27
Compact enclosures ... 43
Wall-mounted network enclosures ... 55
Enclosure systems ... 71
Floor-standing network enclosures ... 101
Server enclosures ... 113
Console systems/PC enclosure systems ... 119
Operating housings/support arm systems/stand systems ... 135
Hygienic Design ... 175
Stainless steel ... 181
Ex enclosures/EMC ... 197
Outdoor enclosures ... 203
Electronic packaging ... 211

Power distribution from page 265

Busbar systems ... 269
Ri4Power Form 1-4 ... 327
Ri4Power ISV distribution enclosures ... 361
Power ... 371

System climate control from page 389

Cooling with ambient air ... 393
Cooling units ... 413
Liquid cooling ... 433
Liquid cooling IT ... 453
CS Outdoor climate control ... 467
Accessories for climate control ... 473

IT infrastructure from page 489

Floor-standing network enclosures ... 55/101
Server enclosures ... 113
Power ... 371
Cooling ... 453
Monitoring ... 767
Security solutions ... 503

Software & services from page 515

Software ... 519
Service ... 531
Quality management ... 535

System acessories from page 537

Enclosures ... 539
Monitoring ... 767
Human/machine interface ... 789

List of model numbers ... 815
Index ... 830

Rittal – The System.

Faster – better – worldwide.

Dear Customer,

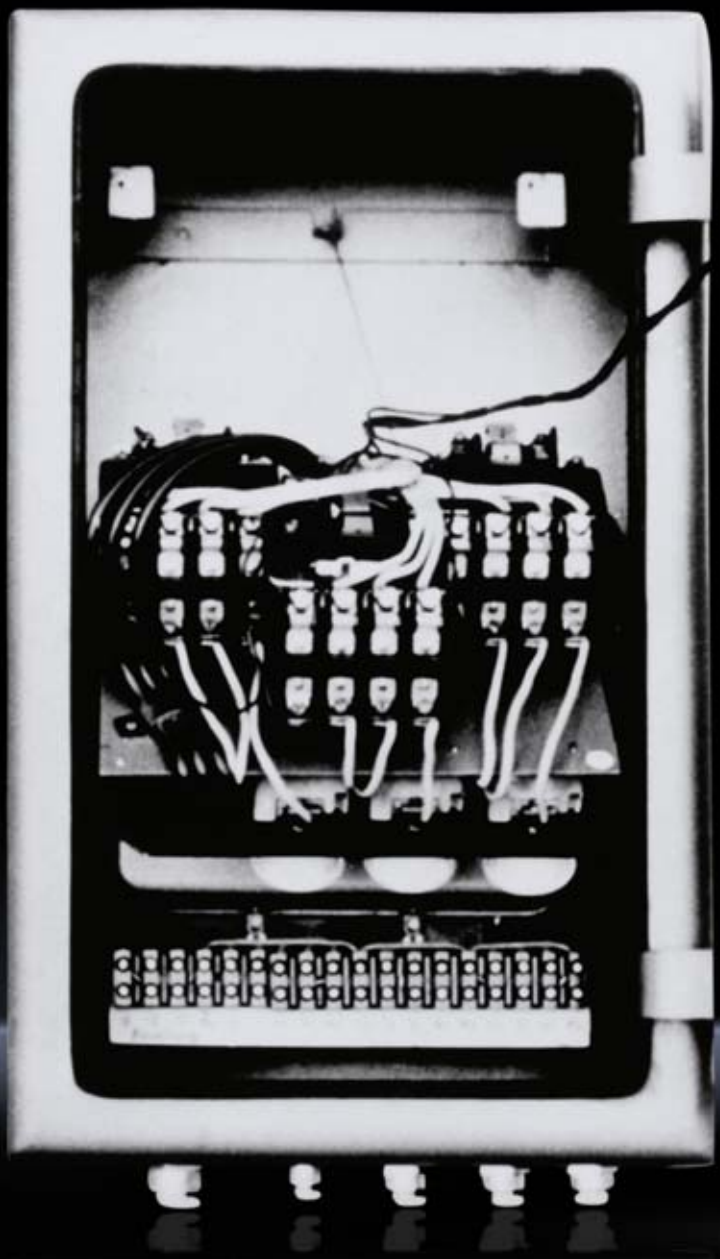
In 2011, Rittal can reflect on five very successful decades. For the past 50 years, we have been redefining the future, in every project. Together with our customers, we have developed an innovative, value-creating system with precise-fit solutions for almost every industry. The new Rittal Catalogue 33, 2011/2012 contains more than 800 pages of detailed information on “Rittal – The System.” Discover the many different facets of our unique range of solutions that is unrivalled anywhere else. Each day, “Rittal – The System”, with its coordinated modular system, facilitates innovative solutions with maximum cost efficiency for companies of all sizes. Embark on a voyage of discovery. The future – your success – starts right here.

Best wishes

Friedhelm Loh
Owner and CEO of the Friedhelm Loh Group

Rittal – The System.

Faster – better – worldwide.



1961

1961: Series production of the very first standard enclosure, AE, begins.

Setting standards.
For 50 years, and well into the future.

To have been setting standards for 50 years, you not only need a good idea, but also the strength and ambition to implement it consistently. Rittal had the idea of producing standardised enclosures for its customers. This idea became a reality in 1961 with the very first standard enclosure AE, laying the foundations for long-term success.
Today, Rittal are world market leaders. We do not see this as a reason to rest on our laurels, but rather as an incentive for future outstanding achievements: By permanently improving our products and services and constant, innovative collaboration with our customers.

Rittal – The System.

Faster – better – worldwide.

1969: Development of the modular series enclosure system RS.
1985: Presentation of the perfect enclosure system PS 4000. With more than 7.1 million units sold, it becomes a global standard.
1999: Perfecting of the global standard PS 4000 and extending it to infinite possibilities
with the Top enclosure system TS 8.

Perfect collaboration.
For 50 years, and well into the future.

We attach great value to direct contact with our customers, with qualified employees who listen attentively and understand your concerns. This is what enabled us to develop ground-breaking product series such as the modular series enclosure system RS at an early stage, in collaboration with our customers. This cooperation is based on our many years of expertise and the unstinting willingness of our employees to acquire forward-thinking knowledge and implement it in a professional fashion. Our customers are still the most important source of new products and services. We continue this dialogue enthusiastically throughout every phase of the process, from the initial idea, to development of a solution, through to the use of our products.

Rittal – The System.

Faster – better – worldwide.

1983: Development and production of enclosure cooling units
1992: Ground-breaking ProOzone initiative to develop the first CFC-free cooling units.
2002: Revolutionising enclosure climate control with cooling units in the TopTherm series with innovative air routing.
2010: Development of the TopTherm chiller as a new modular concept in machine and process cooling.

Always two steps ahead.
For 50 years, and well into the future.

Rittal always offers solutions that make its customers' business more efficient. One good example of this is the problem of heat generation in enclosures as a result of electronic components. Rittal has identified this problem and solved it by developing a wide range of climate control technologies. Highly efficient and versatile. With every innovation, we set new trends: With energy-saving cooling units with nano-technology, fan-and-filter units with innovative diagonal technology, modular recooling systems and modern software tools.

IT INFRASTRUCTURE | SOFTWARE & SERVICES

RITTAL

Rittal – The System.

Faster – better – worldwide.

1988

2000

1988: Start of enclosure production for network technology.
2000: Rittal IT racks with an extensive range of accessories for modern IT infrastructures.
2011: Modular, scalable system solution for complete data centres.

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

We are always there for you.
For 50 years, and well into the future.

For years, we have seen increasing convergence between the IT and industrial markets. Back in 1988, Rittal seized on this opportunity, and has since used its industrial expertise to tap into global IT markets with the production of enclosures for modern network technologies. First, our experience and competency from industry were transferred to the individual components for IT use. From this, Rittal has continuously developed an unbeatable system solution with perfectly coordinated products and processes. Today, not only can our customers rely on pioneering solutions for super-efficient and reliable data centres, IT environments and infrastructures, but also on our global presence and availability.

2011

IT INFRASTRUCTURE | SOFTWARE & SERVICES

RITTAL

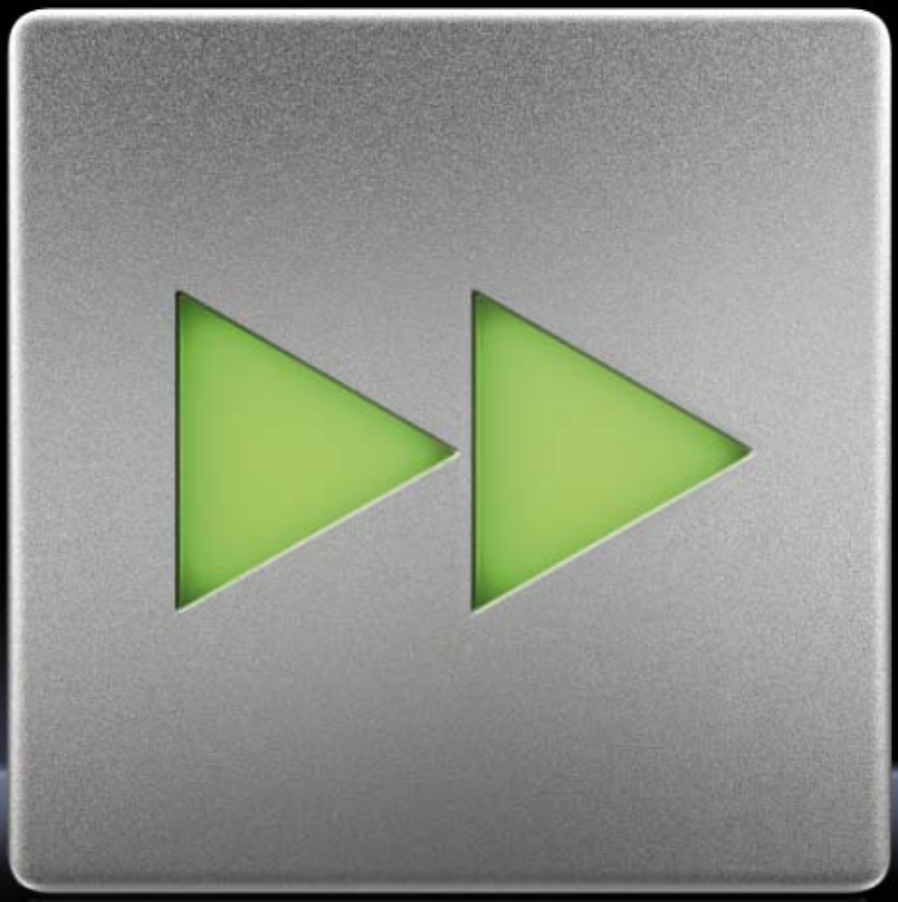
The future

begins today!

The fact that we are not content to look to the past, but instead are always looking to the future, has been pivotal to our success in recent decades. And the same goes for the next 50 years. For Rittal, the future starts afresh with every project. Be it the development of new materials, product improvements, process optimisations or investing in new production sites around the globe, everything we do is to your benefit and your advantage.

Rittal – The System.

Faster – better – worldwide.



2011

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

FRIEDHELM LOH GROUP

Faster.
For 50 years, and well into the future.

For Rittal, being faster is not an empty promise, but a claim that is practised throughout every area of the company, and that is linked to direct customer benefits:

- **Fast** development of innovations, with short paths and fast decision-making
- **Fast** tapping of new markets and industries
- **Fast,** problem-free use of all products worldwide, thanks to national and international approvals
- **Fast** individual solutions through direct product development in collaboration with customers
- **Faster** thanks to a perfect interplay between development, engineering, products and service
- **Faster** thanks to flexible project implementation with system solutions from a single source

Rittal – The System.

Faster – better – worldwide.

2011

Axia Award, Diesel Medal, Top Employer, Prize for Innovation – these are just a few examples of what other people think of Rittal!

Better.
For 50 years, and well into the future.

Many companies promise to be better. Rittal really is better. This isn't just an empty claim; it has been confirmed by independent experts and selection jury members. They bear witness to our outstanding innovations and corporate achievements with positive analyses and awards. Most important of all for us, however, is the confirmation we get from our customers. For 50 years, they have been placing their trust in us, and therefore play a large part in our current position as global market leaders.

The reasons for this are:

- **Better** with powerful innovative strength and the associated safeguarding of competitive advantages on the market
- **Better** thanks to certified quality in management, production and environmental protection
- **Better** thanks to rational production on state-of-the art, automated production lines
- **Better** through targeted solutions that are designed to make our customers' lives easier
- **Better** thanks to the verifiable energy efficiency of our products with tangible cost savings
- **Better** with outstanding education and training, and superbly trained staff

Rittal – The System.

Faster – better – worldwide.

2011

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

FRIEDHELM LOH GROUP

Worldwide.
For 50 years, and well into the future.

One major advantage that our customers really appreciate is our global presence. For more than 50 years we have been on hand to offer advice, assistance and products. Around the globe. We call this healthy customer relationships. It helps our customers to successfully tap into new markets. A dynamic status quo that we will be further expanding in future.

The cornerstones of our global availability:

- **Worldwide** thanks to outstanding logistics with 63 subsidiaries, 40 agencies, 100 warehouses with a total storage area of more than 160,000 m² worldwide
- **Worldwide** thanks to production sites on 3 continents, in 10 state-of-the-art plants with a total production area of more than 210.000 m²
- **Worldwide** thanks to global service with 5 global support points, more than 250 service partners and over 1,000 service engineers
- **Worldwide** thanks to international expertise with country-specific know-how and cross-regional approvals

Rittal – The System.

Faster – better – worldwide.

2011

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL

Dynamic success.
For 50 years, and well into the future.

Rittal – a global success for more than 50 years – is part of the dynamic Friedhelm Loh Group, which invests continuously in new technologies and markets. It specialises in the invention, development and production of customised products and system solutions. At the heart of its success is a lively and exemplary corporate culture which is wholly committed to ethical, social and environmental values with commercial responsibility.

The Friedhelm Loh Group includes the following specialists:

Rittal
The world's leading system suppliers of enclosures, power distribution, climate control, IT infrastructure and software & services

Eplan
Software for global engineering solutions

Mind8
Solution providers for products that are available in a large number of versions and which require intensive explanation

Stahlo
A modern steel service centre

Neef
Shaped sheet metal components and assemblies, particularly for the automotive industry

LKH
Processors of plastics in the hot pressing and injection moulding fields

Würz Energy
Combined heat and power (CHP) units

RITTAL

Enclosures

Small enclosures
Polycarbonate enclosure PK 28
Aluminium enclosures GA 32
Terminal boxes KL 34
E box EB 37
Bus enclosures BG 39

Compact enclosures
Compact enclosures AE 44
ISV wall-mounted distributors AE 47
Compact system enclosures CM 50
Plastic enclosures KS 52

Wall-mounted network enclosures
Wall-mounted enclosures 56

Enclosure systems
Baying systems TS 8 72
SV-TS 8 enclosures ISV 82
Ri4Power enclosures 84
System enclosure SE 8 98

Network distribution enclosures
Network enclosures TS 8 102
Network enclosures TE 7000 107
Distributor racks 110

Server enclosures
Server enclosures TS 8 114
Server enclosures TE 7000 117

Console systems/PC enclosure systems/IW
TopConsole system TP 122
One-piece consoles TP 128
Universal consoles TP 129
PC enclosure systems 130
Enclosure for tower PC 131
Industrial Workstations 132

Operating housings/support arm systems/ stand systems
Comfort Panel 138
Optipanel 140
Operating housings 142
Support arm systems 150
Stand systems 169

Hygienic Design
Small and compact enclosures HD 176

Stainless steel
Enclosure 182
Support arm system CP-S 190
Enclosure systems 192

Ex enclosures/EMC
Ex enclosures 198
EMC enclosures 200

Outdoor enclosures
Outdoor enclosures 204

Electronic Packaging
Subracks Ripac 212
System enclosures Ripac Vario-Module 252
Instrument cases RiCase 258

Competency in enclosure systems

As system providers, Rittal are the world's leading suppliers of innovative enclosure and case technology. Rittal meets very high standards of security, ergonomics, energy and cost efficiency.

Your benefits

Planning and engineering
- Software tools for targeted planning and project management
- Component library RiCAD 3D for efficient engineering

Products
- Modular enclosure and case technology
- Extensive Rittal system solutions for a high level of investment reliability and maximum flexibility
- Compatibility with all types of applications: Industrial, IT, power distribution and climate control.
- A comprehensive range of system accessories for individual installation and fast assembly

Service
- Contiguous global delivery and service network
- Comprehensive quality management
- Our own accredited laboratories for tests, trials and protection category verification
- Global spare parts service
- AE Laser-Express – Individual enclosures to order

Small enclosures

Polycarbonate enclosures PK

Polycarbonate enclosures PK 28
Polycarbonate enclosures PK, accessories 31

Cast aluminium enclosures GA

Cast aluminium enclosures GA 32
Cast aluminium enclosures GA, accessories 33

Terminal boxes KL

Terminal boxes KL 34

E box EB

E box EB 37

Bus enclosures BG

Bus enclosures BG 39

Polycarbonate enclosures PK

PK accessories Page 31 **System accessories** Page 537 **Polyamide cable gland** Page 709

Material:
– Housing of fibre-glass reinforced polyamide
– Cover either transparent (version .100) or grey (version .000), made from fibre-glass-reinforced polycarbonate
– Cover screws from polyamide
– Insulating bung from polyethylene
– All-round foamed-in PU seal

Colour:
RAL 7035

Protection category:
IP 66 to IEC 60 529

Supply includes:
– Enclosure with cover
– Cover screws
– Insulating bungs for wall mounting screws

Approvals:
– UL
– Bureau Veritas

Detailed drawings:
Available on the Internet.

Width mm			65	94	94	94	110	110	Page
Height mm			65	65	94	94	110	110	
Depth mm			57	57	57	81	66	90	
Model No. PK			**9500.000**	**9502.000**	**9504.000**	**9505.000**	**9506.000**	**9507.000**	
		Packs of	12	8	6	6	6	6	
Cover	Transparent		–	–	–	–	–	–	
	Grey		■	■	■	■	■	■	
Accessories									
Support rail TS 35/7.5	Installation in the width	12	–	–	9564.000	9564.000	9564.000	9564.000	31
	Installation in the height	12	–	–	9564.000	9564.000	9564.000	9564.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9580.000	9580.000	9580.000	9580.000	9580.000	9580.000	31

Width mm			130	130	130	130	130	130	Page
Height mm			94	94	94	94	130	130	
Depth mm			57	57	81	81	75	75	
Model No. PK			**9508.100**	**9508.000**	**9509.100**	**9509.000**	**9510.100**	**9510.000**	
		Packs of	4	4	4	4	4	4	
Cover	Transparent		■	–	■	–	■	–	
	Grey		–	■	–	■	–	■	
Accessories									
Mounting plate			–	–	–	–	9545.000	9545.000	31
		Packs of	–	–	–	–	10	10	
Support rail TS 35/7.5	Installation in the width	12	9565.000	9565.000	9565.000	9565.000	9565.000	9565.000	31
	Installation in the height	12	9564.000	9564.000	9564.000	9564.000	9565.000	9565.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9580.000	9580.000	9580.000	9580.000	9580.000	9580.000	31

Width mm			130	130	180	180	180	180	Page
Height mm			130	130	94	94	94	94	
Depth mm			99	99	57	57	81	81	
Model No. PK			**9511.100**	**9511.000**	**9512.100**	**9512.000**	**9513.100**	**9513.000**	
		Packs of	4	4	2	2	2	2	
Cover	Transparent		■	–	■	–	■	–	
	Grey		–	■	–	■	–	■	
Accessories									
Mounting plate			9545.000	9545.000	–	–	–	–	31
		Packs of	10	10	–	–	–	–	
Support rail TS 35/7.5	Installation in the width	12	9565.000	9565.000	9566.000	9566.000	9566.000	9566.000	31
	Installation in the height	12	9565.000	9565.000	9564.000	9564.000	9564.000	9564.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9580.000	9580.000	9580.000	9580.000	9580.000	9580.000	31

Width mm			180	180	180	180	180	180	Page
Height mm			110	110	110	110	110	110	
Depth mm			90	90	111	111	165	165	
Model No. PK			**9514.100**	**9514.000**	**9515.100**	**9515.000**	**9516.100**	**9516.000**	
		Packs of	2	2	2	2	2	2	
Cover	Transparent		■	–	■	–	■	■	
	Grey		–	■	–	■	–	–	
Accessories									
Mounting plate			9547.000	9547.000	9547.000	9547.000	9547.000	9547.000	31
		Packs of	10	10	10	10	10	10	
Support rail TS 35/7.5	Installation in the width	12	9566.000	9566.000	9566.000	9566.000	9566.000	9566.000	31
	Installation in the height	12	9564.000	9564.000	9564.000	9564.000	9564.000	9564.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	31

Width mm			182	182	182	182	182	182	254	254	Page
Height mm			180	180	180	180	180	180	180	180	
Depth mm			90	90	111	111	165	165	90	90	
Model No. PK			**9517.100**	**9517.000**	**9518.100**	**9518.000**	**9519.100**	**9519.000**	**9520.100**	**9520.000**	
		Packs of	1	1	1	1	1	1	1	1	
Cover	Transparent		■	–	■	–	■	–	■	–	
	Grey		–	■	–	■	–	■	–	■	
Accessories											
Mounting plate			9548.000	9548.000	9548.000	9548.000	9548.000	9548.000	9549.000	9549.000	31
		Packs of	10	10	10	10	10	10	8	8	
Support rail TS 35/7.5	Installation in the width	12	9566.000	9566.000	9566.000	9566.000	9566.000	9566.000	9567.000	9567.000	31
	Installation in the height	12	9566.000	9566.000	9566.000	9566.000	9566.000	9566.000	9566.000	9566.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	31

Width mm			254	254	254	254	360	360	360	360	Page
Height mm			180	180	180	180	254	254	254	254	
Depth mm			111	111	165	165	111	111	165	165	
Model No. PK			**9521.100**	**9521.000**	**9522.100**	**9522.000**	**9523.100**	**9523.000**	**9524.100**	**9524.000**	
		Packs of	1	1	1	1	1	1	1	1	
Cover	Transparent		■	–	■	–	■	–	■	–	
	Grey		–	■	–	■	–	■	–	■	
Accessories											
Mounting plate			9549.000	9549.000	9549.000	9549.000	9550.000	9550.000	9550.000	9550.000	31
		Packs of	8	8	8	8	4	4	4	4	
Support rail TS 35/7.5	Installation in the width	12	9567.000	9567.000	9567.000	9567.000	9568.000	9568.000	9568.000	9568.000	31
	Installation in the height	12	9566.000	9566.000	9566.000	9566.000	9567.000	9567.000	9567.000	9567.000	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	9583.000	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	9582.000	31
Hinges		10 sets	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	9581.000	31

Polycarbonate enclosures PK

PK accessories Page 31 **System acessories** Page 537 **Polyamide cable gland** Page 709

Material:
– Housing and cover of fibre-glass reinforced polyamide
– Cover screws from polyamide
– Insulating bung from poly-ethylene
– All-round foamed-in PU seal

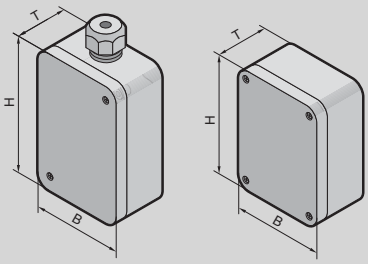
Colour:
RAL 7035

Protection category:
IP 66 to IEC 60 529

Supply includes:
– Enclosure with cover
– Cover screws
– Insulating bung for wall mounting screws (not with PK 9530.000 and PK 9531.000)

Approvals:
Bureau Veritas

Detailed drawings:
Available on the Internet.



Width (B) mm			65	130	180	254	50	50	Page
Height (H) mm			65	94	110	180	52	65	
Depth (T) mm			57	57	90	111	35	35	
Model No. PK			**9500.050**	**9508.050**	**9514.050**	**9521.050**	**9530.000**	**9531.000**	
		Packs of	12	4	2	1	10	10	
Cover	Transparent		–	–	–	–	–	–	
	Grey		■	■	■	■	■	■	
No. of metric knockouts	M16/20		4	10	–	–	–	–	
	M20		–	–	16	24	–	–	
	M20/25		–	–	2	–	–	–	
	M25/32		–	–	–	4	–	–	
	M32/40		–	–	2	4	–	–	
Cable gland for cable diameter 5 –10 mm			–	–	–	–	■	■	
Accessories									
Mounting plate			–	–	9547.000	9549.000	–	–	31
		Packs of	–	–	10	8	–	–	
Support rail TS 35/7.5	Installation in the width	12	–	9565.000	9566.000	9567.000	–	–	31
	Installation in the height	12	–	9564.000	9564.000	9566.000	–	–	31
Wall mounting brackets		40	9583.000	9583.000	9583.000	9583.000	–	–	31
Turn-lock fastener		100	9582.000	9582.000	9582.000	9582.000	–	–	31

Hole patterns for metric knockout available on the Internet.

Accessories

Mounting plate

For universal interior installation.

Material:
2.5 mm melamine phenol-coated laminated paper.

Colour:
RAL 7035

Supply includes:
– Mounting plate
– Self-tapping assembly screws

For enclosure	Width mm	Height mm	Packs of	Model No. PK
PK 9510.000/.100, PK 9511.000/.100	110	110	10	**9545.000**
PK 9514.000/.100, PK 9514.050, PK 9515.000/.100, PK 9516.000/.100	150	90	10	**9547.000**
PK 9517.000/.100, PK 9518.000/.100, PK 9519.000/.100	150	150	10	**9548.000**
PK 9520.000/.100, PK 9521.000/.100, PK 9521.050, PK 9522.000/.100	220	150	8	**9549.000**
PK 9523.000/.100, PK 9524.000/.100	331	220	4	**9550.000**

Support rail

The support rail section provides good flexibility for accommodating terminal blocks and installed components.

Supply includes:
– Support rails
– Self-tapping assembly screws

Rail	Rail length mm	Packs of	Model No. PK
TS 35/7.5	81	12	**9564.000**
	106	12	**9565.000**
	144	12	**9566.000**
	216	12	**9567.000**
	336	12	**9568.000**

Turn-lock fastener

A quick, convenient screw fastening aid is obtained by clipping into the head of the lid screw.

Material:
Polyamide

Colour:
Similar to RAL 7035

	Packs of	Model No. PK
For all enclosures	100	**9582.000**

Supply includes:
1 pack = 100 pieces

Hinges

For hinged attachment of covers.
The supplied drilling template ensures problem-free assembly.

Colour:
Similar to RAL 7035

Supply includes:
1 set =
2 hinges,
4 assembly screws,
4 polyethylene sealing bungs,
1 drilling template.

For enclosure	Material	Packs of	Model No. PK
PK 9500.000/.100 – PK 9513.000/.100	Polycarbonate	10 sets	**9580.000**
PK 9514.000/.100 – PK 9524.000/.100	Polystyrene	10 sets	**9581.000**

Wall mounting brackets

The enclosure can be screwed to the wall using four wall mounting brackets. The bracket is securely attached to the enclosure by means of pins.

Material:
Polyamide, grey

Colour:
Similar to RAL 7035

	Packs of	Model No. PK
For all enclosures	40	**9583.000**

Supply includes:
1 pack = 40 pieces

Cast aluminium enclosures GA

GA accessories Page 33 **System accessories** Page 537

Material:
– Enclosure: Cast aluminium
– Cover: Cast aluminium, all-round foamed-in PU seal

Surface finish:
Textured paint

Colour:
RAL 7001

Protection category:
IP 66 to IEC 60 529, complies with NEMA 4.

Supply includes:
– Enclosure with cover
– Cover screws, captive
– Screws for attaching support rails
– Screw for connection of the PE conductor

Detailed drawings:
Available on the Internet.

Width mm		50	58	98	150	75	125	175	250	122	Page
Height mm		45	64	64	64	80	80	80	80	120	
Depth mm		30	34	35	35	57	57	57	57	80	
Model No. GA		**9100.210**	**9101.210**	**9102.210**	**9103.210**	**9104.210**	**9105.210**	**9106.210**	**9107.210**	**9108.210**	
	Packs of	6	5	3	2	1	1	1	1	1	
Accessories											
Mounting plate		–	–	–	–	–	9105.700	–	–	9108.700	33
	Packs of	–	–	–	–	–	10	–	–	2	
Support rail TS 35, length 2 m		see page 655									
Wall mounting brackets	2	–	–	–	–	–	–	–	–	9121.122	33
Hinge, exterior	2	–	–	–	–	–	–	–	–	9123.000	33
Earth straps		see page 689									
Cable gland		see page 709									

Width mm		220	360	160	260	360	202	280	334	330	Page
Height mm		120	120	160	160	160	232	232	233	230	
Depth mm		91	82	91	91	91	111	111	111	181	
Model No. GA		**9110.210**	**9111.210**	**9112.210**	**9113.210**	**9114.210**	**9116.210**	**9117.210**	**9118.210**	**9119.210**	
	Packs of	1	1	1	1	1	1	1	1	1	
Accessories											
Mounting plate		9110.700	–	9112.700	9113.700	9114.700	9116.700	9117.700	9118.700	9118.700	33
	Packs of	2	–	2	2	1	1	1	1	1	
Support rail TS 35, length 2 m		see page 655									
Wall mounting brackets	2	9121.122	9121.122	9121.160	9121.160	9121.160	9121.230	9121.230	9121.230	9121.230	33
Hinge, exterior	2	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	9123.000	33
Earth straps		see page 689									
Cable gland		see page 709									

Accessories

Mounting plate

For universal interior installation, with mounting holes.

Material:
Sheet steel, zinc-plated

Exterior dimensions mm		For GA enclosures	Packs of	Model No. GA
Width	Height			
114	69	9105.210	10	**9105.700**
109	107	9108.210	2	**9108.700**
207	107	9110.210	2	**9110.700**
144	142	9112.210	2	**9112.700**
245	142	9113.210	2	**9113.700**
346	142	9114.210	1	**9114.700**
183	214	9116.210	1	**9116.700**
264	214	9117.210	1	**9117.700**
314	214	9118.210/9119.210	1	**9118.700**

Wall mounting bracket

For external mounting on surfaces – no need to dismantle the cover if pre-assembled.

Material:
Sheet steel, zinc-plated

For GA enclosures	Packs of	Model No. GA
9108.210/ 9110.210/ 9111.210	2	**9121.122**
9112.210/ 9113.210/ 9114.210	2	**9121.160**
9116.210/ 9117.210/ 9118.210/ 9119.210	2	**9121.230**

Hinge, exterior

For fastening the cover to the enclosure base.

Material:
Die-cast aluminium

Colour:
RAL 7001

For GA enclosures	Packs of	Model No. GA
9108.210/ 9110.210/ 9111.210/ 9112.210/ 9113.210/ 9114.210/ 9116.210/ 9117.210/ 9118.210/ 9119.210	2 + 8 screws	**9123.000**

Terminal boxes KL

System accessories Page 537 **KL stainless steel** Page 183 **KL for Ex areas** Page 198

Material:
– Enclosure: Sheet steel
– Cover: Sheet steel, all-round foamed-in PU seal

Surface finish:
Enclosure and cover: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:
RAL 7035

Protection category:
– Without gland plate: IP 66 to IEC 60 529, complies with NEMA 4
– With gland plate: IP 55 to IEC 60 529, complies with NEMA 12

Supply includes:
– Enclosure with cover
– Quick-action screw including plastic bushes
– For enclosures with gland plate plus sheet steel gland plates with seals and assembly parts

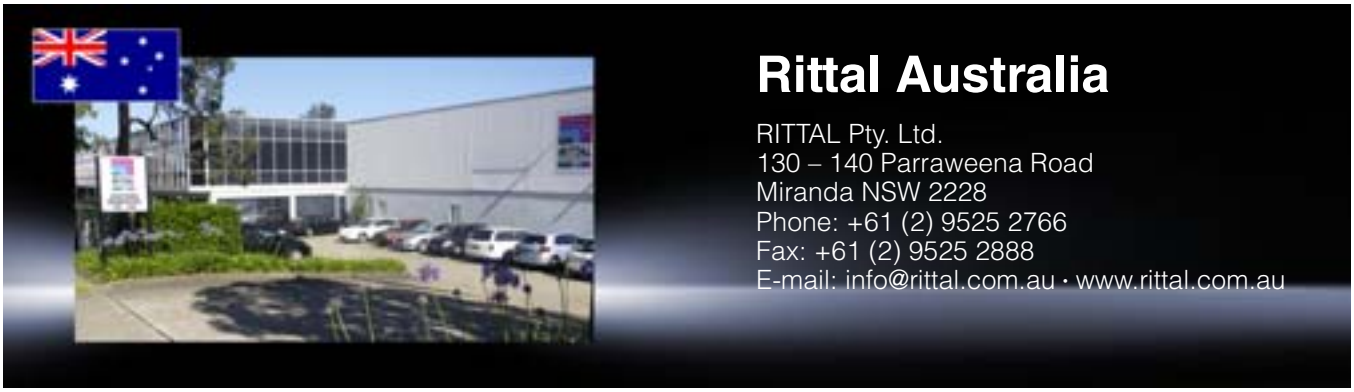
Approvals
– UL
– CSA
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– Bureau Veritas
– VDE

Detailed drawings:
Available on the Internet.

Width mm		Packs of	150	200	200	300	300	400	600	Page
Height mm			150	150	200	150	200	200	200	
Depth mm			80	80	80	80	80	80	80	
Material thickness mm	Enclosure		1.25	1.25	1.25	1.25	1.25	1.25	1.25	
	Cover		1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. KL		1	**1514.510**	**1528.510**	**1516.510**	**1515.510**	**1517.510**	**1518.510**	**1519.510**	
Weight (kg)			1.4	1.6	1.9	2.1	2.6	3.2	4.6	
Gland plate			–	–	–	–	–	–	–	
Accessories										
Mounting plate		1	1560.700	1575.700	1562.700	1561.700	1563.700	1564.700	1566.700	631
Support rail TS 35/7.5		10	2314.000	2315.000	2315.000	2316.000	2316.000	2317.000	–	655
Support rail TS 35/15		10	–	–	–	–	–	–	2319.000	655
Cover retainer		3 pairs	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	613
Cover hinge		6	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	613
Earthing set		5	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	691
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Spare quick-release fastener for KL		12	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	–

Width mm		Packs of	150	200	200	300	300	300	300	300	Page
Height mm			150	150	200	150	150	200	200	300	
Depth mm			120	120	120	120	120	120	120	120	
Material thickness mm	Enclosure		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.38	
	Cover		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. KL		1	**1500.510**	**1529.510**	**1502.510**	**1501.510**	**1530.510**	**1503.510**	**1531.510**	**1507.510**	
Gland plate			–	–	–	–	■	–	■	–	
Weight (kg)			1.6	1.8	2.3	2.6	2.7	3.0	3.3	4.0	
Accessories											
Gland plate (top + bottom)	Size		–	–	–	–	2	–	2	–	
	Qty.		–	–	–	–	1 + 1	–	1 + 1	–	
Gland plate (left + right)	Size		–	–	–	–	–	–	–	–	
	Qty.		–	–	–	–	–	–	–	–	
Mounting plate		1	1560.700	1575.700	1562.700	1561.700	1561.700	1563.700	1563.700	1567.700	631
Support rail TS 35/7.5		10	2314.000	2315.000	2315.000	2316.000	2316.000	2316.000	2316.000	2316.000	655
Cover retainer		3 pairs	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	613
Cover hinge		6	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	613
Earthing set		5	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	691
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Spare quick-release fastener for KL		12	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	–

Width mm		Packs of	300	400	400	400	400	400	400	400	Page
Height mm			300	150	200	200	300	300	400	400	
Depth mm			120	120	120	120	120	120	120	120	
Material thickness mm	Enclosure		1.38	1.25	1.25	1.25	1.38	1.38	1.38	1.38	
	Cover		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. KL		1	**1535.510**	**1589.510**	**1504.510**	**1532.510**	**1508.510**	**1536.510**	**1511.510**	**1539.510**	
Gland plate			■	–	–	■	–	■	–	■	
Weight (kg)			4.5	3.2	3.6	4.0	4.8	5.2	6.2	6.7	
Accessories											
Gland plate (top + bottom)	Size		2	–	–	2	–	2	–	2	From 704
	Qty.		1 + 1	–	–	1 + 1	–	1 + 1	–	1 + 1	
Gland plate (left + right)	Size		2	–	–	–	–	2	–	2	From 704
	Qty.		1 + 1	–	–	–	–	1 + 1	–	1 + 1	
Mounting plate		1	1567.700	1576.700	1564.700	1564.700	1568.700	1568.700	1571.700	1571.700	631
Support rail TS 35/7.5		10	2316.000	2317.000	2317.000	2317.000	2317.000	2317.000	2317.000	2317.000	655
Cover retainer		3 pairs	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	613
Cover hinge		6	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	613
Earthing set		5	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	691
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Spare quick-release fastener for KL		12	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	–



Terminal boxes KL

Width mm		Packs of	500	500	500	500	600	600	600	Page
Height mm			200	200	300	300	200	200	300	
Depth mm			120	120	120	120	120	120	120	
Material thickness mm	Enclosure		1.25	1.25	1.38	1.38	1.25	1.25	1.38	
	Cover		1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. KL		1	**1505.510**	**1533.510**	**1509.510**	**1537.510**	**1506.510**	**1534.510**	**1510.510**	
Gland plate			–	■	–	■	–	■	–	
Weight (kg)			4.4	4.9	5.8	5.2	5.7	5.9	6.8	
Accessories										
Gland plate (top + bottom)	Size		–	2	–	2	–	2	–	From 704
	Qty.		–	2 + 2	–	2 + 2	–	2 + 2	–	
Gland plate (left + right)	Size		–	–	–	2	–	–	–	From 704
	Qty.		–	–	–	1 + 1	–	–	–	
Mounting plate		1	1565.700	1565.700	1569.700	1569.700	1566.700	1566.700	1570.700	631
Support rail TS 35/15		10	2318.000	2318.000	2318.000	2318.000	2319.000	2319.000	2319.000	655
Cover retainer		3 pairs	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	613
Cover hinge		6	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	613
Earthing set		5	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	691
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Spare quick-release fastener for KL		12	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	–

Width mm		Packs of	600	600	600	800	800	800	800	Page
Height mm			300	400	400	200	200	400	400	
Depth mm			120	120	120	120	120	120	120	
Material thickness mm	Enclosure		1.38	1.38	1.38	1.25	1.25	1.38	1.38	
	Cover		1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. KL		1	**1538.510**	**1512.510**	**1540.510**	**1527.510**	**1542.510**	**1513.510**	**1541.510**	
Gland plate			■	–	■	–	■	–	■	
Weight (kg)			7.7	8.4	9.0	6.8	7.2	11.0	12.0	
Accessories										
Gland plate (top + bottom)	Size		2	–	2	–	2	–	2	From 704
	Qty.		2 + 2	–	2 + 2	–	3 + 3	–	3 + 3	
Gland plate (left + right)	Size		2	–	2	–	–	–	2	From 704
	Qty.		1 + 1	–	1 + 1	–	–	–	1 + 1	
Mounting plate		1	1570.700	1572.700	1572.700	1574.700	1574.700	1573.700	1573.700	631
Support rail TS 35/15		10	2319.000	2319.000	2319.000	–	–	–	–	655
Cover retainer		3 pairs	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	1591.000	613
Cover hinge		6	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	1592.000	613
Earthing set		5	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	2570.100	691
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Spare quick-release fastener for KL		12	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	1593.000	–

E box EB

System accessories Page 537 **E box EMC-shielded** Page 201

Material:
– Enclosure: Sheet steel
– Door: Sheet steel, all-round foamed-in PU seal

Surface finish:
– Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
– Mounting plate: Zinc-plated

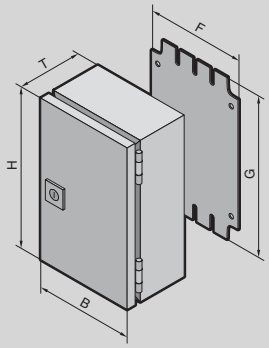
Colour:
RAL 7035

Protection category:
IP 66 to IEC 60 529, complies with NEMA 4

Supply includes:
– Enclosure with hinged door
– 180° hinge
– Cam lock with double-bit insert
– Mounting plate

Approvals:
– UL
– CSA
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– Bureau Veritas
– VDE

Detailed drawings:
Available on the Internet.



Depth 80 mm

Width (B) mm		Packs of	150	150	200	200	200	Page
Height (H) mm			150	300	200	300	400	
Depth (T) mm			80	80	80	80	80	
Mounting plate width (F) mm			125	125	175	175	175	
Mounting plate height (G) mm			135	285	185	285	385	
Material thickness mm	Enclosure		1.25	1.25	1.25	1.25	1.25	
	Door		1.25	1.25	1.25	1.25	1.25	
Model No. EB		1	**1551.500**	**1545.500**	**1546.500**	**1552.500**	**1547.500**	
Weight (kg)			1.7	2.6	2.4	3.2	4.4	
Accessories								
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	627
Pole clamp		1 set	2584.000	2584.000	2584.000	2584.000	2584.000	629
Mounting clip		30	2309.000	2309.000	2309.000	2309.000	2309.000	655
Support rail TS 35, length 2 m		see page 655						
Cable gland		see page 709						
Earth straps		see page 689						
Alternative lock systems		see page 599						

E box EB

Depth 120 mm

Width (B) mm		Packs of	150	150	200	200	200	300	300	200	Page
Height (H) mm			150	300	200	300	400	300	400	500	
Depth (T) mm			120	120	120	120	120	120	120	120	
Mounting plate width (F) mm			125	125	175	175	175	275	275	175	
Mounting plate height (G) mm			135	285	185	285	385	285	385	485	
Material thickness mm	Enclosure		1.25	1.25	1.25	1.25	1.25	1.38	1.38	1.25	
	Door		1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	
Model No. EB		1	**1553.500**	**1548.500**	**1549.500**	**1554.500**	**1550.500**	**1555.500**	**1556.500**	**1557.500**	
Weight (kg)			2.0	3.0	2.8	3.6	5.0	5.0	6.4	6.2	
Accessories											
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	1590.000	627
Pole clamp		1 set	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Mounting clip		30	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	2309.000	655
Support rail TS 35, length 2 m		see page 655									
Cable gland		see page 709									
Earth straps		see page 689									
Alternative lock systems		see page 599									

Depth 155 mm

Width (B) mm		Packs of	300	300	300	Page
Height (H) mm			400	600	800	
Depth (T) mm			155	155	155	
Mounting plate width (F) mm			275	275	275	
Mounting plate height (G) mm			385	585	785	
Material thickness mm	Enclosure		1.38	1.38	1.38	
	Door		1.25	1.25	1.25	
Model No. EB		1	**1577.500**	**1578.500**	**1579.500**	
Weight (kg)			7.1	11.0	13.2	
Accessories						
Wall mounting bracket with 8 mm distance from wall		4	1590.000	1590.000	1590.000	627
Pole clamp		1 set	2584.000	2584.000	2584.000	629
Mounting clip		30	2309.000	2309.000	2309.000	655
Support rail TS 35, length 2 m		see page 655				
Cable gland		see page 709				
Earth straps		see page 689				
Alternative lock systems		see page 599				

System accessories Page 537

Material:
– Enclosure: Sheet steel
– Door: Sheet steel with polycarbonate viewing window, 4 mm

Surface finish:
Enclosure and door: Dipcoat-primed, powder-coated, textured paint

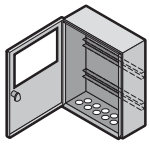
Colour:
RAL 7035

Protection category:
IP 65 to IEC 60 529, complies with NEMA 12.

Supply includes:
– Enclosure with door
– Viewing window in the door
– Product-specific supply scope, see tables

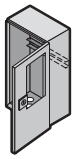
Approvals:
– TÜV
– Lloyds Register of Shipping
– VDE
– UL
– cUL

Detailed drawings:
Available on the Internet.

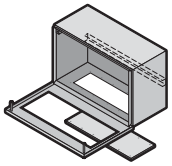


Width mm		Packs of	200	300	400	500	Page
Height mm			300	300	300	300	
Depth mm			80	80	80	80	
Model No. BG		1	**1583.520**	**1584.520**	**1585.520**	**1586.520**	
Material thickness mm	Enclosure		1.25	1.25	1.25	1.25	
	Door		1.25	1.25	1.25	1.25	
Product-specific supply scope							
Door hinge			Left	Left	Left	Left	
Cam lock with double-bit insert			1	1	1	1	
Support rail TS 35/7.5			2	2	2	2	
Number of metric holes	M12		2	2	2	3	
	M20		5	9	13	24	
	M25		2	2	3	–	
Accessories							
Lock cover		1	2476.000	2476.000	2476.000	2476.000	611
Cable glands		see page 709					
Wall mounting bracket		see page 627					
Pole clamp		see page 629					
Earth straps		see page 689					
Alternative lock systems		see page 599					

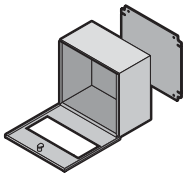
Bus enclosures BG



Width mm		Packs of	200	400	Page
Height mm			300	300	
Depth mm			120	120	
Model No. BG		1	**1605.520**	**1606.520**	
Material thickness mm	Enclosure		1.25	1.38	
	Door		1.25	1.25	
Product-specific supply scope					
Door hinge			Right	Right	
Cam lock with double-bit insert			1	1	
Support rail TS 35/7.5			1	1	
Number of metric holes	M12		2	–	
	M20		–	2	
	M32		5	9	
	M50		–	1	
Accessories					
Lock cover		1	2476.000	2476.000	611
Cable glands		see page 709			
Wall mounting bracket		see page 627			
Pole clamp		see page 629			
Earth straps		see page 689			
Alternative lock systems		see page 599			

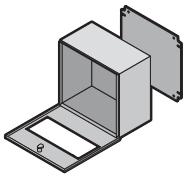


Width mm		Packs of	400	600	Page
Height mm			200	200	
Depth mm			125	125	
Model No. BG		1	**1558.510**	**1559.510**	
Material thickness mm	Enclosure		1.25	1.25	
	Door		1.25	1.25	
Product-specific supply scope					
Door hinge			Bottom	Bottom	
Quick-release fastener			2	3	
Support rail TS 35/7.5			1	1	
Gland plate in base			1	1	
Accessories					
Cable glands		see page 709			
Wall mounting bracket		see page 627			
Pole clamp		see page 629			
Earth straps		see page 689			
Alternative lock systems		see page 599			



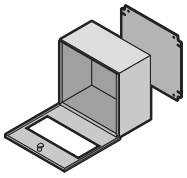
Width mm		Packs of	400	400	400	400	400	400	Page
Height mm			300	300	300	300	300	300	
Depth mm			155	155	155	155	155	155	
Mounting plate width			385	385	385	385	385	385	
Mounting plate height			275	275	275	275	275	275	
Model No. BG		1	**1577.500**	**1577.520**[1)]	**1577.530**[1)]	**1577.550**[1)]	**1577.560**[1)]	**1577.450**[1)]	
Material thickness mm	Enclosure		1.38	1.38	1.38	1.38	1.38	1.38	
	Door		1.25	1.25	1.25	1.25	1.25	1.25	
Product-specific supply scope									
Door hinge			Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	
Cam lock with double-bit insert			1	1	1	1	1	1	
Viewing window	Size mm		–	340 x 115	340 x 190	340 x 115	340 x 190	340 x 155	
	Position[2)] mm		–	92	42	92	42	92	
Mounting plate			1	1	1	1	1	1	
Gland plate in base			–	–	–	1	1	–	
Accessories									
Lock cover		1	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	611
Cable glands		see page 709							
Wall mounting bracket		see page 627							
Pole clamp		see page 629							
Earth straps		see page 689							
Alternative lock systems		see page 599							

[1)] Extended delivery times.
[2)] Bottom edge of window to bottom edge of door



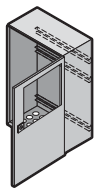
		Packs of							
Width mm			600	600	600	600	600	600	Page
Height mm			300	300	300	300	300	300	
Depth mm			155	155	155	155	155	155	
Mounting plate width			585	585	585	585	585	585	
Mounting plate height			275	275	275	275	275	275	
Model No. BG		1	**1578.500**	**1578.520**[1)]	**1578.530**[1)]	**1578.550**[1)]	**1578.560**[1)]	**1578.450**[1)]	
Material thickness mm	Enclosure		1.38	1.38	1.38	1.38	1.38	1.38	
	Door		1.25	1.25	1.25	1.25	1.25	1.25	
Product-specific supply scope									
Door hinge			Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	
Cam lock with double-bit insert			2	2	2	2	2	2	
Viewing window	Size mm		–	540 x 115	540 x 190	540 x 115	540 x 190	540 x 155	
	Position[2)] mm		–	92	42	92	42	92	
Mounting plate			1	1	1	1	1	1	
Gland plate in base			–	–	–	1	1	–	
Accessories									
Lock cover		1	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	611
Cable glands			see page 709						
Wall mounting bracket			see page 627						
Pole clamp			see page 629						
Earth straps			see page 689						
Alternative lock systems			see page 599						

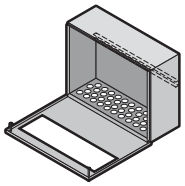
[1)] Extended delivery times. [2)] Bottom edge of window to bottom edge of door



		Packs of							
Width mm			800	800	800	800	800	800	Page
Height mm			300	300	300	300	300	300	
Depth mm			155	155	155	155	155	155	
Mounting plate width			785	785	785	785	785	785	
Mounting plate height			275	275	275	275	275	275	
Model No. BG		1	**1579.500**	**1579.520**[1)]	**1579.530**[1)]	**1579.550**[1)]	**1579.560**[1)]	**1579.450**[1)]	
Material thickness mm	Enclosure		1.38	1.38	1.38	1.38	1.38	1.38	
	Door		1.25	1.25	1.25	1.25	1.25	1.25	
Product-specific supply scope									
Door hinge			Bottom	Bottom	Bottom	Bottom	Bottom	Bottom	
Cam lock with double-bit insert			2	2	2	2	2	2	
Viewing window	Size mm		–	740 x 115	740 x 190	740 x 115	740 x 190	740 x 155	
	Position[2)] mm		–	92	42	92	42	92	
Mounting plate			1	1	1	1	1	1	
Gland plate in base			–	–	–	1	1	–	
Accessories									
Lock cover		1	2476.000	2476.000	2476.000	2476.000	2476.000	2476.000	611
Cable glands			see page 709						
Wall mounting bracket			see page 627						
Pole clamp			see page 629						
Earth straps			see page 689						
Alternative lock systems			see page 599						

[1)] Extended delivery times. [2)] Bottom edge of window to bottom edge of door





		Packs of			Page
Width mm			400	500	
Height mm			500	300	
Depth mm			160	120	
Model No. BG		1	**1611.510**	**1609.510**	
Material thickness mm	Enclosure		1.38	1.38	
	Door		1.5	1.25	
Product-specific supply scope					
Door hinge			Right	Bottom	
Cam lock with double-bit insert			1	–	
Quick-release fastener			–	2	
Support rail TS 35/7.5			3	1	
Number of drilled holes for PG 13.5 or M20			33	48	
Accessories					
Lock cover		1	2476.000	–	611
Cable glands			see page 709		
Wall mounting bracket			see page 627		
Pole clamp			see page 629		
Earth straps			see page 689		
Alternative lock systems			see page 599		

Compact enclosures

Compact enclosures AE

Compact enclosures AE....44
Compact enclosures AE, ISV wall-mounted distributor....47
Compact enclosures AE, protection category IP 69K....48

Compact system enclosures CM

Width: 600 – 800, height: 800 – 1200 mm....50
Width: 1000 – 1200, height: 1000 – 1400 mm....51

Plastic enclosures KS

Plastic enclosures KS....52

Compact enclosures AE

System accessories Page 537 **AE stainless steel** Page 184 **AE IP 69K** Page 187 **AE EMC-shielded** Page 201 **Hygienic Design** Page 176

Material:
– Enclosure: Sheet steel
– Door: Sheet steel, all-round foamed-in PU seal

Surface finish:
– Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
– Mounting plate: Zinc-plated

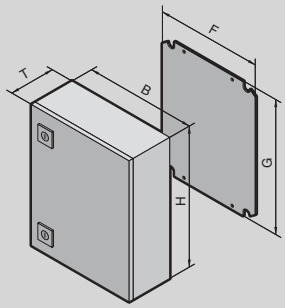
Colour:
RAL 7035

Protection category:
See tables.

Supply includes:
– Enclosure with hinged door(s), of all-round solid construction
– Gland plate(s) in enclosure base
– For single-door enclosures, door hinged on right, may be swapped to left (except with AE 1032.500 and AE 1035.500)
– With cam lock or 3-point lock system
– Mounting plate

Approvals:
– UL
– CSA
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– Bureau Veritas
– VDE

Detailed drawings:
Available on the Internet.



Width (B) mm		Packs of	200	200	300	300	300	380	380	380	Page
Height (H) mm			300	300	300	300	400	300	300	380	
Depth (T) mm			120	155	155	210	210	155	210	210	
Mounting plate width (F) mm			162	162	254	254	254	334	334	334	
Mounting plate height (G) mm			275	275	275	275	375	275	275	355	
Material thickness mm	Enclosure		1.25	1.25	1.38	1.38	1.38	1.38	1.38	1.38	
	Door		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Mounting plate thickness mm			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Cam lock			1	1	1	1	1	1	1	1	
Model No. AE		1	**1032.500**	**1035.500**	**1036.500**	**1033.500**	**1034.500**	**1030.500**	**1031.500**	**1380.500**	
Weight (kg)			4.0	4.5	6.1	7.0	8.8	7.4	7.5	9.8	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4.									
Accessories											
Gland plate	Size		1	1	–	–	–	3	3	3	From 704
	Qty.		1	1	1	1	1	1	1	1	
Rails for interior installation		4	–	–	–	2373.210	2373.210	–	2373.210	2373.210	647
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	627
Baying kit		1 set	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	582
Door stay		5	–	–	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	617
180° hinges		2	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	613
Rain canopies	Sheet steel	1	–	–	–	–	–	–	2501.500	2501.500	619
	Stainless steel	1	–	2470.000	–	2361.000	2361.000	2471.000	2472.000	2472.000	619
Earth straps		see page 689									
LED system light		see page 682									
Wiring plan pocket, plastic		see page 616									
Cable gland		see page 709									
Alternative lock systems		see page 599									

Width (B) mm		Packs of	380	380	400	400	500	500	500	Page
Height (H) mm			600	600	500	800	500	500	700	
Depth (T) mm			210	350	210	300	210	300	250	
Mounting plate width (F) mm			334	334	354	349	449	449	449	
Mounting plate height (G) mm			570	570	475	770	470	470	670	
Material thickness mm	Enclosure		1.38	1.5	1.38	1.5	1.38	1.5	1.5	
	Door		1.5	1.5	1.5	2.0	1.75	1.75	2.0	
Mounting plate thickness mm			2.5	2.5	2.0	3.0	2.5	2.5	2.5	
Cam lock			2	2	2	2	2	2	2	
Model No. AE		1	**1038.500**	**1338.500**	**1045.500**	**1037.500**	**1050.500**	**1350.500**	**1057.500**	
Weight (kg)			15.6	19.4	13.0	26.2	16.8	19.6	31.2	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4.								
Accessories										
Gland plate	Size		3	4	4	4	4	4	4	From 704
	Qty.		1	1	1	1	1	1	1	
Rails for interior installation		4	2373.210	2373.350	2373.210	2373.300	2373.210	2373.300	2373.250	647
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	627
Baying kit		1 set	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	582
Door stay		5	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	617
180° hinge		2	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	613
Door mounting bar		20	–	–	–	–	2325.000	2325.000	2325.000	614
Rain canopies	Sheet steel	1	2501.500	–	–	–	–	–	–	619
	Stainless steel	1	2472.000	–	–	–	2362.000	–	–	619
Earth straps		see page 689								
LED system light		see page 682								
Wiring plan pocket, plastic		see page 616								
Cable gland		see page 709								
Dust guard trim		see page 620								
Alternative lock systems		see page 599								

Width (B) mm		Packs of	600	600	600	600	600	600	600	600	600	Page
Height (H) mm			380	380	600	600	600	760	760	800	1000	
Depth (T) mm			210	350	210	250	350	210	350	250	250	
Mounting plate width (F) mm			549	549	549	549	549	549	549	549	539	
Mounting plate height (G) mm			355	355	570	570	570	730	730	770	955	
Material thickness mm	Enclosure		1.38	1.5	1.38	1.5	1.5	1.38	1.5	1.5	1.5	
	Door		1.5	1.5	1.75	1.75	1.75	2.0	2.0	2.0	2.0	
Mounting plate thickness mm			2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0	3.0	
Cam lock			1	1	2	2	2	2	2	2	2	
Model No. AE		1	**1039.500**	**1339.500**	**1060.500**	**1054.500**	**1360.500**	**1076.500**	**1376.500**	**1058.500**	**1090.500**	
Weight (kg)			15.4	20.0	22.8	24.8	28.4	32.1	36.0	33.6	50.5	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4.										
Accessories												
Gland plate	Size		5	5	5	5	5	5	5	5	5	From 704
	Qty.		1	1	1	1	1	1	1	1	1	
Rails for interior installation		4	2373.210	2373.350	2373.210	2373.250	2373.350	2373.210	2373.350	2373.250	2373.250	647
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	627
Baying kit		1 sets	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	1199.100	–	582
Door stay		5	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	617
180° hinge		2	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	613
Door mounting bar		20	2326.000	2326.000	2326.000	2326.000	2326.000	2326.000	2326.000	2326.000	2326.000	614
Rain canopies	Sheet steel	1	2502.500	2511.500	2502.500	–	2511.500	2502.500	2511.500	–	–	619
	Stainless steel	1	2473.000	–	2473.000	–	–	2473.000	–	–	–	619
Earth straps		see page 689										
LED system light		see page 682										
Wiring plan pocket, plastic		see page 616										
Cable gland		see page 709										
Dust guard trim		see page 620										
Alternative lock systems		see page 599										

Compact enclosures AE

Width (B) mm		Packs of	600	760	760	800	800	800	Page
Height (H) mm			1200	760	760	600	1000	1200	
Depth (T) mm			300	210	300	300	300	300	
Mounting plate width (F) mm			540	704	704	749	739	740	
Mounting plate height (G) mm			1155	730	730	570	955	1155	
Material thickness mm	Enclosure		1.5	1.5	1.5	1.5	1.5	1.5	
	Door		2.0	2.0	2.0	2.0	2.0	2.0	
Mounting plate thickness mm			3.0	3.0	3.0	2.5	3.0	3.0	
Cam lock			–	2	2	2	2	–	
3-point lock system			■	–	–	–	–	■	
Model No. AE		1	**1260.500**	**1077.500**	**1073.500**	**1055.500**	**1180.500**	**1280.500**	
Weight (kg)			55.0	40.0	44.5	33.9	57.0	70.0	
Protection category			IP 66 to IEC 60 529, complies with NEMA 4.						
Accessories									
Gland plate	Size		5	5	5	5	5	5	From 704
	Qty.		1	1	1	1	1	1	
Rails for interior installation		4	2373.300	2373.210	2373.300	2373.300	2373.300	2373.300	647
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	2508.100	2508.100	2508.100	627
Baying kit		1 set	–	1199.100	1199.100	1199.100	–	–	582
Door stay		5	2519.000	2519.000	2519.000	2519.000	2519.000	2519.000	617
180° hinge		2	2449.000	2449.000	2449.000	2449.000	2449.000	2449.000	613
Door mounting bar		20	2326.000	2327.000	2327.000	2328.000	2328.000	2328.000	614
Rain canopies, stainless steel		1	–	–	2474.000	2475.000	2475.000	2475.000	619
Base/plinth	Height 100 mm	1	2816.200	–	–	–	–	2818.200	551
	Height 200 mm	1	2826.200	–	–	–	–	2828.200	551
Eyebolts		4	2509.000	–	–	–	–	2509.000	626
Earth straps		see page 689							
LED system light		see page 682							
Wiring plan pocket, plastic		see page 616							
Cable gland		see page 709							
Dust guard trim		see page 620							
Alternative lock systems		see page 599							

Width (B) mm		Packs of	1000	1000	1000	1000	1000	Page
Height (H) mm			760	760	1000	1200	1400	
Depth (T) mm			210	300	300	300	300	
Mounting plate width (F) mm			944	944	939	940	940	
Mounting plate height (G) mm			730	730	955	1155	1355	
Material thickness mm	Enclosure		1.5	1.5	1.5	1.5	1.5	
	Door		2.0	2.0	2.0	2.0	2.0	
Mounting plate thickness mm			3.0	3.0	3.0	3.0	3.0	
Cam lock			2	2	2	–	–	
3-point lock system			–	–	–	■	■	
Model No. AE		1	**1100.500**	**1130.500**	**1110.500**	**1213.500**	**1114.500**	
Door(s)			2	2	2	2	2	
Weight (kg)			52.0	56.0	71.0	85.0	97.0	
Protection category			IP 55 to IEC 60 529, complies with NEMA 12.					
Accessories								
Gland plate	Size		4	4	4	4	4	From 704
	Qty.		2	2	2	2	2	
Rails for interior installation		4	2373.210	2373.300	2373.300	2373.300	2373.300	647
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	2508.100	2508.100	627
Baying kit		1 set	1199.100	1199.100	–	–	–	582
Door stay		5	2519.000	2519.000	2519.000	2519.000	2519.000	617
180° hinge		2	2449.000	2449.000	2449.000	2449.000	2449.000	613
Door mounting bar		20	2325.000	2325.000	2325.000	2325.000	2325.000	614
Rain canopies, stainless steel		1	–	2363.000	2363.000	2363.000	2363.000	619
Base/plinth	Height 100 mm	1	–	2801.200	2801.200	2801.200	2801.200	551
	Height 200 mm	1	–	2802.200	2802.200	2802.200	2802.200	551
Eyebolts		4	–	–	–	2509.000	2509.000	626
Earth straps		see page 689						
LED system light		see page 682						
Plastic wiring plan pocket		see page 616						
Alternative lock systems		see page 599						

ISV assembly modules Page 362 **ISV accessories** Page 369 **System accessories** Page 537

Suitable for wall mounting (surface mounting). Prepared for the direct installation of ISV assembly modules.

Material:
– Enclosure: Sheet steel
– Door: Sheet steel, all-round foamed-in PU seal

Surface finish:
– Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
– Support plate: Zinc-plated
– Contact hazard protection frame: Textured paint

Colour:
RAL 7035

Protection category:
See table.

Supply includes:
– Stainless steel without gland plate
– R/h door hinge, may be swapped to opposite side (except with SV 9665.855)
– Support plate to accommodate the ISV modules

Note:
Please note the mounting depths of the various enclosure designs when selecting modules.

Detailed drawings:
Available on the Internet.

ISV wall-mounted distributor

Width mm		Packs of	380	500	600	600	600	1000	Page
Height mm			600	700	760	1000	1200	1200	
Depth mm			210	250	210	250	300	300	
Width unit (WU)[1]			1	1	2	2	2	3	
Height unit (U)[2]			3	4	4	6	7	7	
Max. pitch units			36	48	96	144	168	252	
Cam lock			2	2	2	2	–	–	
3-point lock system			–	–	–	–	■	■	
Model No. SV		1	**9665.805**	**9665.815**	**9665.825**	**9665.835**	**9665.845**	**9665.855**	
Technical specifications correspond to Model No. AE			1038.500	1057.500	1076.500	1090.500	1260.500	1213.500	45/46
Door(s)			1	1	1	1	1	2	
Protection category[3]			IP 66	IP 66	IP 66	IP 66	IP 66	IP 55	
Also required									
Gland plates	Plastic		2561.010	2562.010	2563.010	2563.010	2563.010	2562.010	704
	Plastic membrane		2561.500	2562.500	2563.500	2563.500	2563.500	2562.500	705
	Metal		2561.100	2562.100	2563.100	2563.100	2563.100	2562.100	706
	Qty.		1	1	1	1	1	2	
Accessories									
Self-tapping screws		300	–	–	–	–	2487.000	2487.000	666
Base/plinth	Height 100 mm	1	–	–	–	–	2816.200	2801.200	551
	Height 200 mm	1	–	–	–	–	2826.200	2802.200	551
Eyebolts		4	–	–	–	–	2509.000	2509.000	626
Rain canopies	Sheet steel	1	2501.500	–	2502.500	–	–	–	619
	Stainless steel	1	2472.000	–	2473.000	–	–	2363.000	619
Alternative lock systems		see page 599							

[1] 1 WU ≙ 250 mm [2] 1 U ≙ 150 mm
[3] Max. protection category with closed door depends on the cable gland plate and cable entry used.

Compact enclosures AE

System accessories Page 537 **AE stainless steel** Page 184 **AE EMC-shielded** Page 201 **AE for potentially explosive areas** Page 198 **Hygienic Design** Page 176

Perfect protection in a tough environment
The compact enclosure AE in IP 69K is the ideal solution when a high protection category and corrosion resistance are needed.

- Resistant to high-pressure cleaning (protection category IP 69K). The interior seal is protected against direct hosed water.
- Ideal for mounting on vehicles: Lock, hinges and mounting plate are all vibration resistant.
- The enclosure and door have an aluminium zinc coating for a high level of corrosion protection.
- Foamed-in silicone seal, water-impermeable, with high resistance to temperature and chemicals.
- Prepared to accommodate the door stay AE 1101.800 and the interior door.
- Prepared for wall-mounting via M8 nuts directly from the rear.

Material:
– Enclosure: Sheet steel
– Door: Sheet steel, all-round foamed-in silicone seal

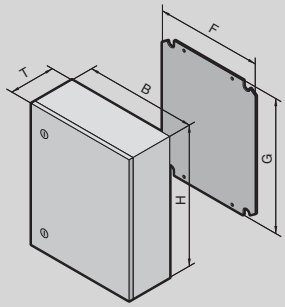
Surface finish:
– Enclosure and door: Aluminium zinc coating, powder-coated, textured paint
– Mounting plate: Zinc-plated

Colour:
RAL 7035

Protection category:
IP 69K to DIN 40 050-9

Supply includes:
– Enclosure with hinged door, of all-round solid construction
– Door hinge may be swapped to opposite side by rotating the enclosure
– Cam lock with double-bit insert

Detailed drawings:
Available on the Internet.



Protection category IP 69K

Width (B) mm	Packs of	230	400	400	650	Page
Height (H) mm		330	400	650	650	
Depth (T) mm		155	250	250	250	
Mounting plate width (F) mm		162	334	334	549	
Mounting plate height (G) mm		275	355	570	570	
Mounting plate thickness mm		2	2	2.5	2.5	
Model No. AE	1	**1101.010**	**1101.020**	**1101.030**	**1101.040**	
Weight (kg)		6.6	13.8	20	29.6	
Locks		1	1	2	2	
Accessories						
Interior door	1	1101.910	1101.920	1101.930	1101.940	588
Door stay	1	1101.800	1101.800	1101.800	1101.800	617
Wall mounting bracket	see page 627					
Cable gland	see page 709					
Earth straps	see page 689					
Support rail TS 35, length 2 m	see page 655					

Compact system enclosures Rittal CM

System accessories Page 537 **System lights** Page 679 **Cable duct** Page 716 **Climate control** Page 389

Material:
- Enclosure: Sheet steel, 1.5 mm
- Door: Sheet steel, 2.0 mm, All-round foamed-in PU seal
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:
RAL 7035

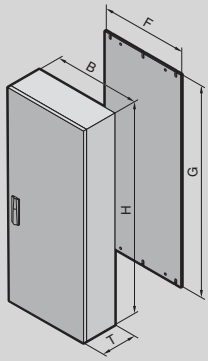
Protection category:
IP 55 to IEC 60 529, complies with NEMA 12 provided suitable gland plates are selected.

Supply includes:
- Enclosure with hinged door(s)
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- 3-point lock
- Mounting plate
- Open base for individual cable entry

Also required:
- Gland plates, see page 560 – 562
- Or trim panel, see page 563

Approvals:
- UL
- CSA
- TÜV
- Lloyds Register of Shipping

Detailed drawings:
Available on the Internet.



Width: 600 – 800, height: 800 – 1200 mm

Width (B) mm		Packs of	600	600	600	600	800	800	800	800	Page
Height (H) mm			800	1000	1200	1200	1000	1000	1200	1200	
Depth (T) mm			400	400	300	400	300	400	300	400	
Mounting plate width (F) mm			540	540	540	540	740	740	740	740	
Mounting plate height (G) mm			755	955	1155	1155	955	955	1155	1155	
Model No. CM		1	**5110.500**	**5111.500**	**5112.500**	**5113.500**	**5114.500**	**5115.500**	**5116.500**	**5117.500**	
Door			1	1	1	1	1	1	1	1	
Base/plinth											
Components front and rear	Height 100 mm	1 set	8601.600	8601.600	8601.600	8601.600	8601.800	8601.800	8601.800	8601.800	543
	Height 200 mm	1 set	8602.600	8602.600	8602.600	8602.600	8602.800	8602.800	8602.800	8602.800	543
Trim panels (sides)	Height 100 mm	1 set	8601.040	8601.040	8601.030	8601.040	8601.030	8601.040	8601.030	8601.040	544
	Height 200 mm	1 set	8602.040	8602.040	8602.030	8602.040	8602.030	8602.040	8602.030	8602.040	544
Accessories											
Rail for interior installation	for height	4	5001.051	5001.052	5001.053	5001.053	5001.052	5001.052	5001.053	5001.053	647
	for width	4	5001.050	5001.050	5001.050	5001.050	5001.051	5001.051	5001.051	5001.051	647
Matching punched sections with mounting flanges	in depth	4	8612.140	8612.140	8612.130	8612.140	8612.130	8612.140	8612.130	8612.140	647
	in width	4	8612.060	8612.060	8612.060	8612.060	8612.080	8612.080	8612.080	8612.080	647
Base configuration rail		2	5001.370	5001.370	5001.371	5001.370	5001.371	5001.370	5001.371	5001.370	649
Mounting plate slide block		2	5001.070	5001.070	5001.070	5001.070	5001.070	5001.070	5001.070	5001.070	634
Support strips for door		20	4596.000	4596.000	4596.000	4596.000	4598.000	4598.000	4598.000	4598.000	614
TS punched section with mounting flange, 17 x 73 mm		4	8612.050	8612.050	8612.050	8612.050	–	–	–	–	647
Cable clamp rails		1	5001.080	5001.080	5001.080	5001.080	5001.081	5001.081	5001.081	5001.081	717
Sheet steel wiring plan pocket, depth 35 mm		1	4116.500	4116.500	4116.500	4116.500	4118.500	4118.500	4118.500	4118.500	617
Rain canopy/vented roof		1	5001.310	5001.310	–	5001.310	–	5001.330	–	5001.330	619
Alternative lock systems		see page 599									

Width: 1000 – 1200, height: 1000 – 1400 mm

Width (B) mm		Packs of	1000	1000	1000	1000	1000	1200	Page
Height (H) mm			1000	1200	1200	1400	1400	1200	
Depth (T) mm			300	300	400	300	400	400	
Mounting plate width (F) mm			940	940	940	940	940	1140	
Mounting plate height (G) mm			955	1155	1155	1355	1355	1155	
Model No. CM		1	**5118.500**	**5119.500**	**5120.500**	**5121.500**	**5122.500**	**5123.500**	
Doors			2	2	2	2	2	2	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.000	8601.000	8601.000	8601.000	8601.000	8601.200	543
	Height 200 mm	1 set	8602.000	8602.000	8602.000	8602.000	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.030	8601.030	8601.040	8601.030	8601.040	8601.040	544
	Height 200 mm	1 set	8602.030	8602.030	8602.040	8602.030	8602.040	8602.040	544
Accessories									
Rail for interior installation	for height	4	5001.052	5001.053	5001.053	5001.054	5001.054	5001.053	647
	for width	4	5001.052	5001.052	5001.052	5001.052	5001.052	5001.053	647
Matching punched sections with mounting flanges	in depth	4	8612.130	8612.130	8612.140	8612.130	8612.140	8612.140	647
	in width	4	8612.000	8612.000	8612.000	8612.000	8612.000	8612.020	647
Base configuration rail		2	5001.371	5001.371	5001.370	5001.371	5001.370	5001.370	649
Mounting plate slide block		2	5001.070	5001.070	5001.070	5001.070	5001.070	5001.070	634
Support strips for door		20	4309.000	4309.000	4309.000	4309.000	4309.000	4596.000	614
TS punched section with mounting flange, 17 x 73 mm		4	8612.040	8612.040	8612.040	8612.040	8612.040	8612.050	647
Cable clamp rails		1	5001.082	5001.082	5001.082	5001.082	5001.082	5001.083	717
Sheet steel wiring plan pocket, depth 35 mm		1	4115.500	4115.500	4115.500	4115.500	4115.500	4116.500	617
Rain canopy/vented roof		1	–	–	5001.350	–	5001.350	5001.360	619
Alternative lock systems		see page 599							

Rittal China

RITTAL Electro-Mechanical Technology
(Shanghai) Co. Ltd.
No. 1658 Minyi Road · Songjiang District
Shanghai, 201612
Phone: +86 (0) 21 5115 7799
Fax: +86 (0) 21 5115 7788
E-mail: marketing@rittal.cn · www.rittal.cn

Plastic enclosures KS

System accessories Page 537 **KS for potentially explosive areas** Page 199

Material:
– Enclosure and door: Fibreglass-reinforced unsaturated polyester
– Mounting plate: Sheet steel
– Foamed-in PU seal

For KS with viewing window:
– Glazed acrylic, 3.0 mm with all-round rubber cable clamp strip

Surface finish:
– Enclosure and door: Dyed plastic with no after-treatment
– Mounting plate: Zinc-plated

Protection category:
See table

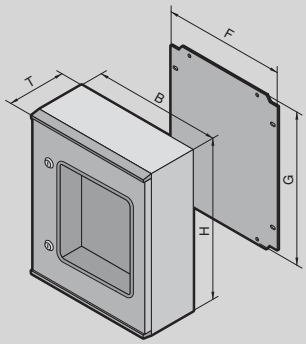
Colour:
Similar to RAL 7035

Supply includes:
– Enclosure with hinged door, of all-round solid construction, 3 mm double-bit lock
– For single-door enclosures: R/h door hinge, may be swapped to opposite side by rotating the enclosure
– For two-door enclosures: Lockable door on right
– Mounting plate
– Twin seal on the top and bottom edges of the door as integral rain protection strip
– Press-fitted C sections at the sides for infinitely variable mounting plate depth adjustment
– KS 1400.500 additionally with removable centre bar in the enclosure

Note:
Under the influence of long-term UV radiation (sunlight) in conjunction with wind and rain, the surface finish may become visually impaired. This does not affect the protection of the installed electrical components in any way. If the enclosures cannot be protected from UV radiation, we recommend that they should be painted with a PUR paint.
Ambient temperature –30°C to +75°C.

Approvals:
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– Bureau Veritas
– VDE

Detailed drawings:
Available on the Internet.



Width (B) mm	Packs of	200	250	300	400	400	400	400	500	Page
Height (H) mm		300	350	400	400	400	600	600	500	
Depth (T) mm		150	150	200	200	200	200	200	300	
Mounting plate width (F) mm		145	195	245	345	345	345	345	417	
Mounting plate height (G) mm		250	300	350	350	350	550	550	450	
Mounting plate thickness mm		2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	
Model No. KS	1	**1423.500**	**1432.500**	**1434.500**	**1444.500**	**1448.500**	**1446.500**	**1449.500**	**1453.500**	
Door(s)		1	1	1	1	1	1	1	1	
Viewing window		–	–	–	–	■	–	■	–	
Cam lock		1	1	2	2	2	2	2	2	
3-point lock system		–	–	–	–	–	–	–	–	
Weight (kg)		3.4	4.3	5.9	7.9	8.0	11.5	11.2	13.5	
Protection category IP 66 to IEC 60 529, complies with NEMA 4X.		■	■	■	■	–	■	–	■	
Protection category IP 56 to IEC 60 529, complies with NEMA 12.		–	–	–	–	■	–	■	–	
Accessories										
Mounting plate adjustment bracket	4	1481.000	1481.000	1481.000	1481.000	1481.000	1481.000	1481.000	1491.000	634
Threaded inserts M6	20	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	666
Pole clamp	1 set	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Wall mounting bracket	4	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	628
Alternative lock systems	see page 599									

Width (B) mm		500	600	600	600	600	800	800	1000	Page
Height (H) mm		500	600	600	800	800	1000	1000	1000	
Depth (T) mm		300	200	200	300	300	300	300	300	
Mounting plate width (F) mm		417	545	545	517	517	717	717	917	
Mounting plate height (G) mm		450	550	550	750	750	950	950	950	
Mounting plate thickness mm		2.5	2.5	2.5	3.0	3.0	3.0	3.0	3.0	
Model No. KS	1	**1454.500**	**1466.500**	**1467.500**	**1468.500**	**1469.500**	**1480.500**	**1479.500**	**1400.500**	
Door(s)		1	1	1	1	1	1	1	2	
Viewing window		■	–	■	–	■	–	■	–	
Cam lock		2	2	2	–	–	–	–	–	
3-point lock system		–	–	–	■	■	■	■	■	
Weight (kg)		13.4	15.9	15.6	26.5	26.0	41.7	39.9	51.6	
Protection category IP 66 to IEC 60 529, complies with NEMA 4X.		–	■	–	■	–	■	–	–	
Protection category IP 56 to IEC 60 529, complies with NEMA 12.		■	–	■	–	■	–	■	■	
Accessories										
Mounting plate adjustment bracket	4	1491.000	1481.000	1481.000	1491.000	1491.000	1491.000	1491.000	1491.000	634
Threaded inserts M6	20	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	666
Pole clamp	1 set	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Wall mounting bracket	4	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	1483.010	628
Alternative lock systems	see page 599									

Wall-mounted network enclosures

Wall-mounted distributors

VerticalBox 56
FlatBox with 482.6 mm (19˝) mounting angles 57
FlatBox with 482.6 mm (19˝) mounting frame 58
QuickBox with glazed door 59
QuickBox with glazed door/sheet steel door 60
QuickBox with vertical 482.6 mm (19˝) level 61
Wall-mounted enclosure EL, 3-part, depth 573/673 mm, pre-configured ..62
Wall-mounted enclosure EL, 3-part, depth 473 mm, with punched rails 63
Wall-mounted enclosure EL, 3-part, depth 373 mm, with mounting plate ..64
Wall-mounted enclosure EL, 3-part, depth 473 mm, with mounting plate ..65
Wall-mounted enclosure EL, 2-part, depth 369 mm, with swing frame 66
Wall-mounted enclosure AE with 482.6 mm (19˝) mounting angles 67
Wall-mounted enclosure AE with 482.6 mm (19˝) pull-out frame 68
Small fibre-optic distributor 69

VerticalBox

System accessories Page 537

Compact 482.6 mm (19˝) enclosure for small networks
- May be used as wall-mounted, under-desk or desktop enclosure
- 482.6 mm (19˝) level, front and rear
- Free access from three sides for interior installation
- Freely selectable door hinging
- Passive ventilation with vent slots
- Rear panel prepared to accommodate a fan
- Horizontal 10 U may be used by installing 482.6 mm (19˝) mounting angles

Material:
– Sheet steel
– Viewing window: Single-pane safety glass, 3 mm

Surface finish:
Powder-coated

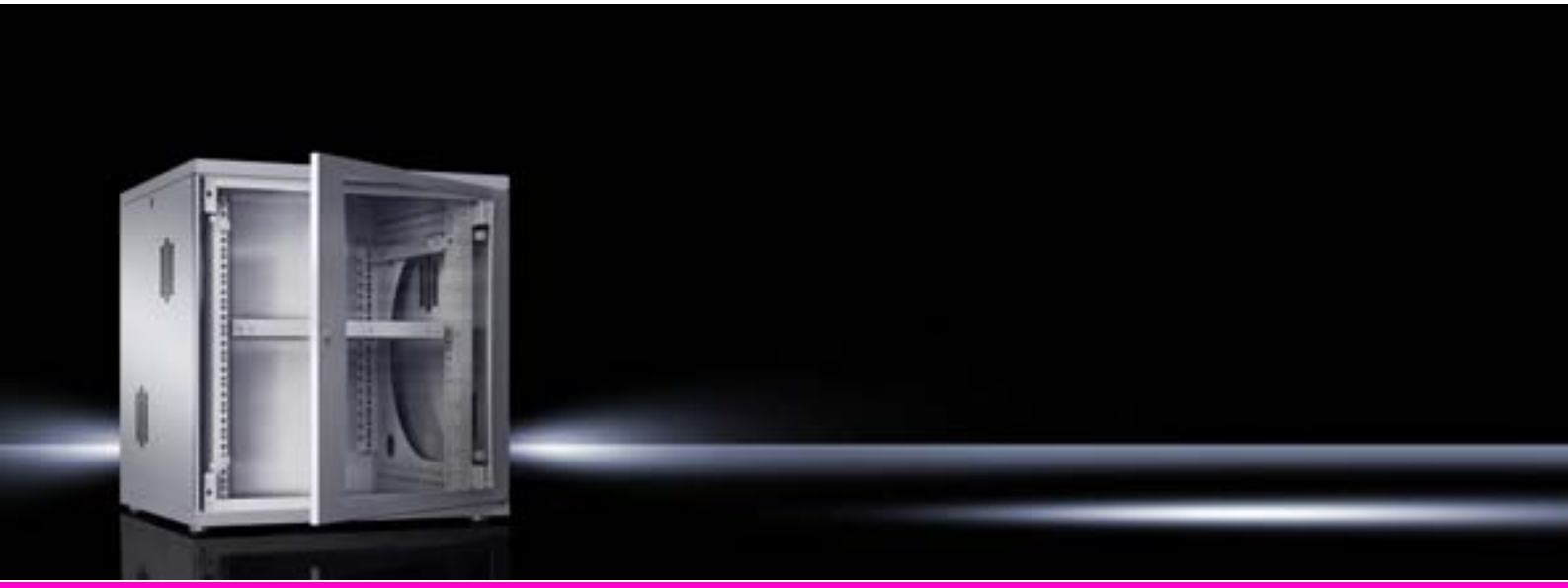
Colour:
RAL 7035

Supply includes:
– Enclosure with glazed door
– Side panels (1 x fixed, 1 x slot-in) with vent slots
– Knockouts for cable entry via roof or base
– Slot-in rear panel with knock-outs for cable entry and fan accommodation
– 482.6 mm (19˝) mounting level, 5 U, front and rear, depth-variable, distance between levels 434 – 489 mm
– Security lock 12321 on the door, side and rear panel
– 4 plastic feet, self-adhesive

Detailed drawings:
Available on the Internet.

U	Packs of	5	Page
Width mm		300	
Height mm		540	
Depth mm		600	
Model No. DK	1	**7501.000**	
Accessories			
Mounting kit for VerticalBox, hinged mounting plate 350 x 484 mm	1	7501.100	757
482.6 mm (19˝) mounting angles, 12 U (10 U usable)[1)]	2	7502.203	744
Brush strip for cut-out openings	2 x 1 m	7072.200	708
Wall mounting bracket, 10 mm	4	2508.010	627
Wall mounting bracket, 40 mm	4	2503.010	627
Fan expansion kit, 230 V AC, 50/60 Hz, 108/125 m^3/h, air throughput, unimpeded airflow	1 set	7980.100	404
Blanking panel, 482.6 mm (19˝), 1 U, RAL 7035	2	7151.035	761
Cable management panel, 482.6 mm (19˝), 1 U, RAL 7035, with 5 cable shunting rings 40 x 50 mm	1	7257.200	729
482.6 mm (19˝) socket strip, 7-way, with rocker switch	1	7240.220	695
Cable entry panel, 482.6 mm (19˝), 1 U	1	7140.535	732

[1)] For mounting at the side of the VerticalBox. With these mounting angles, instead of 5 U vertically at the side, up to 10 U may be used horizontally if only a minimal installation depth is required. Infinitely depth-variable positioning.



System assembly Page 537

For use as a wall-mounted and floor-standing enclosure. Small package – big performance. Time-saving, flexible, clever

- For flexible use as a wall-mounted or floor-standing enclosure
- Maximum width and depth of 700 mm creates plenty of space for use as a patch distributor
- Toolless quick assembly
- System assembly on the open 482.6 mm (19˝) frame

Material:
– Sheet steel
– Viewing window: Single-pane safety glass, 3 mm

Surface finish:
Powder-coated

Colour:
RAL 7035

Note:
– Max. installation depth: D – 112 mm
– Max. distance between two 482.6 mm (19˝) levels: D – 126 mm

Supply includes:
– Flat-packed enclosure
– 1 wall section
– 2 basic supports
– 2 roof/base plates, with cut-outs for cable entry, with brush strips
– 2 mounting angles, 482.6 mm (19˝) (for 6 U and 9 U)
– 1 mounting frame 19˝ (from 12 U)
– 4 levelling feet (from 12 U),
– 2 side panels, lockable,
– 1 glazed door, lockable, security lock 3524 E, door hinge point selectable
– Connection components for toolless, fast assembly
– Earthing kit for system-compatible earthing of all enclosure parts

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

With 482.6 mm (19˝) mounting angles

U	Packs of	6	6	9	9	Page
Width mm		600	600	600	600	
Height mm		358	358	492	492	
Depth mm		400	600	400	600	
Model No. DK	1	**7507.000**	**7507.100**	**7507.010**	**7507.110**	
Accessories						
482.6 mm (19˝) mounting angles as second mounting level	2	7507.706	7507.706	7507.709	7507.709	744
Levelling feet	4	7507.740	7507.740	7507.740	7507.740	556
Cover plates for fan panels	6	7507.760	7507.760	7507.760	7507.760	404
Earth rail	1	7113.000	7113.000	7113.000	7113.000	692
C rail for cable clamping	1	7016.140	7016.140	7016.140	7016.140	722
T-head rail for cable clamping	1	7016.150	7016.150	7016.150	7016.150	722
Fan motor, 230 V AC, 50/60 Hz, 117/135 m^3/h, air throughput, unimpeded airflow	1	7980.100	7980.100	7980.100	7980.100	404
Fan motor, 48 V DC, 184 m^3/h, air throughput, unimpeded airflow	1	7980.148	7980.148	7980.148	7980.148	404
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	476
Cable management panel, 1 U, 5 cable shunting rings 40 x 50 mm	1	7257.200	7257.200	7257.200	7257.200	729
Component shelf 2 U, static installation, depth 250 mm	1	7119.250	7119.250	7119.250	7119.250	675
Component shelf 2 U, static installation, depth 400 mm	1	–	7119.400	–	7119.400	675
Component shelf 1 U, complete set, pull-out, depth 500 mm	1 set	–	7000.625	–	7000.625	674
Base/plinth	1	–	7507.750	–	7507.750	553

FlatBox

With 482.6 mm (19˝) mounting frame

U	Packs of	12	12	15	15	18	21	Page
Width mm		600	600	600	700	700	700	
Height mm		625	625	758	758	892	1025	
Depth mm		400	600	400	700	700	700	
Model No. DK	1	**7507.020**	**7507.120**	**7507.030**	**7507.200**	**7507.210**	**7507.220**	
Accessories								
482.6 mm (19˝) mounting angles as second mounting level	2	7507.712	7507.712	7507.715	7507.715	7507.718	7507.721	744
Cover plates for fan panels	6	7507.760	7507.760	7507.760	7507.760	7507.760	7507.760	404
Earth rail	1	7113.000	7113.000	7113.000	7113.000	7113.000	7113.000	692
C rail for cable clamping	1	7016.140	7016.140	7016.140	7016.140	7016.140	7016.140	722
T-head rail for cable clamping	1	7016.150	7016.150	7016.150	7016.150	7016.150	7016.150	722
Fan motor, 230 V AC, 50/60 Hz, 117/135 m^3/h, air throughput, unimpeded airflow	1	7980.100	7980.100	7980.100	7980.100	7980.100	7980.100	404
Fan motor, 48 V DC, 184 m^3/h, air throughput, unimpeded airflow	1	7980.148	7980.148	7980.148	7980.148	7980.148	7980.148	404
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Cable management panel, 1 U, 5 cable shunting rings 40 x 50 mm	1	7257.200	7257.200	7257.200	7257.200	7257.200	7257.200	729
Component shelf 2 U, static installation, depth 250 mm	1	7119.250	7119.250	7119.250	7119.250	7119.250	7119.250	675
Component shelf 2 U, static installation, depth 400 mm	1	–	7119.400	–	7119.400	7119.400	7119.400	675
Component shelf 1 U, complete set, pull-out, depth 500 mm	1 set	–	7000.625	–	7000.625	7000.625	7000.625	674
Base/plinth	1	–	7507.750	–	7507.755	7507.755	7507.755	553

System accessories Page 537

Wall-mounted enclosure with removable cover for perfect handling during installation and maintenance.

Material:
- Wall mounting plate with mounting brackets: Sheet steel, 2.0 mm
- Enclosure cover: Sheet steel, 1.0 mm
- Door: Sheet steel door or glazed door with sheet steel frame and single-pane safety glass, 3 mm

Surface finish:
Enclosure: Powder-coated

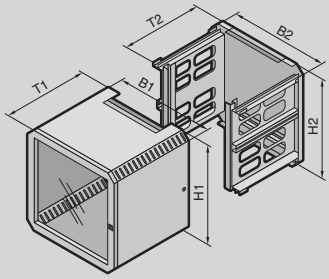
Colour:
RAL 7035

Supply includes:
Wall section:
- Pre-configured mounting bracket
- Brush strip for cable entry at the bottom/top
- Cable clamp rail
- 482.6 mm (19″) mounting angles, fully depth adjustable

Enclosure cover:
- Base and cover tray with vent slots
- Brush strip for cable entry at the top/bottom
- 2 side security locks
- Sheet steel door or glazed door with security lock 12321
- Version with Ergoform-S lock system, may optionally be retrofitted with semi-cylinder

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



With glazed door

U		Packs of	6	6	6	9	9	12	12	12	12	Page
Enclosure cover	**Width** (B1) mm		600	600	600	600	600	600	600	600	600	
	Height (H1) mm		362	362	362	495	495	628	628	628	628	
	Depth (T1) mm		300	400	600	400	600	400	500	600	600	
Wall section	**Width** (B2) mm		595	595	595	595	595	595	595	595	595	
	Height (H2) mm		355	355	355	488	488	621	621	621	621	
	Max. installation depth (T2) mm		247	347	547	347	547	347	447	547	547	
Model No. DK		1	**7502.013**	**7502.014**	**7502.016**	**7502.024**	**7502.026**	**7502.034**	**7502.035**	**7502.036**	**7502.436**[1]	
Accessories												
Mounting angles, 482.6 mm (19″)		2	–	–	–	–	–	7502.203	7502.203	7502.203	7502.203	744
Solid gland plate		2	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	707
Wall mounting bracket, 10 mm		4	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Combination rails for enclosure width		6	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Combination rails for enclosure depth	300/400 mm	6	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	718
	500/600 mm		7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Slide rails for the enclosure depth	300 mm	10	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	751
	400 mm	2	4531.000	4531.000	4531.000	4531.000	4531.000	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	750/751
	500/600 mm		4531.000	4531.000	4531.000	4531.000	4531.000	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	750/751
Earthing set		1	7502.240	7502.240	7502.260	7502.240	7502.260	7502.240	7502.260	7502.260	7502.260	691
Quick-release fastener		2	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	612

[1] With Ergoform-S lock system for semi-cylinder, for combining with quick-release fastener QB 7502.220.
[2] Additional mounting angles required at the rear.

QuickBox

With glazed door

U		Packs of	15	15	15	15	18	18	21	21	Page
Enclosure cover	**Width** (B1) mm		600	600	600	600	600	600	600	600	
	Height (H1) mm		762	762	762	762	895	895	1028	1028	
	Depth (T1) mm		400	500	600	600	400	600	400	600	
Wall section	**Width** (B2) mm		595	595	595	595	595	595	595	595	
	Height (H2) mm		755	755	755	755	888	888	1021	1021	
	Max. installation depth (T2) mm		347	447	547	547	347	547	347	547	
Model No. DK		1	**7502.044**	**7502.045**	**7502.046**	**7502.446**[1]	**7502.054**[3]	**7502.056**	**7502.064**[3]	**7502.066**	
Accessories											
Mounting angles, 482.6 mm (19″)		2	7502.204	7502.204	7502.204	7502.204	7502.205	7502.205	7502.206	7502.206	744
Solid gland plate		2	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	707
Wall mounting bracket, 10 mm		4	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Combination rails for enclosure width		6	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Combination rails for enclosure depth	300/400 mm	6	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	718
	500/600 mm		7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Slide rails for the enclosure depth	400 mm	2	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	750/751
	500/600 mm	2	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	750/751
Earthing set		1	7502.240	7502.260	7502.260	7502.260	7502.240	7502.260	7502.240	7502.260	691
Quick-release fastener		2	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	612

[1] With Ergoform-S lock system for semi-cylinder F, for combining with quick-release fastener QB 7502.220.
[2] Additional mounting angles required at the rear.
[3] Extended delivery times.

With sheet steel door

U		Packs of	6	9	9	12	15	15	21	Page
Enclosure cover	**Width** (B1) mm		600	600	600	600	600	600	600	
	Height (H1) mm		362	495	495	628	762	762	1028	
	Depth (T1) mm		400	400	600	600	400	600	600	
Wall section	**Width** (B2) mm		595	595	595	595	595	595	595	
	Height (H2) mm		355	488	488	621	755	755	1021	
	Max. installation depth (T2) mm		347	347	547	547	347	547	547	
Model No. DK		1	**7502.114**	**7502.124**	**7502.126**	**7502.136**	**7502.144**[3]	**7502.146**	**7502.166**[3]	
Accessories										
Mounting angles, 482.6 mm (19″)		2	–	–	–	7502.203	7502.204	7502.204	7502.206	744
Solid gland plate		2	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	7502.310	707
Wall mounting bracket, 10 mm		4	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Combination rails for enclosure width		6	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Combination rails for enclosure depth	300/400 mm	6	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	7502.302	718
	500/600 mm		7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	7502.304	718
Slide rails for the enclosure depth	300 mm	10	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	4530.000	751
	400 mm	10	4531.000	4531.000	4531.000	7492.300[2]	7492.300[2]	7492.300[2]	7492.300[2]	750/751
	500/600 mm	2	4531.000	4531.000	4531.000	7492.400[2]	7492.400[2]	7492.400[2]	7492.400[2]	750/751
Earthing set		1	7502.240	7502.240	7502.260	7502.260	7502.240	7502.260	7502.260	691
Quick-release fastener		2	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	7502.220	612

[2] Additional mounting angles required at the rear.
[3] Extended delivery times.

System accessories Page 537

Wall-mounted enclosure with optimum use of the interior space
thanks to side installation of the 482.6 mm (19″) components. Status monitoring via side viewing window.

Material:
- Wall mounting plate with mounting brackets: Sheet steel, 2.0 mm
- Enclosure cover: Sheet steel, 1.0 mm, with single-pane safety glass at the side, 3 mm

Surface finish:
Powder-coated

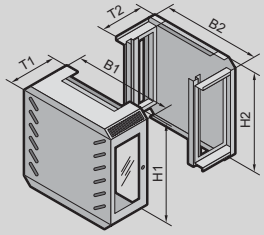
Colour:
RAL 7035

Supply includes:
Wall section:
- With pre-configured 482.6 mm (19″) mounting brackets for accommodating equipment at the side
- Brush strip for cable entry at the bottom and top

Enclosure cover:
- Side vent slots to support passive climate control
- The enclosure is secured via two security locks positioned at the sides

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



With vertical 482.6 mm (19″) level

U		Packs of	3	6	Page
Enclosure cover	**Width** (B1) mm		600	600	
	Height (H1) mm		631	631	
	Depth (T1) mm		210	360	
Wall section	**Width** (B2) mm		595	595	
	Height (H2) mm		621	621	
	Depth (T2) mm		198	348	
Model No. DK		1	**7502.630**[1)]	**7502.660**[1)]	
Accessories					
Gland plates, solid		2	7502.310	7502.310	707
Wall mounting bracket, 10 mm		4	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	627
Combination rails for vertical mounting on the QuickBox wall section		6	7502.304	7502.304	718
Combination rails for horizontal mounting on the QuickBox wall section		6	7502.304	7502.304	718
Mounting angles, 482.6 mm (19″) for front mounting, 12 U		2	7502.203	7502.203	744

[1)] Extended delivery times.

Wall-mounted enclosure EL, 3-part

System accessories Page 537 **Socket strips** Page 695 **Wall mounting bracket** Page 627 **Cable clamps** Page 719

Wall-mounted enclosure with optimum accessibility thanks to hinged part.

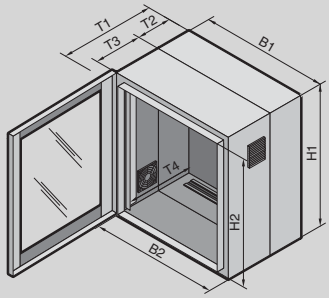
Material:
– Wall and hinged part: Sheet steel, 1.5 mm
– Viewing window: Single-pane safety glass, 3 mm

Surface finish:
Powder-coated

Colour:
– Wall and hinged part: RAL 7035
– Glazed door: RAL 7035/7015 (slate grey)

Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door
– Mini comfort handle for 3 – 15 U
– Comfort handle and 2-point lock for 18 – 21 U
– Including security lock 3524 E
– Product-specific supply scope, see table

Detailed drawings:
Available on the Internet.



Depth 573/673 mm, pre-configured

U		Packs of	9	9	15	15	21	21	Page
Width (B1) mm			600	600	600	600	600	600	
Height (H1) mm			478	478	746	746	1012	1012	
Depth (T1) mm			573	673	573	673	573	673	
Clearance width (B2) mm			502	502	502	502	502	502	
Clearance height (H2) mm			415	415	683	683	949	949	
Depth of wall section (T2) mm			135	135	135	135	135	135	
Depth of hinged part (T3) mm			416	516	416	516	416	516	
Max. installation depth (T4) mm			520	620	520	620	520	620	
Load capacity of hinged part (kg, static)			45	45	75	75	75	75	
Protection category IP 54 to IEC 60 529 when using solid gland plates SZ 2235.135			■	■	■	■	■	■	
Model No. DK		1	**7709.735**	**7709.535**	**7715.735**	**7715.535**	**7721.735**	**7721.535**	
Product-specific supply scope									
Wall section:	Gland plate, solid, top	1	■	■	■	■	■	■	
	Gland plate with brush insert, bottom	1	■	■	■	■	■	■	
	Vertical punched rails	2	■	■	■	■	■	■	
	Horizontal C rail	1	■	■	■	■	■	■	
Hinged part:	482.6 mm (19″) mounting angles, fully depth adjustable	2	■	■	■	■	■	■	
	Side outlet filters left and right	2	■	■	■	■	■	■	
Earth rail with star earthing		1 set	■	■	■	■	■	■	
Wall mounting bracket, 10 mm		4	■	■	■	■	■	■	
Accessories									
Gland plate for metric cable glands		1	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	707
Fan expansion kit, 230 V		1	7980.100	7980.100	7980.100	7980.100	7980.100	7980.100	404
Spare filter mats		5	3322.700	3322.700	3322.700	3322.700	3322.700	3322.700	483
Wall mounting bracket, 40 mm		4	2503.010	–	2503.010	–	2503.010	–	627
Lock inserts, type F			see page 609						
Component shelf 2 U, static installation or fully extendible, 300 mm deep		1	7148.035	7148.035	7148.035	7148.035	7148.035	7148.035	673
Component shelf 2 U, static installation, 250 mm deep		1	7119.250	7119.250	7119.250	7119.250	7119.250	7119.250	675
Cable management panel, 1 U, 5 cable shunting rings 40 x 50 mm		1	7257.200	7257.200	7257.200	7257.200	7257.200	7257.200	729

■ Included with the supply.

Wall-mounted enclosure EL, 3-part

System accessories Page 537 **Socket strips** Page 695 **Wall mounting bracket** Page 627 **Earthing** Page 689 **Cable clamps** Page 719

Wall-mounted enclosure with optimum accessibility thanks to hinged part.

Material:
– Wall and hinged part: Sheet steel, 1.5 mm
– Viewing window: Single-pane safety glass, 3 mm

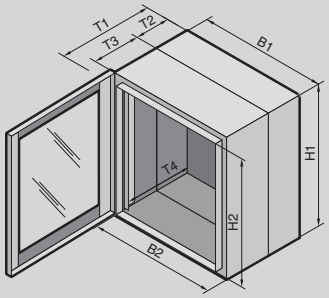
Surface finish:
Powder-coated

Colour:
– Wall and hinged part: RAL 7035
– Glazed door: RAL 7035/7015 (slate grey)

Protection category:
IP 55 to IEC 60 529

Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door
– Mini comfort handle for 3 – 15 U
– Comfort handle and 2-point lock for 18 – 21 U
– Including security lock 3524 E
– Product-specific supply scope, see table

Detailed drawings:
Available on the Internet.



Depth 473 mm, with punched rails

U	Packs of	6	9	12	15	18	21	Page
Width (B1) mm		600	600	600	600	600	600	
Height (H1) mm		345	478	612	746	878	1012	
Depth (T1) mm		473	473	473	473	473	473	
Clearance width (B2) mm		502	502	502	502	502	502	
Clearance height (H2) mm		282	415	549	683	815	949	
Depth of wall section (T2) mm		135	135	135	135	135	135	
Depth of hinged part (T3) mm		316	316	316	316	316	316	
Max. installation depth (T4) mm		420	420	420	420	420	420	
Load capacity of hinged part (kg, static)		30	45	60	75	75	75	
Model No. DK	1	**7706.135**	**7709.135**	**7712.135**	**7715.135**	**7718.135**	**7721.135**	
Product-specific supply scope								
Wall section: Gland plate, solid, top and bottom	2	■	■	■	■	■	■	
Wall section: Vertical punched rails	2	■	■	■	■	■	■	
Wall section: Horizontal C rail for cable clamping	1	■	■	■	■	■	■	
Hinged part: 482.6 mm (19″) mounting angles, fully depth adjustable	2	■	■	■	■	■	■	
Wall mounting bracket, 10 mm	4	■	■	■	■	■	■	
Accessories								
Gland plate with brush insert	1	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	708
Gland plate for metric cable glands	1	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	707
Wall mounting bracket, 40 mm	4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Lock inserts, type F		see page 609						
Earth rail, horizontal	1	7113.000	7113.000	7113.000	7113.000	7113.000	7113.000	692
Component shelf 2 U, static installation and fully extendible	1	7148.035	7148.035	7148.035	7148.035	7148.035	7148.035	673
Component shelf 2 U, static installation, 250 mm deep	1	7119.250	7119.250	7119.250	7119.250	7119.250	7119.250	675
Component shelf 1 U, static installation, 140 mm deep	1	7119.140	7119.140	7119.140	7119.140	7119.140	7119.140	674
Cable management panel, 1 U, 5 cable shunting rings 40 x 50 mm	1	7257.200	7257.200	7257.200	7257.200	7257.200	7257.200	729

■ Included with the supply.

Wall-mounted enclosure EL, 3-part

System accessories Page 537 **Socket strip** Page 695 **Wall mounting bracket** Page 627 **Cable clamps** Page 719 **Earthing** Page 689

Wall-mounted enclosure with optimum accessibility thanks to hinged part.

Material:
– Wall and hinged part: Sheet steel, 1.5 mm
– Viewing window: Single-pane safety glass, 3 mm

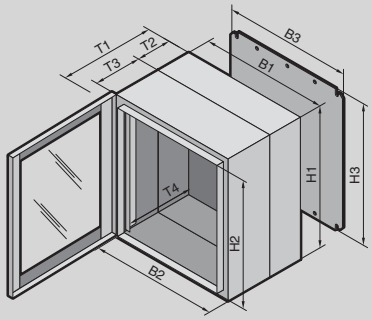
Surface finish:
Powder-coated

Colour:
– Wall and hinged part: RAL 7035
– Glazed door: RAL 7035/7015 (slate grey)

Protection category:
IP 55 to IEC 60 529

Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door
– Mini comfort handle for 3 – 15 U
– Comfort handle and 2-point lock for 18 – 21 U
– Including security lock 3524 E
– Product-specific supply scope, see table

Detailed drawings:
Available on the Internet.



Depth 373 mm, with mounting plate

U		Packs of	3	6	9	12	15	18	21	Page
Width (B1) mm			600	600	600	600	600	600	600	
Height (H1) mm			212	345	478	612	746	878	1012	
Depth (T1) mm			373	373	373	373	373	373	373	
Clearance width (B2) mm			502	502	502	502	502	502	502	
Clearance height (H2) mm			149	282	415	549	683	815	949	
Depth of wall section (T2) mm			135	135	135	135	135	135	135	
Depth of hinged part (T3) mm			216	216	216	216	216	216	216	
Max. installation depth (T4) mm			320	320	320	320	320	320	320	
Width of mounting plate (B3) mm			485	485	485	485	485	485	485	
Height of mounting plate (H3) mm			165	299	432	565	699	832	965	
Load capacity of hinged part (kg, static)			15	30	45	60	75	75	75	
Model No. EL		1	**2243.605**	**2246.605**	**2249.605**	**2252.605**	**2255.605**	**2258.605**	**2261.605**	
Product-specific supply scope										
Wall section:	Gland plate, solid, top and bottom	2	■	■	■	■	■	■	■	
	Mounting plate supplied loose	1	■	■	■	■	■	■	■	
Hinged part:	482.6 mm (19″) mounting angles	2	■	■	■	■	■	■	■	
Accessories										
Wall mounting bracket, 10 mm		4	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Gland plate with brush insert		1	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	708
Gland plate for metric cable glands		1	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	707
Cable glands			see page 709							
Lock inserts, type F			see page 609							
C rails		4	2238.000	2238.000	2238.000	2238.000	2238.000	2238.000	2238.000	655
Blanking plates, 482.6 mm (19″)		3	see page 754							

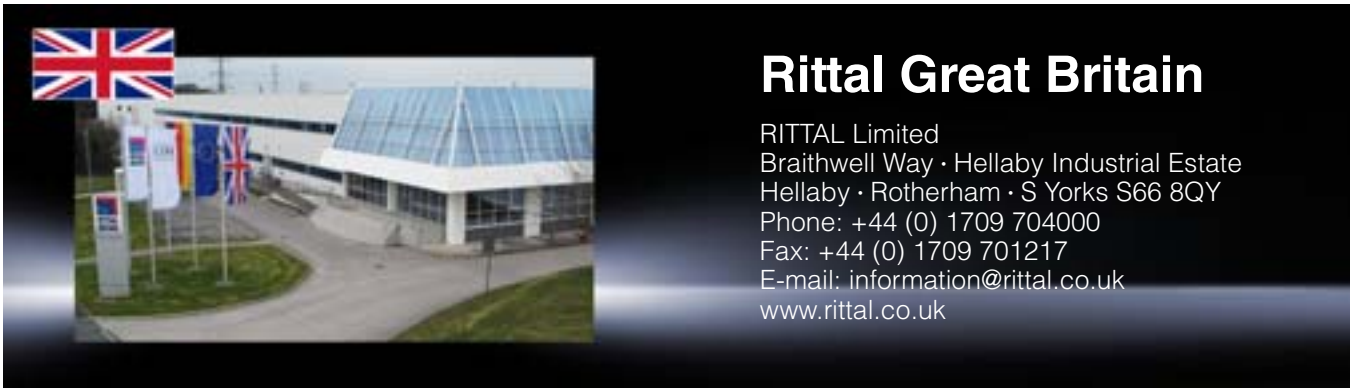
■ Included with the supply.

Wall-mounted enclosure EL, 3-part

Depth 473 mm, with mounting plate

U	Packs of	3	6	9	12	15	18	21	Page
Width (B1) mm		600	600	600	600	600	600	600	
Height (H1) mm		212	345	478	612	746	878	1012	
Depth (T1) mm		473	473	473	473	473	473	473	
Clearance width (B2) mm		502	502	502	502	502	502	502	
Clearance height (H2) mm		149	282	415	549	683	815	949	
Depth of wall section (T2) mm		135	135	135	135	135	135	135	
Depth of hinged part (T3) mm		316	316	316	316	316	316	316	
Max. installation depth (T4) mm		420	420	420	420	420	420	420	
Width of mounting plate (B3) mm		485	485	485	485	485	485	485	
Height of mounting plate (H3) mm		165	299	432	565	699	832	965	
Load capacity of hinged part (kg, static)		15	30	45	60	75	75	75	
Model No. EL	1	**2253.605**	**2256.605**	**2259.605**	**2262.605**	**2265.605**	**2268.605**	**2271.605**	
Product-specific supply scope									
Wall section: Gland plate, solid, top and bottom	2	■	■	■	■	■	■	■	
Wall section: Mounting plate supplied loose	1	■	■	■	■	■	■	■	
Hinged part: 482.6 mm (19″) mounting angles	2	■	■	■	■	■	■	■	
Accessories									
Wall mounting bracket, 10 mm	4	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm	4	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	2503.010	627
Gland plate with brush insert	1	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	708
Gland plate for metric cable glands	1	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	707
Cable glands		see page 709							
Lock inserts, type F		see page 609							
Slide rails	10	2250.000	2250.000	2250.000	2250.000	2250.000	2250.000	2250.000	751
C rails	4	2239.000	2239.000	2239.000	2239.000	2239.000	2239.000	2239.000	655
Blanking plates, 482.6 mm (19″)	3	see page 754							

■ Included with the supply.



Wall-mounted enclosure EL, 2-part

System accessories Page 537 **Cage nuts** Page 757 **Patch panel for copper technology** Page 759 **Socket strips** Page 695

Wall-mounted enclosure with optimum accessibility thanks to swing frame.

Material:
- Enclosure: Sheet steel, 1.5 mm
- Swing frame: Sheet steel
- Front door: Extruded aluminium section, acrylic glazing, 3 mm

Surface finish:
- Enclosure and swing frame: Primed and powder-coated
- Front door: Anodised

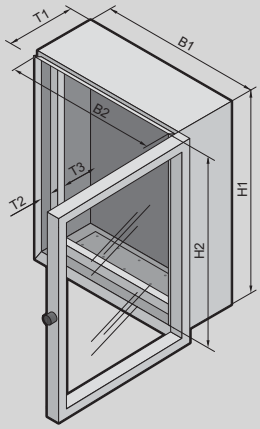
Colour:
- Enclosure and swing frame: RAL 7035
- Front door: Silver

Protection category:
IP 55 to IEC 60 529

Supply includes:
- Enclosure
- Front door
- Swing frame, 482.6 mm (19˝), fitted
- Assembly parts

Approvals:
- TÜV
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- VDE
- UL/cUL
- Bureau Veritas
- Germanischer Lloyd

Detailed drawings:
Available on the Internet.



Depth 369 mm, with swing frame

U	Packs of	6	11	14	Page
Width (B1) mm		600	600	600	
Height (H1) mm		380	600	760	
Depth (T1) mm		369	369	369	
Clearance width (B2) mm		537	537	537	
Clearance height (H2) mm		317	537	697	
Distance from glazed door to swing frame (T2) mm		67 – 97	67 – 97	67 – 97	
Maximum installation depth (T3) mm		270	270	270	
Model No. EL	1	**1919.500**	**1920.500**	**1926.500**	
Accessories					
Wall mounting bracket, 10 mm	4	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm	4	2503.010	2503.010	2503.010	627
Gland plates for metric cable glands	5	2563.010	2563.010	2563.010	704
Blanking plates, 482.6 mm (19˝)	3	see page 754			
Cable management panel, 482.6 mm (19˝), 1 U, 5 cable shunting rings 40 x 50 mm	1	7257.200	7257.200	7257.200	729
Cable entry panel, 482.6 mm (19˝), 1 U	1	7140.535	7140.535	7140.535	732

Standard swing frame with double-bit lock insert may be exchanged for 27 mm lock inserts, type A, see page 609.

Wall-mounted enclosure AE

System accessories Page 537 **Socket strips** Page 695 **Cage nuts** Page 757 **Glazed doors** Page 595

Wall-mounted enclosures for small networks with a high protection category.

Material:
Enclosure: Sheet steel

Surface finish:
– Enclosure: Powder-coated
– Mounting angles: Zinc-plated

Colour:
RAL 7035

Protection category:
See table.

Supply includes:
– Enclosure with hinged door
– Interchangeable door hinge
– Cam lock and double-bit insert
– Gland plate with brush strip for cable entry in the enclosure base
– Product-specific supply scope, see table

Approvals:
(except AE with pull-out frame)
– UL
– CSA
– Lloyds Register of Shipping
– Bureau Veritas
– TÜV
– VDE
– Germanischer Lloyd

Detailed drawings:
Available on the Internet.

With 482.6 mm (19˝) mounting angles

U		Packs of	8	13	16	Page
Width mm			600	600	600	
Height mm			380	600	760	
Depth mm			350	350	350	
Max. installation depth (T2) mm			310	310	310	
Protection category with gland plate for cable gland			IP 55 to IEC 60 529			
Model No. DK		1	**7641.000**	**7643.000**	**7645.000**	
Product-specific supply scope						
Mounting angles, 482.6 mm (19˝), fully depth adjustable		2	■	■	■	
C rail, for cable clamping on the rear panel		1	■	■	■	
Metal bracket for optional accommodation of an earth rail or 482.6 mm (19˝) socket strip		1	■	■	■	
Cam locks		4	■ 1 x	■ 2 x	■ 2 x	
Accessories						
Gland plates in various versions	Size		5	5	5	704 – 708
	Qty.		1	1	1	
Wall mounting bracket, 10 mm		4	2508.010	2508.010	2508.010	627
Wall mounting bracket, 40 mm		4	2503.010	2503.010	2503.010	627
Wall mounting bracket for external mounting		4	2508.100	2508.100	2508.100	627
Glazed door, 34 mm profile depth		1	2730.000	2731.000	2732.000	596
Glazed door, 60 mm profile depth		1	2760.000	2761.000	2762.000	596
Component shelf 2 U, static installation, 250 mm deep		1	7119.250	7119.250	7119.250	675
Earth rail		1	7113.000	7113.000	7113.000	692
Alternative lock systems		see page 599				

■ Included with the supply.

Wall-mounted enclosure AE

System accessories Page 537 **Socket strips** Page 695 **Cage nuts** Page 757 **Glazed doors** Page 595

Material:
– Enclosure: Sheet steel
– Viewing window: Single-pane safety glass, 3 mm

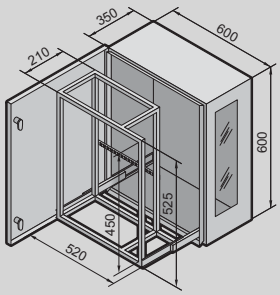
Surface finish:
– Enclosure: Powder-coated
– Pull-out frame: Stainless steel

Colour:
RAL 7035

Protection category:
See table.

Supply includes:
– Enclosure with hinged door
– Cam lock and double-bit insert
– Gland plate with brush strip for cable entry in the enclosure base
– Product-specific supply scope, see table

Detailed drawings:
Available on the Internet.



With 482.6 mm (19˝) pull-out frame

Width mm		Packs of	600	Page
Height mm			600	
Depth mm			350	
L/h door hinge			■	
Cam locks			2	
Side installation, vertical			4 U	
Front installation, vertical and horizontal			10 U	
Protection category with gland plate for cable gland			IP 54 to IEC 60 529	
Model No. DK		1	**7644.000**	
Product-specific supply scope				
Pull-out frame attached to telescopic slides		1	■	
Outlet filter in enclosure base and on left-hand side		2	■	
Viewing window on right-hand side		1	■	
Cable clamp rail on rear wall		1	■	
Additional cable clamp rail for mounting on the pull-out frame			■	
Accessories				
Choice of gland plates	Size		5	704 – 708
	Qty.		1	
Wall mounting bracket, 10 mm		4	2508.010	627
Wall mounting bracket for external mounting		4	2508.100	627
Wall mounting bracket, 40 mm		4	2503.010	627
Shelf		1	7644.400[1)]	675
Component shelf, 1 U, 140 mm deep		1	7119.140	674
Earth rail, horizontal		1	7113.000	692
Fan expansion kit 230 V AC (only for use at the bottom)		1 set	7980.100	404
Fan expansion kit 48 V DC (only for use at the bottom)		1 set	7980.148	404
Spare filter mats		5	3322.700	483
Alternative lock systems			see page 599	

[1)] Extended delivery times.

System accessories Page 537

Layout of the small fibre-optic distributor:
- Mounting plate with variable accommodation for up to two splicing cassettes (cassette width variable from 92 to 120 mm) and integral anti-twist guard
- Dividing plate with comb strip for cable clamping, to cover the splicing cassette, and to accommodate 2 patch panels and patch panels for F-SMA, E-2000 ST couplings, E-2000 duplex, SC couplings and SC duplex couplings
- Cable entry via cable glands in knockouts (12 x PG 7 and 1 x PG 16). Assembled connectors fit through the knockouts (diameter of cut-outs: 12 x 12.5 mm and 2 x 22.5 mm). Additional sealing inserts are required to reduce the clamping range of the cable glands

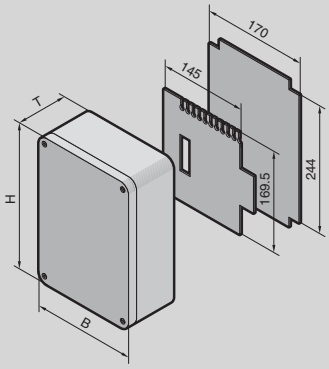
Material:
- Enclosure and cover: Fibreglass-reinforced polycarbonate
- Cover screws: Polyamide
- Insulating bungs: Polyamide
- Foamed-in PU seal

Colour:
RAL 7035

Protection category:
IP 66 to IEC 60 529

Supply includes:
- Enclosure with knockouts for cable glands
- Hinged cover with seal
- 2 cover screws, prepared for a lead seal
- Insulating bungs for wall mounting
- Mounting plate
- Dividing plate
- 12 cable glands PG 7
- 1 cable gland PG 16

Detailed drawings:
Available on the Internet.



Width (B) mm			Packs of	180	Page
Height (H) mm				254	
Depth (T) mm				90	
Number of fibres (when using patch panels)				1 – 24	
Model No. DK			1	**7451.000**	
Accessories					
	Locations per patch panel	Locations per enclosure			
Patch panel for ST couplings	12	24	2	**7462.000**	
Patch panel for SC, E-2000, E-2000 duplex couplings	12/6	24/12	2	**7463.100**	
Patch panel for SC duplex couplings	6	12	2	**7463.200**	
Wall mounting brackets			40	9583.000	31

Enclosure systems

Baying systems TS 8

Height: 1200 mm/1400 mm, depth: 500 mm....72
Height: 1600 mm, depth: 500 mm....73
Height: 1800 mm, depth: 400 mm....73
Height: 1800 mm, depth: 500 mm....74
Height: 1800 mm, depth: 600 mm....74
Height: 2000 mm, depth: 400 mm....75
Height: 2000 mm, depth: 500 mm....75
Height: 2000 mm, depth: 600 mm....76
Height: 2000 mm, depth: 800 mm....76
Height: 2200 mm, depth: 600 mm....77
Electronic enclosure....78
For modular front design....79
IP 66/NEMA 4X and IP 66/NEMA 4....80
For areas at risk from earthquakes....81

TS 8 baying systems for distribution enclosures

Distribution enclosures up to 630 A....82
Distribution enclosures up to 1600 A....83

Baying system TS 8 for Ri4Power applications

Enclosures for Rittal Ri4Power applications....84
Modular enclosures, height: 1800 mm....86
Modular enclosures, height: 2000 mm....87
Modular enclosures, height: 2200 mm....88
Cable chamber enclosures, height: 1800 mm....89
Cable chamber enclosures, height: 2000 mm....90
Cable chamber enclosures, height: 2200 mm....90
Switch-disconnector-fuse enclosure, height: 2000 mm....91
Switch-disconnector-fuse enclosure, height: 2200 mm....92
Busbar enclosure, width: 200 mm....93

System enclosure SE 8

Width: 600 – 800 mm....98
Width: 1000 – 1800 mm....99

Baying systems TS 8

System accessories Page 537 **TS 8 corner enclosures** Page 583 **TS 8 stainless steel** Page 194 **TS 8 EMC-shielded** Page 200

Material:
- Enclosure frame, roof, rear panel and gland plates: Sheet steel, 1.5 mm
- Door: Sheet steel, 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure frame: Dipcoat-primed
- Door, roof and rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate and gland plates: Zinc-plated

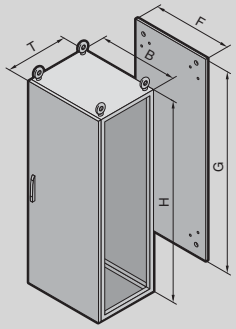
Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529, complies with NEMA 12.

Supply includes:
- Enclosure frame with door(s), 3 mm double-bit lock insert
- Mounting plate
- Gland plates
- Rear panel
- Roof plate
- 4 eyebolts

Approvals:
- UL
- CSA
- TÜV
- Russian Maritime Register of Shipping
- TÜV Mark
- Lloyds Register of Shipping
- Bureau Veritas
- VDE
- Germanischer Lloyd

Detailed drawings:
Available on the Internet.



Height: 1200 mm/1400 mm, depth: 500 mm

Width (B) mm		Packs of	600	800	1200	600	800	1200	Page
Height (H) mm			1200	1200	1200	1400	1400	1400	
Depth (T) mm			500	500	500	500	500	500	
Mounting plate width (F) mm			499	699	1099	499	699	1099	
Mounting plate height (G) mm			1096	1096	1096	1296	1296	1296	
Model No. TS		1	**8615.500**	**8815.500**	**8215.500**	**8645.500**	**8845.500**	**8245.500**	
Door(s)			1	1	2	1	1	2	
Weight (kg)			74.5	92.1	140.0	86.0	107.5	163.5	
Walls									
Side panels		2	8115.235	8115.235	8115.235	8145.235	8145.235	8145.235	567
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.200	8601.600	8601.800	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.200	8602.600	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.050	8601.050	8601.050	8601.050	8601.050	8601.050	544
	Height 200 mm	1 set	8602.050	8602.050	8602.050	8602.050	8602.050	8602.050	544
Flex-Block		see page 540							
Levelling component for base/plinth		see page 546							
Accessories									
Cable clamp rails for cable clamps		2	4191.000	4192.000	4196.000	4191.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4947.000	4944.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.125[1)]	8802.065	8802.085	8802.125[1)]	703
Support strips for door		20	4596.000	4598.000	4596.000	4596.000	4598.000	4596.000	614
Wiring plan pocket, sheet steel		1	4116.X00	4118.X00	4116.X00	4116.X00	4118.X00	4116.X00	617
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	8800.190	613
System lights		see page 679							
Door stay for escape routes		1	4583.500	4583.500	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689							
Alternative lock systems		see page 600							

[1)] Packs of 2 sets

Height: 1600 mm, depth: 500 mm

Width (B) mm		Packs of	600	800	1200	Page
Height (H) mm			1600	1600	1600	
Depth (T) mm			500	500	500	
Mounting plate width (F) mm			499	699	1099	
Mounting plate height (G) mm			1496	1496	1496	
Model No. TS		1	**8665.500**	**8865.500**	**8265.500**	
Door(s)			1	1	2	
Weight (kg)			100.0	103.0	159.3	
Walls						
Side panels		2	8165.235	8165.235	8165.235	567
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.050	8601.050	8601.050	544
	Height 200 mm	1 set	8602.050	8602.050	8602.050	544
Flex-Block		see page 540				
Levelling component for base/plinth		see page 546				
Accessories						
Cable clamp rails for cable clamps		2	4191.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.125[1)]	703
Support strips for door		20	4596.000	4598.000	4596.000	614
180° hinges		4	8800.190	8800.190	8800.190	613
System lights		see page 679				
Door stay for escape routes		1	4583.500	4583.500	4583.500	617
Earth straps		see page 689				
Alternative lock systems		see page 600				

[1)] Packs of 2 sets

Height: 1800 mm, depth: 400 mm

Width (B) mm		Packs of	600	800	1000	1000	1200	Page
Height (H) mm			1800	1800	1800	1800	1800	
Depth (T) mm			400	400	400	400	400	
Mounting plate width (F) mm			499	699	899	899	1099	
Mounting plate height (G) mm			1696	1696	1696	1696	1696	
Model No. TS		1	**8684.500**	**8884.500**	**8084.500**	**8080.500**	**8284.500**	
Door(s)			1	1	1	2	2	
Weight (kg)			91.3	113.5	136.4	140.0	170.6	
Walls								
Side panels		2	8184.235	8184.235	8184.235	8184.235	8184.235	567
Divider panel		1	8609.840	8609.840	8609.840	8609.840	8609.840	571
Doors								
Glazed door		1	8610.680	8610.880	–	–	–	584
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.000	8601.000	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.000	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.040	8601.040	8601.040	8601.040	544
	Height 200 mm	1 set	8602.040	8602.040	8602.040	8602.040	8602.040	544
Flex-Block		see page 540						
Levelling component for base/plinth		see page 546						
Accessories								
Cable clamp rails for cable clamps		2	4191.000	4192.000	4336.000	4336.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4946.000	4946.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.105[1)]	8802.105[1)]	8802.125[1)]	703
Support strips for door		20	4596.000	4598.000	4599.000	4309.000	4596.000	614
Wiring plan pocket, sheet steel		1	4116.X00	4118.X00	4124.000	4115.X00	4116.X00	617
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	613
System lights		see page 679						
Door stay for escape routes		1	4583.500	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689						
Alternative lock systems		see page 600						

[1)] Packs of 2 sets

Baying systems TS 8

Height: 1800 mm, depth: 500 mm

Width (B) mm		Packs of	400	600	800	800	1200	Page
Height (H) mm			1800	1800	1800	1800	1800	
Depth (T) mm			500	500	500	500	500	
Mounting plate width (F) mm			–	499	699	699	1099	
Mounting plate height (G) mm			–	1696	1696	1696	1696	
Model No. TS		1	**8485.510**[1)]	**8685.500**	**8885.500**	**8880.500**	**8285.500**	
Door(s)			1	1	1	2	2	
Weight (kg)			49.2	93.8	115.8	122.5	173.3	
Walls								
Side panels		2	8185.235	8185.235	8185.235	8185.235	8185.235	567
Divider panel		1	8609.850	8609.850	8609.850	8609.850	8609.850	571
Divider panel for module plates		1	8609.100	8609.100	8609.100	8609.100	8609.100	572
Doors								
Glazed door		1	–	8610.680	8610.880	–	–	584
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.800	8601.200	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.050	8601.050	8601.050	8601.050	8601.050	544
	Height 200 mm	1 set	8602.050	8602.050	8602.050	8602.050	8602.050	544
Flex-Block		see page 540						
Levelling component for base/plinth		see page 546						
Accessories								
Mounting plate		1	8614.180	–	–	–	–	639
Cable clamp rails for cable clamps		2	4193.000	4191.000	4192.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	–	4944.000	4945.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	–	8802.065	8802.085	8802.085	8802.125[2)]	703
Support strips for door		20	–	4596.000	4598.000	4594.000	4596.000	614
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	613
Door stay for escape routes		1	–	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689						
Alternative lock systems		see page 600						

[1)] Without tubular door frame, mounting plate and gland plates. Protection category IP 55 and NEMA 12 are not met. [2)] Packs of 2 sets

Height: 1800 mm, depth: 600 mm

Width (B) mm		Packs of	400	600	800	800	1200	Page
Height (H) mm			1800	1800	1800	1800	1800	
Depth (T) mm			600	600	600	600	600	
Mounting plate width (F) mm			–	499	699	699	1099	
Mounting plate height (G) mm			–	1696	1696	1696	1696	
Model No. TS		1	**8486.510**[1)]	**8686.500**	**8886.500**	**8881.500**	**8286.500**	
Door(s)			1	1	1	2	2	
Weight (kg)			51.7	96.8	120.3	125.8	179.9	
Support strips fitted in the enclosure depth			■	■	■	■	■	
Walls								
Side panels		2	8186.235	8186.235	8186.235	8186.235	8186.235	567
Divider panel		1	8609.860	8609.860	8609.860	8609.860	8609.860	571
Divider panel for module plates		1	8609.110	8609.110	8609.110	8609.110	8609.110	572
Doors								
Glazed door		1	–	8610.680	8610.880	–	–	584
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.800	8601.200	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.060	8602.060	544
Flex-Block		see page 540						
Levelling component for base/plinth		see page 546						
Accessories								
Mounting plate		1	8614.180	–	–	–	–	639
Cable clamp rails for cable clamps		2	4193.000	4191.000	4192.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	–	4944.000	4945.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	–	8802.065	8802.085	8802.085	8802.125[2)]	703
Support strips for door		20	–	4596.000	4598.000	4594.000	4596.000	614
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	613
Door stay for escape routes		1	–	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689						
Alternative lock systems		see page 600						

[1)] Without tubular door frame, mounting plate and gland plates. Protection category IP 55 and NEMA 12 are not met. [2)] Packs of 2 sets

Height: 2000 mm, depth: 400 mm

Width (B) mm		Packs of	600	800	1000	1200	Page
Height (H) mm			2000	2000	2000	2000	
Depth (T) mm			400	400	400	400	
Mounting plate width (F) mm			499	699	899	1099	
Mounting plate height (G) mm			1896	1896	1896	1896	
Model No. TS		1	**8604.500**	**8804.500**	**8004.500**	**8204.500**	
Door(s)			1	1	2	2	
Weight (kg)			99.0	124.0	152.8	184.5	
Walls							
Side panels		2	8104.235	8104.235	8104.235	8104.235	567
Divider panel		1	8609.040	8609.040	8609.040	8609.040	571
Doors							
Glazed door		1	8610.600	8610.800	–	–	584
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.000	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.040	8601.040	8601.040	544
	Height 200 mm	1 set	8602.040	8602.040	8602.040	8602.040	544
Flex-Block		see page 540					
Levelling component for base/plinth		see page 546					
Accessories							
Cable clamp rails for cable clamps		2	4191.000	4192.000	4336.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4946.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.105[1)]	8802.125[1)]	703
Support strips for door		20	4596.000	4598.000	4309.000	4596.000	614
Wiring plan pocket, sheet steel		1	4116.X00	4118.X00	4115.X00	4116.X00	617
180° hinges		4	8800.190	8800.190	8800.190	8800.190	613
System lights		see page 679					
Door stay for escape routes		1	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689					
Alternative lock systems		see page 600					

[1)] Packs of 2 sets

Height: 2000 mm, depth: 500 mm

Width (B) mm		Packs of	400	600	800	1000	1200	Page
Height (H) mm			2000	2000	2000	2000	2000	
Depth (T) mm			500	500	500	500	500	
Mounting plate width (F) mm			–	499	699	899	1099	
Mounting plate height (G) mm			–	1896	1896	1896	1896	
Model No. TS		1	**8405.510[1)]**	**8605.500**	**8805.500**	**8005.500**	**8205.500**	
Door(s)			1	1	1	2	2	
Weight (kg)			60.7	101.3	126.3	157.1	190.6	
Walls								
Side panels		2	8105.235	8105.235	8105.235	8105.235	8105.235	567
Divider panel		1	8609.050	8609.050	8609.050	8609.050	8609.050	571
Divider panel for module plates		1	8609.120	8609.120	8609.120	8609.120	8609.120	572
Doors								
Glazed door		1	–	8610.600	8610.800	–	–	584
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.000	8601.200	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.050	8601.050	8601.050	8601.050	8601.050	544
	Height 200 mm	1 set	8602.050	8602.050	8602.050	8602.050	8602.050	544
Flex-Block		see page 540						
Levelling component for base/plinth		see page 546						
Accessories								
Mounting plate		1	8614.200	–	–	–	–	639
Cable clamp rails for cable clamps		2	4193.000	4191.000	4192.000	4336.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	–	4944.000	4945.000	4946.000	4947.000	653
Section for cable entry, rear		1 set	–	8802.065	8802.085	8802.105[2)]	8802.125[2)]	703
Support strips for door		20	–	4596.000	4598.000	4309.000	4596.000	614
Wiring plan pocket, sheet steel		1	–	4116.X00	4118.X00	4115.X00	4116.X00	617
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	613
System lights		see page 679						
Door stay for escape routes		1	–	4583.500	4583.500	4583.500	4583.500	617
Earth straps		see page 689						
Alternative lock systems		see page 600						

[1)] Without tubular door frame, mounting plate and gland plates. Protection category IP 55 and NEMA 12 are not met. [2)] Packs of 2 sets

Baying systems TS 8

Height: 2000 mm, depth: 600 mm

Width (B) mm		Packs of	400	600	800	1000	1200	Page
Height (H) mm			2000	2000	2000	2000	2000	
Depth (T) mm			600	600	600	600	600	
Mounting plate width (F) mm			–	499	699	899	1099	
Mounting plate height (G) mm			–	1896	1896	1896	1896	
Model No. TS		1	**8406.510**[1]	**8606.500**	**8806.500**	**8006.500**	**8206.500**	
Door(s)			1	1	1	2	2	
Weight (kg)			55.7	104.0	130.5	161.2	194.6	
Support strips fitted in the enclosure depth			■	■	■	■	■	
Walls								
Side panels		2	8106.235	8106.235	8106.235	8106.235	8106.235	567
Divider panel		1	8609.060	8609.060	8609.060	8609.060	8609.060	571
Divider panel for module plates		1	8609.130	8609.130	8609.130	8609.130	8609.130	572
Doors								
Glazed door		1	–	8610.600	8610.800	–	–	584
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.000	8601.200	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.060	8602.060	544
Flex-Block			see page 540					
Levelling component for base/plinth			see page 546					
Accessories								
Mounting plate		1	8614.200	–	–	–	–	639
Cable clamp rails for cable clamps		2	4193.000	4191.000	4192.000	4336.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	–	4944.000	4945.000	4946.000	4947.000	653
Section for cable entry, rear		1 set	–	8802.065	8802.085	8802.105[2]	8802.125[2]	703
Support strips for door		20	–	4596.000	4598.000	4309.000	4596.000	614
180° hinges		4	8800.190	8800.190	8800.190	8800.190	8800.190	613
Door stay for escape routes		1	–	4583.500	4583.500	4583.500	4583.500	617
Earth straps			see page 689					
Alternative lock systems			see page 600					

[1] Without tubular door frame, mounting plate and gland plates. Protection category IP 55 and NEMA 12 are not met.
[2] Packs of 2 sets

Height: 2000 mm, depth: 800 mm

Width (B) mm		Packs of	600	800	1200	Page
Height (H) mm			2000	2000	2000	
Depth (T) mm			800	800	800	
Mounting plate width (F) mm			499	699	1099	
Mounting plate height (G) mm			1896	1896	1896	
Model No. TS		1	**8608.500**	**8808.500**	**8208.500**	
Door(s)			1	1	2	
Weight (kg)			111.3	137.0	203.0	
Support strips fitted in the enclosure depth			■	■	■	
Walls						
Side panels		2	8108.235	8108.235	8108.235	567
Divider panel		1	8609.080	8609.080	8609.080	571
Doors						
Glazed door		1	8610.600	8610.800	–	584
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.080	8602.080	8602.080	544
Flex-Block			see page 540			
Levelling component for base/plinth			see page 546			
Accessories						
Cable clamp rails for cable clamps		2	4191.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.125[1]	703
Support strips for door		20	4596.000	4598.000	4596.000	614
180° hinges		4	8800.190	8800.190	8800.190	613
Door stay for escape routes		1	4583.500	4583.500	4583.500	617
Earth straps			see page 689			
Alternative lock systems			see page 600			

[1] Packs of 2 sets

Height: 2200 mm, depth: 600 mm

Width (B) mm		Packs of	600	800	1200	Page
Height (H) mm			2200	2200	2200	
Depth (T) mm			600	600	600	
Mounting plate width (F) mm			499	699	1099	
Mounting plate height (G) mm			2096	2096	2096	
Model No. TS		1	**8626.500**	**8826.500**	**8226.500**	
Door(s)			1	1	2	
Weight (kg)			113.1	139.3	208.0	
Support strips fitted in the enclosure depth			■	■	■	
Walls						
Side panels		2	8126.235	8126.235	8126.235	567
Divider panel		1	8609.260	8609.260	8609.260	571
Doors						
Glazed door		1	8610.620	8610.820	–	584
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	544
Flex-Block			see page 540			
Levelling component for base/plinth			see page 546			
Accessories						
Cable clamp rails for cable clamps		2	4191.000	4192.000	4196.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4945.000	4947.000	653
Section for cable entry, rear		1 set	8802.065	8802.085	8802.125[1)]	703
Support strips for door		20	4596.000	4598.000	4596.000	614
Wiring plan pocket, sheet steel		1	4116.X00	4118.X00	4116.X00	617
180° hinges		4	8800.190	8800.190	8800.190	613
System lights			see page 679			
Door stay for escape routes		1	4583.500	4583.500	4583.500	617
Earth straps			see page 689			
Alternative lock systems			see page 600			

[1)] Packs of 2 sets

Baying systems TS 8

System accessories Page 537 **482.6 mm (19˝) installation accessories** from page 733 **Subrack systems** Page 211 **482.6 mm (19˝) climate control** Page 399/400

Material:
– Enclosure frame: Sheet steel 1.5 mm
– Front frame: Extruded aluminium sections with die-cast corner pieces
– Rear door: Sheet steel 2 mm
– Roof and gland plates: Sheet steel 1.5 mm
– Adaptor sections: Aluminium

Surface finish:
– Enclosure frame: Dipcoat-primed
– Roof and rear door: Dipcoat-primed, powder-coated on the outside, textured paint
– Front frame: Powder-coated
– Gland plates: Zinc-plated

Colour:
RAL 7035

Supply includes:
– Enclosure frame
– Front frame (r/h hinge, opening angle 130°, held on the left via mechanical snap fasteners)
– Rear door (r/h hinge, may be swapped to opposite side)
– Roof
– Adaptor sections
– Gland plates

Approvals:
– UL
– cUL

Detailed drawings:
Available on the Internet.

Electronic enclosure

U		Packs of	33	33	42	42	Page
Width mm			600	600	600	600	
Height mm			1600	1600	2000	2000	
Depth mm			600	800	600	800	
Model No. TS		1	**8410.510**	**8418.510**	**8430.510**	**8438.510**	
Door(s)			1	1	1	1	
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.600	8601.600	8601.600	8601.600	543
	Height 200 mm	1 set	8602.600	8602.600	8602.600	8602.600	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.080	8601.060	8601.080	544
	Height 200 mm	1 set	8602.060	8602.080	8602.060	8602.080	544
Flex-Block		see page 540					
Levelling component for base/plinth		see page 546					
Accessories							
Side panels		2	8166.235	8168.235	8106.235	8108.235	567
Cable clamp rails for cable clamps		2	4191.000	4191.000	4191.000	4191.000	717
Cable clamp rails (C section) for cable clamps		6	4944.000	4944.000	4944.000	4944.000	653
Section for cable entry, rear		1 set	8802.065	8802.065	8802.065	8802.065	703
Adaptor sections for rear		2	8613.360	8613.360	8613.300	8613.300	742
LED system light		1	4140.830	4140.830	4140.830	4140.830	682
Alternative lock systems		see page 600					

System accessories Page 537

Application area:
Suitable for the installation of
- Partial mounting plates
- Component shelves and drawers
- Punched sections and rails
- Partial doors with and without viewing panels
- Fully glazed doors
- Drawers
- Vertically divided doors
- Trim panels hinged at the top
- Protective bars

Material:
Enclosure frame, roof, rear panel and gland plates:
Sheet steel 1.5 mm

Surface finish:
– Enclosure frame: Dipcoat-primed
– Roof and rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Supply includes:
– Enclosure frame
– Roof
– Rear panel
– Three-piece gland plates
– 4 eyebolts

Detailed drawings:
(TS basic enclosures without door)
Available on the Internet.

For modular front design

Width mm		Packs of	600	800	Page
Height mm			2000	2000	
Depth mm			600	600	
Model No. TS		1	**8606.512**	**8806.512**	
Weight (kg)			52.5	63.0	
Walls					
Side panels		2	8106.512	8106.512	591
Divider panel		1	8609.060	8609.060	571
Divider panel for module plates		1	8609.130	8609.130	572
Base/plinth					
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	543
	Height 200 mm	1 set	8602.600	8602.800	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	544
Flex-Block		see page 540			
Trim panel, hinged at the top, height 300 mm		1	8801.230	8801.240	589
Holder for protective bar		2	8801.000	8801.000	587
Protective bar		1	8801.010	8801.010	587
Partial doors		see page 590			
Partial mounting plate		see page 636			
System lights		see page 679			

Baying systems TS 8

System accessories Page 537 **Cable entry** Page 701

Supply includes:
- Enclosure frame with door, 3 mm double-bit lock insert
- Roof plate
- Gland plate
- Rear panel
- Mounting plate
- 4 eyebolts

Protection category:
See table.

NEMA 4X:

Material:
- Enclosure frame, roof, base, rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Mounting plate: Stainless steel 1.4301 (AISI 304), 3.0 mm

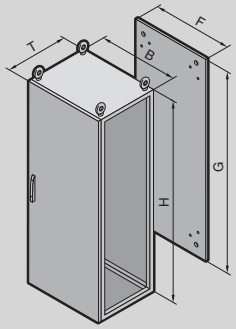
Surface finish:
- Enclosure frame: Uncoated
- Door, roof, base, rear panel: Exterior brushed, grain size 400
- Mounting plate: Zinc-plated

NEMA 4:

Material:
- Enclosure frame, roof, base, rear panel: Sheet steel, spray-finished, 1.5 mm
- Door: Sheet steel, spray-finished, 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure frame, door, roof, base, rear panel: Dipcoat-primed and powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:
RAL 7035



IP 66/NEMA 4X and IP 66/NEMA 4

		Packs of	Stainless steel	Sheet steel	Page
Width (B) mm			800	800	
Height (H) mm			2000	2000	
Depth (T) mm			600	600	
Mounting plate width (F) mm			699	699	
Mounting plate height (G) mm			1896	1896	
Model No. TS		1	**8450.680**	**8806.580**	
Door(s)			1	1	
Protection category			IP 66 to IEC 60 529, complies with NEMA 4X.	IP 66 to IEC 60 529, complies with NEMA 4.	
Also required					
Side panels IP 66/NEMA 4X, NEMA 4		2	**8700.680**	**8106.580**	–
Baying frame IP 66/NEMA 4X, NEMA 4		1	**8700.010**	**8700.010**	–
Quick-fit baying clamps, one-piece		6	8800.500	8800.500	577
Baying clamp, horizontal		4	8800.400	8800.400	577
Angular baying brackets		4	8800.430	8800.430	579
Base/plinth					
Components front and rear	Height 100 mm	1 set	8701.800	8601.800	549/543
	Height 200 mm	1 set	8702.800	8602.800	549/543
Trim panels, sides	Height 100 mm	1 set	8701.060	8601.060	549/544
	Height 200 mm	1 set	8702.060	8602.060	549/544
Base/plinth trim, modular		4	2913.000	–	549
Accessories					
Cable clamp rails		2	4192.000	4192.000	717
Wiring plan pocket, sheet steel		1	4118.000	4118.000	617
System light		see page 679			
Alternative lock systems		see page 600			

For areas at risk from earthquakes

TS 8 for earthquake zone 1, 2 and 3 to Bellcore
TS 8806.500:
W x H x D 800 x 2000 x 600 mm

With base/plinth (base/plinth components front and rear, see page 543 and base/plinth trim, side, see page 544), 100 mm high with a weight load of 125 kg spread evenly over the mounting plate.

Note:
These versions have been tested and meet the requirements to Telcordia GR 63-CORE. They should be seen as a comparative variable to the customer's own plant, since the certification of empty enclosures is not possible.

TS 8 for earthquake zone 4 to Bellcore
TS 8806.500:
W x H x D 800 x 2000 x 600 mm

Fitted with:
– Earthquake kit and
– Earthquake base/plinth, see page 81,
with weight load of 450 kg distributed evenly over the mounting plate.

(Photo shows TS 8 for earthquake zone 4 to Bellcore)

Earthquake kit

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:

1 2 side reinforcements, bottom

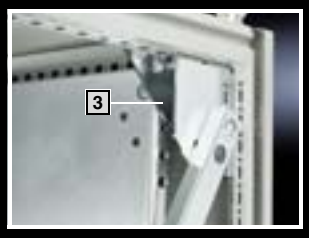
2 2 bracing struts each, sides

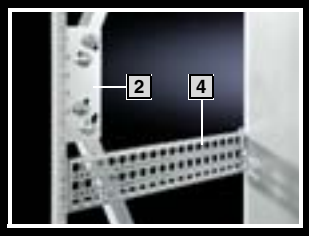
3 8 gusset plates

4 Mounting plate attachment and reinforcement including assembly parts

For enclosures W x H x D mm	Packs of	Model No. TS
800 x 2000 x 600	1	**8613.860**
600 x 2000 x 600	1	**8613.660**[1)]
600 x 2000 x 400	1	**8613.640**[1)]

[1)] Extended delivery times.





Earthquake base/plinth

Height 100 mm

Material:
– Corner pieces: Sheet steel 5 mm
– Trim panels Sheet steel 2 mm

Surface finish:
Powder-coated

Colour:
RAL 7022

Supply includes:
1 set =
– 4 corner pieces
– 2 depth stays
– 1 trim panel each front and rear
fully assembled.

For enclosures W x D mm	Packs of	Model No. TS
800 x 600	1	**8601.860**
600 x 600	1	**8601.660**[1)]
600 x 400	1	**8601.640**[1)]

[1)] Extended delivery times.

Baying systems TS 8

System accessories Page 537 **ISV installation modules** From page 362 **ISV accessories** Page 369

Material:
– Sheet steel
– Contact hazard protection frame: Hard PVC

Surface finish:
– Enclosure frame: Dipcoat-primed
– Door(s), roof, rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
– Enclosure frame, roof, rear panel, door(s): RAL 7035
– Contact hazard protection frame: RAL 9002

Supply includes:
– Enclosure frame with mounting level, door(s), 3 mm double-bit lock insert
– Three-piece gland plates
– Rear panel
– Roof plate
– Contact hazard protection frame
– 4 eyebolts

Testing:
Design certificate to IEC 61 439-1/-2

Detailed drawings/ Technical information:
Available on the Internet.

ISV-TS 8 enclosures for distribution enclosures up to 630 A

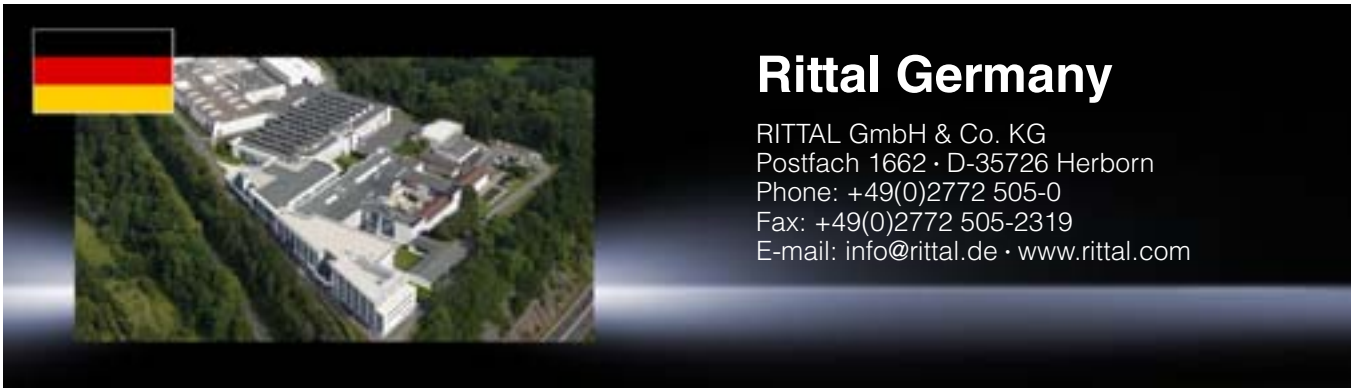
Width mm		Packs of	600		850		1100		Page
Height mm			2000		2000		2000		
Depth mm			400	600	400	600	400	600	
Model No. SV		1	**9665.945**	**9665.905**	**9665.955**	**9665.915**	**9665.965**	**9665.925**	
Door(s)			1	1	1	1	2	2	
Approximate weight (kg)			89.5	94.5	113.5	120	157	167	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.600	8601.600	8601.850	8601.850	8601.300	8601.300	543
	Height 200 mm	1 set	8602.600	8602.600	8602.850	8602.850	8602.100	8602.100	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.060	8601.040	8601.060	8601.040	8601.060	544
	Height 200 mm	1 set	8602.040	8602.060	8602.040	8602.060	8602.040	8602.060	544
Flex-Block		see page 540							
Levelling component for base/plinth		see page 546							
Accessories									
Cable clamp rails		2	4191.000	4191.000	–	–	–	–	717
Roof plates for cable entry glands[1]	IP 55	1	9665.943	9665.903	9665.953	9665.913	9665.963	9665.923	622
Cable entry plates[2]		2	8800.060	8800.060	–	–	–	–	701
Side panels		2	8104.235	8106.235	8104.235	8106.235	8104.235	8106.235	567
Cable entry glands		see page 623							
Alternative lock systems		see page 600							

[1] To exchange for the TS standard roof
[2] Cable entry grommets, see page 702.

ISV-TS 8 enclosures for distribution enclosures up to 1600 A

Width mm		Packs of	600	850	Page
Height mm			2000	2000	
Depth mm			600	600	
Model No. SV		1	**9665.975**	**9665.985**	
Door			1	1	
Approximate weight (kg)			94.5	120	
Base/plinth					
Components front and rear	Height 100 mm	1 set	8601.600	8601.850	543
	Height 200 mm	1 set	8602.600	8602.850	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	544
Also required					
Support bracket		24 set	4183.000	4183.000	661
Punched sections without mounting flanges		4	4376.000	4382.000	652
System attachment for mounting the Maxi-PLS busbar support SV 9649.160 and busbar support SV 3052.000, see page 340		2	**9665.971**	**9665.971**	–
Flex-Block		see page 540			
Levelling component for base/plinth		see page 546			
Accessories					
Cable clamp rails		2	4191.000	–	717
Roof plates for cable entry glands[1]	IP 55	1	9665.903	9665.913	622
Cable entry plates[2]		2	8800.060	–	701
Side panels		2	8106.235	8106.235	567
Cable entry glands		see page 623			
Alternative lock systems		see page 600			

[1] To exchange for the TS standard roof
[2] Cable entry grommets, see page 702.



Baying systems TS 8

System accessories Page 537 **NH slimline fuse-switch disconnectors size 00 – 3** Page 306/307 **SV components** From page 327

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Door(s), roof, rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Protection category:
Up to IP 54, depending on the panels.

Supply includes:
– Enclosure frame with door(s), 3 mm double-bit lock insert
– Roof
– Rear panel
– Three-piece gland plates
– TS punched section with mounting flange.

Testing:
– Design certificate to IEC 61 439-1/-2
– IEC 61 641

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

1 SV-TS 8 enclosures for Rittal Ri4Power applications (depth 600 mm)

Without mounting plate							
Width mm		Packs of	600	800	1000	1200	Page
Height mm			2000	2000	2000	2000	
Depth mm			600	600	600	600	
Model No. SV		1	**9660.605**[1)]	**9660.635**[1)]	**9660.695**[1)]	**9660.655**[1)]	
Technical specifications correspond to Model No. TS			8606.500	8806.500	8006.500	8206.500	76
Door(s)			1	1	2	2	
Weight (kg)			76.0	92.6	113.7	137.6	
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.000	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.060	544
Flex-Block		see page 540					
Levelling component for base/plinth		see page 546					
Accessories							
Cable clamp rails		2	4191.000	4192.000	4336.000	4196.000	717
Cable entry plates[2)]		2	8800.060	8800.080	–	–	701
		4	–	–	8800.100	8800.120	701
Side panels		2	8106.235	8106.235	8106.235	8106.235	567
Roof plates[3)] for protection category/design	IP 43/vented	1	9671.766	9671.786	–	–	622
	IP 2X/vented	1	9660.235	9660.245	9660.255	9660.265	622
Roof plates for cable entry glands[3)]		1	9665.903	9671.586	–	–	622
Roof plates with pressure relief function[3)]		1	9660.935	9660.945	9660.955	9660.965	622
Contact hazard protection cover plate for NH slimline fuse-switch disconnectors[4)]		1 set	9660.460	9660.470	9660.480	9660.490	343
Mounting brackets		24	9660.090	9660.090	9660.090	9660.090	344
Blanking cover		see page 344					
Alternative lock systems		see page 600					
Enclosure configuration		see page 592					
Compartment configuration		see page 345					

[1)] Without mounting plate. [2)] Cable entry grommets, see page 702. [3)] To exchange for the TS standard roof.
[4)] Only used when mounting the Maxi-PLS system in the rear section.

1 SV-TS 8 enclosures for Rittal Ri4Power applications (depth 800 mm)

Without mounting plate						
Width mm		Packs of	600	800	1200	Page
Height mm			2000	2000	2000	
Depth mm			800	800	800	
Model No. SV		1	**9660.805**[1)]	**9660.835**[1)]	**9660.855**[1)]	
Technical specifications correspond to Model No. TS			8608.500	8808.500	8208.500	76
Door(s)			1	1	2	
Weight (kg)			83.0	99.1	146.0	
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.080	8602.080	8602.080	544
Flex-Block		see page 540				
Levelling component for base/plinth		see page 546				
Accessories						
Cable clamp rails		2	4191.000	4192.000	4196.000	717
Cable entry plates[2)]		2	8800.060	8800.080	–	701
		4	–	–	8800.120	701
Side panels		2	8108.235	8108.235	8108.235	567
Roof plates[3)] for protection category/design	IP 43/vented	1	9671.768	9671.788	–	622
	IP 2X/vented	1	9659.525	9659.535	9659.555	622
Roof plates for cable entry glands[3)]		1	9671.568	9671.588	–	622
Roof plates with pressure relief function[3)]		1	9671.468	9671.488	–	622
Mounting brackets		24	9660.090	9660.090	9660.090	344
Blanking cover		see page 344				
Alternative lock systems		see page 600				
Enclosure configuration		see page 592				
Compartment configuration		see page 345				

[1)] Without mounting plate. [2)] Cable entry grommets, see page 702. [3)] To exchange for the TS standard roof.

Baying systems TS 8

System accessories Page 537 **SV components** From page 327

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Protection category:
Up to IP 54, depending on the panels.

Supply includes:
– Enclosure frame
– Rear panel
– Three-piece gland plates

Testing:
– Design certificate to IEC 61 439-1/-2
– IEC 61 641

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

2 SV-TS 8 modular enclosures (height 1800 mm)

Width mm		Packs of	400	600	800	Page
Height mm			1800	1800	1800	
Depth mm			600	600	600	
Model No. SV		1	**9670.486**	**9670.686**	**9670.886**	
Weight (kg)			42.0	49.0	58.5	
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	544
Flex-Block		see page 540				
Levelling component for base/plinth		see page 546				
Also required						
Side panels for protection category	IP 55	2	8186.235	8186.235	8186.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.646	9671.666	9671.686	622
	IP 43/vented	1	9671.746	9671.766	9671.786	622
	IP 2X/vented	1	9671.846	9660.235	9660.245	622
Roof plates for cable entry gland	IP 55	1	9671.546	9665.903	9671.586	622
Roof plates with pressure relief function		1	9671.446	9660.935	9660.945	622
Front trim panels for protection category	IP 54/sealed	1 set	9671.014	9671.016	9671.018	594
	IP 2X/vented	1 set	9671.034	9671.036	9671.038	594
Upgrade kit for front panels IP 2X	IP 43	1 set	9671.044	9671.046	9671.048	594
Partial doors for clearance height with front trim panel 100/100 mm		1	9671.156	9671.176	9671.196	592
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	9672.014	9672.016	9672.018	593
	IP 2X/vented	1 set	9672.034	9672.036	9672.038	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	9672.024	9672.026	9672.028	593
	IP 2X/vented	1 set	9672.044	9672.046	9672.048	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	9672.054	9672.056	9672.058	593
Partial doors for modular configuration		1	see page 590			
Angular baying brackets		4	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	578
Accessories						
Enclosure configuration		see page 592				
Compartment configuration		see page 345				

2 SV-TS 8 modular enclosures (height 2000 mm)

Width mm		Packs of	400	600	800	400	600	800	Page
Height mm			2000	2000	2000	2000	2000	2000	
Depth mm			600	600	600	800	800	800	
Model No. SV		1	**9670.406**	**9670.606**	**9670.806**	**9670.408**	**9670.608**	**9670.808**	
Weight (kg)			43.8	51.0	61.0	43.8	53.7	64.2	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.400	8601.600	8601.800	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.400	8602.600	8602.800	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	544
Flex-Block		see page 540							
Levelling component for base/plinth		see page 546							
Also required									
Side panels for protection category	IP 55	2	8106.235	8106.235	8106.235	8108.235	8108.235	8108.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.646	9671.666	9671.686	9671.648	9671.668	9671.688	622
	IP 43/vented	1	9671.746	9671.766	9671.786	9671.748	9671.768	9671.788	622
	IP 2X/vented	1	9671.846	9660.235	9660.245	9671.848	9659.525	9659.535	622
Roof plates for cable entry gland	IP 55	1	9671.546	9665.903	9671.586	9671.548	9671.568	9671.588	622
Roof plates with pressure relief function		1	9671.446	9660.935	9660.945	9671.448	9671.468	9671.488	622
Front trim panels for protection category	IP 54/sealed	1 set	9671.014	9671.016	9671.018	9671.014	9671.016	9671.018	594
	IP 2X/vented	1 set	9671.034	9671.036	9671.038	9671.034	9671.036	9671.038	594
Upgrade kit for front panels IP 2X	IP 43	1 set	9671.044	9671.046	9671.048	9671.044	9671.046	9671.048	594
Partial doors for clearance height with front trim panel 100/100 mm		1	9671.158	9671.178	9671.198	9671.158	9671.178	9671.198	592
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	9672.014	9672.016	9672.018	9672.014	9672.016	9672.018	593
	IP 2X/vented	1 set	9672.034	9672.036	9672.038	9672.034	9672.036	9672.038	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	9672.024	9672.026	9672.028	9672.024	9672.026	9672.028	593
	IP 2X/vented	1 set	9672.044	9672.046	9672.048	9672.044	9672.046	9672.048	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	9672.054	9672.056	9672.058	9672.054	9672.056	9672.058	593
Partial doors for clearance height with front trim panel 300/100 mm		1	9671.156	9671.176	9671.196	9671.156	9671.176	9671.196	592
Partial doors for modular configuration		1	see page 590						
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	578
Accessories									
Enclosure configuration		see page 592							
Compartment configuration		see page 345							

Baying systems TS 8

2 SV-TS 8 modular enclosures (height 2200 mm)

Width mm		Packs of	400	600	800	400	600	800	Page
Height mm			2200	2200	2200	2200	2200	2200	
Depth mm			600	600	600	800	800	800	
Model No. SV		1	**9670.426**	**9670.626**	**9670.826**	**9670.428**	**9670.628**	**9670.828**	
Weight (kg)			43.2	54.0	59.4	46.1	55.8	66.0	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.400	8601.600	8601.800	8601.400	8601.600	8601.800	543
	Height 200 mm	1 set	8602.400	8602.600	8602.800	8602.400	8602.600	8602.800	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	544
Flex-Block		see page 540							
Levelling component for base/plinth		see page 546							
Also required									
Side panels for protection category	IP 55	2	8126.235	8126.235	8126.235	8128.235	8128.235	8128.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.646	9671.666	9671.686	9671.648	9671.668	9671.688	622
	IP 43/vented	1	9671.746	9671.766	9671.786	9671.748	9671.768	9671.788	622
	IP 2X/vented	1	9671.846	9660.235	9660.245	9671.848	9659.525	9659.535	622
Roof plates for cable entry gland	IP 55	1	9671.546	9665.903	9671.586	9671.548	9671.568	9671.588	622
Roof plates with pressure relief function		1	9671.446	9660.935	9660.945	9671.448	9671.468	9671.488	622
Front trim panels for protection category	IP 54/sealed	1 set	9671.014	9671.016	9671.018	9671.014	9671.016	9671.018	594
	IP 2X/vented	1 set	9671.034	9671.036	9671.038	9671.034	9671.036	9671.038	594
Upgrade kit for front panels IP 2X	IP 43	1 set	9671.044	9671.046	9671.048	9671.044	9671.046	9671.048	594
Partial doors for clearance height with front trim panel 100/100 mm		1	9671.150	9671.170	9671.190	9671.150	9671.170	9671.190	592
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	9672.014	9672.016	9672.018	9672.014	9672.016	9672.018	593
	IP 2X/vented	1 set	9672.034	9672.036	9672.038	9672.034	9672.036	9672.038	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	9672.024	9672.026	9672.028	9672.024	9672.026	9672.028	593
	IP 2X/vented	1 set	9672.044	9672.046	9672.048	9672.044	9672.046	9672.048	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	9672.054	9672.056	9672.058	9672.054	9672.056	9672.058	593
Partial doors for clearance height with front trim panel 300/100 mm		1	9671.158	9671.178	9671.198	9671.158	9671.178	9671.198	592
Partial doors for modular configuration		1	see page 590						
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	578
Accessories									
Enclosure configuration		see page 592							
Compartment configuration		see page 345							

System accessories Page 537 **SV components** From page 327

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Door(s), rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Protection category:
Up to IP 54, depending on the panels.

Supply includes:
– Enclosure frame
– Door, 3 mm double-bit lock insert
– Rear panel
– Three-piece gland plates

Testing:
– Design certificate to IEC 61 439-1/-2
– IEC 61 641

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

3 SV-TS 8 cable chamber enclosures (height 1800 mm)

Width mm		Packs of	300	400	600	Page
Height mm			1800	1800	1800	
Depth mm			600	600	600	
Model No. SV		1	**9670.396**	**9670.496**	**9670.696**	
Door(s)			1	1	1	
Weight (kg)			47.0	49.5	62.0	
Base/plinth						
Components front and rear	Height 100 mm	1 set	8601.915	8601.400	8601.600	543
	Height 200 mm	1 set	8602.915	8602.400	8602.600	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	544
Levelling component for base/plinth		see page 546				
Also required						
Side panels for protection category	IP 55	2	8186.235	8186.235	8186.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.636	9671.646	9671.666	622
	IP 43/vented	1	9671.736	9671.746	9671.766	622
	IP 2X/vented	1	–	9671.846	9660.235	622
Roof plates for cable entry gland	IP 55	1	9671.536	9671.546	9665.903	622
Roof plates with pressure relief function		1	–	9671.446	9660.935	622
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	–	9672.014	9672.016	593
	IP 2X/vented	1 set	–	9672.034	9672.036	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	–	9672.024	9672.026	593
	IP 2X/vented	1 set	–	9672.044	9672.046	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	–	9672.054	9672.056	593
Angular baying brackets		4	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	578
Accessories						
Enclosure configuration		see page 592				
Compartment configuration		see page 345				
Alternative lock systems		see page 600				

Baying systems TS 8

3 SV-TS 8 cable chamber enclosures (height 2000 mm)

Width mm		Packs of	300	400	600	300	400	600	Page
Height mm			2000	2000	2000	2000	2000	2000	
Depth mm			600	600	600	800	800	800	
Model No. SV		1	**9670.316**	**9670.416**	**9670.616**	**9670.318**	**9670.418**	**9670.618**	
Door(s)			1	1	1	1	1	1	
Weight (kg)			48.5	53.8	69.4	50.4	55.9	74.0	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.915	8601.400	8601.600	8601.915	8601.400	8601.600	543
	Height 200 mm	1 set	8602.915	8602.400	8602.600	8602.915	8602.400	8602.600	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	544
Flex-Block		see page 540							
Levelling component for base/plinth		see page 546							
Also required									
Side panels for protection category	IP 55	2	8106.235	8106.235	8106.235	8108.235	8108.235	8108.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.636	9671.646	9671.666	9671.638	9671.648	9671.668	622
	IP 43/vented	1	9671.736	9671.746	9671.766	9671.738	9671.748	9671.768	622
	IP 2X/vented	1	–	9671.846	9660.235	–	9671.848	9659.525	622
Roof plates for cable entry gland	IP 55	1	9671.536	9671.546	9665.903	9671.538	9671.548	9671.568	622
Roof plates with pressure relief function		1	–	9671.446	9660.935	–	9671.448	9671.468	622
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	–	9672.014	9672.016	–	9672.014	9672.016	593
	IP 2X/vented	1 set	–	9672.034	9672.036	–	9672.034	9672.036	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	–	9672.024	9672.026	–	9672.024	9672.026	593
	IP 2X/vented	1 set	–	9672.044	9672.046	–	9672.044	9672.046	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	–	9672.054	9672.056	–	9672.054	9672.056	593
Partial doors for clearance height with front trim panel 300/100 mm		1	–	9671.156	9671.176	–	9671.156	9671.176	592
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	578
Accessories									
Enclosure configuration		see page 592							
Compartment configuration		see page 345							
Alternative lock systems		see page 600							

3 SV-TS 8 cable chamber enclosures (height 2200 mm)

Width mm		Packs of	300	400	600	300	400	600	Page
Height mm			2200	2200	2200	2200	2200	2200	
Depth mm			600	600	600	800	800	800	
Model No. SV		1	**9670.336**	**9670.436**	**9670.636**	**9670.338**	**9670.438**	**9670.638**	
Door(s)			1	1	1	1	1	1	
Weight (kg)			47.8	57.3	75.8	50.6	61.0	80.7	
Base/plinth									
Components front and rear	Height 100 mm	1 set	8601.915	8601.400	8601.600	8601.915	8601.400	8601.600	543
	Height 200 mm	1 set	8602.915	8602.400	8602.600	8602.915	8602.400	8602.600	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.060	8601.080	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.060	8602.080	8602.080	8602.080	544
Levelling component for base/plinth		see page 546							
Also required									
Side panels for protection category	IP 55	2	8126.235	8126.235	8126.235	8128.235	8128.235	8128.235	567
Roof plates for protection category/design	IP 55/sealed	1	9671.636	9671.646	9671.666	9671.638	9671.648	9671.668	622
	IP 43/vented	1	9671.736	9671.746	9671.766	9671.738	9671.748	9671.768	622
	IP 2X/vented	1	–	9671.846	9660.235	–	9671.848	9659.525	622
Roof plates for cable entry gland	IP 55	1	9671.536	9671.546	9665.903	9671.538	9671.548	9671.568	622
Roof plates with pressure relief function		1	–	9671.446	9660.935	–	9671.448	9671.468	622
Front trim panels, top 300 mm/bottom 100 mm for protection category	IP 54/sealed	1 set	–	9672.014	9672.016	–	9672.014	9672.016	593
	IP 2X/vented	1 set	–	9672.034	9672.036	–	9672.034	9672.036	593
Front trim panels, top 100 mm/bottom 300 mm for protection category	IP 54/sealed	1 set	–	9672.024	9672.026	–	9672.024	9672.026	593
	IP 2X/vented	1 set	–	9672.044	9672.046	–	9672.044	9672.046	593
Upgrade kit for front trim panels 300/100 mm IP 2X	IP 43	1 set	–	9672.054	9672.056	–	9672.054	9672.056	593
Partial doors for clearance height with front trim panel 300/100 mm		1	–	9671.158	9671.178	–	9671.158	9671.178	592
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	8800.490	8800.490	578
Accessories									
Enclosure configuration		see page 592							
Compartment configuration		see page 345							
Alternative lock systems		see page 600							

System accessories Page 537 **SV components** From page 327

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Door(s), roof, rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Protection category:
Up to IP 3X, depending on the panels.

Supply includes:
– Enclosure frame
– Door(s), 3 mm double-bit lock insert
– Roof
– Rear panel
– Three-piece gland plates

Testing:
– Design certificate to IEC 61 439-1/-2
– IEC 61 641

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

4 SV-TS 8 switch-disconnector-fuse enclosure (height 2000 mm)

Width mm		Packs of	1000	1200	1000	1200	Page
Height mm			2000	2000	2000	2000	
Depth mm			600	600	800	800	
Model No. SV		1	**9670.006**	**9670.106**	**9670.008**	**9670.108**	
Door(s)			1	1	1	1	
Weight (kg)			97.0	116.0	104.0	123.0	
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.000	8601.200	8601.000	8601.200	543
	Height 200 mm	1 set	8602.000	8602.200	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.080	8602.080	544
Flex-Block		see page 540					
Levelling component for base/plinth		see page 546					
Also required							
Side panels for protection category	IP 55	2	8106.235	8106.235	8108.235	8108.235	567
Front trim panels, top 336 mm/ bottom 136 mm for protection category	IP 3X	1 set	9674.340	9674.340	9674.340	9674.340	354
Front trim panels, top 186 mm/ bottom 336 mm for protection category	IP 3X	1 set	9674.342	9674.342	9674.342	9674.342	354
Contact hazard protection, cable chamber	Roof section	1 set	9674.362	9674.366	9674.364	9674.368	355
	Rear section	1 set	9674.372	9674.376	9674.372	9674.376	355
Assembly kit for fuses	Jean Müller	1	9674.350	9674.350	9674.350	9674.350	354
	ABB/Siemens	1	9674.356	9674.356	9674.356	9674.356	354
Divider panel for switch-disconnector-fuse section	Busbar system in the roof section	1	9674.306	9674.306	9674.308	9674.308	355
	Busbar system in the rear section	1	9674.305	9674.305	9674.307	9674.307	355
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	578
Accessories							
Roof plates for protection category/design[1)]	IP 2X/vented	1	9660.255	9660.265	9659.545	9659.555	622
Roof plates with pressure relief function[1)2)]		1	9660.955	9660.965	–	–	622
Enclosure configuration		see page 592					
Compartment configuration		see page 345					

[1)] In exchange for the standard TS roof. [2)] Other sizes available on request.

Baying systems TS 8

4 SV-TS 8 switch-disconnector-fuse enclosure (height 2200 mm)

Width mm		Packs of	1000	1200	1000	1200	Page
Height mm			2200	2200	2200	2200	
Depth mm			600	600	800	800	
Model No. SV		1	**9670.026**	**9670.126**	**9670.028**	**9670.128**	
Door(s)			1	1	1	1	
Weight (kg)			102.0	122.0	109.0	129.0	
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.000	8601.200	8601.000	8601.200	543
	Height 200 mm	1 set	8602.000	8602.200	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.060	8601.060	8601.080	8601.080	544
	Height 200 mm	1 set	8602.060	8602.060	8602.080	8602.080	544
Flex-Block		see page 540					
Levelling component for base/plinth		see page 546					
Also required							
Side panels for protection category	IP 55	2	8126.235	8126.235	8128.235	8128.235	567
Front trim panels, top 336 mm/ bottom 136 mm for protection category	IP 3X	1 set	9674.340	9674.340	9674.340	9674.340	354
Front trim panels, top 186 mm/ bottom 336 mm for protection category	IP 3X	1 set	9674.342	9674.342	9674.342	9674.342	354
Contact hazard protection, cable chamber	Roof section	1 set	9674.362	9674.366	9674.364	9674.368	355
	Rear section	1 set	9674.372	9674.376	9674.372	9674.376	355
Assembly kit for fuses	Jean Müller	1	9674.352	9674.352	9674.352	9674.352	354
	ABB/Siemens	1	9674.358	9674.358	9674.358	9674.358	354
Divider panel for switch-disconnector-fuse section	Busbar system in the roof section	1	9674.326	9674.326	9674.328	9674.328	355
	Busbar system in the rear section	1	9674.325	9674.325	9674.327	9674.327	355
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	578
Accessories							
Roof plates for protection category/design[1]	IP 2X/vented	1	9660.255	9660.265	9659.545	9659.555	622
Roof plates with pressure relief function[1][2]		1	9660.955	9660.965	–	–	622
Enclosure configuration		see page 592					
Compartment configuration		see page 345					

[1] In exchange for the standard TS roof.
[2] Other sizes available on request.

System accessories Page 537 **SV components** From page 327

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Roof, rear panel, front trip panel, gland plate: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:
RAL 7035

Protection category:
Up to IP 55

Supply includes:
– Enclosure frame
– Front trim panel
– Roof
– Rear panel
– Gland plate

Testing:
– Design certificate to IEC 61 439-1/-2
– IEC 61 641

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

5 SV-TS 8 busbar enclosures (width 200 mm)

Width mm		Packs of	200	200	200	200	Page
Height mm			2000	2200	2000	2200	
Depth mm			600	600	800	800	
Model No. SV		1	**9670.206**	**9670.226**	**9670.208**	**9670.228**	
Weight (kg)			34.0	36.6	37.5	40.0	
Base/plinth[1)]							
Also required							
Side panels for protection category	IP 55	2	8106.235	8126.235	8108.235	8128.235	567
Coupling set mounting kit		1 set	9674.196	9674.196	9674.198	9674.198	351
Angular baying brackets		4	8800.430	8800.430	8800.430	8800.430	579
Baying connectors, external		6	8800.490	8800.490	8800.490	8800.490	578
Accessories							
Compartment configuration			see page 345				

[1)] The busbar enclosure is on one base/plinth together with the main enclosure, i.e. please select a base/plinth for the main enclosure which is 200 mm wider.

Rittal Canada

RITTAL Systems Ltd.
6485 Ordan Drive · Missisauga ON L5T 1X2
Canada
Phone: +1 (905) 795-0777
Fax: +1 (905) 795-9548
Toll-free: 1-800-399-0748
E-mail: marketing@rittal.ca · www.rittal.ca

System enclosure SE 8

Perfect compatibility

- With the TS 8 baying system in width, height and depth
- Identical system accessories for all mounting parts in SE 8 and TS 8

Base installation

- Two base/plinth systems can be used:
  - TS 8 base/plinth and the Flex-Block base/plinth system
- Maximum versatility with cable entry:
  - Cable entry plates for grommets or connector glands
  - EMC gland plates
  - Cable clamp rail with cable clamps
  - C rail with cable clamps

Wide range of materials with a high protection category and excellent stability

- Protection category IP 55 including the 1800 mm wide free-standing enclosure
- Stainless steel enclosures are easy to clean, thanks to their solid basic form

System enclosure SE 8

1. Complete compatibility with TS 8 system accessories for interior installation
2. Time saving – Installation can begin directly, no assembly of side and rear panels
3. High load capacity of the mounting plate and enclosure structure
4. Fully compatible with all gland plate modules and the TS 8 base/plinth as well as the Flex-Block base/plinth system
5. Minimal planning effort – One Model Number = Complete enclosure

System enclosure SE 8

System accessories Page 537 **SE 8 stainless steel** Page 195

The system enclosure is based on the TS 8 platform and replaces enclosures in the ES 5000 series.

Material:
- Enclosure: Sheet steel, 1.5 mm
- Door: Sheet steel, 2.0 mm
- Rear panel and gland plates: Sheet steel, 1.5 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure, door/double door and rear panel: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate and gland plates: Zinc-plated

Colour:
RAL 7035

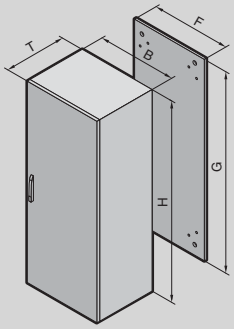
Protection category:
IP 55 to IEC 60 529, complies with NEMA 12

Supply includes:
- Enclosure with door(s), double-bit lock insert
- R/h door hinge with single-door enclosures, may be swapped to opposite side
- Mounting plate
- Gland plates
- Rear panel (in two pieces from a width of 1600 mm), detachable

Note:
- The system accessories for this enclosure system may be found on the following order pages, with references to the respective product groups in the section on system assembly
- The system accessories classified under “ES” can only be used with free-standing enclosures in the ES 5000 series

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.



Width: 600 – 800 mm

Width (B) mm		Packs of	600	800	800	800	800	Page
Height (H) mm			1800	1800	2000	2000	2000	
Depth (T) mm			400	400	400	500	600	
Mounting plate width (F) mm			499	699	699	699	699	
Mounting plate height (G) mm			1696	1696	1896	1896	1896	
Model No. SE		1	**5830.500**	**5831.500**	**5832.500**	**5833.500**	**5834.500**	
Door(s)			1	1	1	1	1	
Base/plinth								
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.800	8601.800	8601.800	543
	Height 200 mm	1 set	8602.600	8602.800	8602.800	8602.800	8602.800	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.040	8601.040	8601.050	8601.060	544
	Height 200 mm	1 set	8602.040	8602.040	8602.040	8602.050	8602.060	544
Roof								
Eyebolts		4	4568.000	4568.000	4568.000	4568.000	4568.000	626
Rail systems								
Punched section with mounting flange, outer level		4	8612.140	8612.140	8612.140	8612.150	8612.160	647
Punched section with mounting flange, inner level		4	8612.040	8612.040	8612.040	8612.050	8612.060	647
Other rail systems, based on TS 8		see from page 644						
Base								
Cable entry plate		2	8800.060	8800.080	8800.080	8800.080	8800.080	701
Accessories								
Cable clamp rails for cable clamps		2	4191.000	4192.000	4192.000	4192.000	4192.000	717
Alternative lock systems		see page 600						

Width: 1000 – 1800 mm

Width (B) mm		Packs of	1000	1200	1600	1200	1200	1200	1800	Page
Height (H) mm			1800	1800	1800	2000	2000	2000	2000	
Depth (T) mm			400	400	400	400	500	600	500	
Mounting plate width (F) mm			899	1099	1499	1099	1099	1099	1699	
Mounting plate height (G) mm			1696	1696	1696	1896	1896	1896	1896	
Model No. SE		1	**5840.500**	**5841.500**	**5842.500**	**5843.500**	**5844.500**	**5845.500**	**5846.500**	
Door(s)			2	2	2	2	2	2	2	
Base/plinth										
Components front and rear	Height 100 mm	1 set	8601.000	8601.200	8601.920	8601.200	8601.200	8601.200	8601.980	543
	Height 200 mm	1 set	8602.000	8602.200	8602.920	8602.200	8602.200	8602.200	8602.980	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.040	8601.040	8601.040	8601.050	8601.060	8601.050	544
	Height 200 mm	1 set	8602.040	8602.040	8602.040	8602.040	8602.050	8602.060	8602.050	544
Roof										
Eyebolts		4	4568.000	4568.000	4568.000	4568.000	4568.000	4568.000	4568.000	626
Rail systems										
Punched section with mounting flange, outer level		4	8612.140	8612.140	8612.140	8612.140	8612.150	8612.160	8612.150	647
Punched section with mounting flange, inner level		4	8612.040	8612.040	8612.040	8612.040	8612.050	8612.060	8612.050	647
Other rail systems, based on TS 8		see from page 644								
Base										
Cable entry plate		2	8800.100	8800.120	–	8800.120	8800.120	8800.120	–	701
Accessories										
Cable clamp rails for cable clamps		2	4336.000	4196.000	4338.000	4196.000	4196.000	4196.000	4339.000	717
Alternative lock systems		see page 600								

Network distribution enclosures

Network enclosures TS 8

Pre-configured, doors unvented 102
Pre-configured, doors unvented/vented 103
Pre-configured, doors/rear wall unvented 104
Pre-configured, doors unvented, divided 104
Network enclosures TS 8 105

Network enclosures TE 7000

Pre-configured 107
600 mm width 108
800 mm width 109

Distributor racks

TE 7000 open 110
Data Rack 111

Network enclosures TS 8

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Material:
– Enclosure: Sheet steel
– Glazed door: Single-pane safety glass, 3 mm

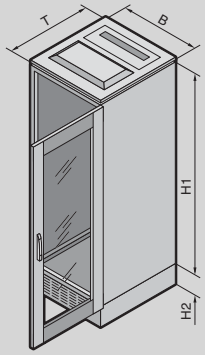
Surface finish:
– Enclosure frame: Dipcoat-primed
– Doors and roof: Dipcoat-primed, powder-coated
– Gland plates, punched sections with mounting flanges and mounting angles: Zinc-plated

Colour:
RAL 7035

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



Pre-configured, doors unvented

U	Packs of	24	24	38	42
Width (B) mm		600	800	800	800
Height (H1 + H2) mm		1200 + 100	1200 + 100	1800 + 100	2000 + 100
Depth (T) mm		600	800	800	800
Distance between levels, preconfigured mm		–	498	498	498
Glazed aluminium door at the front, 180°, with comfort handle for semi-cylinder and security lock 3524 E	1	■	■	■	■
Sheet steel door at the rear, 130°, with handle and security lock 3524 E	1	■	■	■	■
482.6 mm (19″) mounting level at the front and rear, cranked mounting angles screw-fastened onto installation brackets approx. 150 mm behind the front edge of the frame, depth-variable		–	■	■	■
482.6 mm (19″) mounting angle at the front, cranked mounting angle screw-fastened to TS punched sections with mounting flanges as support strips		■	–	–	–
Gland plate mounted at front as infill panel	1	–	■	■	■
Gland plate, one-piece, vented, with cable entry	1	■	–	–	–
Roof plate for cable entry, two-piece	1	■	■	■	■
Including side panels	2	■	■	–	■
Model No. DK	1	**7830.100**	**7830.110**	**7830.850**	**7830.200**
Supply includes					
Baying kit TS 8800.500	1 set	–	–	■	–
Base/plinth vented, 100 mm high	1	■	■	■	■
Earthing of all enclosure panels pre-configured	1 set	■	■	■	■
Levelling feet (incl. base/plinth adaptor)	4	■	■	■	■
Spacers for raising the roof	4	■	■	■	■
Cable clamp rails for the inner frame level	4	■	■	■	■
Cable shunting rings, plastic	10	■	■	■	■
Captive nuts M6, conductive	50	■	■	■	■
Multi-tooth screws M6	50	■	■	■	■
Accessories					
Side panel, lockable, see page 569	1	–	–	7824.188	–

■ Included with the supply.

Pre-configured, doors unvented

U	Packs of	42	42	42	42	47
Width (B) mm		800	800	800	800	800
Height (H1 + H2) mm		2000 + 100	2000 + 100	2000 + 100	2000 + 100	2200 + 100
Depth (T) mm		800	800	1000	1000	800
Distance between levels, pre-configured mm		498	498	740	740	498
Glazed aluminium door at the front,180°, with comfort handle for semi-cylinder and security lock 3524 E	1	■	■	■	■	■
Sheet steel door at the rear, 130°, with handle and security lock 3524 E	1	■	■	■	■	■
482.6 mm (19˝) mounting level at the front and rear, cranked mounting angles screw-fastened onto installation brackets approx. 150 mm behind the front edge of the frame, depth-variable		■	■	■	■	■
Gland plate mounted at front as infill panel	1	■	■	■	■	■
Roof plate for cable entry, two-piece	1	■	■	■	■	■
Including side panels	2	–	■	■	–	–
Model No. DK	1	**7830.250**	**7830.202**	**7830.230**	**7830.240**	**7830.270**
Supply includes						
Baying kit TS 8800.500	1 set	■	–	–	■	■
Base/plinth vented, 100 mm high	1	■	■	■	■	■
Earthing of all enclosure panels preconfigured	1 set	■	■	■	■	■
Levelling feet (incl. base/plinth adaptor)	4	■	■	■	■	■
Spacers for raising the roof	4	■	■	■	■	■
Cable clamp rails for the inner frame level	4	■	■	■	■	■
Cable shunting rings, plastic	10	■	■	■	■	■
Captive nuts M6, conductive	50	■	■	■	■	■
Multi-tooth screws M6	50	■	■	■	■	■
Also included: Compact light (8 W), mounting kit (magnetic), 482.6 mm (19˝) socket strip, 7-way (earthing-pin), door-operated switch, junction box incl. connection accessories, 482.6 mm (19˝) component shelf (500 mm) incl. mounting accessories		–	■	–	–	–
Accessories						
Side panel, lockable, see page 569	1	7824.208	–	–	7824.200	7824.228

■ Included with the supply.

Pre-configured, doors vented

U	Packs of	24	42	42	47
Width (B) mm		800	800	800	800
Height (H1 + H2) mm		1200 + 100	2000 + 100	2000 + 100	2200 + 100
Depth (T) mm		1000	1000	1000	1000
Distance between levels, pre-configured mm		740	740	740	740
Glazed sheet steel door at the front, 180°, with comfort handle for semi-cylinder and security lock 3524 E	1	■	■	■	■
Vented sheet steel door at the rear, 180°, with handle and security lock 3524 E	1	■	■	■	■
482.6 mm (19˝) mounting level at the front and rear, L-shaped mounting angles screw-fastened onto 2 or 3 support strips, depth-variable		■	■	■	■
Gland plate, one-piece, vented, with cable entry	1	■	■	■	■
Roof plate for cable entry	1	■	■	■	■
Including side panels	2	■	■	–	–
Model No. DK	1	**7830.130**	**7830.330**	**7830.335**	**7830.380**[1)]
Supply includes					
Baying kit TS 8800.500	1 set	–	–	■	■
Base/plinth vented, 100 mm high	1	■	■	■	■
Earthing of all enclosure panels pre-configured	1 set	■	■	■	■
Levelling feet (incl. base/plinth adaptor)	4	■	■	■	■
Spacers for raising the roof	4	■	■	■	■
Cable clamp rails for the inner frame level	4	■	■	■	■
Cable shunting rings, plastic	10	■	■	■	■
Captive nuts M6, conductive	50	■	■	■	■
Multi-tooth screws M6	50	■	■	■	■
Accessories					
Side panel, lockable, see page 569	1	–	–	7824.200	7824.220

■ Included with the supply. [1)] Extended delivery times.

Network enclosures TS 8

Pre-configured, doors/rear wall unvented

U	Packs of	42	40
Width (B) mm		800	800
Height (H1 + H2 + H3) mm		2000 + 100 + 25	2000 + 100 + 25
Depth (T) mm		800	800
Distance between levels, pre-configured mm		498	–
Glazed aluminium door at the front, 180°, with comfort handle for semi-cylinder and security lock 3524 E	1	■	■
Sheet steel door at the rear, 130°, with handle and security lock 3524 E	1	■	–
Sheet steel rear panel	1	–	■
482.6 mm (19″) mounting level at the front and rear, L-shaped mounting angles screw-fastened onto support strips, depth-variable		■	–
Swing frame, large, with side trim panel for the installation of 482.6 mm (19″) mounting components whilst utilising the full enclosure height (130°, 150 kg static load capacity)		–	■
Gland plate, one-piece, vented, with cable entry	1	–	■
Gland plate mounted at front as infill panel	1	■	–
Roof plate with cut-out for fan insert and vent panel on spacers	1	■	■
Including side panels	2	–	–
Model No. DK	1	**7830.550**	**7830.670**
Supply includes			
Baying kit TS 8800.500	1 set	■	■
Base/plinth vented, 100 mm high	1	■	■
Earthing of all enclosure panels pre-configured	1 set	■	■
Levelling feet (incl. base/plinth adaptor)	4	■	■
Spacers for raising the roof	4	■	■
Cable clamp rails for the inner frame level	4	■	■
Cable shunting rings, plastic	10	■	■
Captive nuts M6, conductive	50	■	■
Multi-tooth screws M6	50	■	■
Accessories			
Side panel, lockable, see page 569	1	7824.208	7824.208

■ Included with the supply.

Pre-configured, doors unvented, divided

U	Packs of	42
Width (B) mm		800
Height (H1 + H2) mm		2000 + 100
Depth (T) mm		800
Distance between levels, pre-configured mm		498
Glazed sheet steel door at front, vertically divided, 180°	1	■
Sheet steel door at rear, vertically divided, 180°	1	■
482.6 mm (19″) mounting level at the front and rear, cranked mounting angles screw-fastened onto installation brackets approx. 150 mm behind the front edge of the frame, depth-variable		■
Gland plate mounted at front as infill panel	1	■
Roof plate with cut-out for fan insert and vent panel on spacers	1	■
Including side panels	2	–
Model No. DK	1	**7830.260**
Supply includes		
Baying kit TS 8800.500	1 set	■
Base/plinth vented, 100 mm high	1	■
Earthing of all enclosure panels pre-configured	1 set	■
Levelling feet (incl. base/plinth adaptor)	4	■
Spacers for raising the roof	4	■
Cable clamp rails for the inner frame level	4	■
Cable shunting rings, plastic	10	■
Captive nuts M6, conductive	50	■
Multi-tooth screws M6	50	■
Accessories		
Side panel, lockable, see page 569	1	7824.208

■ Included with the supply.

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Material:
– Sheet steel
– Glazed door: Single-pane safety glass, 3 mm

Surface finish:
– Enclosure frame: Dipcoat-primed
– Doors and roof: Dipcoat-primed, powder-coated
– Base plates and punched sections with mounting flanges: Zinc-plated

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529
in connection with side panels, screw-fastened

Supply includes:
Product-specific supply scope, see table.

Approvals:
– UL
– cUL

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

U	15	15	20	20	24	24	24	24
Width mm	600	600	600	600	600	600	800	800
Height mm	800	800	1000	1000	1200	1200	1200	1200
Depth mm	600	600	600	600	600	600	600	600
Model No. DK	**7820.100**	**7821.100**	**7820.200**	**7821.200**	**7820.300**	**7821.300**	**7820.340**[1)]	**7821.340**
Supply includes								
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	–	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	■	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■	■	■
Base/plinth	see page 542							

U	24	29	29	33	33	33	33
Width mm	800	600	600	600	600	600	600
Height mm	1200	1400	1400	1600	1600	1600	1600
Depth mm	800	800	800	600	600	800	800
Model No. DK	**7820.350**	**7820.410**	**7821.410**	**7820.500**	**7821.500**	**7820.510**	**7821.510**
Supply includes							
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■	■
Base/plinth	see page 542						

■ Included with the supply. [1)] Extended delivery times.

Network enclosures TS 8

U	38	38	38	38	38	38
Width mm	600	600	600	600	800	800
Height mm	1800	1800	1800	1800	1800	1800
Depth mm	600	600	800	800	800	800
Model No. DK	**7820.600**	**7821.600**	**7820.610**	**7821.610**	**7820.650**	**7821.650**
Supply includes						
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■
Base/plinth	see page 542					

U	42	42	42	42	42	42
Width mm	600	600	600	600	600	600
Height mm	2000	2000	2000	2000	2000	2000
Depth mm	600	600	800	800	1000	1000
Model No. DK	**7820.700**	**7821.700**	**7820.710**	**7821.710**	**7820.730**	**7821.730**
Supply includes						
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■
Base/plinth	see page 542					

U	42	42	42	42	42	42
Width mm	800	800	800	800	800	800
Height mm	2000	2000	2000	2000	2000	2000
Depth mm	600	600	800	800	1000	1000
Model No. DK	**7820.740**	**7821.740**	**7820.750**	**7821.750**	**7820.770**	**7821.770**
Supply includes						
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■
Base/plinth	see page 542					

U	47	47	47	47	47	47
Width mm	600	600	600	600	800	800
Height mm	2200	2200	2200	2200	2200	2200
Depth mm	600	600	800	800	800	800
Model No. DK	**7820.800**	**7821.800**	**7820.810**	**7821.810**	**7820.850**	**7821.850**
Supply includes						
Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	■	–	■	–	■	–
Sheet steel door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E	–	■	–	■	–	■
Sheet steel door at the rear (130°), with handle and security lock 3524 E	■	■	■	■	■	■
Gland plate, multi-piece, solid	■	■	■	■	■	■
Roof plate, solid	■	■	■	■	■	■
Base/plinth	see page 542					

■ Included with the supply.

Network enclosures TE 7000

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Benefits:
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed

Material:
– Sheet steel
– Glazed door: Single-pane safety glass, 4 mm

Surface finish:
– Mounting frame: Dipcoat-primed
– Enclosure panels: Powder-coated

Colour:
RAL 7035

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

Pre-configured

U	Packs of	24	42	42	Page
Width mm		800	800	800	
Height mm		1200	2000	2000	
Depth mm		800	800	800	
Distance between levels, pre-configured mm		495	495	495	
Model No. TE	1	**7000.840**	**7000.850**	**7000.852**	
Supply includes					
Self-supporting 482.6 mm (19″) frame structure, front and rear, depth-variable	2	■	■	■	
Glazed door at the front, incl. 130° hinge, recessed handle and security lock 3524 E	1	■	■	■	
Sheet steel door at the rear, including 130° hinge, security lock 3524 E	1	■	■	■	
Side panels, lockable, including security lock 3524 E	2	■	■	7000.652	570
Base frame with maximum cut-out (for optional population with module plates)	1	■	■	■	
Roof plate including brush strip for cable entry and concealed cut-out for optional fan	1	■	■	■	
Levelling feet (including base/plinth adaptor) supplied loose	4	■	■	■	
Spacers, 20 mm, supplied loose to raise the roof	4	■	■	■	
Base/plinth 100 mm, vented	1	■	■	■	
Tested frame earthing to IEC 60 950, fitted		■	■	■	
C rails, for cable clamping in the enclosure depth via cable clamps, supplied loose	4	■	■	■	
Cable shunting rings made of plastic, 105 x 70 mm, supplied loose	10	■	■	■	
Captive nuts M6, conductive	50	■	■	■	
Multi-tooth screw M6, with plastic washers	50	■	■	■	
Accessories					
Baying kit	1 set	7000.640	7000.640	■	582
Ergoform-S handle for semi-cylinder, to exchange for the existing lock	1	2435.000	2435.000	2435.000	607
Fan module, with 2 fans and thermostat, pre-wired ready for connection	1	7000.670	7000.670	7000.670	406
Slide rail for TE, for attachment between the 482.6 mm (19″) mounting frames, length 424 mm	2	7963.410	7963.410	7963.410	750
482.6 mm (19″) component shelf for static installation, for direct screw fastening without an installation kit, 413 mm deep, load capacity 30 kg, static	1	7000.620	7000.620	7000.620	671
482.6 mm (19″) component shelf, complete set, pull-out, 500 mm deep, load capacity 50 kg static	1 set	7000.625	7000.625	7000.625	674
Socket strip, 8-way	1	7000.630	7000.630	7000.630	696
Transport castors (only without base/plinth)	4	7000.672	7000.672	7000.672	557

■ Included with the supply.

Network enclosures TE 7000

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Benefits:
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed

Material:
– Sheet steel
– Glazed door: Single-pane safety glass, 4 mm

Surface finish:
– Mounting frame: Dipcoat-primed
– Enclosure panels: Powder-coated

Colour:
RAL 7035

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

600 mm width

U	Packs of	11	11	24	24	42	42	47	47	Page
Width mm		600	600	600	600	600	600	600	600	
Height mm		600	600	1200	1200	2000	2000	2200	2200	
Depth mm		600	800	600	800	600	800	600	800	
Distance between levels, pre-configured mm		495	495	495	495	495	495	495	495	
Model No. TE	1	**7000.390**	**7000.410**	**7000.430**	**7000.440**	**7000.500**	**7000.510**	**7000.560**[1)]	**7000.570**[1)]	
Supply includes										
Self-supporting 482.6 mm (19″) frame structure, front and rear, depth-variable	2	■	■	■	■	■	■	■	■	
Glazed door at the front, incl. 130° hinge, recessed handle and security lock 3524 E	1	■	■	■	■	■	■	■	■	
Sheet steel door at the rear, including 130° hinge, security lock 3524 E	1	■	■	■	■	■	■	■	■	
Side panels, lockable, including security lock 3524 E	2	■	■	■	■	■	■	■	■	
Base frame with maximum cut-out (for optional population with module plates)	1	■	■	■	■	■	■	■	■	
Roof plate including brush strip for cable entry and concealed cut-out for optional fan	1	■	■	■	■	■	■	■	■	
Levelling feet, M10, supplied loose	4	■	■	■	■	■	■	■	■	
Spacers, 20 mm, supplied loose to raise the roof	4	■	■	■	■	■	■	■	■	
Accessories										
Base/plinth components, front and rear, vented	1 set	7825.601	7825.601	7825.601	7825.601	7825.601	7825.601	7825.601	7825.601	543
Base/plinth trim panels, side	1 set	8601.065	8601.085	8601.065	8601.085	8601.065	8601.085	8601.065	8601.085	544
Baying kit	4	7000.640	7000.640	7000.640	7000.640	7000.640	7000.640	7000.640	7000.640	582
Fan module, with 2 fans and thermostat, pre-wired ready for connection	1	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	406
Earthing kit	1 set	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	691
Socket strip, 8-way	1	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	696
482.6 mm (19″) component shelf, complete set, pull-out, 500 mm deep, load capacity 50 kg static	1 set	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	674
Transport castors (only without base/plinth)	4	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	557

■ Included with the supply. [1)] Extended delivery times.

800 mm width

U	Packs of	24	24	42	42	42	47	47	47	Page
Width mm		800	800	800	800	800	800	800	800	
Height mm		1200	1200	2000	2000	2000	2200	2200	2200	
Depth mm		600	800	600	800	800	600	800	800	
Distance between levels, pre-configured mm		495	495	495	495	495	495	495	495	
Model No. TE	1	**7000.450**[1)]	**7000.460**	**7000.520**	**7000.530**	**7000.532**	**7000.580**[1)]	**7000.590**	**7000.592**[1)]	
Supply includes										
Self-supporting 482.6 mm (19˝) frame structure, front and rear, depth-variable	2	■	■	■	■	■	■	■	■	
Glazed door at the front, incl. 130° hinge, recessed handle and security lock 3524 E	1	■	■	■	■	■	■	■	■	
Sheet steel door at the rear, including 130° hinge, security lock 3524 E	1	■	■	■	■	■	■	■	■	
Side panels, lockable, including security lock 3524 E	2	■	■	■	■	–	■	■	■	
Base frame with maximum cut-out (for optional population with module plates)	1	■	■	■	■	■	■	■	■	
Roof plate including brush strip for cable entry and concealed cut-out for optional fan	1	■	■	■	■	■	■	■	■	
Levelling feet (including base/plinth adaptor) supplied loose	4	■	■	■	■	■	■	■	■	
Spacers, 20 mm, supplied loose to raise the roof	4	■	■	■	■	■	■	■	■	
Accessories										
Base/plinth components, front and rear, vented	1 set	7825.801	7825.801	7825.801	7825.801	7825.801	7825.801	7825.801	7825.801	543
Base/plinth trim panels, side	1 set	8601.065	8601.085	8601.065	8601.085	8601.085	8601.065	8601.085	8601.085	544
Baying kit	4	7000.640	7000.640	7000.640	7000.640	■	7000.640	7000.640	■	582
Fan module, with 2 fans and thermostat, pre-wired ready for connection	1	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	7000.670	406
Earthing kit	1 set	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	691
Socket strip, 8-way	1	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	7000.630	696
482.6 mm (19˝) component shelf, complete set, pull-out, 500 mm deep, load capacity 50 kg static	1 set	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	674
Transport castors (only without base/plinth)	4	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	7000.672	557

■ Included with the supply. [1)] Extended delivery times.

Distributor racks

482.6 mm (19˝) installation system Page 749 **Monitoring** Page 767 **Power System Module** Page 383

Benefits:
- Optimum accessibility from all sides during assembly and installation.
- Unrestricted airflow, due to the open design.
- Standard cable trays in the roof area for larger quantities of cables.
- The distance between attachment levels is infinitely variable.

Material:
Sheet steel

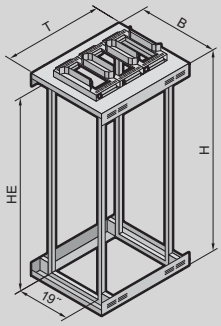
Colour:
RAL 7035

Surface finish:
Powder-coated

Load capacity:
700 kg, static

Supply includes:
– Self-supporting frame structure, with 482.6 mm (19˝) mounting level front and rear
– Open roof frame for cable entry
– 3 cable routing trays
– Open base frame with 2 punched sections with mounting flanges for individual configuration fitted in the width
– Levelling feet

Detailed drawings:
Available on the Internet.



TE 7000 open

U (HE)	Packs of	42	42	Page
Width (B) mm		600	800	
Height[1] (H) mm		2000	2000	
Depth (T) mm		1000	1000	
Distance between levels (mm) as delivered		745	745	
Model No. TE	1	**7000.940**	**7000.944**	
Accessories				
Cable management panel 482.6 mm (19˝), 1 U for horizontal cable routing, with 5 steel rings, zinc-plated, passivated, size 105 x 43 mm	1	7257.035	7257.035	729
Cable management panel 482.6 mm (19˝), 2 U for horizontal cable routing, with 5 steel rings, zinc-plated, passivated, size 125 x 85 mm	1	7257.100	7257.100	729
Shunting rings to accommodate large quantities of cables, for mounting on the side of the mounting frame, dimension 330 x 90 mm	4	7220.600	7220.600	724
Cable management panel 482.6 mm (19˝), 2 U for horizontal cable routing, with removable front panel	1	7158.100	7158.100	731
Component shelf 482.6 mm (19˝), 1/2 U static installation, depth-variable in the range from 600 – 900 mm	1	7063.720	7063.720	673
Slide rail 482.6 mm (19˝), load capacity 100 kg, for distance between 482.6 mm (19˝) levels (internal) 740 mm	2	7063.740	7063.740	750
Slide rail 482.6 mm (19˝), depth-variable within the range from 590 – 930 mm, load capacity 80 kg, static	2	7063.883	7063.883	749
C rail, variable within the range 450 – 800 mm	1	7016.140	7016.140	722
T-head rail, variable within the range 450 – 800 mm	1	7016.150	7016.150	722
Cable route for vertical cable management, for mounting at the side rear of the 482.6 mm (19˝) mounting frame, W = 100 mm, H = 1700 mm	1 set	7000.685	7000.685	726
Cable duct, 42 U	1	7827.320	7827.320	728
Cable manager, basic kit, for system-compatible cable deflection	8	7064.100	7064.100	723
Cable routing bars for 482.6 mm (19˝) system punchings	4	7111.224	7111.224	727

[1] Plus 100 mm roof-mounting/cable-routing trays.

482.6 mm (19˝) installation system Page 748 **Monitoring** Page 767 **Power System Module** Page 383

Material:
– Profile frame, base/plinth: Sheet steel
– Feet: Die-cast zinc

Colour:
– Profile frame, base/plinth: RAL 7035
– Trim panel, feet: RAL 5018

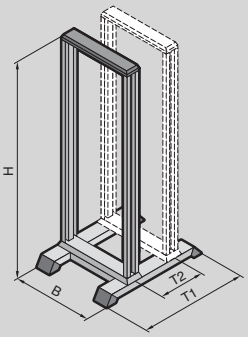
Load capacity:
Max. 150 kg, static/level

Supply includes:
– Torsionally stiff profile frame with 482.6 mm (19˝) punchings
– Stable base/plinth with integral feet, with the option for base anchoring
– Assembly parts

Note:
Order second mounting level separately.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



Data Rack

U	Packs of	31	36	40	45	Page
Width (B) mm		550	550	550	550	
Height (H) mm		1499.5	1721.8	1899.5	2121.8	
Depth (T1) mm		750	750	750	750	
Distance from the second mounting level (T2) mm[1]		min. 150 – max. 350				
Model No. DK	1	**7391.000**	**7396.000**	**7400.000**	**7445.000**	
Accessories						
Second mounting level[1]	1	7296.000	7297.000	7298.000	7299.000	748
Baying clamp	3	7494.000	7494.000	7494.000	7494.000	748
Levelling feet	4	7493.000	7493.000	7493.000	7493.000	555
Cable duct, 42 U	1	7827.320	7827.320	7827.320	7827.320	728
C rails, 482.6 mm (19˝)	6	7016.100	7016.100	7016.100	7016.100	732
Cable clamp rails, 482.6 mm (19˝)	6	7016.110	7016.110	7016.110	7016.110	732
Cable clamp strap D = 250 mm	6	7016.120	7016.120	7016.120	7016.120	732
Twin castors	4	7495.000	7495.000	7495.000	7495.000	556
Depth stays	2	7401.000	7401.000	7401.000	7401.000	748
Component shelf 2 U for one pair of mounting angles D = 250 mm	1	7119.250	7119.250	7119.250	7119.250	675
Component shelf 2 U for one pair of mounting angles D = 400 mm	1	7119.400	7119.400	7119.400	7119.400	675
Component shelf 2 U for one pair of mounting angles D = 300 mm[3]	1	7148.035	7148.035	7148.035	7148.035	673
Drawer 2 U for one pair of mounting angles	1	7281.035	7281.035	7281.035	7281.035	804
Component shelf D = 300 mm[2] [3]	1	7143.035	7143.035	7143.035	7143.035	670
Component shelf D = 400 mm[2] [3]	1	7144.035	7144.035	7144.035	7144.035	670
Component shelf D = 500 mm[2] [3]	1	7145.035	7145.035	7145.035	7145.035	670
Slide rails D max. < 190 mm	10	1962.200	1962.200	1962.200	1962.200	738
Slide rails D max. > 190 mm	10	1963.200	1963.200	1963.200	1963.200	738
Slide rails for two pairs of mounting angles[1] [2] [4]	2	7402.000	7402.000	7402.000	7402.000	748

[1] Second mounting level may be positioned on a 50 mm pitch pattern.
[2] A second pair of mounting angles is required for assembly.
[3] Stationary installation or full withdrawal, telescopic slides see page 677.
[4] Distance between levels (T2) 350 mm, can be combined with component shelf ≥ D = 500 mm.

Server enclosures

Server enclosures TS 8

Server enclosures TS 8 114
Colocation 115
For High Performance Cooling systems HPC 116

Server enclosures TE 7000

Server enclosures TE 7000 117

Server enclosures TS 8

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Enclosure panels: Dipcoat-primed, powder-coated
– Mounting angles, mounting frame and punched sections with mounting flanges: Zinc-plated

Colour:
RAL 7035

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

U	Packs of	24	42	42	47	42	42	Page
Width mm		600	600	600	600	800	800	
Height mm		1200	2000	2000	2200	2000	2000	
Depth mm		1000	1000	1200	1000	1000	1200	
Distance between levels, pre-configured mm		740	740	740	740	740	740	
482.6 mm (19″) level, flat mounting angles on punched sections with mounting flanges, front and rear, depth-variable	2	■	■	■	■	–	–	
482.6 mm (19″) mounting frames, front and rear, depth variable	2	–	–	–	–	■	■	
Model No. DK	1	**7831.433**[2)]	**7831.438**	**7831.481**	**7831.442**	**7831.446**	**7831.485**	
Supply includes								
Enclosure frame	1	■	■	■	■	■	■	
Sheet steel doors, vented[1)], front and rear	2	■	■	■	■	■	■	
Roof plate for cable entry, two-piece	1	■	■	■	■	■	■	
Levelling feet	4	■	■	■	■	■	■	
Open base, without base frame	1	■	■	■	■	■	■	
Comfort handle for semi-cylinder with security lock 3524 E	2	■	■	■	■	■	■	
Earthing of all enclosure panels pre-configured	1 set	■	■	■	■	■	■	
Accessories								
Side panels, lockable	2	7824.120	7824.200	–	7824.220	7824.200	–	569
Side panel, plug-type, divided	1	–	–	7824.310	–	–	7824.310	570
Base mounting bracket	4	8800.210	8800.210	8800.210	8800.210	8800.210	8800.210	558
Depth-variable slide rail, 1 U	2	7063.883	7063.883	7063.883	7063.883	7063.883	7063.883	749
Stabiliser, pull-out	1	7825.250	7825.250	7825.260[2)]	7825.250	7825.250	7825.260[2)]	554

■ Included with the supply. [1)] Vented surface area > 78% perforated. [2)] Delivery times available on request.

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Design features
- Robust frame structure
- Front and rear door fully vented; vented surface area > 78% perforated
- 2-point locking
- Door hinge may be swapped to opposite side without machining
- Cable entry via the base/plinth and roof (optional)
- Bayable at all levels
- Static load capacity of up to 1000 kg

Material:
Sheet steel

Surface finish:
- Enclosure frame: Dipcoat-primed
- Enclosure panels: Dipcoat-primed, powder-coated
- Mounting angles, mounting frame and punched sections with mounting flanges: Zinc-plated

Colour:
RAL 7035

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Colocation

Number of front and rear doors	Packs of	2/2	4/4	Page
U		2 x 21	4 x 10	
Width mm		600	600	
Height mm		2200	2200	
Depth mm		1000	1000	
Distance between levels, pre-configured mm		740	740	
Model No. DK	1	**7831.453**[1)]	**7831.463**[1)]	
Supply includes				
Sheet steel doors, vented, front and rear with 180° hinges		■	■	
Roof plate, solid	1	■	■	
Levelling feet	4	■	■	
482.6 mm (19″) levels, flat mounting angles on punched sections with mounting flanges, front and rear, depth-variable		■	■	
Earthing of all enclosure panels pre-configured		■	■	
Individual compartments, shielded/separate cable routing per compartment		■	■	
Comfort handle for semi-cylinder with security lock 3524 E		■	■	
Accessories				
Side panels, lockable	2	7824.220	7824.220	569
Base mounting bracket	4	8800.210	8800.210	558
Depth-variable slide rail, 1 U	2	7063.883	7063.883	749
Semi-cylinder for individual lock	2	9785.042	9785.042	604
Quick-fit baying clamps	6	8800.500	8800.500	577
Stabiliser, pull-out	1	7825.250	7825.250	554

■ Included with the supply. [1)] Extended delivery times.

Server enclosures TS 8

System accessories Page 537 **Baying system** Page 576 **Monitoring** Page 767

Load capacity:
Max. static load capacity of the interior installation 1000 kg, static

Material:
– Sheet steel
– Glazed door: Single-pane safety glass, 4 mm

Surface finish:
– Enclosure frame: Dipcoat-primed
– Enclosure panels: Additionally powder-coated
– Gland plates and 482.6 mm (19˝) mounting frame: Zinc-plated

Colour:
RAL 7035

Protection category:
IP 54 to IEC 60 529, in conjunction with solid roof plate (bayed option) and additional screw-fastened side panels with stand-alone siting.

Supply includes:
Product-specific supply scope, see table.

Photo shows a configuration example with equipment not included in the scope of supply.

For High Performance Cooling systems HPC

U	Packs of	42	42	42	42	42	42	Page
Width mm		600	600	600	800	800	800	
Height mm		2000	2000	2000	2000	2000	2000	
Depth mm		1000	1200	1200	1000	1200	1200	
Distance between levels, pre-configured mm		740	740	740	740	740	740	
Including side panels		–	–	■	–	–	■	
Model No. DK	1	**7831.810**[1)]	**7831.812**[1)]	**7831.813**[1)]	**7831.800**[1)]	**7831.802**[1)]	**7831.803**[1)]	
Supply includes								
Glazed aluminium door at the front (180°)	1	■	■	■	■	■	■	
Sheet steel door at the rear (130°)	1	■	■	■	■	■	■	
Comfort handle front and rear for semi-cylinder, security lock 3524 E	2	■	■	■	■	■	■	
Roof plate for cable entry, two-piece	1	■	■	■	■	■	■	
Levelling feet	4	■	■	■	■	■	■	
Base frame with multi-piece gland plate	1	■	■	■	■	■	■	
482.6 mm (19˝) mounting frames, front and rear, depth variable	2	■	■	■	■	■	■	
Earthing of all enclosure panels pre-configured	1 set	■	■	■	■	■	■	
Accessories								
Side panel, screw-fastened, IP 55	2	8100.235	–	■	8100.235	–	■	567
Depth-variable slide rail, 1 U, length 590 – 930 mm, 80 kg, static	2	7063.883	7063.883	7063.883	7063.883	7063.883	7063.883	749
482.6 mm (19˝) heavy-duty base, 700 mm deep, 100 kg static load capacity	1	7063.897	7063.897	7063.897	7063.897	7063.897	7063.897	672
Installation kit for heavy-duty component shelf, depth-variable	1 set	7063.890	7063.890	7063.890	7063.890	7063.890	7063.890	676
Flex-Block	see page 540							
Liquid Cooling Package	see page 461							

■ Included with the supply. [1)] Extended delivery times.

Server enclosures TE 7000

System accessories Page 537 **Power System Module** Page 383 **Monitoring** Page 767 **Climate control** Page 389

Benefits:
- No frame structure
- Optimum accessibility
- Readily dismantled and therefore easily installed

Material:
Sheet steel

Surface finish:
– Mounting frame: Dipcoat-primed
– Enclosure panels: Powder-coated

Colour:
See table.

Supply includes:
Product-specific supply scope, see table.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

U	Packs of	24	42	42	42	42	Page
Width mm		600	600	600	800	800	
Height mm		1200	2000	2000	2000	2000	
Depth mm		1000	1000	1000	1000	1000	
Distance between levels, pre-configured mm		745	745	745	745	745	
Colour		RAL 7035	RAL 7035	RAL 9005	RAL 7035	RAL 9005	
Model No. TE	1	**7000.875**	**7000.882**	**7000.885**	**7000.892**	**7000.895**	
Supply includes							
Self-supporting frame structure with 482.6 mm (19˝) mounting frame, depth-variable	2	■	■	■	■	■	
Sheet steel door vented[2)], front with moulded handle, 130° hinge, security lock 3524 E	1	■	■	■	■	■	
Sheet steel door vented[2)], rear with moulded handle, 130° hinge, security lock 3524 E	1	■	■	■	■	■	
Levelling feet	4	■	■	■	■	■	
Roof plate including brush strip for cable entry and optional fitting with an active fan unit	1	■	■	■	■	■	
Base frame with maximum cut-out for optional fitting with module plates, solid, passively vented or for cable entry	1	■	■	■	■	■	
Accessories							
Side panels, lockable, including security lock 3524 E	2	■	7000.653	7000.663	7000.653	7000.663	570
Baying kit	1 set	7000.640	■	■	■	■	582
Ergoform-S handle for semi-cylinder, to exchange for the existing lock	1	2435.000	2435.000	2452.000[1)]	2435.000	2452.000[1)]	607
Fan unit, with 2 fans and thermostat, pre-wired ready for connection	1	7000.670	7000.670	–	7000.670	–	406
Transport castors, including assembly parts.	4	7000.672	7000.672	7000.672	7000.672	7000.672	557
C rail, for cable clamping in the enclosure width via cable clamps, on the 482.6 mm (19˝) mounting frame at the rear	4	7828.060	7828.060	7828.060	7828.060	7828.060	653
Slide rail, 482.6 mm (19˝) for 740 mm distance between levels	2	7063.740	7063.740	7063.740	7063.740	7063.740	750
Cable clamp rail, depth-variable 500 – 895 mm, for cable attachment in the enclosure depth via cable ties	4	7858.162	7858.162	7858.162	7858.162	7858.162	722
Cable clamp rail, for cable attachment in the enclosure width via cable ties, on the 482.6 mm (19˝) mounting frame at the rear	4	7828.062	7828.062	7828.062	7828.062	7828.062	722
Earthing kit for TE	1 set	7000.675	7000.675	7000.675	7000.675	7000.675	691
Socket strip for TE, 8-way for earthing-pin plugs	1	7000.630	7000.630	7000.630	7000.630	7000.630	696

■ Included with the supply. [1)] Matt nickel-plated [2)] Free space in perforated plate part > 67%

Console systems/ PC enclosure systems/ Industrial Workstations

TopConsole system TP

Overview of mounting components 121
Combination options 122
600 mm wide 123
800 mm wide 124
1200 mm wide 125
1600 mm wide 126
Accessories 127

One-piece consoles TP

One-piece consoles TP 128

Universal consoles TP

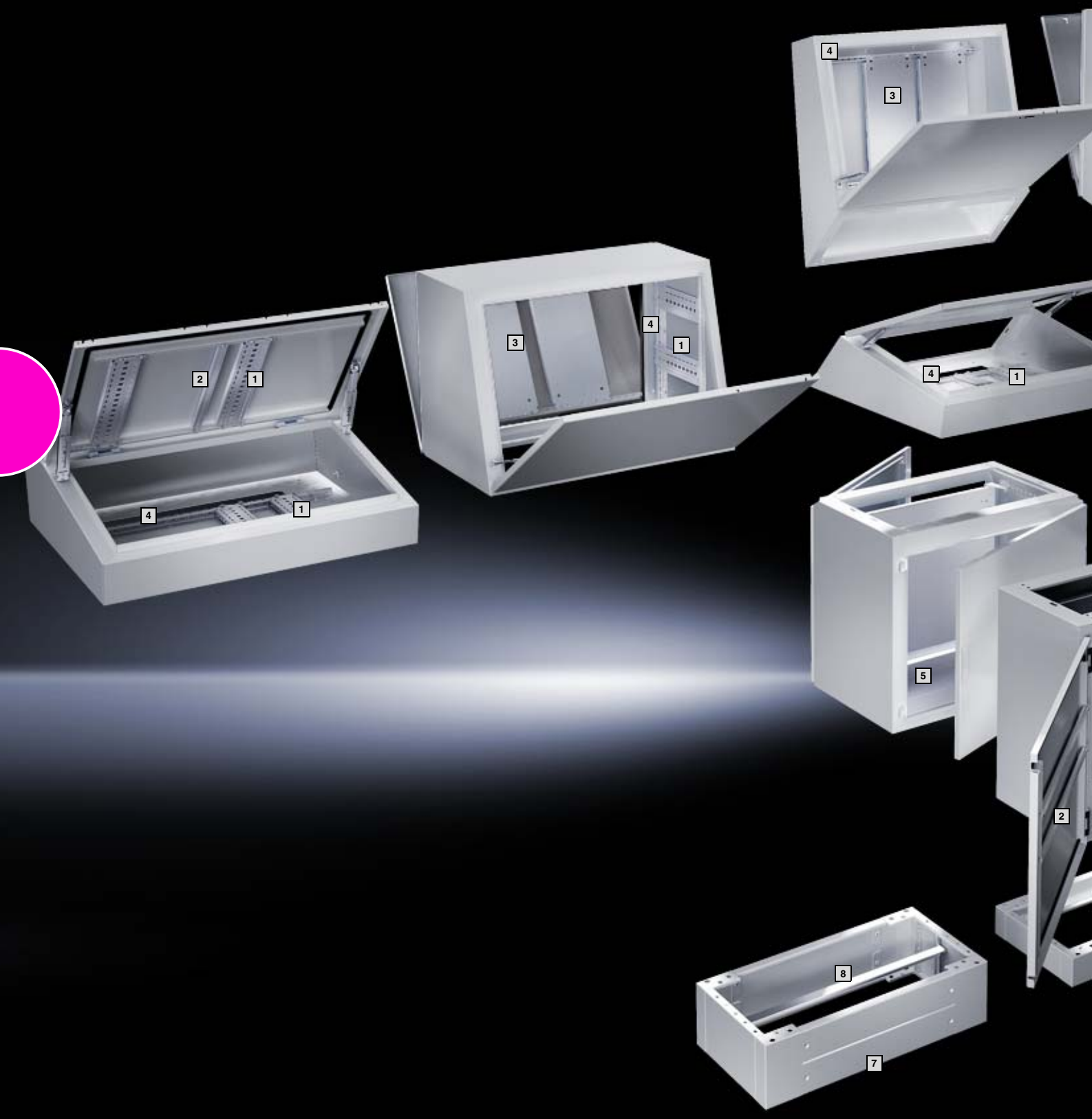
Universal consoles TP 129

PC enclosure systems

PC enclosure systems TS 8 130
Enclosure for tower PC 131

Industrial Workstations

Combination options 132
IW enclosures and worktops 133


4
3
2
1
4
1
3
4
1
4
1
4
1
5
2
8
7

TopConsole system TP

Overview of mounting components

1. Punched section with mounting flange, 17 x 73 mm
2. Support strips
3. Partial mounting plates
4. Rail for interior installation
5. Gland plates
6. Cable entry grommets
7. Base/plinth
8. Assembly bolts for base/plinth

TopConsole system TP

System accessories Page 537 **Monitors, keyboards** From page 796 **Climate control** Page 389

Material:
– Enclosure:
Sheet steel 1.5 mm
– Door and console cover:
Sheet steel, 2.0 mm,
All-round foamed-in PU seal
– Mounting plate:
Sheet steel 2.5 mm

Surface finish:
– Dipcoat-primed, powder-coated on the outside, textured paint
– Mounting plate zinc-coated on bottom part

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529,
complies with NEMA 12
(provided suitable gland plates are selected)

Supply includes:
Console
– Enclosure
– Cover hinged at bottom, including cover retainer
– Open base for individual cable entry

Console, deep
– Enclosure
– Front cover hinged at bottom, including cover retainer
– Rear door, hinged at bottom
– Open base for individual cable entry

Desk section
– Enclosure
– Cover hinged,
2 stays with automatic locking and unlocking
– Opening for running cables into the enclosure base

Pedestal
– Enclosure open at top
– Door or double door with locking rod (with depth 400 mm at the front, with depth 500 mm at the front and rear)
– Depth-adjustable mounting plate (with depth 500 mm)
– Open base for individual cable entry

Also required:
Gland plates, see page 560.

Approvals:
– CE
– UL
– cUL

Detailed drawings:
Available on the Internet.

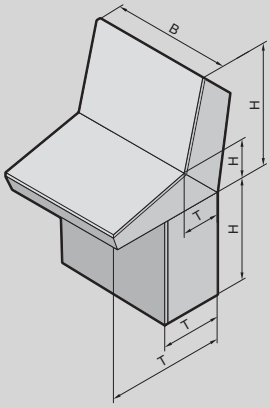
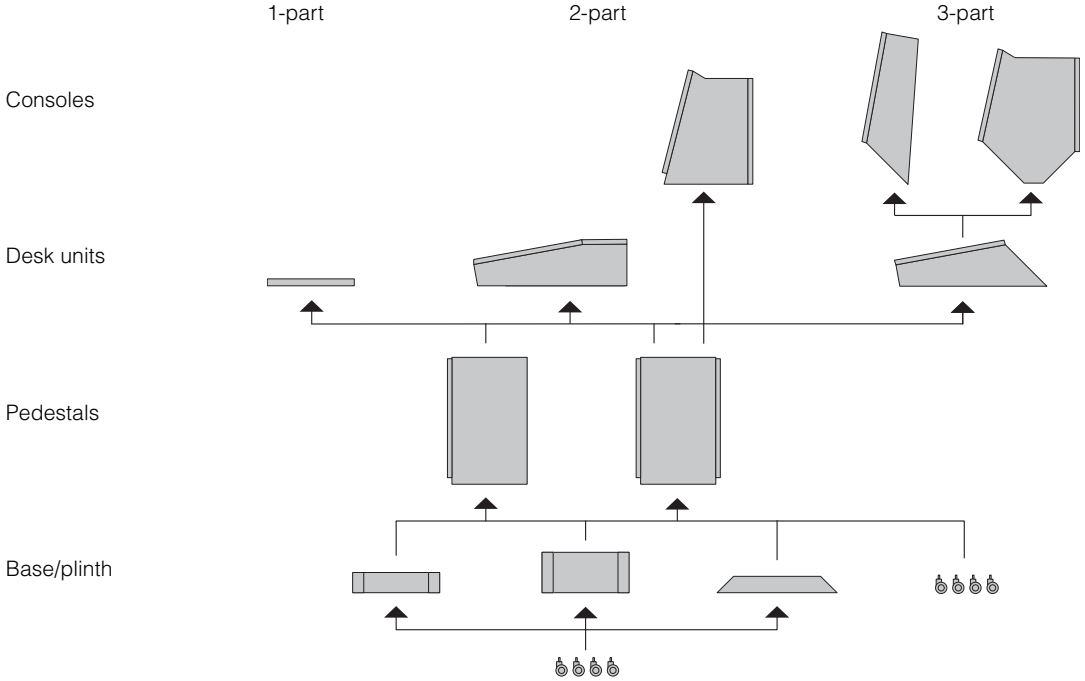
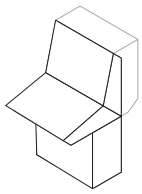
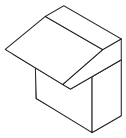
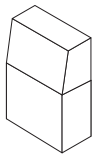
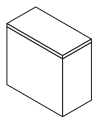


Photo shows a configuration example with equipment not included in the scope of supply.

Combination options



600 mm wide

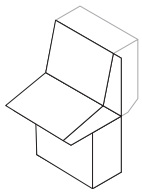
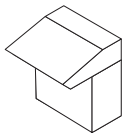
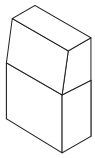
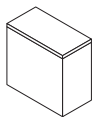





Configuration			3-part		2-part		2-part		1-part		
Depth of pedestal in mm			400	500	400	500	400	500	400	500	
Consoles 700 mm high											
Height (H) mm		Packs of	700		–		–		–		Page
Depth (T) mm			240		–		–		–		
Model No. TP		1	**6720.500**		**–**		**–**		**–**		
Consoles 540/730 mm high with enlarged installation depth											
Height (H) mm		Packs of	–	730	–		–	540	–		Page
Depth (T) mm			–	520	–		–	520	–		
Model No. TP		1	**–**	**6720.200**	**–**		**–**	**6720.100**	**–**		
Accessories											
Partial mounting plate	Width 200 mm	1	6730.310		–		–	6730.310[1]	–		638
	Width 500 mm	1	6730.330		–		–	6730.330[1]	–		638
Rail for interior installation	For width	4	5001.050		–		–	5001.050	–		647
	For height	4	5001.051		–		–	5001.050	–		647
Desk units											
Height (H) mm		Packs of	235		235		–		–		Page
Depth (T) mm			700		700		–		–		
Model No. TP		1	**6714.500**		**6710.500**		**–**		–		
Accessories											
Rail for interior installation	For width	4	5001.050		5001.050		–		–		647
Console		1	–		6730.400		–		–		127
Trim panel for pedestal		1	–		–		–		5001.130	6370.100	127
Pedestals											
Height (H) mm		Packs of	675	675	675	675	–	675	675	675	Page
Depth (T) mm			400	500	400	500	–	500	400	500	
Model No. TP		1	**6700.500**	**6704.500**	**6700.500**	**6704.500**	**–**	**6704.500**	**6700.500**	**6704.500**	
Accessories											
Base/plinth components front and rear	Height 100 mm	1 set	8601.600	8601.600	8601.600	8601.600	–	8601.600	8601.600	8601.600	543
	Height 200 mm	1 set	8602.600	8602.600	8602.600	8602.600	–	8602.600	8602.600	8602.600	543
Base/plinth trim panels, side	Height 100 mm	1 set	8601.040	8601.050	8601.040	8601.050	–	8601.050	8601.040	8601.050	544
	Height 200 mm	1 set	8602.040	8602.050	8602.040	8602.050	–	8602.050	8602.040	8602.050	544
Cross member, adjustable		2	8601.450	8601.450	8601.450	8601.450	–	8601.450	8601.450	8601.450	552
Gland plates	1-part	1	5001.222	–	5001.222	–	–	–	5001.222	–	561
	2-part	1 + 1	5001.214 + 5001.218	5001.214 + 5001.222	5001.214 + 5001.218	5001.214 + 5001.222	–	5001.214 + 5001.222	5001.214 + 5001.218	5001.214 + 5001.222	561 561
	Individual	For more gland plate variants, see page 563									
Rail for interior installation	For height	4	5001.050	5001.050	5001.050	5001.050	–	5001.050	5001.050	5001.050	647
Punched section with mounting flange, 17 x 73 mm	In the depth	4	8612.140	8612.150	8612.140	8612.150	–	8612.150	8612.140	8612.150	647
Punched rail 18 x 38 mm	In the depth	4	8612.240	8612.250	8612.240	8612.250	–	8612.250	8612.240	8612.250	650
Support strips	In the depth	20	4694.000	4695.000	4694.000	4695.000	–	4695.000	4694.000	4695.000	650
Punched section with mounting flange, 17 x 73 mm	For door	4	8612.050	8612.050	8612.050	8612.050	–	8612.050	8612.050	8612.050	647
Support strips	For door	20	4596.000	4596.000	4596.000	4596.000	–	4596.000	4596.000	4596.000	650
Cable clamp rail		1	5001.080	5001.080	5001.080	5001.080	–	5001.080	5001.080	5001.080	717
Wiring plan pocket		1	4116.500	4116.500	4116.500	4116.500	–	4116.500	4116.500	4116.500	617
Alternative lock systems		see page 601									

[1] Configuration examples and further details of the accessories required may be found on the Internet.

TopConsole system TP

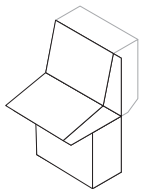
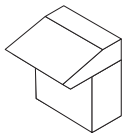
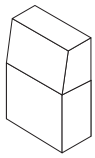
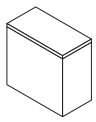
800 mm wide

Configuration			3-part		2-part		2-part		1-part		
Depth of pedestal in mm			400	500	400	500	400	500	400	500	
Consoles 700 mm high											
Height (H) mm		Packs of	700		–		–		–		Page
Depth (T) mm			240		–		–		–		
Model No. TP		1	**6721.500**		**–**		**–**		**–**		
Consoles 540/730 mm high with enlarged installation depth											
Height (H) mm		Packs of	–	730	–		–	540	–		Page
Depth (T) mm			–	520	–		–	520	–		
Model No. TP		1	**–**	**6721.200**	**–**		**–**	**6721.100**	**–**		
Accessories											
Partial mounting plate	Width 200 mm	1	6730.310		–		–	6730.310[1)]	–		638
	Width 500 mm	1	6730.330		–		–	6730.330[1)]	–		638
	Width 700 mm	1	6730.340		–		–	6730.340[1)]	–		638
Rail for interior installation	For width	4	5001.051		–		–	5001.051	–		647
	For height	4	5001.051		–		–	5001.050	–		647
Desk units											
Height (H) mm		Packs of	235		235		–		–		Page
Depth (T) mm			700		700		–		–		
Model No. TP		1	**6715.500**		**6711.500**		**–**		**–**		
Accessories											
Rail for interior installation	For width	4	5001.051		5001.051		–		–		647
Console		1	–		6730.410		–		–		127
Trim panel for pedestal		1	–		–		–		5001.140	6730.110	127
Pedestals											
Height (H) mm		Packs of	675	675	675	675	–	675	675	675	Page
Depth (T) mm			400	500	400	500	–	500	400	500	
Model No. TP		1	**6701.500**	**6705.500**	**6701.500**	**6705.500**	**–**	**6705.500**	**6701.500**	**6705.500**	
Accessories											
Base/plinth components front and rear	Height 100 mm	1 set	8601.800	8601.800	8601.800	8601.800	–	8601.800	8601.800	8601.800	543
	Height 200 mm	1 set	8602.800	8602.800	8602.800	8602.800	–	8602.800	8602.800	8602.800	543
Base/plinth trim panels, side	Height 100 mm	1 set	8601.040	8601.050	8601.040	8601.050	–	8601.050	8601.040	8601.050	544
	Height 200 mm	1 set	8602.040	8602.050	8602.040	8602.050	–	8602.050	8602.040	8602.050	544
Cross member, adjustable		2	8601.450	8601.450	8601.450	8601.450	–	8601.450	8601.450	8601.450	552
Gland plates	1-part	1	5001.223	–	5001.223	–	–	–	5001.223	–	561
	2-part	1 + 1	5001.215 + 5001.219	5001.215 + 5001.223	5001.215 + 5001.219	5001.215 + 5001.223	–	5001.215 + 5001.223	5001.215 + 5001.219	5001.215 + 5001.223	561 561
	Individual	For more gland plate variants, see page 563									
Rail for interior installation	For height	4	5001.050	5001.050	5001.050	5001.050	–	5001.050	5001.050	5001.050	647
Punched section with mounting flange, 17 x 73 mm	In the depth	4	8612.140	8612.150	8612.140	8612.150	–	8612.150	8612.140	8612.150	647
Punched rail 18 x 38 mm	In the depth	4	8612.240	8612.250	8612.240	8612.250	–	8612.250	8612.240	8612.250	650
Support strips	In the depth	20	4694.000	4695.000	4694.000	4695.000	–	4695.000	4694.000	4695.000	650
Punched section with mounting flange, 17 x 73 mm	For door	4	8612.050	8612.050	8612.050	8612.050	–	8612.050	8612.050	8612.050	647
Support strips	For door	20	4598.000	4598.000	4598.000	4598.000	–	4598.000	4598.000	4598.000	650
Cable clamp rail		1	5001.081	5001.081	5001.081	5001.081	–	5001.081	5001.081	5001.081	717
Wiring plan pocket		1	4118.500	4118.500	4118.500	4118.500	–	4118.500	4118.500	4118.500	617
Alternative lock systems		see page 601									

[1)] Configuration examples and further details of the accessories required may be found on the Internet.

1200 mm wide

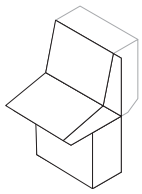
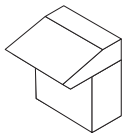
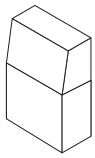
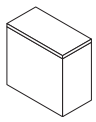





Configuration			3-part		2-part		2-part		1-part		
Depth of pedestal in mm			400	500	400	500	400	500	400	500	
Consoles 700 mm high											
Height (H) mm		Packs of	700		–		–		–		Page
Depth (T) mm			240		–		–		–		
Model No. TP		1	**6722.500**		**–**		**–**		**–**		
Consoles 540/730 mm high with enlarged installation depth											
Height (H) mm		Packs of	–	730	–		–	540	–		Page
Depth (T) mm			–	520	–		–	520	–		
Model No. TP		1	**–**	**6722.200**	**–**		**–**	**6722.100**	**–**		
Accessories											
Partial mounting plate	Width 200 mm	1	6730.310		–		–	6730.310[1]	–		638
	Width 500 mm	1	6730.330		–		–	6730.330[1]	–		638
	Width 700 mm	1	6730.340		–		–	6730.340[1]	–		638
Rail for interior installation	For width	4	5001.053		–		–	5001.053	–		647
	For height	4	5001.051		–		–	5001.050	–		647
Desk units											
Height (H) mm		Packs of	235		235		–		–		Page
Depth (T) mm			700		700		–		–		
Model No. TP		1	**6716.500**		**6712.500**		**–**		**–**		
Accessories											
Rail for interior installation	For width	4	5001.053		5001.053		–		–		647
Trim panel for pedestal		1	–		–		–		5001.160	6730.120	127
Pedestals											
Height (H) mm		Packs of	675	675	675	675	–	675	675	675	Page
Depth (T) mm			400	500	400	500	–	500	400	500	
Model No. TP		1	**6702.500**	**6706.500**	**6702.500**	**6706.500**	**–**	**6706.500**	**6702.500**	**6706.500**	
Accessories											
Base/plinth components front and rear	Height 100 mm	1 set	8601.200	8601.200	8601.200	8601.200	–	8601.200	8601.200	8601.200	543
	Height 200 mm	1 set	8602.200	8602.200	8602.200	8602.200	–	8602.200	8602.200	8602.200	543
Base/plinth trim panels, side	Height 100 mm	1 set	8601.040	8601.050	8601.040	8601.050	–	8601.050	8601.040	8601.050	544
	Height 200 mm	1 set	8602.040	8602.050	8602.040	8602.050	–	8602.050	8602.040	8602.050	544
Cross member, adjustable		2	8601.450	8601.450	8601.450	8601.450	–	8601.450	8601.450	8601.450	552
Gland plates[2]	1-part	1	5001.225	–	5001.225	–	–	–	5001.225	–	561
	2-part	1 + 1	5001.217 + 5001.221	5001.217 + 5001.225	5001.217 + 5001.221	5001.217 + 5001.225	–	5001.217 + 5001.225	5001.217 + 5001.221	5001.217 + 5001.225	561
	Individual	For more gland plate variants, see page 563									
Rail for interior installation	For height	4	5001.050	5001.050	5001.050	5001.050	–	5001.050	5001.050	5001.050	647
Punched section with mounting flange, 17 x 73 mm	In the depth	4	8612.140	8612.150	8612.140	8612.150	–	8612.150	8612.140	8612.150	647
Punched rail 18 x 38 mm	In the depth	4	8612.240	8612.250	8612.240	8612.250	–	8612.250	8612.240	8612.250	650
Support strips	In the depth	20	4694.000	4695.000	4694.000	4695.000	–	4695.000	4694.000	4695.000	650
Punched section with mounting flange, 17 x 73 mm	For door	4	8612.050	8612.050	8612.050	8612.050	–	8612.050	8612.050	8612.050	647
Support strips	For door	20	4596.000	4596.000	4596.000	4596.000	–	4596.000	4596.000	4596.000	650
Cable clamp rail		1	5001.083	5001.083	5001.083	5001.083	–	5001.083	5001.083	5001.083	717
Wiring plan pocket		1	4116.500	4116.500	4116.500	4116.500	–	4116.500	4116.500	4116.500	617
Alternative lock systems		see page 601									

[1] Configuration examples and further details of the accessories required may be found on the Internet.
[2] With the two-door pedestal, the base opening is divided in two, and two sets of gland plates are required!

TopConsole system TP

1600 mm wide

Configuration			3-part		2-part		2-part		1-part		
Depth of pedestal in mm			400	500	400	500	400	500	400	500	
Consoles 700 mm high											
Height (H) mm		Packs of	700		–		–		–		Page
Depth (T) mm			240		–		–		–		
Model No. TP		1	**6723.500**		**–**		**–**		**–**		
Consoles 540/730 mm high with enlarged installation depth											
Height (H) mm		Packs of	–	730	–		–	540	–		Page
Depth (T) mm			–	520	–		–	520	–		
Model No. TP		1	**–**	**6723.200**	**–**		**–**	**6723.100**	**–**		
Accessories											
Partial mounting plate	Width 200 mm	1	6730.310		–		–	6730.310[1]	–		638
	Width 500 mm	1	6730.330		–		–	6730.330[1]	–		638
	Width 700 mm	1	6730.340		–		–	6730.340[1]	–		638
Rail for interior installation	For height	4	5001.051		–		–	5001.050	–		647
Desk units											
Height (H) mm		Packs of	235		235		–		–		Page
Depth (T) mm			700		700		–		–		
Model No. TP		1	**6717.500**		**6713.500**		**–**		**–**		
Accessories											
Rail for interior installation	For width	4	5001.054		5001.054		–		–		647
Trim panel for pedestal		1	–		–		–		6730.030	6730.130	127
Pedestals											
Height (H) mm		Packs of	675	675	675	675	–	675	675	675	Page
Depth (T) mm			400	500	400	500	–	500	400	500	
Model No. TP		1	**6703.500**	**6707.500**	**6703.500**	**6707.500**	**–**	**6706.500**	**6703.500**	**6707.500**	
Accessories											
Base/plinth components front and rear	Height 100 mm	1 set	8601.920	8601.920	8601.920	8601.920	–	8601.920	8601.920	8601.920	543
	Height 200 mm	1 set	8602.920	8602.920	8602.920	8602.920	–	8602.920	8602.920	8602.920	543
Base/plinth trim panels, side	Height 100 mm	1 set	8601.040	8601.050	8601.040	8601.050	–	8601.050	8601.040	8601.050	544
	Height 200 mm	1 set	8602.040	8602.050	8602.040	8602.050	–	8602.050	8602.040	8602.050	544
Cross member, adjustable		2	8601.450	8601.450	8601.450	8601.450	–	8601.450	8601.450	8601.450	552
Gland plates[2]	1-part	1	5001.236	–	5001.236	–	–	–	5001.236	–	561
	2-part	1 + 1	5001.234 + 5001.235	5001.234 + 5001.236	5001.234 + 5001.235	5001.234 + 5001.236	–	5001.234 + 5001.236	5001.234 + 5001.235	5001.234 + 5001.236	561 561
	Individual	For more gland plate variants, see page 563									
Rail for interior installation	For height	4	5001.050	5001.050	5001.050	5001.050	–	5001.050	5001.050	5001.050	647
Punched section with mounting flange, 17 x 73 mm	In the depth	4	8612.140	8612.150	8612.140	8612.150	–	8612.150	8612.140	8612.150	647
Punched rail 18 x 38 mm	In the depth	4	8612.240	8612.250	8612.240	8612.250	–	8612.250	8612.240	8612.250	650
Support strips	In the depth	20	4694.000	4695.000	4694.000	4695.000	–	4695.000	4694.000	4695.000	650
Support strips	For door	20	4598.000	4598.000	4598.000	4598.000	–	4598.000	4598.000	4598.000	650
Cable clamp rail	Width 800 mm	1	5001.081	5001.081	5001.081	5001.081	–	5001.081	5001.081	5001.081	717
Wiring plan pocket		1	4118.500	4118.500	4118.500	4118.500	–	4118.500	4118.500	4118.500	617
Alternative lock systems		see page 601									

[1] Configuration examples and further details of the accessories required may be found on the Internet.
[2] With the two-door pedestal, the base opening is divided in two, and two sets of gland plates are required!

Trim panel

for pedestal
for covering the complete top opening when using the pedestal on its own.

Material:
Sheet steel

Surface finish:
Textured paint

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529,
complies with NEMA 12.

Supply includes:
Assembly parts.

For pedestal		Model No.
Width mm	Depth mm	
600	400	**5001.130**
800		**5001.140**
1200		**5001.160**
1600		**6730.030**
600	500	**6730.100**
800		**6730.110**
1200		**6730.120**
1600		**6730.130**

Strengthener

for desk unit, rear with hinged cover

- Suitable for mounting operating housings using
  – CP-L enclosure attachment, Ø130 mm, CP 6525.510, see page 155
  – CP-XL enclosure attachment, round CP 6130.610, see page 163
  – Housing couplings CP-XL for desk mounting, CP 6528.410 see page 166
- Easily screw-fastened to the base of the desk unit.
- Connection hole pattern for CP support arm systems in the centre as standard; other positions can be accommodated by drilling extra holes.

Mounting cut-out required in the cover of the desk units, mounting cut-outs to match the various support arm systems.

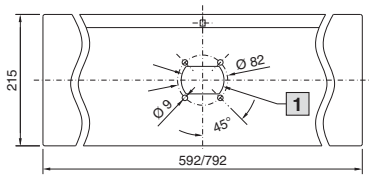
Material:
Sheet steel

Supply includes:
Assembly parts.

For width mm	Packs of	Model No. TP
600	1	**6730.400**
800	1	**6730.410**

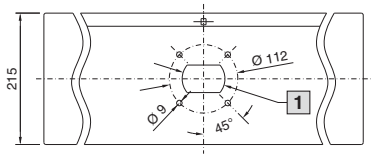
Mounting cut-outs
for the covers of the desk units

for external mounting of CP 6525.510

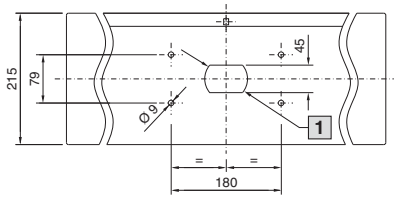


1 Max. Ø 70 mm

for external mounting of CP 6130.610



for external mounting of CP 6528.410



One-piece consoles TP

System accessories Page 537 **Monitors, keyboards** From page 796 **Climate control** Page 389 **One-piece consoles AP stainless steel** Page 192

Material:
- Enclosure: Sheet steel 1.5 mm
- Door and console cover: Sheet steel, 2.0 mm, all-round foamed-in PU seal
- Mounting plate: Sheet steel 3.0 mm
- Lock cover: Plastic, self-extinguishing

Surface finish:
- Enclosure, cover and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Mounting plate: Zinc-plated

Colour:
RAL 7035

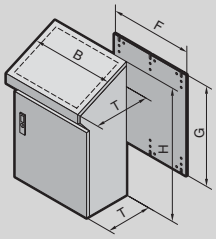
Protection category:
IP 55 to IEC 60 529, complies with NEMA 12 (provided suitable gland plates are selected).

Supply includes:
- Enclosure, solid back and sides
- Door or double door at front, with locking rod
- Mounting plate
- Cover hinged at rear, 2 stays with automatic locking and unlocking
- Open base for individual cable entry

Also required:

Gland plates,
see page 560 – 562.

Detailed drawings:
Available on the Internet.



Width (B) mm		Packs of	600	800	1000	1200	Page
Height (H) mm			960	960	960	960	
Depth (T) mm	Bottom		400	400	400	400	
	Top		520	520	520	520	
Mounting plate width (F) mm			530	730	930	1130	
Mounting plate height (G) mm			900	900	900	900	
Model No. TP		1	**6746.500**	**6748.500**	**6740.500**	**6742.500**	
Door(s)			1	1	2	2	
Base/plinth							
Components front and rear	Height 100 mm	1 set	8601.600	8601.800	8601.000	8601.200	543
	Height 200 mm	1 set	8602.600	8602.800	8602.000	8602.200	543
Trim panels, sides	Height 100 mm	1 set	8601.040	8601.040	8601.040	8601.040	544
	Height 200 mm	1 set	8602.040	8602.040	8602.040	8602.040	544
Cross member, adjustable		2	8601.450	8601.450	8601.450	8601.450	552
Accessories							
Gland plates[1)]	1-part	1	5001.222	5001.223	5001.224	5001.225	561
	2-part	1 + 1	5001.214 + 5001.218	5001.215 + 5001.219	5001.216 + 5001.220	5001.217 + 5001.221	561
	Individual	For more gland plate variants, see page 563					
Rail for interior installation	For enclosures	4	5001.051	5001.051	5001.051	5001.051	179
	For cover	4	5001.050	5001.051	5001.052	5001.053	179
Punched section with mounting flange, 17 x 73 mm	For enclosures	4	8612.140	8612.140	8612.140	8612.140	647
	For cover	4	8612.040	8612.040	8612.040	8612.040	647
	For door	4	8612.050	–	8612.040	8612.050	647
Punched rail 18 x 38 mm	For enclosures	4	8612.240	8612.240	8612.240	8612.240	650
Cable clamp rail		1	5001.080	5001.081	5001.082	5001.083	717
Wiring plan pocket		1	4116.500	4118.500	4115.500	4116.500	617
Alternative lock systems		see page 601					

[1)] With the two-door variant, the base opening is divided in two, and two sets of gland plates are required!

Universal consoles TP

System accessories Page 537 **Monitors, keyboards** From page 796 **Climate control** Page 389

Material:
– Enclosure, gland plates: Sheet steel 1.5 mm
– Doors: Sheet steel 2.0 mm
– Mounting plate: Sheet steel 3.0 mm

Surface finish:
– Enclosure and doors: Dipcoat-primed, powder-coated on the outside, textured paint
– Mounting plate and gland plates: Zinc-plated

Colour:
RAL 7035

Protection category:
– IP 55 to IEC 60 529, complies with NEMA 12.
– With a short bottom door (TP 2694.500), the drawer or desk section (see below) should be fitted in order to preserve the protection category.

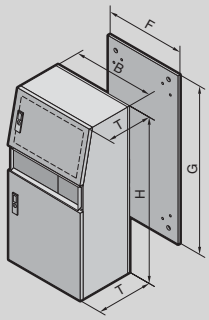
Supply includes:
– Enclosure with doors
– Mounting plate
– Gland plates

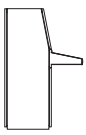
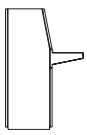
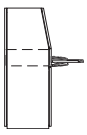
Note:
Top door with studs left and right for installing vertical perforated mounting strips SZ 2310.038 and horizontal support strips SZ 2325.000 to be mounted on top (see page 615/614).

Approvals:
– UL
– CSA
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– VDE

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



							
		Packs of	with short front door			with tall front door	Page
Width (B) mm			600			600	
Height (H) mm			1300			1300	
Depth (T) mm	Bottom		500			500	
	Top		417.5			417.5	
Mounting plate width (F) mm			499			499	
Mounting plate height (G) mm			1196			1196	
Model No. TP		1	**2694.500**			**2695.500**	
Weight (kg)			77.0			80.0	
Also required							
Desk section			**2696.500**	**2696.500**	–	–	–
Drawer for keyboard			–	–	**4757.500**[1)]	–	–
Accessories							
Base/plinth	Height 100 mm	1	2807.200			2807.200	551
	Height 200 mm	1	2808.200			2808.200	551
Cross member, adjustable		2	8601.450			8601.450	552
Perforated mounting strip		1	2310.038			2310.038	615
Support strips		1	2325.000			2325.000	614
Cable clamp rail		1	4191.000			4191.000	717
Alternative lock systems		see page 601					

[1)] Only suitable for installation without a mounting plate.

PC enclosure systems

System accessories Page 537 **Monitors, keyboards** From page 796 **Climate control** Page 389 **PC case system, stainless steel** Page 193

Material:
– Enclosure, door, mounting compartment, supports: Sheet steel
– Handles, decorative trim panels: Plastic
– Door trim panels: Aluminium

Protection category:
IP 55 to IEC 60 529, complies with NEMA 12.

Supply includes:
Enclosure, door, rear door and enclosure-specific supply scope (see table)

Approvals:
– UL
– CSA
– TÜV
– Germanischer Lloyd
– Russian Maritime Register of Shipping
– Lloyds Register of Shipping
– VDE

Detailed drawings/ Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Enclosure-specific supply scope										
Keyboard drawer		Packs of	■	■	■	■	–	–	–	Page
Folding keyboard			–	–	–	–	■	■	–	
Desk section			–	–	–	–	–	–	■	
Glazed door, top			■	■	■	–	■	■	■	
Mounting compartment, small			–	–	■	–	–	–	–	
Mounting compartment, large			–	–	–	■	–	–	–	
Component shelf			■	■	■	–	■	■	■	
Width mm			600	600	600	600	600	600	600	
Height mm			1600	1600	1600	1600	1600	1600	1600	
Depth mm			636	836	636	636	636	836	636	
Model No. PC		1	**8366.000**	**8368.000**	**8366.300**	**8366.400**	**8366.100**	**8368.100**	**8366.200**	
Max. keyboard dimensions mm	Width		480	480	480	480	475	475	540	
	Height		70	70	70	70	60 / 50	60 / 50	40	
	Depth		260	260	260	260	200 / 250	200 / 250	175	
Weight (kg)			118	133	118	117	118	124	108	
Accessories										
Base/plinth, static		1	8800.920	on request	8800.920	8800.920	8800.920	on request	8800.920	548
Base/plinth components front and rear	Height 100 mm	1 set	8601.600	8601.600	8601.600	8601.600	8601.600	8601.600	8601.600	543
	Height 200 mm	1 set	8602.600	8602.600	8602.600	8602.600	8602.600	8602.600	8602.600	543
Base/plinth trim, front	Height 200 mm	1	8360.920	8360.920	8360.920	8360.920	8360.920	8360.920	8360.920	548
Base/plinth trim, side	Height 100 mm	1 set	8601.060	8601.080	8601.060	8601.060	8601.060	8601.080	8601.060	544
	Height 200 mm	1 set	8602.060	8602.080	8602.060	8602.060	8602.060	8602.080	8602.060	544
Cross member, adjustable	Height 70 mm	2	8601.680	8601.680	8601.680	8601.680	8601.680	8601.680	8601.680	552
Partial mounting plate	Height 775 mm	1	8614.675	8614.675	8614.675	8614.675	8614.675	8614.675	8614.675	636
Component shelf, pull-out		1	6902.960	6902.980	6902.960	6902.960	6902.960	6902.980	6902.960	668
Drawer tray		1	6902.700	6902.700	6902.700	6902.700	6902.700	6902.700	6902.700	669
Paper removal flap		1	6903.200	6903.200	6903.200	6903.200	6903.200	6903.200	6903.200	805
Socket strips		see page 695								
Alternative lock systems		see page 600								

System accessories Page 537 **Comfort Panel** Page 138 **Optipanel** Page 140 **TFT monitor** Page 796

Compact enclosure, ready to connect.
Standard commercially available tower PCs, up to W/H/D: 250 x 530 x 600 mm (max. 20 kg) may be attached securely to the base screw fastened to the door using the retaining strap supplied loose. The rear interfaces of the PC are readily accessible with the door open. Because the socket strip and fan-and-filter unit are already pre-installed, the enclosure is ready for immediate use.

Roof prepared for mounting
- Worktop IW 6902.310
- Beneath surfaces

Base prepared for mounting
- Cast feet IW 6902.920
- On surfaces

Material:
– Enclosure: Sheet steel
– Door: Sheet steel
– Design strips: Aluminium

Surface finish:
– Enclosure: Powder-coated, textured paint
– Door: Powder-coated

Colour:
– Enclosure: RAL 7035
– Door: RAL 7015
– Design strips: RAL 7035

Protection category:
IP 54 to IEC 60 529, complies with NEMA 12 (in conjunction with connector gland SZ 2400.300/.500 supplied loose)

Supply includes:
– Enclosure of all-round solid construction
– R/h door hinge
– Door with base screw-fastened on the inside
– Side cam lock
– Rear panel with two cut-outs for use of the connector gland SZ 2400.300/.500 supplied loose
– Cable gland M20, brass, nickel-plated
– Outlet filter fitted in left side panel
– Fan-and-filter unit fitted in the right side panel, door operated switch, supply socket for 230 V power supply, socket strip with 3 sockets and overvoltage protection

Also required:

Connection cable for infeed, see page 683.

Photo shows a configuration example with equipment not included in the scope of supply.

Enclosure for tower PC

Width mm	Packs of	760	Page
Height mm		760	
Depth mm		300	
Model No. IW	1	**6900.300**	
Weight (kg)		55	
Accessories			
Cast feet	2	6902.920	553
Twin castors	1 set	7495.000	556
Worktop without handle	1	6902.310	170
Enclosure attachment, tilting, base mounting	1	6902.640	165
Optipanel for TFT monitor 17″	1	6380.040	140
TFT monitor 17″ with safety glass screen	1	6450.020	796
Alternative lock systems	see page 601		

Industrial Workstations

System accessories Page 537 **Comfort Panel** Page 138 **Optipanel** Page 140 **TFT monitor** Page 796

Material:
– Enclosure, roof, drawer tray, designer door, rear wall and rear door: Sheet steel
– Worktop: Chipboard: Plastic-laminated on both sides (edging)
– Aluminium handle: Powder-coated

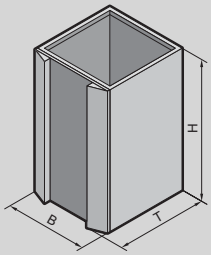
Surface finish:
Enclosure: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:
– Enclosure, worktop: RAL 7035
– Worktop edge strip: RAL 7015
– Worktop handle: RAL 9006

Protection category:
See table.

Supply includes:
Available on the Internet.

Detailed drawings:
Available on the Internet.



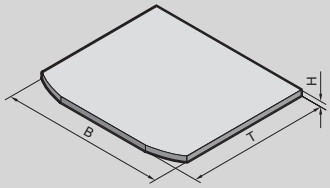
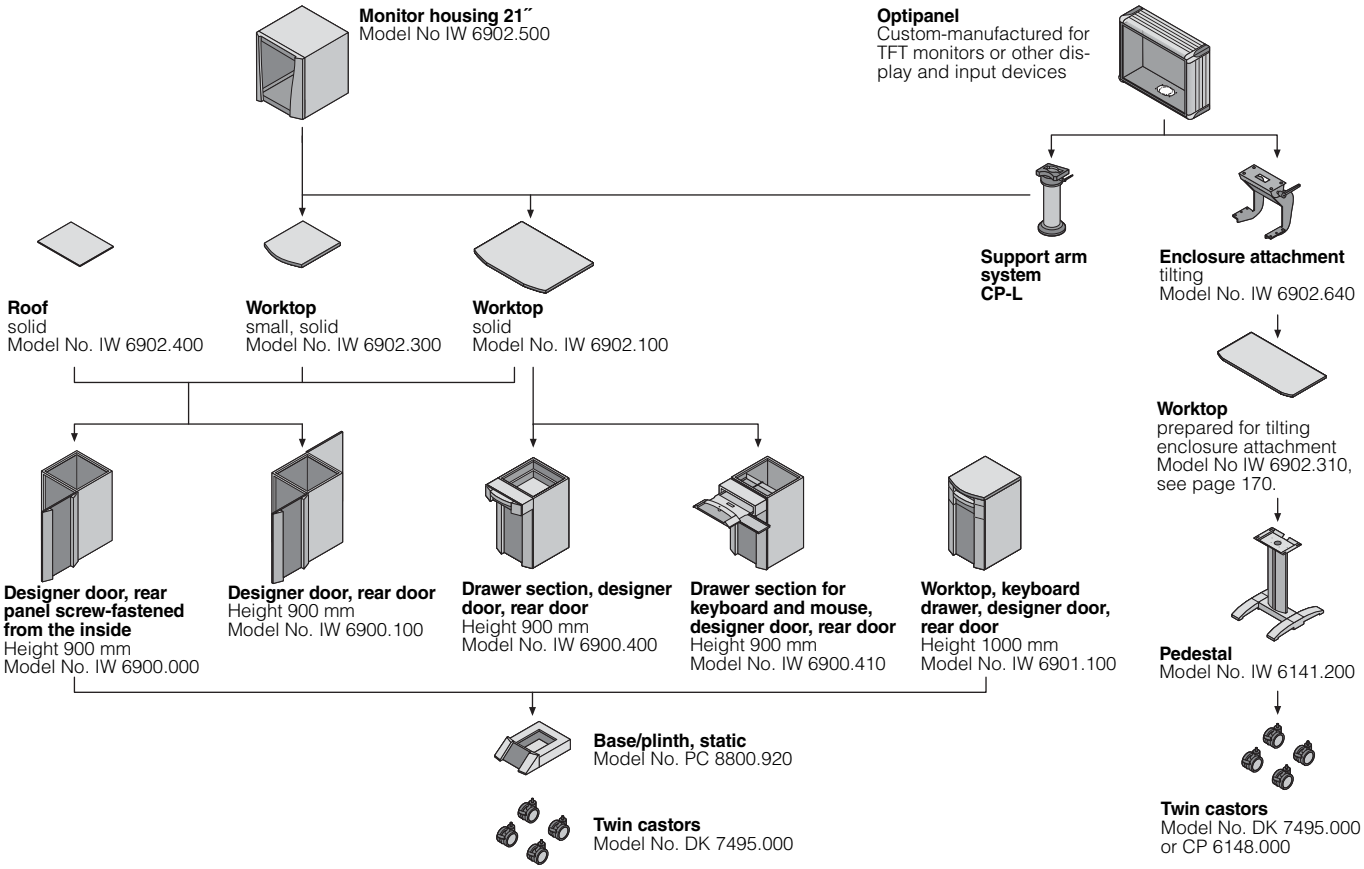


Photo shows a configuration example with equipment not included in the scope of supply.

Combination options



IW enclosures and worktops

Enclosure										Page
Design					Designer door, rear panel screw-fastened from the inside	Designer door, rear door	Drawer section, designer door, rear door	Drawer section for keyboard and mouse, designer door, rear door	Worktop, keyboard drawer, designer door, rear door	
Width (B) mm					600	600	600	600	600	
Height (H) mm					900	900	900	900	1000	
Depth (T) mm					600	600	600 (890)	600 (890)	645	
Weight (kg)					54.9	59.9	73	73	91	
Model No. IW					**6900.000**	**6900.100**	**6900.400**	**6900.410**	**6901.100**	
Protection category					IP 55 to IEC 60 529, complies with NEMA 12		IP 54 to IEC 60 529, complies with NEMA 12			
	Width (B) mm	**Height** (H) mm	**Depth** (T) mm	Weight kg	**Model No. IW**					
Worktops	610	38	645	11.6	6902.300	6902.300	–	–	■	
	1000	38	895	24	6902.100	6902.100	6902.100	6902.100	–	
Roof	600	13	640	7.4	6902.400	6902.400	–	–	–	
Monitor housing	600	600	600	42.5	6902.500	6902.500	6902.500	6902.500	–	

Accessories	Packs of						
Base/plinth, static	1	8800.920	8800.920	8800.920	8800.920	8800.920	548
Cross member, adjustable	2	8601.680	8601.680	8601.680	8601.680	–	552
Twin castors	1 set	7495.000	7495.000	7495.000	7495.000	7495.000	556
Handle adaptor for comfort handle	1	8611.300	8611.300	–	–	–	584
Cable gland	1	6902.770	6902.770	6902.770	6902.770	6902.770	712
Mounting plate for enclosure width 600 mm	1	8614.675	8614.675	8614.675	8614.675	8614.680	636
Component shelf, static installation	1	8800.900	8800.900	8800.900	8800.900	8800.900	669
Component shelf, pull-out	1	6902.960	6902.960	6902.960	6902.960	6902.960	668
Drawer tray	1	6902.700	6902.700	6902.700	6902.700	6902.700	669
Adaptor section 482.6 mm (19″)	1	8613.070	8613.070	8613.070	8613.070	–	741
Paper removal flap	1	6903.200	6903.200	6903.200	6903.200	6903.200	805
Enclosure attachment, tilting	see page 165						
Support arm systems	see page 147						
Operating housings	see page 142						

■ Included with the supply.

Operating housings/support arm systems/stand systems

Comfort Panel

Benefits at a glance 137
Comfort Panel 138
Comfort Panel, configuration examples 139

Optipanel

Benefits at a glance 137
Optipanel 140
Optipanel, configuration examples 141

Operating housings

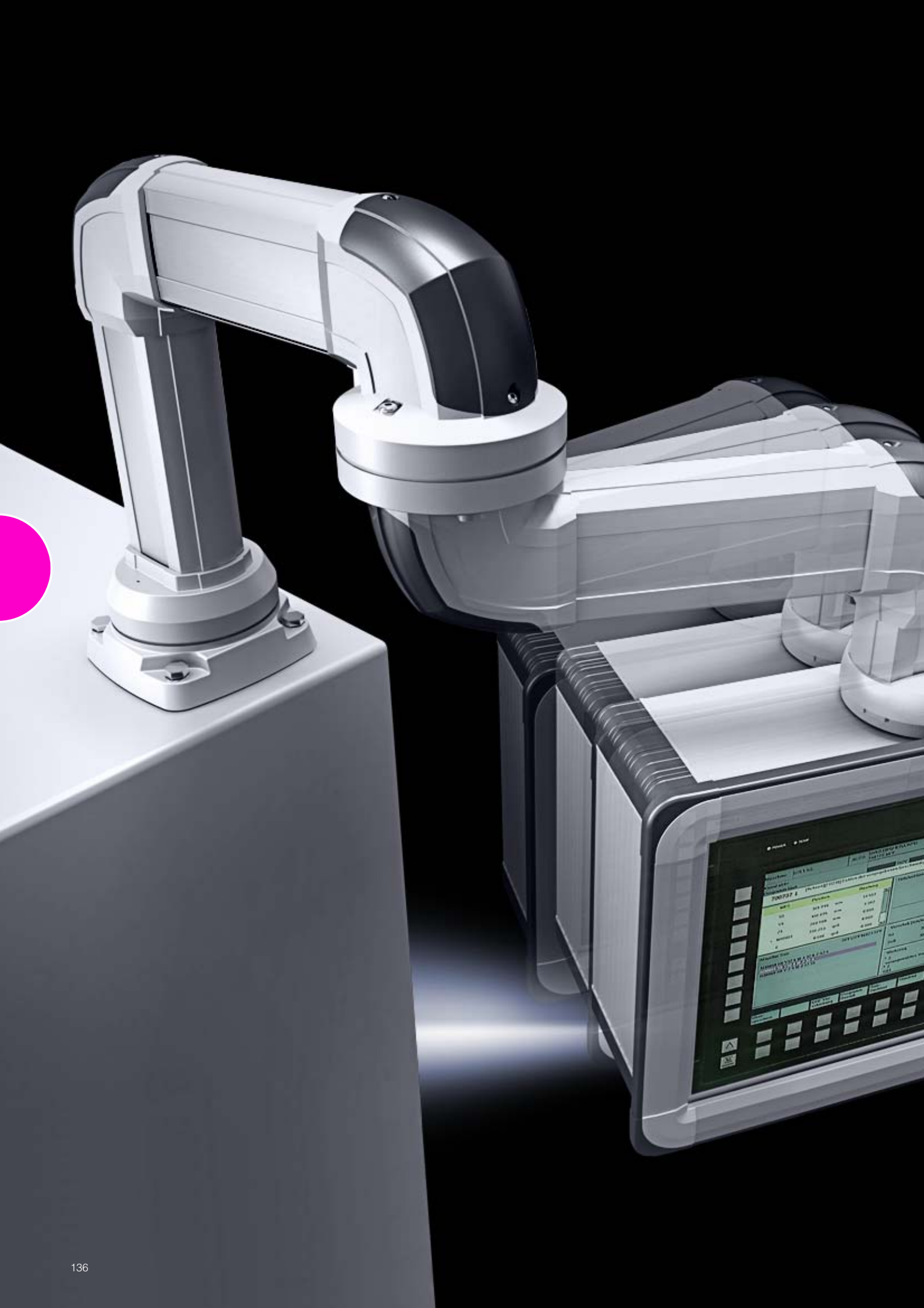
Compact Panel 142
Command panel housing with door 143
Operating housing with handle strips 144
Operating housing with display panel front 145

Support arm systems

Support arm systems, overview 147
Support arm system CP-S, steel 149
Support arm system CP-L 153
Support arm system CP-C 157
Support arm system CP-XL 161
Support arm systems, accessories 164

Stand systems

Pedestal, modular 169
Pedestal, complete 170
Pillar, small 171
Pillar 172
Accessories 173



Comfort Panel/Optipanel

Benefits at a glance

- Aluminium enclosure, high thermal conductivity for optimum passive heat dissipation
- Low weight coupled with high stability
- Protection category IP 65
- Compatible with all Rittal stand and support arm systems

The choice is yours

Standard range

- Standard variants offering outstanding value for money and short delivery times
- Easy, fast and reliable selection
- For front panel installations, tailored to the most common operating solutions

Comfort Panel, see page 138.

Optipanel, see page 140.

Configurable special solutions

- Individual sizes, also for the direct installation of panels with no front plate
- Complete solution diversity for virtually all applications
- Maximum flexibility in design and function

The command panel configurator determines the most suitable enclosure for your application based on user-specific parameters.

More detailed information can be found at: www.rittal.com

Comfort Panel

System accessories Page 537 **Support arm systems** Page 147 **Stand systems** Page 169 **Industrial Workstations** Page 132

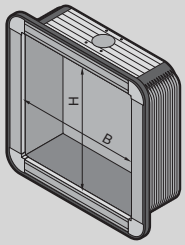
Material:
– Enclosure:
Extruded aluminium section
– Corner pieces:
Die-cast zinc
– Corner protectors:
Plastic

Colour:
– Enclosure:
Natural-anodised
– Corner pieces:
RAL 7035
– Corner protectors:
Similar to RAL 7024

Protection category:
IP 65 to IEC 60 529

Supply includes:
Seals and assembly parts for front panels.

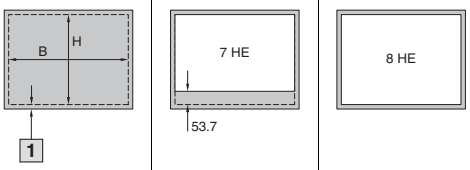
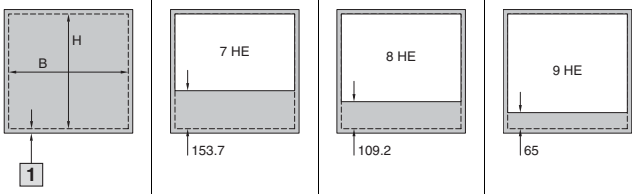
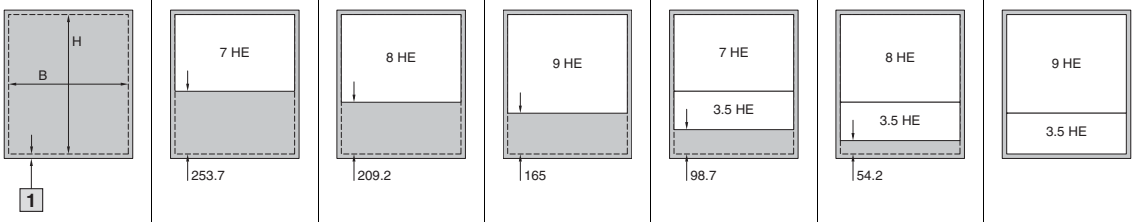
Detailed drawings:
Available on the Internet.



For front panel width (B) mm	Packs of	520			520			520			Page
For front panel height (H) mm		400			500			600			
Installation depth mm		74	152	191	74	152	191	74	152	191	
Model No. CP[4]	1	**6372.541**	**6372.542**	**6372.543**	**6372.551**	**6372.552**	**6372.553**	**6372.561**	**6372.562**	**6372.563**	
Weight (kg)		7.8	11.7	13.8	8.8	12.3	15.2	9.7	13.5	16.7	
Design											
Support arm connection CP-L, ▭ 120 x 65 mm[1]		■	–	–	■	–	–	■	–	–	
Support arm connection CP-L, Ø 130 mm[1]		–	■	■	–	■	■	–	■	■	
Hinged rear panel with screw lock		■	–	–	■	–	–	■	–	–	
Hinged rear panel with cam[2]		–	■	–	–	■	–	–	■	–	
Screw-fastened rear panel[3]		–	–	■	–	–	■	–	–	■	
Accessories											
Front panel	1	6028.014	6028.014	6028.014	6028.015	6028.015	6028.015	6028.016	6028.016	6028.016	794
Handle set, horizontal	1	6375.000	6375.000	6375.000	6375.000	6375.000	6375.000	6375.000	6375.000	6375.000	790
Handle set, vertical	2	6375.040	6375.040	6375.040	6375.050	6375.050	6375.050	6375.060	6375.060	6375.060	790
Mounting bracket for interior installation	4	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	658
Spring nut M5	50	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	666
Earthing plate	1	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	690

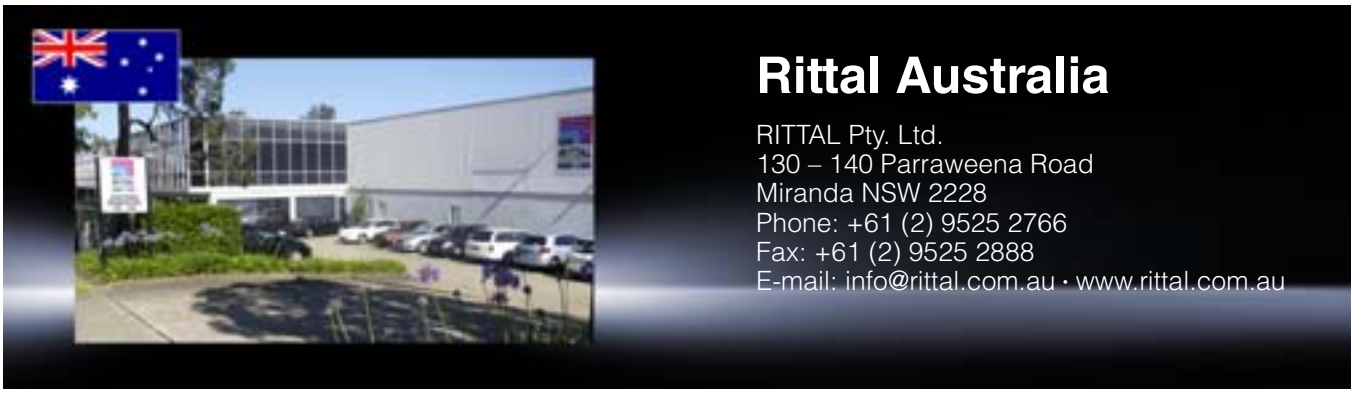
[1] Top or bottom, by rotating the enclosure.
[2] With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 609, plastic handles and T handles, version C, see page 608.
[3] Enclosure hinged at the front with side double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 609, plastic handles and T handles, version C, see page 608.
[4] Configuration examples, see page 139.

Installation examples

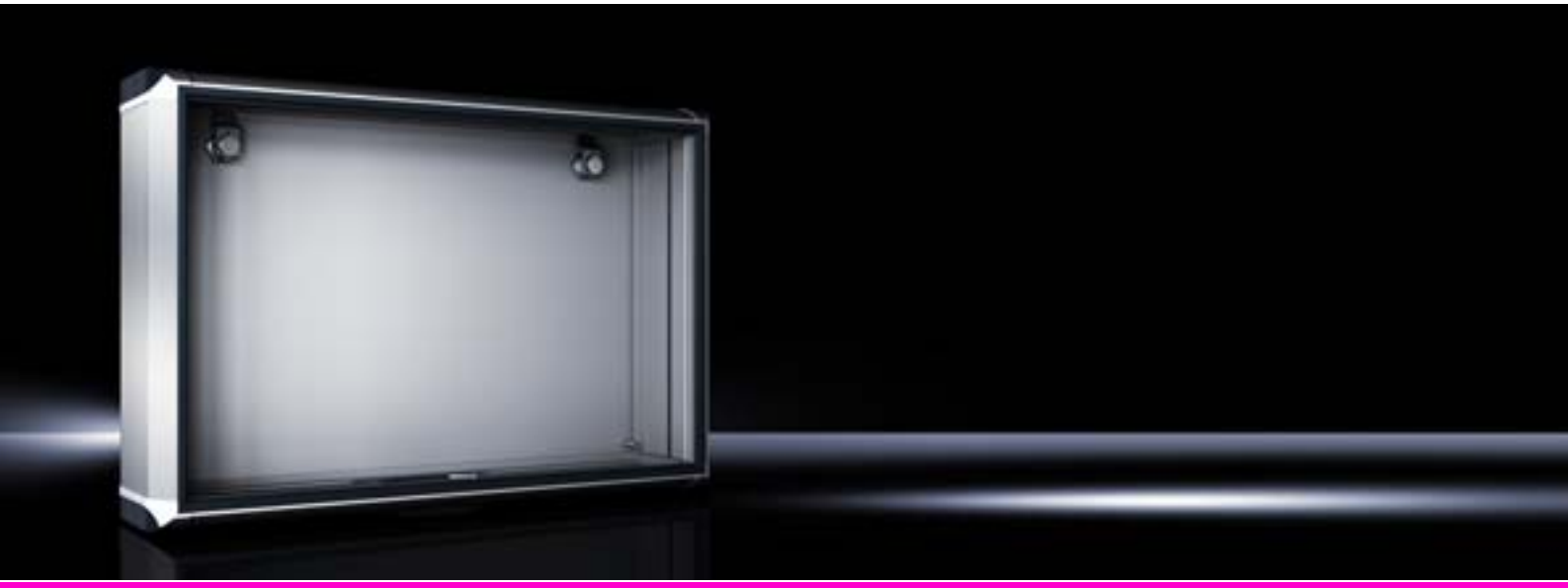
Front panel height mm	Cut-out dimensions
400	
	W (B) = 484 mm H = 364 mm 1 = 18 mm all-round for attaching the adaptor plate
500	
	W (B) = 484 mm H = 464 mm 1 = 18 mm all-round for attaching the adaptor plate
600	
	W (B) = 484 mm H = 564 mm 1 = 18 mm all-round for attaching the adaptor plate

Free space, available for individual installed equipment such as rows of switches etc.

HE = U



Optipanel



System accessories Page 537 **Support arm systems** Page 147 **Stand systems** Page 169 **Industrial Workstations** Page 132

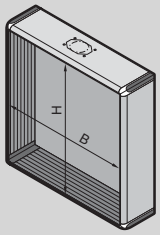
Material:
– Enclosure:
Extruded aluminium section
– Corner pieces:
Die-cast zinc
– Corner protectors:
Plastic

Colour:
– Enclosure:
Natural-anodised
– Corner pieces:
RAL 7035
– Corner protectors:
Similar to RAL 7024

Protection category:
IP 65 to IEC 60 529

Supply includes:
Seals and assembly parts for front panels.

Detailed drawings:
Available on the Internet.



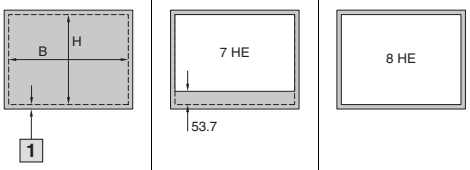
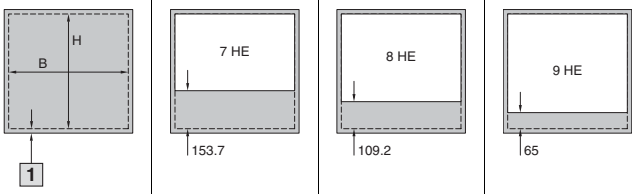
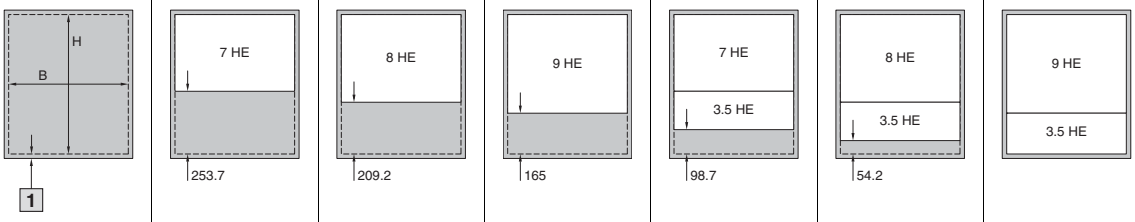
For front panel width (B) mm	Packs of	430	482.6	482.6	520		520		520		Page
For front panel height (H) mm		343	310.3	354.8	400		500		600		
Installation depth mm		100	100	100	100	150	100	150	100	150	
Model No. CP	1	**6380.020**[1]	**6380.000**	**6380.040**[1]	**6380.400**[2]	**6380.410**	**6380.500**[2]	**6380.510**[2]	**6380.600**[2]	**6380.610**[2]	
Weight (kg)		5.3	6.2	6.6	5.8	7.3	6.6	8.3	7.3	9.2	
Design											
Support arm connection CP-L, ▭ 120 x 65 mm[3]		■	■	■	■	–	■	–	■	–	
Support arm connection CP-L, Ø 130 mm[3]		–	–	–	–	■	–	■	–	■	
Hinged rear panel[4]		■	■	■	■	■	■	■	■	■	
Accessories											
Front panel	1	–	6028.010	–	6028.014	6028.014	6028.015	6028.015	6028.016	6028.016	794
Handle set, horizontal	1	–	6385.010	6385.010	6385.000	6385.000	6385.000	6385.000	6385.000	6385.000	790
Handle set, vertical	2	–	–	–	6385.040	6385.040	6385.050	6385.050	6385.060	6385.060	790
Mounting bracket for interior installation	4	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	6205.100	658
Mounting bracket	4	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	4597.000	658
Earthing plate	1	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	2570.500	690
Spring nut M5	50	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	6108.000	666

[1] To fit TFT monitors, see page 796.
[2] Configuration examples, see page 141.
[3] Top or bottom, by rotating the enclosure.
[4] With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 609, plastic handles and T handles, version C, see page 608.

To fit **desktop TFT up to 20.1˝**
with rear connection
- VESA 75
- VESA 100

Model No. CP 6380.050

Configuration examples

Front panel height mm	Cut-out dimensions
400	
	W (B) = 484 mm H = 364 mm 1 = 18 mm all-round for attaching the adaptor plate
500	
	W (B) = 484 mm H = 464 mm 1 = 18 mm all-round for attaching the adaptor plate
600	
	W (B) = 484 mm H = 564 mm 1 = 18 mm all-round for attaching the adaptor plate

Free space, available for individual installed equipment such as rows of switches etc.

HE = U

Compact Panel

System accessories Page 537 **Support arm systems** Page 147 **Stand systems** Page 169

For small operating units built into front panels. The front panel is inserted from the rear and secured with screw clamps. Special front panels with a material thickness of between 2 and 6 mm are possible. Rear panel optionally hinged on the left or right.

Material:
– Roof tray, base tray, rear panel: Aluminium
– Side parts: Extruded aluminium section
– Screw cover: Plastic

Surface finish:
– Roof tray, base tray, side parts: Powder-coated
– Rear panel: Natural-anodised

Colour:
RAL 7024

Protection category:
IP 65 to IEC 60 529

Supply includes:
– Roof tray
– Base tray
– Rear panel
– Side parts
– Screw cover
– Seal and screw clamp

Detailed drawings:
Available on the Internet.

Width mm		Packs of	241	241	315	315	Page
Height mm			238	388	238	388	
Depth mm			87	87	87	87	
To fit	Front panel width mm		178	178	252	252	
	Front panel height mm		200	350	200	350	
Model No. CP (with support arm connection CP-S)		1	**6340.000**	**6340.100**	**6340.300**	**6340.400**	
Weight (kg)			2.8	3.8	3.4	4.5	
Accessories							
Front panel, 3.0 mm aluminium, natural-anodised		1	6028.500	6028.510	6028.530	6028.540	794
Wall mounting bracket, vertically hinged		1 set	6341.000	6341.000	6341.000	6341.000	630
Cover plate for support arm connection CP-S		1	6505.200	6505.200	6505.200	6505.200	794
Spring nut M5		50	6108.000	6108.000	6108.000	6108.000	666

To order different heights for front panel width:
– 178 mm use Model No.: CP 6342.109
– 252 mm use Model No.: CP 6342.209
and additionally specify the front panel height. Extended delivery times.

Command panel housing with door

System assembly Page 537 **Support arm systems** Page 147 **Stand systems** Page 169 **Command panel housing with door, stainless steel** Page 189

Material:
- Enclosure and door: Sheet steel
- Handle strips: Aluminium
- Cover caps: Plastic

Surface finish:
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Handle strips: Powder-coated

Colour:
- Enclosure and door: RAL 7035
- Handle strips and cover caps: RAL 5018

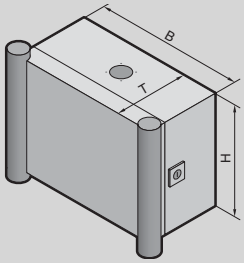
Protection category:
IP 55 to IEC 60 529

Supply includes:
- Enclosure with cut-out and reinforcement for support arm system CP-L, Ø 130 mm
- Cam lock with double-bit insert
- Door with sealing frame
- Side handle strips and cover caps

Note:
The support arm connection and door hinge may be swapped over by rotating the enclosure.

Approvals:
- UL
- cUL

Detailed drawings:
Available on the Internet.



Width (B) mm		Packs of	300	300	300	400	400	500	Page
Height (H) mm			200	300	400	300	400	500	
Depth (T) mm			180	180	180	180	180	180	
Model No. CP		1	**6534.000**	**6535.000**	**6537.000**	**6536.000**	**6538.000**	**6544.000**	
Weight (kg)			5.5	7.1	8.4	8.4	10.6	14.5	
Accessories									
Matching mounting plate	AE type		1032.500	1033.500	1034.500	1030.500	1380.500	1050.500	44
	Model No.[2)]		0271.324	0271.926	0271.927	0274.131	0271.548	0271.333	–
Support rails[1)]	Model No.	10	2316.000	2316.000	2316.000	2317.000	2317.000	2318.000	655
Alternative lock systems		With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 609, plastic handles and T handles, version C, see page 608.							

[1)] Only with vertical attachment of punched rail 23 x 23 mm, see page 651.
[2)] Extended delivery times.

Operating housing with handle strips

System accessories Page 537 **Support arm systems** Page 147 **Stand systems** Page 169 **Command panel housing with door, stainless steel** Page 189

Material:
- Enclosure and door: Sheet steel
- Handle strips: Aluminium
- Cover caps: Plastic

Surface finish:
- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
- Handle strips: Powder-coated

Colour:
- Enclosure and door: RAL 7035
- Handle strips and cover caps: RAL 7030

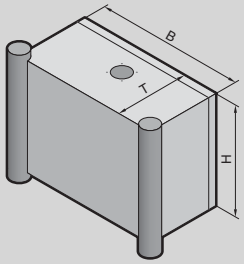
Protection category:
IP 55 to IEC 60 529

Supply includes:
- Enclosure with cut-out and reinforcement for support arm system CP-L, Ø 130 mm
- Mounting angles spot welded at the sides
- Front with maximum cut-out, covered with easily machinable 3 mm aluminium front panel
- Side handle strips with cover caps
- Rear door with r/h hinge
- Cam lock with double-bit insert

Note:
The support arm connection and door hinge may be swapped over by rotating the enclosure.

Approvals:
- UL
- cUL

Detailed drawings:
Available on the Internet.



Width (B) mm	Packs of	300	380	380	500	600	Page
Height (H) mm		200	300	380	500	380	
Depth (T) mm		155	210	210	210	210	
Model No. CP	1	**6540.200**[1)]	**6531.200**	**6530.200**	**6532.200**	**6533.200**	
Weight (kg)		4.9	9.3	10.2	15.4	14.6	
Accessories							
Support strips for attaching to the mounting angles of the side panel	20	–	–	4594.000	4309.000	4594.000	614
Rail for interior installation	4	–	2373.210	2373.210	2373.210	2373.210	647
Mini comfort handle	1	–	–	2537.0X0	2537.0X0	2537.0X0	606
Alternative lock systems	With 3 mm double-bit lock insert, may be exchanged for 27 mm lock inserts, version A, see page 609, lock cylinder, plastic handles and T handles, version B, see page 608.						

[1)] Support arm connection and door hinge at the bottom.

Operating housing with display panel front

System accessories Page 537 **Support arm systems** Page 147 **Stand systems** Page 169 **Command panel housing with door, stainless steel** Page 189

Material:
– Enclosure and door: Sheet steel
– Frame and front panel: Aluminium

Surface finish:
– Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint
– Frame and front panel: Natural-anodised

Colour:
RAL 7035

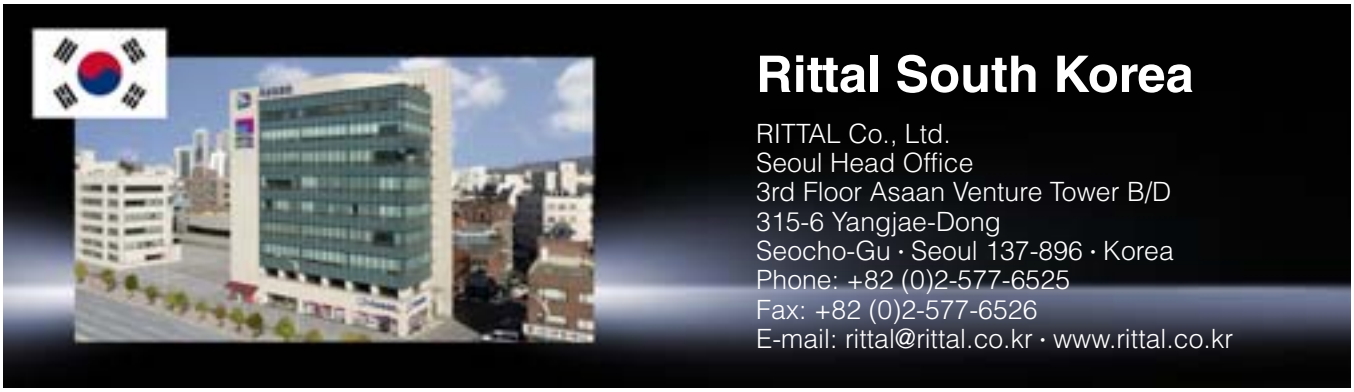
Protection category:
IP 54 to IEC 60 529

Supply includes:
– Enclosure without gland plate
– Mounting angles spot welded at the sides
– With maximum cut-out at the front and fitted, easily machinable 3 mm front panel with aluminium frame, with r/h hinge, screw-fastened from the inside.
– Rear door with r/h hinge
– Cam lock with double-bit insert

Approvals:
– UL
– cUL

Detailed drawings:
Available on the Internet.

Width mm	Packs of	380	380	500	600	Page
Height mm		380	600	500	600	
Depth mm		249	249	249	249	
Model No. CP	1	**6442.500**	**6462.500**	**6552.500**	**6662.500**	
Weight (kg)		9.5	13.4	18.0	19.6	
Cam lock		1	2	2	2	
Accessories						
Reinforcement plate with support arm cut-out CP-L	1	6143.210	6143.210	6143.210	–	173
Enclosure reinforcement with support arm cut-out CP-XL	1	–	–	–	6503.000	173
Rail for interior installation	4	2373.210	2373.210	2373.210	2373.210	647
Mini comfort handle	1	2537.0X0	2537.0X0	2537.0X0	2537.0X0	606
Alternative lock systems	With 3 mm double-bit lock insert, may be exchanged for 27 mm lock inserts, version A, see page 609, lock cylinder, plastic handles and T handles, version B, see page 608.					



Support arm systems

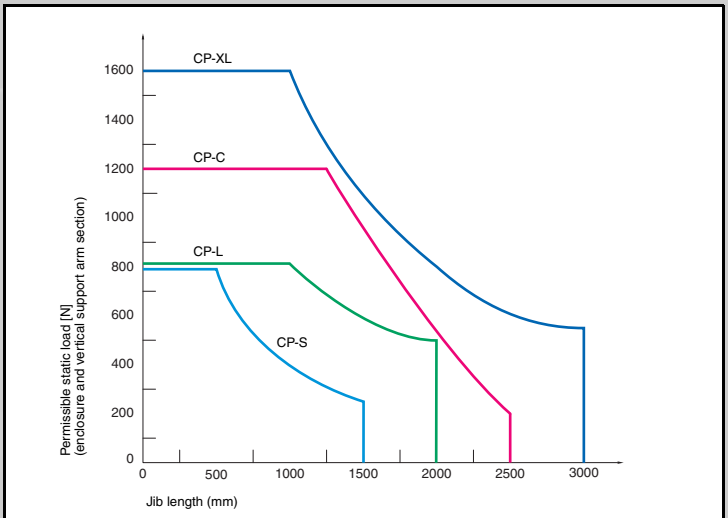
Support arm system CP-S
Overview of components 149
Support section CP-S 150
Support arm system CP-S, components 151

Support arm system CP-L
Overview of components 153
Support section CP-L 154
Support arm system CP-L, components 155

Support arm system CP-C
Overview of components 157
Support section CP-C 158
Support arm system CP-C, components 159

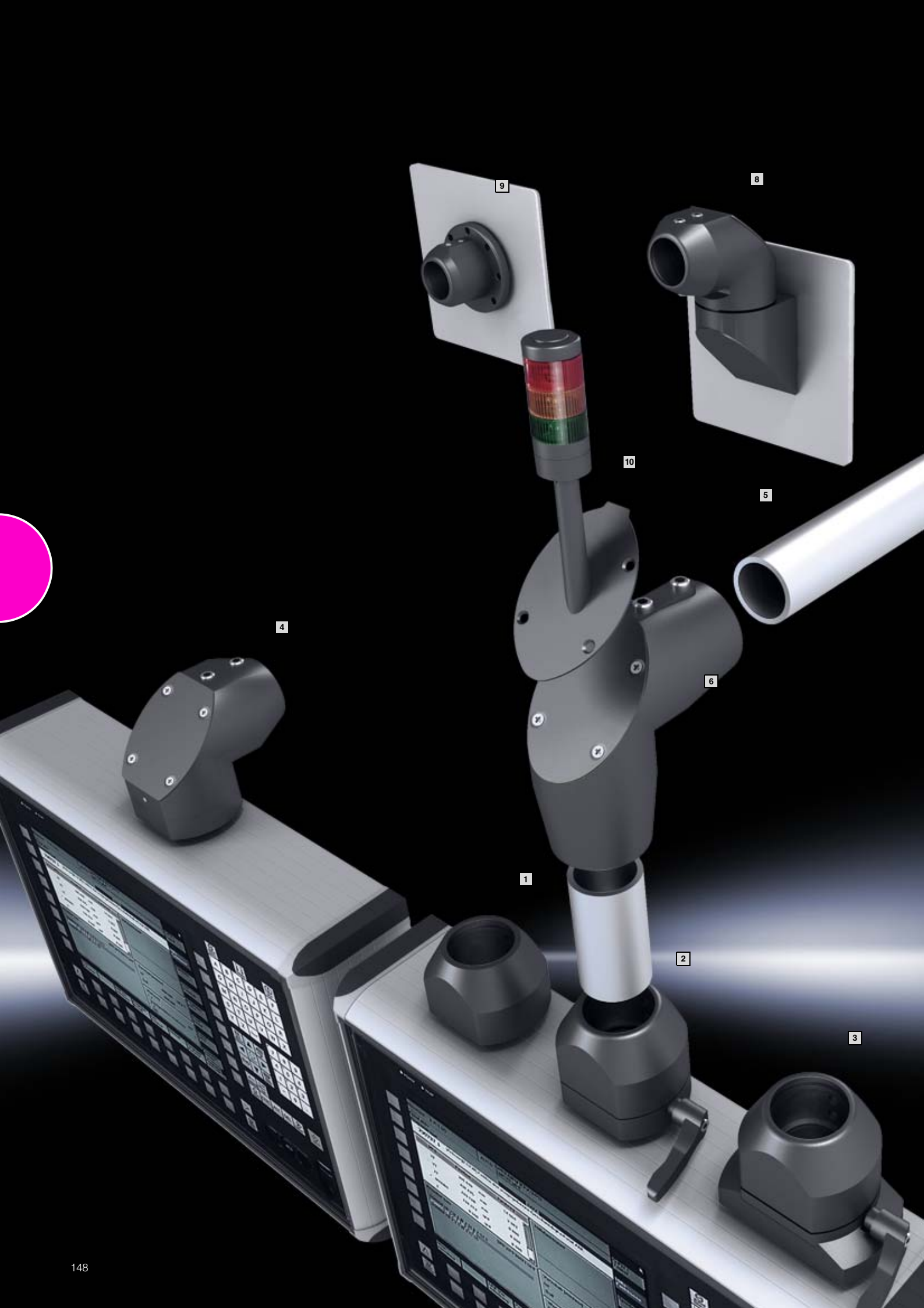
Support arm system CP-XL
Overview of components 161
Support section CP-XL 162
Support arm system CP-XL, components 163

Load information
Comparison of support arm systems

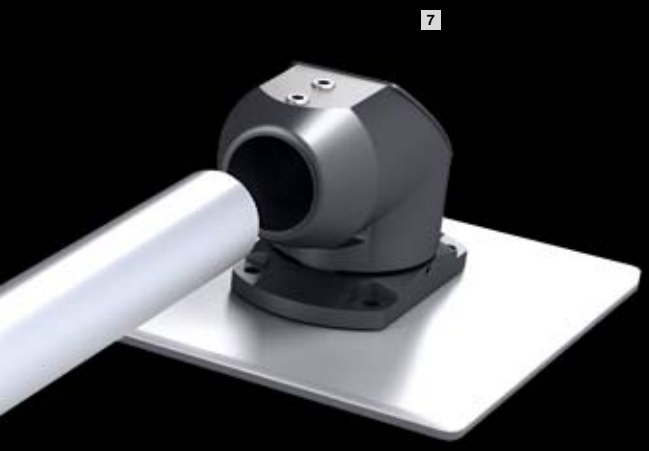


Support arm configurator
The support arm configurator determines the correct support arm system according to user-specific parameters.

More detailed information can be found at: www.rittal.com


9
8
10
5
4
6
1
2
3

Support arm system CP-S, steel



Overview of components

1 Enclosure attachment CP-S
(CP 6501.070)

2 Housing coupling, round CP-S
(CP 6501.050)

3 Housing coupling, CP-S for support arm connection
CP-L ▭ 120 x 65 mm
(CP 6501.130)

4 Angle coupling 90° CP-S
(CP 6501.120)

5 Support section CP-S
(CP 6501.000, .020)

6 Angle piece 90° CP-S
(CP 6501.140)

7 Top mounted joint CP-S
(CP 6501.160)

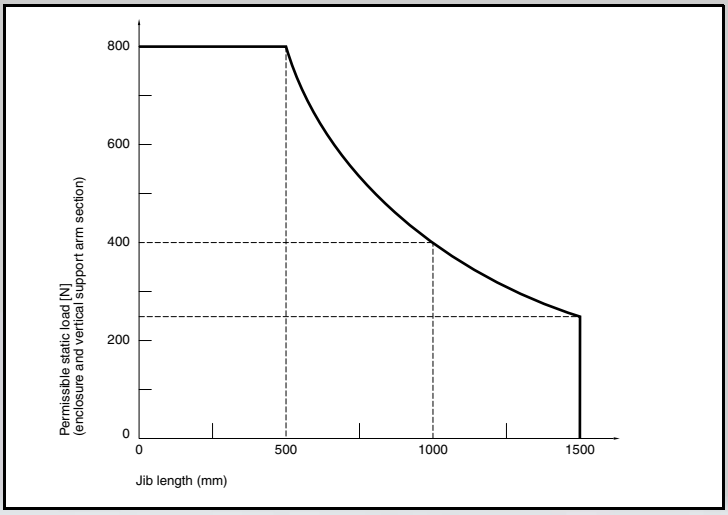
8 Wall mounted hinge CP-S
(CP 6501.150)

9 Wall/base mounting bracket CP-S
(CP 6501.110)

10 Mounting components for signal pillar
(CP 2375.030)

Load information

When using CP-S in conjunction with CP-L
(in the horizontal development of the system),
the CP-L load diagram applies.



Support arm system CP-S, steel

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

Support section CP-S
Attached to the connection components via 2 clamping screws.

Size:
– External diameter: 48.3 mm
– Wall thickness: 4.0 mm

Material:
– Steel conduit, powder-coated

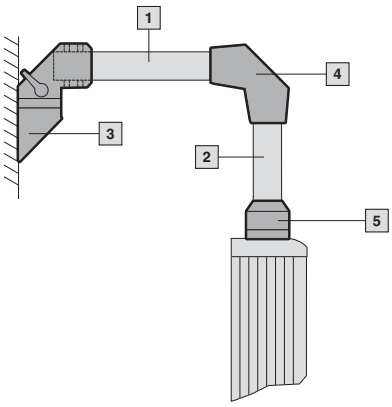
Colour:
RAL 7035

Supply includes:
Support section CP-S

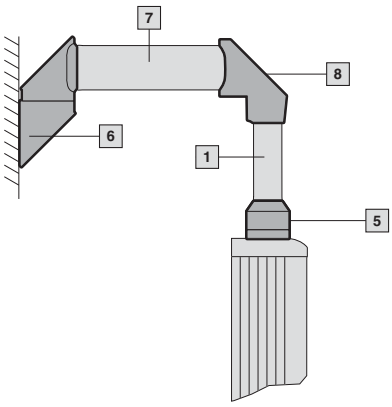
Note:
Stainless steel, see page 190.

Detailed drawings:
Available on the Internet.

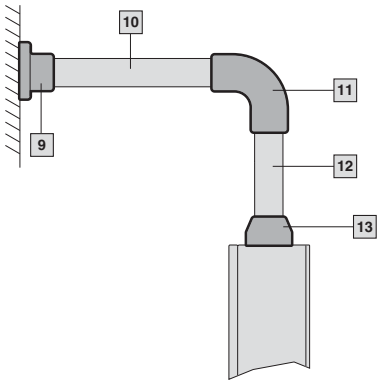
Integral adjustment facility



Combination with support arm system CP-L

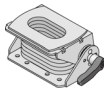
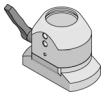
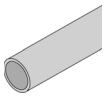
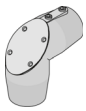
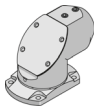
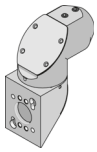


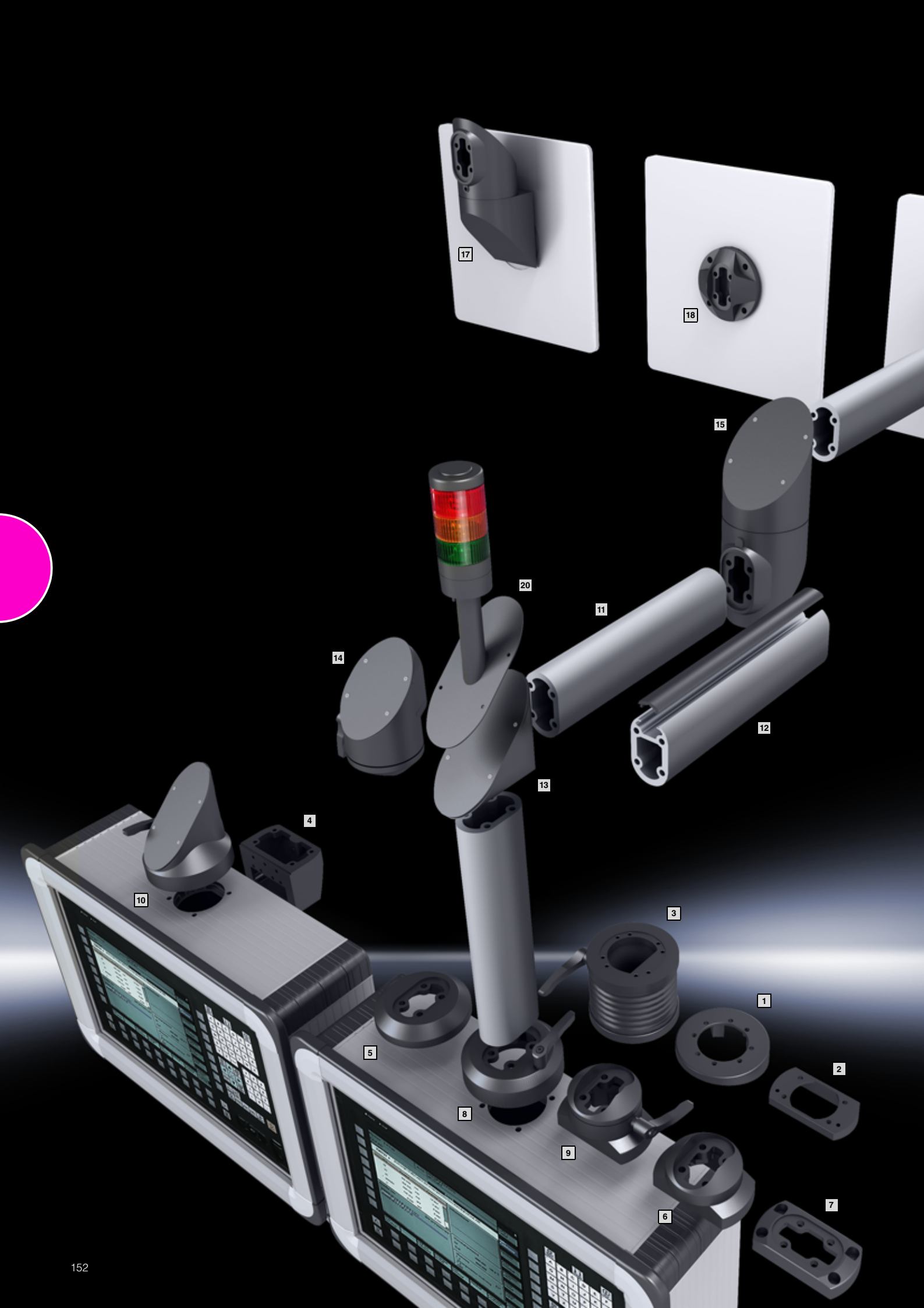
Also available in stainless steel version, see page 190



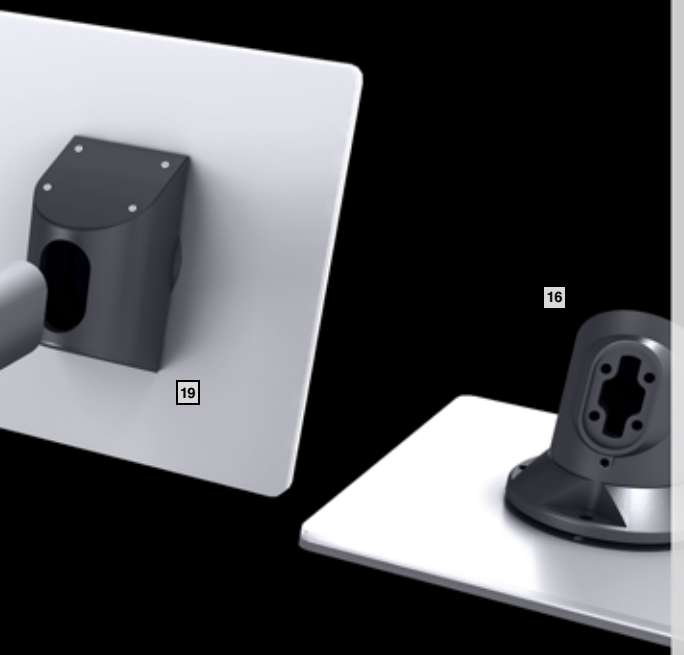
1 Support section CP-S, 1000 mm (CP 6501.020)
2 Support section CP-S, 500 mm (CP 6501.000)
3 Wall mounted hinge CP-S (CP 6501.150)
4 Angle piece 90° CP-S (CP 6501.140)
5 Housing coupling CP-S (CP 6501.050)
6 Wall mounted hinge CP-L (CP 6521.010)
7 Support section CP-L, 500 mm (CP 6511.000)
8 Angle adaptor CP-L to CP-S 90° (CP 6501.090)
9 Wall/base mounting, rigid, CP-S, stainless steel (CP 6663.000)
10 Support section CP-S, stainless steel, 1000 mm (CP 6660.010)
11 Angle piece 90°, CP-S, stainless steel (CP 6664.300)
12 Support section CP-S, stainless steel, 500 mm (CP 6660.050)
13 Housing coupling CP-S, stainless steel (CP 6664.000)

Support arm system CP-S, steel

		Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section	Desk section	Wall section
							Model No. CP		
	**Enclosure attachment, tilting**								
	see page 167	■	–	–	0.8	7024	**6902.670**	**–**	**–**
	Enclosure attachment CP-S								
		–	■	–	1.0	7024	**6501.070**	**–**	**–**
	Housing coupling, round CP-S								
		■	–	–	1.1	7024	**6501.050**	**–**	**–**
	**Housing coupling CP-S**								
	for support arm connection CP-L □ 120 x 65 mm	■	–	–	1.5	7024	**6501.130**	**–**	**–**
	Angle coupling 90° CP-S								
		■	–	–	1.6	7024	**6501.120**	**–**	**–**
	**Support section CP-S**								
		–	–	500 1000	2.1 4.2	7035 7035	**6501.000** **6501.020**		
	**Angle piece 90° CP-S**								
		–	■	–	1.1	7024	**6501.140**	**–**	**6501.140**
	Mounting component for signal pillar								
	see page 813	–	■	–	0.3	7024	**2375.030**	**–**	**–**
	**Top mounted joint CP-S**								
		■	–	–	1.8	7024	**–**	**–**	**6501.160**
	**Wall mounted hinge CP-S**								
		■	–	–	2.2	7024	**–**	**–**	**6501.150**
	Wall/base mounting bracket CP-S								
		–	■	–	0.7	7024	**–**	**–**	**6501.110**
	Accessories CP-S								
	Angle adaptor 90° CP-L to CP-S CP 6501.090								see page 168


17
18
15
20
11
14
12
13
4
10
3
1
5
2
8
9
6
7

Support arm system CP-L



Overview of components

1 Tilting adaptor 10° CP-L, for support arm connection Ø 130 mm (CP 6527.010)

2 Tilting adaptor 10° CP-L, for support arm connection CP-L ▭ 120 x 65 mm (CP 6527.110)

3 Tilting adaptor ±45° CP-L, for support arm connection Ø 130 mm (CP 6529.010)

4 Connection console CP-L (CP 6508.010)

5 Enclosure attachment CP-L, for support arm connection Ø 130 mm (CP 6525.510)

6 Enclosure attachment CP-L, for support arm connection CP-L ▭ 120 x 65 mm (CP 6525.610)

7 Enclosure attachment, locatable CP-L, for support arm connection CP-L ▭ 120 x 65 mm (CP 6525.210)

8 Housing coupling CP-L, for support arm connection Ø 130 mm (CP 6525.010)

9 Housing coupling CP-L, for support arm connection CP-L ▭ 120 x 65 mm (CP 6525.110)

10 Angle coupling 90° CP-L, for support arm connection Ø 130 mm (CP 6526.010)

11 Support section CP-L, closed (CP 6509.000, CP 6511.000, CP 6513.000, CP 6515.000)

12 Support section CP-L, open (CP 6513.050)

13 Angle piece 90° CP-L (CP 6524.010)

14 Articulated joint 90° CP-L, may only be top-mounted/suspended on the enclosure side (CP 6524.210)

15 Intermediate hinge CP-L (CP 6523.010)

16 Top mounted joint CP-L (CP 6522.010)

17 Wall mounted hinge CP-L (CP 6521.010)

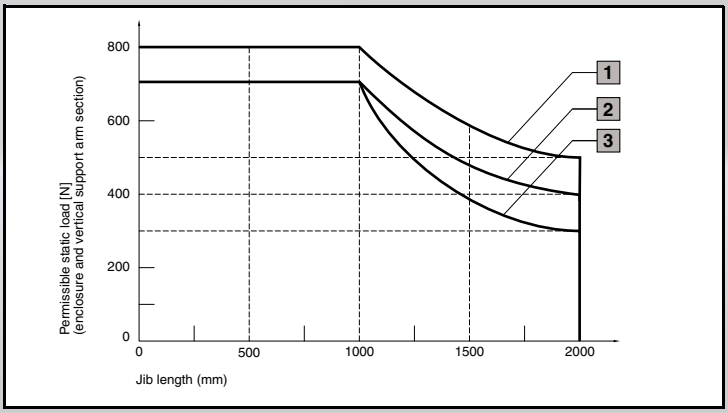
18 Wall/base mounting bracket, small CP-L (CP 6520.510)

19 Wall/base mounting bracket, large CP-L (CP 6520.010)

20 Mounting components for signal pillar (CP 2375.000, .020)

Load information

Permissible load depending on system configuration



1 System configuration without intermediate hinge

2 System configuration with one intermediate hinge

3 System configuration with one intermediate hinge and one top-mounted/wall-mounted joint

Note:
– Intermediate hinge CP 6523.010 should only be used once per system!
– When using the open support section, the load information is 70% of the closed support section.

Support arm system CP-L

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

Support section CP-L
Attachment to the connection components with 4 self-tapping screws in the screw channel, may be cut to any required length, no thread-tapping required.

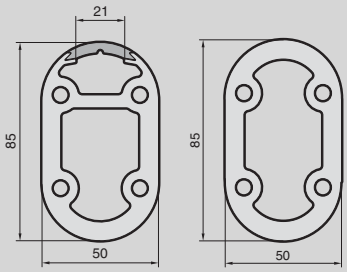
Size:
– External dimensions: 50 x 85 mm
– Wall thickness: 8 mm

Material:
– Support section: Extruded aluminium section
– Cover Plastic

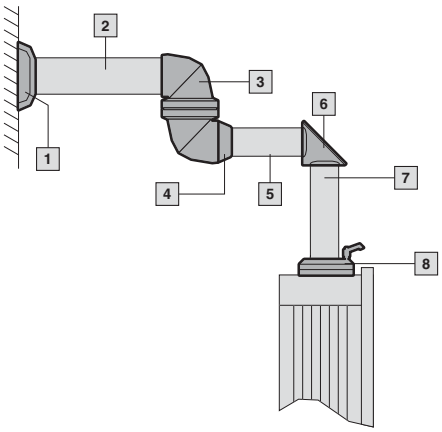
Colour:
Support section: RAL 7035

Supply includes:
Support section CP-L

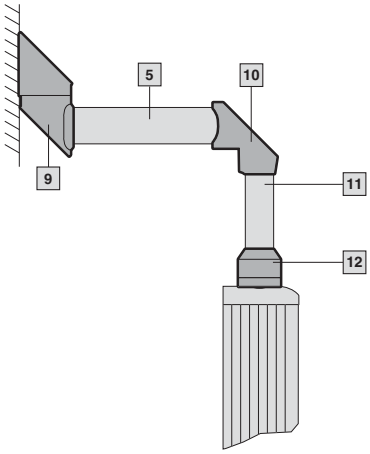
Detailed drawings:
Available on the Internet.



Combination with support arm systems CP-C to CP-L

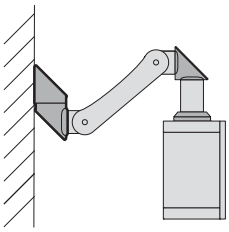


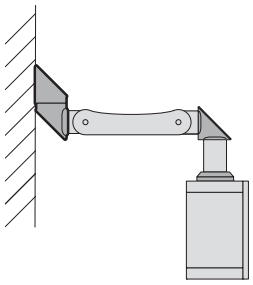
Combination with support arm systems CP-C to CP-S

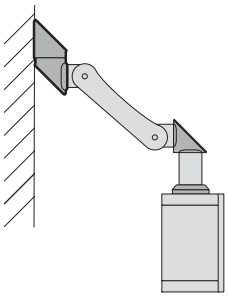


1 Wall/base mounting bracket CP-C, large (CP 6072.000)
2 Support section CP-C, 500 mm (CP 6074.100)
3 Intermediate hinge CP-C (CP 6071.800)
4 Adaptor CP-C to CP-L (CP 6071.600)
5 Support section CP-L (CP 6511.000)
6 Angle piece 90° CP-L (CP 6524.010)
7 Support section CP-L, 500 mm (CP 6511.000)
8 Housing coupling CP-L (CP 6525.010)
9 Wall mounted hinge CP-L (CP 6521.010)
10 Angle adaptor 90° (CP 6501.090)
11 Support section CP-S, steel, 500 mm (CP 6501.000)
12 Housing coupling CP-S (CP 6501.050)

Combination with support arm, height adjustable

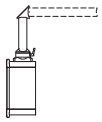
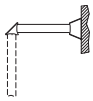
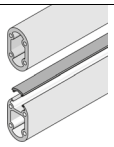
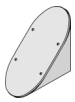
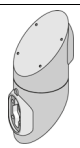
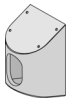
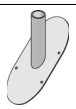
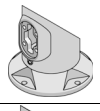
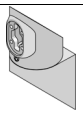


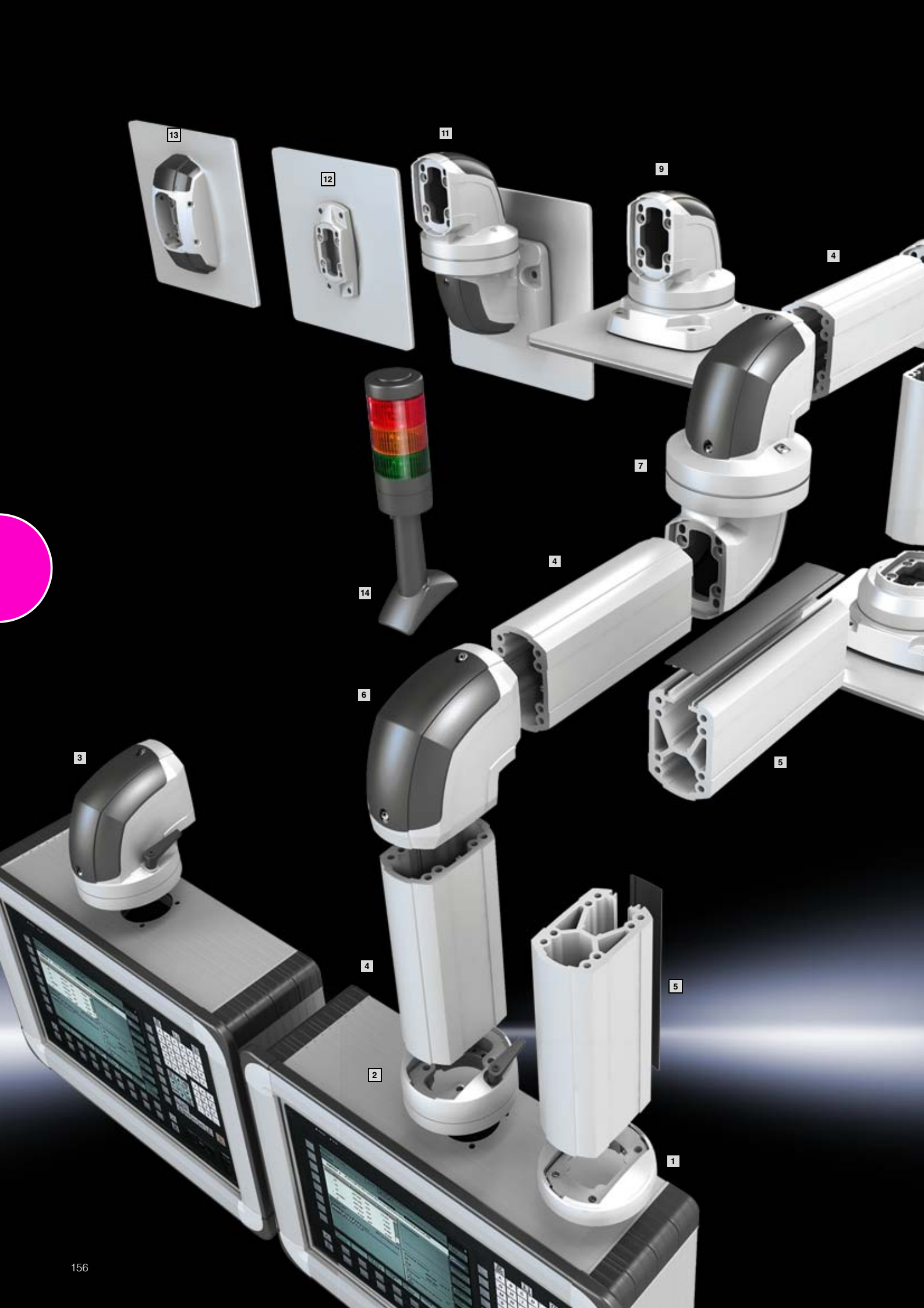




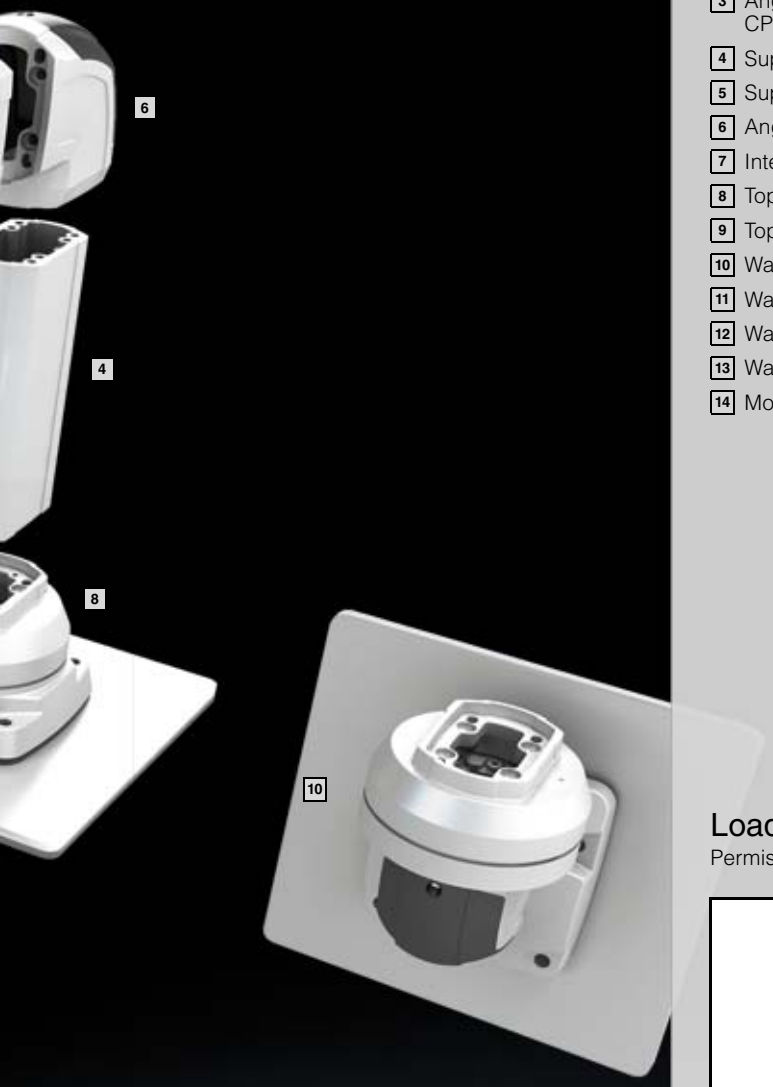
- Adjustment range up to 800 mm
- Integral stay in three stages, except for CP 6510.210
- Problem-free cable entry with connectors such as DVI, VGA, except with CP 6510.210
- Support arm, height-adjustable, see page 166

Support arm system CP-L

		Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section	Desk section	Wall section
									
							Model No. CP		
	Tilting adaptor 10° CP-L								
	for support arm connection Ø 130 mm	–	■	–	0.6	7024	**6527.010**	**–**	**–**
	for support arm connection CP-L ▭ 120 x 65 mm	–	■	–	0.4	7024	**6527.110**	**–**	**–**
	Tilting adaptor ±45° CP-L								
	for support arm connection Ø 130 mm	■	–	–	1.3	7024	**6529.010**	**–**	**–**
	Connection console CP-L								
	for flat operating housings	–	■	–	0.7	7024	**6508.010**	**–**	**–**
	Enclosure attachment CP-L								
	for support arm connection Ø 130 mm	–	■	–	1.0	7024	**6525.510**	**–**	**–**
	for support arm connection CP-L ▭ 120 x 65 mm	–	■	–	1.0	7024	**6525.610**	**–**	**–**
	Enclosure attachment, locatable CP-L								
	for support arm connection CP-L ▭ 120 x 65 mm	–	■	–	0.4	7024	**6525.210**	**–**	**–**
	Housing coupling CP-L								
	for support arm connection Ø 130 mm	■	–	–	1.7	7024	**6525.010**	**–**	**–**
	for support arm connection CP-L ▭ 120 x 65 mm	■	–	–	1.4	7024	**6525.110**	**–**	**–**
	Angle coupling 90° CP-L								
	for support arm connection Ø 130 mm	■	–	–	1.9	7024	**6526.010**	**–**	**–**
	**Support section CP-L**								
	Closed	– – – –	– – – –	250 500 1000 2000	1.3 2.6 5.1 10.2	7035 7035 7035 7035	**6509.000** **6511.000** **6513.000** **6515.000**	**6509.000** **6511.000** **6513.000** **6515.000**	**6509.000** **6511.000** **6513.000** **6515.000**
	Open	–	–	1000	4.75	7035	**6513.050**	**6513.050**	**6513.050**
	**Angle piece 90° CP-L**								
		–	■	–	1.4	7024	**6524.010**	**–**	**6524.010**
	Articulated joint 90° CP-L								
		■	–	–	1.2	7024	**6524.210**	**–**	**–**
	**Intermediate hinge CP-L**								
		■	–	–	3.2	7024	**–**	**6523.010**	**–**
	**Wall/base mounting, large CP-L**								
		–	■	–	1.9	7024	**–**	**–**	**6520.010**
	**Mounting component for signal pillar**								
	see page 813	– –	■ ■	– –	0.4	9017 9017	**2375.000** **–**	**–** **2375.020**	**–** **2375.020**
	**Top mounted joint CP-L**								
		■	–	–	3.0	7024	**–**	**–**	**6522.010**
	**Wall mounted hinge CP-L**								
		■	–	–	3.2	7024	**–**	**–**	**6521.010**
	Wall/base mounting bracket, small, CP-L								
		–	■	–	0.6	7024	**–**	**–**	**6520.510**
	Accessories CP-L:								
	Adaptation options								see page 164
	Support arm bracket CP 6519.000								see page 167
	Connection plate CP 6528.210								see page 165


13
12
11
9
4
7
4
14
6
3
5
4
5
2
1

Support arm system CP-C



Overview of components

1 Enclosure attachment CP-C, for support arm connection CP-L Ø 130 mm (CP 6070.200)

2 Enclosure attachment CP-C, for support arm connection CP-L Ø 130 mm (CP 6070.000)

3 Angle coupling 90° CP-C, for support arm connection CP-L Ø 130 mm (CP 6071.200)

4 Support section CP-C, closed (CP 6074.000, .100, .300, .500)

5 Support section CP-C, open (CP 6075.100, .300, .500)

6 Angle piece 90° CP-C (CP 6071.400)

7 Intermediate hinge CP-C (CP 6071.800)

8 Top-mounted joint CP-C, vertical outlet (CP 6072.800)

9 Top-mounted joint CP-C, horizontal outlet (CP 6072.600)

10 Wall-mounted joint CP-C, vertical outlet (CP 6072.400)

11 Wall-mounted joint CP-C, horizontal outlet (CP 6072.500)

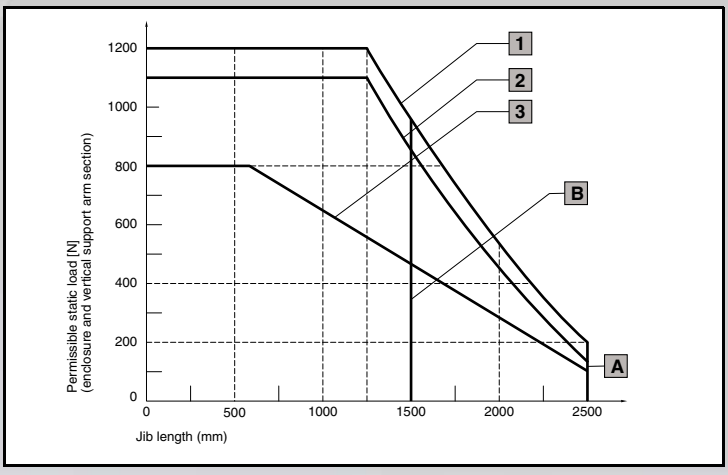
12 Wall/base mounting bracket, small CP-C (CP 6072.200)

13 Wall/base mounting bracket, large CP-C (CP 6072.000)

14 Mounting components for signal pillar (CP 6073.000)

Load information

Permissible load depending on system configuration



1 Without intermediate hinge

2 With intermediate hinge CP 6071.800 and closed support section

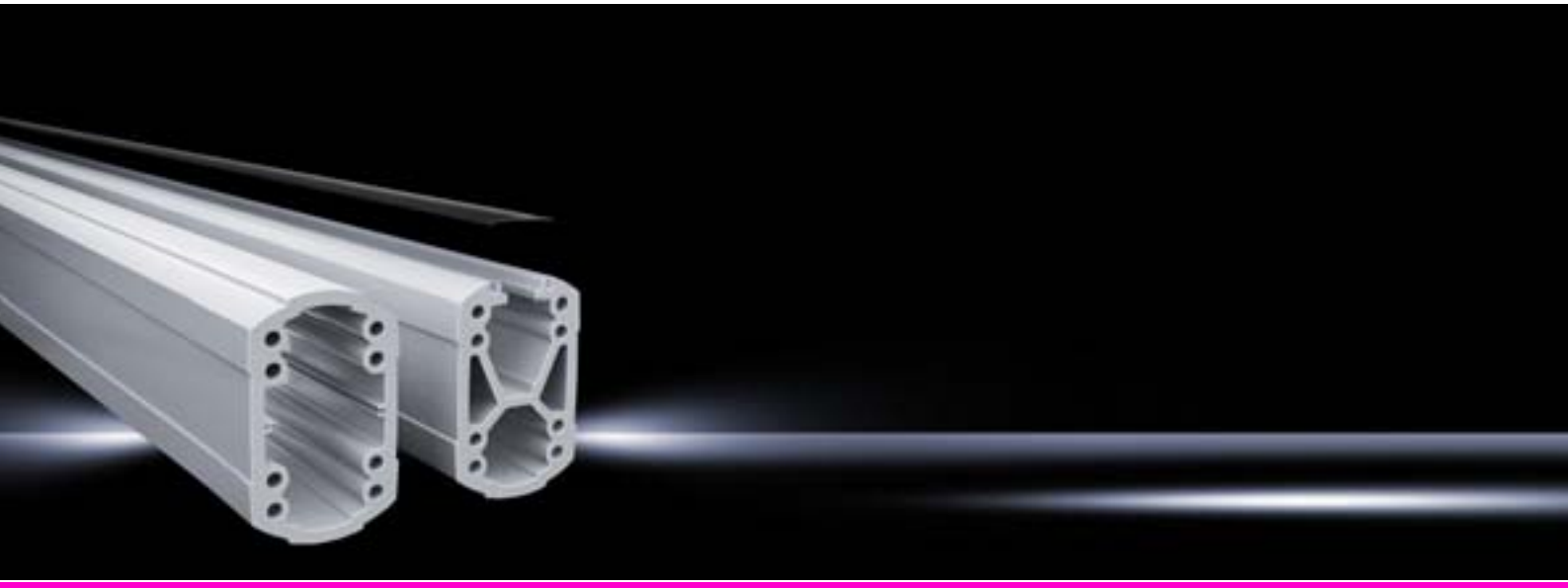
3 With intermediate hinge CP 6071.800 and open support section

A Maximum system length 2500 mm for systems with horizontal outlet at the system start.

B Maximum system length 1500 mm for systems **with vertical outlet** at the system start.

Note:
- Wall/base mounting bracket, small CP 6072.200 must not be used in conjunction with intermediate hinge CP 6071.800!
- Intermediate hinge CP 6071.800 should only be used once per system!

Support arm system CP-C



Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

Support section CP-C
Attachment to the connection components with 4 self-tapping screws in the screw channel. May be cut to any required length, no thread-tapping required.
Closed cable duct with a large cross-section.
Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via cover section. X-shaped profile for higher load capacity, large cable routing channels.

Upper channel adequate for cables with large connectors (e.g. DVI or VGA) and available/usable throughout the entire system.

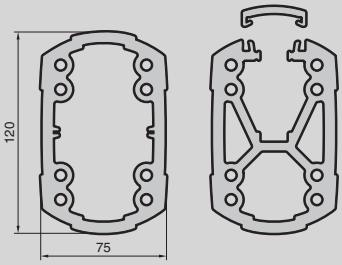
Size:
– External dimensions: 75 x 120 mm
– Wall thickness: 6.5 mm

Material:
– Support section: Extruded aluminium section
– Cover: Plastic

Colour:
– Support section: RAL 7035
– Cover: RAL 7024

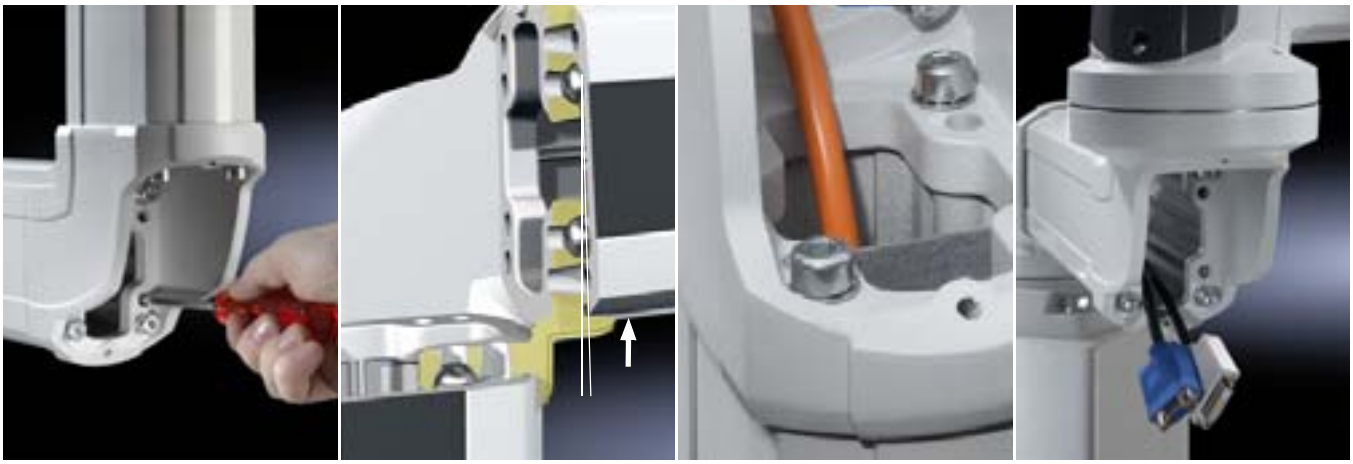
Supply includes:
– Support section CP-C
– Clip-in lid (only for CP-C open)

Detailed drawings:
Available on the Internet.

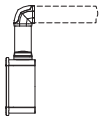
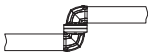
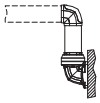
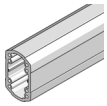
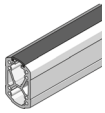
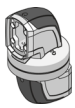
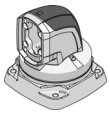
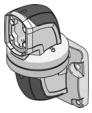
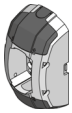


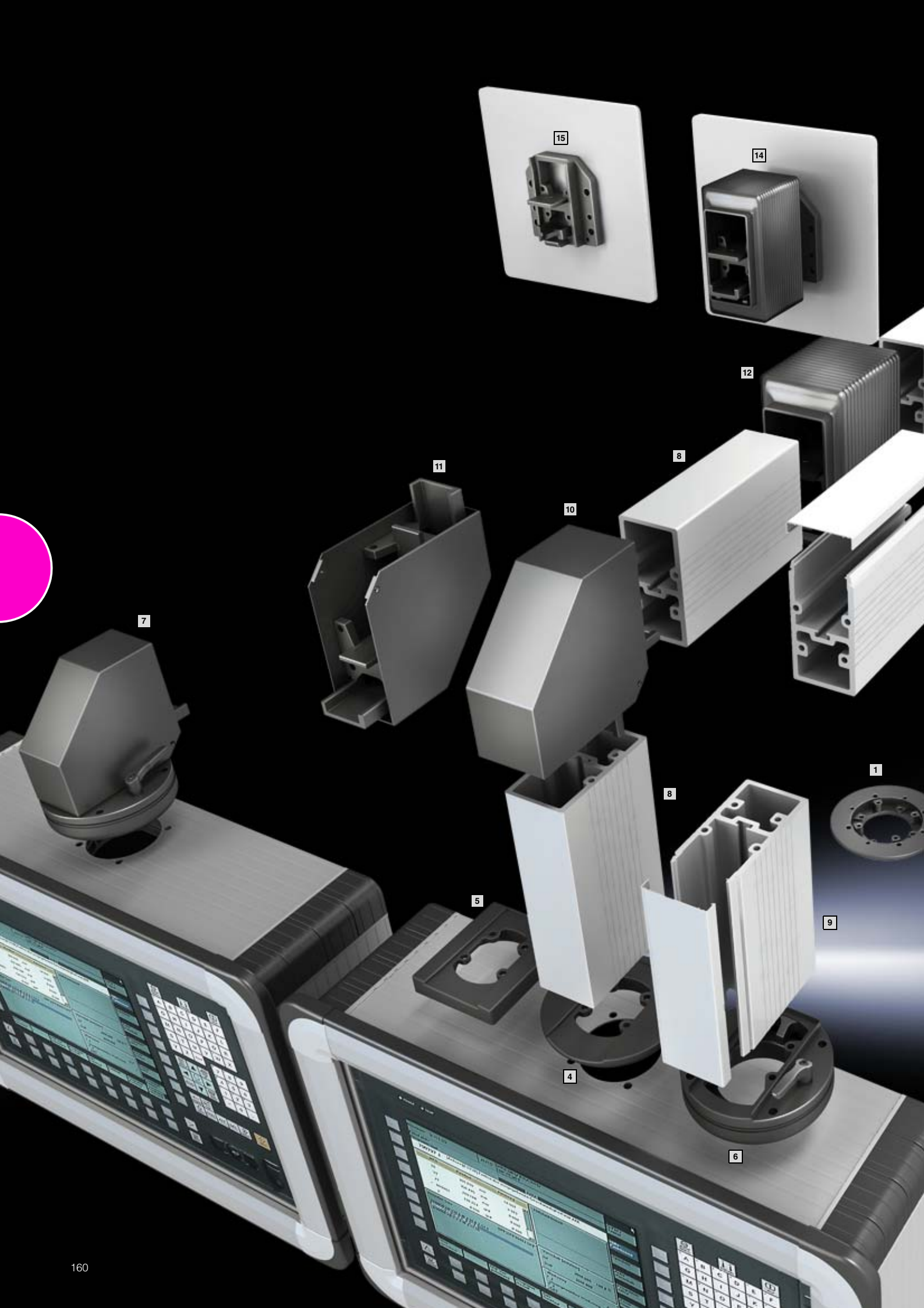
Function
- Easily adjusted without dismantling the system
- Fast, simple assembly of the system
- Rotation range may be limited without dismantling the system

Cable management
- Cross-section sufficient for large connectors
- Separation between data and power cables
- Removable cover for simple cable entry
- Flexible cable entry and routing options

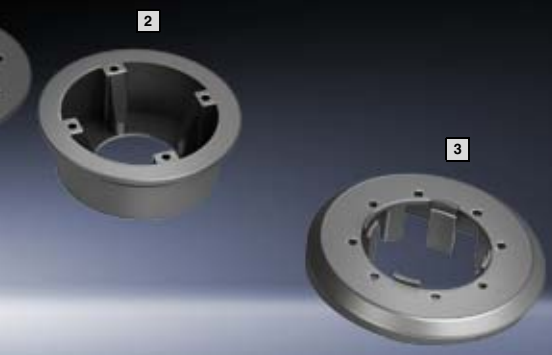


Support arm system CP-C

		Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section	Desk section	Wall section
									
							Model No. CP		
	Enclosure attachment CP-C for support arm connection CP-L Ø 130 mm								
		–	■	–	0.7	7035	**6070.200**	**–**	**–**
	Housing coupling CP-C for support arm connection CP-L Ø 130 mm								
		■	–	–	2.0	7035	**6070.000**	**–**	**–**
	Angle coupling 90° CP-C for support arm connection CP-L Ø 130 mm								
		■	–	–	2.1	7035/ 7024	**6071.200**	**–**	**–**
	**Support section CP-C**								
	Closed	– – – –	– – – –	250 500 1000 2000	2.0 3.9 7.8 15.6	7035	**6074.000** **6074.100** **6074.300** **6074.500**	**6074.000** **6074.100** **6074.300** **6074.500**	**6074.000** **6074.100** **6074.300** **6074.500**
	Open	– – –	– – –	500 1000 2000	4.6 9.2 18.4	7035/ 7024	**6075.100** **6075.300** **6075.500**	**6075.100** **6075.300** **6075.500**	**6075.100** **6075.300** **6075.500**
	Angle piece 90° CP-C								
		–	■	–	1.1	7035/ 7024	**6071.400**	**–**	**6071.400**
	**Intermediate hinge CP-C**								
		■	–	–	4.4	7035/ 7024	**–**	**6071.800**	**–**
	**Top-mounted joint CP-C**								
	Vertical outlet	■	–	–	3.8	7035	**–**	**–**	**6072.800**
	Horizontal outlet	■	–	–	4.3	7035/ 7024	**–**	**–**	**6072.600**
	**Wall-mounted hinge CP-C**								
	Vertical outlet	■	–	–	5.5	7035/ 7024	**–**	**–**	**6072.400**
	Horizontal outlet	■	–	–	6.1	7035/ 7024	**–**	**–**	**6072.500**
	Wall/base mounting bracket, small, CP-C								
		–	■	–	0.5	7035	**–**	**–**	**6072.200**
	**Wall/base mounting bracket, large, CP-C**								
		–	■	–	2.5	7035/ 7024	**–**	**–**	**6072.000**
	Mounting component for signal pillar								
	See page 813	–	■	–	0.1	7024	**6073.000**	**6073.000**	**6073.000**
	Accessories CP-C:								
	Adaptor CP-C to CP-L CP 6071.600								see page 165
	Connection adaptor CP-L Ø 130 mm to CP-L ▭ 120 x 65 mm CP 6071.000								see page 164
	Support arm, height adjustable								see page 166


15
14
12
11
8
10
7
1
8
5
9
4
6

Support arm system CP-XL



Overview of components

1 Connection adaptor CP-L to CP-XL, 20 mm height (CP 6528.010)

2 Connection adaptor CP-L to CP-XL, 55 mm height (CP 6528.510)

3 Tilting adaptor 10° CP-XL (CP 6023.010)

4 Enclosure attachment, round CP-XL (CP 6130.610)

5 Enclosure attachment, square CP-XL (CP 6130.510)

6 Housing coupling CP-XL (CP 6130.010)

7 Angle coupling 90° CP-XL (CP 6140.010)

8 Support section CP-XL, closed (CP 6050.500, 6100.500, 6200.500)

9 Support section CP-XL, open (CP 6050.000, 6100.000, 6200.000)

10 Angle piece 90° CP-XL, outlet at bottom (CP 6140.010)

11 Angle piece 90° CP-XL, outlet at top (CP 6180.010)

12 Intermediate hinge CP-XL (CP 6120.010)

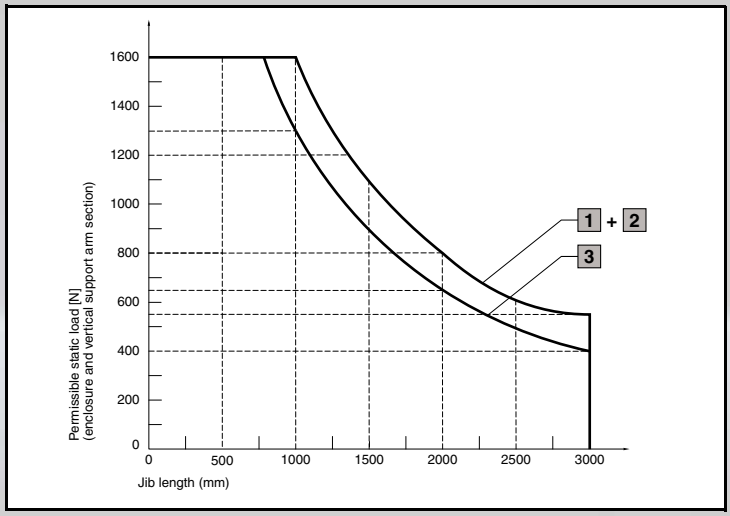
13 Top mounted joint CP-XL (CP 6170.010)

14 Wall mounted hinge CP-XL (CP 6110.010)

15 Wall/base mounting bracket CP-XL (CP 6160.010)

Load information

Permissible load depending on system configuration



1 Open and closed support section without intermediate hinge

2 Closed support section with one intermediate hinge

3 Open support section with one intermediate hinge

Note:
Intermediate hinge CP 6120.010 should only be used once per system!

Support arm system CP-XL

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

Support section CP-XL
Attachment to the connection components with 4 self-tapping screws in a screw channel, may be cut to any required length. Closed cable duct for higher loads and torsion.

Open cable duct for easy servicing access and for pre-assembled cables with connectors; lockable via clip-in cover.

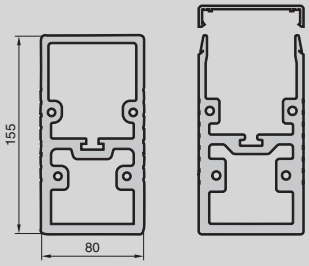
Size:
External dimensions:
80 x 155 mm

Material:
Extruded aluminium section

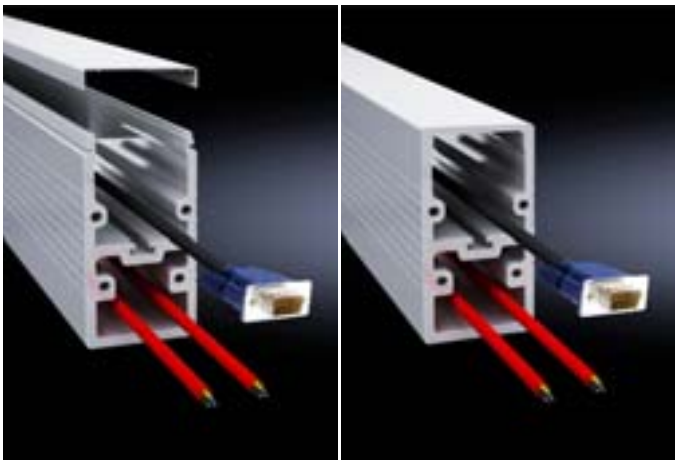
Colour:
RAL 7035

Supply includes:
– Support section CP-XL
– Clip-in cover
(only for CP-XL open)

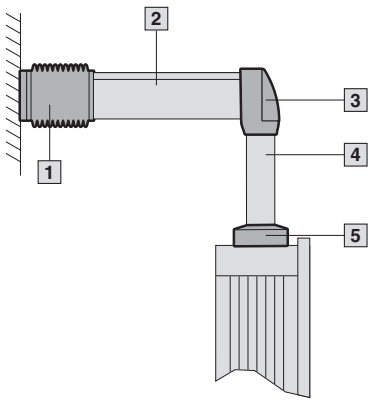
Detailed drawings:
Available on the Internet.



Cable management
- Open support section for retrospective cable insertion
- Separation of control cables from power supply with two separate ducts

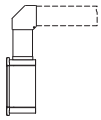
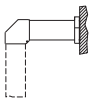
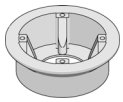
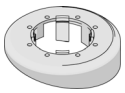
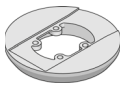
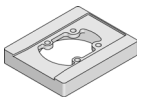
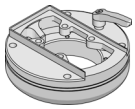
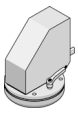
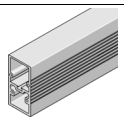
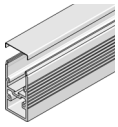
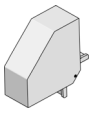
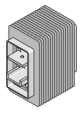
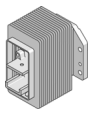
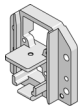
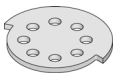


Combination with support arm systems CP-XL to CP-L

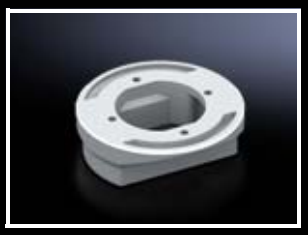


1 Wall mounted hinge CP-XL (CP 6110.010)
2 Support section CP-XL (CP 6100.000)
3 Angle adaptor 90° CP-XL to CP-L (CP 6528.110)
4 Support section CP-L (CP 6511.000)
5 Housing coupling CP-L for support arm connection CP-L Ø 130 mm (CP 6525.010)

Support arm system CP-XL

		Rotating/tilting	Rigid	Length mm	Weight kg	Colour RAL	Enclosure section	Desk section	Wall section
									
							Model No. CP		
	**Connection adaptor CP-L to CP-XL**								
	Height 20 mm	–	■	–	0.6	7024	**6528.010**	**–**	**–**
	Height 55 mm	–	■	–	0.7	7024	**6528.510**	**–**	**–**
	**Tilting adaptor 10° CP-XL**								
		–	■	–	1.4	7024	**6023.010**	**–**	**–**
	**Enclosure attachment, round CP-XL**								
		–	■	–	1.2	7024	**6130.610**	**–**	**–**
	**Enclosure attachment, rectangular CP-XL**								
		–	■	–	1.2	7024	**6130.510**	**–**	**–**
	**Housing coupling CP-XL**								
		■	–	–	3.6	7024	**6130.010**	**–**	**–**
	**Angle coupling 90° CP-XL**								
		■	–	–	2.1	7024	**6040.010**	**–**	**–**
	**Support section CP-XL**								
	Closed	– – –	– – –	500 1000 2000	5.5 11.0 22.0	7035 7035 7035	**6050.500** **6100.500** **6200.500**	**6050.500** **6100.500** **6200.500**	**6050.500** **6100.500** **6200.500**
	Open	– – –	– – –	500 1000 2000	4.9 9.8 19.6	7035 7035 7035	**6050.000** **6100.000** **6200.000**	**6050.000** **6100.000** **6200.000**	**6050.000** **6100.000** **6200.000**
	**Angle piece 90° CP-XL**								
	Outlet at bottom	–	–	–	2.4	7024	**6140.010**	**–**	**6140.010**
	Outlet at top	–	–	–	3.6	7024	**6180.010**	**–**	**6180.010**
	**Intermediate hinge CP-XL**								
		■	–	–	6.5	7024	**–**	**6120.010**	**–**
	Top mounted joint CP-XL								
		■	–	–	11.9	7024	**–**	**–**	**6170.010**
	**Wall mounted hinge CP-XL**								
		■	–	–	8.5	7024	**–**	**–**	**6110.010**
	**Wall/base mounting bracket CP-XL**								
		–	■	–	4.1	7024	**–**	**–**	**6160.010**
	**Rotation range restrictor**								
	for: Intermediate hinge CP 6120.010 Wall-mounted hinge CP 6110.010	–	■	–	0.6	–	**–**	**6110.100**	**6110.100**

Accessories



Connection adaptor CP-L Ø 130 mm to CP-L ▭ 120 x 65 mm

For external mounting of command panels with support arm cutout CP-L ▭ 120 x 65 mm.

Material:
Cast aluminium

Supply includes:
Seal and assembly parts.

Height mm	Colour RAL	Weight kg	Model No. CP
40	7035	0.5	**6071.000**

Detailed drawings:
Available on the Internet.

Connection adaptor CP-L to CP-XL

For mounting between enclosures with support arm connection CP-L and support arm system CP-XL.
May also be used for the attachment of command panels with cut-out for CP-L directly to machines and systems without a support arm. The mounting cut-out CP-XL should be provided there.

Assembly sequence:
- Mount the connection adaptor on the supporting structure
- Mount the enclosure and tighten the screws

Material:
Cast aluminium

Supply includes:
Seal and assembly parts.

Height mm	Colour RAL	Weight kg	Model No. CP
20[1)]	7024	0.6	**6528.010**
55	7024	0.7	**6528.510**

[1)] If the load permits, also suitable for mounting between enclosure with support arm connection CP-XL and support arm system CP-L Ø 130 mm.

Detailed drawings:
Available on the Internet.

Adaptor

for Siemens Pro-Panel
- For external mounting of Siemens Simatic Pro-Panel on
  – Support arm system CP-S
  – Support arm system CP-L ▭ 120 x 65 mm

Material:
Aluminium

Supply includes:
Assembly parts.

Colour RAL	Model No. CP
7024	**6528.450**

Connection console CP-L

for Beckhoff Control-Panels
- Removable cover for easy cable entry with a large opening (110 x 50 mm)
- For external mounting of Beckhoff Control-Panels on
  – Support arm system CP-S
  – Support arm system CP-L ▭ 120 x 65 mm

Material:
Cast aluminium

Supply includes:
Seals and assembly parts for mounting on the enclosure and 2 cable ties.

Colour RAL	Weight kg	Model No. CP
7024	0.7	**6508.020**

Detailed drawings:
Available on the Internet.

Connection plates CP-L

With reinforcement plate

- For easy location of the command panel onto the support arm or pedestal.
- More space for cable entry
- For mounting command panels
  - Comfort Panel from a front panel width of 247 mm and installation depth of 152 mm
  - Optipanel from a front panel width of 220 mm and installation depth of 150 mm
  - Sheet steel from 135 mm installation depth

Material:
- Connection plate: Cast aluminium
- Reinforcement plate: Sheet steel, 6 mm

Supply includes:
Seals and assembly parts.

Colour RAL	Weight kg	Model No. CP
7024	0.7	**6528.210**

Detailed drawings:
Available on the Internet.

Enclosure attachment, tilting, base mounting

CP-L ▭ 120 x 65 mm

For mounting beneath:
- IW worktop with pedestal
- Adequately large surfaces

Fits enclosures with mounting cut-out:
- CP-L ▭ 120 x 65 mm
  (e.g. Optipanel, see page 140, Comfort Panel, see page 138)

With mounting cut-out for connector grommet for sealed cable entry.

Tilt angle:
+/–40°, lockable via clamping levers.

Material:
Sheet steel

Surface finish:
Spray-finished

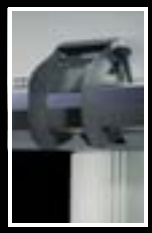
Supply includes:
Assembly parts.

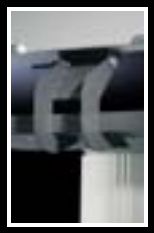
Colour RAL	Weight kg	Model No. IW
7024	1.6	**6902.640**

Note:
The enclosure attachment can be mounted either on the support arm connection of the Optipanel enclosure or on the underside or rear of any enclosure.

Accessories:
- Connector gland, see page 712
- IW worktop, see page 133
- Pedestal, see page 169.

Detailed drawings:
Available on the Internet.





Connection adaptor CP-C to CP-L

Applications:
- For integration of the support arm, height-adjustable CP-L (see page 154) to the CP-C support arm system
- For mounting small, flat operating housings if the load capacity of the support arm system CP-C is needed for long jib lengths

Benefits:
- Integral adjustment facility

Material:
Cast aluminium

Supply includes:
- Seals
- Self-tapping screws for CP-L support section attachment.

Weight kg	Model No. CP
0.6	**6071.600**

Detailed drawings:
Available on the Internet.

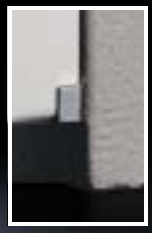
Adjustment set for support section CP-XL

The adjustment set also supports retrospective alignment of the CP support section.

Material:
Sheet steel 1.0 mm

Surface finish:
Zinc-plated

Packs of	Model No. CP
10	**6205.000**



Accessories

Housing couplings CP-XL

for desktop mounting
The stable, rotating connection with extra space for cable routing.
For additional stability of the roof and base with heavy installed equipment.

For mounting
- Command panels from 150 mm installation depth on
- IW worktops
- Horizontal surfaces (floors or ceilings)

Attachment
- of command panels: With one-man assembly via machined keyholes
- on surfaces: Via external screws with cover

Rotation range:
Max. 350°, lockable via clamping levers.
By using additional M6 cheese-head screws, the rotation range may be limited to ±28°, ±73°, ±118°, ±163°.

Material:
– Housing coupling: Cast aluminium/die-cast zinc
– Reinforcement plate: Sheet steel, 6 mm

Surface finish:
– Housing coupling: Powder-coated, textured
– Reinforcement plate: Zinc-plated

Colour:
Housing coupling: RAL 7024

Supply includes:
– Reinforcement plate
– Seals
– Assembly parts

Design	Optipanel	Comfort Panel	Weight kg	**Model No. CP**
B = 418 mm	432[1)]	435[1)]	4.2	**6528.410**

[1)] From front panel width mm without keyboard housing; with keyboard housing on request.

Note:
With the Comfort Panel and Optipanel enclosures, the rectangular support arm cut-out can be selected, ordered and prepared using the command panel configurators at www.rittal.com.

Detailed drawings:
Available on the Internet.

Support arm, height adjustable for support arm system CP-L

Offers enhanced ergonomics thanks to:
- Adjustment range
  – for tall and short operators
  – for seated and standing work
  – adjustable to a maximum of 800 mm as required via an adjusting screw at the front of the support arm.
- Precise coordination of the compression spring to the enclosure weight via an adjusting screw at the rear of the support arm.
- Complete functional reliabilty – if the compression spring breaks, the arm will remain in position.
- Clip-off plastic panels for access to integral cable routing.
- Tilting angle of the mounted enclosure is identical in every height position.

For 6510.330 and 6510.340:
- More space for cable routing.
- Cables with connectors such as DVI, VGA are also easily inserted.
- Integral locking in three stages.
- Superior load capacity.

Supply includes:
Assembly parts.

Overall length mm	Colour RAL	Weight range kg[1)]	**Model No. CP**
962	9006	10 – 20	**6510.210**
1090	9006	15 – 32	**6510.330**
1090	9006	20 – 40	**6510.340**

[1)] For populated enclosure and vertical support section.

Note:
Maximum cross-section for cable entry:
6510.210 = 8 x 15 mm
6510.330/.340 = 16 x 40 mm

Detailed drawings:
Available on the Internet.

Pivot CP-L

with/without jib

- For direct, vertically hinged integration into machines and systems
- Enclosure suspended or top-mounted
- With integral rotation range restrictor
- To fit enclosures with mounting cut-out CP-L Ø 130 mm

Jib length mm	Colour RAL	Load capacity N	**Model No. CP**
–	7024	700	**6016.700**
200	7024/7035	700	**6016.600**

Detailed drawings:
Available on the Internet.

Support arm bracket 90° CP-L

- For the configuration of compact systems
- To fit support arm system CP-L
- No thread-tapping required

Colour RAL	Weight kg	**Model No. CP**
7035	3.4	**6519.000**

Detailed drawings:
Available on the Internet.

Enclosure attachment, tilting, top mounting

For mounting on:

- IW worktop, prepared for enclosure attachment CP-L, Ø 130 mm, see page 133
- Surfaces
- Enclosure attachment/coupling CP-L ▭ 120 x 65 mm, see page 155
- Attachment/housing coupling CP-S (may also be used as tilting adaptor +100°/–60° for CP-S), see page 151

To fit enclosures up to 20 kg with support arm connection:

- CP-S
- CP-L ▭ 120 x 65 mm
- CP-L Ø 130 mm
- VESA Standard 75.

With cable tube for protected cable entry.

Tilt angle:
+100°/–60°, adjustable in 7.2° increments via clamping lever and may be limited to +100°/–15° using the stop screw supplied loose.

Colour RAL	Weight kg	**Model No. IW**
7024	0.8	**6902.670**

Material:
Sheet steel

Surface finish:
Spray-finished

Supply includes:
– Assembly parts
– Plastic concertina section

Accessories:

IW worktops prepared for enclosure attachment, see page 133.

Detailed drawings:
Available on the Internet.

Accessories

Angle adaptor 90°

Connection component between:
- small and larger support arm systems.

Outlet optionally at the top or bottom if this configuration is chosen for static or visual reasons. The removable cover ensures easier cable entry.

Material:
Cast aluminium

Supply includes:
Seal for support section attachment.

	Colour RAL	Weight kg	**Model No. CP**
CP-L to CP-S	7024	1.0	**6501.090**
CP-XL to CP-L	7024	1.7	**6528.110**

Detailed drawings:
Available on the Internet.

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

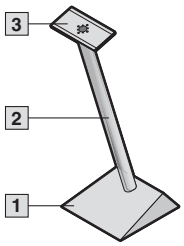
Pedestal, modular, consisting of:
- Pedestal base plate
- Support section
- Enclosure connection

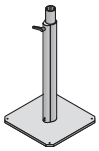
Colour:
RAL 7035

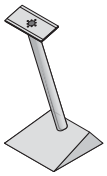
Detailed drawings:
Available on the Internet.

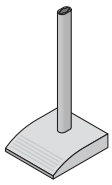
Photo shows a configuration example with equipment not included in the scope of supply.

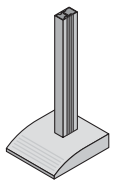
Pedestal, modular











Weight load kg	15	18	35	50	Page
1 Pedestal base plate	**Model No. CP**				
Pedestal base plate	**6146.100**	**6143.200**	**6137.535**	**6137.035**	
Dimensions W x H x D mm	400 x 10 x 400	400 x 108 x 400	490 x 100 x 600		

2 Support section	**Model No. CP**				
Height-adjustable (adjustment range 732 – 1122 mm)	**6146.200**	**–**	**–**	**–**	
Closed, length 1000 mm	–	6513.000	6513.000	6100.500	155/163
Open, length 1000 mm	–	6513.050	6513.050	6100.000	155/163

3 Enclosure connection	**Model No. CP**				
Enclosure reinforcement, rigid	–	6143.210	–	–	173
Enclosure attachment CP-S	6501.070	–	–	–	151
Housing coupling CP-S	6501.050	–	–	–	151
Enclosure attachment CP-L, Ø 130 mm	–	–	6525.510	–	155
Enclosure attachment CP-L, ▭ 120 x 65 mm	–	–	6525.610	–	155
Housing coupling CP-L, Ø 130 mm	–	–	6525.010	–	155
Housing coupling CP-L, ▭ 120 x 65 mm	–	–	6525.110	–	155
Enclosure attachment CP-XL, round	–	–	–	6130.610	163
Enclosure attachment CP-XL, rectangular	–	–	–	6130.510	163
Housing coupling CP-XL	–	–	–	6130.010	163
Tilt adjustment	**6146.300**	–	–	–	

Accessories					
Twin castors	6148.000	–	6148.000	6148.000	556
Levelling feet	–	–	4612.000	4612.000	555
Base mount	–	–	1590.000	1590.000	627
Gas pressurised spring, load capacity 15 kg	**6146.400**	**–**	**–**	**–**	

Stand systems

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

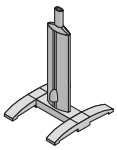
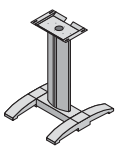
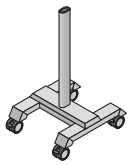
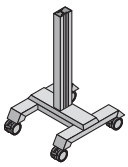
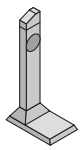
The right system to suit any application:
- Fixed or mobile variant
- Different designs
- Weight load from 15 – 50 kg
- Reliable protection of cable management

Colour:
RAL 7035

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Pedestal, complete

						
Weight load kg	25	25	35	50	50	Page
Model No. CP	**6141.100**	**6141.200**	**6136.500**	**6136.000**	**6135.000**	
Dimensions W x H x D mm	600 x 1093 x 660	600 x 946 x 660	600 x 1005 x 550		360 x 995 x 500	
Supply includes						
Cross member	■	■	■	■	–	
Base plate	–	–	–	–	■	
Twin castors	–	–	■	■	–	
Support section	■	–	■	■	■	
Vertical aluminium moulding, may be opened	■	■	–	–	–	
Worktop attachment	–	■	–	–	–	
Accessories						
Twin castors	6148.000, 7495.000	6148.000, 7495.000	–	–	–	556
Levelling feet	4612.000	4612.000	–	–	–	555
Base mount	6147.000	6147.000	–	–	–	173
Trim panel for pedestal	6144.100	6144.100	–	–	–	173
Enclosure attachment CP-L, Ø 130 mm	6525.510	–	6525.510	–	–	155
Enclosure attachment CP-L, ▭ 120 x 65 mm	6525.610	–	6525.610	–	–	155
Housing coupling CP-L, Ø 130 mm	6525.010	–	–	–	–	155
Housing coupling CP-L, ▭ 120 x 65 mm	6525.110	–	–	–	–	155
Enclosure attachment CP-L, ▭ 120 x 65 mm, locatable	6525.210	–	–	–	–	155
Enclosure attachment CP-XL, round	–	–	–	6130.610	–	163
Enclosure attachment CP-XL, rectangular	–	–	–	6130.510	–	163
Enclosure attachment, tilting	–	6902.640	–	–	–	165
Worktop without handle[1)]	**–**	**6902.310**	**–**	**–**	**–**	

■ Included with the supply.
[1)] W x H x D 950 x 38 x 600 mm

Comfort Panel Page 138 **Optipanel** Page 140 **Compact Panel** Page 142 **Command panel housing with door** Page 143 **Command panel** Page 144

The welded alternatives to the pedestal, complete
- Pedestal, open:
  For retrospective cable entry with preassembled connectors
- Pillar, small:
  For heavy installed equipment

Material:
Steel

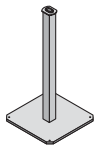
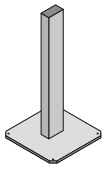
Surface finish:
Spray-finished

Colour:
RAL 7035

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Pillar, small

			
Weight load kg	40	80	Page
Model No. CP	**6215.000**	**6214.500**	
Design			
Base plate cross-section W x H x D mm	400 x 10 x 400	500 x 12 x 500	
Pedestal tube cross-section W x H mm	86 x 73	160 x 80	
Pedestal tube wall thickness mm	3	3.2	
Overall height mm	1093	1150	
Accessories			
Enclosure attachment CP-L, Ø 130 mm	6525.510	–	155
Housing coupling CP-L, Ø 130 mm	6525.010[1)]	–	155
Enclosure attachment CP-XL, round	–	6130.610	163
Enclosure attachment CP-XL, rectangular	–	6130.510	163
Housing coupling CP-XL	–	6130.010	163

[1)] When assembling enclosures with support arm connection CP-L, ▭ 120 x 65 mm, connection adaptor CP-L, Ø 130 mm to CP-L, ▭ 120 x 65 mm CP 6071.000 (see page 164) should additionally be used.

Stand systems

Support arm system CP-S Page 149 **Support arm system CP-L** Page 153 **Support arm system CP-C** Page 157 **Support arm system CP-XL** Page 161

The stable base point for the support arm system. The attachment of additional enclosures, e.g. for security systems, is also possible.
There is a choice of 2 cross-sections:
- 140 x 140 mm
- 200 x 200 mm

Design:
– Base plate, thickness: 15 mm, with 4 mounting holes
– Cut-out in the base plate in accordance with the cross-section for cable entry from below
– Pedestal tube (wall thickness 5 mm) welded to the base plate
– Connection facility for support arm systems as per the selection table.

Delivery time:
Available on request.

Material:
Steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts for support arm system according to selection.

Note:
Customer-specific designs, such as:
– Other RAL colours
– Heights
– Consoles for additional enclosures
available on request.

Accessories:
– Support arm system CP-S, see page 150
– CP-L, see page 154
– CP-C, see page 158
– CP-XL, see page 162
– Gland plates size 2, see from page 704.

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Pillar

Design	For support arm system	Model No. CP
Cross-section 140 x 140 mm, height 2000 mm[1)]	CP-S, CP-L, CP-C	**6214.000**
Cross-section 200 x 200 mm, height 2000 mm[1)]	CP-C, CP-XL	**6220.000**

[1)] Unless otherwise specified.

In addition to the Model Number, the following information is also needed:
1. Unless otherwise stated, the position for the cable entry cut-out is on the rear.
2. Position and Item No. of support arm component

Support arm component	Support arm system			
	CP-S	CP-L	CP-C	CP-XL
Wall/base mounting bracket, large, side mounting	6501.110	6520.010	6072.000	6160.010
Wall mounted hinge, horizontal outlet, side mounting	6501.150	6521.010	6072.500	6110.010
Top mounted joint, mounting on top	6501.160	6522.010	6072.600, 6072.800	6170.010

Base mount

Brackets for screw-fastening from below to the cast feet with posidrive raised countersunk screws M12. Optionally with projection at the front, interior or sides, with Ø 11 mm hole for screw-fastening to the base.

Material:
Steel

Surface finish:
Zinc-plated

Supply includes:
Posidrive raised countersunk screws M12.

Packs of	**Model No. CP**
4	**6147.000**

Trim panel

Material:
Cast aluminium

Supply includes:
Assembly parts for screw-fastening between the cast feet at the front or rear.

Colour RAL	**Model No. CP**
7035 textured	**6144.100**

Enclosure reinforcement

For external or internal reinforcement of enclosures of a corresponding size.
Smaller enclosures may also be mounted directly without reinforcement.

Supply includes:
Assembly parts for the enclosure and support section plus 2 seals.

Detailed drawings:
Available on the Internet.

	For enclosure	Support arm connection	Material	Weight kg	**Model No. CP**
1	B1 ≥ 300 mm, T1 ≥ 150 mm	CP-S	Stainless steel 1.4301	0.9	**6143.310**
2	B1 ≥ 300 mm, T1 ≥ 150 mm	CP-L	Sheet steel	0.9	**6143.210**
3	CP 6662.500 or AE (B1 = 600 mm, T1 ≥ 210 mm)	CP-XL	Sheet steel	2.2	**6503.000**

B = Width
T = Depth

Hygienic Design

Small and compact enclosures HD

Terminal boxes HD 176
Compact enclosures HD, single-door 177
Accessories 178

Hygienic Design

HD accessories Page 178 **System accessories** Page 537

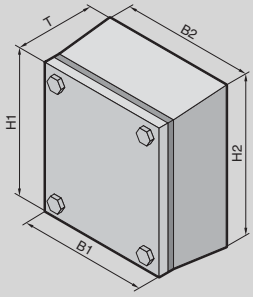
Material:
- Enclosure and cover: Stainless steel 1.4301 (AISI 304) 1.5 mm
- Mounting bracket: Sheet steel, zinc-plated, passivated, 2.0 mm
- Quick-release fasteners: Stainless steel
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

Surface finish:
- Enclosure and cover: Brushed finish, grain 400, R_A< 0.8 µm
- Seal: Blue, dyed (RAL 5010)

Protection category:
- IP 66 to IEC 60 529
- IP 69K to DIN 40 050-9
  Compliant with NEMA 13
  Compliant with NEMA 4X
  Compliant with NEMA 3R

Supply includes:
- Enclosure of all-round solid construction
- Cover
- Mounting bracket (pre-assembled)
- Seal and quick-release locks (supplied loose)

Detailed drawings:
Available on the Internet.



Terminal boxes HD

Width	Front (B1) mm	Packs of	150	150	200	300	400	400	Page
	Rear (B2) mm		172	177	227	327	427	427	
Height	Front (H1) mm		150	150	200	200	200	300	
	Rear (H2) mm		172	177	227	227	227	327	
Depth	(T) mm		80	120	120	120	120	120	
Model No. HD		1	**1670.600**	**1671.600**	**1672.600**	**1674.600**	**1675.600**	**1676.600**	
Accessories									
Wall spacer bracket HD		1	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	178
Mounting plate		1	1560.700	1560.700	1562.700	1563.700	1564.700	1568.700	631
Support rail TS 35/7.5		10	2314.000	2314.000	2315.000	2316.000	2317.000	2317.000	655
Cable gland HD		see page 711							

HD accessories Page 178 **System accessories** Page 537

Material:
- Enclosure and door: Stainless steel 1.4301 (AISI 304)
- Mounting plate: Sheet steel
- Lock inserts HD: Stainless steel 1.4404 (AISI 316L)
- Seal: Silicone, compliant with FDA Guideline 21 CFR 177.2600

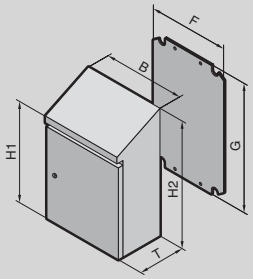
Surface finish:
- Enclosure and door: Brushed, grain size 400, R_A< 0.8 µm
- Mounting plate: Zinc-plated
- Seal: Blue, dyed (RAL 5010)

Protection category:
- IP 66 to IEC 60 529
- IP 69K to DIN 40 050-9 Compliant with NEMA 13 Compliant with NEMA 4X

Supply includes:
- Enclosure of all-round solid construction
- Door with press-fitted seal
- Interchangeable door hinge
- Mounting plate

Detailed drawings:
Available on the Internet.

DGUV Test
NG 08075
Hygiene geprüft
hygiene tested



Compact enclosures HD, single-door

Width	(B) mm	Packs of	220	390	390	510	610	610	810	810	Page
Height	Front (H1) mm		350	430	650	550	430	650	1050	1250	
	Rear (H2) mm		437	549	769	669	601	769	1221	1421	
Depth	(T) mm		155	210	210	210	300	210	300	300	
Mounting plate width (F) mm			162	334	334	449	549	549	739	740	
Mounting plate height (G) mm			275	355	570	470	355	570	955	1155	
Model No. HD		1	**1302.600**	**1306.600**	**1308.600**	**1307.600**	**1320.600**	**1310.600**	**1316.600**	**1317.600**	
Accessories											
Wall spacer bracket HD		1	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	4000.100	178
Rails for interior installation		see page 179									
Cable gland HD		see page 711									

Accessories

Levelling feet HD

for TS 8

Benefits:
- Minimises cleaning time thanks to fully covered, permanently sealed threads.
- Compensation of floor inclines up to an angle of 10° thanks to flexible base plate.
- Baying can even be achieved on sloping floors, thanks to a large levelling range of 55 mm.

Load capacity:
Max. 5000 N static per levelling foot.

Material:
Stainless steel 1.4301 (AISI 304)

Supply includes:
Assembly parts and seals.

Thread	Levelling range mm	Base mount	Packs of	Model No. HD
M12	120 – 175	without	4	**4000.200**
		with	4	**4000.210**

Wall spacer bracket HD

Benefits:
- Creates space for cleaning behind the enclosure.
- Shorter assembly times by eliminating the need for an all-round seal.
- Greater hygiene safety by avoiding an uncontrollable dead space or gap between the enclosure and wall.

Functional principle:
- Mounting on the wall optionally from the enclosure interior via a through-hole (max. M8) or from the rear via an integral M10 thread.

Material:
Stainless steel 1.4301 (AISI 304)

Supply includes:
Assembly parts and seals.

Wall distance mm	Packs of	Model No. HD
50	1	**4000.100**

Enclosure key HD

Packs of	Model No. HD
1	**2549.600**

Bit HD

for universal key SZ 2549.500
See page 612.

Packs of	Model No. HD
1	**2549.510**

Cam lock HD

Hygienic Design variant for easy, safe cleaning.

Applications:
- Compact enclosures AE stainless steel (except AE 1017.XXX and AE 1019.XXX).
- May be integrated into customised applications, e.g. covers of machine panels.

Material:
Stainless steel 1.4404 (AISI 316L)

Packs of	Model No. HD
1	**2304.010**

Accessories:

Enclosure key HD,
see page 178.

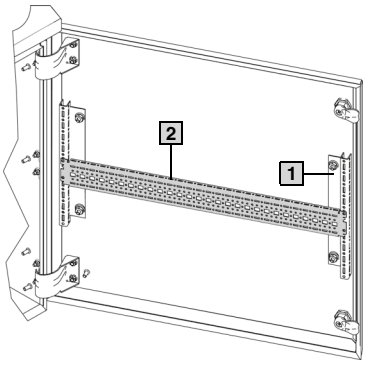
Rails for interior installation

for compact enclosures HD
For mounting on the existing threaded bolts.
With TS system punchings on three sides.

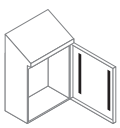
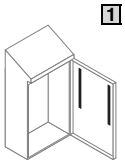
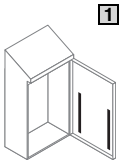
Material:
Sheet steel, zinc-plated

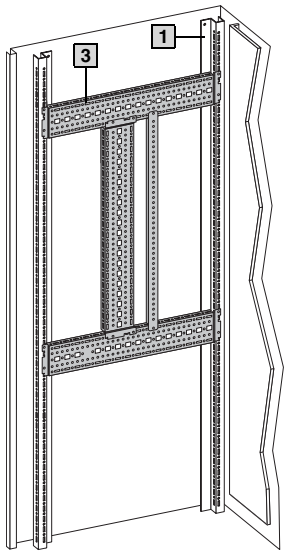
Supply includes:
Assembly parts.

Length mm	Packs of	Model No. CM	Page
510	4	**5001.050**	647
710	4	**5001.051**	647
910	4	**5001.052**	647
1110	4	**5001.053**	647



Interior installation, door

Enclosure	1	1	1
			
Model No. HD	**Model No. CM**		
1316.600	5001.052	5001.050	5001.050
1317.600	5001.053	5001.051 5001.050	5001.051 5001.050

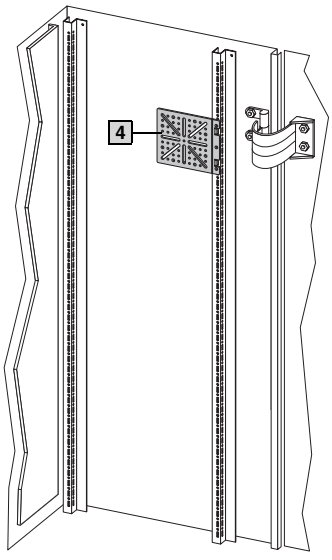


Rails for door installation

Enclosure	2 TS punched section with mounting flange, 17 x 73 mm
Model No. HD	**Model No. TS**
1316.600 1317.600	8612.065

Interior installation, enclosure

Enclosure	1 Rails for interior installation	3 TS punched section without mounting flange, 17 x 73 mm	4 Mounting plates
Model No. HD	**Model No. CM**	**Model No. TS**	
1308.600 1310.600	5001.050	–	–
1316.600	5001.052	8612.130 (only on lock side)	8612.400 8612.410
1317.600	5001.053	8612.130 (only on lock side)	8612.400 8612.410



Stainless steel

Small enclosures

Switch housing 182
Terminal boxes KL 183
Bus enclosures BG 183

Compact enclosures

Compact enclosures AE 184
Compact enclosures AE, protection category IP 69K 187

Command panels

Premium Panel, protection category IP 69K 188
Command panel housing with door 189

Support arm system

Support section CP-S, stainless steel 190
Support arm system CP-S, stainless steel, components 191

Enclosure systems

One-piece consoles AP 192
PC enclosure systems 193
Baying systems TS 8 194
System enclosure SE 8 195

Stainless steel

System assembly Page 537

Material:
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.25 mm
- Cover: Stainless steel 1.4301 (AISI 304), 1,25 mm, all-round foamed-in PU-seal

Surface finish:
- Enclosure and cover: Brushed, grain size 240 or 180 (for terminal boxes)

Protection category:
IP 66 to IEC 60 529, complies with NEMA 4X.

Supply includes:
- Enclosure with cover
- Product-specific supply scope, see tables

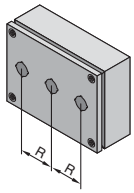
Approvals:
Terminal boxes KL
- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Bus enclosures BG
- TÜV
- Lloyds Register of Shipping
- VDE
- UL
- cUL

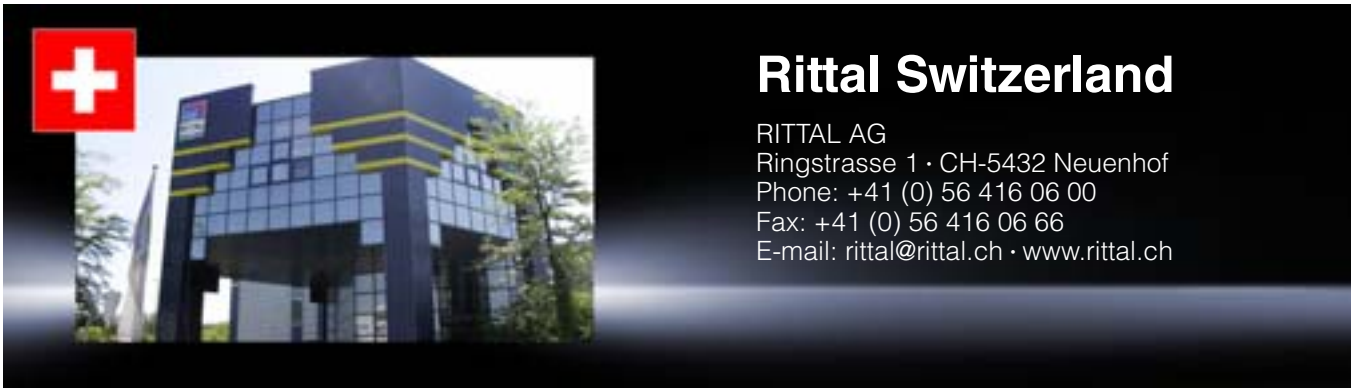
Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

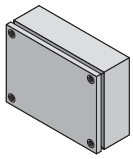
Switch housing



Width mm	Packs of	100	160	220	280	Page
Height mm		100	100	100	100	
Depth mm		90	90	90	90	
Model No. SM	1	**2384.010**	**2384.020**	**2384.030**	**2384.040**	
Pitch pattern (R) mm		–	60	60	60	
No. of switch cut-outs, Ø 22.5 mm		1	2	3	4	
Number of quick-release fasteners		2	4	4	4	
Accessories						
Wall mounting bracket	4	1594.000	1594.000	1594.000	1594.000	627
Pressure relief stoppers	5	2459.500	2459.500	2459.500	2459.500	566
Cable gland HD	see page 711					



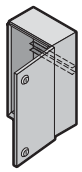
Terminal boxes KL



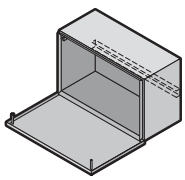
Width mm	Packs of	150	150	300	200	200	Page
Height mm		150	150	150	200	200	
Depth mm		80	120	80	80	120	
Model No. KL	1	**1521.010**	**1527.010**	**1522.010**	**1523.010**	**1528.010**	
Weight (kg)		1.3	1.6	1.8	1.8	2.2	
Number of quick-release fasteners		4	4	4	4	4	
Accessories							
Mounting plate	1	1560.700	1560.700	1561.700	1562.700	1562.700	631
Wall mounting bracket	4	1594.000	1594.000	1594.000	1594.000	1594.000	627
Wall angle	4	2583.010	2583.010	2583.010	2583.010	2583.010	628
Pole clamp	1	2584.000	2584.000	2584.000	2584.000	2584.000	629
Support rails TS 35/7.5	10	2314.000	2314.000	2316.000	2315.000	2315.000	655
Cover hinge, stainless steel 1.4404	2	1592.010	1592.010	1592.010	1592.010	1592.010	613
Pressure relief stoppers	5	2459.500	2459.500	2459.500	2459.500	2459.500	566

Width mm	Packs of	300	300	400	300	400	Page
Height mm		200	200	200	300	300	
Depth mm		80	120	120	120	120	
Model No. KL	1	**1524.010**	**1529.010**	**1525.010**	**1526.010**	**1530.010**	
Weight (kg)		2.4	2.9	3.6	3.9	4.6	
Number of quick-release fasteners		4	4	4	4	4	
Accessories							
Mounting plate	1	1563.700	1563.700	1564.700	1567.700	1568.700	631
Wall mounting bracket	4	1594.000	1594.000	1594.000	1594.000	1594.000	627
Wall angle	4	2583.010	2583.010	2583.010	2583.010	2583.010	628
Pole clamp	1	2584.000	2584.000	2584.000	2584.000	2584.000	629
Support rails TS 35/7.5	10	2316.000	2316.000	2317.000	2316.000	2316.000	655
Cover hinge, stainless steel 1.4404	2	1592.010	1592.010	1592.010	1592.010	1592.010	613
Pressure relief stoppers	5	2459.500	2459.500	2459.500	2459.500	2459.500	566

Bus enclosures BG



Width mm	Packs of	200	300	400	Page
Height mm		300	300	300	
Depth mm		80	80	80	
Model No. BG	1	**1583.010**[1)]	**1584.010**[1)]	**1585.010**[1)]	
Weight (kg)		2.8	3.7	4.5	
Number of quick-release fasteners		2	2	2	
Product-specific supply scope					
Support rail TS 35/7.5	1	■	■	■	655
180° hinge, die-cast zinc, chrome-plated	2	■	■	■	613
Accessories					
Wall mounting bracket	4	1594.000	1594.000	1594.000	627
Pole clamp	1	2584.000	2584.000	2584.000	629
Condensate discharge	6	2459.000	2459.000	2459.000	566



Width mm	Packs of	400	600	Page
Height mm		200	200	
Depth mm		123	123	
Model No. BG	1	**1558.010**[2)]	**1559.010**[2)]	
Weight (kg)		4.5	6.0	
Number of quick-release fasteners		2	3	
Product-specific supply scope				
Support rail TS 35/7.5	1	■	■	655
180° hinge, die-cast zinc, chrome-plated	2	■	■	613
Accessories				
Wall mounting bracket	4	1594.000	1594.000	627
Pole clamp	1	2584.000	2584.000	629
Condensate discharge	6	2459.000	2459.000	566

[1)] Support rail fixed on studs
[2)] Support rail adjustable on profile strip

Stainless steel

System accessories Page 537 **Compact enclosures AE, sheet steel** Page 44 **Hygienic Design** Page 176

Material:
- Enclosure: Stainless steel
- Door: Stainless steel, all-round foamed-in PU seal
- Mounting plate: Sheet steel
- Locks: Die-cast zinc

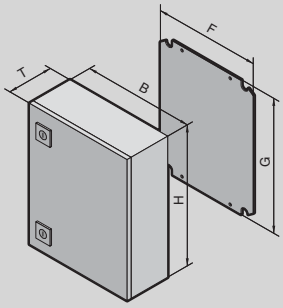
Surface finish:
- Enclosure and door: Brushed, grain 240
- Mounting plate: Zinc-plated
- Locks: Nickel-plated

Protection category:
See tables.

Supply includes:
- Enclosure with door(s)
- Cam lock or 3-point lock system (for AE 1017.X00 and AE 1019.X00) with double-bit insert
- Mounting plate

Approvals:
- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- Bureau Veritas
- VDE

Detailed drawings:
Available on the Internet.



Compact enclosures AE

Width (B) mm		Packs of	200	200	200	300	380	380	Page
Height (H) mm			300	300	300	300	300	300	
Depth (T) mm			120	155	155	210	155	210	
Mounting plate width (F) mm			162	162	162	254	334	334	
Mounting plate height (G) mm			275	275	275	275	275	275	
Model No. AE			**1001.600**	**1002.600**	**1002.500**	**1003.600**	**1004.600**	**1011.600**	
Material	1.4301 (AISI 304)	1	■	■	–	■	■	■	
	1.4404 (AISI 316L)	1	–	–	■	–	–	–	
Door			1	1	1	1	1	1	
Weight (kg)			3.6	4.1	4.1	6.9	7.4	8.4	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4X							
Accessories									
Rails for interior installation		4	–	–	–	2373.210	–	2373.210	647
Rain canopy	1.4301 (AISI 304)	1	–	2470.000	2470.000	2361.000	2471.000	2472.000	619
Wall mounting bracket	1.4301 (AISI 304)	4	2433.000	2433.000	–	2433.000	2433.000	2433.000	627
	1.4404 (AISI 316L)	4	–	–	2433.500	–	–	–	627
Wall angle	1.4301 (AISI 304)	4	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	628
Pole clamp		1	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Cam lock 1.4404 (AISI 316L)	Standard	1	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	609
	Hygienic Design	1	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	178
Alternative lock systems		see page 602							

Compact enclosures AE

Width (B) mm		Packs of	300	300	380	380	600	400	Page
Height (H) mm			380	380	380	380	380	500	
Depth (T) mm			210	210	210	210	210	210	
Mounting plate width (F) mm			275	275	334	334	549	354	
Mounting plate height (G) mm			334	334	355	355	355	475	
Model No. AE		1	**1005.600**	**1005.500**	**1006.600**	**1006.500**	**1009.600**	**1015.600**	
Material	1.4301 (AISI 304)		■	–	■	–	■	■	
	1.4404 (AISI 316L)		–	■	–	■	–	–	
Door			1	1	1	1	1	1	
Weight (kg)			8.4	8.4	9.8	9.8	14.6	12.9	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4X							
Accessories									
Rails for interior installation		4	2373.210	2373.210	2373.210	2373.210	2373.210	2373.210	647
Rain canopy	1.4301 (AISI 304)	1	2361.000	2361.000	2472.000	2472.000	2473.000	–	619
Wall mounting bracket	1.4301 (AISI 304)	4	2433.000	–	2433.000	–	2433.000	2433.000	627
	1.4404 (AISI 316L)	4	–	2433.500	–	2433.500	–	–	627
Wall angle	1.4301 (AISI 304)	4	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	628
Pole clamp		1	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Cam lock 1.4404 (AISI 316L)	Standard	1	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	609
	Hygienic Design	1	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	178
Alternative lock systems		see page 602							

Width (B) mm		Packs of	500	500	380	600	600	600	Page
Height (H) mm			500	500	600	600	600	760	
Depth (T) mm			210	300	210	210	210	210	
Mounting plate width (F) mm			449	449	334	549	549	549	
Mounting plate height (G) mm			470	470	570	570	570	730	
Model No. AE		1	**1007.600**	**1013.600**	**1008.600**	**1010.600**	**1010.500**	**1012.600**	
Material	1.4301 (AISI 304)		■	■	■	■	–	■	
	1.4404 (AISI 316L)		–	–	–	–	■	–	
Door			1	1	1	1	1	1	
Weight (kg)			15.7	18.4	15.1	23.5	23.5	30.2	
Protection category		IP 66 to IEC 60 529, complies with NEMA 4X							
Accessories									
Rails for interior installation		4	2373.210	2373.300	2373.210	2373.210	2373.210	2373.210	647
Rain canopy		1	2362.000	–	2472.000	2473.000	2473.000	2473.000	619
Wall mounting bracket	1.4301 (AISI 304)	4	2433.000	2433.000	2433.000	2473.000	–	2433.000	627
	1.4404 (AISI 316L)	4	–	–	–	–	2433.500	–	627
Wall angle	1.4301 (AISI 304)	4	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	628
Pole clamp		1	2584.000	2584.000	2584.000	2584.000	2584.000	2584.000	629
Cam lock 1.4404 (AISI 316L)	Standard	1	2304.000	2304.000	2304.000	2304.000	2304.000	2304.000	609
	Hygienic Design	1	2304.010	2304.010	2304.010	2304.010	2304.010	2304.010	178
Alternative lock systems		see page 602							

Stainless steel

Compact enclosures AE

Width (B) mm		Packs of	760	800	800	1000	1000	1000	Page
Height (H) mm			760	1000	1200	1000	1200	1200	
Depth (T) mm			300	300	300	300	300	300	
Mounting plate width (F) mm			704	739	740	939	940	940	
Mounting plate height (G) mm			730	955	1155	955	1155	1155	
Model No. AE		1	**1014.600**	**1016.600**	**1017.600**	**1018.600**	**1019.600**	**1019.500**	
Material	1.4301 (AISI 304)		■	■	■	■	■	–	
	1.4404 (AISI 316L)		–	–	–	–	–	■	
3-point lock system			–	–	■	–	■	■	
Door(s)			1	1	1	2	2	2	
Weight (kg)			42.5	52.9	61.5	71.0	76.0	76.0	
Protection category			IP 66 to IEC 60 529, complies with NEMA 4X			IP 55 to IEC 60 529, complies with NEMA 12			
Accessories									
Rails for interior installation		4	2373.300	2373.300	2373.300	2373.300	2373.300	2373.300	647
Rain canopy		1	2474.000	2475.000	2475.000	2363.000	2363.000	2363.000	619
Wall mounting bracket	1.4301 (AISI 304)	4	2433.000	2433.000	2433.000	2433.000	2433.000	–	627
	1.4404 (AISI 316L)	4	–	–	–	–	–	2433.500	627
Wall angle		4	2583.010	2583.010	2583.010	2583.010	2583.010	2583.010	628
Cam lock 1.4404 (AISI 316L)	Standard	1	2304.000	2304.000	–	2304.000	–	–	609
	Hygienic Design	1	2304.010	2304.010	–	2304.010	–	–	178
Alternative lock systems			see page 602						

System accessories Page 537 **AE sheet steel** Page 44 **AE EMC shielded** Page 201 **AE Ex-proof** Page 198 **Hygienic Design** Page 176

Perfect protection in a tough environment
The compact enclosure AE in IP 69K is the ideal solution when a high protection category combined with corrosion resistance are needed.

- **Resistant to high-pressure cleaning** (protection category IP 69K). The interior seal is protected against direct hosed water.
- Ideal for mounting on vehicles: Lock, hinges and mounting plate are all vibration resistant.
- 10° roof tilt prevents liquids from accumulating on the roof.
- Foamed-in silicone seal. The closed cell structure of the foam means that water absorption is negligible. Temperature resistant from –60°C to +180°C.

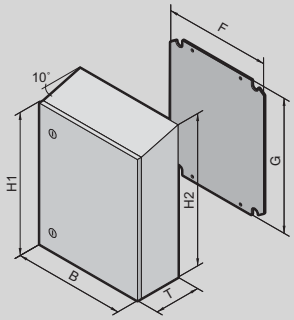
Material:
– Enclosure, hinge and lock: Stainless steel 1.4301 (AISI 304)
– Door: Stainless steel 1.4301 (AISI 304), all-round foamed-in PU seal
– Mounting plate: Sheet steel

Surface finish:
– Enclosure and door: Brushed, grain 240
– Mounting plate: Zinc-plated

Protection category:
IP 69K to DIN 40 050-9, complies with NEMA 4X.

Supply includes:
– Enclosure of all-round solid construction
– Single-door
– Interchangeable door hinge
– Cam lock with double-bit insert
– Mounting plate.

Detailed drawings:
Available on the Internet.



Compact enclosures AE, protection category IP 69K

Width (B) mm	Packs of	230	400	400	650	Page
Height, front (H1) mm		330	400	650	650	
Height, rear (H2) mm		352	439	689	689	
Depth (T) mm		155	250	250	250	
Mounting plate width (F) mm		162	334	334	549	
Mounting plate height (G) mm		275	355	570	570	
Mounting plate thickness mm		2	2	2.5	2.5	
Model No. AE	1	**1101.110**	**1101.120**	**1101.130**	**1101.140**	
Locks		1	1	2	2	
Accessories						
Interior door	1	1101.910	1101.920	1101.930	1101.940	588
Door stay	1	1101.800	1101.800	1101.800	1101.800	617
Wall mounting bracket, stainless steel 1.4301 (AISI 304)	4	2433.000	2433.000	2433.000	2433.000	627
Cable glands	see page 709					

Stainless steel

System accessories Page 537 **TFT monitor** Page 796 **Support arm system CP-S, stainless steel** Page 190 **Hygienic Design** Page 176

Optionally with or without keyboard housing

- **Resistant to high-pressure cleaning** (protection category IP 69K). The seal lies between two seals and is optimally compressed by the screw fastening.
- **Suitable for clean room use** Screw fastening to comply with high standards in the food industry. With plastic stoppers on the inside or hex screws on the outside.
- **Optimum EMC conditions** The labyrinth seal achieves a particularly high level of RF shielding of the enclosure.
- **Accessibility** Internal rear panel bracket. This solution is clearly superior to external hinges from a hygiene point of view.
- **Handling** Two duct connectors between the enclosures.

Material:
Stainless steel 1.4301 (AISI 304)

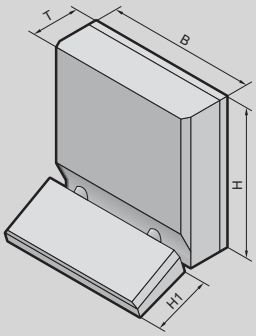
Surface finish:
Brushed, grain 240

Protection category:
IP 69K to DIN 40 050-9

Clean room:
Air purity class 1 to DIN EN ISO 14 644-1

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



Premium Panel, protection category IP 69K

		Packs of	Premium Panel	
			With keyboard housing	Without keyboard housing
Model No. CP		1	**6680.000**[1)]	**6681.000**
Width (B) mm			530	530
Height mm	Operating housing (H)		460	360
	Keyboard housing (H1)		200	–
Depth mm	Operating housing (T)		120	120
For installation panel W x H	Operating housing		482.6 mm (19″) x 354.8 mm (8 U)	482.6 mm (19″) x 310 mm (7 U)
	Keyboard housing		482.6 mm (19″) x 177 mm (4 U)	–
Installation depth mm	Operating housing		115	115
	Keyboard housing		Front 58 Rear 63	–
Support arm connection			Top	Top, or bottom by rotating the enclosure

[1)] Extended delivery times.

System accessories Page 537 **TFT monitor** Page 796 **Support arm system CP-S, stainless steel** Page 190 **Hygienic Design** Page 176

Material:
– Enclosure and door: Stainless steel 1.4301 (AISI 304)
– Handle strips: Plastic approved for use with foodstuffs

Surface finish:
Brushed, grain 240

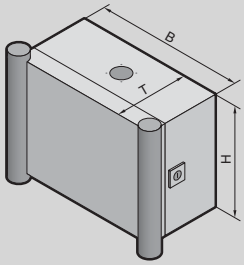
Colour:
Handle strips: similar to RAL 5002

Protection category:
IP 66 to IEC 60 529

Supply includes:
– Enclosure of all-round solid construction
– Cut-out and reinforcement for support arm system
– Fastener with guide plate
– Door with sealing frame and side handle strips
– The support arm connection and door hinge may be swapped over by rotating the enclosure

Approvals:
– UL
– cUL

Detailed drawings:
Available on the Internet.



Command panel housing with door

Width (B) mm	Packs of	300	400	400	600	Page
Height (H) mm		300	300	400	400	
Depth (T) mm		150	150	150	150	
Model No. CP	1	**6535.010**	**6536.010**	**6538.010**	**6539.010**	
Weight (kg)		6.3	7.5	8.8	12.1	
Accessories						
Matching mounting plate from AE		1033.500	1030.500	1380.500	1039.500	44/45
ID no.		0271.926	0274.131	0271.548	0271.351	
Support rails[1)] **Model No. SZ**	10	2316.000	2317.000	2317.000	2319.000	655
Alternative lock systems	With 3 mm double-bit lock insert, may be exchanged for 41 mm lock inserts, version C, see page 609, plastic handles and T handles, version C, see page 608.					

[1)] Only with vertical attachment of punched rail 23 x 23 mm, see page 651.

Stainless steel

Stainless steel enclosures Page 188 – 189 **Support section CP-S, steel** Page 150

Support section CP-S, stainless steel
Attached to the connection components via 2 clamping screws.

Size:
– External diameter: 48.3 mm
– Wall thickness: 3 mm

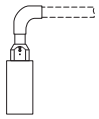
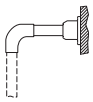
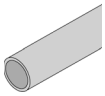
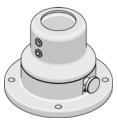
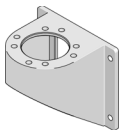
Material:
Stainless steel

Surface finish:
Brushed, grain size 240 (support section and wall console only)

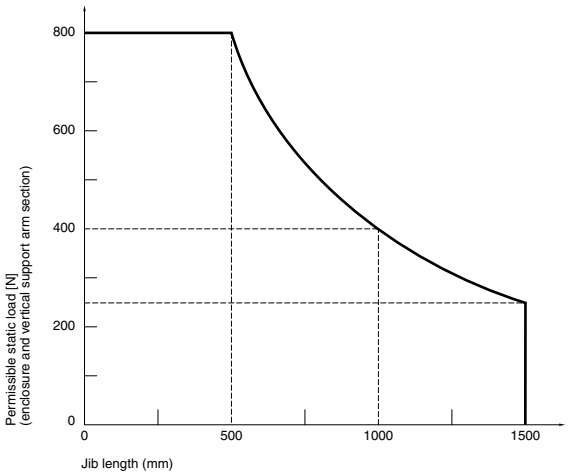
Protection category:
IP 69K to DIN 40 050-9 (resistant to high-pressure cleaning)

Supply includes:
Support section CP-S

Detailed drawings:
Available on the Internet.

		Rotating/tilting	Rigid	Length mm	Weight kg	Material	Enclosure section	Desk section	Wall section
									
							Model No. CP		
	Tilting adaptor 10°								
		–	■	–	0.7	1.4305 (AISI 303)	**6664.100**	–	–
	Enclosure attachment CP-S, stainless steel								
		–	■	–	1.3	1.4305 (AISI 303)	**6664.500**	–	–
	Housing coupling CP-S stainless steel								
		■	–	–	1.1	1.4305 (AISI 303)	**6664.000**	–	–
	**Support section CP-S, stainless steel**								
		–	■	500 1000	2.0 3.9	1.4301 (AISI 304)	**6660.050** **6660.010**		
	Angle piece 90° CP-S, stainless steel								
		–	■	–	1.3	1.4305 (AISI 303)	**6664.300**	–	**6664.300**
	Wall/base mount, rigid, CP-S stainless steel								
		–	■	–	1.7	1.4305 (AISI 303)	–	–	**6663.000**
	**Wall/base mount, rotating, CP-S stainless steel**								
	Rear, thread M8 Front, hole Ø 9 mm	■	–	–	3.9 4.5	1.4305 (AISI 303)	–	–	**6663.500** **6663.400**
	**Wall console CP-S stainless steel**								
	Rear, thread M8 Front, hole Ø 9 mm	–	■	–	1.5 1.8	1.4301 (AISI 304)	–	–	**6665.000** **6665.500**

Load information
Permissible load depending on system configuration



Stainless steel

System accessories Page 537 **Monitors, keyboards** Page 796/798 **Climate control** Page 389 **One-piece consoles, sheet steel** Page 128

Material:
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door or double door and console lid: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

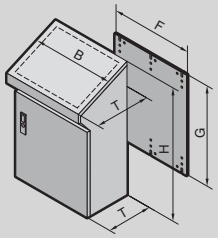
Surface finish:
- Enclosure, door, console lid and gland plates: Brushed, grain 120
- Mounting plate: Zinc-plated

Protection category:
IP 55 to IEC 60 529, complies with NEMA 12.

Supply includes:
- Enclosure, closed back and sides
- Door or double door at front, with locking rod
- Console lid with lid stay and cam lock latched in the enclosure
- Cam lock with double-bit insert
- Gland plate, divided
- Mounting plate

Approvals:
- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- VDE

Detailed drawings:
Available on the Internet.



One-piece consoles AP

Width (B) mm		Packs of	600	800	1000	1200	Page
Height (H) mm			960	960	960	960	
Depth (T) mm	Bottom		400	400	400	400	
	Top		480	480	480	480	
Mounting plate width (F) mm			530	730	930	1130	
Mounting plate height (G) mm			780	780	780	780	
Model No. AP		1	**2683.600**	**2684.600**	**2685.600**	**2686.600**	
Door(s)			1	1	2	2	
Weight (kg)			52.0	65.2	79.5	90.3	
Accessories							
Base/plinth	Height 100 mm	1	2865.000	2869.000	2867.000	2870.000	552
	Height 200 mm	1	2875.000	2878.000	2885.000	2886.000	552
Cable clamp rail		2	4191.000	4192.000	4336.000	4196.000	717
Support rail TS 35/15		6	4934.000	4935.000	4933.000	4937.000	655
Hose-proof hood		see page 485					
Alternative lock systems		see page 602					

System accessories Page 537 **PC enclosure systems, sheet steel** Page 130

Material:
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.8 mm
- Rear door: Stainless steel 1.4301 (AISI 304), 2.0 mm
- Gland plates: Stainless steel 1.4301 (AISI 304) 1.5 mm
- Monitor field: Single-pane safety glass, 4 mm

Surface finish:
Brushed, grain 240

Protection category:
IP 55 to IEC 60 529, complies with NEMA 12.

Supply includes:
- Enclosure, solid top and sides
- Rear door with locking rod
- Glazed door at the top, latched from the inside
- Component shelf
- Lock insert, lock no. 3524 E
- Keyboard drawer with front, swing-down for handrest and mouse pad support
- Bottom door with locking rod
- Gland plate, divided
- Lock with double-bit insert

Approvals:
- UL
- CSA
- TÜV
- Germanischer Lloyd
- Russian Maritime Register of Shipping
- Lloyds Register of Shipping
- VDE

Detailed drawings:
Available on the Internet.

PC enclosure systems

Width (B) mm	Packs of	600	
Height (H) mm		1600	
Depth (T) mm		620	
Model No. PC	1	**4650.000**	
Weight (kg)		115	
Accessories			
Base/plinth, height 100 mm	1	2855.000	552
Levelling feet, 100 mm high	1 set	2859.000	556
Base/plinth trim, modular	4	2913.000	549
Adaptor pieces, 482.6 mm (19″)	8	4547.000	742
TFT holder, vertically hinged	1	2383.040	797
Component shelf, pull-out	1 set	6902.960	668
Cable clamp rail	2	4191.000	717
Connector gland	see page 713		
LED system light	1	4140.840	682
Compact light	1	4140.210	681
Alternative lock systems	see page 602		

Stainless steel

System accessories Page 537 **Baying systems TS 8, sheet steel** Page 72 **EMC baying systems TS 8** Page 200

Material:
- Enclosure frame, roof, rear panel and gland plates: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door(s): Stainless steel 1.4301 (AISI 304), 2.0 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure frame and gland plates: Uncoated
- Door, roof and rear panel: Exterior brushed, grain size 400
- Mounting plate: Zinc-plated

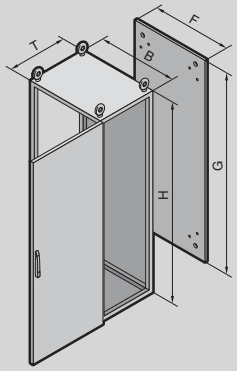
Protection category:
IP 55 to IEC 60 529, complies with NEMA 12.

Supply includes:
- Enclosure frame with door(s)
- Mounting plate
- Gland plates
- Rear panel
- Roof
- Locking rod with double-bit insert

Note:
Due to the hardness of the material, we recommend using metal multi-tooth screw SZ 2486.300, see page 666, for the interior installation.

Approvals:
- UL
- CSA
- TÜV
- Russian Maritime Register of Shipping
- TÜV Mark
- Lloyds Register of Shipping
- Bureau Veritas
- VDE
- Germanischer Lloyd

Detailed drawings:
Available on the Internet.



Baying systems TS 8

Width (B) mm		Packs of	800	1200	600	800	1200	600	800	1200	Page
Height (H) mm			1800	1800	1800	1800	1800	2000	2000	2000	
Depth (T) mm			400	400	500	500	500	600	600	600	
Mounting plate width (F) mm			699	1099	499	699	1099	499	699	1099	
Mounting plate height (G) mm			1696	1696	1696	1696	1696	1896	1896	1896	
Model No. TS		1	**8454.600**	**8456.600**	**8457.600**	**8455.600**	**8453.600**	**8452.600**	**8450.600**	**8451.600**	
Door(s)			1	2	1	1	2	1	1	2	
Support strips			–	–	–	–	–	2	2	2	
Weight (kg)			112.9	170.4	92.5	116.3	174.9	104.4	129.7	194.7	
Walls											
Side panels		2	8700.840	8700.840	8700.850	8700.850	8700.850	8700.060	8700.060	8700.060	567
Divider panel		1	8609.840	8609.840	8609.850	8609.850	8609.850	8609.060	8609.060	8609.060	571
Divider panel for module plates		1	–	–	8609.100	8609.100	8609.100	8609.130	8609.130	8609.130	572
Base/plinth											
Components front and rear	Height 100 mm	1 set	8701.800	8701.200	8701.600	8701.800	8701.200	8701.600	8701.800	8701.200	549
	Height 200 mm	1 set	8702.800	8702.200	8702.600	8702.800	8702.200	8702.600	8702.800	8702.200	549
Trim panels, sides	Height 100 mm	1 set	8701.040	8701.040	8701.050	8701.050	8701.050	8701.060	8701.060	8701.060	549
	Height 200 mm	1 set	8702.040	8702.040	8702.050	8702.050	8702.050	8702.060	8702.060	8702.060	549
Base/plinth trim, modular		4	2907.000	2907.000	2908.000	2908.000	2908.000	2913.000	2913.000	2913.000	549
Accessories											
Cable clamp rails		2	4192.000	4196.000	4191.000	4192.000	4196.000	4191.000	4192.000	4196.000	717
Cable entry plates		2	8700.800	8700.120[1)]	8700.600	8700.800	8700.120[1)]	8700.600	8700.800	8700.120[1)]	701
Wiring plan pocket, sheet steel		1	4118.000	4116.000	4116.000	4118.000	4116.000	4116.000	4118.000	4116.000	617
Alternative lock systems		see page 602									
System lights		see page 679									

[1)] Packs of 4

System accessories Page 537 **SE 8 sheet steel** Page 98

Material:
- Enclosure: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Door(s): Stainless steel 1.4301 (AISI 304), 2.0 mm
- Rear panel: Stainless steel 1.4301 (AISI 304), 1.5 mm
- Mounting plate: Sheet steel, 3.0 mm

Surface finish:
- Enclosure, rear panel, gland plate and door(s): Brushed, grain 240
- Mounting plate: Zinc-plated

Protection category:
See tables.

Supply includes:
- Enclosure, solid top and sides
- Door(s)
- Rear panel, detachable
- 130° hinges
- Mounting plate
- Gland plates, divided
- Locking rod with double-bit insert

Note:
- Due to the hardness of the material, we recommend using metal multi-tooth screw SZ 2486.300, see page 666, for the interior installation
- The system accessories for this enclosure system may be found on the following order pages, or references to the respective product groups in the section on system assembly
- The system accessories classified under “ES” can only be used with free-standing enclosures in the ES 5000 series

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

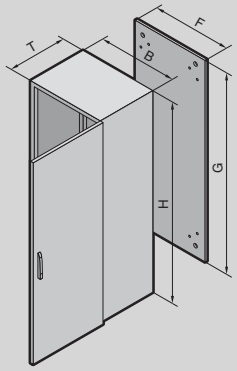


Photo shows a configuration example with equipment not included in the scope of supply.

System enclosure SE 8

Width (B) mm		Packs of	600	600	800	800	1000	1200	Page
Height (H) mm			1600	1800	1800	2000	1800	2000	
Depth (T) mm			400	500	500	600	400	500	
Mounting plate width (F) mm			499	499	699	699	899	1099	
Mounting plate height (G) mm			1496	1696	1696	1896	1696	1896	
Model No. SE			**5850.500**	**5851.500**	**5852.500**	**5853.500**	**5854.500**	**5855.500**	
Door(s)			1	1	1	1	1	2	
Protection category			IP 55 to IEC 60 529, complies with NEMA 12						
Base/plinth									
Components front and rear	Height 100 mm	1 set	8701.600	8701.600	8701.800	8701.800	8701.000	8701.200	549
	Height 200 mm	1 set	8702.600	8702.600	8702.800	8702.800	8702.000	8702.200	549
Trim panels	Height 100 mm	1 set	8701.040	8701.050	8701.050	8701.060	8701.040	8701.050	549
	Height 200 mm	1 set	8702.040	8702.050	8702.050	8702.060	8702.040	8702.050	549
Roof									
Eyebolts		4	4568.000	4568.000	4568.000	4568.000	4568.000	4568.000	626
Rail systems									
Punched section with mounting flange, outer level		4	8612.140	8612.150	8612.150	8612.160	8612.140	8612.150	647
Punched section with mounting flange, inner level		4	8612.040	8612.050	8612.050	8612.060	8612.040	8612.050	647
Other rail systems, based on TS 8		see from page 644							
Accessories									
Cable clamp rails for cable clamps		2	4191.000	4191.000	4192.000	4192.000	4336.000	4196.000	717
Alternative lock systems		see page 602							

Ex enclosures/EMC enclosures

Ex enclosures

Stainless steel....198
Plastic....199

EMC enclosures

The Rittal EMC concept....200
EMC baying systems TS 8....200
EMC subrack Ripac Vario....200
EMC E-Box EB....201
EMC compact enclosures AE....201

Note:
All TS 8 enclosures prepared for pressurisation on request.

Ex enclosures

System accessories Page 537

Application range:
- Zone 1 and 2 or 21 and 22 to 94/9/EC
- Ambient temperature range: –30°C to +80°C
- Protection type to IEC 60 079: Equipment protection thanks to increased safety, equipment protection thanks to enclosure

Material:
- Enclosure: Stainless steel 1.4301 (AISI 304)
- Cover or door: Stainless steel 1.4301 (AISI 304), all-round foamed-in silicone seal
- Mounting plate: Sheet steel

Surface finish:
- Enclosure: Brushed, grain 240
- Mounting plate: Zinc-plated

Protection category:
IP 66 to IEC 60 529

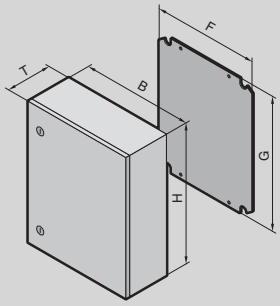
Supply includes:
- Enclosure
- Cover or door
- Mounting plate (only for enclosures with door)

Certificates:
Enclosure with cover:
- PTB 03 ATEX 1013U
- IEC Ex PTB 09.0033U

Enclosure with door:
- PTB 02 ATEX 1082U
- IEC Ex PTB 09.0035U

Approvals:
- ATEX
- IEC

Detailed drawings:
Available on the Internet.



Stainless steel, with screw fastened cover

Width (B) mm	Packs of	150	200	300	300	300	400	Page
Height (H) mm		150	200	150	200	300	200	
Depth (T) mm		80	80	80	80	120	120	
Model No. KEL	1	**9301.000**	**9303.000**	**9302.000**	**9304.000**	**9306.000**	**9305.000**	
Weight (kg)		1.3	1.8	1.8	2.4	3.9	3.6	
Accessories								
Mounting plates		1560.700	1562.700	1561.700	1563.700	1567.700	1564.700	631
Wall mounting bracket[1)]	4	1594.000	1594.000	1594.000	1594.000	1594.000	1594.000	627
Support rails TS 35/7.5	10	2314.000	2315.000	2316.000	2316.000	2316.000	2317.000	655
Earth straps	see page 689							

Stainless steel, with hinged door

Width (B) mm	Packs of	200	300	380	380	380	600	600	760	800	Page
Height (H) mm		300	380	300	380	600	600	760	760	1000	
Depth (T) mm		155	210	155	210	210	210	210	300	300	
Mounting plate width (F) mm		162	334	334	334	334	549	549	704	739	
Mounting plate height (G) mm		275	275	275	355	570	570	730	730	955	
Model No. KEL	1	**9401.600**	**9409.600**	**9402.600**	**9403.600**	**9404.600**	**9405.600**	**9406.600**	**9407.600**	**9408.600**	
Cam lock with double-bit insert		1	1	1	1	2	2	2	2	2	
Weight (kg)		3.8	7.7	7.4	9.7	13.3	15.6	22.3	30.5	36.3	
Accessories											
Wall mounting bracket[1)]	4	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	2433.000	627
Support rails TS 35/7.5	10	2315.000	2316.000	–	–	–	2319.000	2319.000	–	–	655
Rails for interior installation	4	–	2373.210	–	2373.210	2373.210	2373.210	2373.210	2373.300	2373.300	647
Perforated mounting strip	20	–	2310.038	–	2310.038	–	–	–	–	–	615
Earth straps	see page 689										

[1)] Stainless steel 1.4301 (AISI 304)

System accessories Page 537

Application range:
- Zone 1 and 2 or 21 and 22 to 94/9/EC
- Ambient temperature range: –30°C to +80°C
- Protection type to IEC 60 079: Equipment protection thanks to increased safety, equipment protection thanks to enclosure

Material:
- Fibre-glass-reinforced unsaturated polyester, surface resistance: < 10^9 Ω
- Door: Fibre-glass-reinforced unsaturated polyester, surface resistance: < 10^9 Ω, all-round foamed-in silicone seal
- Mounting plate: Sheet steel, zinc-plated

Colour:
RAL 9011

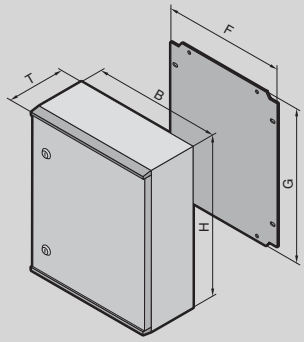
Protection category:
IP 66 to IEC 60 529

Supply includes:
- Enclosure
- Door
- Mounting plate.

Certificates:
- PTB 03 ATEX 1011U
- IEC Ex PTB 10.0011U

Approvals:
- ATEX
- IEC

Detailed drawings:
Available on the Internet.



Plastic

Width (B) mm	Packs of	200	250	300	400	400	500	600	600	800	Page
Height (H) mm		300	350	400	400	600	500	600	800	1000	
Depth (T) mm		150	150	200	200	200	300	200	300	300	
Mounting plate width (F) mm		145	195	245	345	345	417	545	517	717	
Mounting plate height (G) mm		250	300	350	350	550	450	550	750	950	
Model No. KEL	1	**9201.600**	**9202.600**	**9203.600**	**9204.600**	**9205.600**	**9207.600**	**9206.600**	**9208.600**	**9209.600**	
Cam lock with double-bit insert		1	1	2	2	2	2	2	–	–	
3-point locking rod		–	–	–	–	–	–	–	■	■	
Weight (kg)		3.7	4.6	6.0	6.5	11.5	12.9	15.9	24.3	39.0	
Accessories											
Wall mounting bracket	4	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	9266.000	628
Threaded inserts M6	20	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	1482.000	666
Mounting plate adjustment bracket	4	1481.000	1481.000	1481.000	1481.000	1481.000	1491.000	1481.000	1491.000	1491.000	634
Support rails	see page 654										
Earth straps	see page 689										
Cable duct	see page 715										

The Rittal EMC concept

Rittal offers excellent pre-requisites for EMC enclosure configurations in the form of its standard sheet steel enclosures, EMC-shielded enclosures, and a practical range of EMC accessories. Depending on the individual application, anything is possible, be it closely intermeshed potential equalisation in a standard enclosure to prevent conducted interference, or extra shielding to protect against high-frequency electromagnetic fields.
For Rittal EMC enclosures with a high level of shielding, excellent attenuation levels and attractive value-for-money products are achieved on the basis of zinc-plated metal surfaces in conjunction with low-resistance EMC shields.

Empty enclosures and mechanical accessory components are not subject to the European EMC Directive and the German EMC Act.
Thanks to the basic design in conjunction with the metal-plated enclosure body, even standard enclosures offer a good shielding effect against electrical fields, which in many cases is sufficient. The large enclosures in the TS 8 series offer a good level of shielding across a broad frequency range, even in the standard version.
For increased EMC requirements, Rittal offers the TS 8 enclosure in a version certified by the VDE with high RF attenuation. This shielding concept is also transferred to other enclosure platforms.
Further information on the topic of EMC may be found on our website at **www.rittal.com.**

EMC baying systems TS 8

Material:
– Door: Sheet steel with aluminium zinc coating, 2.0 mm
– Rear panel: Sheet steel with aluminium zinc coating, 1.5 mm
– Mounting plate: Sheet steel with zinc coating, 3.0 mm

Surface finish:
– Frame structure, door, rear panel and roof plate: Spray-finished on the outside and paint-free on the inside

Colour:
RAL 7035

Protection category:
– IP 55 to IEC 60 529
– The EMC version (“high RF attenuation”) has been certified by the VDE.

Supply includes:
– Enclosure frame with door
– Rear panel and roof plate detachable
– Door hinged on the right, may be swapped to the left
– 4 eyebolts, fitted,
– Mounting plate
– Three-piece gland plates

Width mm	Height mm	Depth mm	Model No. TS	
			TS enclosures.	TS side panels
800	2000	600	**8806.750**	**8106.750**
800	2000	800	**8808.750**	**8108.750**

Note:
Other sizes available on request.

Also required:

EMC baying seal TS 8800.690,
see page 688, for bayed enclosures.

EMC subrack Ripac Vario

The Ripac Vario EMC subrack system was developed with consideration for EMC aspects. The subracks are equipped with a conductive surface finish and with EMC components such as springs and extrusions.

Technical specifications:
– Overall depth:
245, 285, 305, 345, 405 mm
– Installation width: 84 HP
– Height: 3 U, 6 U

Tests:
Vibration and shock-tested to IC 61 587-1, based on:
– IEC 600-68-2-6 test Fc
– IEC 600-68-2-27 test Ea

Standards:
Ripac Vario subracks are based on the system dimensions to IEC 60 297-3, -101, -102, -103.

Material:
– Side panels: 2.5 mm aluminium
– Flanges and horizontal rails: Extruded aluminium section
– Cover plates: Aluminium

Surface finish:
Clear-chromated

Note:
For further information, refer to page 217.

EMC E-Box EB

Material:
Sheet steel with aluminium zinc coating

Surface finish:
– Powder-coated on the outside
– Interior surfaces conductive

Colour:
RAL 7035

Protection category:
– IP 55 to IEC 60 529
– The EMC version (“high RF attenuation”) has been certified by the VDE.

Note:
All sizes available on request.

EMC compact enclosures AE

Material:
Sheet steel with aluminium zinc coating

Surface finish:
– Powder-coated on the outside
– Interior surfaces conductive

Colour:
RAL 7035

Protection category:
– IP 55 to IEC 60 529
– The EMC version (“high RF attenuation”) has been certified by the VDE.

Note:
All sizes available on request.

Approvals:
Available on the Internet.

Outdoor enclosures

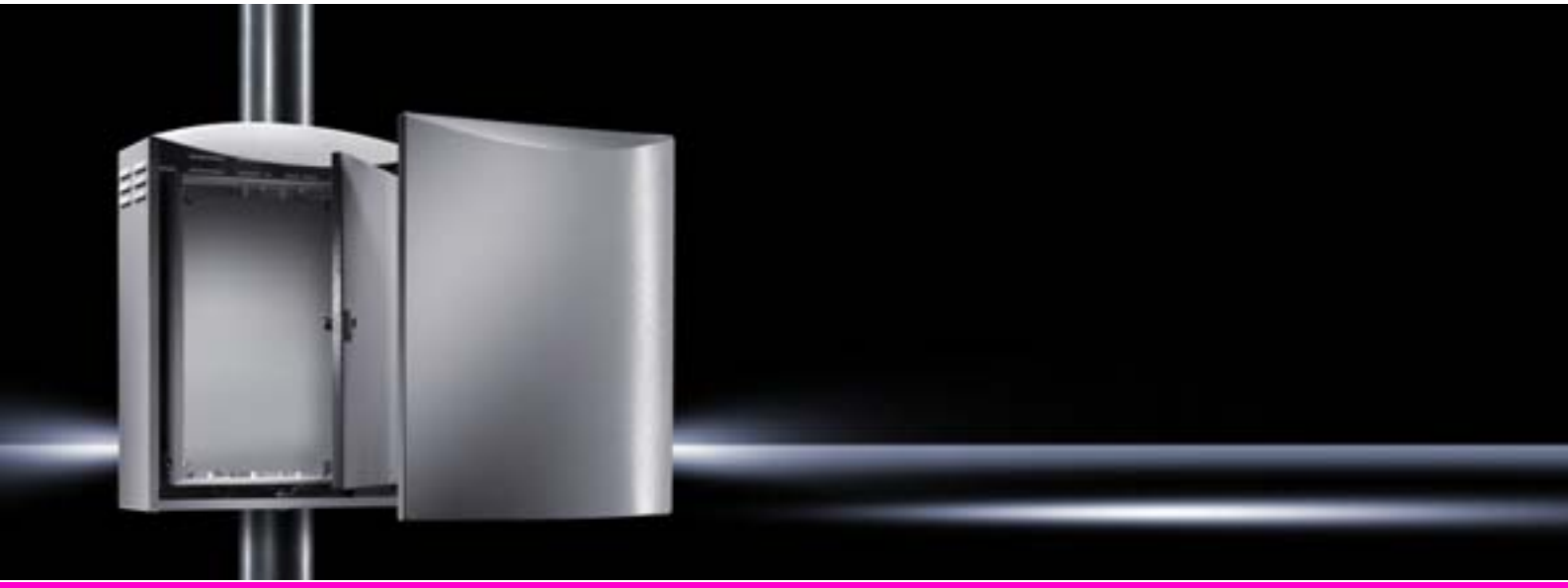
CS wall-mounted enclosures
Twin-walled 204

CS New Basic enclosures
Single-walled and one-door, width: 600 and 800 mm 205
Single-walled and two-door, width: 1200 mm 206

CS Toptec
Double-walled, platform TS 8 207

CS modular enclosures
Double-walled, configuration variants, width: 600 mm 208
Double-walled, configuration variants, width: 800 and 1200 mm 209

CS wall-mounted enclosures



Compact enclosures AE, stainless steel Page 184 **Compact enclosures AE, stainless steel, protection category IP 69K** Page 187

Outdoor enclosures for wall or pole mounting.
Enclosure-within-an-enclosure concept, outer enclosure with cut-out at the bottom and integrated louvres on the rear panel and side panels for ventilation.

Material:
– Enclosure: Aluminium AlMg3
– Mounting plate: Sheet steel, zinc-plated

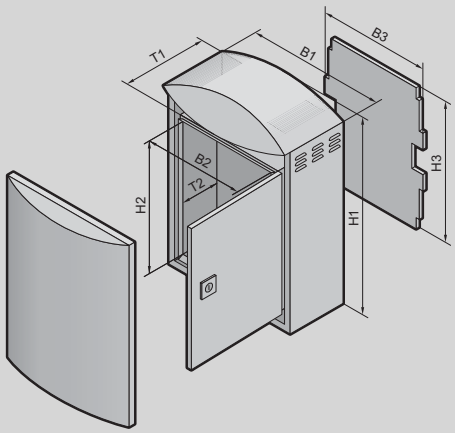
Surface finish:
– Powder-coated
– UV-resistant pure polyester

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
Double-walled outdoor enclosure, fully preconfigured:
– Inner enclosure with mounting plate, gland plate and security lock (CS 9791.045 with 2 security locks)
– Mounting bracket for thermostat or hygrostat
– Outer enclosure with designer cover and security lock 3524 E
– 2 C rails on the rear panel

Detailed drawings:
Available on the Internet.



Twin-walled

Outer enclosure						
Width (B1) mm	Packs of	370	420	530	630	Page
Height (H1) mm		522	560	700	780	
Depth (T1) mm		210	210	265	380	
Inner enclosure						
Width (B2) mm		300	350	460	580	
Height (H2) mm		400	440	565	580	
Depth (T2) mm		170	170	220	333	
Clearance width mm		280	330	440	560	
Clearance height mm		380	420	545	560	
Clearance depth mm		145	145	195	308	
Mounting plate width (B3) mm		270	320	430	550	
Mounting plate height (H3) mm		380	410	535	550	
Model No. CS	1	**9791.015**	**9791.025**	**9791.035**	**9791.045**	
Accessories						
Wall mounting bracket	4	9765.120	9765.120	9765.120	9765.120	629
Pole clamp	1 set	2584.000	2584.000	2584.000	2584.000	629
Enclosure heaters	1	3105.330	3105.330	3105.330	3105.330	471
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	476
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	476
Socket	2	2506.100	2506.100	2506.100	2506.100	698
LED system light	1	4140.810	4140.810	4140.820	4140.820	682
LED connection cable	1	4315.800	4315.800	4315.800	4315.800	683
Adaptor power pack	1	4315.860	4315.860	4315.860	4315.860	683

Climate control Page 467 **Rail systems** Page 652 **Cable routing** Page 715

Outdoor enclosure with 100 mm transport plinth and rain canopy with projections on all sides. Photo shows a configuration example with equipment not included in the scope of supply.

Material:
Aluminium AlMg3

Surface finish:
– Powder-coated
– UV-resistant pure polyester

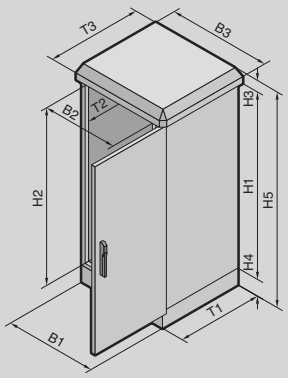
Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529, complies with NEMA 3R in conjunction with the gland plates offered in the accessories.

Supply includes:
Single-walled outdoor enclosure, fully pre-configured:
– Basic enclosure with open base
– 25 mm system punchings in the roof, base, front and in the enclosure depth
– Front door(s) with door stay, swing lever handle and semi-cylinder, lock BJ 20027
– Transport plinth with screw-fastened trim panels front and rear
– Enclosure with width 1200 mm has two 600 mm wide mounting panels
– Rain canopy

Detailed drawings:
Available on the Internet.

Note:
When configuring with partial mounting panels or 482.6 mm (19˝) partial installation, punched rails are required in the enclosure height, see page 651.



Single-walled and one-door, width: 600 and 800 mm

Width (B1) mm	Packs of	600	600	600	800	800	800	Page
Height (H1) mm		800	1200	1200	800	1200	1200	
Depth (T1) mm		400	400	500	400	400	500	
Clearance width (B2) mm		512	512	512	712	712	712	
Clearance height (H2) mm		712	1112	1112	712	1112	1112	
Clearance depth (T2) mm		349	349	449	349	349	449	
Rain canopy width (B3) mm		650	650	650	850	850	850	
Rain canopy height (H3) mm		55	55	55	55	55	55	
Rain canopy depth (T3) mm		450	450	550	450	450	550	
Base/plinth height (H4) mm		100	100	100	100	100	100	
Overall height (H5) mm		955	1355	1355	955	1355	1355	
Model No. CS	1	**9783.540**	**9783.550**	**9783.530**	**9783.510**	**9783.520**	**9783.610**	
Accessories								
Concrete base/plinth	1	9765.182	9765.182	9765.082	9765.088	9765.088	9765.084	550
Gland plate, divided	1 set	9785.511	9785.511	9785.514	9785.512	9785.512	9785.513	566
Cable entry plates	2	8800.060	8800.060	8800.060	8800.080	8800.080	8800.080	701
Mounting plates	1	9765.090	9765.092	9765.092	9765.097	9765.095	9765.095	639
Mounting angles, 482.6 mm (19˝)	2	7685.000	7688.000	7688.000	7685.000	7688.000	7688.000	743
Installation kit for mounting angles	2	7696.000	7696.000	7696.000	7698.000	7698.000	7698.000	743
Enclosure heaters	1	3105.400	3105.400	3105.400	3105.400	3105.400	3105.400	471
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Semi-cylinder, alternative closure	1	9785.040	9785.040	9785.040	9785.040	9785.040	9785.040	604

CS New Basic enclosures

Single-walled and two-door, width: 1200 mm

Width (B1) mm	Packs of	1200		1200		Page
Height (H1) mm		1200		1200		
Depth (T1) mm		400		500		
Clearance width (B2) mm		512		512		
Clearance height (H2) mm		1112		1112		
Clearance depth (T2) mm		349		449		
Rain canopy width (B3) mm		1250		1250		
Rain canopy height (H3) mm		55		55		
Rain canopy depth (T3) mm		450		550		
Base/plinth height (H4) mm		100		100		
Overall height (H5) mm		1355		1355		
Model No. CS	1	**9784.620**	**9784.520**	**9784.640**	**9784.540**	
Without centre bar, overlapping doors		■	–	■	–	
With removable centre bar, 2 lockable doors		–	■	–	■	
Accessories						
Concrete base/plinth	1	9765.089		9765.086		550
Gland plate, divided	1 set	2 x 9785.511		2 x 9785.514		566
Cable entry plates	2	8800.060		8800.060		701
Mounting plate for one half of the enclosure	1	9765.092		9765.092		639
Mounting plate, full installation	1	9765.191		9765.191		639
Mounting angles, 482.6 mm (19″)	2	7688.000		7688.000		743
Installation kit for mounting angles	2	7696.000		7696.000		743
Enclosure heaters	1	3105.400		3105.400		471
Enclosure internal thermostat	1	3110.000		3110.000		476
Semi-cylinder	1	9785.040	–	9785.040	–	604
	2	–	9785.042	–	9785.042	604

Rittal Australia

RITTAL Pty. Ltd.
130 – 140 Parraweena Road
Miranda NSW 2228
Phone: +61 (2) 9525 2766
Fax: +61 (2) 9525 2888
E-mail: info@rittal.com.au · www.rittal.com.au

Climate control Page 467 **Rail systems** Page 644 **Cable routing** Page 715

Outdoor enclosure with 100 mm transport plinth and rain canopy with projections on all sides. Side panels, rear panel and door fully double-walled on the outside, the entire TS 8 frame is available for interior installation.

Material:
- Enclosure frame: Stainless steel 1.4301 (AISI 304)
- Enclosure panels and base/plinth trim: Aluminium, AlMg3

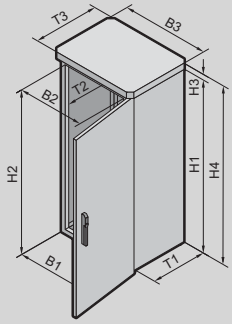
Surface finish:
- Powder-coated
- UV-resistant pure polyester

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
Double-walled outdoor enclosure, fully pre-configured:
- TS 8 frame with 25 mm system punchings in the roof and base frame plus vertical sections with two mounting levels
- Front door with door stay, swing lever handle and semi-cylinder, lock BJ20027
- Side panels left and right
- Rear panel
- Rain canopy
- Base/plinth with screw-fastened gland plates and screw-fastened trim panels front and rear
- All enclosure panels are doubled and earthed (external wall onto internal wall)

Detailed drawings:
Available on the Internet.



Double-walled, platform TS 8

Width (B1) mm		Packs of	600	800	600	800	Page
Height (H1) mm			1200	1200	1600	1600	
Depth (T1) mm			600	600	600	600	
Clearance width (B2) mm			512	712	512	712	
Clearance height (H2) mm			1112	1112	1512	1512	
Clearance depth (T2) mm			512	512	512	512	
Rain canopy width (B3) mm			694	894	694	894	
Rain canopy height (H3) mm			45	45	45	45	
Rain canopy depth (T3) mm			694	694	694	694	
Overall height (H4) mm			1345	1345	1745	1745	
Model No. CS		1	**9774.105**	**9774.205**	**9774.305**	**9774.405**	
Accessories							
Concrete base/plinth		1	9765.166	9765.186	9765.166	9765.186	550
Mounting angles, 482.6 mm (19″)		2	7827.120	7827.120	7827.160	7827.160	739
TS punched section with mounting flange as installation kit		4	8612.060	–	8612.060	–	647
Installation bracket TS		2	–	7827.480	–	7827.480	746
Mounting plate		1	9765.092	9765.095	–	9765.096	639
Gland plate	Size		4	4	4	4	From 704
	Qty.		2	2	2	2	
Semi-cylinder		1	9785.040	9785.040	9785.040	9785.040	604
Cooling unit, 1000 W		1	–	9776.500	–	9776.500	468
Heat exchanger, 85 W/K		1	–	9776.102	–	9776.102	468

CS modular enclosures

System accessories Page 537

CS modular enclosures
Double-walled outdoor enclosure with base/plinth and rain canopy projecting on all sides. Side panels doubled up to the outside, door and rear panel to the inside.
Photo shows a configuration example with equipment not included in the scope of supply.

Material:
– Enclosure, roof and side panel: Aluminium AlMg3
– Base/plinth, battery plinth: Aluminium AlMg3

Surface finish:
– Powder-coated
– UV-resistant pure polyester

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529, complies with NEMA 3R.

Order example,
see page 209.

Other climate control devices,
from page 467.

Detailed drawings:
Available on the Internet.

Double-walled, configuration variants, width: 600 mm

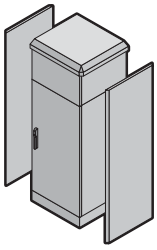
Width mm	600	600	600	600	Page
Height mm	800	1000	1200	1600	
Depth mm	600	500	600	600	
Model No. CS	**9751.015**	**9751.075**	**9751.025**	**9751.035**	
Base/plinth					
Standard base/plinth 100 mm	**9755.015**	**9755.065**	**9755.015**	**9755.015**	
Battery plinth 350 mm	**9754.025**	**9754.015**	**9754.025**	**9754.025**	
Roof-mounted climate control					
Cooling unit, 1000 W	9762.212	9762.212	9762.212	9762.212	469
Heat exchanger, 30 W/K	9764.040	9764.040	9764.040	9764.040	469
Mounting frame for cooling unit	9765.051	9765.051	9765.051	9765.051	469
Climate hood	**9756.015**	**9756.065**	**9756.015**	**9756.015**	
Wall-mounted climate control					
Cooling unit, 1000 W	–	–	9761.212	9761.212	469
Roof					
Standard roof	**9757.015**	**9757.065**	**9757.015**	**9757.015**	
Roof for wall-mounted climate control	**–**	**–**	**9758.015**	**9758.015**	
Side panel					
Side panel for 100 mm base/plinth	**9753.015**	**9753.175**	**9753.035**	**9753.045**	
Side panel for 350 mm base/plinth	**9753.055**	**9753.195**	**9753.075**	**9753.085**	
Side panel for 100 mm base/plinth and roof-mounted climate control	**9753.095**	**9753.185**	**9753.115**	**9753.125**	
Side panel for 350 mm base/plinth and roof-mounted climate control	**9753.135**	**9753.205**	**9753.155**	**9753.165**	

Delivery times available on request.

Double-walled, configuration variants, width: 800 and 1200 mm

Width mm	800	800	800	800	1200	1200	Page
Height mm	1000	1200	1200	1600	1200	1200	
Depth mm	500	500	600	600	500	600	
Model No. CS	**9751.085**	**9751.045**	**9751.055**	**9751.065**	**9752.015**	**9752.025**	
Base/plinth							
Standard base/plinth 100 mm	**9755.025**	**9755.025**	**9755.035**	**9755.035**	**9755.045**	**9755.055**	
Battery plinth 350 mm	**9754.035**	**9754.035**	**9754.045**	**9754.045**	2 x **9754.015**	2 x **9754.025**	
Roof-mounted climate control							
Cooling unit, 1000 W	9762.212	9762.212	9762.212	9762.212	9762.212	9762.212	469
Heat exchanger, 30 W/K	9764.040	9764.040	9764.040	9764.040	9764.040	9764.040	469
Mounting frame for cooling unit	9765.051	9765.051	9765.051	9765.051	9765.051	9765.051	469
Climate hood	**9756.025**	**9756.025**	**9756.035**	**9756.035**	**9756.045**	**9756.055**	
Wall-mounted climate control							
Cooling unit, 1000 W	–	9761.212	9761.212	9761.212	9761.212	9761.212	469
Roof							
Standard roof	**9757.025**	**9757.025**	**9757.035**	**9757.035**	**9757.045**	**9757.055**	
Roof for wall-mounted climate control	**–**	**9758.025**	**9758.035**	**9758.035**	**9758.045**	**9758.055**	
Side panel							
Side panel for 100 mm base/plinth	**9753.175**	**9753.025**	**9753.035**	**9753.045**	**9753.025**	**9753.035**	
Side panel for 350 mm base/plinth	**9753.195**	**9753.065**	**9753.075**	**9753.085**	**9753.065**	**9753.075**	
Side panel for 100 mm base/plinth and roof-mounted climate control	**9753.185**	**9753.105**	**9753.115**	**9753.125**	**9753.105**	**9753.115**	
Side panel for 350 mm base/plinth and roof-mounted climate control	**9753.205**	**9753.145**	**9753.155**	**9753.165**	**9753.145**	**9753.155**	

Delivery times available on request.



Order example: Enclosure 800 x 1200 x 500 mm of aluminium AlMg3 with standard base/plinth and roof-mounted cooling unit.

You will need:

Enclosure:	Basic enclosure 800 x 1200 x 500 mm	**CS 9751.045**
Base/plinth:	Standard base/plinth 100 mm	**CS 9755.025**
Roof-mounted climate control:	Roof-mounted cooling unit	**CS 9762.212**
	Mounting frame	**CS 9765.051**
	Climate hood	**CS 9756.025**
Roof:	Standard roof	**CS 9757.025**
Side panel:	Side panel for 100 mm base/plinth and roof-mounted climate control	**CS 9753.105**

Electronic Packaging

Subracks

Subrack Ripac EASY 212
Parts for Ripac EASY 214
Subrack Ripac Vario 216
Parts for Ripac Vario 218
Cover plates for Ripac EASY 228
Cover plates for Ripac Vario 229
Accessories for subracks 230
Overview of horizontal rails 247
Assembly parts 250

System enclosures

Ripac Vario-Module 252
Accessories for Ripac Vario-Module 256

Instrument cases

RiCase 258
Accessories for RiCase 260

Subrack Ripac EASY

Parts for Ripac EASY Page 214 **Accessories** Page 232 **Assembly parts** Page 250 **Subrack configurator** Page 525

Material/Surface finish:
- Side panels:
  2 mm aluminium, uncoated
- Horizontal rails:
  Extruded aluminium section, corrosion-resistant
- Flanges: Pre-anodised

Supply includes:
- Side panels
- Flanges
- Horizontal rails
- Threaded inserts
- Assembly screws or insulating strips
- Horizontal rails (C4, C5, C7) incl. preconfigured assembly screws
- Horizontal rails (A2) incl. preconfigured assembly screws and threaded inserts

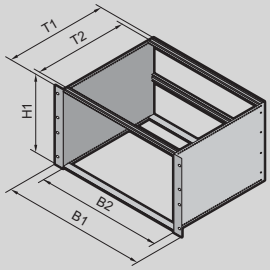
Detailed parts lists:
Available on the Internet.

Tests:
Vibration and shock-tested to IEC 61 587-1 based on:
IEC 600-68-2-6 test Fc
IEC 600-68-2-27 test Ea

Standards:
Subracks are based on the system dimensions of IEC 60 297-3, -101, -102, -103.

Note:
The backplanes may be fitted in direct contact with the rear horizontal rails for conductive mounting.
No additional contact strips are required.

Detailed drawings:
Available on the Internet.



Ripac EASY for backplane, 3 U

U	**3**						
Height (H1) mm	132						
Width (B1) mm	482.6 (19˝)						
Width (B2) HP	84						
Side panel (T1) mm	175	175	235	235	295	355	415
Depth (T2) mm	160	160	220	220	280	340	400
Max. PCB depth mm	160	160	220	220	280	340	400
for conductive backplane	■	–	■	–	■	■	■
for insulated backplane	–	■	–	■	–	–	–
Model No. RP	**3634.100**	**3634.101**	**3634.110**	**3634.111**	**3634.120**	**3634.130**	**3634.140**
Accessories							
Top/bottom covers	see page 228						
Horizontal rails	see page 214						
Telescopic slides	see page 233						
Other accessories for subracks	see page 230						

Ripac EASY for backplane, 6 U

U	**6**						
Height (H1) mm	265.35						
Width (B1) mm	482.6 (19˝)						
Width (B2) HP	84						
Side panel (T1) mm	175	175	235	235	295	355	415
Depth (T2) mm	160	160	220	220	280	340	400
Max. PCB depth mm	160	160	220	220	280	340	400
for conductive backplane	■	–	■	–	■	■	■
for insulated backplane	–	■	–	■	–	–	–
Model No. RP	**3634.180**	**3634.181**	**3634.190**	**3634.191**	**3634.200**	**3634.210**	**3634.220**
Accessories							
Top/bottom covers	see page 228						
Horizontal rails	see page 214						
Telescopic slides	see page 233						
Other accessories for subracks	see page 230						

Ripac EASY for connectors IEC 60 603-2, 3 U and 6 U

U	**3**			**6**		
Height (H1) mm	132			265.35		
Width (B1) mm	482.6 (19˝)			482.6 (19˝)		
Width (B2) HP	84			84		
Side panel (T1) mm	175	235	295	175	235	295
Depth (T2) mm	160	220	280	160	220	280
Max. PCB depth mm	160	220	280	160	220	280
Model No. RP	**3634.150**	**3634.160**	**3634.170**	**3634.230**	**3634.240**	**3634.250**
Accessories						
Top/bottom covers	see page 228					
Horizontal rails	see page 214					
Telescopic slides	see page 233					
Other accessories for subracks	see page 230					

Parts for Ripac EASY

Overview of horizontal rails Page 247 **Configurator for subracks** Page 525

Ripac EASY 84 HP “Standard”	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**		
		VME J1/ VME J2	Connector IEC 60 603-2	Top-hat rail	VME J1/J2	Connector IEC 60 603-2	Top-hat rail

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	**Model No. RP**			**Model No. RP**		
175	160	2	2	**3634.695**	**3634.695**	**3634.695**	**3634.720**	**3634.720**	**3634.720**
235	220	2	2	**3634.700**	**3634.700**	**3634.700**	**3634.725**	**3634.725**	**3634.725**
295	280	2	2	**3634.705**	**3634.705**	**3634.705**	**3634.730**	**3634.730**	**3634.730**
355	340	2	2	**3634.710**	**3634.710**	**3634.710**	**3634.735**	**3634.735**	**3634.735**
415	400	2	2	**3634.715**	**3634.715**	**3634.715**	**3634.740**	**3634.740**	**3634.740**

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	**Model No. RP**			**Model No. RP**		
With drilled holes for handles	2	2	**3634.745**	**3634.745**	**3634.745**	**3634.750**	**3634.750**	**3634.750**
Without drilled holes for handles	2	2	**3634.746**	**3634.746**	**3634.746**	**3634.751**	**3634.751**	**3634.751**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	**Model No. RP**			**Model No. RP**		
A2 Front, including threaded inserts and screws		84	2	2	**3634.600**	**3634.600**	**3634.600**	**3634.600**	**3634.600**	**3634.600**
Rear, for backplanes, including screws	**C4** conductive		2	2	**3634.615**	–	–	**3634.615**	–	–
	C7 for insulating strips		2	2	**3634.775**	–	–	**3634.775**	–	–
C5 Rear, with Z rail for connectors			2	2	–	**3634.620**	–	–	**3634.620**	–
D2 Rear, with Z rail for connectors			1	1	–	–	–	–	**3634.085**	–
Rear, centre, for backplanes	**D3** conductive, incl. screw		1	1	–	–	–	**3634.045**	–	–
	D1 for insulating strips		1	1	–	–	–	**3684.582**	–	–
	Screw for **D1** rails		2	100	–	–	–	**3634.430**	–	–
D4 Rear for panel mounting, including threaded inserts and screws			2	2	**3634.515**	**3634.515**	**3634.515**	**3634.515**	**3634.515**	**3634.515**
G Insulating strip	for **C7** rail	21	8	8	**3685.274**	–	–	–	–	–
	for **C7** and **D1** rails		16	8	–	–	–	**3685.274**	–	–

Ripac EASY 84 HP “Standard”	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**		
		VME J1/ VME J2	Connector IEC 60 603-2	Top-hat rail	VME J1/J2	Connector IEC 60 603-2	Top-hat rail

4 Covers

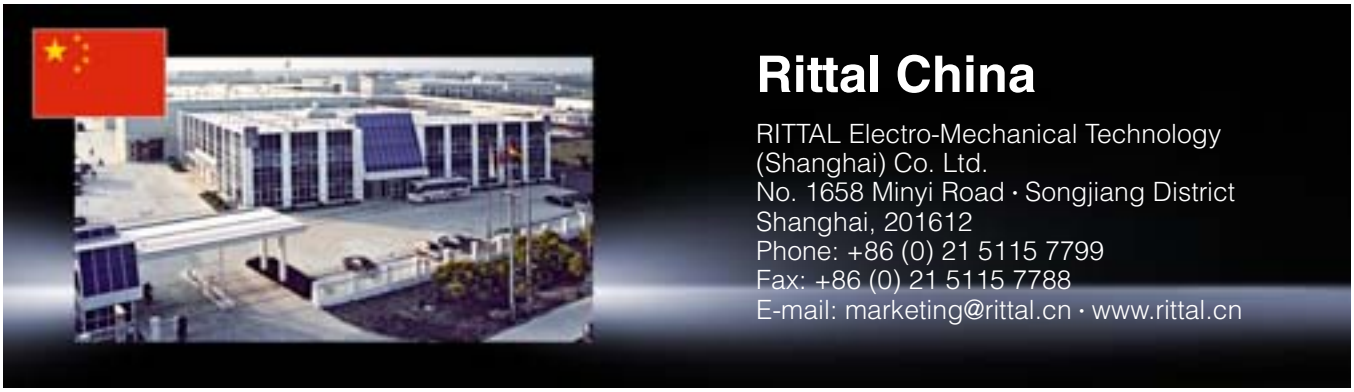
	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP		Model No. RP	
						Slotted	**Solid**	**Slotted**	**Solid**
Version 1 (to cover the card space, not for subracks with top-hat rails)	175	160	84	2	2	**3634.685**	**3634.675**	**3634.685**	**3634.675**
	235	220		2	2	**3634.690**	**3634.680**	**3634.690**	**3634.680**
Version 2 (to cover the entire subrack)	175	100	84	2	2	**3634.650**	**3634.625**	**3634.650**	**3634.625**
	235	160		2	2	**3634.655**	**3634.630**	**3634.655**	**3634.630**
	295	220		2	2	**3634.660**	**3634.635**	**3634.660**	**3634.635**
	355	280		2	2	**3634.665**	**3634.640**	**3634.665**	**3634.640**
	415	280		2	2	**3634.670**	**3634.645**	**3634.670**	**3634.645**
Screws for cover plates version 2				8	100	**3634.233**		**3634.233**	

Assembly parts for cover plates

	Side panel depth mm	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP		
Mounting clips	175	84	min. 4	50	**3634.450**	**3634.450**	**3634.450**	**3634.450**	**3634.450**	**3634.450**
	235		min. 4, max. 8	50						
	295		min. 4, max. 12	50						
	355		min. 4, max. 16	50						
	415		min. 4, max. 20	50						
Screws for mounting clips	175	84	min. 4	100	**3634.420**	**3634.420**	**3634.420**	**3634.420**	**3634.420**	**3634.420**
	235		min. 4, max. 8	100						
	295		min. 4, max. 12	100						
	355		min. 4, max. 16	100						
	415		min. 4, max. 20	100						

Top-hat rail and adaptor

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP		
Top-hat rail types TS 35 x 7.5 EN 60 715, 423 mm long	84	1	1	–	–	**3634.780**	–	–	–
		2		–	–	–	–	–	**3634.780**
Adaptor for top-hat rail mounting, incl. screws M4 x 6	84	2	2	–	–	**3634.770**	–	–	–
		4		–	–	–	–	–	**3634.770**



Subrack Ripac Vario

Cover plates Page 229 **Guide rails** Page 235 **Assembly kits** Page 232 **Front panels** Page 239 **Configurator for subracks** Page 525

Material/Surface finish:
- Side panels: 2.5 mm aluminium, clear-chromated
- 482.6 mm (19″) flanges and horizontal rails: Extruded aluminium section, clear-chromated
- Cover plates: Aluminium, unplated (EMC version only)

Supply includes:
- Flanges
- Side panels
- Horizontal rails
- Threaded inserts
- Insulating strips or Z rails

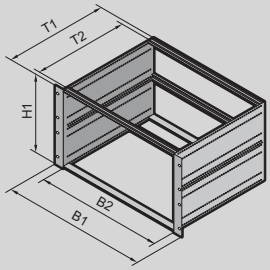
Additionally for EMC version:
- Trim sections
- EMC gaskets
- Roof plates
- Mounting blocks

Detailed parts lists:
Available on the Internet.

Tests:
Vibration and shock-tested to IEC 61 587-1 based on:
IEC 600-68-2-6 test Fc
IEC 600-68-2-27 test Ea

Standards:
Ripac subracks are based on the system dimensions of IEC 60 297-3, -101, -102, -103.

Detailed drawings:
Available on the Internet.



Ripac Vario for backplane, 3 U

U	**3**						
Height (H1) mm	132						
Width (B1) mm	482.6 (19″)						
Width (B2) HP	84						
Side panel (T1) mm	185	225	245	305	345	365	405
Depth (T2) mm	160	200	220	280	320	340	380
Max. PCB depth mm	160	160	220	280	280	340	340
Model No. RP, not EMC	**3684.020**	**3684.021**	**3684.022**	**3685.231**	**3684.024**	**3685.232**	**3684.025**
Accessories							
Top/bottom covers	see page 229						
Horizontal rails	see page 218 – 226						
Other accessories for subracks	see page 232						

Ripac Vario for backplane, 4 U and 6 U

U	**4 (3 + 1)**	**6**				
Height (H1) mm	176.45	265.35				
Width (B1) mm	482.6 (19″)	482.6 (19″)				
Width (B2) HP	84	84				
Side panel (T1) mm	245	185	245	285	345	365
Depth (T2) mm	220	160	220	260	320	340
Max. PCB depth mm	220	160	220	220	280	340
Model No. RP, not EMC	**3685.235**	**3684.043**	**3684.045**	**3684.046**	**3684.047**	**3685.239**
Accessories						
Top/bottom covers	see page 229					
Horizontal rails	see page 218 – 226					
Other accessories for subracks	see page 232					

Ripac Vario EMC for backplane, 3 U and 6 U

U	**3**						**6**
Height (H1) mm	132						265.35
Width (B1) mm	482.6 (19″)						482.6 (19″)
Width (B2) HP	84						84
Side panel (T1) mm	245	285	285	305	345	405	265
Depth (T2) mm	220	260	260	280	320	380	220
Max. PCB depth mm	160	220	220	220	280	340	160
Model No. RP, EMC	**3684.128**	**3684.129**	**3684.143**	**3685.241**	**3684.130**	**3684.131**	**3684.170**
EMC for lever handle	■	■	–	■	■	■	–
EMC for injector/extractor handle	–	–	■	–	–	–	■
Accessories							
EMC accessories	see page 230						

Ripac Vario for connectors IEC 60 603-2, 3 U and 6 U

U	**3**					**6**	
Height (H1) mm	132					265.35	
Width (B1) mm	482.6 (19″)					482.6 (19″)	
Width (B2) HP	84					84	
Side panel (T1) mm	185	225	245	305	365	185	245
Depth (T2) mm	160	200	220	280	340	160	220
Max. PCB depth mm	160	160	220	280	340	160	220
Model No. RP, not EMC	**3684.034**	**3684.035**	**3684.036**	**3685.233**	**3685.234**	**3684.056**	**3684.058**
Accessories							
Top/bottom covers	see page 229						
Horizontal rails	see page 218 – 226						
Other accessories for subracks	see page 232						

Accessories for Ripac EASY, Ripac Vario and Ripac Vario EMC	
Identification strips	see page 234
Front panels	see page 239
ESD contact for front panels	see page 237
Earthing inserts for front panels	see page 238
Conductive strips	see page 221
Guide rails	see page 235
ESD contact for guide rails	see page 237
Box type plug-in units	see page 246
Top and bottom cover plates for box-type plug-in units	see page 246
Mounting kits	see page 232
Handles	see page 233
Handles	see page 243
Injector/extractor handles	see page 241

Parts for Ripac Vario

Overview of horizontal rails Page 247 **Configurator for subracks** Page 525

Ripac Vario (EMC-upgradable) 42 HP "Standard"	**Detailed drawings:** Available on the Internet.	3 U			6 U			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
185	160	2	1	**3684.511**	**3684.511**	**3684.511**	**3684.529**	**3684.529**	**3684.529**	**3684.529**
225	160	2	1	**3684.512**	**3684.512**	**3684.512**	**3684.530**	**3684.530**	**3684.530**	**3684.530**
245	220	2	1	**3684.513**	**3684.513**	**3684.513**	**3684.531**	**3684.531**	**3684.531**	**3684.531**
285	220	2	1	**3684.514**	**3684.514**	**3684.514**	**3684.532**	**3684.532**	**3684.532**	**3684.532**

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Standard, with drilled holes for handles	2	1	**3684.622**	**3684.622**	**3684.622**	**3684.624**	**3684.624**	**3684.624**	**3684.624**
Standard, without drilled holes for handles	2	1	**3684.615**	**3684.615**	**3684.615**	**3684.617**	**3684.617**	**3684.617**	**3684.617**
Recessed, without drilled holes for handles	2	1	**3684.626**	**3684.626**	**3684.626**	**3684.628**	**3684.628**	**3684.628**	**3684.628**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
A Front and rear (for subracks with rails on the rear)		42	4	1	**3684.560**	**3684.560**	–	**3684.560**	**3684.560**	–	–
			3	1	–	–	**3684.560**	–	–	–	–
			2	1	–	–	–	–	–	**3684.560**	**3684.560**
B Front, with 10 mm extension			2	1	–	–	–	–	–	**3684.565**	**3684.565**
			1	1	–	–	**3684.565**	–	–	–	–
I Threaded insert (6 x 2 mm)			4	2	**3684.608**	**3684.608**	**3684.608**	**3684.608**	**3684.608**	**3684.608**	**3684.608**
Rear	**C1** for backplane		2	1	**3684.570**	–	**3684.570**	**3684.570**	–	**3684.570**	**3684.570**
	C3 with Z rail for connectors		2	1	–	**3686.191**	–	–	**3686.191**	–	–
Rear, centre	**D1** for backplane		1	1	–	–	–	**3684.580**	–	–	**3684.580**
	D2 with Z rail for connectors		1	1	–	–	–	–	**3687.600**	–	–

4 Corner trims, rear

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
For subracks with mounting flanges, standard	2	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**
For subracks with mounting flanges, recessed	4	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**

Ripac Vario (EMC-upgradable) 42 HP "Standard"	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

Insulating strips for rails (C1) rear and (D1) rear centre

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
G Insulating strip	21	4	8	**3685.274**	**–**	**3685.274**	**–**	**–**	**3685.274**	**–**
		8	8	**–**	**–**	**–**	**3685.274**	**–**	**–**	**3685.274**

5 Covers

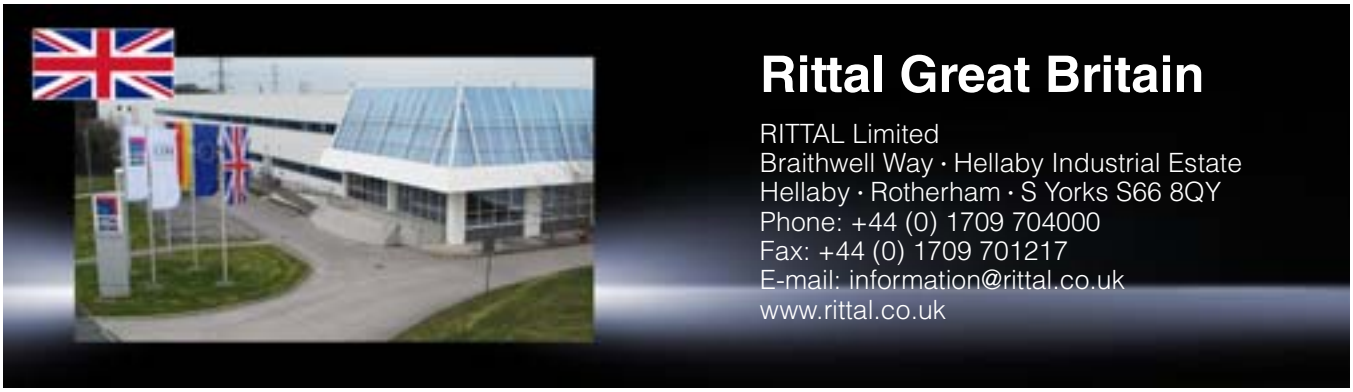
	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP Slotted			Model No. RP Slotted			
To cover the entire subrack	185	160	42	2	1	**3684.957**	**3684.957**	**3684.957**	**3684.957**	**3684.957**	**3684.957**	**3684.957**
	225	160		2	1	**3687.623**	**3687.623**	**3687.623**	**3687.623**	**3687.623**	**3687.623**	**3687.623**
	245	160		2	1	**3684.958**	**3684.958**	**3684.958**	**3684.958**	**3684.958**	**3684.958**	**3684.958**
	285	220		2	1	**3685.642**	**3685.642**	**3685.642**	**3685.642**	**3685.642**	**3685.642**	**3685.642**

Assembly parts

	Side panel depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Screw M4 x 12 for horizontal rails on side panels	–	2/ horizontal rail	100	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**
Mounting blocks @ 28.5 mm for cover plates (max. quantity for max. EMC protection)	185	min. 4, max. 8	10	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**
	225	min. 8, max. 16	10							
	245	min. 8, max. 20	10							
	285	min. 8, max. 24	10							
Screw M3 x 6 for mounting blocks	–	3/ mounting block	100	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**
Mounting kit for 482.6 mm (19″) flange, recessed	–	4	4 set	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**

EMC gasket (only for subracks with horizontal rails at the rear)

		HP	Required quantity per subrack	Packs of	Model No. RP 3 U			Model No. RP 6 U			
EMC gaskets, vertical	Version 1	–	2	1	**3686.975**	**3686.975**	**3686.975**	**3686.977**	**3686.977**	**3686.977**	**3686.977**
	Version 2	–	2	1	**3688.611**	**3688.611**	**3688.611**	**3688.614**	**3688.614**	**3688.614**	**3688.614**
EMC gaskets, horizontal	for horizontal rails	40	4	1	**3684.974**	**3684.974**	**3684.974**	**3684.974**	**3684.974**	**3684.974**	**3684.974**
	for cover plates	40	4	1	**3684.975**	**3684.975**	**3684.975**	**3684.975**	**3684.975**	**3684.975**	**3684.975**



Parts for Ripac Vario

Overview of horizontal rails Page 247 **Configurator for subracks** Page 525

Ripac Vario (EMC-upgradable) 84 HP "Standard"	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
185	160	2	1	**3684.511**	**3684.511**	**3684.511**	**3684.529**	**3684.529**	**3684.529**	**3684.529**
225	160	2	1	**3684.512**	**3684.512**	**3684.512**	**3684.530**	**3684.530**	**3684.530**	**3684.530**
245	220	2	1	**3684.513**	**3684.513**	**3684.513**	**3684.531**	**3684.531**	**3684.531**	**3684.531**
285	220	2	1	**3684.514**	**3684.514**	**3684.514**	**3684.532**	**3684.532**	**3684.532**	**3684.532**
305	280	2	1	**3684.515**	**3684.515**	**3684.515**	**3684.533**	**3684.533**	**3684.533**	**3684.533**
345	280	2	1	**3684.516**	**3684.516**	**3684.516**	**3684.534**	**3684.534**	**3684.534**	**3684.534**
365	280	2	1	**3684.517**	**3684.517**	**3684.517**	**3684.535**	**3684.535**	**3684.535**	**3684.535**
405	280	2	1	**3684.518**	**3684.518**	**3684.518**	**3684.536**	**3684.536**	**3684.536**	**3684.536**
465	280	2	1	**3684.520**	**3684.520**	**3684.520**	**3684.538**	**3684.538**	**3684.538**	**3684.538**
525	280	2	1	**3684.521**	**3684.521**	**3684.521**	**3684.539**	**3684.539**	**3684.539**	**3684.539**
585	280	2	1	**3684.522**	**3684.522**	**3684.522**	**3684.540**	**3684.540**	**3684.540**	**3684.540**

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Standard, with drilled holes for handles	2	1	**3684.622**	**3684.622**	**3684.622**	**3684.624**	**3684.624**	**3684.624**	**3684.624**
Standard, without drilled holes for handles	2	1	**3684.615**	**3684.615**	**3684.615**	**3684.617**	**3684.617**	**3684.617**	**3684.617**
Recessed, without drilled holes for handles	2	1	**3684.626**	**3684.626**	**3684.626**	**3684.628**	**3684.628**	**3684.628**	**3684.628**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
A Front and rear (for sub-racks with rails on the rear)		84	4	1	**3684.562**	**3684.562**	–	**3684.562**	**3684.562**	–	–
			3	1	–	–	**3684.562**	–	–	–	–
			2	1	–	–	–	–	–	**3684.562**	**3684.562**
B Front, with 10 mm extension			2	1	–	–	–	–	–	**3684.567**	**3684.567**
			1	1	–	–	**3684.567**	–	–	–	–
I Threaded insert (6 x 2 mm)			4	2	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**
Rear	**C1** for backplane		2	1	**3684.572**	–	**3684.572**	**3684.572**	–	**3684.572**	**3684.572**
	C3 with Z rail for connectors		2	1	–	**3686.159**	–	–	**3686.159**	–	–
Rear, centre	**D1** for backplane		1	1	–	–	–	**3684.582**	–	–	**3684.582**
	D2 with Z rail for connectors		1	1	–	–	–	–	**3687.602**	–	–

Ripac Vario (EMC-upgradable) 84 HP "Standard"	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

4 Corner trims, rear

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
For subracks with mounting flanges, standard	2	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**
For subracks with mounting flanges, recessed	4	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**

Conductive/insulating strips for rails (C1) rear and (D1) rear centre

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
G Insulating strip	21	8	8	**3685.274**	**–**	**3685.274**	**–**	**–**	**3685.274**	**–**
		16	8	**–**	**–**	**–**	**3685.274**	**–**	**–**	**3685.274**
H Conductive strip	84	2	2	**3685.273**	**–**	**3685.273**	**–**	**–**	**3685.273**	**–**
		4	2	**–**	**–**	**–**	**3685.273**	**–**	**–**	**3685.273**

5 Covers

	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP		Model No. RP	
						slotted	**solid**	**slotted**	**solid**
To cover the PCB space	–	160	84	2	1	**3684.681**	**3684.680**	**3684.681**	**3684.680**
	–	220		2	1	**3685.851**	**3685.813**	**3685.851**	**3685.813**
	–	280		2	1	**3685.855**	**3685.814**	**3685.855**	**3685.814**
To cover the entire subrack	185	160	84	2	1	**3684.681**	**3684.680**	**3684.681**	**3684.680**
	225	160		2	1	**3684.694**	**3684.683**	**3684.694**	**3684.683**
	245	160		2	1	**3684.695**	**3684.684**	**3684.695**	**3684.684**
	285	220		2	1	**3684.696**	**3684.685**	**3684.696**	**3684.685**
	305	220		2	1	**3685.852**	**3684.686**	**3685.852**	**3684.686**
	345	280		2	1	**3684.698**	**3684.687**	**3684.698**	**3684.687**
	365	280		2	1	**3685.853**	**3684.688**	**3685.853**	**3684.688**
	405	280		2	1	**3684.700**	**3684.689**	**3684.700**	**3684.689**
	465	280		2	1	**3684.701**	**3684.691**	**3684.701**	**3684.691**
	525	280		2	1	**3684.702**	**3684.692**	**3684.702**	**3684.692**
	585	280		2	1	**3684.703**	**3684.693**	**3684.703**	**3684.693**

Assembly parts

	Side panel depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Screw M4 x 12 for horizontal rails on side panels	–	2/ horizontal rail	100	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**
Mounting blocks @ 28.5 mm for cover plates (max. quantity for max. EMC protection)	185	min. 4, max. 8	10	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**
	225	min. 8, max. 16	10							
	245	min. 8, max. 20	10							
	285	min. 8, max. 24	10							
	305	min. 8, max. 28	10							
	345	min. 8, max. 32	10							
	365	min. 8, max. 36	10							
	405	min. 8, max. 40	10							
	465	min. 8, max. 48	10							
	525	min. 8, max. 56	10							
	585	min. 8, max. 64	10							
Screw M3 x 6 for mounting blocks	–	3/ mounting block	100	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**
Mounting kit for 482.6 mm (19″) flange, recessed	–	4	4 sets	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**

EMC gasket (only for subracks with horizontal rails at the rear)

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
					3 U			**6 U**			
EMC gaskets, vertical	Version 1	–	2	1	**3686.975**	**3686.975**	**3686.975**	**3686.977**	**3686.977**	**3686.977**	**3686.977**
	Version 2	–	2	1	**3688.611**	**3688.611**	**3688.611**	**3688.614**	**3688.614**	**3688.614**	**3688.614**
EMC gaskets, horizontal	for horizontal rails	84	4	1	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**
	for cover plates	84	4	1	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**

Parts for Ripac Vario

Overview of horizontal rails Page 247 **Configurator for subracks** Page 525

Ripac Vario (EMC-upgradable) 84 HP “Standard”	**Detailed drawings:** Available on the Internet.	**4 (3 + 1) U**			**7 (6 + 1) U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
225	160	2	1	**3685.793**	**3685.793**	**3685.793**	**3685.896**	**3685.896**	**3685.896**	**3685.896**
245	220	2	1	**3685.850**	**3685.850**	**3685.850**	**3685.897**	**3685.897**	**3685.897**	**3685.897**
285	220	2	1	**3684.523**	**3684.523**	**3684.523**	**3685.743**	**3685.743**	**3685.743**	**3685.743**
305	280	2	1	**3685.794**	**3685.794**	**3685.794**	–	–	–	–
345	280	2	1	**3684.524**	**3684.524**	**3684.524**	**3685.744**	**3685.744**	**3685.744**	**3685.744**
365	280	2	1	**3685.795**	**3685.795**	**3685.795**	–	–	–	–
405	280	2	1	**3684.525**	**3684.525**	**3684.525**	**3684.541**	**3684.541**	**3684.541**	**3684.541**
465	280	2	1	**3685.796**	**3685.796**	**3685.796**	–	–	–	–

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Standard, with drilled holes for handles	2	1	**3684.623**	**3684.623**	**3684.623**	**3684.625**	**3684.625**	**3684.625**	**3684.625**
Standard, without drilled holes for handles	2	1	**3684.616**	**3684.616**	**3684.616**	**3684.618**	**3684.618**	**3684.618**	**3684.618**
Recessed, without drilled holes for handles	2	1	**3684.627**	**3684.627**	**3684.627**	**3684.629**	**3684.629**	**3684.629**	**3684.629**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
A Front and rear (for subracks with rails on the rear)		84	6	1	**3684.562**	**3684.562**	–	**3684.562**	**3684.562**	–	–
			5	1	–	–	**3684.562**	–	–	–	–
			4	1	–	–	–	–	–	**3684.562**	**3684.562**
B Front, with 10 mm extension			2	1	–	–	–	–	–	**3684.567**	**3684.567**
			1	1	–	–	**3684.567**	–	–	–	–
I Threaded insert (6 x 2 mm)			6	2	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**
Rear	**C1** for backplane		2	1	**3684.572**	–	**3684.572**	**3684.572**	–	**3684.572**	**3684.572**
	C3 with Z rail for connectors		2	1	–	**3686.159**	–	–	**3686.159**	–	–
Rear, centre	**D1** for backplane		1	1	–	–	–	**3684.582**	–	–	**3684.582**
	D2 with Z rail for connectors		1	1	–	–	–	–	**3687.602**	–	–

Ripac Vario (EMC-upgradable) 84 HP "Standard"	**Detailed drawings:** Available on the Internet.	**4 (3 + 1) U**			**7 (6 + 1) U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

4 Corner trims, rear

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
For subracks with mounting flanges, standard	2	1	**3684.635**	**3684.635**	**3684.635**	**3684.637**	**3684.637**	**3684.637**	**3684.637**
For subracks with mounting flanges, recessed	4	1	**3684.635**	**3684.635**	**3684.635**	**3684.637**	**3684.637**	**3684.637**	**3684.637**

Conductive/insulating strips for rails (C1) rear and (D1) rear centre

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
G Insulating strip	21	8	8	**3685.274**	**–**	**3685.274**	**–**	**–**	**3685.274**	**–**
		16	8	**–**	**–**	**–**	**3685.274**	**–**	**–**	**3685.274**
H Conductive strip	84	2	2	**3685.273**	**–**	**3685.273**	**–**	**–**	**3685.273**	**–**
		4	2	**–**	**–**	**–**	**3685.273**	**–**	**–**	**3685.273**

5 Covers

	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP		Model No. RP	
						Slotted	**Solid**	**Slotted**	**Solid**
To cover the entire subrack	225	160	84	2	1	**3684.694**	**3684.683**	**3684.694**	**3684.683**
	245	160		2	1	**3684.695**	**3684.684**	**3684.695**	**3684.684**
	285	220		2	1	**3684.696**	**3684.685**	**3684.696**	**3684.685**
	305	220		2	1	**3685.852**	**3684.686**	**3685.852**	**3684.686**
	345	280		2	1	**3684.698**	**3684.687**	**3684.698**	**3684.687**
	365	280		2	1	**3685.853**	**3684.688**	**3685.853**	**3684.688**
	405	280		2	1	**3684.700**	**3684.689**	**3684.700**	**3684.689**
	465	280		2	1	**3684.701**	**3684.691**	**3684.701**	**3684.691**

Assembly parts

	Side panel depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Screw M4 x 12 for horizontal rails on side panels	–	2/ horizontal rail	100	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**
Mounting blocks @ 28.5 mm for cover plates (max. quantity for max. EMC protection)	225	min. 8, max. 16	10	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**
	245	min. 8, max. 20	10							
	285	min. 8, max. 24	10							
	305	min. 8, max. 28	10							
	345	min. 8, max. 32	10							
	365	min. 8, max. 36	10							
	405	min. 8, max. 40	10							
	465	min. 8, max. 48	10							
Screw M3 x 6 for mounting blocks	–	3/ mounting block	100	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**

EMC gasket (only for subracks with horizontal rails at the rear)

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
					4 (3 + 1) U			**7 (6 + 1) U**			
EMC gaskets, vertical	Version 1	–	2	1	**3686.976**	**3686.976**	**3686.976**	**3686.978**	**3686.978**	**3686.978**	**3686.978**
	Version 2	–	2	1	**3688.612**	**3688.612**	**3688.612**	**3688.615**	**3688.615**	**3688.615**	**3688.615**
EMC gaskets, horizontal	between 2 horizontal rails	84	1	1	**3685.789**	**3685.789**	**3685.789**	**3685.789**	**3685.789**	**3685.789**	**3685.789**
	for horizontal rails	84	6	1	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**
	for cover plates	84	4	1	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**

Parts for Ripac Vario

Overview of horizontal rails Page 247 **Configurator for subracks**Page 525

Ripac Vario (EMC-upgradable) 84 HP “heavy-duty”	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
185	160	2	1	**3684.511**	**3684.511**	**3684.511**	**3684.529**	**3684.529**	**3684.529**	**3684.529**
225	160	2	1	**3684.512**	**3684.512**	**3684.512**	**3684.530**	**3684.530**	**3684.530**	**3684.530**
245	220	2	1	**3684.513**	**3684.513**	**3684.513**	**3684.531**	**3684.531**	**3684.531**	**3684.531**
285	220	2	1	**3684.514**	**3684.514**	**3684.514**	**3684.532**	**3684.532**	**3684.532**	**3684.532**
305	280	2	1	**3684.515**	**3684.515**	**3684.515**	**3684.533**	**3684.533**	**3684.533**	**3684.533**
345	280	2	1	**3684.516**	**3684.516**	**3684.516**	**3684.534**	**3684.534**	**3684.534**	**3684.534**
365	280	2	1	**3684.517**	**3684.517**	**3684.517**	**3684.535**	**3684.535**	**3684.535**	**3684.535**
405	280	2	1	**3684.518**	**3684.518**	**3684.518**	**3684.536**	**3684.536**	**3684.536**	**3684.536**
465	280	2	1	**3684.520**	**3684.520**	**3684.520**	**3684.538**	**3684.538**	**3684.538**	**3684.538**
525	280	2	1	**3684.521**	**3684.521**	**3684.521**	**3684.539**	**3684.539**	**3684.539**	**3684.539**
585	280	2	1	**3684.522**	**3684.522**	**3684.522**	**3684.540**	**3684.540**	**3684.540**	**3684.540**

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Standard, with drilled holes for handles	2	1	**3684.622**	**3684.622**	**3684.622**	**3684.624**	**3684.624**	**3684.624**	**3684.624**
Standard, without drilled holes for handles	2	1	**3684.615**	**3684.615**	**3684.615**	**3684.617**	**3684.617**	**3684.617**	**3684.617**
Recessed, without drilled holes for handles	2	1	**3684.626**	**3684.626**	**3684.626**	**3684.628**	**3684.628**	**3684.628**	**3684.628**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Front	**A1**	84	4	1	**9908.721**	**9908.721**	–	**9908.721**	**9908.721**	–	–
			3	1	–	–	**9908.721**	–	–	–	–
			2	1	–	–	–	–	–	**9908.721**	**9908.721**
	B2		2	1	–	–	–	–	–	**9908.722**	**9908.722**
			1	1	–	–	**9908.722**	–	–	–	–
I Threaded insert (6 x 2 mm)			4	2	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**
Threaded insert (5 x 2 mm)			2	1	**9901.816**	–	**9901.816**	**9901.816**	–	**9901.816**	**9901.816**
Rear	**C6** for backplane		2	1	**9908.723**	–	**9908.723**	**9908.723**	–	**9908.723**	**9908.723**
	C3 with Z rail for connectors		2	1	–	**3686.159**	–	–	**3686.159**	–	–
Rear, centre	**D1** for backplane		1	1	–	–	–	**3684.582**	–	–	**3684.582**
	D2 with Z rail for connectors		1	1	–	–	–	–	**3687.602**	–	–

Ripac Vario (EMC-upgradable) 84 HP “heavy-duty”	**Detailed drawings:** Available on the Internet.	**3 U**			**6 U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

4 Corner trims, rear

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
For subracks with mounting flanges, standard	2	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**
For subracks with mounting flanges, recessed	4	1	**3685.276**	**3685.276**	**3685.276**	**3685.277**	**3685.277**	**3685.277**	**3685.277**

Conductive/insulating strips for rails (C1) rear and (D1) rear centre

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
G Insulating strip	21	8	8	**3685.274**	**–**	**3685.274**	**–**	**–**	**3685.274**	**–**
		16	8	**–**	**–**	**–**	**3685.274**	**–**	**–**	**3685.274**
H Conductive strip	84	2	2	**3685.273**	**–**	**3685.273**	**–**	**–**	**3685.273**	**–**
		4	2	**–**	**–**	**–**	**3685.273**	**–**	**–**	**3685.273**

5 Covers

	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP		Model No. RP	
						Slotted	**Solid**	**Slotted**	**Solid**
To cover the PCB space	–	160	84	2	1	**3684.681**	**3684.680**	**3684.681**	**3684.680**
	–	220		2	1	**3685.851**	**3685.813**	**3685.851**	**3685.813**
	–	280		2	1	**3685.855**	**3685.814**	**3685.855**	**3685.814**
To cover the entire subrack	185	160	84	2	1	**3684.681**	**3684.680**	**3684.681**	**3684.680**
	225	160		2	1	**3684.694**	**3684.683**	**3684.694**	**3684.683**
	245	160		2	1	**3684.695**	**3684.684**	**3684.695**	**3684.684**
	285	220		2	1	**3684.696**	**3684.685**	**3684.696**	**3684.685**
	305	220		2	1	**3685.852**	**3684.686**	**3685.852**	**3684.686**
	345	280		2	1	**3684.698**	**3684.687**	**3684.698**	**3684.687**
	365	280		2	1	**3685.853**	**3684.688**	**3685.853**	**3684.688**
	405	280		2	1	**3684.700**	**3684.689**	**3684.700**	**3684.689**
	465	280		2	1	**3684.701**	**3684.691**	**3684.701**	**3684.691**
	525	280		2	1	**3684.702**	**3684.692**	**3684.702**	**3684.692**
	585	280		2	1	**3684.703**	**3684.693**	**3684.703**	**3684.693**

Assembly parts

	Side panel depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Screw M4 x 12 for horizontal rails on side panels	–	2/ horizontal rail	100	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**
Mounting blocks @ 28.5 mm for cover plates (max. quantity for max. EMC protection)	185	min. 4, max. 8	10	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**
	225	min. 8, max. 16	10							
	245	min. 8, max. 20	10							
	285	min. 8, max. 24	10							
	305	min. 8, max. 28	10							
	345	min. 8, max. 32	10							
	365	min. 8, max. 36	10							
	405	min. 8, max. 40	10							
	465	min. 8, max. 48	10							
	525	min. 8, max. 56	10							
	585	min. 8, max. 64	10							
Screw M3 x 6 for mounting blocks	–	3/ mounting block	100	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**
Mounting kit for 482.6 mm (19″) flange, recessed	–	4	4 sets	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**

EMC gasket (only for subracks with horizontal rails at the rear)

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
					3 U			**6 U**			
EMC gaskets, vertical	Version 1	–	2	1	**3686.975**	**3686.975**	**3686.975**	**3686.977**	**3686.977**	**3686.977**	**3686.977**
	Version 2	–	2	1	**3688.611**	**3688.611**	**3688.611**	**3688.614**	**3688.614**	**3688.614**	**3688.614**
EMC gaskets, horizontal	for horizontal rails	84	4	1	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**
	for cover plates	84	4	1	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**

Parts for Ripac Vario

Overview of horizontal rails Page 247 **Configurator for subracks** Page 525

Ripac Vario (EMC-upgradable) 84 HP "heavy-duty"	**Detailed drawings:** Available on the Internet.	**4 (3 + 1) U**			**7 (6 + 1) U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

1 Side panels

Depth mm	Max. PCB depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
225	160	2	1	**3685.793**	**3685.793**	**3685.793**	**3685.896**	**3685.896**	**3685.896**	**3685.896**
245	220	2	1	**3685.850**	**3685.850**	**3685.850**	**3685.897**	**3685.897**	**3685.897**	**3685.897**
285	220	2	1	**3684.523**	**3684.523**	**3684.523**	**3685.743**	**3685.743**	**3685.743**	**3685.743**
305	280	2	1	**3685.794**	**3685.794**	**3685.794**	–	–	–	–
345	280	2	1	**3684.524**	**3684.524**	**3684.524**	**3685.744**	**3685.744**	**3685.744**	**3685.744**
365	280	2	1	**3685.795**	**3685.795**	**3685.795**	–	–	–	–
405	280	2	1	**3684.525**	**3684.525**	**3684.525**	**3684.541**	**3684.541**	**3684.541**	**3684.541**
465	280	2	1	**3685.796**	**3685.796**	**3685.796**	–	–	–	–

2 Flange 482.6 mm (19˝)

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Standard, with drilled holes for handles	2	1	**3684.623**	**3684.623**	**3684.623**	**3684.625**	**3684.625**	**3684.625**	**3684.625**
Standard, without drilled holes for handles	2	1	**3684.616**	**3684.616**	**3684.616**	**3684.618**	**3684.618**	**3684.618**	**3684.618**
Recessed, without drilled holes for handles	2	1	**3684.627**	**3684.627**	**3684.627**	**3684.629**	**3684.629**	**3684.629**	**3684.629**

3 Horizontal rails

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Front	**A1**	84	4	1	**9908.721**	**9908.721**	**9908.721**	**9908.721**	**9908.721**	–	–
			3	1	–	–	–	–	–	**9908.721**	**9908.721**
	A3[1]		1	1	**9904.745**	**9904.745**	–	**9904.745**	**9904.745**	–	–
	A4[2]		1	1	–	–	–	–	–	**3688.704**	–
	B2		1	1	–	–	–	–	–	**9908.722**	**9908.722**
	B1		1	1	–	–	**3687.724**	–	–	**3687.724**	**3687.724**
I Threaded insert (6 x 2 mm)			6	2	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**	**3650.310**
Threaded insert (5 x 2 mm)			2	1	**9901.816**	–	**9901.816**	**9901.816**	–	**9901.816**	**9901.816**
Rear	**C6** for backplane		2	1	**9908.723**	–	**9908.723**	**9908.723**	–	**9908.723**	**9908.723**
	C3 with Z rail for connectors		2	1	–	**3686.159**	–	–	**3686.159**	–	–
Rear, centre	**D1** for backplane		1	1	–	–	–	**3684.582**	–	–	**3684.582**
	D2 with Z rail for connectors		1	1	–	–	–	–	**3687.602**	–	–

[1] A3 horizontal rail is also used to divide 6 U PCB space into 2 x 3 U for VME/subrack connector.
[2] A4 horizontal rail is also used to divide 6 U PCB space into 2 x 3 U for cPCI subrack.

Ripac Vario (EMC-upgradable) 84 HP “heavy-duty”	**Detailed drawings:** Available on the Internet.	**4 (3 + 1) U**			**7 (6 + 1) U**			
		VME J1/ VME J2	Connector IEC 60 603-2	cPCI	VME J1/J2	Connector IEC 60 603-2	cPCI, VME64x with J0	VME64x without J0

4 Corner trims, rear

	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
For subracks with mounting flanges, standard	2	1	**3684.635**	**3684.635**	**3684.635**	**3684.637**	**3684.637**	**3684.637**	**3684.637**
For subracks with mounting flanges, recessed	4	1	**3684.635**	**3684.635**	**3684.635**	**3684.637**	**3684.637**	**3684.637**	**3684.637**

Conductive/insulating strips for rails (C1) rear and (D1) rear centre

	HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
G Insulating strip	21	8	8	**3685.274**	**–**	**3685.274**	**–**	**–**	**3685.274**	**–**
		16	8	**–**	**–**	**–**	**3685.274**	**–**	**–**	**3685.274**
H Conductive strip	84	2	2	**3685.273**	**–**	**3685.273**	**–**	**–**	**3685.273**	**–**
		4	2	**–**	**–**	**–**	**3685.273**	**–**	**–**	**3685.273**

5 Covers

	Side panel depth mm	Max. PCB depth mm	HP	Required quantity per subrack	Packs of	Model No. RP		Model No. RP	
						Slotted	**Solid**	**Slotted**	**Solid**
To cover the entire subrack	225	160	84	2	1	**3684.694**	**3684.683**	**3684.694**	**3684.683**
	245	160		2	1	**3684.695**	**3684.684**	**3684.695**	**3684.684**
	285	220		2	1	**3684.696**	**3684.685**	**3684.696**	**3684.685**
	305	220		2	1	**3685.852**	**3684.686**	**3685.852**	**3684.686**
	345	280		2	1	**3684.698**	**3684.687**	**3684.698**	**3684.687**
	365	280		2	1	**3685.853**	**3684.688**	**3685.853**	**3684.688**
	405	280		2	1	**3684.700**	**3684.689**	**3684.700**	**3684.689**
	465	280		2	1	**3684.701**	**3684.691**	**3684.701**	**3684.691**

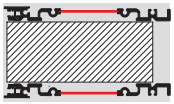
Assembly parts

	Side panel depth mm	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
Screw M4 x 12 for horizontal rails on side panels	–	4/ horizontal rail	100	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**	**3654.300**
Mounting blocks @ 28.5 mm for cover plates (max. quantity for max. EMC protection)	225	min. 8, max. 16	10	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**	**3684.234**
	245	min. 8, max. 20	10							
	285	min. 8, max. 24	10							
	305	min. 8, max. 28	10							
	345	min. 8, max. 32	10							
	365	min. 8, max. 36	10							
	405	min. 8, max. 40	10							
	465	min. 8, max. 48	10							
Screw M3 x 6 for mounting blocks	–	3/ mounting block	100	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**	**3684.233**
Mounting kit for 482.6 mm (19″) flange, recessed	–	4	4 set	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**	**3687.015**

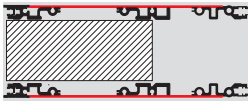
EMC gasket (only for subracks with horizontal rails at the rear)

		HP	Required quantity per subrack	Packs of	Model No. RP			Model No. RP			
					4 (3 + 1) U			**7 (6 + 1) U**			
EMC gaskets, vertical	Version 1	–	2	1	**3686.976**	**3686.976**	**3686.976**	**3686.978**	**3686.978**	**3686.978**	**3686.978**
	Version 2	–	2	1	**3688.612**	**3688.612**	**3688.612**	**3688.615**	**3688.615**	**3688.615**	**3688.615**
EMC gaskets, horizontal	for horizontal rails	84	6	1	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**	**3684.808**
	for cover plates	84	4	1	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**	**3684.807**

Version 1



Version 2



Covers

For subracks Ripac EASY

- Perforated or solid
- Optional screw-fastening to the side panels with mounting clips for additional support

Covers version 1, slide-in:
The covers simply slide into the front and rear horizontal rails.

Covers version 2, slide-in/screw-fastening, for retrospective installation/removal:
In this application, additional horizontal rails are installed at the rear for panel mounting. Covers can be fitted over the horizontal rails for back-plane/connector mounting.

The covers simply slide into the front horizontal rails and are screw-fastened to the rear horizontal rails for panel mounting.

Material:
Aluminium

Supply includes:
2 cover plates

Version 1

HP	For side panel depth mm	Slotted	Solid	Model No. RP
84	175	–	■	**3634.675**
84	175	■	–	**3634.685**
84	235	–	■	**3634.680**
84	235	■	–	**3634.690**

Version 2[1)]

HP	For side panel depth mm	Slotted	Solid	Model No. RP
84	175	–	■	**3634.625**
84	175	■	–	**3634.650**
84	235	–	■	**3634.630**
84	235	■	–	**3634.655**
84	295	–	■	**3634.635**
84	295	■	–	**3634.660**
84	355	–	■	**3634.640**
84	355	■	–	**3634.665**
84	415	–	■	**3634.645**
84	415	■	–	**3634.670**

Also required:

[1)] Assembly screws M3 x 6 with Torx drive T10, packs of 100, Model No. RP 3634.233, see page 250.

Accessories:

Mounting clips

Packs of	Model No. RP
50	**3634.450**

Assembly screws for mounting clips

Packs of	Model No. RP
100	**3634.420**

Covers

For all subracks Ripac Vario, Ripac Vario EMC.
To cover the overall subrack depth
(EMC application) or as connector protection.

- Flat design for top and bottom
- Optionally solid or slotted
- For mounting on the subrack side panel with the aid of mounting blocks.

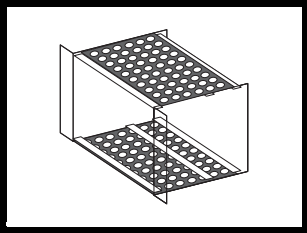
Material:
1.0 mm aluminium, unplated, hole diameter 4 mm in perforated version.

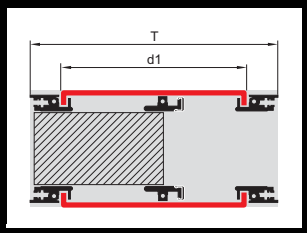
Supply includes:
1 cover plate

Note:
For EMC applications, additional mounting blocks must be fitted across the entire subrack depth.

Also required:

– Mounting blocks, see page 231.
– EMC gaskets for covers, see page 231.
– Assembly screws, Packs of 100, Model No. RP 3684.233, see page 250.





HP	For side panel depth (T) mm	Cover plate depth (d1) mm	Slotted	Solid	**Model No. RP**
42	175	142	■	–	**3684.957**
42	225	192	■	–	**3687.623**
42	245	212	■	–	**3684.958**
42	285	252	■	–	**3685.642**
84	175	142	–	■	**3684.680**
			■	–	**3684.681**
84	225	192	–	■	**3684.683**
			■	–	**3684.694**
84	235	202	–	■	**3685.813**
			■	–	**3685.851**
84	245	212	–	■	**3684.684**
			■	–	**3684.695**
84	285	252	–	■	**3684.685**
			■	–	**3684.696**
84	295	262	–	■	**3685.814**
			■	–	**3685.855**
84	305	272	–	■	**3684.686**
			■	–	**3685.852**
84	345	312	–	■	**3684.687**
			■	–	**3684.698**
84	365	332	–	■	**3684.688**
			■	–	**3685.853**
84	405	372	–	■	**3684.689**
			■	–	**3684.700**
84	465	432	–	■	**3684.691**
			■	–	**3684.701**
84	525	492	–	■	**3684.692**
			■	–	**3684.702**
84	585	552	–	■	**3684.693**
			■	–	**3684.703**

Components for EMC installation

EMC gaskets, vertical

To ensure EMC protection between the subrack side panel and the front/rear panels. There are two versions available.

Suitable for mounting on:
- 482.6 mm (19″) flanges for subracks
- Corner trims, rear
- EMC contact strip
- U-channel front panels
- Trim panels for Ripac Vario-Module
- Flanges for Ripac Vario-Module

Material:
Stainless steel

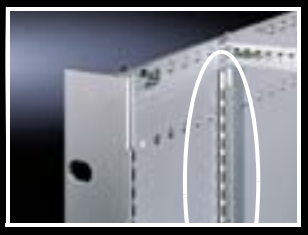
A Version 1: segmented

U	Packs of	Model No. RP
1	1	**3686.973**
3	1	**3686.975**
4	1	**3686.976**
6	1	**3686.977**
7	1	**3686.978**

B Version 2: one-piece

U	Packs of	Model No. RP
3	1	**3688.611**
4	1	**3688.612**
6	1	**3688.614**
7	1	**3688.615**

EMC



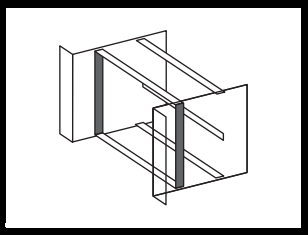
EMC contact strip

To ensure EMC protection when horizontal rails are set-back.
Integral channel to accommodate EMC gaskets.

Material:
Extruded aluminium section

Surface finish:
Clear-chromated

Note:
2 sections are required for each subrack.



U	Packs of	Model No. RP
3	1	**3684.643**
6	1	**3684.644**

EMC

! Also required:

- EMC gaskets, vertical, see page 230.
- Assembly screws M3 x 6, Packs of 100, Model No. RP 3684.233, see page 250.
- Mounting kit for gland plates, Model No. RP 3687.015, see page 219.

EMC gaskets, horizontal (K)

For horizontal EMC protection. For snap-fastening onto the front horizontal rails.

Material:
Stainless steel

Usable width (HP)	Packs of	Model No. RP
For top/bottom horizontal rail		
40	1	**3684.974**
84	1	**3684.808**
For sub-division of 6 U into 2 x 3 U, between 2 horizontal rails		
84	1	**3685.789**

EMC

Components for EMC installation/assembly kits

EMC gaskets

for covers
For EMC shielding between the horizontal rails and covers.

Material:
Stainless steel

HP	Packs of	Model No. RP
84	1	**3684.807**

EMC

Mounting blocks

For mounting the covers on the side panel of the subrack.

Material:
Die-cast

Surface finish:
Nickel-plated

Note:
For EMC applications, mounting blocks must be fitted across the entire subrack depth. The table here shows the number of mounting blocks required to install 1 cover plate with EMC shielding.

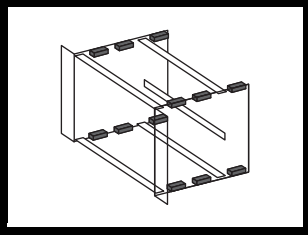
	Packs of	Model No. RP
Mounting blocks 28.5 mm long	10	**3684.234**

Also required:

Assembly screws M3 x 6, Packs of 100, Model No. RP 3684.233, see page 250.

Number of mounting blocks for max. EMC protection	Multi-level screening plate depth mm
4	142
8	192
10	212
12	252
14	272
16	312
18	332
20	372
24	432
28	492
32	552

EMC



Vertical divider kit

For the combined installation of single and double Euroboards in 6 U and 9 U subracks.

Material:
Aluminium

Surface finish:
Clear-chromated

Supply includes:
- 2 horizontal rails, front
- 1 adaptor rail
- 2 threaded inserts
- 1 vertical support (from 12 HP)
- Assembly parts

HP	HP	Model No. RP
1 (2 x 3 U)	2 (6 U)	
14	68	**3684.220**
21	61	**3684.221**
28	54	**3684.222**
42	40	**3684.224**

Accessories:

- Front panel, see page 239.
- Front panel 6 U x 2 HP to conceal the vertical support, see page 239.

Mounting kits

Horizontal mounting kit

For the horizontal installation of 6 U/9 U PCBs in 3 U/4 U subracks.

1 Horizontal installation space:
3 U subrack: 20 HP (5 slots)
4 U Subrack: 28 HP (7 slots)

2 Vertical installation space:
(when installing double Euroboards)
31 HP (without trim frame)
28 HP (with trim frame)

Material:
Aluminium

Surface finish:
Clear-chromated

Supply includes:
– 2 horizontal rails, front
– 2 horizontal rails, rear
– 1 horizontal rail, rear, centre (only for 3688.027)
– 2 threaded inserts
– 2 or 4 insulating strips
– 4 connection parts
– Assembly parts

For backplane assembly with standard horizontal rail, front

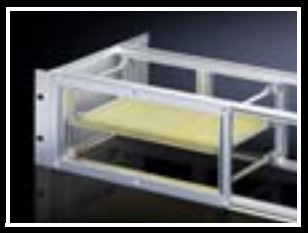
U Horizontal	Model No. RP	
	Application	for 3 U subrack
6	for VME, connector	**3684.206**

For backplane assembly, front horizontal rail with 10 mm extension

U Horizontal	Model No. RP	
	Application	for 3 U subrack
6	for VME 64x without P0	**3684.210**
6	for cPCI, VME 64x with P0	**3688.027**

Accessories:

Trim frame, see page 232.



Trim frame

for horizontal mounting kit
To conceal the front sections of the horizontal mounting kit.

Material:
Aluminium

Surface finish:
Anodised

U Horizontal	HP	Model No. RP
		for 3 U subrack
6	56	**3685.783**

Also required:

– Collar screws, packs of 100, Model No. RP 3685.097, see page 250.
– Plastic collars, packs of 100, Model No. RP 3687.021, see page 250.

Trim frame, vented

for horizontal mounting kit
To conceal the front sections of the horizontal mounting kit.

Material:
Aluminium

Surface finish:
– Anodised
– Clear-chromated (EMC version)

Supply includes:
2 EMC gaskets, horizontal, 20 HP (with EMC version)

U Horizontal	HP	Model No. RP
		for 3 U subrack
6	63	**3685.787**

Also required:

– Collar screws, packs of 100, Model No. RP 3685.097, see page 250.
– Plastic collars, packs of 100, Model No. RP 3687.021, see page 250.

EMC version

U Horizontal	HP	Model No. RP
		for 3 U subrack
6	63	**3688.041**

EMC gasket, vertical, 3 U, see page 230.

EMC

Also required:

– Slotted centering screws, Packs of 100, Model No. RP 3687.050, see page 250.
– Posidrive centering screws, Packs of 100, Model No. RP 3687.051, see page 250.

Handles

To fit all subracks and component shelves
For fitting on the subrack flange with handle holes and on all component shelves.

Material:
Die-cast zinc

Surface finish:
Spray-finished, silver-grey

Supply includes:
Assembly parts.

For	Packs of	Model No. RP
Subracks 3 U and 4 U	2	**3636.010**
Component shelves		
Subracks 6 U and 7 U	2	**3666.010**

Telescopic slides

Facilitate optimum accessibility to the units, even when built-in.
For up to a maximum enclosure width of 426 mm.

Load capacity:
30 kg

Material:
Sheet steel

Supply includes:
1 set =
2 telescopic slides,
divider kit,
assembly parts.

For enclosure depth mm	Maximum extension mm	Model No. RP
600	511,2	**3659.180**
800	596,4	**3659.190**

Note:
May only be fitted in conjunction with flat 482.6 mm (19˝) sections!

Threaded insert (I)

With M2.5 threaded holes on an HP pitch pattern.
For sliding into the horizontal rail.
There are two threaded insert versions, which are distinguished by their height.

Material:
Steel

Surface finish:
Zinc-plated

Usable width (HP)	Packs of	Model No. RP	
		6 x 2 mm	5 x 2 mm
		for horizontal rails	
		Type A, A1, A3, A4, B, B1, B2, C3	Type A2, C5, C6, C7, D4
42	1	**3684.608**	–
84	2	**3650.310**	–
84	1	–	**9901.816**

Door cut-out trim

for subracks

Material:
Aluminium

Width	Packs of	Model No. UN
482.6 mm (19˝)	2	**3634.070**

General

Adaptor rail, rear, centre (E)

When subdividing e.g. 6 U into 2 x 3 U, the adaptor rail accommodates the guide rails when fastened to the centre horizontal rail.

- HP pitch pattern of holes for the precise installation of guide rails
- M4 and M2.5 thread on the end face
- Straight-through core hole

Material:
Extruded aluminium section

Surface finish:
Clear-chromated

Usable width (HP)	Packs of	Model No. RP
42	1	**3684.590**
84	1	**3684.591**

Also required:

Assembly screws M4 x 12, Packs of 100, Model No. RP 3654.300, see page 250.

Detailed drawings:
Available on the Internet.

Z rail for connector IEC 60 603-2 (F)

For converting a subrack for backplane with connectors.

Material:
Extruded aluminium section

Surface finish:
Clear-chromated

Note:
The Z rail for connectors is fitted without insulating strips or conductive strips.
Mounting, see page 247 – 249.

Usable width (HP)	Packs of	Model No. RP
20	1	**3684.599**
42	1	**3684.600**
84	2	**3685.271**

Also required:

Assembly screws M2.5 x 6, Packs of 100, Model No. RP 3654.340, see page 250.

Detailed drawings:
Available on the Internet.

Identification strip (J)

To identify the slots on the subrack, self-adhesive. The following versions are available.

4 mm wide:
- for horizontal rails
- for rear horizontal rails

2 mm wide:
- for front horizontal rails (channel on front face)

For horizontal rail	Width mm	Label	Packs of	Model No. RP
At the front	4	1 ... 84	1	**3687.575**
Rear	4	1 ... 168	1	**3687.577**
At the front	4	84 ... 1	1	**3687.574**
At the front	2	1 ... 84	1	**3687.576**

Plastic guide rails

For 160, 220 and 280 mm PCBs up to 2 mm nominal thickness.

2 versions are available:
- Snap-in fastening and screw-fastening
- Snap-in fastening

Material:
Polycarbonate, base material to UL 94-V0

Snap-in fastening/screw-fastening[1)]

PCB depth mm	Packs of	Model No. RP
160	10	**3688.048**
220	10	**3688.049**
280	10	**3688.052**

Snap-in fastening

PCB depth mm	Packs of	Model No. RP
160	10	**3688.045**
220	10	**3688.046**
280	10	**3688.047**

Also required:

[1)] Assembly screws,Packs of 100,
Model No. RP 3654.360, see page 250.

Plastic guide rails

for contact spring fitting

For 160, 220 and 280 mm PCBs up to 2 mm nominal thickness. By installing contact springs, an electrical connection can be made between the PCB and the assembly.

Material:
Polycarbonate, base material to UL 94-V0

PCB depth mm	Packs of	Model No. RP
160	10	**3688.053**
220	10	**3688.054**
280	10	**3688.056**

Accessories:

Contact springs, see page 235.

Contact springs

For electrical connection between the PCB and the subrack, or to discharge static charges from the PCB.
Suitable for installation in guide rails for contact spring fitting and end pieces for guide rails.

Packs of	Model No. RP
10	**3687.726**

Guide rails

Guide rails, aluminium

For high loads. Suitable for nominal PCB thicknesses from 1.6 mm. A distinction is made between guide rails for and without end pieces. The guide rails without end pieces are screw-fastened directly into the horizontal rail.

Material:
Aluminium

1 Without end pieces[1)]

PCB depth mm	Packs of	Model No. RP
160	10	**3688.064**
220	10	**3688.065**
280	10	**3688.066**

2 For end pieces

PCB depth mm	Packs of	Model No. RP
160	10	**3688.057**
220	10	**3688.058**
280	10	**3688.059**

Also required:

- [1)] Screw M2.5 x 6, Packs of 100, Model No. RP 3654.340, see page 250.
- [1)] Nut M2.5, Packs of 100, Model No. RP 3654.370, see page 250.
- [1)] Retaining cage M2.5, Packs of 100, Model No. RP 9901.417, see page 251.

End pieces

for guide rails, aluminium
To discharge static charges, contact springs RP 3687.726 may be used.

Material:
Polycarbonate, base material to UL 94-V1

	Packs of	Model No. RP
End piece front and rear	10 pairs	**3688.028**

Accessories:

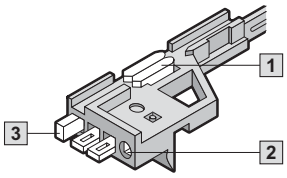
Contact springs, see page 235.

Keyable guide rails, plastic

Guide rails 4 HP, keyable, to IEEE 1101.10.

- For 1.6 – 2.0 mm nominal thickness
- Chambers for the installation of keys
- Option of installing ESD contacts to discharge static charges
- Narrow design for maximum air flow

1 ESD contact for guide rail
2 ESD contact for front panel
3 Keys



For PCB depth mm	Packs of	Model No. RP
160	10	**3685.257**
220	10	**3685.258**
280	10	**3685.259**

Material:
Polycarbonate, base material to UL 94-V0

Colour:
Grey

Note:
Only for use in conjunction with type IV, IVs, VII injector/extractor handles.

Accessories:

- Keys, see page 238
- ESD contact, see page 237
- Extractor handles type IV, IVs, VII, see page 241

Keyable guide rails

with 1/2 HP offset

Guide rails with 1/2 HP offset for use in telecom applications. This allows PCBs to be populated on both sides. Green guide rails with offset are prescribed in the CompactPCI standard (PICMG 2.11) for the installation of power supply units.

- For 1.6 – 2.0 mm PCB thickness
- 4 HP x 160/220 mm
- Narrow design for maximum air flow
- Chambers for the installation of keys
- Option of installing ESD contacts to discharge static charges

Material:
Polycarbonate, base material to UL 94-V0

Colour:
Grey

For PCB depth mm	Packs of	Model No. RP
160	10	**3688.062**
220	10	**3688.060**

Accessories:

– Keys, see page 238
– ESD contact, see page 237
– Extractor handles type IVs, VII with 1/2 HP offset, see page 241.

Note:
Only suitable for use in conjunction with extractor handles typeIVs, VII with 1/2 HP offset.

Guide rails

for box type plug-in units

For PCB depth 1.6 mm.
For insertion into cover plates with vent slots (from 12 HP), see page 246.

Material:
Noryl

For PCB depth mm	Packs of	Model No. RP
160	10	**3606.140**
220	10	**3606.200**

Air block panel

for unused slots

To conceal unused slots and prevent unwanted airflow. The air block panel simply snaps into position on the guide rails.

Material:
Polycarbonate, self-extinguishing to UL 94-V0

Colour:
Blue

For keyable guide rails	Packs of	Model No. RP
160 mm	1	**3687.924**

Note:
Not suitable for use in conjunction with guide rails with 1/2 HP offset.

ESD contact

for installation in keyable guide rails

To discharge static charges.

1 **ESD contact for guide rail**
For permanent direct discharge from the PCB.

2 **ESD contact for front panel**
To discharge static charges in conjunction with the ESD pin. For insertion into the end piece of the guide rail.

3 **ESD pin**

4 **Keys**

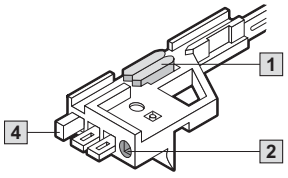
Material:

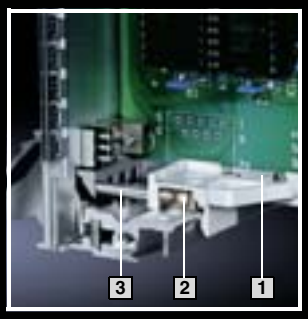
1 Stainless steel

2 Tin bronze, tin-plated

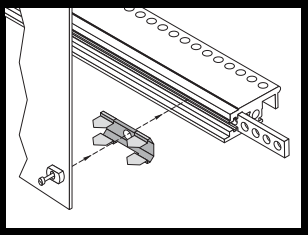
ESD contact for	Packs of	Model No. RP
Guide rail	50	**3684.204**
Front panel	50	**3684.205**

Note:
Only for use in conjunction with extractor handle with ESD pin (type IV, IVs, VII), see page 241.





Guide rails



Earthing inserts for front panels

Allows easy connection of the front panel to the mounting angle.

Material:
Spring steel

Surface finish:
Clear-chromated

Packs of	Model No. RP
50	**3606.010**

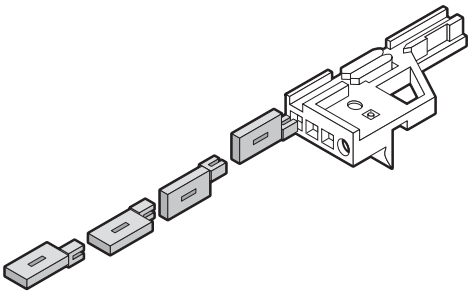
Keys

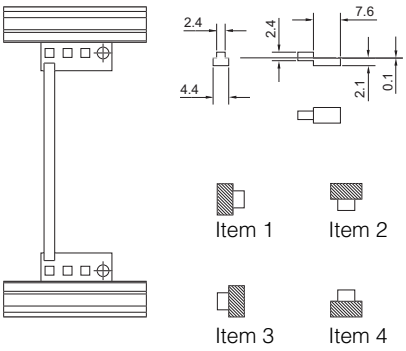
Keys are used for coding of board-type plug-in units. They prevent the use of assemblies in incorrect slots. The keys are inserted into the chambers of the keyable guide rails and the injector/extractor handles, types IV, IVs and VII (4 positions are possible). This produces 64 keying combinations per guide rail.
When keying the top and bottom guide rail, 4096 potential combinations are possible.

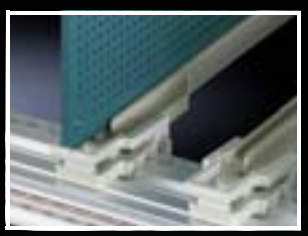
Standards:
IEEE 1101.10, IEC 60 297-5-104

Material:
Plastic, PBTP, basic material to UL 94-V0

Colour	Packs of	Model No. RP
Grey	100	**3684.325**
Red	100	**3684.326**







PCB ejector/retainer

The two-piece PCB ejector is used for securing and extracting PCBs without front panels. The base section may also be used separately for board retention only.

Material:
Polycarbonate, base material to UL 94-V0

	Packs of	Model No. RP
PCB ejector/retainer	10 pairs	**3687.014**

Front panels as filler panels

Detailed drawings and assembly:
Available on the Internet.

Front panels (unhinged) as filler panels

	Material	Surface finish	Ventilation		Design		HP	Thickness/ nominal width mm	Packs of	Model No. RP				
			with	without	EMC	Non-EMC				1 U	3 U	4 U	6 U	7 U
Flat front panel	Alu-minium	Natural-ano-dised	–	■	–	■	2	2.5/9.8	1	–	**3684.889**	–	**3684.911**	–
			–	■	–	■	3	2.5/14.9	1	–	**3684.890**	–	**3684.912**	–
			–	■	–	■	4	2.5/20.0	1	–	**3684.891**	–	**3684.913**	–
			–	■	–	■	5	2.5/25.1	1	–	**3684.892**	–	**3684.914**	–
			–	■	–	■	6	2.5/30.2	1	–	**3684.893**	–	–	–
			–	■	–	■	7	2.5/35.3	1	–	**3684.894**	–	–	–
			–	■	–	■	8	2.5/40.3	1	–	**3684.895**	–	**3684.917**	–
			–	■	–	■	10	2.5/50.5	1	–	**3684.896**	–	**3684.918**	–
			–	■	–	■	12	2.5/60.7	1	–	**3684.897**	–	**3684.919**	–
			–	■	–	■	14	2.5/70.8	1	–	**3684.898**	–	**3684.920**	–
			–	■	–	■	20	2.5/101.3	1	–	**3684.899**	–	–	–
			–	■	–	■	21	2.5/106.4	1	–	**3684.900**	–	–	–
			–	■	–	■	28	2.5/141.9	1	–	**3684.902**	–	**3684.924**	–
			–	■	–	■	40	2.5/202.9	1	–	**3684.903**	–	**3684.976**	–
			–	■	–	■	42	2.5/213.0	1	–	**3684.904**	**3684.908**	**3684.925**	–
			–	■	–	■	84	2.5/426.4	1	**3684.886**	**3684.907**	**3684.910**	**3684.927**	**3684.930**
			–	■	–	■	85	2.5/431.5	1	–	**3684.744**	–	**3684.746**	–
			■	–	–	■	84	2.5/426.4	1	**3684.812**	**3684.814**	–	–	–
U-channel front panel	Alu-minium	Clear-chro-mated	–	■	■	–	2	2.5/9.8	1	–	**3684.755**	–	**3684.781**	–
			–	■	■	–	3	2.5/14.9	1	–	**3687.989**	–	–	–
			–	■	■	–	4	2.5/20.0	1	–	**3684.756**	–	**3684.782**	–
			–	■	■	–	5	2.5/25.1	1	–	**3684.757**	–	**3684.783**	–
			–	■	■	–	6	2.5/30.2	1	–	**3684.758**	–	**3684.784**	–
			–	■	■	–	7	2.5/35.3	1	–	**3684.759**	–	–	–
			–	■	■	–	8	2.5/40.3	1	–	**3684.760**	–	**3684.786**	–
			–	■	■	–	10	2.5/50.5	1	–	**3684.761**	–	**3684.787**	–
			–	■	■	–	12	2.5/60.7	1	–	**3684.762**	–	**3684.788**	–
			–	■	■	–	14	2.5/70.8	1	–	**3684.763**	–	**3684.789**	–
			–	■	■	–	20	2.5/101.3	1	–	**3688.007**	–	**3688.016**	–
			–	■	■	–	21	2.5/106.4	1	–	**3688.008**	–	–	–
			–	■	■	–	28	2.5/141.9	1	–	**3688.009**	–	**3688.017**	–
			–	■	■	–	40	2.5/202.9	1	–	**3688.010**	–	–	–
			–	■	■	–	42	2.5/213.0	1	–	**3688.011**	**3688.014**	**3688.018**	**3688.025**
			–	■	■	–	60	2.5/304.5	1	–	**3688.012**	–	**3688.019**	–
			–	■	■	–	84	2.5/426.4	1	**3688.006**	**3688.013**	**3688.015**	**3688.022**	**3688.026**
			■	–	■	–	84	2.5/426.4	1	**3688.029**	**3688.030**	–	–	–

Front panels (hinged)

	Material	Surface finish	Ventilation		Design		HP	Thickness/ nominal width mm	Packs of	Model No. RP				
			with	without	EMC	Non-EMC				1 U	3 U	4 U	6 U	7 U
Flat front panel, vertically hinged	Alu-minium	Natural-ano-dised	–	■	–	■	84	2.5/425.8	1	–	**3652.610**	–	**3652.630**	–
Flat front panel, horizontally hinged	Alu-minium	Natural-ano-dised	–	■	–	■	84	2.5/426.4	1	–	**3652.510**	–	**3652.530**	–
			–	■	–	■	85	2.5/431.5	1	–	**3684.291**	–	**3684.293**	–
U-shaped front panel, horizontally hinged	Alu-minium	Clear-chro-mated	–	■	■	–	84	2.5/426.4	1	–	**3688.031**	**3688.032**	**3688.038**	**3688.039**

Accessories for subracks

Front panels as filler panels

Detailed drawings and assembly:
Available on the Internet.

Assembly parts

	Design of front panel		Width of the front panel	Required quantity per front panel	Packs of	Model No. RP				
	EMC	Non-EMC				1 U	3 U	4 U	6 U	7 U
Slotted collar screw M2.5 x 11	–	■	2, 3, 4, 5, 6, 7, 8 HP	2	100	**3685.097**	**3685.097**	**3685.097**	**3685.097**	**3685.097**
	–	■	10, 12, 14, 20, 28, 42 HP	4	100					
	–	■	84, 85 HP	6	100					
Plastic collar, material PA-VO	–	■	2, 3, 4, 5, 6, 7, 8 HP	2	100	**3687.021**	**3687.021**	**3687.021**	**3687.021**	**3687.021**
	–	■	10, 12, 14, 20, 28, 42 HP	4	100					
	–	■	84, 85 HP	6	100					
Slotted centering screw M2.5 x 11	■	–	2, 3, 4, 5, 6, 7 HP	2	100	**3687.050**	**3687.050**	**3687.050**	**3687.050**	**3687.050**
	■	–	8, 10, 12, 14, 20, 21 HP	4	100					
	■	–	28, 40, 42 HP	6	100					
	■	–	84 HP	10	100					
Posidrive centering screw M2.5 x 11	■	–	2, 3, 4, 5, 6, 7 HP	2	100	**3687.051**	**3687.051**	**3687.051**	**3687.051**	**3687.051**
	■	–	8, 10, 12, 14, 20, 21 HP	4	100					
	■	–	28, 40, 42 HP	6	100					
	■	–	84 HP	10	100					

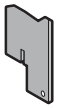
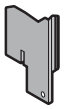
Vertical EMC gaskets

	Design of front panel		Subrack type	Required quantity per front panel	Packs of	Model No. RP				
	EMC	Non-EMC				1 U	3 U	4 U	6 U	7 U
Version 1	■	–	Standard	1	1	**3686.973**	**3686.975**	**3686.976**	**3686.977**	**3686.978**
Version 2	■	–	Heavy-duty	1	1	**–**	**3688.611**	**3688.612**	**3688.614**	**3688.615**

Front panels for type I, II, IV, IVs and VII handles

Detailed drawings and assembly:
Available on the Internet.

Front panels for type I, II, IV, IVs and VII handles

	Material	Surface finish	Design		HP	Thickness/ nominal width mm	Packs of	Model No. RP	
			EMC	Non-EMC				3 U	6 U
 Flat front panel	Aluminium	Natural-anodised	–	■	4	2.5/20.0	1	**3685.500**	**3685.508**
			–	■	5	2.5/25.1	1	**3685.501**	**–**
			–	■	7	2.5/35.3	1	**3685.503**	**–**
			–	■	8	2.5/40.3	1	**–**	**3685.512**
 U-channel front panel	Aluminium	Clear-chromated	■	–	4	2.5/20.0	1	**3685.524**	**3685.532**
			■	–	5	2.5/25.1	1	**3685.525**	**–**
			■	–	6	2.5/30.2	1	**3685.526**	**–**
			■	–	7	2.5/35.3	1	**3685.527**	**–**
			■	–	8	2.5/40.3	1	**–**	**3685.536**
			■	–	12	2.5/60.7	1	**3685.530**	**3685.538**

Type I, II, IV, IVs and VII handles

	Subrack type	Colour	Design		Internal mounting		HP	Required quantity per front panel	Packs of	Model No. RP	
			Offset	ESD pin	Bottom	Top				3 U	6 U
Type I extractor handle, lever 15 mm long	VME, connector	Grey	–	–	■	–	4	1	1	**3685.587**	**–**
					■	■		2	1	**–**	**3685.587**
		Black			■	–		1	1	**3685.589**	**–**
					■	■		2	1	**–**	**3685.589**
Type II extractor handles, lever 30 mm long	VME, connector	Grey	–	–	■	–	4	1	1	**3685.588**	**–**
					■	■		2	1	**–**	**3685.588**
		Black			■	–		1	1	**3685.590**	**–**
					■	■		2	1	**–**	**3685.590**
Type IV injector/extractor handle, lever 38 mm long	VME64x, cPCI	Grey	–	■	■	–	4	1	1	**3686.900**	**3686.900**
					–	■		1	1	**–**	**3686.901**
		Black			■	–		1	1	**3686.902**	**3686.902**
					–	■		1	1	**–**	**3686.903**
Type IVs injector/extractor handle, lever 38 mm long (with red push-button)	VME64x, cPCI	Black	–	■	■	–	4	1	1	**3688.771**	**3688.771**
					–	■		1	1	**–**	**3688.770**
		Black	1/2 HP	■	■	–		1	1	**3688.773**	**3688.773**
					–	■		1	1	**–**	**3688.772**
Injector/extractor handle type VII, plastic (Telecom), lever 51 mm high	VME64x, cPCI	Black	–	■	■	–	4	1	1	**3688.785**	**3688.785**
					–	■		1	1	**–**	**3688.784**
		Black	1/2 HP	■	■	–		1	1	**3688.781**	**3688.781**
					–	■		1	1	**–**	**3688.780**
Injector/extractor handle type VII, metal (Telecom), lever 61.3 mm high	VME64x, cPCI	Clear	–	■	■	–	4	1	1	**3688.791**	**3688.791**
					–	■		1	1	**–**	**3688.790**

Assembly parts

	Design of front panel		Width of the front panel	Required quantity per front panel	Packs of	Model No. RP	
	EMC	Non-EMC				3 U	6 U
PCB holder LP die-cast DIN with thread	■	■	4, 5, 6, 7, 8, 10, 12 HP	1	10	**3685.198**	**–**
Oval countersunk-screw M2.5 x 8	■	■	4, 5, 6, 7, 8, 10, 12 HP	1	100	**3685.282**	**–**
Slotted collar screw M2.5 x 11	–	■	4, 5, 6, 7 HP	1	100	**3685.097**	**–**
			8, 10, 12 HP	3		**3685.097**	**–**
				2		**–**	**3685.097**
Plastic collar, material PA-VO	–	■	4, 5, 6, 7 HP	1	100	**3687.021**	**–**
			8, 10, 12 HP	3		**3687.021**	**–**
				2		**–**	**3687.021**
Slotted centering screw M2.5 x 11	■	–	4, 5, 6, 7 HP	1	100	**3687.050**	**–**
			8, 10, 12 HP	3		**3687.050**	**–**
				2		**–**	**3687.050**
Posidrive centering screw M2.5 x 11	■	–	4, 5, 6, 7 HP	1	100	**3687.051**	**–**
			8, 10, 12 HP	3		**3687.051**	**–**
				2		**–**	**3687.051**

Accessories for subracks

Front panels for type I, II, IV, IVs and VII handles

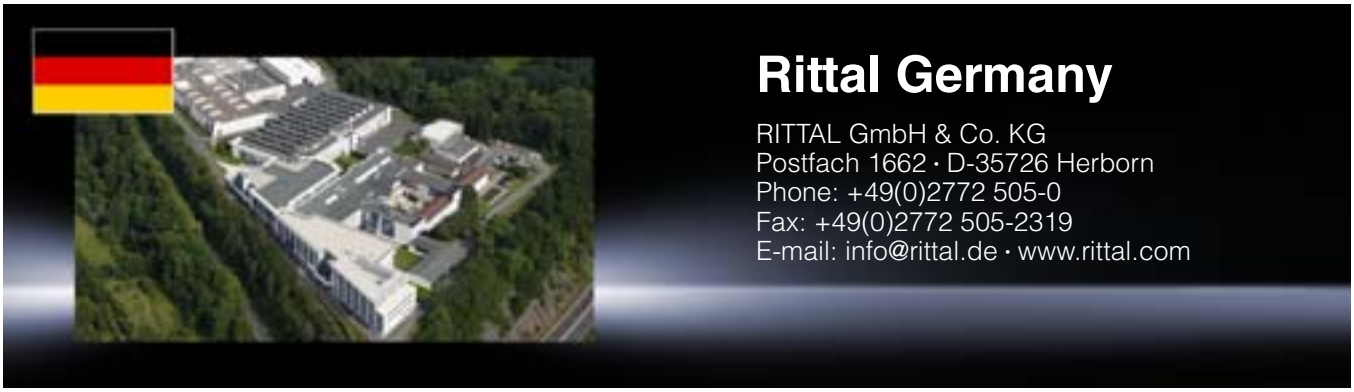
Detailed drawings and assembly:
Available on the Internet.

Vertical EMC gaskets

	Design of front panel		Subrack type	Required quantity per front panel	Packs of	Model No. RP	
	EMC	Non-EMC				3 U	6 U
Version 1	■	–	Standard	1	1	**3686.975**	**3686.977**
Version 2	■	–	Heavy-duty	1	1	**3688.611**	**3688.614**

Microswitch and mounting clip

	Description	For handle type	Required quantity per front panel	Packs of	Model No. RP	
					3 U	6 U
Micro-switch without cable, without connector	Switching load: 50 mA, 30 V DC Service life/switching cycles: – For nominal load: 30.000 – Mechanical: 50.000	IV, IVs, VII	1	10	**3684.410**	**3684.410**
Micro-switch mounting clip	Plastic		1	10	**3684.411**	**3684.411**
Micro-switch with cable and connector, fully assembled including mounting clip	– Connector: Type Molex 51021-0300 – 3 cables 25 mm x #32 AWG – Mounting clip: Plastic		1	1 set	**3686.536**	**3686.536**



Front panels and type V, VI handles

Detailed drawings and assembly:
Available on the Internet.

Front panels for type V, VI handles

	Material	Surface finish	Design		HP	Thickness/ nominal width mm	Packs of	Model No. RP	
			EMC	Non-EMC				3 U	6 U
Flat front panel	Aluminium	Natural-anodised	–	■	4	2.5/20.0	1	**3685.570**	**3685.579**
			–	■	5	2.5/25.1	1	**3685.571**	**–**
			–	■	6	2.5/30.2	1	**3685.572**	**3685.581**
			–	■	7	2.5/35.2	1	**3685.573**	**–**
			–	■	8	2.5/40.3	1	**3685.574**	**3685.583**
			–	■	10	2.5/50.5	1	**3685.575**	**3685.584**
			–	■	12	2.5/60.6	1	**3685.576**	**–**
			–	■	14	2.5/70.8	1	**3685.577**	**3685.586**
U-channel front panel	Aluminium	Clear-chromated	■	–	4	2.5/20.0	1	**–**	**3687.758**
			■	–	8	2.5/40.3	1	**–**	**3687.760**
			■	–	10	2.5/50.5	1	**–**	**3687.756**

Type V, VI handles

	Subrack type	Material/surface finish	Colour	Internal mounting		HP	Required quantity per front panel	Packs of	Model No. RP	
				Bottom	Top				3 U	6 U
Handle type V	VME, connector	Plastic	Grey	■	–	4	1	1	**3685.491**	**–**
				■	■		2	1	**–**	**3685.491**
				■	–	8	1	1	**3685.492**	**–**
				■	■		2	1	**–**	**3685.492**
				■	–	12	1	1	**3685.493**	**–**
				■	■		2	1	**–**	**3685.493**
			Black	■	–	4	1	1	**3685.496**	**–**
				■	■		2	1	**–**	**3685.496**
				■	–	8	1	1	**3685.497**	**–**
				■	■		2	1	**–**	**3685.497**
				■	–	12	1	1	**3685.498**	**–**
				■	■		2	1	**–**	**3685.498**
Handle type V, aluminium	VME, connector	Aluminium, anodised	Clear	■	–	4	1	1	**3685.596**	**–**
				■	■		2	1	**–**	**3685.596**
				■	–	5	1	1	**3685.597**	**–**
				■	■		2	1	**–**	**3685.597**
				■	–	6	1	1	**3685.598**	**–**
				■	■		2	1	**–**	**3685.598**
				■	–	7	1	1	**3685.599**	**–**
				■	■		2	1	**–**	**3685.599**
				■	–	8	1	1	**3685.600**	**–**
				■	■		2	1	**–**	**3685.600**
				■	–	10	1	1	**3685.601**	**–**
				■	■		2	1	**–**	**3685.601**
				■	–	12	1	1	**3685.602**	**–**
				■	■		2	1	**–**	**3685.602**
				■	–	14	1	1	**3685.603**	**–**
				■	■		2	1	**–**	**3685.603**
Handle type VI, aluminium	VME, connector	Aluminium, anodised	Clear	■	–	4	1	1	**3685.606**	**–**
				■	■		2	1	**–**	**3685.606**
				■	–	5	1	1	**3685.607**	**–**
				■	■		2	1	**–**	**3685.607**
				■	–	6	1	1	**3685.608**	**–**
				■	■		2	1	**–**	**3685.608**
				■	–	7	1	1	**3685.609**	**–**
				■	■		2	1	**–**	**3685.609**
				■	–	8	1	1	**3685.610**	**–**
				■	■		2	1	**–**	**3685.610**
				■	–	10	1	1	**3685.611**	**–**
				■	■		2	1	**–**	**3685.611**
				■	–	12	1	1	**3685.612**	**–**
				■	■		2	1	**–**	**3685.612**
				■	–	14	1	1	**3685.613**	**–**
				■	■		2	1	**–**	**3685.613**

Accessories for subracks

Front panels and type V, VI handles

Detailed drawings and assembly:
Available on the Internet.

Assembly parts

	Design of front panel		Width of the front panel	Required quantity per front panel	Packs of	Model No. RP	
	EMC	Non-EMC				3 U	6 U
PCB holder on front panel	■	■	4, 5, 6, 7, 8, 10, 12, 14 HP	1	10	**3606.330**	–
	■	■		2	10	–	**3606.330**
Mounting kit for type V handles, plastic	■	■	4, 8, 12 HP	1	1	**3687.519**	–
	■	■		2	1	–	**3687.519**
Mounting kit for type V, VI handles, aluminium	■	■	4, 5 HP	1	1	**3687.146**	–
	■	■		2	1	–	**3687.146**
	■	■	6, 7, 8, 10, 12, 14 HP	2	1	**3687.146**	–
	■	■		4	1	–	**3687.146**
Slotted collar screw M2.5 x 11	–	■	4, 5, 6, 7, 8 HP	2	100	**3685.097**	**3685.097**
	–	■	10, 12, 14 HP	4	100	**3685.097**	**3685.097**
Plastic collar, material PA-VO	–	■	4, 5, 6, 7, 8 HP	2	100	**3687.021**	**3687.021**
	–	■	10, 12, 14 HP	4	100	**3687.021**	**3687.021**
Slotted centering screw M2.5 x 11	■	–	4 HP	2	100	**3687.050**	**3687.050**
	■	–	8, 10 HP	4	100	**3687.050**	**3687.050**
Posidrive centering screw M2.5 x 11	■	–	4 HP	2	100	**3687.051**	**3687.051**
	■	–	8, 10 HP	4	100	**3687.051**	**3687.051**

Identification strips for type V handles, aluminium

	Handle	Material	Thick-ness mm	Surface finish	HP	Quantity required per handle, type V, aluminium	Packs of	Model No. RP	
								3 U	6 U
Identification strips for type V handles, aluminium	Type V	Aluminium	0,7	Natural-anodised	4	1	1	**3685.747**	**3685.747**
					5	1	1	**3685.748**	**3685.748**
					6	1	1	**3685.749**	**3685.749**
					7	1	1	**3685.750**	**3685.750**
					8	1	1	**3685.751**	**3685.751**
					10	1	1	**3685.752**	**3685.752**
					12	1	1	**3685.753**	**3685.753**
					14	1	1	**3685.754**	**3685.754**

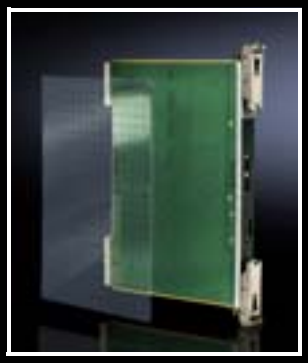
Vertical EMC gaskets

	Design of front panel		Subrack type	Required quantity per front panel	Packs of	Model No. RP	
	EMC	Non-EMC				3 U	6 U
Version 1	■	–	Standard	1	1	**3686.975**	**3686.977**
Version 2	■	–	Heavy-duty	1	1	**3688.611**	**3688.614**

Plastic covers

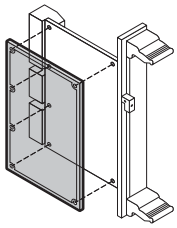
for PCBs
For mechanical protection of the solder side and of the EMC gaskets.
Attachment holes as per CPCI or VME specifications. Optionally available as slotted or solid version.

Material:
0.3 mm plastic, anti-static
Maximum temperature up to 65°C



For PCBs	Packs of	Model No. RP		
		for cPCI[1]		for VME
		Slotted	Solid	Solid
3 U x 160 mm	1	**3687.932**	**–**	**3685.626**
3 U x 220 mm	1	**–**	**–**	**3685.805**
6 U x 80 mm	1	**3687.933**	**3686.573**	**–**
6 U x 160 mm	1	**3687.934**	**3686.574**	**3685.627**
6 U x 220 mm	1	**–**	**–**	**3685.824**

[1] 0.5 mm plastic, transparent, anti-static UL 94-V0, maximum temperature up to 65°C.



Also required:

Required for mounting the perforated CPCI covers:

Mounting clips

Packs of	Model No. RP
100	**3687.955**

PCB holder kit

For attaching the PCB to front panels with handle types I, II, IV, IVs, VII.

Material:
Die-cast

Note:
Only required at the top with 3 U front panels with lever handles.

Packs of	Model No. RP
10	**3685.198**

Also required:

– For securing PCBs to PCB holders:
Pan-head screws, Packs of 100,
Model No. RP 3654.320, see page 250.
– For attaching the front panel to the PCB holder:
Oval head screw, Packs of 100,
Model No. RP 3685.282, see page 250.

PCB holder

for box type plug-in units
For fastening PCBs in box type plug-in units.

Material:
Polycarbonate, base material to UL 94-V0

Supply includes:
Assembly parts.

Packs of	Model No. RP
2	**3606.321**

Detailed drawings:
Available on the Internet.

Ripac box type plug-in units, type I

Technical specifications:
- Installation depth: 160 and 220 mm
- Height: 3 U to IEC 60 297-3
- Rear panel to accommodate individual connectors

Material:
- Front panel: 2.5 mm aluminium
- Rear panel: 2 mm aluminium, natural-anodised
- Side panel sections: Extruded aluminium section
- Handle: Aluminium
- PCB holder: Plastic

Surface finish:
Front panel, side panel sections, handle: Natural-anodised

Accessories:
- Covers, see page 246.
- Guide rails, see page 235.

Detailed drawings:
Available on the Internet.

HP	Model No. RP	
	3 U	3 U
Board depth 160 mm		
6	**3653.000**	**–**
8	**–**	**3653.010**
10	**–**	**3653.020**
12	**–**	**3653.030**
14	**–**	**3653.040**
21	**–**	**3653.050**
28	**–**	**3653.060**
Board depth 220 mm		
10	**–**	**3653.200**
12	**–**	**3653.210**
14	**–**	**3653.220**
21	**–**	**3653.230**
28	**–**	**3653.240**
Supply includes		
Front panel	1	1
Handle	1	1
Side panels	1	2
Cover including rear panel	1	–
Rear panel	–	1
PCB holder	2	2
Assembly parts (set)	1	1

Covers

for box type plug-in units, type I

With vent holes
For slide-in fastening.

Material:
1.0 mm aluminium, unplated

With vent slots
For screw fastening.
Suitable for the installation of guide rails.

Material:
1.2 mm sheet steel

Surface finish:
Spray-finished

Colour:
RAL 9006

Unit width	Packs of	Model No. RP	
		with vent slots[1)]	with vent holes
Board depth 160 mm			
8 HP	1	**–**	**3687.585**
10 HP	1	**3687.556**	**3685.683**
12 HP	1	**3687.557**	**3685.684**
14 HP	1	**3687.558**	**3685.685**
21 HP	1	**3687.559**	**3685.686**
28 HP	1	**3687.560**	**3685.687**
Board depth 220 mm			
10 HP	1	**–**	**3685.695**
12 HP	1	**–**	**3685.696**
14 HP	1	**3687.565**	**3685.697**
21 HP	1	**3687.566**	**3685.698**
28 HP	1	**3687.567**	**3685.699**

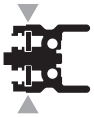
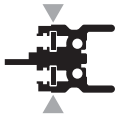
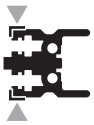
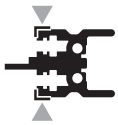
[1)] Guide rails for box type plug-in units from 12 HP:
For PCB depth 160 mm, packs of 10,
Model No. RP 3606.140
For PCB depth 220 mm, packs of 10,
Model No. RP 3606.200

Also required:

Assembly screws,
Packs of 100, Model No. RP 3685.289,
see page 250.

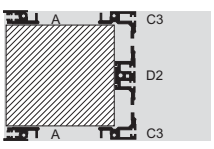
Ripac section system: Complete, simple and easy to manage

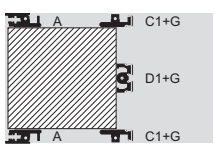
To fit all subrack systems as well as the Ripac Vario-Module system enclosure

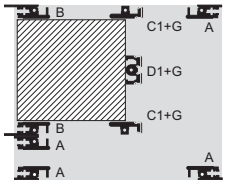
Main sections	**A** Front horizontal rail	**A1** Front horizontal rail, double screw fastening	**A2** Front horizontal rail, double screw fastening (Ripac EASY)	**A3** Front horizontal rail, double, with double screw fastening	**A4** Front horizontal rail, with 10 mm extension, double, with double screw fastening	**B** Front horizontal rail, with 10 mm extension, for extractor handle type IV or VII
	Page 218 – 222	Page 226	Page 214	Page 226	Page 226	Page 218 – 222
Additional extrusions						
E Rear adaptor rail, centre, to accommodate guide rails Page 234	–	–	–	–	–	–
F Z rail for connector Page 234	–	–	–	–	–	–
G Insulating strip[1)] Page 221	–	–	–	–	–	–
H Conductive strip[1)] Page 221	–	–	–	–	–	–
I Threaded insert Page 233						
J Identification strip Page 234			–			
K EMC gasket, horizontal Page 230			–			

[1)] For conductive or insulated attachment of backplanes.

All system requirements can be met by just a few basic types of horizontal rail.
A cost-effective, easy-to-manage range.



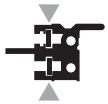




Detailed drawings:
Available on the Internet.

Ripac section system: Complete, simple and easy to manage

To fit all subrack systems as well as the Ripac Vario-Module system enclosure

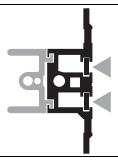
Main sections / Additional extrusions	**B1** Double front horizontal rail, with 10 mm extension	**B2** Front horizontal rail, with 10 mm extension, double screw fastening	**C1** Rear horizontal rail	**C3** Rear horizontal rail, with integral Z-rail	**C4** Rear horizontal rail, double screw fastening, for conductive backplane mounting (Ripac EASY)	**C5** Rear horizontal rail, with integral Z-rail, double screw fastening (Ripac EASY)
	Page 226	Page 226	Page 218 – 222	Page 218 – 226	Page 214	Page 214
E Rear adaptor rail, centre, to accommodate guide rails Page 234	–	–	–	–	–	–
F Z rail for connector Page 234	–	–		–		–
G Insulating strip[1] Page 221	–	–		–	–	–
H Conductive strip[1] Page 221	–	–		–	–	–
I Threaded insert Page 233			–		–	
J Identification strip Page 234					–	–
K EMC gasket, horizontal Page 230			–	–	–	–

[1] For conductive or insulated attachment of backplanes.

Detailed drawings:
Available on the Internet.

Ripac section system: Complete, simple and easy to manage

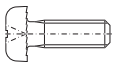
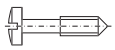
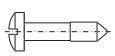
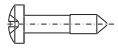
To fit all subrack systems as well as the Ripac Vario-Module system enclosure

Main sections / **Additional extrusions**	**C6** Rear horizontal rail, double screw fastening	**C7** Rear horizontal rail, for insulated back-plane mounting (also for Ripac EASY)	**D1** Rear horizontal rail, centre (also for Ripac EASY with insulating strips)	**D2** Rear horizontal rail, centre, with integral Z rail (also for Ripac EASY)	**D3** Rear horizontal rail, centre, with integral contact surface (Ripac EASY)	**D4** Rear horizontal rail, for backplane mounting, double screw fastening (Ripac EASY)
	Page 224 – 226	Page 214	Page 218 – 226	Page 218 – 226	Page 214	Page 214
E Rear adaptor rail, centre, to acommo-date guide rails Page 234	–	–				–
F Z rail for connector Page 234				–		–
G Insulating strip[1] Page 221				–	–	–
H Conductive strip[1] Page 221				–	–	–
I Threaded insert Page 233		–	–		–	
J Identification strip Page 234		–	–	–	–	–
K EMC gasket, horizontal Page 230	–	–	–	–	–	–

[1] For conductive or insulated attachment of backplanes.

Detailed drawings:
Available on the Internet.

Assembly parts

For the attachment of	Designation	Dimensions	Model No.	Packs of
Covers, version 2, on Ripac EASY horizontal rails	Screws ISO 7046	M3 x 6 T10	**3634.233**	100
Mounting clip on Ripac EASY side panel	Screws ISO 7049	ST3.5 x 9.5 C-Z	**3634.420**	100
Horizontal rails front/rear on side panels (Ripac EASY)	Assembly screw, self-tapping, T20, self-locking	M4 x 12	**3634.430**	100
Covers on Ripac EASY side panels	Mounting clip for Ripac EASY cover plates		**3634.450**	50
– Horizontal rails to side panels – Divider panels to horizontal rails – Vertical support tohorizontal rails	Panhead self-locking screw similar to DIN ISO 7045-8.8-Z-A2K	M4 x 12 	**3654.300**	100
– PCBs to PCB holders (die-cast for 3 U), top – PCBs to extractor handles with 6 U	Panhead posidrive screw ISO 7045-4.8-Z-A2K	M2.5 x 8	**3654.320**	100
– Connectors to Z rails – Z rails to horizontal rails – Type V/VI handles to partial front panels, bottom right for ≥ 5 HP – Aluminium guide rails to horizontal rails – Mezzanine front panels	Panhead posidrive screw ISO 7045-4.8-Z-A2K	M2.5 x 6	**3654.340**	100
Connectors to PCBs	Panhead posidrive screw ISO 7045-4.8-Z-A2K	M2.5 x 12	**3654.350**	100
Guide rails (plastic) to horizontal rails	Screw for plastic WN 1413	M2.2 x 6	**3654.360**	100
– Flat front panels to handles type V, VI – Aluminium guide rails to horizontal rails	Square nut DIN 562-A2K	M2.5	**3654.370**	100
– Covers to mounting blocks – EMC contact strips	Flat countersunk-screw ISO 7046-1-4.8-Z-A2K	M3 x 6	**3684.233**	100
Cover plates on side panels (Ripac Vario)	Mounting block		**3684.234**	10
Type V/VI handle to front panels	Bracket		**3684.435**	100
Front panels and rear panels to horizontal rails	Collar screw, cheese-head, slotted	M2.5 x 11 	**3685.097**	100
PCB holders (die-cast) to front panels, top	Oval csk-screw ISO 7047-4.8-Z-A2K	M2.5 x 8	**3685.282**	100
– Covers/box-type plug-in units – Contact/spring sections for 3-part front panels	Flat countersunk-screw ISO 7046-1-4.8-Z-A2K	M2.5 x 5	**3685.289**	100
Recessed flanges to side panels	Mounting kit for set back flanges: Panhead self-locking screw similar to DIN ISO 7045-8.8-Z-A2K Hex nut ISO 4032-8 Washer	 M4 x 8 M4 4.3	**3687.015**	4 sets
Flat front panels	Plastic collars		**3687.021**	100
– EMC front panels to horizontal rails – EMC trim frame to conceal the front sections of the horizontal mounting kit	Centering screw, slotted	M2.5 x 11 	**3687.050**	100
EMC front panels to horizontal rails	Centering screw, posidrive	M2.5 x 11 	**3687.051**	100

For the attachment of	Designation	Dimensions	Model No.	Packs of
Type V/VI handles (aluminium) to front panels	Mounting kit for type V/VI handles:		**3687.146**	1 set
	Panhead posidrive screw ISO 7045-4.8-Z-A2K	M2.5 x 6		
	Bracket			
	Square nut DIN 562-11H-A2K	M2.5		
Handles type V (plastic) to front panels and box type plug-in units	Mounting kit for type V handle (plastic):		**3687.519**	1 set
	Cover black			
	Cover grey			
	Hex nut	M2.5		
	Screw	M2.5 x 16		
	Screw	M2.5 x 12		
	Square nut DIN 562-04-A2K	M2.5		
Aluminium guide rails to horizontal rails (fastening of square nuts)	Retaining cage	M2.5	**9901.417**	100

System enclosures Ripac Vario-Module

Accessories for Ripac Vario-Module Page 256 **RiCase** Page 258 **Configurator for subracks** Page 525

Technical specifications:
- May be used as a rack-mounted enclosure or instrument case.
- External dimensions to IEC 60 297-1 for installation in 482.6 mm (19˝) racks.
- Installation dimensions for board type plug-in units to IEC 60 297-3-101.

Material/Surface finish:
- Side panels: Extruded aluminium section, spray-finished
- Cross rails: Extruded aluminium section, clear-chromated
- Corner trims: Die-cast zinc, spray-finished
- Side trims: Extruded aluminium section, spray-finished
- Contacts: Conductive (in EMC version)

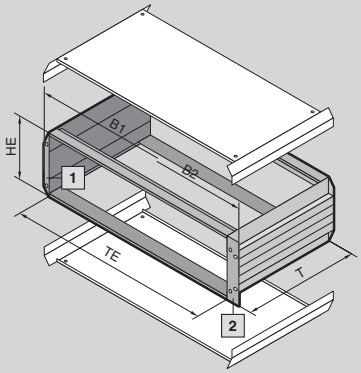
Colour:
RAL 7035

Protection category:
IP 40 for non-vented version

Supply includes:
- 2 side panels
- 4 horizontal rails
- 4 threaded inserts
- 2 rear corner trims
- 2 side trim panels, centre (from a height of 4 U)
- Assembly parts

Note:
Corner trims, flanges and top and bottom cover plates as well as horizontal rails for further configuration must be ordered in addition to this.

Detailed drawings:
Available on the Internet.



1 Equipped as an instrument case

2 Equipped as a rack-mounted unit

TE = HP

Ripac Vario-Module, 42 HP

U (HE)	Packs of	**3**	**3**	**3**	**3**	Page
EMC		–	■	–	■	
Width (B1) mm		235.6	235.6	235.6	235.6	
Width (B2) mm		251.6	251.6	251.6	251.6	
Depth (T) mm		250.4	250.4	310.4	310.4	
Model No. VM Basic enclosure	1	**3982.040**	**3983.040**	**3982.070**	**3983.070**	
Also required						
Top covers – with vent holes – without vent holes	 1 1	 3982.941 –	–	 3982.951 –	–	256 256
Front corner trims for assembly as instrument case	2	3981.310	3981.310	3981.310	3981.310	257
Flanges for configuration as rack-mount – without handle holes – with handle holes	 2 2	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 257 257
EMC installation						
EMC gaskets, horizontal – for upper/lower horizontal rail – between covers and horizontal rails	 1 1	 –	 3684.974 3684.975	 –	 3684.974 3684.975	
EMC gaskets, vertical	1	–	3686.975	–	3686.975	
Front/rear panels EMC		–	see page 241 – 243	–	see page 241 – 243	
Accessories						
Front/rear panels	see page 241 – 243					
Carrying handles	2	–	–	3981.360	3981.360	257
Front handles[1)]	2	3636.010	3636.010	3636.010	3636.010	678
Rear adjustable feet	4	3901.000	3901.000	3901.000	3901.000	256

[1)] Only in conjunction with mounting flanges with handle holes.

Ripac Vario-Module, 63 HP

U (HE)	Packs of	**3**	**3**	**3**	**3**	Page
EMC		–	■	–	■	
Width (B1) mm		342.3	342.3	342.3	342.3	
Width (B2) mm		358.3	358.3	358.3	358.3	
Depth (T) mm		250.4	250.4	310.4	310.4	
Model No. VM Basic enclosure	1	**3982.050**	**3983.050**	**3982.080**	**3983.080**	
Also required						
Top covers – with vent holes – without vent holes	 1 1	 3982.942 –	 – 	 3982.952 –	 – 	 256 256
Front corner trims for assembly as instrument case	2	3981.310	3981.310	3981.310	3981.310	257
Flanges for configuration as rack-mount – without handle holes – with handle holes	 2 2	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 257 257
EMC installation						
EMC gaskets, horizontal[1] – for upper/lower horizontal rail – between covers and horizontal rails	 1 1	 –	 3684.808 3684.807	 –	 3684.808 3684.807	 230 231
EMC gaskets, vertical	1	–	3686.975	–	3686.975	230
Front/rear panels EMC		–	see page 241 – 243	–	see page 241 – 243	
Accessories						
Front/rear panels		see page 241 – 243				
Carrying handles	2	–	–	3981.360	3981.360	257
Front handles[2]	2	3636.010	3636.010	3636.010	3636.010	678
Rear adjustable feet	4	3901.000	3901.000	3901.000	3901.000	256

[1] Shorten 84 HP EMC gaskets to 63 HP.
[2] Only in conjunction with mounting flanges with handle holes.

Ripac Vario-Module, 84 HP

U (HE)	Packs of	**2**	**3**	**3**	**3**	**3**	**3**	Page
EMC		■	–	–	■	–	■	
Width (B1) mm		449.0	449.0	449.0	449.0	449.0	449.0	
Width (B2) mm		465.1	465.1	465.1	465.1	465.1	465.1	
Depth (T) mm		310.4	250.4	310.4	310.4	370.4	370.4	
Model No. VM Basic enclosure	1	**3983.030**	**3982.060**	**3982.090**	**3983.090**	**3982.100**	**3983.100**	
Also required								
Top covers – with vent holes – without vent holes	 1 1	 3981.950 3981.910	 –	 3982.950 3982.910	 3981.950 3981.910	 3982.960 –	 3981.960 3981.920	 256 256
Bottom covers – with vent holes – without vent holes	 1 1	 3981.750 3981.710	 –	 3982.750 3982.710	 3981.750 3981.710	 3982.760 –	 3981.760 –	 256 256
Front corner trims for assembly as instrument case	2	–	3981.310	3981.310	3981.310	3981.310	3981.310	257
Flanges for configuration as rack-mount – without handle holes – with handle holes	 2 2	 3981.200 –	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 3981.210 3981.260	 257 257
EMC installation								
EMC gaskets, horizontal – for upper/lower horizontal rail – between covers and horizontal rails	 1 1	 3684.808 3684.807	 –	 –	 3684.808 3684.807	 –	 3684.808 3684.807	
EMC gaskets, vertical	1	–	–	–	3686.975	–	3686.975	
Front/rear panels EMC		see page 241 – 243	–	–	see page 241 – 243	–	see page 241 – 243	
Accessories								
Front/rear panels		see page 241 – 243						
Carrying handles	2	–	–	3981.360	3981.360	–	–	257
Front handles[1]	2	–	3636.010	3636.010	3636.010	3636.010	3636.010	678
Rear adjustable feet	4	3901.000	3901.000	3901.000	3901.000	3901.000	3901.000	256

[1] Only in conjunction with mounting flanges with handle holes.

System enclosures Ripac Vario-Module

Ripac Vario-Module, 84 HP

U (HE)	Packs of	**4 (3 + 1)**	**4 (3 + 1)**	**4 (3 + 1)**	**4 (3 + 1)**	**4 (3 + 1)**	Page
EMC		–	–	■	–	■	
Width (B1) mm		449.0	449.0	449.0	449.0	449.0	
Width (B2) mm		465.1	465.1	465.1	465.1	465.1	
Depth (T) mm		250.4	310.4	310.4	370.4	370.4	
Model No. VM Basic enclosure	1	**3982.110**	**3982.120**	**3983.120**	**3982.130**	**3983.130**	
Also required							
Top covers – with vent holes – without vent holes	 1 1	 –	 3982.950 3982.910	 3981.950 3981.910	 3982.960 –	 3981.960 –	 256 256
Bottom covers – with vent holes – without vent holes	 1 1	 –	 3982.750 3982.710	 3981.750 3981.710	 3982.760 –	 3981.760 –	 256 256
Front corner trims for assembly as instrument case	2	3981.320	3981.320	3981.320	3981.320	3981.320	257
Flanges for configuration as rack-mount – with handle holes	2	3981.270	3981.270	3981.270	3981.270	3981.270	257
EMC installation							
EMC gaskets, horizontal – for upper/lower horizontal rail – between covers and horizontal rails – between 2 horizontal rails	 1 1 1	 –	 –	 3684.808 3684.807 3685.789	 –	 3684.808 3684.807 3685.789	 230 231 230
EMC gaskets, vertical	1	–	–	3686.976	–	3686.976	230
Front/rear panels EMC		–	–	see page 241 – 243	–	see page 241 – 243	
Accessories							
Front/rear panels	see page 241 – 243						
Carrying handles	2	–	3981.360	3981.360	–	–	257
Front handles[1)]	2	3636.010	3636.010	3636.010	3636.010	3636.010	678
Rear adjustable feet	4	3901.000	3901.000	3901.000	3901.000	3901.000	256

[1)] Only in conjunction with mounting flanges with handle holes.

Ripac Vario-Module, 84 HP

U (HE)	Packs of	**6**	**6**	**6**	**6**	**6**	**6**	Page
EMC		–	■	–	■	–	■	
Width (B1) mm		449.0	449.0	449.0	449.0	449.0	449.0	
Width (B2) mm		465.1	465.1	465.1	465.1	465.1	465.1	
Depth (T) mm		310.4	310.4	370.4	370.4	430.4	430.4	
Model No. VM Basic enclosure	1	**3982.140**	**3983.140**	**3982.150**	**3983.150**	**3982.160**	**3983.160**	
Also required								
Top covers – with vent holes – without vent holes	 1 1	 3982.950 3982.910	 3981.950 3981.910	 3982.960 –	 3981.960 –	 3982.970 3982.930	 –	 256 256
Bottom covers – with vent holes – without vent holes	 1 1	 3982.750 3982.710	 3981.750 3981.710	 3982.760 –	 3981.760 –	 3982.770 3982.730	 – –	 256 256
Front corner trims for assembly as instrument case	2	3981.330	3981.330	3981.330	3981.330	3981.330	3981.330	257
Flanges for configuration as rack-mount – with handle holes	2	3981.280	–	–	–	–	–	257
EMC installation								
EMC gaskets, horizontal – for upper/lower horizontal rail – between covers and horizontal rails	 1 1	 –	 3684.808 3684.807	 –	 3684.808 3684.807	 –	 3684.808 3684.807	 230 231
EMC gaskets, vertical	1	–	3686.977	–	3686.977	–	3686.977	230
Front/rear panels EMC		–	see page 241 – 243	–	see page 241 – 243	–	see page 241 – 243	
Accessories								
Front/rear panels	see page 241 – 243							
Carrying handles	2	3981.360	3981.360	–	–	–	–	257
Front handles[1)]	2	3666.010	3666.010	3666.010	3666.010	3666.010	3666.010	678
Rear adjustable feet	4	3901.000	3901.000	3901.000	3901.000	3901.000	3901.000	256

[1)] Only in conjunction with mounting flanges with handle holes.

Ripac Vario-Module, 84 HP

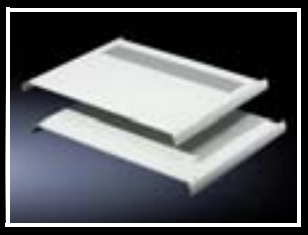
U (HE)	Packs of	**7 (6 + 1)**	**7 (6 + 1)**	Page
EMC		–	–	
Width (B1) mm		449.0	449.0	
Width (B2) mm		465.1	465.1	
Depth (T) mm		310.4	430.4	
Model No. VM Basic enclosure	1	**3982.170**	**3982.190**	
Also required				
Top covers – with vent holes – without vent holes	 1 1	 3982.950 3982.910	 3982.970 3982.930	 256 256
Bottom covers – with vent holes – without vent holes	 1 1	 3982.750 3982.710	 3982.770 3982.730	 256 256
EMC installation				
EMC gaskets, horizontal – for upper/lower horizontal rail – between covers and horizontal rails	 1 1	 3684.808 3684.807	 3684.808 3684.807	 230 231
EMC gaskets, vertical	1	3686.977	3686.977	230
Front/rear panels EMC	see page 241 – 243			
Accessories				
Front/rear panels	see page 241 – 243			
Carrying handles	2	3981.360	–	257
Front handles[1)]	2	3666.010	3666.010	678
Rear adjustable feet	4	3901.000	3901.000	256

[1)] Only in conjunction with mounting flanges with handle holes.

Ripac Vario-Module

Enclosure population

For individual interior installation of the enclosures, system components from the Ripac range may be used (see page 212 – 255).



Covers

for Ripac Vario-Module

Material:
– Sheet steel
– Contacts: Conductive (only for EMC version)

Surface finish:
Spray-finished

Colour:
RAL 7035

Standard version

HP	Depth mm	with vent holes	Model No. VM
42	250.4	■	**3982.941**
	310.4	■	**3982.951**
63	250.4	■	**3982.942**
	310.4	■	**3982.952**
84	310.4	■	**3982.950**
		–	**3982.910**
	370.4	■	**3982.960**
	430.4	■	**3982.970**
		–	**3982.930**

EMC version

HP	Depth mm	with vent holes	Model No. VM
84	310.4	■	**3981.950**
		–	**3981.910**
	370.4	■	**3981.960**

Bottom covers

for Ripac Vario-Module

Material:
– Sheet steel
– Contacts: Conductive (only for EMC version)

Surface finish:
Spray-finished

Colour:
RAL 7035

Standard version

HP	Depth mm	with vent holes	Model No. VM
84	310.4	■	**3982.750**
		–	**3982.710**
	370.4	■	**3982.760**
	430.4	■	**3982.770**
		–	**3982.730**

EMC version

HP	Depth mm	with vent holes	Model No. VM
84	310.4	■	**3981.750**
		–	**3981.710**
	370.4	■	**3981.760**

Feet

with fold-out support stand.
Load capacity up to 20 kg.

Material:
Plastic

Colour:
RAL 7035

Packs of	Model No. VM
2	**3919.000**

Rear adjustable feet

For mounting on the rear of the enclosure.
Dual function:
– Mechanical protection of the connection components.
– Also act as a cable tidy during transportation.

Material:
PA, self-extinguishing to UL 94-V0

Colour:
RAL 7035

Packs of	Model No. VM
4	**3901.000**

Front flanges

Required when the Ripac Vario-Module is to be used as a rack-mounted enclosure.
The flanges have a channel to accommodate vertical EMC gaskets.

Material:
Aluminium

Surface finish:
Clear-chromated

U	Packs of	with handle hole	Model No. VM
2	2	■	**3981.200**
3	2	■	**3981.210**
	2	–	**3981.260**
4	2	–	**3981.270**

Accessories:

– Vertical EMC gasket, see page 230.
– Front handles for mounting on front flanges, see page 233.

Front corner trims

Required when the Ripac Vario-Module is to be used as a desk-top instrument case.
The corner trims have a channel to accommodate vertical EMC gaskets.

Material:
Aluminium

Surface finish:
Spray-finished

Colour:
RAL 7035

U	Packs of	Model No. VM
3	2	**3981.310**
4	2	**3981.320**
6	2	**3981.330**

1 and 8 U available on request.

Accessories:

– Vertical EMC gasket, see page 230.
– Front handles for mounting on front corner trim pieces, see page 233.

Carrying handles

For ergonomic transportation, even with stacked enclosures.
May also be used as a support stand.

Max. load capacity: 350 N.

Material:
– Die-cast zinc
– Extruded aluminium section

Colour:
RAL 7035

Note:
Not suitable for use in conjunction with bottom covers.

For enclosure depth mm	Packs of	Model No. VM
310.4	2	**3981.360**

Support stand/carrying handle

To fit Ripac Vario-Module 3 U, 4 U and 6 U, adjustable on a 30° pitch pattern.

Material:
– Extruded aluminium section
– Die-cast

Colour:
RAL 7035

Supply includes:
Assembly parts.

Note:
Corner trim for support stands/carrying handles should be ordered separately.

HP	Packs of	Model No. VM
42	1	**3981.390**

Instrument cases RiCase

Accessories for RiCase Page 260 **Subracks** Page 212 **Ripac Vario-Module** Page 252 **Configurator for subracks** Page 525

Technical specifications:
For slide-in equipment to IEC 60 297-3.

Material:
– Roof and base tray, side panels: Extruded aluminium section
– Mounting bracket: Extruded aluminium section, clear-chromated

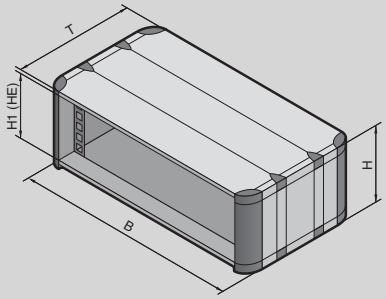
Colour:
– Enclosure: RAL 7035
– Decorative elements: RAL 5018 (turquoise)

Protection category:
IP 42 for unvented version.

Supply includes:
– 2 side panels
– Roof and base tray
– 4 mounting brackets
– 4 threaded inserts
– 2 plain inserts
– 1 rear panel (only for 1/2 19″).

Enclosures are supplied partially assembled.

Detailed drawings:
Available on the Internet.



RiCase 269.2 mm (1/2 19″)

U (HE)	Packs of	**2**	**3**	**4**	Page
Vented		–	–	–	
Width (B) mm		348.6	348.6	348.6	
Height (H) mm		121.9	166.4	210.8	
Depth (T) mm		300.0	300.0	420.0	
Model No. RC	1	**3750.200**	**3750.210**	**3750.400**	
Weight (kg)		3.8	4.2	6.0	
Accessories					
Carrying handles, horizontal	2	3751.250	3751.250	3751.260	263
Threaded inserts with M4 thread	8	–	–	3751.730	262
End section	2	–	–	3751.910	260
Earthing set	4	3798.000	3798.000	3798.000	263
Tower feet	1 set	3751.850	3751.850	3751.850	263
Captive nuts M6, with contact	50	2094.200	2094.200	2094.200	757
Assembly screw M6 x 16 mm, Phillips-head	100	7094.100	7094.100	7094.100	758

RiCase 482.6 mm (19˝)

U (HE)	Packs of	**3**				**4**		**6**			Page
Vented		–	■	–	■	–	■	–	–	■	
Width (B) mm		562.0		562.0		562.0		562.0			
Height (H) mm		166.4		166.4		210.8		299.7			
Depth (T) mm		300.0		420.0		420.0		300.0	420.0		
Model No. RC	1	**3750.310**	**3750.330**	**3750.320**	**3750.340**	**3750.420**	**3750.440**	**3750.600**	**3750.610**	**3750.640**	
Weight (kg)		5.4	5.3	7.1	6.9	7.7	7.5	6.6	8.7	8.5	
Accessories											
Blanking plates, as rear wall or front panel	3	1933.200		1933.200		1934.200		1936.200			754
Carrying handles, horizontal	2	3751.250		3751.260		3751.260		3751.250	3751.260		263
Threaded inserts with M4 thread	8	–		–		3751.730		–			262
Earthing set	4	3798.000		3798.000		3798.000		3798.000			263
Tower feet	1 set	3751.850		3751.850		3751.850		3751.850			263
Captive nuts M6, with contact	50	2094.200		2094.200		2094.200		2094.200			757
Assembly screw M6 x 16 mm, Phillips-head	100	7094.100		7094.100		7094.100		7094.100			758

RiCase 482.6 mm (19˝)

U (HE)	Packs of	**6**		**7**			**9**	**12**		Page
Vented		–	■	■	–	■	■	–	■	
Width (B) mm		562.0		562.0	562.0		562.0	562.0		
Height (H) mm		299.7		344.2	344.2		433.1	566.5		
Depth (T) mm		540.0		420.0	540.0		540.0	540.0		
Model No. RC	1	**3750.620**	**3750.650**	**3750.720**	**3750.710**	**3750.730**	**3750.930**	**3750.000**	**3750.030**	
Weight (kg)		12.2	10.8	9.1	12.9	11.5	12.9	16.4	15.0	
Accessories										
Blanking plates, as rear wall or front panel	3	1936.200		1935.200	1935.200		1939.200	1937.200		754
Carrying handles, horizontal	2	3751.270		3751.260	3751.270		3751.270	3751.270		263
Slide rails	2	3751.520		–	3751.520		–	3751.520		263
Threaded inserts with M4 thread	8	–		3751.750	3751.750		–	–		262
Mounting rail	2	3751.420		–	3751.420		3751.420	3751.420		262
Earthing set	4	3798.000		3798.000	3798.000		3798.000	3798.000		263
Tower feet	1 set	3751.850		3751.850	3751.850		3751.850	3751.850		263
Captive nuts M6, with contact	50	2094.200		2094.200	2094.200		2094.200	2094.200		757
Assembly screw M6 x 16 mm, Phillips-head	100	7094.100		7094.100	7094.100		7094.100	7094.100		758

RiCase

Back panel

Screw-fastened
To close off at the rear, or as a front panel.

Material:
Aluminium

Surface finish:
Natural-anodised

For enclosure width mm	H (U)	Packs of	Model No. VC
482.6 (19″)	3	3	**1933.200**
482.6 (19″)	4	3	**1934.200**
482.6 (19″)	6	3	**1936.200**
482.6 (19″)	7	3	**1935.200**
482.6 (19″)	9	3	**1939.200**
482.6 (19″)	12	3	**1937.200**

Also required:

– Captive nuts M6, EL 2094.200, see page 757.
– Assembly screws M6 x 16 mm, EL 7094.100, see page 758.

End section

To cover the sides to the left and right of the sub-rack when no rear door or rear panel is used.

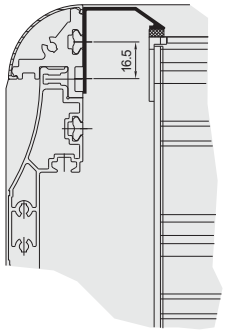
Material:
Extruded aluminium section

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure height	Packs of	Model No. RC
4 U	2	**3751.910**



Front door

Vertically hinged
For mechanical protection of built-in control components.
– Optionally hinged on the right or left
– With lock

Material:
– Frame section: Extruded aluminium section
– Corner pieces: Die-cast aluminium
– Viewing pane: Smoked acrylic

Surface finish:
Frame section, corner pieces: Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure width mm	W mm	H (U)	Model No. RC
482.6 (19″)	503	4	**3751.330**

Detailed drawings:
Available on the Internet.

Aluminium front door

Vertically hinged
For mechanical protection of built-in control components.
– Optionally hinged on the right or left
– With lock

Material:
– Frame section: Extruded aluminium section
– Corner pieces: Die-cast aluminium
– Aluminium plate

Surface finish:
Frame section, corner pieces: Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure width mm	W mm	H (U)	Model No. RC
482.6 (19″)	503	4	**3751.370**

Detailed drawings:
Available on the Internet.

Keyboard lid

Suitable for the installation of 482.6 mm (19″) keyboards.
– Horizontally hinged and lockable
– Removable cover plate

Material:
– Frame section:
Extruded aluminium section/die-cast
– Base and cover plate: Aluminium

Surface finish:
Frame section, base and cover plate:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure width mm	H (U)	Packs of	Model No. RC
482.6 (19″)	4	1	**3751.800**

Note:
Use only in conjunction with support stand/ carrying handle.

Detailed drawings:
Available on the Internet.

Mounting angles 482.6 mm (19″)

For front/rear installation of subracks and blanking plates.

Material:
Extruded aluminium section

Surface finish:
Clear-chromated

Supply includes:
Assembly parts.

For enclosure height	Packs of	Model No. RC
4 U	2	**3751.680**
7 U	2	**3751.640**

Also required:
– Threaded inserts, see page 262.
– Mounting rails, see page 262.
– Spacers, see page 262.

RiCase

Mounting rails

For the installation of component shelves, static or pull-out.

Material:
Aluminium

Surface finish:
Clear-chromated

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. RC
540	2	**3751.420**

Also required:

– Threaded inserts, see page 262.
– Spacers, see page 262.

Accessories:

– Component shelf, see page 668.
– Component shelves, 482.6 mm (19˝), see page 670.

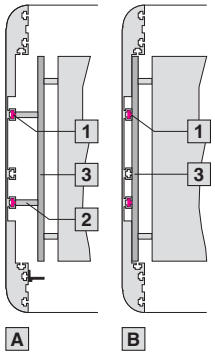
A Component shelf installation for 482.6 mm (19˝) (width 409 mm, also with telescopic slides)

B Direct component shelf installation (width 471 mm)

1 Threaded inserts

2 Long spacers

3 Mounting rails



Threaded inserts

with M4 thread
For the installation of mounting angles, slide rails, mounting kits, cable ducts etc. Simply slide into the channels in the side panels.

Material:
Extruded aluminium section

Surface finish:
Clear-chromated

For enclosure height	Packs of	Model No. RC
4 U	8	**3751.730**
7 U	8	**3751.750**

Spacers

For the attachment of mounting rails.

Design	Packs of	Model No. RC
for component shelf installation (width 409 mm)	4	**3751.460**

Slide rails

To support heavy installed equipment.

Material:
1.5 mm sheet steel

Surface finish:
Clear-chromated

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. RC
540	2	**3751.520**

Also required:

Threaded inserts, see page 262.

Earthing set

To meet electrical protective measures; fits all RiCase enclosures.

Supply includes:
– Slide-in strip
– Screw, yellow/green connection cable
– Serrated washer
– Nut

Packs of	Model No. VC
4	**3798.000**

Carrying handles

Horizontal
For easy, secure transportation.
– May be retrofitted
– Load capacity 30 kg/pair

Material:
– Side parts: Die-cast
– Centre part: Extruded aluminium section

Surface finish:
Side parts, centre part: Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. RC
300	2	**3751.250**
420	2	**3751.260**
540	2	**3751.270**

Tower feet

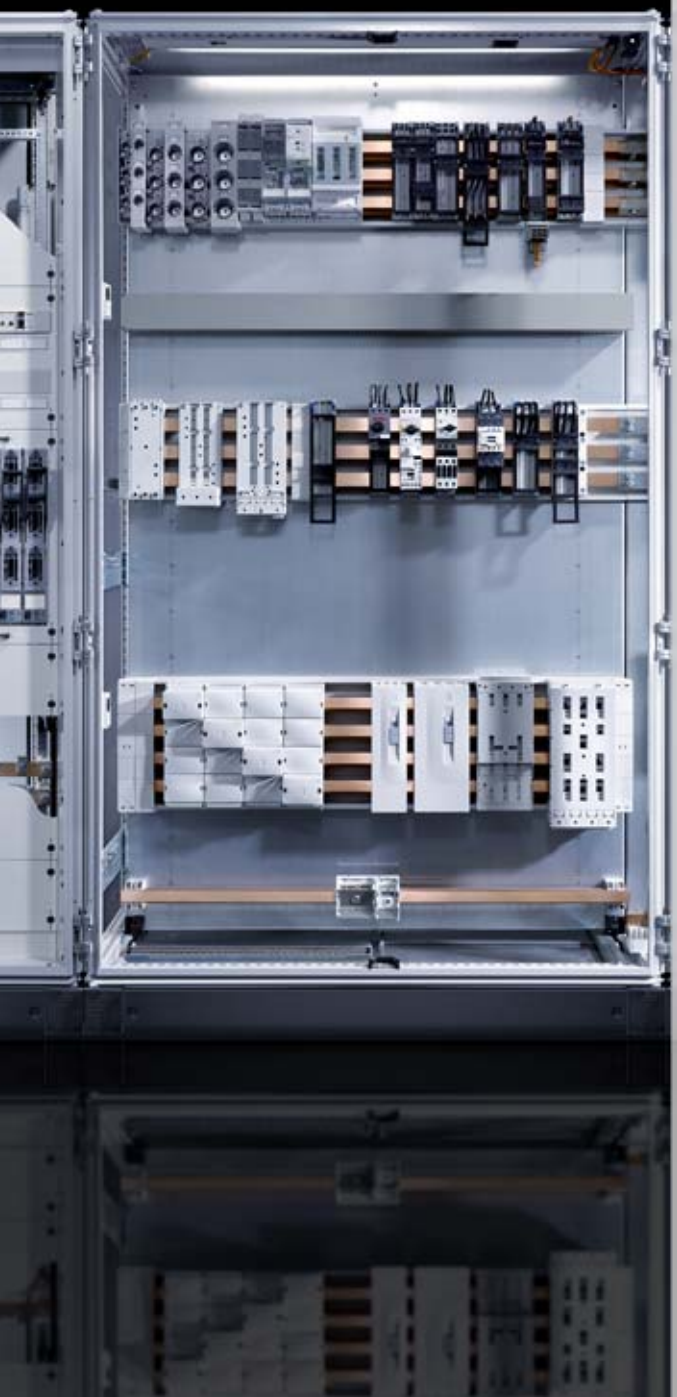
For vertical siting of enclosures, may be retro-fitted.

Material:
Plastic to UL 94-V0, self-extinguishing

Colour:
RAL 5018 (turquoise)

Supply includes:
– 4 tower feet
– Assembly parts

Packs of	Model No. RC
1 set	**3751.850**



Power Distribution

Busbar systems

Mini-PLS busbar system (40 mm) 270
RiLine60 busbar system (60 mm) 275

Ri4Power Form 1-4

Baying system TS 8 for Ri4Power applications 84
Maxi-PLS system components 328
Flat-PLS system components 332
Connector kits for Maxi-PLS 337
Connector kits for Maxi-PLS/Flat-PLS 338
Busbar systems (100/185/150 mm) 340
Cover systems Form 1 342
Compartment configuration Form 1-4 345
Ri4Power accessories 352

Ri4Power ISV distribution enclosures

Overview 361
ISV wall-mounted distributors AE 47
ISV distribution enclosures TS 8 82
Installation modules 362

Power

UPS systems 372
Power Distribution Rack 382
Power System Module 384
RiCell Flex fuel cell system 387

Offener Leistungsschalter
Air circuit breaker
SIEMENS
ABB

Experts in power distribution and back-up

As system providers, Rittal are the world's leading suppliers of safe power distribution and back-up systems. Rittal's top priorities here are to ensure maximum safety coupled with optimum value for money and maximum availability.

Your benefits

Planning and engineering
- Power engineering planning software for low-voltage switchgear and busbar systems
- Complete engineering support from expert Rittal advisors for individual project handling

Products
- Modular busbar systems including approvals for all the world's markets
- Flexible complete solutions for low-voltage switchgear and distribution enclosures
- Universal connection system for almost all applications
- Versatile, approved fuse elements
- A comprehensive range of system components for individual installation and fast assembly
- Modular UPS systems with a high level of efficiency for optimum supply reliability
- Intelligent power distributors for IT racks in data centres
- Scalable fuel cell technology for indoor and outdoor applications

Service
- Contiguous global delivery and service network
- Global spare parts service
- Comprehensive quality management
- Our own accredited laboratories for tests, trials and protection category verification
- Efficiency advice for optimum energy management and the lowest energy costs

Busbar systems

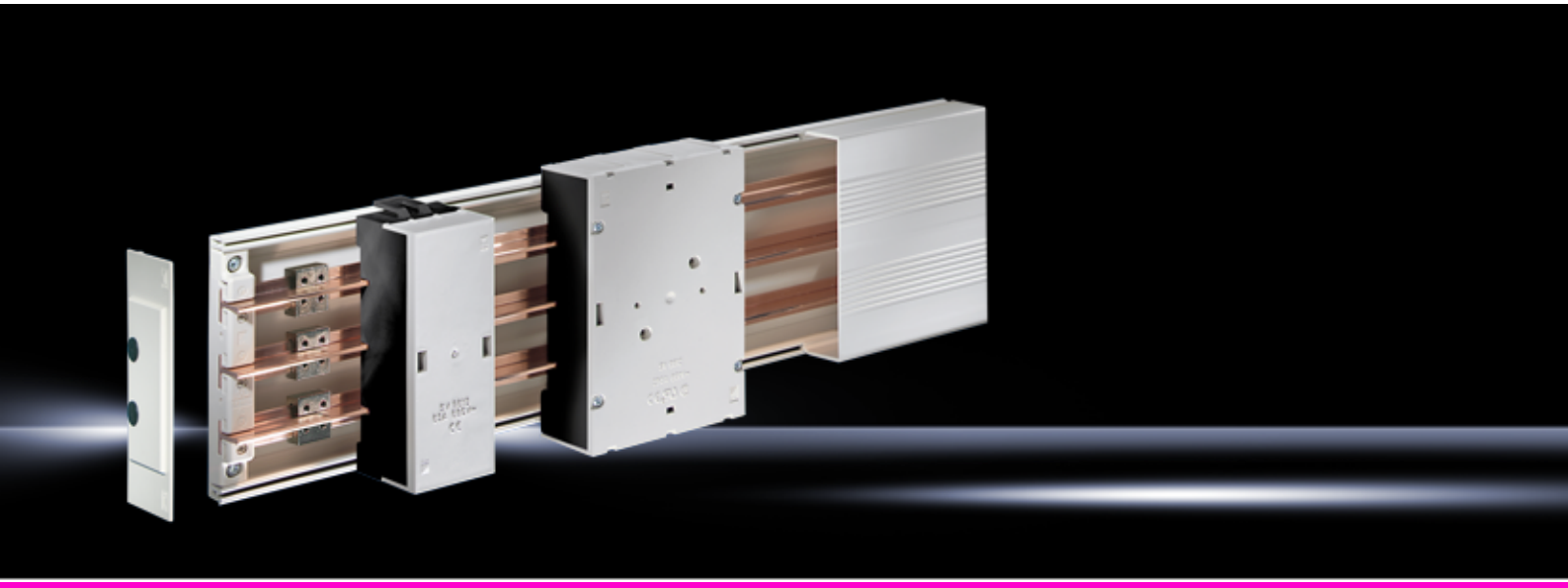
Mini-PLS busbar system (40 mm)

Busbar support 270
Special busbars E-Cu 270
Contact hazard protection 270
Busbar connection adaptor 270
Bus-mounting fuse base 271
NH fuse-switch disconnector, size 000 271
Component adaptor 12 A/25 A 272
Component adaptor 40 A/100 A 273
Allocation of switchgear 273

RiLine60 busbar system (60 mm)

Flat copper bar system 276
PLS busbar support 278
Busbar connection adaptor 280
OM adaptors 25 A to 65 A/OM supports 283
Circuit-breaker component adaptors 100 A to 630 A 287
Allocation of switchgear 290
Bus-mounting fuse bases 294
NH fuse-switch disconnectors, size 000 296
NH fuse-switch disconnectors, size 00 298
NH fuse-switch disconnectors, size 1 300
NH fuse-switch disconnectors, size 2 302
NH fuse-switch disconnectors, size 3 304
NH slimline fuse-switch disconnectors, size 00 306
NH slimline fuse-switch disconnectors, size 1/size 2/size 3 307
Fuse holder up to 60/400 A 308
RiLine accessories 310

Mini-PLS busbar system (40 mm)



Component adaptors Page 272 **Bus-mounting fuse base** Page 271 **NH fuse-switch disconnectors** Page 271

Busbar supports, busbar connection adaptors

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
– RAL 7035
– RAL 9011 (busbar connection adaptor chassis)

Contact hazard protection

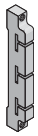
Material:
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

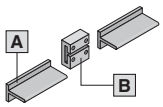
Colour:
RAL 7035

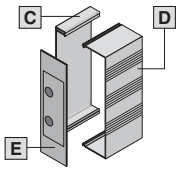
Short-circuit resistance diagram:
Available on the Internet.

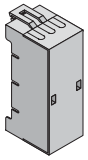
Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Mini-PLS busbar supports (3-pole)			
	Busbar support, suitable for top mounting	Packs of	■
	Bar centre distance mm		40
	Model No. SV	4	**9600.000**

A Mini-PLS special busbars E-Cu, bar thickness 3 mm, bar cross-section 120 mm²						
	Length mm	Packs of	500	700	1100	1500
	Model No. SV	3	**9601.000**	**9602.000**	**9603.000**	**9624.000**
	Accessories					
	B Busbar connectors					
	Model No. SV	3	**9611.000**	**9611.000**	**9611.000**	**9611.000**

Mini-PLS contact hazard protection						
	Components	Length mm	Packs of	**Model No. SV**			
	C Base tray	500	1	**9605.000**	**9605.000**	**9605.000**	**9605.000**
		700	1	**9606.000**	**9606.000**	**9606.000**	**9606.000**
		1100	1	**9607.000**	**9607.000**	**9607.000**	**9607.000**
	D Cover section	250	1	**9608.000**	**9608.000**	**9608.000**	**9608.000**
		500	1	**9609.000**	**9609.000**	**9609.000**	**9609.000**
	E End covers	–	2	**9610.000**	**9610.000**	**9610.000**	**9610.000**

Mini-PLS busbar connection adaptors (3-pole)					Page
	Rated current up to	Packs of	63 A	250 A	
	Rated operating voltage		690 V~	690 V~	
	Cable outlet		top/bottom	top/bottom	
	Connection of round conductors[1] mm²		1.5 – 35	10 – 120	
	Clamping area for laminated copper bars W x H mm		10 x 8	17 x 15	
	Width mm		54	115	
	Height mm		160	182	
	Model No. SV	1	**9613.000**	**9612.000**	
Accessories					
Laminated copper bars			■	■	314

[1] Wire end ferrules should be used with fine wire conductors.

Mini-PLS fuse elements

Busbar system Page 270 **Busbar connection adaptor** Page 270 **Component adaptor** Page 272/273

Bus-mounting fuse base

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
– Chassis: RAL 9011
– Cover: RAL 7035

NH fuse-switch disconnectors

Material:
– Fibreglass-reinforced polyamide
– Fire protection corresponding to UL 94-V0
– Contact tracks: Silver-plated hard copper

Colour:
RAL 7035

Basis of test:
– IEC 60 947-3
– IEC 60 269-2 (fuse inserts)

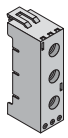
Busbar adaptor

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

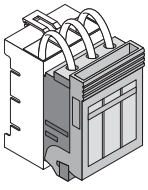
Colour:
RAL 9011

Technical information:
Available on the Internet.

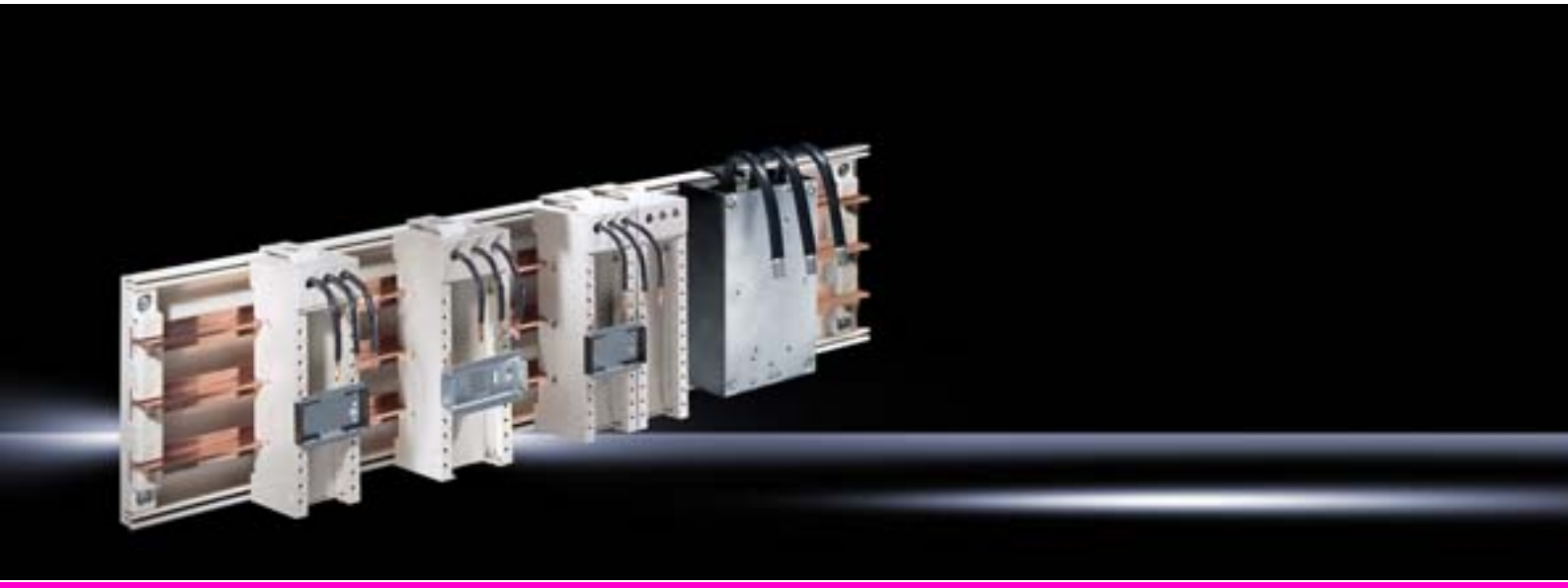
Detailed drawings:
Available on the Internet.

Mini-PLS bus-mounting fuse bases (3-pole)				
	Fuse insert	Packs of	D 02-E18	
	Rated current		63 A	
	Rated operating voltage		400 V~	
	Connection of round conductors[1] mm²		1.5 – 16	
	Width mm		38	
	Height mm		160	
	Model No. SV	1	**9630.000**	
Accessories				
Identification labels		100	9320.080	

[1] Wire end ferrules should be used with fine wire conductors.

NH fuse-switch disconnectors, size 000 (3-pole)				
	Rated operating current	Packs of	100 A	Page
	Rated operating voltage		690 V~	
	Cable outlet		top/bottom	
	Type of connection		Terminal	
	Connection of round conductors mm²		1.5 – 50	
	Clamping area for laminated copper bars W x H mm		10 x 10	
	Width mm		89	
	Height mm		141.5	
	Model No. SV	1	**3431.000**	296
Also required				
Mini-PLS busbar adaptors (3-pole)				
With connection cables mm²			35	
Width mm			90	
Height mm			160	
Model No. SV		1	**9629.100**	
Accessories				
Micro-switch		5	3071.000	324

Mini-PLS component adaptor



Busbar system Page 270 **Busbar connection adaptor** Page 270 **Bus-mounting fuse base** Page 271 **NH fuse-switch disconnectors** Page 271

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

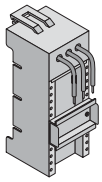
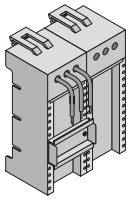
Colour:
– RAL 7035
– RAL 9011 (SV 9629.000)

Note:
Overview of standard switchgear with allocation of the relevant adaptor, see page 273.

Technical information:
Available on the Internet.

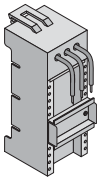
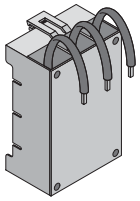
Detailed drawings:
Available on the Internet.

12 A/25 A (3-pole)

Design												
Rated current up to		Packs of	12 A	25 A	25 A	25 A	25 A	25 A	25 A	25 A	25 A	Page
Rated operating voltage			690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	
Connection cables[1)]			AWG 14	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	AWG 12	
Support rails	Qty.		1	1	1	1	1	1	1	1	1	
	Height mm		7.5	7.5	15	7.5	15	7.5	15	7.5	7.5	
Width mm			45	45	45	54	54	72	72	90	108	
Height mm			160	160	160	160	160	160	160	160	160	
Model No. SV		1	**9614.110**	**9614.100**	**9615.100**	**9614.000**	**9615.000**	**9625.000**	**9626.000**	**9629.010**	**9629.030**	
Accessories												
Insert strip		2	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	9623.000	318
Support rails Height 7.5 mm	Width 45 mm	10	9320.150	9320.150	9320.150	–	–	–	–	9320.150	–	318
	Width 54 mm	10	–	–	–	3548.000	3548.000	–	–	–	3548.000	318
	Width 72 mm	10	–	–	–	–	–	3549.000	3549.000	–	–	318

[1)] AWG = American Wire Gauges
AWG 14 = 2.08 mm² ≙ 2.5 mm²
AWG 12 = 3.31 mm² ≙ 4 mm²

40 A/100 A (3-pole)

Design									
Rated current up to			Packs of	40 A	40 A	40 A	40 A	100 A	Page
Rated operating voltage				690 V~	690 V~	690 V~	690 V~	690 V~	
Connection cables[1]				AWG 10	AWG 10	AWG 10	AWG 10	35 mm²	
Support rails		Qty.		1	1	1	1	–	
		Height mm		7.5	15	7.5	15	–	
Width mm				54	54	72	72	90	
Height mm				160	160	160	160	160	
Model No. SV			1	**9616.000**	**9617.000**	**9627.000**	**9628.000**	**9629.000**	
Accessories									
Insert strip			2	9623.000	9623.000	9623.000	9623.000	–	318
Support rails	Height 7.5 mm	Width 54 mm	10	3548.000	3548.000	–	–	–	318
		Width 72 mm	10	–	–	3549.000	3549.000	–	318
	Height 15 mm	Width 72 mm	5	–	–	–	–	9320.120	322

[1] AWG = American Wire Gauges
AWG 10 = 5.26 mm² ≙ 6 mm²

Allocation of switchgear – Mini-PLS component adaptors 12 A/25 A

Make/model	Model No. SV
ABB	
MS116	9614.100
MS325	9614.000
MS450 (max. 25 A)	9614.000
MS451 (max. 25 A)	9614.000
Eaton	
PKZM0 (up to 25 A)	9614.100
PKZM01 (up to 25 A)	9614.100
PKZM4 (up to 25 A)	9614.000
PKE12	9614.100
PKE32 (up to 25 A)	9614.100
PKE65 (up to 25 A)	9614.000
Schneider Electric	
GV2-P (up to 25 A)	9614.100
GV2-RT	9614.100
GV2-LE10	9614.100
GV3 (up to 25 A)	9614.100

Make/model	Model No. SV
Siemens	
S0	
3RV10 21...	9614.100
3RV20 21... (up to 25 A)	9614.100
S00	
3RV10 11...	9614.100[1]
3RV20 11...	9614.100[1]
S2	
3RV10 31... (up to 25 A)	9614.000

[1] Support rail must be offset

Allocation of switchgear – Mini-PLS component adaptors 40 A/100 A

Make/model	Model No. SV	Accessories Model No. SV
ABB		
MS450 (max. 40 A)	9617.000	–
MS451 (max. 40 A)	9629.000	9320.120
MS495	9629.000	9320.120
MS496	9629.000	9320.120
MS497	9629.000	9320.120
Tmax		
T1	9629.000	–
T2	9629.000	–
Eaton		
NZM 1	9629.000	–
PKZ2	9627.000	–
PKZM4 (max. 40 A)	9617.000	–
PKZM4	9629.000	9320.120

Make/model	Model No. SV	Accessories Model No. SV
Schneider Electric		
NS 80	9629.000	–
GV3 (max. 40 A)	9616.000	–
GV3	9629.000	9320.120
Siemens		
S2		
3RV10 31... (max. 40 A)	9616.000	–
3RV10 31...	9629.000	9320.120
S3		
3RV1341/42	9629.000	9320.120

RiLine60

Busbar systems 3- and 4-pole

Support + bars + contact hazard protection

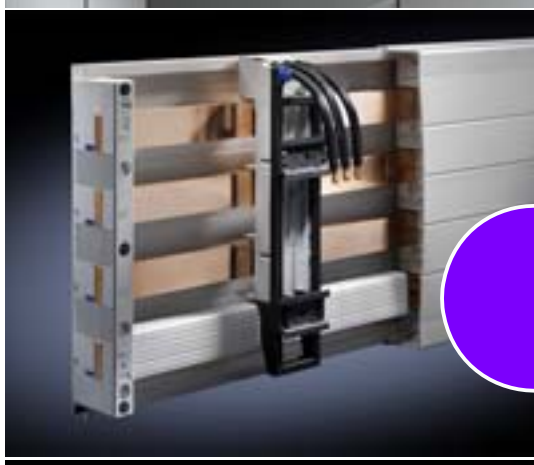
- Flat copper bar system, see page 276
- PLS busbar system, see page 278
- Accessories, see page 310

Connection system 3- and 4-pole

- Busbar connection adaptor, see page 280
- Connection clamps, see page 316
- Connection block, see page 317
- Accessories, see page 310

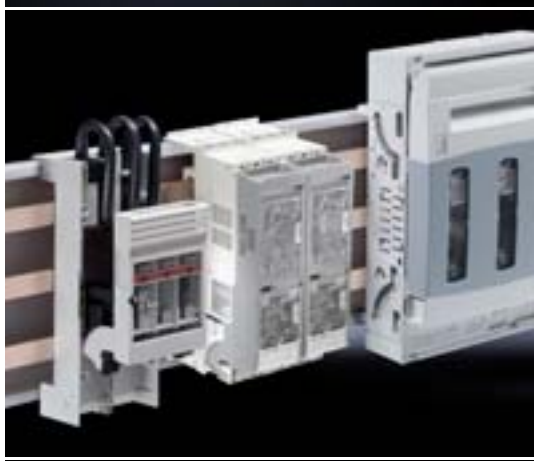
Component adaptors 3- and 4-pole

- OM adaptor, see page 283
- Circuit-breaker component adaptor, see page 287
- Accessories, see page 318



Fuse elements 3-pole

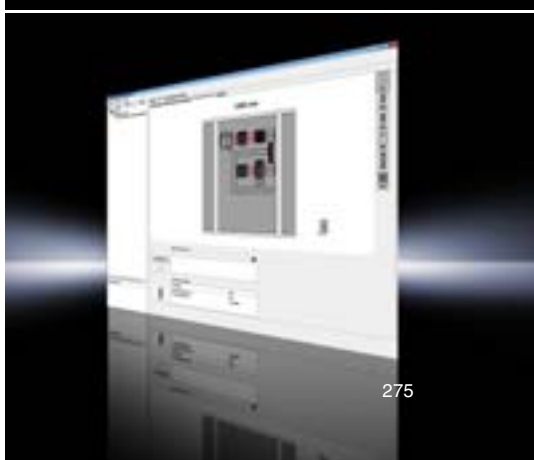
- Bus-mounting fuse bases, see page 294
- NH fuse-switch disconnectors, see page 296
- NH slimline fuse-switch disconnectors, see page 306
- Accessories, see page 323



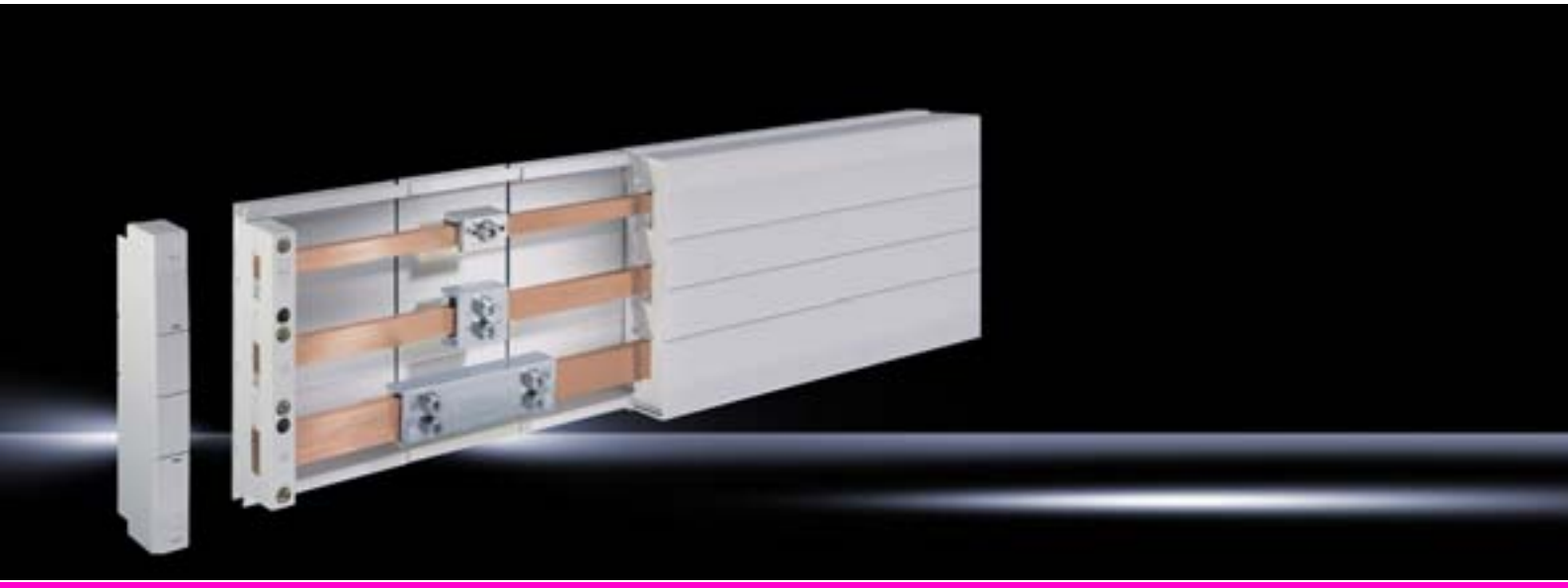
Rittal Power Engineering 5.0

Model No. SV 3020.500, see page 523

- Configuration of RiLine60 busbar system
- Simple component selection, integral switchgear database
- Automatic calculation of rated currents and heat losses



RiLine60 busbar systems up to 800 A (60 mm)



Connection systems Page 280 – 282 **Component adaptors** Page 283 – 289 **Fuse elements** Page 294 – 309

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

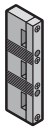
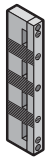
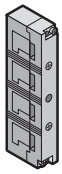
Note:
The use of a base tray is required for UL applications.

Short-circuit resistance diagrams:
Available on the Internet.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

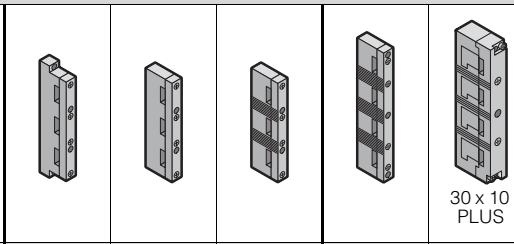
Flat copper bar system

Busbar support								
							 30 x 10 PLUS	
No. of poles/bar centre distance		Packs of	3-pole/60 mm			4-pole/60 mm		Page
External attachment			■	–	–	–	–	
Internal attachment			–	■	■	■	■	
For busbars mm	12 x 5/10		■	■	–	■	–	
	15 x 5 – 25 x 10, 30 x 5		■	■	■	■	–	
	30 x 10		■	■	■	■	■	
Approvals			–	–	UL	UL	UL	
Model No. SV		4	**9340.010**	**9340.000**	**9340.050**	**9340.004**	**9342.014**	
Also required								
Spacer when using busbars 12 x 5/10 mm			■	■	–	■	–	
Model No. SV		12	9340.090	9340.090	–	9340.090	–	310

RiLine60 busbar systems up to 800 A (60 mm)

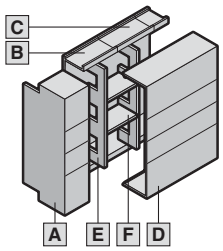
Flat copper bar system

Busbar support



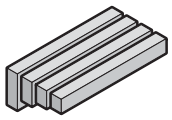
No. of poles/bar centre distance	Packs of	3-pole/60 mm			4-pole/60 mm		Page
Model No. SV	4	9340.010	9340.000	9340.050	9340.004	9342.014	
Also required							
Spacer when using busbars 12 x 5/10 mm		■	■	–	■	–	
Model No. SV	12	9340.090	9340.090	–	9340.090	–	310

Contact hazard protection



Components	Length mm	Approvals	Packs of	Model No. SV			Model No. SV		Page
A End cover	–	UL	2	**9340.070**	**9340.070**	**9340.070**	**9340.074**	**9342.074**	–
B Base tray	500	UL	2	–	9340.100	9340.100	–	–	315
	700	UL	2	–	9340.110	9340.110	–	–	315
	900	UL	2	–	9340.120	9340.120	–	–	315
	1100	UL	2	–	9340.130	9340.130	9340.134	9342.134	315
	2400	–	1	–	9340.170	–	–	–	315
C Base tray infill	100	UL	2	–	9340.140	9340.140	–	–	315
D Cover section	700	UL	2	–	9340.200	9340.200	–	–	315
	1100	UL	2	–	9340.210	9340.210	9340.214	9340.214	315
E Support panel	–	UL	5	–	9340.220	9340.220	9340.224	9340.224	315
F Cross members	160	–	2	–	–	9340.230	–	–	315

Busbars E-Cu; length: 2400 mm/bar



Dimensions mm	Max. rated current acc. to DIN EN	Max. rated current acc. to UL 508	Approvals	Packs of	Model No. SV			Model No. SV		Page
12 x 5	210 A	–	cULus	6	3580.000	3580.000	3580.000	3580.000	–	311
12 x 10	340 A	–	cULus	6	3580.100	3580.100	3580.100	3580.100	–	311
15 x 5	260 A	175 A	cULus	6	3581.000	3581.000	3581.000	3581.000	–	311
15 x 10	360 A	350 A	cULus	6	3581.100	3581.100	3581.100	3581.100	–	311
20 x 5	319 A	230 A	cULus	6	3582.000	3582.000	3582.000	3582.000	–	311
20 x 10	497 A	465 A	cULus	6	3585.000	3585.000	3585.000	3585.000	–	311
25 x 5	384 A	290 A	cULus	6	3583.000	3583.000	3583.000	3583.000	–	311
30 x 5	447 A	350 A	cULus	6	3584.000[1)]	3584.000[1)]	3584.000[1)]	3584.000[1)]	–	311
30 x 10	800 A	700 A	cULus	6	3586.000[1)]	3586.000[1)]	3586.000[1)]	3586.000[1)]	3586.000[1)]	311

Accessories

Components	For busbars mm	Approvals	Packs of	Model No. SV			Model No. SV		Page
Busbar connectors for single connection	12 x 5 – 15 x 10	cULus	3	9350.075	9350.075	9350.075	9350.075	–	313
	20 x 5 – 30 x 10	cULus	3	9320.020	9320.020	9320.020	9320.020	9320.020	313
Busbar connectors for baying connection[2)]	20 x 5 – 30 x 10	cULus	3	9320.030	9320.030	9320.030	9320.030	9320.030	313
Busbar cover section Length: 1000 mm/section	12 x 5 – 30 x 10	cULus	10	3092.000	3092.000	3092.000	3092.000	3092.000	311
	12/15 x 5	cULus	4	9350.010	9350.010	9350.010	9350.010	9350.010	311
	12/15 x 10	cULus	4	9350.060	9350.060	9350.060	9350.060	9350.060	311

[1)] To order the tin-plated version, please add extension .200 to the Model No. Delivery times available on request.
[2)] Connection from enclosure to enclosure (TS 8)

RiLine60 busbar systems 800 A/1600 A (60 mm)

Connection systems Page 280 – 282 **Component adaptors** Page 283 – 289 **Fuse elements** Page 294 – 309

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Note:
The use of a base tray is required for UL applications.

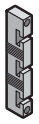
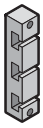
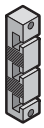
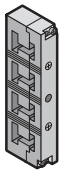
Short-circuit resistance diagrams:
Available on the Internet.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

PLS busbar support

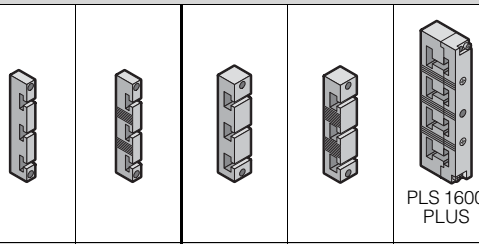
Busbar support

						 PLS 1600 PLUS
For Rittal system	Packs of	**PLS 800**		**PLS 1600**		
No. of poles/bar centre distance		3-pole/60 mm		3-pole/60 mm		4-pole/ 60 mm
Internal attachment		■	■	■	■	■
Busbar support, suitable for top mounting		■	■	■	■	■
Approvals		–	UL	–	UL	UL
Model No. SV	4	**9341.000**	**9341.050**	**9342.000**	**9342.050**	**9342.004**

RiLine60 busbar systems 800 A/1600 A (60 mm)

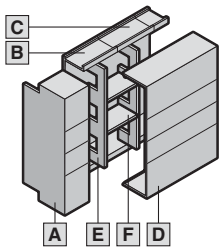
PLS busbar support

Busbar support



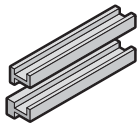
For Rittal system	Packs of	PLS 800		PLS 1600			Page
No. of poles/bar centre distance		3-pole/60 mm		3-pole/60 mm		4-pole/ 60 mm	
Model No. SV	4	9341.000	9341.050	9342.000	9342.050	9342.004	

Contact hazard protection



Components		Length mm	Approvals	Packs of	Model No. SV		Model No. SV			Page
A	End cover	–	UL	2	**9341.070**	**9341.070**	**9342.070**	**9342.070**	**9342.074**	–
B	Base tray	500	UL	2	9341.100	9341.100	9342.100	9342.100	–	315
		700	UL	2	9341.110	9341.110	9342.110	9342.110	–	315
		900	UL	2	9341.120	9341.120	9342.120	9342.120	–	315
		1100	UL	2	9341.130	9341.130	9342.130	9342.130	9342.134	315
		2400	–	1	9341.170	–	9342.170	–	–	315
C	Base tray infill	100	UL	2	9341.140	9341.140	9342.140	9342.140	–	315
D	Cover section	700	UL	2	9340.200	9340.200	9340.200	9340.200	–	315
		1100	UL	2	9340.210	9340.210	9340.210	9340.210	9340.214	315
E	Support panel	–	UL	5	9340.220	9340.220	9340.220	9340.220	9340.224	315
F	Cross members	160	–	2	–	9340.230	–	9340.230	–	315

PLS special busbars E-Cu[1)]



Design			Packs of	PLS 800	PLS 1600	Page
Bar cross-section				300 mm²	900 mm²	
Bar thickness				5 mm	10 mm	
Max. rated current acc. to	DIN EN			800 A	1600 A	
	UL 508			700 A	1400 A	
Length mm	For enclosure width mm	Approvals		Model No. SV	Model No. SV	
495	600	cULus	3	3524.000	3527.000	312
695	800	cULus	3	3525.000	3528.000	312
895	1000	cULus	3	3525.010	3528.010	312
1095	1200	cULus	3	3526.000	3529.000	312
2400	variable	cULus	1	3509.000	3516.000	312

Accessories

Components		Approvals	Packs of	Model No. SV	Model No. SV	Page
PLS busbar connectors	Single connection	cULus	3	3504.000	3514.000	313
	Baying connection[2)]	cULus	3	3505.000	3515.000	313
PLS expansion connectors[3)]		cULus	3	9320.060	9320.070	313

[1)] To order the tin-plated version of the busbars, please add extension .2X0 to the Model No. Delivery times available on request.
[2)] Connection from enclosure to enclosure (TS 8)
[3)] Two PLS busbar connectors (single connection) are required to fit one expansion connector.

RiLine60 connection system

Busbar systems Page 276 – 279 **Component adaptors** Page 283 – 289 **Fuse elements** Page 294 – 309

Material:
Chassis
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0
Chassis
SV 3439.010
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0
Cover
– ABS
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

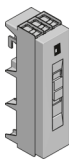
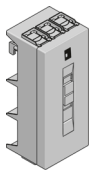
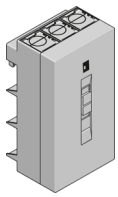
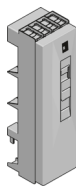
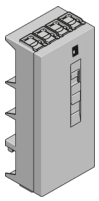
Note:
The technical data given in the tables may vary for UL applications.

SV 3439.010
When connecting round conductors 300 mm² with ring terminals, the terminal clamps fitted as standard in the busbar connection adaptors must be replaced with screws and/or bolts M10.

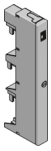
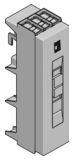
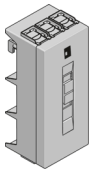
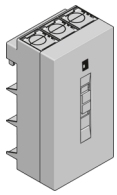
Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

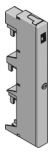
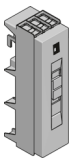
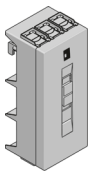
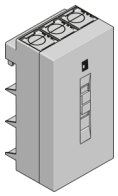
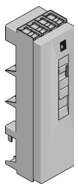
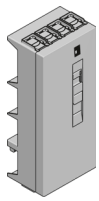
Busbar connection adaptor 125 A/250 A/800 A, cable outlet top/bottom

							
Design	Packs of	3-pole			4-pole		Page
Rated current up to		125 A	250 A	800 A	125 A	250 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	690 V~	
Cable outlet top/bottom		■	■	■	■	■	
Connection of round conductors mm² ● fine-wire with wire end ferrule ● multi-wire ● solid		10 – 25 16 – 35 –	35 – 120 35 – 120 –	95 – 185 95 – 300 –	10 – 25 16 – 35 –	35 – 120 35 – 120 –	
Clamping area for laminated copper bars W x H mm		10 x 7.8	18.5 x 15.5	33 x 20	10 x 7.8	18.5 x 15.5	
Width mm		55	90	129	75	118	
Height mm		210	210	246	270	270	
Approvals							
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No. SV	1	**9342.220**	**9342.250**	**9342.280**	**9342.224**	**9342.254**	
Accessories							
Laminated copper bars		■	■	■	■	■	314

Busbar connection adaptor 63 A/125 A/250 A/800 A, cable outlet top

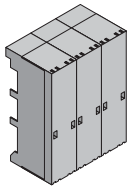
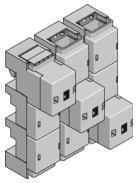
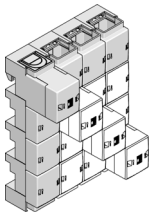
						
Design	Packs of	3-pole	3-pole	3-pole	3-pole	Page
Rated current up to		63 A	125 A	250 A	800 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet at the top		■	■	■	■	
Connection of round conductors mm² ● fine-wire with wire end ferrule ● multi-wire ● solid		 2.5 – 10 2.5 – 10 2.5 – 10	 10 – 25 16 – 35 –	 35 – 120 35 – 120 –	 95 – 185 95 – 300 –	
Clamping area for laminated copper bars W x H mm		–	10 x 7.8	18.5 x 15.5	33 x 20	
Width mm		20	55	90	129	
Height mm		215	210	210	246	
Approvals		UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	
Model No. SV	1	**9342.200**	**9342.230**	**9342.260**	**9342.290**	
Accessories						
Laminated copper bars		–	■	■	■	314

Busbar connection adaptor 63 A/125 A/250 A/800 A, cable outlet bottom

								
Design	Packs of	3-pole				4-pole		Page
Rated current up to		63 A	125 A	250 A	800 A	125 A	250 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	
Cable outlet at the bottom		■	■	■	■	■	■	
Connection of round conductors mm² ● fine-wire with wire end ferrule ● multi-wire ● solid		 2.5 – 10 2.5 – 10 2.5 – 10	 10 – 25 16 – 35 –	 35 – 120 35 – 120 –	 95 – 185 95 – 300 –	 10 – 25 16 – 35 –	 35 – 120 35 – 120 –	
Clamping area for laminated copper bars W x H mm		–	10 x 7.8	18.5 x 15.5	33 x 20	10 x 7.8	18.5 x 15.5	
Width mm		20	55	90	129	75	118	
Height mm		215	210	210	246	270	270	
Approvals		UL	UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	5/10	
Model No. SV	1	**9342.210**	**9342.240**	**9342.270**	**9342.300**	**9342.244**	**9342.274**	
Accessories								
Laminated copper bars		–	■	■	■	■	■	314

RiLine60 connection system

Busbar connection adaptor 600 A/800 A/1600 A, cable outlet top/bottom

							
Design	Packs of	3-pole			4-pole		Page
Rated current up to		600 A	800 A	1600 A	800 A	1600 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	690 V~	
Cable outlet top/bottom		■	■	■	■	■	
Connection of round conductors mm² ● fine-wire with wire end ferrule ● multi-wire		 35 – 240 35 – 240	 95 – 185 95 – 300	 – –	 95 – 185 95 – 300	 – –	
Clamping area for laminated copper bars W x H mm ● For 5 mm bar thickness ● For 10 mm bar thickness		 24 x 21 24 x 21	 33 x 26 33 x 21	 65 x 27 65 x 22	 33 x 26 33 x 21	 65 x 27 65 x 22	
Width mm		180	150	255	150	255	
Height mm		247	210	210	210	210	
Approvals		–	㊊	㊊	㊊	㊊	
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	
For bar thickness mm		5/10	5/10	5/10	5/10	5/10	
Model No. SV	1 set	**3439.010**	**9342.310**	**9342.320**	**9342.310**	**9342.320**	
Also required							
Busbar connection adaptor (extra set for 4-pole configuration)							
Width mm		–	–	–	50	85	
Height mm		–	–	–	270	270	
Approvals		–	–	–	㊊	㊊	
For bar systems with centre-to-centre spacing mm		–	–	–	60	60	
For bar thickness mm		–	–	–	5/10	5/10	
Model No. SV	1	**–**	**–**	–	**9342.314**	**9342.324**	
Accessories							
Laminated copper bars		■	■	■	■	■	314

RiLine60 component adaptor

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Fuse elements** Page 294 – 309

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
Chassis: RAL 7035

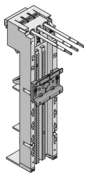
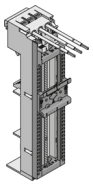
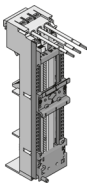
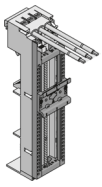
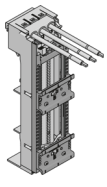
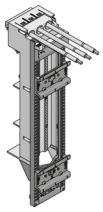
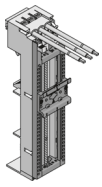
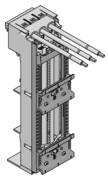
Note:
– Overview of standard commercially available switchgear with allocation of the relevant adaptor, see page 290 – 293.
– The technical data given in the tables may vary for UL applications.

Design of support rails:
– TS XXC with anti-slip guard
– TS XXD without anti-slip guard
– TS XXD-V without anti-slip guard, variable positioning on the support frame
– TS XXE with anti-slip guard, reinforced version

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

OM adaptors 25 A/32 A with connection cables (3-pole)

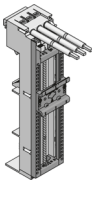
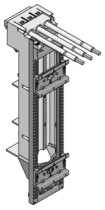
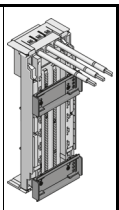
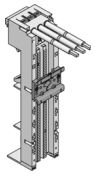
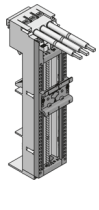
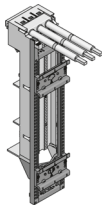
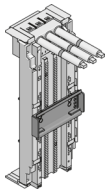
Design											
Rated current up to		Packs of	25 A	25 A	25 A	32 A	32 A	32 A	32 A	32 A	Page
Rated operating voltage			690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	
Connection cables[1]	Design		AWG 12	AWG 12	AWG 12	AWG 10	AWG 10	AWG 10	AWG 10	AWG 10	
	Length mm		130	130	130	130	130	130	130	130	
With	Support frame mm		–	45 x 170	45 x 170	45 x 170	45 x 170	45 x 237	55 x 170	55 x 170	
	PinBlock		–	–	■	–	–	–	–	–	
	Support frame support		–	–	–	–	–	■	–	–	
Support rails	Qty.		1	1	1	1	2	2	1	2	
	Height mm		10	10	10	10	10	10	10	10	
Design of support rails			TS 45C	TS 45C	TS 45C	TS 45C	TS 45D TS 45 D-V[2]	TS 45D TS 45 D-V[2]	TS 55D	TS 45D TS 55 D-V[2]	319
Width mm			45	45	45	45	45	45	55	55	
Height mm			208	208	208	208	208	272	208	208	
Approvals			UL	UL	UL	UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm			60	60	60	60	60	60	60	60	
For bar thickness mm			5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	
Model No. SV		1	**9340.310**	**9340.340**	**9340.370**	**9340.350**	**9340.380**	**9340.390**	**9340.460**	**9340.470**	

Accessories	
OM support	see page 286
Insert strip, support rails	see page 319
Connection pin, support frame, PinBlock for support frame, PinBlock PLUS	see page 320/321

[1] AWG = American Wire Gauges · AWG 12 = 3.31 mm² ≙ 4 mm² · AWG 10 = 5.26 mm² ≙ 6 mm²
[2] Support rail with special latch is secured from behind with the support frame loosened.

RiLine60 component adaptor

OM adaptors 40 A/65 A with connection cables (3-pole)

Design										
Rated current up to		Packs of	40 A	40 A	40 A	65 A	65 A	65 A	65 A	Page
Rated operating voltage			690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	
Connection cables[1]	Design		AWG 8	AWG 8	AWG 8	AWG 6	AWG 6	AWG 6	AWG 6	
	Length mm		130	130	130	130	130	130	130	
With	Support frame mm		55 x 170	55 x 237	–	–	55 x 170	55 x 237	–	
	Support frame support		–	■	–	–	–	■	–	
	Insert strips		–	–	■	–	–	–	■	
Support rails	Qty.		1	2	2	1	1	2	1	
	Height mm		10	10	7.5	10	10	10	7.5	
Design of support rails			TS 55D	TS 55D TS 55D-V[2]	Metal	TS 55E	TS 55E	TS 55D TS 55D-V[2]	Metal	319
Width mm			55	55	75	55	55	55	75	
Height mm			208	272	208	208	208	272	208	
Approvals			UL	UL	UL	UL	UL	UL	UL	
For bar systems with centre-to-centre spacing mm			60	60	60	60	60	60	60	
For bar thickness mm			5/10	5/10	5/10	5/10	5/10	5/10	5/10	
Model No. SV		1	**9340.720**	**9340.730**	**9340.710**	**9340.410[3]**	**9340.430[3]**	**9340.450[3]**	**9340.700[3]**	

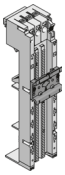
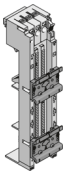
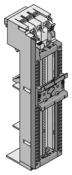
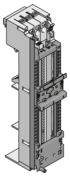
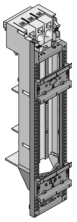
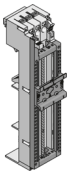
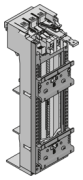
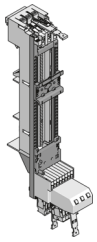
Accessories	
OM support	see page 286
Insert strip, support rails	see page 319
Connection pin, support frame, PinBlock for support frame, PinBlock PLUS	see page 320/321

[1] AWG = American Wire Gauges
AWG 8 = 8.37 mm² ≙ 10 mm²
AWG 6 = 13.3 mm² ≙ 16 mm²
[2] Support rail with special latch is secured from behind with the support frame loosened.
[3] According to a heat dissipation test to IEC 60 439-1, a current carrying capacity of up to 80 A is supported.

Rittal Sweden

RITTAL Scandinavian ab
Rittalgatan 1 · SE-262 73 Ängelholm
Phone: +46 (431) 44 26 00
Fax: +46 (431) 44 26 44
E-mail: info@rittal.se · www.rittal.se

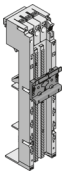
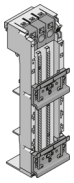
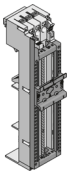
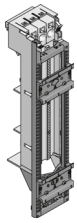
OM adaptors 32 A with tension spring clamp/OM Premium adaptors 25 A (3-pole)

Design									Premium adaptor 			
Rated current up to		Packs of	32 A	32 A	32 A	32 A	32 A	32 A	25 A	25 A	25 A	Page
Rated operating voltage			690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	690 V~	
Connection of round conductors mm²			1.5 – 6	1.5 – 6	1.5 – 6	1.5 – 6	1.5 – 6	1.5 – 6	1.5 – 4	1.5 – 4	1.5 – 4	
With	Support frame mm		–	–	45 x 170	45 x 170	45 x 237	55 x 170	45 x 170	55 x 170	45 x 237	
	Support frame support		–	–	–	–	■	–	–	–	■	
	PinBlock		–	–	–	■	–	–	–	–	■	
	Connector outlet		–	–	–	–	–	–	1)	1)	2)	
Support rails	Qty.		1	2	1	1	2	1	2	2	1	
	Height mm		10	10	10	10	10	10	10	10	10	
Design of support rails			TS 45C	TS 45D	TS 45C	TS 45C	TS 45D TS 45D-V3)	TS 55D	TS 45D TS 45D-V3)	TS 55D TS 55D-V3)	TS 45C	319
Width mm			45	45	45	45	45	55	45	55	45	
Height mm			208	208	208	208	272	208	208	208	292	
For bar systems with centre-to-centre spacing mm			60	60	60	60	60	60	60	60	60	
For bar thickness mm			5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	5/10	
Model No. SV		1	**9340.510**	**9340.520**	**9340.530**	**9340.550**	**9340.560**	**9340.660**	**9340.910**	**9340.930**	**9340.900**	
Accessories												
Cable set	AWG 14	15	9340.850	9340.850	9340.850	9340.850	9340.850	9340.850	9340.850	9340.850	9340.850	321
	AWG 12	15	9340.860	9340.860	9340.860	9340.860	9340.860	9340.860	9340.860	9340.860	9340.860	321
	AWG 10	15	9340.870	9340.870	9340.870	9340.870	9340.870	9340.870	–	–	–	321
OM support		see page 286										
Insert strip, support rails		see page 319										
Connection pin, support frame, PinBlock for support frame, PinBlock PLUS, ST combination connector		see page 320/321										

1) Supply includes: Connector with connection facility for 3 main contacts (1.5 – 4 mm²).
2) Supply includes: Sub-unit with connection facility for 3 main contacts (1.5 – 4 mm²) and 8 auxiliary contacts (0.5 – 2.5 mm²) including connectors.
3) The support rail with special latch is attached from the rear with the support frame loosened.

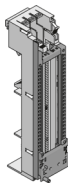
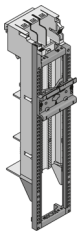
RiLine60 component adaptor

OM adaptors 65 A with tension spring clamp (3-pole)

Design							
Rated current up to		Packs of	65 A	65 A	65 A	65 A	Page
Rated operating voltage			690 V~	690 V~	690 V~	690 V~	
Connection of round conductors mm²			2.5 – 16	2.5 – 16	2.5 – 16	2.5 – 16	
With	Support frame mm		–	–	55 x 170	55 x 237	
	Support frame support		–	–	–	■	
Support rails	Qty.		1	2	1	2	
	Height mm		10	10	10	10	
Design of support rails			TS 55E	TS 55E TS 55D	TS 55E	TS 55D TS 55D-V[1]	319
Width mm			55	55	55	55	
Height mm			208	208	208	272	
For bar systems with centre-to-centre spacing mm			60	60	60	60	
For bar thickness mm			5/10	5/10	5/10	5/10	
Model No. SV		1	**9340.610[2]**	**9340.620[2]**	**9340.630[2]**	**9340.650[2]**	
Accessories							
Cable set	AWG 14	15	9340.850	9340.850	9340.850	9340.850	321
	AWG 12	15	9340.860	9340.860	9340.860	9340.860	321
	AWG 10	15	9340.870	9340.870	9340.870	9340.870	321
	AWG 8	6	9340.880	9340.880	9340.880	9340.880	321
	AWG 6	6	9340.890	9340.890	9340.890	9340.890	321
Twin cords AWG 10		6	9340.820	9340.820	9340.820	9340.820	321
Insert strip, support rails		see page 319					
Connection pin, support frame, PinBlock for support frame, PinBlock PLUS		see page 320/321					

[1] The support rail with special latch is attached from the rear with the support frame loosened.
[2] According to a heat dissipation test to IEC 60 439-1, a current carrying capacity of up to 80 A is supported.

OM supports without contact system (3-pole)

Design					
With	Support frame mm	Packs of	45 x 170	45 x 237	55 x 237	Page
	Support frame support		–	■	■	
	PinBlock		■	–	–	
Support rails	Qty.		–	1	1	
	Height mm		–	10	10	
Design of support rails			–	TS 45D	TS 55D-V[1]	319
Approvals			UL	UL	UL	
Width mm			45	45	55	
Height mm			208	272	272	
For bar systems with centre-to-centre spacing mm			60	60	60	
For bar thickness mm			5/10	5/10	5/10	
Model No. SV		1	**9340.260**	**9340.250**	**9340.270**	
Accessories						
Insert strip, support rails		see page 319				
Connection pin, support frame, PinBlock for support frame, PinBlock PLUS		see page 320/321				

[1] The support rail with special latch is attached from the rear with the support frame loosened.

RiLine60 component adaptor

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Fuse elements** Page 294 – 309

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

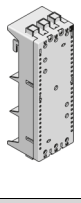
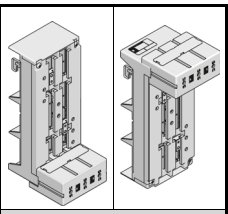
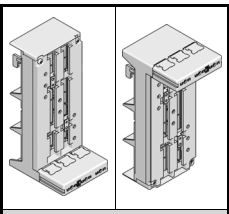
Supply includes:
Circuit-breaker component adaptor 125 to 630 A
Including terminal cover and sliding blocks for switchgear attachment.

Note:
The technical data given in the tables may vary for UL applications.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

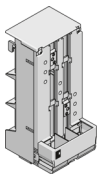
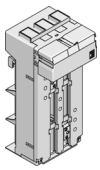
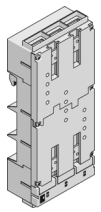
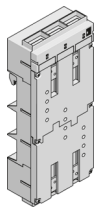
Circuit-breaker component adaptors 100 A/125 A/160 A (3-pole)

Design									
Rated current up to		Packs of	100 A		125 A		160 A		Page
Rated operating voltage			690 V~		690 V~		690 V~		
Type of connection			Box terminal		Box terminal		Box terminal		
Connection of round conductors mm²			10 – 35		35 – 120		35 – 120		
Clamping area for laminated copper bars W x H mm			10 x 7.8		18.5 x 15.5		18.5 x 15.5		
For switchgear make/model	ABB		MS 497		S2, T1, T1 UL, T2, T2 UL		S2, T1, T2		
	Allen Bradley		–		140-CMN		140-CMN		
	Eaton		PKZ2[1]		NZM1, NZM1 UL, BZM B1		NZM1, BZM B1		
	GE		–		FD		FD		
	OEZ		–		BC160N		BC160N		
	Schneider Electric		GV3ME80[1]		NS80, NSC100, NSE75, NSE100		NS80, NSC100		
	Siemens		S3		3RV13 53, 3VT1		3RV13 53, 3VT1		
	Terasaki		–		E125, S125		E125, S125		
	Universal application		■ [1]		–		–		
Width mm			72		90		90		
Height mm			210		225		215		
Approvals			Ⓤ		Ⓤ		–		
For bar systems with centre-to-centre spacing mm			60		60		60		
For bar thickness mm			5/10		5/10		5/10		
Cable outlet[2]			Top	Bottom	Top	Bottom	Top	Bottom	
Model No. SV		1	**9342.400**	**9342.410**	**9342.540**	**9342.550**	**9342.500**	**9342.510**	
Accessories									
Support rail width 72 mm, height 15 mm		5	9320.120		–		–		322
Sliding blocks		6	–		9342.560		9342.560		322
Connection bracket			–		■		■		322

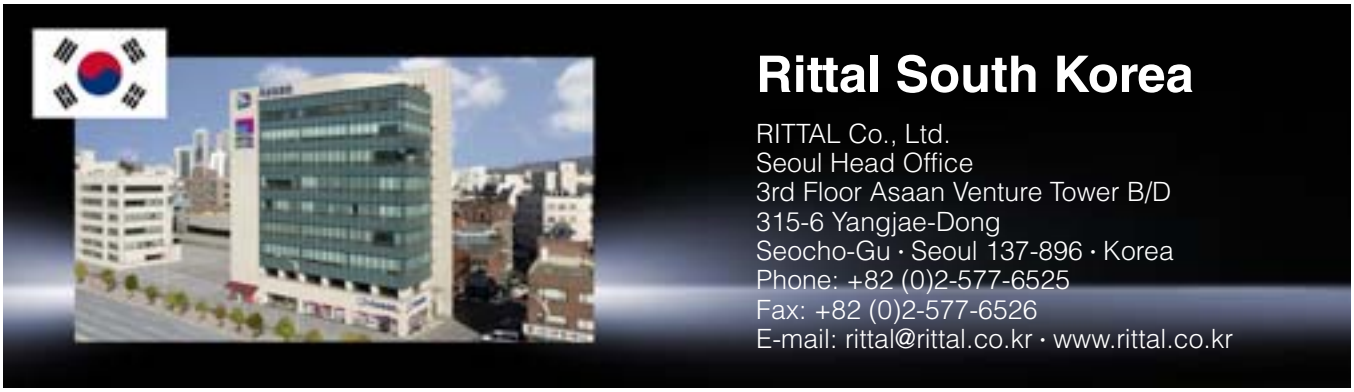
[1] Mounting only possible with support rail SV 9320.120. [2] Switch outlet or outgoing cable.

RiLine60 component adaptor

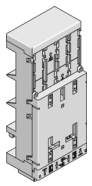
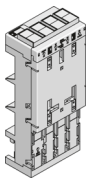
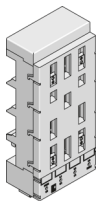
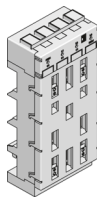
Circuit-breaker component adaptors 250 A/630 A (3-pole)

Design							
Rated current up to		Packs of	250 A		630 A		Page
Rated operating voltage			690 V~		690 V~		
Type of connection			Box terminal		Screw terminal M10		
Connection of round conductors mm²			35 – 120		max. 150[1]		
Clamping area for laminated copper bars W x H mm			18.5 x 15.5		32 x 10		
For switchgear make/model	ABB		S3, T3, T4[4], T3 UL, T4 UL		S5, T5, T5 UL		
	Allen Bradley		140U-J		140U-L		
	Eaton		NZM2, NZM2 UL, BZM B2		NZM3, NZM3 UL		
	GE		FE		–		
	Mitsubishi		NF125-SGW/HGW, NF160-SGW/HGW		NF400-SEW/HEW/REW, NF630-SEW/HEW/REW		
	OEZ		BD250N, BD250S		BH630N, BH630S		
	Schneider Electric		NS(X)100, NS(X)160, NS(X)250, GV7, NSF150, NSF250		NS(X)400, NS(X)630, NSJ400, NSJ600		
	Siemens		VL150X UL, VL150 UL, VL250 UL, VL160X, VL160, VL250, 3RV10 63, 3RV13 63, 3RV13 64, 3VT2[4]		VL400, VL630[2], VL400X UL, VL400 UL, 3VT3, 3V10 73, 3RV13 73, 3RV13 74		
	Terasaki		L125, H125, S160, H160, L160, E250, L250, H250		E400, S400, H400, L400, E630, S630		
Width mm			105		140		
Height mm			240		324		
Approvals			ⓊL		ⓊL		
For bar systems with centre-to-centre spacing mm			60		60		
For bar thickness mm			5/10		5/10		
Cable outlet[3]			Top	Bottom	Top	Bottom	
Model No. SV		1	**9342.600**	**9342.610**	**9342.700**	**9342.710**	
Accessories							
Insert strip 25 mm to extend the construction width from 140 mm to 190 mm		4 (1 set)	–		9342.720		322
Sliding blocks		6	9342.640		–		322
Connection bracket			■		■		322

[1] With ring terminal.
[2] Also required: Insert strip 25 mm (SV 9342.720).
[3] Switch outlet or outgoing cable.
[4] The top attachment bars on the circuit-breaker component adaptor must be removed.



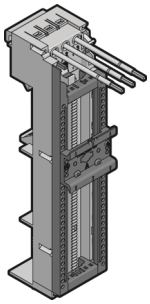
Circuit-breaker component adaptors 160 A/250 A (4-pole)

Design							
Rated current up to		Packs of	160 A		250 A		Page
Rated operating voltage			690 V~		690 V~		
Type of connection			Box terminal		Box terminal		
Connection of round conductors mm^2			35 – 120		35 – 120		
Clamping area for laminated copper bars W x H mm			18.5 x 15.5		18.5 x 15.5		
For switchgear make/model	ABB		T1 (160 A), T2 (160 A)		T3S (250 A), T4V (315 A)		
	Eaton		NZM1-4 (125 A), BZM E1-4 (100 A)		NZM2-4 (250 A)		
	Schneider Electric		NSC100		NS(X)100, NS(X)160, NS(X)250		
	Siemens		–		VL160X, VL160, VL250		
Width mm			120		140		
Height mm			277		310		
Approvals			UL		UL		
For bar systems with centre-to-centre spacing mm			60		60		
For bar thickness mm			5/10		5/10		
Cable outlet[1)]			Top	Bottom	Top	Bottom	
Model No. SV		1	**9342.504**	**9342.514**	**9342.604**	**9342.614**	
Accessories							
Sliding blocks		6	9342.560	9342.560	9342.640	9342.640	322

[1)] Switch outlet or outgoing cable.

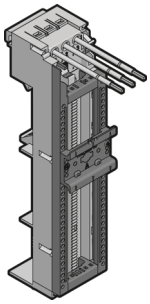
RiLine60 component adaptor

Allocation of switchgear – OM adaptors with connection cables

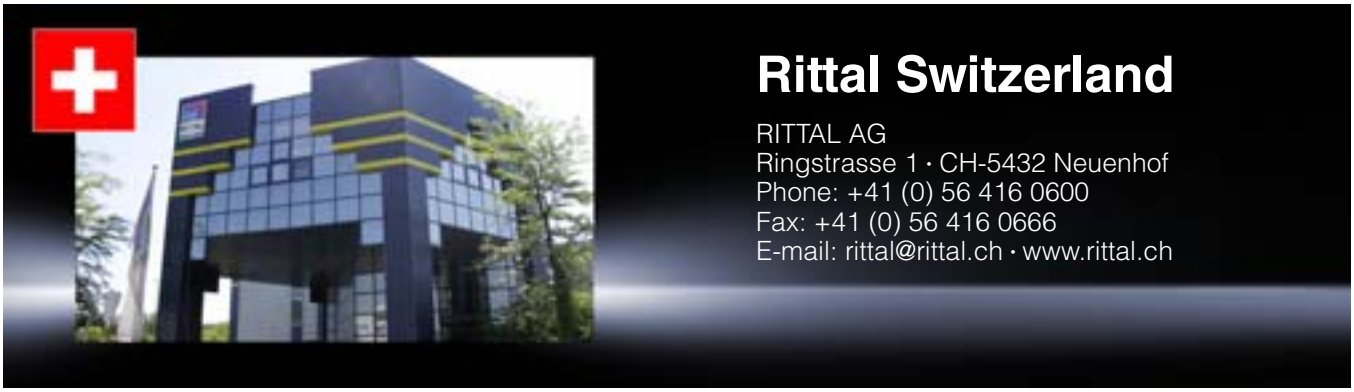


Model No. SV	Design	ABB: MCB: MS 116/132	ABB: MCB: MS 325	ABB: MCB: MS 450/451	ABB: MCB: MS 495/496/497	ABB: Starter: MS 116 + AF09, AF12, AF16	ABB: Starter: MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	ABB: Starter: MS 450 + A40, A50	ABB: Reversing starter: MS 116 + AF09, AF12, AF16	ABB: Reversing starter: MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	ABB: Reversing starter: MS 450 + A40, A50	ABB: Soft starter: MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25	ABB: Soft starter: MS 325 + PSR25	ABB: Soft starter: MS 450 + PSR30	Eaton: MCB: PKZM0	Eaton: MCB: PKZM01	Eaton: MCB: PKZM4	Eaton: MCB: PKE12	Eaton: MCB: PKE32	Eaton: MCB: PKE65	Eaton: Starter: MSC-D + M7 - M15	Eaton: Starter: MSC-D + M17 - M32	Eaton: Starter: PKZM4 + DILM 17-65	Eaton: Starter: MSC - DE ... M7 - M12	Eaton: Starter: MSC - DE ... M17 - M32	Eaton: Starter: PKE 65 + DILM 65	Eaton: Reversing starter: MSC - DE ... M7 - M12	Eaton: Reversing starter: MSC - DE ... M17 - M32	Eaton: Reversing starter: PKE 65 + DILM 65	Eaton: Soft starter: PKE 12, PKE 32 + DS7-340	Eaton: Soft starter: PKZ0 + DS7-340
	For make/model	MS 116/132	MS 325	MS 450/451	MS 495/496/497	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25	MS 325 + PSR25	MS 450 + PSR30	PKZM0	PKZM01	PKZM4	PKE12	PKE32	PKE65	MSC-D + M7 - M15	MSC-D + M17 - M32	PKZM4 + DILM 17-65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	PKE 12, PKE 32 + DS7-340	PKZ0 + DS7-340
		Construction width													Construction width																
		45	54	55	70	45	45	70	90	90	140	45	45	55	45	45	55	45	45	55	45	45	55	45	45	55	90	90	110	45	45
Model No. SV	**Design**	**Required quantity (units)**																													
9340.340	OM adaptor 25 A, AWG 12, W = 45 mm	1														1		1	1												
9340.350	OM adaptor 32 A, AWG 10, W = 45 mm					1									1																
9340.370	OM adaptor 25 A, AWG 12, W = 45 mm								1												1						1				
9340.380	OM adaptor 32 A, AWG 10, W = 45 mm																					1						1			
9340.390	OM adaptor 32 A, AWG 10, W = 45 mm						1			1		1	1											1	1					1	1
9340.430	OM adaptor 65 A, AWG 6, W = 55 mm			1	1												1			1										
9340.450	OM adaptor 65 A, AWG 6, W = 55 mm							1			1			1									1			1					
9340.460	OM adaptor 32 A, AWG 10, W = 55 mm		1																												
9340.260	OM support, 45 x 208 mm								1																		1	1			
9340.250	OM support, 45 x 272 mm									1																					
9340.270	OM support, 55 x 272 mm										1																				
9342.860	Support rail TS45D, 35 x 10 mm	1							1																						
9342.870	Support rail TS45D-V, 35 x 10 mm					1																						1			
9340.290	Insert strip, 10 x 208 mm				2			2			3																				
9340.280	Connection pin								3	3	3																3	3			

Allocation of switchgear – OM adaptors with connection cables

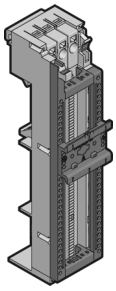


For make/model	Siemens																Schneider Electric													
	MCB					Starter						Reversing starter					MCB			Starter							Reversing starter				Soft starter
	3RV10 11... (S00)	3RV10 21... (S0)	3RV10 31... (S2)	3RV20 11... (S00) Screw terminal	3RV20 21... (S0) Screw terminal up to 40 A	3RA11 10... (S00)	3RA11 20... (S0)	3RA11 30... (S2)	3RA21 10... (S00) Screw terminal	3RA21 20... (S00/S0) Screw terminal	3RA21 20... (S0) Screw terminal	3RA12 10... (S00 + S00)	3RA11 20... (S0 + S0)	3RV10 31.. + 3RT103... (S2 + S2)	3RA22 10... (S00) Screw terminal	3RA22 20... (S0) Screw terminal	GV2 - ME (screw and tension spring terminal)	GV2 - P	GV2 - RT, LE10, L10	GV3 BIS 65A	GV2 P + LC1D	GV2 ME + LC1D	GV2 - DM102 + LC1D/LC1K	GV2 - DP + LC1D/LC1K	GV3 + LC1D65	LUB 12	LUB 32	GV2 P + LC2D (AC)	GV2 ME + LC2D/LC2K (AC)	GV2 DM + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 ME + ATS
	Construction width																Construction width														
	45	45	55	45	45	45	45	55	45	45	45	90	100	120	90	90	45	55	45	55	45	45	45	45	55	45	45	90	90	90	90	90	45
Model No. SV	**Design**	**Required quantity (units)**															**Required quantity (units)**															
9340.340	OM adaptor 25 A, AWG 12, W = 45 mm	1	1		1												1		1							1						
9340.350	OM adaptor 32 A, AWG 10, W = 45 mm									1	1					1					1	1	1	1			1	1	1	1	1	
9340.370	OM adaptor 25 A, AWG 12, W = 45 mm						1	1		1		1	1		1																	
9340.390	OM adaptor 25 A, AWG 12, W = 45 mm																															1
9340.430	OM adaptor 65 A, AWG 6, W = 55 mm			1														1		1												
9340.450	OM adaptor 65 A, AWG 6, W = 55 mm								1					1											1							
9340.720	OM support, 45 x 272 mm					1																										
9340.260	OM support, 45 x 208 mm											1	1		1													1	1	1	1	1	
9340.270	OM support, 55 x 272 mm													1		1																
9340.290	Insert strip, 10 x 208 mm												1	1																		
9340.280	Connection pin											3	3	3	3	3												3	3	3	3	3	
9342.800	PinBlock, W = 45 mm																				1	1	1	1				2	2	2	2	2	
9342.820	PinBlock PLUS																				1	1	1	1									



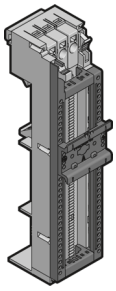
RiLine60 component adaptor

Allocation of switchgear – OM adaptors with tension spring terminal



For make/model	ABB													Eaton															
	MCB				Starter			Reversing starter			Soft starter			MCB						Starter						Reversing starter			Soft starter		
	MS 116/132	MS 325	MS 450/451	MS 495/496/497	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + AF09, AF12, AF16	MS 132 + AF09, AF12, AF16, AF26, AF30, AF38	MS 450 + A40, A50	MS 116 + PSR3, PSR6, PSR9, PSR12, PSR16, PSR25	MS 325 + PSR25	MS 450 + PSR30	PKZM0	PKZM01	PKZM4	PKE12	PKE32	PKE65	MSC-D + M7 - M15	MSC-D + M17 - M32	PKZM4 + DILM 17-65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	MSC - DE ... M7 - M12	MSC - DE ... M17 - M32	PKE 65 + DILM 65	PKE 12 + DS7-340	PKE 32 + DS7-340	PKZ0 + DS7-340
	Construction width													Construction width															
	45	54	55	70	45	45	70	90	90	140	45	45	55	45	45	55	45	45	55	45	45	55	45	45	55	90	90	110	45	45	45
Model No. SV	**Design**	**Required quantity (units)**													**Required quantity (units)**															
9340.530	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm	1				1								1	1		1	1													
9340.550	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm								1											1	1					1	1				
9340.560	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm						1			1		1	1										1	1					1	1	1
9340.660	OM adaptor 32 A, 1.5 – 6 mm², W = 55 mm		1																												
9340.630	OM adaptor 65 A, 2.5 – 16 mm², W = 55 mm			1	1											1			1												
9340.650	OM adaptor 65 A, 2.5 – 16 mm², W = 55 mm							1			1			1								1			1			1			
9340.250	OM support, 45 x 272 mm									1																					
9340.260	OM support, 45 x 208 mm								1																	1	1				
9340.270	OM support, 55 x 272 mm										1																	1			
9340.290	Insert strip, 10 x 208 mm				2			2			3																				
9340.280	Connection pin								3	3	3															3	3	3			
9340.860	Cable set AWG 12	3				3			3			3	3				3			3			3			3			3		
9340.870	Cable set AWG 10		3				3			3				3	3			3			3			3			3			3	3
9340.890	Cable set AWG 6			3	3			3			3		3			3			3			3			3			3			
9342.860	Support rail TS45D, 35 x 10 mm	1																													
9342.930	Support rail TS55D, 35 x 10 mm								1																						

Allocation of switchgear – OM adaptors with tension spring terminal



For make/model	Siemens																Schneider Electric													
	MCB					Starter						Reversing starter					MCB				Starter						Reversing starter				Soft starter
	3RV10 11... (S00)	3RV10 21... (S0)	3RV10 31... (S2)	3RV20 11... (S00) Screw terminal	3RV20 21... (S0) Screw terminal up to 40A	3RA11 10... (S00)	3RA11 20... (S0)	3RA11 30... (S2)	3RA21 10... (S00) Screw terminal	3RA21 20... (S00/S0) Screw terminal	3RA21 20... (S0) Screw terminal	3RA12 10... (S00 + S00)	3RA11 20... (S0 + S0)	3RV10 31.. + 3RT103... (S2 + S2)	3RA22 10... (S00) Screw terminal	3RA22 20... (S0) Screw terminal	GV2 - ME (screw and tension spring terminal)	GV2 - P	GV2 - RT, LE10, L10	GV3 BIS 65A	GV2 P + LC1D	GV2 ME + LC1D	GV2 - DM102 + LC1D/LC1K	GV2 - DP + LC1D/LC1K	GV3 + LC1D65	LUB 12	LUB 32	GV2 P + LC2D (AC)	GV2 ME + LC2D/LC2K (AC)	GV2 DM + LC2D/LC2K	GV2 DP + LC2D/LC2K	GV2 ME + ATS
	Construction width																Construction width													
	45	45	55	45	45	45	45	55	45	45	45	90	100	120	90	90	45	55	45	55	45	45	45	45	55	45	45	90	90	90	90	45

Model No. SV	Design	Required quantity (units)															Required quantity (units)													
9340.530	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm	1	1		1	1											1		1							1	1				
9340.550	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm						1	1		1	1	1	1	1		1	1					1	1	1	1			1	1	1	1	
9340.560	OM adaptor 32 A, 1.5 – 6 mm², W = 45 mm																														1
9340.630	OM adaptor 65 A, 2.5 – 16 mm², W = 55 mm			1														1		1											
9340.650	OM adaptor 65 A, 2.5 – 16 mm², W = 55 mm								1					1											1						
9340.260	OM support, 45 x 208 mm											1	1		1	1												1				
9340.270	OM support, 55 x 272 mm													1																	
9340.290	Insert strip, 10 x 208 mm												1																		
9340.280	Connection pin											3	3	3														3	3	3	3	
9340.860	Cable set AWG 12	3			3		3			3	3	3	3			3											3					
9340.870	Cable set AWG 10		3					3					3			3	3		3		3	3	3	3			3	3	3	3	3	3
9340.880	Cable set AWG 8					3																										
9340.890	Cable set AWG 6			3					3					3				3		3						3						
9342.820	PinBlock PLUS																				1			1				1	1	1	1	

Rittal Japan

RITTAL K.K.
Sales HQ.
Shin-Yokohama AK Bldg 2F
3-23-3, Shin-Yokohama, Kohoku-ku
Kanagawa 222-0033
Phone: 0120-998-631 / +81 (45) 478-6801
Fax: 0120-998-632 / +81 (45) 478-6880
E-mail: contact@rittal.co.jp · www.rittal.co.jp

RiLine60 fuse elements

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289

Material:
Bus-mounting fuse base
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0
Contact hazard protection
– Polyamide (PA 6.6)
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Note:
For the use of fuse inserts to DIN EN 60 269-3 (DIN VDE 0636-301).

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Bus-mounting fuse bases (3-pole)

Design	Packs of	Clamping screw fastening			Snap-on mounting					
Fuse inserts		D 02-E 18 (adaptor sleeve)	D II-E 27 (adaptor screw)	D III-E 33 (adaptor screw)	D 02-E 18 (adaptor sleeve)	D 02-E 18 (adaptor sleeve)	D II-E 27 (gauge ring)	D II-E 27 (gauge ring)	D III-E 33 (gauge ring)	D III-E 33 (gauge ring)
Width mm		27	42	57	36	36	42	42	57	57
Rated current		63 A	25 A	63 A	63 A	63 A	25 A	25 A	63 A	63 A
Rated operating voltage		400 V~	500 V~	690 V~	400 V~	400 V~	500 V~	500 V~	690 V~	690 V~
Terminal for round conductors[1] mm²		1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16	1.5 – 16
For bar systems with centre-to-centre spacing mm		60	60	60	60	60	60	60	60	60
For bar thickness mm		5/10	5/10	5/10	5	10	5	10	5	10
Model No. SV	10	**3418.000**	**3427.000**	**3433.000**	**3422.000**	**3423.000**	**3520.000**	**3521.000**	**3530.000**	**3531.000**
Contact hazard protection										
Design	Packs of	**Model No. SV**			**Model No. SV**					
Contact hazard protection cover	10	**3419.000**	**3428.000**	**3434.000**	**3424.000**	**3424.000**	**3428.000**	**3428.000**	**3434.000**	**3434.000**
Extension cover	10	**3421.000**	**3430.000**	**3436.000**	**–**	**–**	**3430.000**	**3430.000**	**3436.000**	**3436.000**
End caps for bar system with base tray	10	**3420.010**	**3429.010**	**3435.010**	**3425.010**	**3425.010**	**3429.010**	**3429.010**	**3435.010**	**3435.010**
End caps for bar system without base tray	10	**3420.000**	**3429.000**	**3435.000**	**3425.000**	**3425.000**	**3429.000**	**3429.000**	**3435.000**	**3435.000**
Side cover	10	**3093.000**	**3093.000**	**3093.000**	**3093.000**	**3093.000**	**3093.000**	**3093.000**	**3093.000**	**3093.000**
Identification labels	100	**9320.080**	**9320.080**	**9320.080**	**9320.080**	**9320.080**	**9320.080**	**9320.080**	**9320.080**	**9320.080**

[1] Wire end ferrules should be used with fine wire conductors.

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289

Material:
– Polyamide (PA 6)
– Fire protection corresponding to UL 94-V0

Colour:
– Chassis: RAL 7035
– Fuse holder: RAL 7001

Basis of test:
IEC/DIN EN 60 947-3

Supply includes:
Reducing retaining springs for D01 and 10 x 38 mm fuses.

Note:
– For the use of fuse inserts to DIN EN 60 269-3 (DIN VDE 0636-301).
– With integral visual fuse monitoring via flashing indicator and operating status display.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Bus-mounting fuse base D-Switch (3-pole)

Design	Packs of	Snap-on mounting
Fuse inserts		D 01[1)] D 02[2)] 10 x 38 mm[1)]
Rated operating current		63 A
Rated operating voltage		400 V~
Terminal for round conductors[3)] mm²		1.5 – 25
Min. voltage, indicator light		100 – 400 V~
Width mm		27
Height mm		226
For bar systems with centre-to-centre spacing mm		60
For bar thickness mm		5/10
Model No. SV	3	**9340.950**

[1)] When using D01 and 10 x 38 mm fuses, reducing retaining springs must be used. Use of D 01 fuses optionally possible with adaptor sleeve for D 02 base/plinths.
[2)] With Neozed adaptor sleeves for D 02.
[3)] Wire end ferrules should be used with fine wire conductors.

RiLine NH fuse elements

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289

Material:
NH fuse-switch disconnector
– Fibreglass-reinforced polyamide
– Fire protection corresponding to UL 94-V0
– Contact tracks: Silver-plated hard copper
Busbar adaptor
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0

Colour:
NH fuse-switch disconnector
– Chassis: RAL 9011
– Cover: RAL 7035
Busbar adaptor
– RAL 7035

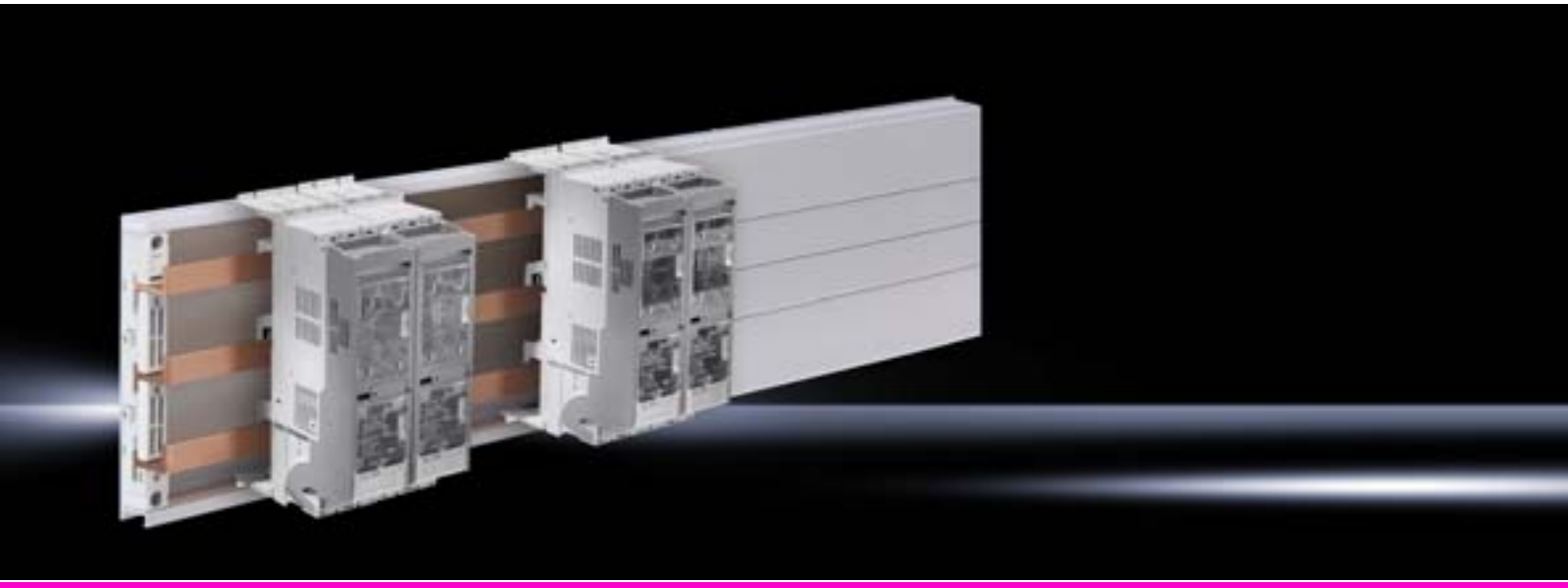
Basis of test:
– IEC/DIN EN 60 947-3
– DIN EN 60 269-2 (fuse inserts)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

NH fuse-switch disconnectors, size 000 (3-pole)

Rated operating current	Packs of	100 A		Page
Rated operating voltage		690 V~		
Cable outlet		top/bottom		
Type of connection		Terminal		
Connection of round conductors mm²		1.5 – 50		
Clamping area for laminated copper bars W x H mm		10 x 10		
Width mm		89		
Height mm		141.5		
For construction type		Mounting plate configuration		
Model No. SV	1	**3431.000**		
Also required				
Busbar adaptor For mounting SV 3431.000 on bar systems				
Connection cables mm²		35		
Width mm		90		
Height mm		230		
For bar systems with centre-to-centre spacing mm		60		
For bar thickness mm		5	10	
Model No. SV	1	**9320.040**	**9320.050**	
Accessories				
Micro-switch	5	3071.000		324



Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289

Material:
– Fibreglass-reinforced polyamide
– Fire protection corresponding to UL 94-V0
– Contact tracks: Silver-plated hard copper

Colour:
– Chassis: RAL 7035
– Cover: RAL 7001

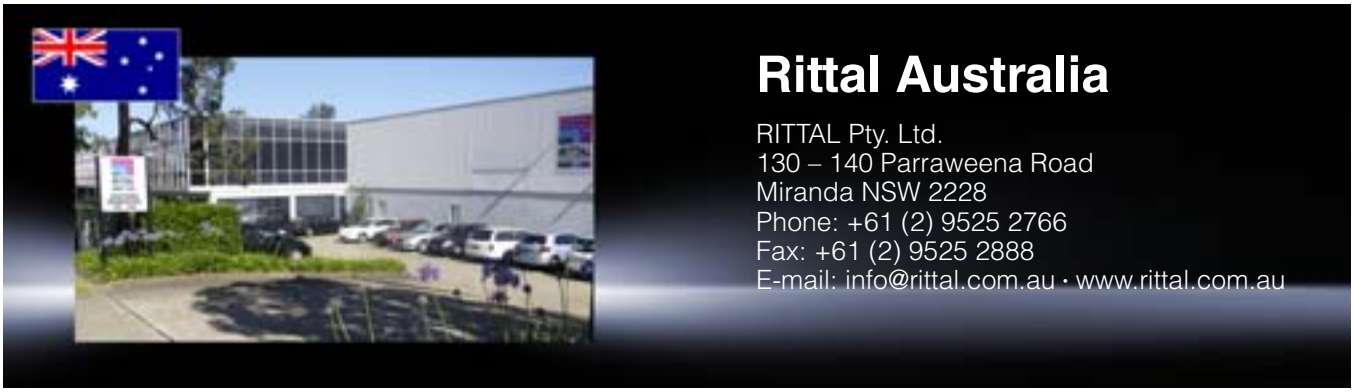
Basis of test:
– IEC/DIN EN 60 947-3
– DIN EN 60 269-2 (fuse inserts)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

NH bus-mounting fuse-switch disconnectors, size 000 (3-pole)

Rated operating current	Packs of	100 A	100 A	Page
Rated operating voltage		690 V~	690 V~	
Cable outlet		Top	Bottom	
Type of connection		Box terminal	Box terminal	
Connection of round conductors mm²		2.5 – 50	2.5 – 50	
Width mm		53	53	
Height mm		213	213	
For bar systems with centre-to-centre spacing mm		60	60	
For bar thickness mm		5/10	5/10	
Model No. SV	1	**3431.020**	**3431.030**	
Accessories				
Micro-switch	5	3071.000	3071.000	324



RiLine NH fuse elements

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289

Material:
– Polyamide (PA 6).
– Fire protection corresponding to UL 94-V0
– Contact tracks: Electrolytic copper, silver-plated

Colour:
– Chassis: RAL 7035
– Cover: RAL 7035/7001

Note:
The technical data given in the tables may vary for RU applications.
Applications to RU only in conjunction with "Special Purpose Fuses".

Basis of test:
– IEC/DIN EN 60 947-3
– DIN EN 60 269-2 (fuse inserts)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

NH fuse-switch disconnectors, size 00 (3-pole)

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		160 A	160 A	160 A	160 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm²		4 – 95	up to 95	4 – 95	up to 95	
Clamping area for laminated copper bars W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
Approvals						
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.000**	**9343.010**	**9344.000**	**9344.010**	
Accessories						
Micro-switch	5	3071.000	3071.000	3071.000	3071.000	324
Connection space cover	2	9344.520	9344.520	9344.520	9344.520	323
Prism terminal	3	–	9344.600	–	9344.600	323
Laminated copper bars		■	■	■	■	314

NH fuse-switch disconnectors size 00 (3-pole), with electronic fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		160 A	160 A	160 A	160 A	
Rated operating voltage		400 – 690 V~	400 – 690 V~	400 – 690 V~	400 – 690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm^2		4 – 95	up to 95	4 – 95	up to 95	
Clamping area for laminated copper bars W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.020**	**9343.030**	**9344.020**	**9344.030**	
Accessories						
Micro-switch	5	3071.000	3071.000	3071.000	3071.000	324
Connection space cover	2	9344.520	9344.520	9344.520	9344.520	323
Prism terminal	3	–	9344.600	–	9344.600	323
Laminated copper bars		■	■	■	■	314

NH fuse-switch disconnectors size 00 (3-pole), with electromechanical fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		160 A	160 A	160 A	160 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M8	Box terminal	Screw M8	
Connection of round conductors mm^2		4 – 95	up to 95	4 – 95	up to 95	
Clamping area for laminated copper bars W x H mm		13 x 13	20 x 5	13 x 13	20 x 5	
Width mm		106	106	106	106	
Height mm		194	194	194	194	
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.040**	**9343.050**	**9344.040**	**9344.050**	
Accessories						
Micro-switch	5	3071.000	3071.000	3071.000	3071.000	324
Connection space cover	2	9344.520	9344.520	9344.520	9344.520	323
Prism terminal	3	–	9344.600	–	9344.600	323
Laminated copper bars		■	■	■	■	314

RiLine NH fuse elements

NH fuse-switch disconnectors size 1 (3-pole)

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		250 A	250 A	250 A	250 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Box terminal	Screw M10	
Connection of round conductors mm²		35 – 150[1)]	up to 150	35 – 150[1)]	up to 150	
Clamping area for laminated copper bars W x H mm		20 x 3 – 14	32 x 10	20 x 3 – 14	32 x 10	
Width mm		184	184	184	184	
Height mm		298	298	298	298	
Approvals						
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.100**	**9343.110**	**9344.100**	**9344.110**	
Also required						
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	–	9344.810	324
Accessories						
Micro-switch	2	9344.510	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.530	9344.530	9344.530	9344.530	323
Box terminal	3	–	9344.610	–	9344.610	323
Arcing chamber	3	9344.680	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	■	314

[1)] Connection of sector-shaped conductors 50 – 150 mm².

NH fuse-switch disconnectors size 1 (3-pole), with electronic fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		250 A	250 A	250 A	
Rated operating voltage		400 – 690 V~	400 – 690 V~	400 – 690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm²		35 – 150[1)]	up to 150	up to 150	
Clamping area for laminated copper bars W x H mm		20 x 3 – 14	32 x 10	32 x 10	
Width mm		184	184	184	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.120**	**9343.130**	**9344.130**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.810	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.530	9344.530	9344.530	323
Box terminal	3	–	9344.610	9344.610	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 50 – 150 mm².

NH fuse-switch disconnectors size 1 (3-pole), with electromechanical fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		250 A	250 A	250 A	
Rated operating voltage		690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm^2		35 – 150[1)]	up to 150	up to 150	
Clamping area for laminated copper bars W x H mm		20 x 3 – 14	32 x 10	32 x 10	
Width mm		184	184	184	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.140**	**9343.150**	**9344.150**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.810	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.530	9344.530	9344.530	323
Box terminal	3	–	9344.610	9344.610	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 50 – 150 mm^2.

RiLine NH fuse elements

NH fuse-switch disconnectors size 2 (3-pole)

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		400 A	400 A	400 A	400 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Box terminal	Screw M10	
Connection of round conductors mm²		95 – 300[1)]	up to 240	95 – 300[1)]	up to 240	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	32 x 10 – 20	50 x 10	
Width mm		210	210	210	210	
Height mm		298	298	298	298	
Approvals						
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.200**	**9343.210**	**9344.200**	**9344.210**	
Also required						
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	–	9344.820	324
Accessories						
Micro-switch	2	9344.510	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.540	9344.540	9344.540	9344.540	323
Box terminal	3	–	9344.620	–	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm².

NH fuse-switch disconnectors size 2 (3-pole), with electronic fuse monitoring

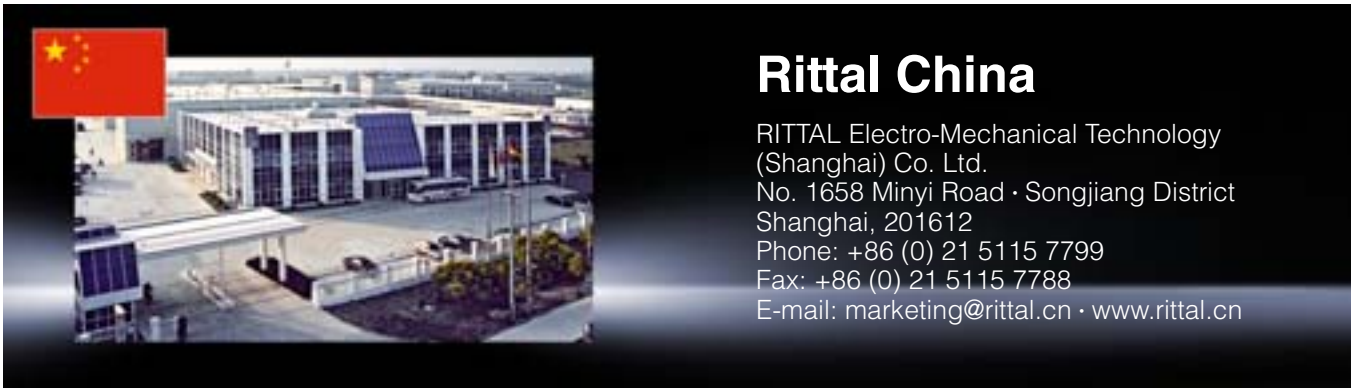
Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		400 A	400 A	400 A	
Rated operating voltage		400 – 690 V~	400 – 690 V~	400 – 690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm²		95 – 300[1)]	up to 240	up to 240	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	50 x 10	
Width mm		210	210	210	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.220**	**9343.230**	**9344.230**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.820	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.540	9344.540	9344.540	323
Box terminal	3	–	9344.620	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm².

NH fuse-switch disconnectors size 2 (3-pole), with electromechanical fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		400 A	400 A	400 A	
Rated operating voltage		690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm^2		95 – 300[1)]	up to 240	up to 240	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	50 x 10	
Width mm		210	210	210	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.240**	**9343.250**	**9344.250**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.820	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.540	9344.540	9344.540	323
Box terminal	3	–	9344.620	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm^2.



RiLine NH fuse elements

NH fuse-switch disconnectors size 3 (3-pole)

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly		Page
Rated operating current		630 A	630 A	630 A	630 A	
Rated operating voltage		690 V~	690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Box terminal	Screw M10	
Connection of round conductors mm²		95 – 300[1)]	up to 300	95 – 300[1)]	up to 300	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	32 x 10 – 20	50 x 10	
Width mm		250	250	250	250	
Height mm		298	298	298	298	
Approvals						
For bar systems with centre-to-centre spacing mm		60	60	–	–	
For bar thickness mm		5/10	5/10	–	–	
Model No. SV	1	**9343.300**	**9343.310**	**9344.300**	**9344.310**	
Also required						
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	–	9344.830	324
Accessories						
Micro-switch	2	9344.510	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.550	9344.550	9344.550	9344.550	323
Box terminal	3	–	9344.620	–	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm².

NH fuse-switch disconnectors size 3 (3-pole), with electronic fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		630 A	630 A	630 A	
Rated operating voltage		400 – 690 V~	400 – 690 V~	400 – 690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm²		95 – 300[1)]	up to 300	up to 300	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	50 x 10	
Width mm		250	250	250	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.320**	**9343.330**	**9344.330**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.830	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.550	9344.550	9344.550	323
Box terminal	3	–	9344.620	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm².

NH fuse-switch disconnectors size 3 (3-pole), with electromechanical fuse monitoring

Design	Packs of	NH bus-mounting fuse-switch disconnectors for bar systems		NH fuse-switch disconnectors for mounting plate assembly	Page
Rated operating current		630 A	630 A	630 A	
Rated operating voltage		690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Box terminal	Screw M10	Screw M10	
Connection of round conductors mm^2		95 – 300[1)]	up to 300	up to 300	
Clamping area for laminated copper bars W x H mm		32 x 10 – 20	50 x 10	50 x 10	
Width mm		250	250	250	
Height mm		298	298	298	
For bar systems with centre-to-centre spacing mm		60	60	–	
For bar thickness mm		5/10	5/10	–	
Model No. SV	1	**9343.340**	**9343.350**	**9344.350**	
Also required					
Busbar adaptor For mounting NH fuse-switch disconnectors on bar systems with 100 mm centre-to-centre spacing	1	–	–	9344.830	324
Accessories					
Micro-switch	2	9344.510	9344.510	9344.510	324
Connection space cover	2	9344.550	9344.550	9344.550	323
Box terminal	3	–	9344.620	9344.620	323
Arcing chamber	3	9344.680	9344.680	9344.680	323
Laminated copper bars		■	■	■	314

[1)] Connection of sector-shaped conductors 120 – 300 mm^2.

RiLine NH fuse elements

Busbar systems Page 276 – 279, 340 **Connection system** Page 280 – 282 **NH fuse-switch disconnectors** Page 296 – 305

Material:
– Fibreglass-reinforced polyamide
– Fire protection corresponding to UL 94-V0
– Contact tracks: Silver-plated hard copper

Colour:
– Chassis: RAL 7035
– Cover: RAL 7001
– Handle: RAL 7016

Basis of test:
– IEC/DIN EN 60 947-3
– DIN EN 60 269-2 (fuse inserts)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

NH slimline fuse-switch disconnectors, size 00 (3-pole)

Rated operating current		Packs of	160 A		160 A		160 A		Page
Rated operating voltage			690 V~		690 V~		690 V~		
Cable outlet			top/bottom		top/bottom		top/bottom		
Type of connection			Box terminal		Screw M8		Screw M8		
Connection of round conductors mm^2			2.5 – 95		up to 95		up to 95		
Width mm			50		50		50		
Height mm			400		400		740		
For converter installation			–	–	–	–	–	■	
For bar systems with centre-to-centre spacing mm			60	100	60	100	185	185	
For bar thickness mm			5/10	10	5/10	10	10	10	
Model No. SV		1	**9346.000**	**9346.020**	**9346.010**	**9346.030**	**9346.040**	**9346.050**	
Also required									
Busbar adaptor For mounting SV 9346.020/.030 on bar systems with 185 mm centre-to-centre spacing									
Design	Single adaptor	1	–	9346.410	–	9346.410	–	–	325
	Two-way adaptor	1	–	9346.420	–	9346.420	–	–	325
Busbar terminal For mounting SV 9346.040/.050 on bar systems with 185 mm centre-to-centre spacing		3	–	–	–	–	**9346.470**	**9346.470**	–
Accessories									
Micro-switch		5	9346.400	9346.400	9346.400	9346.400	9346.400	9346.400	324
Lug terminal connection part		1 set	–	–	3592.020	3592.020	3592.020	3592.020	324
Clamp-type terminal connection		1 set	–	–	3592.010	3592.010	3592.010	3592.010	325
Support bracket		4	9346.430	9346.430	9346.430	9346.430	9346.430	9346.430	325
Connection space cover		1	9346.460	9346.460	9346.460	9346.460	9346.460	9346.460	324
Sliding nuts M8 for mounting SV 9346.040/.050 on busbar systems	Maxi-PLS 1600/2000	15	–	–	–	–	9640.910	9640.910	329
	Maxi-PLS 3200	15	–	–	–	–	9650.905	9650.905	329

RiLine NH fuse elements

Busbar systems Page 340 **Connection clamps** Page 316 **Accessories** Page 310 – 325

Material:
– Fibreglass-reinforced polyamide
– Fire protection corresponding to UL 94-V0
– Contact tracks: Silver-plated hard copper

Colour:
– Chassis: RAL 7035
– Cover: RAL 7001
– Handle: RAL 7016

Supply includes:
– 3 screws M12 x 30 for equipment attachment
– 3 inserted screw nuts M12
– 3 hex nuts for cable connection

Basis of test:
– IEC/DIN EN 60 947-3
– DIN EN 60 269-2 (fuse inserts)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

NH slimline fuse-switch disconnectors, size 1/size 2/size 3 (3-pole)

Size	Packs of	Size 1	Size 2	Size 3	Page
Rated operating current		250 A	400 A	630 A	
Rated operating voltage		690 V~	690 V~	690 V~	
Cable outlet		top/bottom	top/bottom	top/bottom	
Type of connection		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm^2		up to 240	up to 240	up to 240	
Equipment attachment		Screw M12	Screw M12	Screw M12	
Width mm		100	100	100	
Height mm		740	740	740	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Model No. SV	1	**9346.110**	**9346.210**	**9346.310**	
Accessories					
Box terminal	3	9346.450	9346.450	9346.450	325
Busbar terminal	3	9346.440	9346.440	9346.440	325
Support bracket	4	9346.430	9346.430	9346.430	325
Micro-switch	5	3071.000	3071.000	3071.000	324
Inserted screw nuts M12	30	3591.060	3591.060	3591.060	311

RiLine Class fuse elements

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289 **Accessories** Page 310 – 325

Material:
– Polyamide (PA 6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Note:
Suitable for snap-on mounting on
– Support rails 35 mm (7.5/15 mm high) to DIN EN 60 715 or
– RiLine component adaptor combinations (OM adaptor/support), see page 283 – 286.

Approvals:
UL 512, CSA C22.2 No. 39

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Fuse holder up to 60 A (3-pole)

Fuse type (class)		CC	J	J
Rated operating current		30 A	30 A	60 A
Rated operating voltage		600 V~	600 V~	600 V~
Fuse standard		UL 4248-4	UL 4248-8	UL 4248-8
Fuse size mm		10 x 38	21 x 57	27 x 60
Connection of round conductors	mm^2	2.5 – 10	2.5 – 25	2.5 – 25
	AWG	AWG 6 – 14	AWG 2 – 14	AWG 2 – 14
Width mm		52.5	97.5	120
Height mm		78	114	122
Depth mm		59	80	89
Approvals		UL	UL	UL
Packs of		4	2	2
Model No. SV		**9345.000**	**9345.010[1)]**	**9345.030**

[1)] May also be used for cylindrical fuses 22 x 58 mm to French standards without UL licensing.

Mounting example on 60 mm bar systems

Required accessories		For fuse holder			Page
Model No. SV	Designation	SV 9345.000	SV 9345.010	SV 9345.030	
9340.260	OM support	–	1	–	286
9340.270	OM support	–	–	1	286
9340.280	Connection pin	–	3	6	320
9340.290	Insert strip	–	–	1	319
9340.410	OM adaptor	–	1	1	284
9340.460	OM adaptor	1	–	–	283
9342.880	Support rail	–	1	–	319
9342.950	Support rail	1	1	2	319

RiLine Class fuse elements

Busbar systems Page 276 – 279 **Connection system** Page 280 – 282 **Component adaptors** Page 283 – 289 **Accessories** Page 310 – 325

Material:
- Polyamide (PA 6).
- Fire protection corresponding to UL 94-V0
- Contact tracks: Electrolytic copper, silver-plated

Colour:
- Chassis: RAL 7035
- Cover: RAL 7035/7001

Approvals:
- UL 4248-1/UL 4248-8
- CSA C22.2 No. 4248.107/ CSA C22.2 No. 4248.8-07

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Fuse holder 61 – 400 A (3-pole)

Fuse type (class)	Packs of	J	J	J
Rated operating current		61 – 100 A	101 – 200 A	201 – 400 A
Rated operating voltage		600 V~	600 V~	600 V~
Fuse standard		UL 4248-8	UL 4248-8	UL 4248-8
Fuse size mm		29 x 118	41 x 146	54 x 181
Cable outlet		top/bottom	top/bottom	top/bottom
Type of connection		Box terminal	Box terminal	Box terminal
Connection of round conductors		AWG 2 – MCM 300	AWG 3/0 – MCM 600	AWG 3/0 – MCM 600
Width mm		184	210	250
Height mm		288	288	328/353[1)]
Approvals				
For bar systems				
Bar centre distance mm		60	60	60
For bar thickness mm		5/10	5/10	5/10
Model No. SV	1	**9345.100**	**9345.200**	**9345.400**
For mounting plate assembly				
Model No. SV	1	**9345.110**	**9345.210**	**9345.410**

[1)] 328 mm (SV 9345.400), 353 mm (SV 9345.410)

Busbar supports/base isolators

Busbar supports 1- and 2-pole

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Supply includes:
SV 9342.030
Including raised section for stepped configuration of the PLS busbars.

Note:
SV 9340.030/SV 9342.030
The busbar supports may be bayed with 60 mm bar centre distance for the configuration of multi-pole systems.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Design	Packs of	1	2	2	Page
Number of poles		1-pole	1-pole	2-pole	
Bar centre distance mm		–	–	60	
For busbars E-Cu		PLS 1600	–	–	312
		–	12 x 5/10[1], 15 x 5 – 30 x 10 mm	12 x 5 – 30 x 10 mm	311
PEN/N/PE support		■	■	■	
N/PE support		–	–	■	
Model No. SV	4	**9342.030**	**9340.030**	**9340.040**	
Accessories					
Spacers	12	–	9340.090	–	310
Captive nuts M5[2]	50	–	4166.000	4166.000	665

[1] If 12 x 5/10 mm busbars are used, the spacer SV 9340.090 is additionally required.
[2] For attaching the busbar support to the TS frame section and punched sections with mounting flanges with rectangular system punchings 12.5 x 10.5 mm.

Base isolators

For configuring busbar systems with any given bar centre distances and for assembling insulated PE or PEN bars.

Material:
Duroplastic polyester (UP resin)

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Rated operating voltage	1 kV	1 kV
Tensile strength	12 kN	13 kN
Torsional strength	75 Nm	90 Nm
Bending strength	6 kN	6 kN
Height mm	40	50
Thread	M10	M10
Packs of	6	6
Model No. SV	**3031.000**	**3032.000**

Spacers

for RiLine60 busbar supports (flat busbar system)
For adapting 12 x 5 and 12 x 10 mm size busbars.
For busbar supports
- SV 9340.030 (1-pole), see page 310.
- SV 9340.000/.010 (3-pole), see page 276.
- SV 9340.004 (4-pole), see page 276.

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

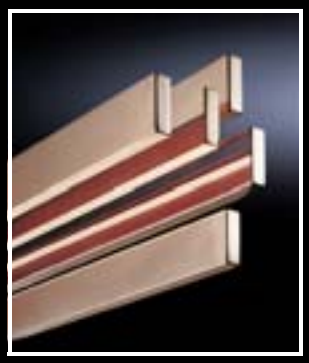
Colour:
RAL 7035

Packs of	**Model No. SV**
12	**9340.090**

Busbars E-Cu

To DIN EN 13 601.
Length: 2400 mm/bar.

Technical information:
Available on the Internet.



Dimensions mm	Approvals	Packs of	Model No. SV	Page
E-Cu				
12 x 5		6	**3580.000**	
15 x 5		6	**3581.000**	
20 x 5		6	**3582.000**	
25 x 5		6	**3583.000**	
30 x 5		6	**3584.000**	
12 x 10		6	**3580.100**	
15 x 10		6	**3581.100**	
20 x 10		6	**3585.000**	
30 x 10		6	**3586.000**	
40 x 10	–	3	**3587.000**	
50 x 10	–	3	**3588.000**	
60 x 10	–	3	**3589.000**	
80 x 10	–	3	**3590.000**	
100 x 10	–	3	**3590.010**	
E-Cu tin-plated[1)]				
30 x 5	–	6	**3584.200**	
30 x 10	–	6	**3586.200**	
Accessories				
Busbar connectors for busbars mm	12 x 5 – 15 x 10 (single connection)	3	9350.075	313
	20 x 5 – 30 x 10 (single connection)	3	9320.020	313
	20 x 5 – 30 x 10 (bayed connection)	3	9320.030	313
Busbar cover section for busbars mm	12/15 x 5	4	9350.010	311
	12/15 x 10	4	9350.060	311
	12 x 5 – 30 x 10	10	3092.000	311
	40 – 60 x 10	10	3085.000	311

[1)] Extended delivery times.

Busbar cover sections

Contact hazard protection via covering of the busbars. May be cut to required length.
Length: 1000 mm/section.

Material:
– Thermally modified hard PVC.
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Note:
Contact hazard protection, for more solutions see page 315.

Detailed drawings:
Available on the Internet.

For busbars mm	Approvals	Packs of	Model No. SV
12/15 x 5	–	4	**9350.010**
12/15 x 10	–	4	**9350.060**
12 x 5 – 30 x 10		10	**3092.000**
40 – 60 x 10	–	10	**3085.000**

Inserted screw nuts M12

Self-holding nuts with knurled ring for busbars E-Cu.
Hole diameter: 14.5 mm.

Packs of	Model No. SV
30	**3591.060**

Busbars

PLS special busbars E-Cu

Technical information:
Available on the Internet.

For system PLS 800, bar thickness 5 mm, bar cross-section 300 mm²

For enclosure width mm	Length mm	E-Cu tin-plated[1)]	Approvals	Packs of	Model No. SV	Page
600	495	–	ᵫ	3	**3524.000**	
600	495	■	–	3	**3524.200**	
800	695	–	ᵫ	3	**3525.000**	
800	695	■	–	3	**3525.200**	
1000	895	–	ᵫ	3	**3525.010**	
1000	895	■	–	3	**3525.210**	
1200	1095	–	ᵫ	3	**3526.000**	
1200	1095	■	–	3	**3526.200**	
variable	2400	–	ᵫ	1	**3509.000**	
variable	2400	■	–	1	**3509.200**	
Accessories						
PLS busbar connector (single connection)				3	3504.000	313
PLS busbar connector (bayed connection)				3	3505.000	313
PLS expansion connectors				3	9320.060	313

[1)] Extended delivery times.

For system PLS 1600, bar thickness 10 mm, bar cross-section 900 mm²

For enclosure width mm	Length mm	E-Cu tin-plated[1)]	Approvals	Packs of	Model No. SV	Page
600	495	–	ᵫ	3	**3527.000**	
600	495	■	–	3	**3527.200**	
800	695	–	ᵫ	3	**3528.000**	
800	695	■	–	3	**3528.200**	
1000	895	–	ᵫ	3	**3528.010**	
1000	895	■	–	3	**3528.210**	
1200	1095	–	ᵫ	3	**3529.000**	
1200	1095	■	–	3	**3529.200**	
variable	2400	–	ᵫ	1	**3516.000**	
variable	2400	■	–	1	**3516.200**	
Accessories						
PLS busbar connector (single connection)				3	3514.000	313
PLS busbar connector (bayed connection)				3	3515.000	313
PLS expansion connectors				3	9320.070	313

[1)] Extended delivery times.

Busbar connectors

For connecting square busbars, no drilling required.

Material:
SV 9350.075
– Top piece: St 37, nickel-plated surface finish
– Contact plate: E-Cu, nickel-plated surface finish

SV 9320.020/SV 9320.030
– Top piece: Sheet steel, zinc-plated, passivated
– Contact plate: E-Cu, silver-plated

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

For busbars mm	Application		Approvals	Packs of	Model No. SV
	Single connection	Bayed connection[1]			
12 x 5 – 15 x 10	■	–		3	**9350.075**
20 x 5 – 30 x 10	■	–		3	**9320.020**
	–	■		3	**9320.030**

[1] From enclosure to enclosure (TS 8)

PLS busbar connectors

For connecting the PLS special busbars; no drilling required.

Material:
E-Cu

Surface finish:
Nickel-plated

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Application	For system	Approvals	Packs of	Model No. SV
Single connection	PLS 800		3	**3504.000**
	PLS 1600		3	**3514.000**
Baying connection[1]	PLS 800		3	**3505.000**
	PLS 1600		3	**3515.000**

[1] From enclosure to enclosure (TS 8)

PLS expansion connectors

For thermal and mechanical compensation during connection of PLS special busbars from enclosure to enclosure (TS 8).

Material:
E-Cu

Note:
At a temperature increase of 30 K, there is an expansion in the length of the busbars by approximately 0.5 mm/m. For this reason, it is advisable to use an expansion connectors for thermal compensation in busbar systems with busbar sections > 3600 mm.

Detailed drawings:
Available on the Internet.

Expansion connectors	For system	Approvals	Packs of	Model No. SV	Page
	PLS 800		3	**9320.060**	
	PLS 1600		3	**9320.070**	
Also required					
PLS busbar connectors[1]	PLS 800		3	3504.000	313
	PLS 1600		3	3514.000	313

[1] Two busbar connectors are needed to fit one expansion connector.

Laminated copper bars

Laminated copper bars

Length: 2000 mm/bar.

Material:
Cu lamina
– High-purity electrolyte copper F20

Insulation
– High-strength vinyl compound
– Expansion 370%
– Temperature range: –30°C to +105°C
– Fire protection corresponding to UL 94-V0
– Dielectric strength: 20 kV/mm

Short-circuit resistance diagram:
Available on the Internet.

Technical information:
Available on the Internet.

Configuration[1] mm	I_n for 70 K[2]	I_n for 50 K[2]	I_n for 30 K[2]	Packs of	Model No. SV
8 x 6 x 0.5	195 A	165 A	125 A	1	**3565.015**
6 x 9 x 0.8	285 A	240 A	180 A	1	**3565.005**
4 x 15.5 x 0.8	330 A	275 A	210 A	1	**3567.005**
6 x 15.5 x 0.8	415 A	350 A	265 A	1	**3568.005**
10 x 15.5 x 0.8	575 A	480 A	365 A	1	**3569.005**
5 x 20 x 1	525 A	435 A	330 A	1	**3570.005**
5 x 24 x 1	605 A	510 A	385 A	1	**3571.005**
10 x 24 x 1	920 A	770 A	585 A	1	**3572.005**
5 x 32 x 1	770 A	645 A	485 A	1	**3573.005**
10 x 32 x 1	1155 A	965 A	730 A	1	**3574.005**
5 x 40 x 1	930 A	780 A	590 A	1	**3575.005**
10 x 40 x 1	1370 A	1145 A	865 A	1	**3576.005**
5 x 50 x 1	1125 A	940 A	710 A	1	**3577.005**
10 x 50 x 1	1635 A	1365 A	1030 A	1	**3578.005**
10 x 63 x 1	1950 A	1610 A	1230 A	1	**3579.005**

[1] Number of lamina x lamina width x lamina thickness
[2] The conductor temperature of the laminated copper bar is derived from the sum total of the ambient temperature and the temperature increase.
Example:
SV 3565.000 carrying 220 A, i.e. the temperature increases by 30 K. At an ambient temperature of 35°C, this produces a resultant conductor temperature of 35°C + 30 K = 65°C.

Universal support

For the attachment of laminated copper bars from 5 x 20 x 1 to 10 x 63 x 1 mm.

Material:
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Supply includes:
Screws and “U” nuts for mounting on PS punched rails.

Packs of	Model No. SV
3	**3079.000**

Accessories:

PS punched rails,
see page 651.

Short-circuit resistance diagram:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Universal support

For the attachment of multi-stacked laminated copper bars from 5 x 40 x 1 to 10 x 100 x 1 mm.

Material:
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Supply includes:
Screws and sliding nuts for attachment on C rails.

Packs of	Model No. SV
3 sets	**3079.010**

Note:
3 sets of universal supports correspond to the supply scope shown in the photograph.

Accessories:

C rails 30/15,
see page 653.

System components

Material:
– Thermally modified hard PVC
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Detailed drawings:
Available on the Internet.

For RiLine60 busbar systems			3-pole			4-pole		
			Flat bars	PLS 800	PLS 1600	Flat bars	30 x 10 PLUS	PLS 1600 PLUS
1 Base tray								
Length (L) mm	Packs of	Approv-als	**Model No. SV**			**Model No. SV**		
500	2	UL	**9340.100**	**9341.100**	**9342.100**	–	–	–
700	2	UL	**9340.110**	**9341.110**	**9342.110**	–	–	–
900	2	UL	**9340.120**	**9341.120**	**9342.120**	–	–	–
1100	2	UL	**9340.130**	**9341.130**	**9342.130**	**9340.134**	**9342.134**	**9342.134**
2400	1	–	**9340.170**	**9341.170**	**9342.170**	–	–	–
1 Base tray infill								
100	2	UL	**9340.140**	**9341.140**	**9342.140**	–	–	–
2 Cover section								
700	2	UL	**9340.200**	**9340.200**	**9340.200**	–	–	–
1100	2	UL	**9340.210**	**9340.210**	**9340.210**	**9340.214**	**9340.214**	**9340.214**

1 Base tray
For rear contact hazard protection of the flat bar assembly.

1 Base tray infill
For rear contact hazard protection when connecting the busbars from enclosure to enclosure.

Supply includes:
Assembly parts.

2 Cover section
May be cut to length as required; for clip-on mounting to the base tray.

Note:
If the cover section is loaded from the front, the support panel is needed for stability.

Support panel

for cover section
To prevent side access to the cover section. The support panel also provides additional stability. Recommended mounting distance ≤ 500 mm.

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

For system assembly	Approvals	Packs of	**Model No. SV**
3-pole	UL	5	**9340.220**
4-pole	UL	5	**9340.224**

Detailed drawings:
Available on the Internet.

Cross member

for RiLine60 busbar connections, 3-pole
To comply with the clearances required for "feeder circuits" under UL 508. For flat bar systems with 60 mm bar centre distance and PLS 800/1600.

Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Supply includes:
2 pieces for one busbar connection

Length mm	Approvals	Packs of	**Model No. SV**
160	UL	2	**9340.230**

Also required:

Support panel SV 9340.220 (2 pieces), see page 315.

Detailed drawings:
Available on the Internet.

Connection system

Conductor connection clamps

Material:
– Sheet steel, zinc-plated, passivated (SV 3450.500 – SV 3459.500)
– Brass (SV 3550.000/SV 3555.000)

Accessories:

Laminated copper bars, see page 314.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

For bar thickness mm	Connection of round conductors[1] mm²	Clamping area for laminated copper bars W x H mm	Approvals	Packs of	Model No. SV
3 –5	1 – 4	–		15	**3550.000**
5	1 – 4	–		15	**3450.500**
5	2.5 –16	8 x 8		15	**3451.500**
5	16 – 50	10.5 x 11		15	**3452.500**
5	35 – 70	16.5 x 15		15	**3453.500**
5	70 – 185	22.5 x 20		15	**3454.500**
6 –10	1 – 4	–		15	**3555.000**
10	1 – 4	–		15	**3455.500**
10	2.5 – 16	8 x 8		15	**3456.500**
10	16 – 50	10.5 x 11		15	**3457.500**
10	35 – 70	16.5 x 15		15	**3458.500**
10	70 – 185	22.5 x 20		15	**3459.500**

[1] Wire end ferrules should be used with fine wire conductors.

Plate clamps

For connecting laminated copper bars; no drilling required.

Material:
Sheet steel

Surface finish:
Zinc-plated, passivated

Accessories:

Laminated copper bars, see page 314.

For busbars mm	Clamping area for laminated copper bars W x H mm	Packs of	Model No. SV
12 x 5 – 30 x 10	34 x 10	3	**3554.000**
40 x 10	34 x 10	3	**3559.000**
50 x 10	34 x 10	3	**3560.000**
50 x 10	54 x 10	3	**3562.000**
60 x 10	34 x 10	3	**3561.000**
60 x 10	54 x 10	3	**3563.000**
80 x 10	65 x 10	3	**3460.500**

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

System covers

For conductor connection clamps and plate clamps.

Material:
– ABS
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Note:
For 3-pole systems with 60/100 mm bar centre distance.
Only suitable for use with systems without a base tray. For systems with a base tray, the system covers must be mechanically shortened.

Detailed drawings:
Available on the Internet.

Width mm	Depth mm	Height mm		Approvals	Packs of	Model No. SV
		For mounting on bar systems				
		60 mm	100 mm			
50	80	230	325		4	**3086.000**
100	80	230	325		4	**3087.000**
100	110	230	325		4	**3090.000**
200	80	230	325		4	**3088.000**
200	110	230	325		4	**3091.000**

Connection block

Material:
Chassis
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0
Cover
– ABS
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

Supply includes:
3 terminals including cover.

Note:
When using the terminal on 2-pole busbar systems (SV 9340.040), the terminal must be rotated through 180° for connection to the PE busbar.

Technical information:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Outlet	Packs of	top/bottom	top/bottom	Page
Connection of round conductors mm^2 ● fine-wire with wire end ferrule ● multi-wire		 95 – 185 95 – 300	 – –	
Clamping area for laminated copper bars W x H mm ● For 5 mm bar thickness ● For 10 mm bar thickness		 33 x 27 33 x 22	 65 x 27 65 x 22	
Width mm		50	85	
Height mm		88	88	
For bar thickness mm		5/10	5/10	
Model No. SV	3	**9342.311**	**9342.321**	
Accessories				
Laminated copper bars		■	■	314

for Mini-PLS component adaptors

Insert strip

for Mini-PLS component adaptors
To extend the construction width.

Material:
ABS

Colour:
RAL 7035

Width mm	Packs of	Model No. SV
9	2	**9623.000**

Support rails 35 x 7.5 mm

for Mini-PLS component adaptors

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws and side anti-slip guard.

Width mm	Packs of	Model No. SV
45	10	**9320.150**
54	10	**3548.000**
72	10	**3549.000**

for RiLine60 component adaptors

Support rails 35 x 10 mm

for OM adaptor/support
For attaching to the adaptor section and support frame.

Material:
Polyamide (PA 6.6).

Colour:
RAL 9005

Supply includes:
Assembly screws.

Note:
UL approval in conjunction with OM adaptor/support.

Design	Width mm	With anti-slip guard[1]	Packs of	Model No. SV
TS 45C	45	■	5	**9342.850**
TS 45D	45	–	5	**9342.860**
TS 45D-V[2]	45	–	5	**9342.870**
TS 55C	55	■	5	**9342.920**
TS 55D	55	–	5	**9342.930**
TS 55D-V[2]	55	–	5	**9342.940**
TS 55E[3]	55	■	5	**9342.960**

[1] Anti-slip guard for motor circuit-breaker.
[2] Support rail only suitable for non-pitch pattern-dependent mounting on support frame.
[3] Reinforced version. Recommended for switchgear with an unladen weight per support rail > 600 g.

Support rails 35 x 15 mm

for OM adaptor/support
For attaching to the adaptor section.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws and side anti-slip guard.

Width mm	Packs of	Model No. SV
45	5	**9342.880**
55	5	**9342.950**

Support rails 35 x 7.5 mm

for OM adaptor/support
For assembly on 55 mm wide OM adaptors/supports with 10 mm wide insert strips mounted on the right and left.
Arrangement of the mounting hole for central configuration on 55 mm wide adaptor section or support frame.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws and side anti-slip guard.

Width mm	Packs of	Model No. SV
72	5	**9342.980**

Insert strip

for OM adaptor/support
To extend the construction width in a 10 mm pitch pattern. May be bayed as often as required on both sides. With integral cable duct.

Material:
Polyamide (PA 6.6).

Colour:
RAL 7035

Supply includes:
6 connection pins (SV 9340.280).

Width mm	Approvals	Packs of	Model No. SV
10	UL	2	**9340.290**

for RiLine60 component adaptors

Connection pin

For any required mechanical connection of OM adaptor/support and insert strip (SV 9340.290).

Material:
Polyamide (PA 6).

Colour:
RAL 5010

Approvals	Packs of	Model No. SV
UL	20	**9340.280**

Support frame

for OM adaptor/support
For use as a spare or for the configuration of replacement assemblies.

Material:
Polyamide (PA 6.6).

Colour:
RAL 9005

Note:
UL approval in conjunction with OM adaptor/support.

Length mm	For adaptor width mm	Packs of	Model No. SV
170	45	5	**9341.800**
237	45	5	**9341.820**
170	55	5	**9341.830**
237	55	5	**9341.850**

Detailed drawings:
Available on the Internet.

Support frame support

for OM adaptors
To reinforce support frames 45 x 237 mm and 55 x 237 mm for use on OM adaptors.

Material:
Polyamide (PA 6.6).

Colour:
RAL 9005

Note:
UL approval in conjunction with OM adaptor/support.

Packs of	Model No. SV
10	**9340.800**

PinBlock

for support frames
For reliable attachment and positioning of the contactor on motor starter combinations, for simple clip-on mounting onto the support frame. Individual vertical positioning is achieved by relocating the PinBlock.

Material:
Polyamide (PA 6.6).

Colour:
RAL 9005

Note:
UL approval in conjunction with OM adaptor/support.

For support frame width mm	Packs of	Model No. SV
45	5	**9342.800**
55	5	**9342.810**

PinBlock Plus

for starters with increased contactor attachment
Mounted by simply clipping onto the PinBlock (SV 9342.800/.810).

Material:
Polyamide (PA 6.6).

Colour:
RAL 9005

Note:
UL approval in conjunction with OM adaptor/ support.

Packs of	Model No. SV
5	**9342.820**

ST-Combi connector

for OM premium adaptor
May be used as a spare. With tension spring clamp at the outlet end.

Material:
Polyamide (PA 6.6).

Design	Packs of	Model No. SV
3-pole 1.5 – 4 mm²	5	**9341.980**
8-pole 0.25 – 2.5 mm²	5	**9341.990**

Cable set

Pre-assembled connection cables for individual connection of switchgear, top-mounted on OM adaptors with tension spring clamps.
Length: 130 mm.

Material:
- PVC insulation
- Temperature resistant to 105°C
- Wire ends with ultrasonic wire-end compression at both ends

Technical information:
Available on the Internet.

Design	Packs of	Model No. SV
AWG 14 = 2.08 mm² ≙ 2.5 mm²	15	**9340.850**
AWG 12 = 3.31 mm² ≙ 4 mm²	15	**9340.860**
AWG 10 = 5.26 mm² ≙ 6 mm²	15	**9340.870**
AWG 8 = 8.37 mm² ≙ 10 mm²	6	**9340.880**
AWG 6 = 13.3 mm² ≙ 16 mm²	6	**9340.890**

AWG = American Wire Gauges

Twin cords

for OM adaptors with tension spring clamp 2.5 – 16 mm²
Pre-assembled connection cables for individual connection of up to two switchgear units per adaptor.

Cable length:
L1 = 140 mm,
L2 = 250 mm.

Material:
- PVC insulation
- Temperature resistant to 105°C
- Wire ends with ultrasonic wire-end compression at both ends

Technical information:
Available on the Internet.

Design	Packs of	Model No. SV
AWG 10 = 5.26 mm² ≙ 6 mm²	6	**9340.820**

AWG = American Wire Gauges

for RiLine60 CB component adaptors

Insert strip

for circuit-breaker component adaptors
To extend the construction width from 140 mm to 190 mm.

Material:
ABS

Colour:
RAL 7035

For circuit-breaker component adaptor	Width mm	Approvals	Packs of	Model No. SV
SV 9342.700 SV 9342.710	25	UL	4 (1 set)	**9342.720**

Note:
4 units (1 set) are needed to widen a component adaptor.

Sliding blocks

for circuit-breaker component adaptors
For additional locking of circuit-breakers with more than two attachment points.

Colour:
RAL 7035

Note:
UL approval in conjunction with circuit-breaker component adaptor.

For circuit-breaker component adaptor	With threaded insert	Packs of	Model No. SV
SV 9342.500/.510 SV 9342.504/.514 SV 9342.540/.550	M3/M4	6	**9342.560**
SV 9342.600/.610 SV 9342.604/.614	M4/M5	6	**9342.640**

Connection bracket

for circuit-breaker component adaptors
Pre-assembled, laminated flat copper for connecting standard, commercially available moulded case circuit-breakers (MCCB).

Material:
Electrolytic copper F20

Insulation:
- Vinyl compound
- Temperature resistant to 105°C
- Fire protection corresponding to UL 94-V0

Detailed drawings:
Available on the Internet.

Dimensions[1] mm	For circuit-breaker component adaptor	For connecting moulded case circuit-breakers (MCCB), make (model)	Packs of[2]	Model No. SV
6 x 9 x 0.8	SV 9342.500/.510 SV 9342.540/.550	ABB (T1, T1 UL, T2, T2 UL), Eaton (NZM1, NZM1 UL, BZM B1), OEZ (BC160N), Schneider Electric (NSC100, NSE75, NSE100) Siemens (3RV13 53, 3VT 1)	3	**9342.570[3]**
10 x 15.5 x 0.8	SV 9342.600/.610	ABB (T3, T3 UL), GE (FE), Schneider Electric (NSF150, NSF250)	3	**9342.660**
		Allen Bradley (140U-J), Schneider Electric (NS/NSX100/160/250, GV7)	3	**9342.670**
		ABB (S3), Eaton (NZM2, NZM2 UL, BZM B2), Siemens (VL250, VL250 UL)	3	**9342.680**
		Siemens (VL150X UL, VL150 UL, VL160X, VL160)	3	**9342.690**
10 x 32 x 1	SV 9342.700/.710	ABB (T5, T5 UL), Siemens (3RV10 73, 3RV13 73/74)	3	**9342.770**
		ABB (S5), Allen Bradley (140U-L), Schneider Electric (NS/SX 400/630, NSJ 400/600)	3	**9342.780**
		Eaton (NZM3, NZM3 UL)	3	**9342.790**

[1] Number of lamina x lamina width x lamina thickness
[2] 3 pieces = 1 set
[3] Universal application for switchgear with a dimensional difference between the mounting level and the upper edge of the contact level of 20 ± 5 mm.

Support rail 35 x 15 mm

For
- **Circuit-breaker component adaptor**
- **Mini-PLS component adaptor**

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws and side anti-slip guard.

For component adaptors	Width mm	Approvals	Packs of	Model No. SV
SV 9342.400 SV 9342.410 SV 9629.000	72		5	**9320.120**

For RiLine NH fuse elements

Prism terminal

for NH disconnectors size 00
with screw terminal
For direct connection of round and sector-shaped conductors.

Material:
Cast brass

Surface finish:
Nickel-plated

Technical information:
Available on the Internet.

Connection		Packs of	Model No. SV
Round conductor mm^2	Sector-shaped conductor mm^2		
10 – 70	10 – 70	3	**9344.600**

Box terminals

for NH disconnectors, sizes 1 to 3
with screw terminal
For direct connection of round and sector-shaped conductors and laminated copper bars.

Material:
Cast brass

Surface finish:
Nickel-plated

Technical information:
Available on the Internet.

For NH disconnectors	Clamping area for laminated copper bars W x H mm	Connection		Packs of	Model No. SV
		Round conductor mm^2	Sector-shaped conductor mm^2		
Size 1	20 x 14	35 – 150	50 – 150	3	**9344.610**
Size 2/3	32 x 20	95 – 300	120 – 300	3	**9344.620**

Connection space cover

for NH disconnectors
- For extending the contact hazard protection cover, e.g. when using ring terminals with a long collar.
- Bayable as required at the top and bottom.

Material:
Polyamide (PA 6).

Colour:
RAL 7035

For NH disconnectors	Packs of	Model No. SV
Size 00	2	**9344.520**
Size 1	2	**9344.530**
Size 2	2	**9344.540**
Size 3	2	**9344.550**

Detailed drawings:
Available on the Internet.

Arc chambers

for NH disconnectors, sizes 1 to 3
To increase switching capacity (utilisation category).

Technical information:
Available on the Internet.

Packs of	Model No. SV
3	**9344.680**

For RiLine NH fuse elements

Busbar adaptor

for NH disconnectors, size 1 – 3
For mounting NH disconnectors on bar systems with 100 mm centre-to-centre spacing

Technical information:
Available on the Internet.

For NH disconnectors		Packs of	Model No. SV
Size	Model No. SV		
1	9344.110 9344.130 9344.150	1	**9344.810**
2	9344.210 9344.230 9344.250	1	**9344.820**
3	9344.310 9344.330 9344.350	1	**9344.830**

Micro-switch

for NH disconnectors/NH slimline fuse-switch disconnectors
To indicate the switch position of the NH unit (cover).

1 For NH disconnectors		
Size	Packs of	Model No. SV
000/00	5	**3071.000**
1 – 3	2	**9344.510**[1)]

[1)] Plastic lug for attaching the micro-switch to the disconnector chassis.

2 For NH slimline fuse-switch disconnectors		
Size	Packs of	Model No. SV
00	5	**9346.400**
1 – 3	5	**3071.000**

Connection space cover

for NH slimline fuse-switch disconnectors, size 00
Extended version for the use of ring terminals with a long collar.

Material:
Polycarbonate

Packs of	Model No. SV
1	**9346.460**

Lug terminal connection parts

for NH slimline fuse-switch disconnectors, size 00
For connecting laminated copper bars and round conductors 1.5 to 25 mm².
Clamping area W x H: 16 x 10 mm.

Material:
Cast brass

Surface finish:
Nickel-plated

Technical information:
Available on the Internet.

Packs of	Model No. SV
1 set	**3592.020**

For RiLine NH fuse elements

Clamp-type terminal connection

for NH slimline fuse-switch disconnectors, size 00
For the connection of round conductors 1.5 to 95 mm².

Material:
Cast brass

Surface finish:
Nickel-plated

Technical information:
Available on the Internet.

Packs of	Model No. SV
1 set	**3592.010**

Box terminal

for NH slimline fuse-switch disconnectors, size 1 – 3
For converting NH slimline disconnectors to box terminal connection for round conductors up to 300 mm².

Material:
Cast brass

Surface finish:
Nickel-plated

Packs of	Model No. SV
3	**9346.450**

Busbar terminal

for NH slimline fuse-switch disconnectors, size 1 – 3
For mounting NH slimline disconnectors on bar systems with 185 mm centre-to-centre spacing, no drilling required.

Packs of	Model No. SV
3	**9346.440**

Support bracket

for NH slimline fuse-switch disconnectors, size 00 – 3
For optional attachment of a customised contact hazard protection cover e.g. for special applications in conjunction with distribution enclosures. The support brackets may be attached to the left and right of the strip chassis.

Packs of	Model No. SV
4	**9346.430**

Busbar adaptor

for NH slimline fuse-switch disconnectors, size 00
For mounting NH slimline disconnectors SV 9346.020/.030 on bar systems with 185 mm centre-to-centre spacing.

Supply includes:
Compensating panels.

Design	Packs of	Model No. SV
Single adaptor	1	**9346.410**
Two-way adaptor	1	**9346.420**

Offener Leistungsschalter
Air circuit breaker
SIEMENS
ABB
TERASAKI
Schneider
Offener Leistungsschalter
Air circuit breaker
SIEMENS
ABB
TERASAKI
Schneider

Ri4Power Form 1-4

Modular system

- For low-voltage switchgear with design certificate to IEC 61 439-1/-2 and DIN EN 61 439-1/-2
- For control systems and power distributors
- Structured system solution for switch-gear with Form separation 1-4b
- Simple, installation-friendly system assembly

Busbar systems up to 5500 A

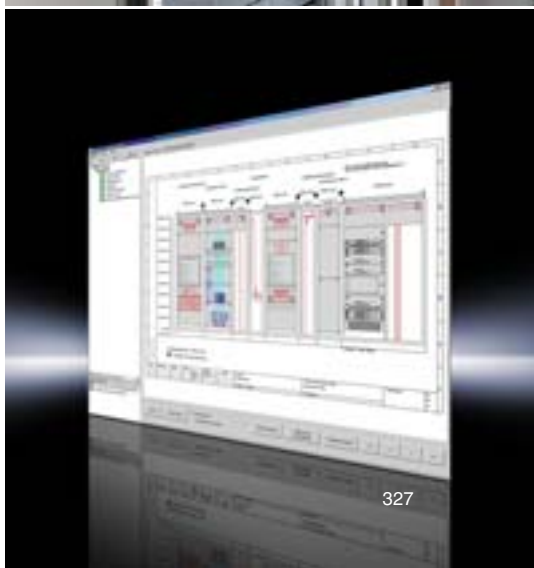
- RiLine60 – The compact busbar system up to 1600 A, see page 275
- Maxi-PLS – The assembly-friendly system, see page 328
- Flat-PLS – The flat bar system for discerning requirements, see page 332
- Tested PE conductor system, see page 693
- High levels of short-circuit resistance up to 100 kA for 1 sec./220 kA

Modular enclosure system

- Based on enclosure platform TS 8, see page 84
- Flexible, modular front design, see page 592
- Roof plates to suit every requirement, see page 622
- Modular compartment configuration for internal compartmentalisation up to Form 4b, see page 345
- Internal cover plates, contact hazard protection for air circuit-breaker and NH switch-disconnector fuse sections, see page 342
- Accessories for Ri4Power, see page 352

Simple planning

- **Power Engineering 5.0** SV 3020.500, see page 523
- Configuration of low-voltage switchgear with design certificate
- Simple, fast assembly with automatically generated assembly plan
- Generation of parts lists with graphical output



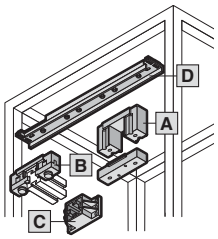
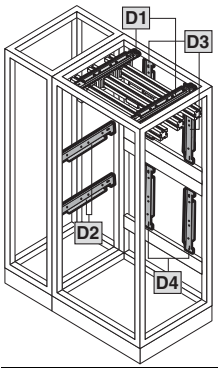
Busbar systems Maxi-PLS

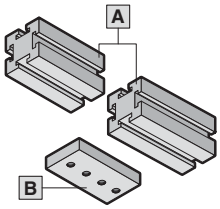
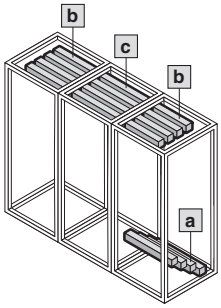
System components

Material:
– Busbar support, end support, end cover: PA 6.6
– System attachment: Stainless steel
– Cover section: Hard PVC

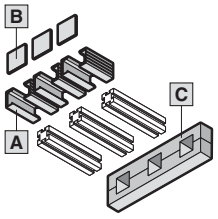
Note:
Busbars for PE/PEN combinations,
see page 693/694.

Detailed drawings:
Available on the Internet.

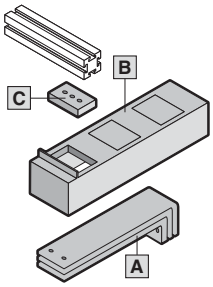
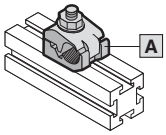
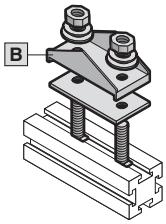
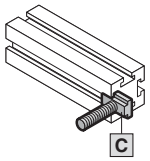
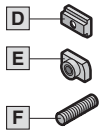
Supports and attachment in the TS 8 enclosure				Packs of	Maxi-PLS 1600/2000 Model No. SV		Maxi-PLS 3200 Model No. SV	
	**A Busbar support**			1	**9649.000**		**9659.000**	
	B Busbar support, suitable for top mounting			1	**9649.160**		**9659.160**	
	C End supports			2	**9649.010**		**9659.010**	
	System attachment for installation in the busbar support							
	For application	For enclosure depth mm	Bar centre distance mm	Packs of	Model No. SV		Model No. SV	
	D1 In the roof/ base section	600	100	2	**9640.080**		**–**	
			150	2	**–**		**9650.100**	
		800	100	2	**9640.088**		**–**	
			150	2	**–**		**9650.080**	
	D2 Vertical coupling set	600	100	2	**9649.076**		**–**	
			150	2	**–**		**9650.076**	
		800	100	2	**9649.078**		**–**	
			150	2	**–**		**9659.078**	
	D3 Rear section top/bottom	–	100	2	**9640.098**		**–**	
			150	2	**–**		**9650.098**	
	D4 Rear section, centre (185 mm)	–	185	2	3-pole	4-pole	3-pole	4-pole
					9640.150	**–**	**9650.150**	**–**

A Maxi-PLS busbars E-Cu (special lengths avaialble on request)				Maxi-PLS 1600	Maxi-PLS 2000	Maxi-PLS 3200
	For enclosure width mm	For application[1)]	Length mm	Packs of	Model No. SV		Model No. SV
	600	a	491	1	**9640.206**	**9640.201**	**9650.201**
	600	b	525	1	**9640.216**	**9640.211**	**9650.211**
	600	c	599	1	**9640.226**	**9640.221**	**9650.221**
	800	a	691	1	**9640.236**	**9640.231**	**9650.231**
	800	b	725	1	**9640.246**	**9640.241**	**9650.241**
	800	c	799	1	**9640.256**	**9640.251**	**9650.251**
	1000	a	891	1	**9640.266**	**9640.261**	**9650.261**
	1000	b	925	1	**9640.276**	**9640.271**	**9650.271**
	1000	c	999	1	**9640.286**	**9640.281**	**9650.281**
	1200	a	1091	1	**9640.296**	**9640.291**	**9650.291**
	1200	b	1125	1	**9640.306**	**9640.301**	**9650.301**
	1200	c	1199	1	**9640.316**	**9640.311**	**9650.311**
	–	–	2400	3	**9640.365**	**9640.360**	**9650.360**
	–	–	2400	4	**–**	**9649.360**	**9659.360**
	B Longitudinal connector E-Cu for simple baying connection of Maxi-PLS busbars. Incl. sliding blocks, bolts, washers and nuts.			1	**9640.191**	**9640.191**	**9650.191**

[1)] A = Cable connection system with end support
B = Left-hand or right-hand end enclosure in a switchgear installation
C = Bayed enclosure with sections bayed on the left and right

Contact hazard protection/short-circuit protection		Packs of	Model No. SV		Model No. SV	
	**A Cover section** for clip-on mounting on the Maxi-PLS busbars, length 1000 mm	5	**9640.050**		**9650.050**	
	B End cover for clip-on mounting on the end surface of Maxi-PLS busbars	2	**9649.060**		**9659.060**	
	C Stabiliser to increase short-circuit resistance (I_{cw} up to 124 kA)	4	3-pole	4-pole	3-pole	4-pole
			–	**–**	**9650.140**	**–**

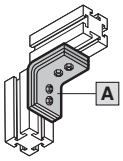
System components

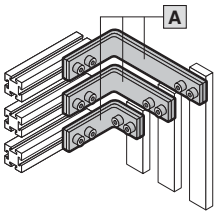
Connection system				Maxi-PLS 1600/2000 Model No. SV		Maxi-PLS 3200 Model No. SV	
	**A Connection bracket E-Cu,** transition from the main busbar system to the connection kits.						
	Width mm	No. of brackets per phase	Packs of	3-pole	4-pole	3-pole	4-pole
				Enclosure depth 600/800 mm		Enclosure depth 600 mm	
	60	1	1 set	**9640.433**	**9640.433 + 9640.434**	**9650.400**	–
	60	2	1 set	**9640.443**	**9640.443 + 9640.444**	**9650.410**	–
	60	3	1 set	**9640.453**	**9640.453 + 9640.454**	**9650.420**	–
	100	2	1 set	**9640.473**	**9640.473 + 9640.474**	**9650.470**	–
	100	3	1 set	**9640.483**	**9640.483 + 9640.484**	**9650.480**	–
	120	3	1 set	–	–	**9650.487**	
						Enclosure depth 800 mm	
	60	1	1 set	–	–	**9659.403**	**9659.403 + 9659.404**
	60	2	1 set	–	–	**9659.413**	**9659.413 + 9659.414**
	60	3	1 set	–	–	**9659.423**	**9659.423 + 9659.424**
	100	2	1 set	–	–	**9659.473**	**9659.473 + 9659.474**
	100	3	1 set	–	–	**9659.483**	**9659.483 + 9659.484**
	120	3	1 set	–	–	**9659.493**	**9659.493 + 9659.494**
	B Isolator chassis for isolated routing of the connection brackets. Material: RAL 6.6, black. Incl. assembly parts.						
	Bar centre distance mm	For connection bracket width mm	Packs of	**Model No. SV**		**Model No. SV**	
	100	60	1	**9640.021**	**9640.021**	–	–
	150	60	1	–	–	**9650.021**	**9650.021**
	150	100	1	–	–	**9650.031**	**9650.031**
	C Contact maker E-Cu for contacting the connection brackets to the Maxi-PLS busbars. Incl. sliding blocks.						
	Width mm	60	1	**9640.171**	**9640.171**	**9650.171**	**9650.171**
		100	1	**9640.181**	**9640.181**	**9650.181**	**9650.181**
	**A Connection clamp** for the connection of round conductors (Cu/Al) 95 to 300 mm² (single-wire and multi-wire). Incl. assembly parts.						
			1	**9640.325**	**9640.325**	**9650.325**	**9650.325**
	B Connection plates for the connection of laminated flat copper bars. Assembly parts.						
	Maximum clamping area	2 x 10 x 32 x 1 mm	3	**9640.330**	**9640.330**	**9650.330**	**9650.330**
		2 x 10 x 63 x 1 mm	3	**9640.340**	**9640.340**	**9650.340**	**9650.340**
		2 x 10 x 100 x 1 mm	3	**9640.350**	**9640.350**	**9650.350**	**9650.350**
	**C Terminal stud** for connecting cables with ring terminals. Including sliding blocks.			Length 30 mm		Length 32 mm	
	Thread	M12	3	**9640.370**	**9640.370**	**9650.370**	**9650.370**
		M16	3	**9640.380**	**9640.380**	**9650.380**	**9650.380**
	D Sliding blocks for sliding into the Maxi-PLS busbar section at the sides.						
	Thread	M8 / Length 20 mm	15	**9640.970**	**9640.970**	–	–
		M10 / Length 25 mm	15	**9640.980**	**9640.980**	**9650.980**	**9650.980**
		M12 / Length 35 mm	15	–	–	**9650.990**	**9650.990**
	**E Sliding nuts** for retrospective insertion into the Maxi-PLS busbar section.						
	Thread	M6	15	**9640.900**	**9640.900**	**9650.900**	**9650.900**
		M8	15	**9640.910**	**9640.910**	**9650.905**[1)]	**9650.905**[1)]
		M10	15	**9640.920**	**9640.920**	**9650.910**	**9650.910**
		M12	15	–	–	**9650.920**	**9650.920**
	**F Threaded bolts** for individual connection options[2)]. Incl. nuts, plain washers, spring lock washers (M6 and M8 only) or washers.						
	Thread	M6 / Length 35 mm	6	**9640.930**	**9640.930**	**9640.930**	**9640.930**
		M8 / Length 35 mm	6	**9640.940**	**9640.940**	**9640.940**	**9640.940**
		M10 / Length 35 mm	8	**9676.971**	**9676.971**	**9676.971**	**9676.971**
		M10 / Length 45 mm	8	**9676.972**	**9676.972**	**9676.972**	**9676.972**
		M10 / Length 55 mm	8	**9676.973**	**9676.973**	**9676.973**	**9676.973**
		M10 / Length 70 mm	8	**9676.976**	**9676.976**	**9676.976**	**9676.976**
		M10 / Length 80 mm	8	**9676.977**	**9676.977**	**9676.977**	**9676.977**
		M12 / Length 40 mm	8	–	–	**9676.981**	**9676.981**
		M12 / Length 50 mm	8	–	–	**9676.982**	**9676.982**
		M12 / Length 60 mm	8	–	–	**9676.983**	**9676.983**
		M12 / Length 70 mm	8	–	–	**9676.986**	**9676.986**
		M12 / Length 80 mm	8	–	–	**9676.987**	**9676.987**

[1)] Packs of 3. [2)] Sliding blocks or sliding nuts are additionally required for attachment.

Busbar systems Maxi-PLS

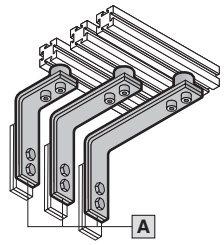
System components

Connection system			Maxi-PLS 1600/2000 Model No. SV		Maxi-PLS 3200 Model No. SV		Page
	**A Corner bracket E-Cu** for connecting horizontal Maxi-PLS busbar systems in the roof/base section to vertical busbar systems, for 90° connection of two Maxi-PLS busbars in the rear section. May be used for individual installation.						
	For Maxi-PLS	Packs of	3/4-pole 1600	3/4-pole 2000	3/4-pole 3200		
	Number of brackets per phase		2 x 60 x 10 mm	3 x 60 x 10 mm	3 x 80 x 10 mm		
	Model No. SV	1	**9640.705**[1)]	**9640.700**[1)]	**9650.700**[2)]		
	[1)] Also required: 4 sliding blocks 9640.980 per corner bracket. [2)] Also required: 4 sliding blocks 9650.990 per corner bracket.						



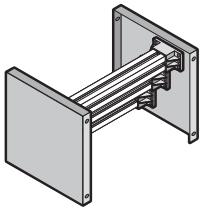
A Connection kits for busbar riser. For connecting horizontal Maxi-PLS busbar systems in the rear section to vertical busbar systems.

For enclosure depth mm		Number of brackets per phase	Packs of	1600		2000		3200		Page
600	800			3-pole	4-pole	3-pole	4-pole	3-pole	4-pole	
■	■	2	1 set	**9660.318**	**9660.318+ 9660.319**	–	–	–	–	
■	■	3	1 set	–	–	**9660.313**	**9660.313+ 9660.314**	–	–	
■	–	3	1 set	–		–		**9660.363**	–	
–	■	3	1 set	–		–		**9660.368**	**9660.368 + 9660.369**	
Also required:	Sliding blocks		15	9640.980	9640.980	9640.980	9640.980	9650.990	9650.990	329
	Threaded bolts		8	9676.972	9676.972	9676.973	9676.973	9676.983	9676.983	329
	Required quantity			12	16	12	16	12	16	



A T-connector kits for Maxi-PLS/RiLine60 busbar systems.
For connecting horizontal Maxi-PLS main busbar systems to vertical RiLine60 distribution busbar systems in the modular outgoing section, including assembly parts.

Main busbar system Maxi-PLS									Maxi-PLS 1600/2000 Model No. SV		Maxi-PLS 3200 Model No. SV	
Maxi-PLS		Distribution busbar system				Enclosure depth mm		Packs of	3-pole	4-pole	3-pole	4-pole
In the roof/ base section	In the rear section top/ bottom	Behind the compartment 30 x 10/5 mm	Behind the compartment PLS 1600	Inside the compartment 30 x 10/5 mm	Inside the compartment PLS 1600	600	800					
■	–	■	–	–	–	■	■	1 set	**9675.303**	**9675.304**	–	–
■	–	■	–	–	–	■	–	1 set	–	–	**9675.311**	–
■	–	■	–	–	–	–	■	1 set	–	–	**9675.313**	**9675.314**
■	–	–	■	–	–	■	■	1 set	**9675.306**	**9675.307**	–	–
■	–	–	■	–	–	■	–	1 set	–	–	**9675.315**	–
–	–	–	■	–	–	–	■	1 set	–	–	**9675.316**	**9675.317**
■	–	–	–	■	–	■	–	1 set	**9675.321**	**9675.322**	**9675.331**	–
■	–	–	–	■	–	–	■	1 set	**9675.323**	**9675.324**	**9675.333**	**9675.334**
■	–	–	–	–	■	■	–	1 set	**9675.325**	**9675.328**	**9675.335**	–
■	–	–	–	–	■	–	■	1 set	**9675.326**	**9675.327**	**9675.336**	**9675.337**
–	■	■	–	–	–	■	■	1 set	**9675.343**	**9675.344**	–	–
–	■	■	–	–	–	–	■	1 set	–	–	**9675.353**	**9675.354**
–	■	–	■	–	–	■	■	1 set	**9675.346**	**9675.347**	–	–
–	■	–	■	–	–	–	■	1 set	–	–	**9675.356**	**9675.357**
–	■	–	–	■	–	■	–	1 set	**9675.361**	**9675.362**	–	–
–	■	–	–	■	–	–	■	1 set	**9675.363**	**9675.364**	**9675.373**	**9675.374**
–	■	–	–	–	■	■	–	1 set	**9675.365**	**9675.368**	–	–
–	■	–	–	–	■	–	■	1 set	**9675.366**	**9675.367**	**9675.376**	**9675.377**

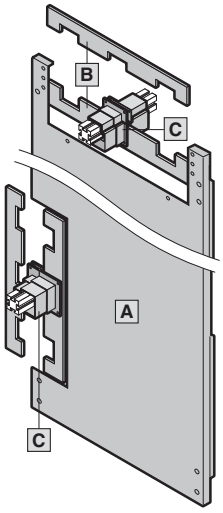


Compact infeed for Maxi-PLS busbar 1600/2000
For individual use as a 3-pole cable connection bar system.
Direct mounting on the mounting plate or punched section without mounting flange.

Supply includes:
6 end supports, 2 support plates for end supports, 1 PS mounting rail 23 x 23 mm (length 495 mm), mounting accessories

Packs of	Maxi-PLS 1600/2000		Maxi-PLS 3200	
	3-pole	4-pole	3-pole	4-pole
1 set	**9660.980**	–	–	–

System components



Shielding

A Divider panel for TS enclosures. For side shielding from neighbouring panels. In conjunction with the busbar gland and the divider panel modules to prevent arcing. Assembly parts.

Maxi-PLS busbars in the roof section

For enclosure depth mm		For enclosure height mm	Packs of	Maxi-PLS 1600/2000 Model No. SV	Maxi-PLS 3200 Model No. SV
600	800				
■	–	2000	1	**9660.620**	**9660.620**
–	■	2000	1	**9659.590**	**9659.590**

Maxi-PLS busbars in the rear section

For enclosure depth mm		For enclosure height mm	Packs of		
600	800				
■	–	2000	1	**9660.610**	**9660.610**
–	■	2000	1	**9659.580**	**9659.580**

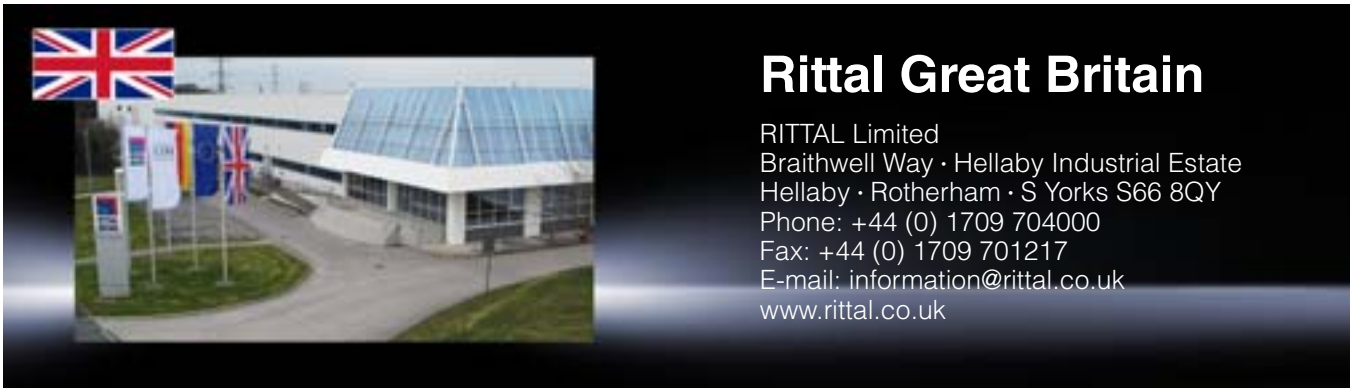
B Divider panel module for busbar gland. Assembly parts.

For enclosure depth mm		Bar centre distance mm			Packs of	1600/2000		3200	
600	800	100	150	185		3-pole	4-pole	3-pole	4-pole
■	–	■	–	–	1	**9640.621**		–	
–	■	■	–	–	1	**9640.628**		–	–
■	–	–	■	–	1	–	–	**9650.621**	–
–	■	–	■	–	1	–	–	**9659.601**	
■	■	–	–	■	1	**9640.641**[1)]	–	**9650.641**[1)]	–

C Busbar gland
The busbar gland may also be used as a cover for longitudinal connectors. Assembly parts.

Use with longitudinal connector		Required packs of	Packs of	1600/2000		3200	
no	yes			3-pole	4-pole	3-pole	4-pole
■	–	6	1 set	**9640.600**	–	**9650.600**	–
■	–	8	1 set	–	**9640.600**	–	**9650.600**
–	■	3 3	1 set 1 set	**9640.610 + 9640.600**	–	**9650.610 + 9650.600**	–
–	■	4 4	1 set 1 set	–	**9640.610 + 9640.600**	–	**9650.610 + 9650.600**

[1)] For assembly in the rear enclosure section.



Busbar systems Flat-PLS

System components

Busbar system Flat-PLS/Flat-PLS 100, for flat copper bars
For the configuration of busbar systems from flat copper bars.
For mounting on a system attachment or directly on the mounting plate.
Also suitable for aluminium and copper-plated aluminium bars.
Max. permissible tolerance of bar width (60/100 mm) ± 0.3 mm,
bar thickness (10 mm) ± 0.15 mm.

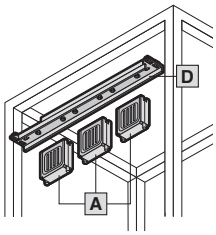
Material:
– Polyamide (PA 6.6).
– Fire protection corresponding to UL 94-V0

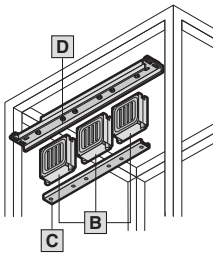
Colour:
RAL 9005

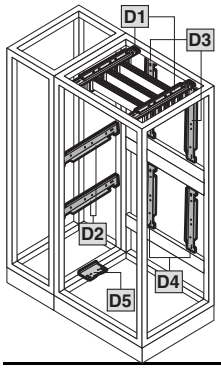
Short-circuit resistance diagrams:
Available on the Internet.

Current carrying capacity:
Available on the Internet.

Technical information:
Available on the Internet.





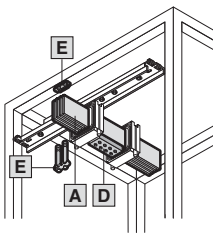


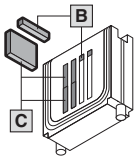
Supports and attachment in the TS 8 enclosure						Flat-PLS 60 Model No. SV		Flat-PLS 100 Model No. SV	
A Busbar support									
System	For busbars up to mm[1]				Packs of				
Flat-PLS 60	4 x 60 x 10				1	**9676.002**		–	
Flat-PLS 100	4 x 100 x 10				1	–		**9676.004**	
B Busbar support for stabiliser bar									
System	For busbars up to mm[1]				Packs of				
Flat-PLS 60	4 x 60 x 10				1	**9676.020**		–	
Flat-PLS 100	4 x 100 x 10				1	–		**9676.021**	
D System attachment for installation in the busbar support									
For application	Enclosure depth mm	Bar centre distance mm			Packs of	3-pole	4-pole	3-pole	4-pole
		120	165	185					
D1 in the roof/base section/directly above/below coupling switch	600	■	–	–	2	**9674.162**	**9674.162**	–	–
		–	■	–	2	–	–	**9674.164**	–
	800	■	–	–	2	**9674.182**	**9674.182**	–	–
		–	■	–	2	–	–	**9674.184**	**9674.184**
D2 Vertical coupling set	600	■	–	–	2	**9674.172**	**9674.172**	–	–
		–	■	–	2	–	–	**9674.174**	–
	800	■	–	–	2	**9674.192**	**9674.192**	–	–
		–	■	–	2	–	–	**9674.194**	**9674.194**
D3 Rear section top/bottom	–	■	–	–	2	**9674.122**	**9674.122**	–	–
		–	■	–	2	–	–	**9674.124**	**9674.124**
D4 Rear section, centre (185 mm)		–	–	■	2	**9674.152**	–	–	–
		–	–	■	2	–	–	**9674.154**	–
D5 Single-pole assembly, for mounting on the TS 8 frame					2	**9674.102**	**9674.102**	**9674.104**	**9674.104**
C Busbar stabiliser bars									
For busbar supports	Bar centre distance mm		System assembly		Packs of	3-pole	4-pole	3-pole	4-pole
SV 9676.020	120		3/4-pole		2	**9676.022**	**9676.023**	–	–
	185		3-pole		2	**9676.026**	–	–	–
SV 9676.021	165		3/4-pole		2	–	–	**9676.024**	**9676.025**
	185		3-pole		2	–	–	**9676.027**	–

[1] At a bar width of < 60 mm for Flat-PLS 60 or < 100 mm for Flat-PLS 100, the empty gaps in the support should be filled with spacers. When using only 1, 2 or 3 bars, the vacant bar slots should be closed using the filler pieces.

System components

Busbars and accessories for supports





A Busbars E-Cu to DIN EN 13 601. Length: 2400 mm/bar

Dimensions mm	Weight/bar kg	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
40 x 10	8.55	3	**3587.000**	–
50 x 10	10.68	3	**3588.000**	–
60 x 10	12.82	3	**3589.000**	–
80 x 10	17.09	3	–	**3590.000**
100 x 10	21.44	3	–	**3590.010**

B Spacers – At a bar width of < 60/100 mm the spacer should be used.

E-Cu Dimensions mm	Required number of spacers per chamber	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
40 x 10	2	16	**9676.007**	**9676.007**
50 x 10	1			
80 x 10	2			

C Filler pieces – When using only 1, 2 or 3 bars, the vacant bar slots should be closed using the filler pieces.

		Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
Flat-PLS 60	2 per free bar slot	16	**9676.008**	**9676.008**
Flat-PLS 100	3 per free bar slot			

D Longitudinal connector E-Cu for connecting Flat-PLS busbar systems, no drilling required.

No. of strands per conductor	For busbar width mm	Screw	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
2	40 – 100	[1]	1	**9676.621**	**9676.621**
3 or 4	40 – 100	[1]	1	**9676.641**	**9676.641**

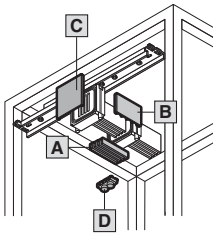
[1] Must be ordered additionally according to the busbar width B (length = B + 40 mm, see page 335).

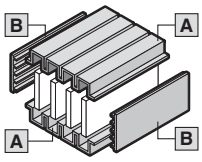
E Busbar claws for Flat-PLS

For busbar width up to mm	Screw	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
2 x B x 10	[1]	1	**9676.017**	**9676.017**
3 x B x 10	[1]	1	**9676.018**	**9676.018**
4 x B x 10	[1]	1	**9676.019**	**9676.019**

[1] Must be ordered additionally according to the busbar width B (length = B + 20 mm, screw connections, see page 335).

Contact hazard protection





Cover sections for Flat-PLS

For system	No. of bars per conductor	For busbar width mm	Length mm	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
A Edge cover section for bar systems with no space between the strands	1	–	1000	10	**9676.041**	**9676.041**
	2	–	1000	10	**9676.042**	**9676.042**
	3	–	1000	10	**9676.043**	**9676.043**
A Edge cover section for bar systems with 10 mm space between the strands	2	–	1000	10	**9676.052**	**9676.052**
	3	–	1000	10	**9676.053**	**9676.053**
	4	–	1000	10	**9676.054**	**9676.054**
B Side cover section for bar systems, to match the edge cover sections	–	60	1000	10	**9676.056**	**9676.056**
	–	80	1000	10	**9676.058**	**9676.058**
	–	100	1000	10	**9676.059**	**9676.059**

C End cover for busbar supports Flat-PLS

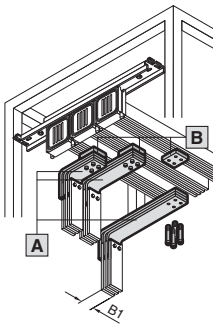
	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
For Flat-PLS 60 and Flat-PLS 100	2	**9676.006**	**9676.006**

D Covers for busbar claws

No. of bars per conductor	For busbar claw	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
2	SV 9676.017 SV 9676.832	8	**9676.046**	**9676.046**
3	SV 9676.018	8	**9676.047**	**9676.047**
4	SV 9676.019	8	**9676.048**	**9676.048**

Busbar systems Flat-PLS

System components



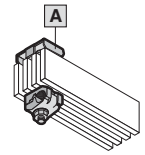
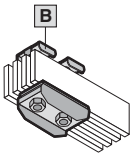
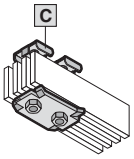
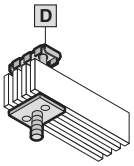
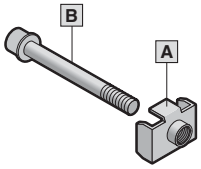
Connection system						Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
A Connection brackets for Flat-PLS For connecting the connection kits of open air circuit-breakers to a Flat-PLS 60/100 main bar system in the roof section, base section, directly above or below the air circuit-breaker.							
For bar width of connection brackets mm	No. of strands per conductor	For conductor	For enclosure depth mm	Packs of			
60	1	L1, L2, L3	600	1 set		**9676.201**	**9676.301**
		N		1 set		**9676.202**	**–**
	2	L1, L2, L3		1 set		**9676.203**	**9676.303**
		N		1 set		**9676.204**	**–**
	3	L1, L2, L3		1 set		**9676.205**	**9676.305**
		N		1 set		**9676.206**	**–**
100	2	L1, L2, L3		1 set		**9676.213**	**9676.313**
		N		1 set		**9676.214**	**–**
	3	L1, L2, L3		1 set		**9676.215**	**9676.315**
		N		1 set		**9676.216**	**–**
120	3	L1, L2, L3		1 set		**9676.217**	**9676.317**
		N		1 set		**9676.218**	**–**
60	1	L1, L2, L3	800	1 set		**9676.221**	**9676.321**
		N		1 set		**9676.222**	**9676.322**
	2	L1, L2, L3		1 set		**9676.223**	**9676.323**
		N		1 set		**9676.224**	**9676.324**
	3	L1, L2, L3		1 set		**9676.225**	**9676.325**
		N		1 set		**9676.226**	**9676.326**
100	2	L1, L2, L3		1 set		**9676.233**	**9676.333**
		N		1 set		**9676.234**	**9676.334**
	3	L1, L2, L3		1 set		**9676.235**	**9676.335**
		N		1 set		**9676.236**	**9676.336**
120	3	L1, L2, L3		1 set		**9676.237**	**9676.337**
		N		1 set		**9676.238**	**9676.338**
B Contact makers for Flat-PLS							
For busbar width B mm	Screw	No. of strands per conductor		Packs of			
60	[1]	2		1		**9676.526**	**9676.526**
60	[1]	3 or 4		1		**9676.546**	**9676.546**
80	[1]	2		1		**9676.528**	**9676.528**
80	[1]	3 or 4		1		**9676.548**	**9676.548**
100	[1]	2		1		**9676.520**	**9676.520**
100	[1]	3 or 4		1		**9676.540**	**9676.540**

[1] Must be ordered additionally according to the busbar width B (length = B + 40 mm, see page 335).

Rittal France

RITTAL SAS
ZA des Grands Godets · 880 rue Marcel Paul
94507 Champigny sur Marne Cedex
Phone: +33 (0) 1 49 83 60 00
Fax: +33 (0) 1 49 83 82 06
E-mail: info@rittal.fr · www.rittal.fr

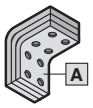
System components

Connection system				Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
	**A Direct connection terminals** for Flat-PLS For the direct connection of round conductors 95 – 300 mm² (single-wire or multi-wire).				
	For round conductors	Screw	Packs of		
	95 – 300 mm² RE/RM	[1]	1	**9676.730**	**9676.730**
	[1] Must be ordered additionally according to the busbar width B (length = B + 60 mm, screw connections, see page 335).				
	**B Connection plates for laminated copper bars,** incl. assembly parts (excluding screws)				
	For busbar width mm	Screw	Packs of		
	2 x 10 x 32 x 1	[1]	1	**9676.747**	**9676.747**
	2 x 10 x 63 x 1	[1]	1	**9676.748**	**9676.748**
	2 x 10 x 100 x 1	[1]	1	**9676.749**	**9676.749**
	[1] Must be ordered additionally according to the busbar width B (length = B + 50 mm, screw connections, see page 335).				
	**C Connection plates with bolts M10,** incl. assembly parts (excluding screws)				
	Terminal studs	Screw	Packs of		
	M10	[1]	1	**9676.710**	**9676.710**
	2 x M10	[1]	1	**9676.714**	**9676.714**
	[1] Must be ordered additionally according to the busbar width B (length = B + 40 mm, screw connections, see page 335).				
	**D Connection plates with bolts M12/M16,** incl. assembly parts (excluding screws)				
	Terminal studs	Screw	Bolt length mm	Packs of		
	M12	[1]	30	1	**9676.700**	**9676.700**
	M16	[1]	30	1	**9676.704**	**9676.704**
	[1] Must be ordered additionally according to the busbar width B (length = B + 20 mm, screw connections, see page 335).					
	**A Claw with threaded insert M10**				
	Nut		Packs of		
	M10		8	**9676.832**	**9676.832**
	B Screw connections				
	Screw design		Packs of		
	M10 x 60		8	**9676.806**	**9676.806**
	M10 x 70		8	**9676.807**	**9676.807**
	M10 x 80		8	**9676.808**	**9676.808**
	M10 x 90		8	**9676.809**	**9676.809**
	M10 x 100		8	**9676.810**	**9676.810**
	M10 x 110		8	**9676.811**	**9676.811**
	M10 x 120		8	**9676.812**	**9676.812**
	M10 x 130		8	**9676.813**	**9676.813**
	M10 x 140		8	**9676.814**	**9676.814**
	M10 x 150		8	**9676.815**	**9676.815**
	M10 x 160		8	**9676.816**	**9676.816**
	M10 x 170		8	**9676.817**	**9676.817**
	M10 x 190		8	**9676.819**	**9676.819**

Busbar systems Flat-PLS

System components

Connection system

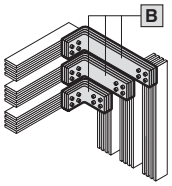


A Angular connector for Flat-PLS
For connecting horizontal Flat-PLS busbar systems in the roof/base section and vertical Flat-PLS busbar systems.

Bar population up to mm	For enclosure depth mm	No. of brackets mm	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
2 x 40 x 10	600/800	2 x 40 x 10	1	**9675.842**	–
2 x 60 x 10	600/800	3 x 40 x 10	1	**9675.843**	–
4 x 60 x 10	600/800	3 x 80 x 10	1	**9675.883**	–
4 x 40 x 10 mm or 2 x 100 x 10	600/800	2 x 80 x 10	1	**9675.882**	**9675.882**
4 x 80 x 10	600/800	2 x 100 x 10	1	–	**9675.892**
4 x 100 x 10	600/800	3 x 100 x 10	1	–	**9675.893**

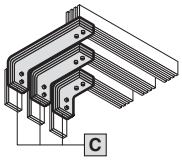
Also required

Claw with threaded insert	see page 335
Screw connections	see page 335
Contact makers	see page 334



B Angular connector for Flat-PLS
For connecting horizontal Flat-PLS busbar systems in the rear section to vertical Flat-PLS busbar systems.

Bar population up to mm	For conductor	For enclosure depth mm	Angular version mm	Packs of	Flat-PLS 60 Model No. SV	Flat-PLS 100 Model No. SV
2 x 60 x 10	L1, L2, L3	600	3 x 40 x 10	1 set	**9675.846**	–
	N		3 x 40 x 10	1 set	**9675.847**	–
4 x 60 x 10	L1, L2, L3		3 x 80 x 10	1 set	**9675.886**	–
	N		3 x 80 x 10	1 set	**9675.887**	–
2 x 60 x 10	L1, L2, L3	800	3 x 40 x 10	1 set	**9675.848**	–
	N		3 x 40 x 10	1 set	**9675.849**	–
4 x 60 x 10	L1, L2, L3		3 x 80 x 10	1 set	**9675.888**	–
	N		3 x 80 x 10	1 set	**9675.889**	–
2 x 100 x 10	L1, L2, L3	600	2 x 80 x 10	1 set	–	**9675.876**
4 x 100 x 10	L1, L2, L3		3 x 100 x 10	1 set	–	**9675.896**
2 x 100 x 10	L1, L2, L3	800	2 x 80 x 10	1 set	–	**9675.878**
	N		2 x 80 x 10	1 set	–	**9675.877**
4 x 100 x 10	L1, L2, L3		3 x 100 x 10	1 set	–	**9675.898**
	N		3 x 100 x 10	1 set	–	**9675.897**



C T-connector kits for Flat-PLS/RiLine60 bar systems.
For connecting horizontal Flat-PLS main busbar systems to vertical RiLine60 distribution busbar systems in the modular outgoing section. Sets of screws for connection to distributor busbar system.

Flat-PLS: In the roof/base section	Flat-PLS: In the rear section top/bottom	Distribution busbar system: Behind the compartment 30 x 10/5 mm	Distribution busbar system: Behind the compartment PLS 1600	Distribution busbar system: Inside the compartment 30 x 10/5 mm	Distribution busbar system: Inside the compartment PLS 1600	Enclosure depth mm: 600	Enclosure depth mm: 800	Packs of	3-pole	4-pole	3-pole	4-pole
■	–	■	–	–	–	■	–	1 set	**9675.501**	**9675.502**	**9675.511**	–
■	–	■	–	–	–	–	■	1 set	**9675.503**	**9675.504**	**9675.513**	**9675.514**
■	–	–	■	–	–	■	–	1 set	**9675.505**	**9675.508**	**9675.515**	–
■	–	–	■	–	–	–	■	1 set	**9675.506**	**9675.507**	**9675.516**	**9675.517**
■	–	–	–	■	–	■	–	1 set	**9675.521**	**9675.522**	**9675.531**	–
■	–	–	–	■	–	–	■	1 set	**9675.523**	**9675.524**	**9675.533**	**9675.534**
■	–	–	–	–	■	■	–	1 set	**9675.525**	**9675.528**	**9675.535**	–
■	–	–	–	–	■	–	■	1 set	**9675.526**	**9675.527**	**9675.536**	**9675.537**
–	■	■	–	–	–	–	■	1 set	**9675.543**	**9675.544**	**9675.553**	**9675.554**
–	■	–	■	–	–	–	■	1 set	**9675.546**	**9675.547**	**9675.556**	**9675.557**
–	■	–	–	■	–	–	■	1 set	**9675.563**	**9675.564**	**9675.573**	**9675.574**
–	■	–	–	–	■	–	■	1 set	**9675.566**	**9675.567**	**9675.576**	**9675.577**

Also required

Spacer rolls	see page 353
Screw connections	see page 335
Claw with threaded insert	see page 335

Screw connections

for connection brackets

For connecting connection brackets and a connector kit.
May be used for 3- and 4-pole connector kits.

Material:
Steel screws, zinc-plated, passivated

Supply includes:
8 nuts and 16 washers.

Note:
For a bar width of 120 mm, 2 packs are required per connector kit.

Technical information:
Available on the Internet.

For systems	Screw design	No. of bars per phase	Packs of	Model No. SV
Maxi-PLS[1] 1600/2000/3200	M10 x 40	1	8	**9676.966**
	M10 x 60	2	8	**9676.967**
	M10 x 80	3	8	**9676.968**
Maxi-PLS[2] 1600/2000/3200 and Flat-PLS 60/100	M12 x 40	1	8	**9676.961**
	M12 x 60	2	8	**9676.962**
	M12 x 80	3	8	**9676.963**

[1] For connection bracket width 60/80 mm
[2] For connection bracket width 100/120 mm

Stacking insulator

To support the connection kits top/bottom for circuit-breakers. Easily retro-fitted.

Supply includes:
Assembly parts.

Packs of	Model No. SV
6	**9660.200**

Support rails

for stacking insulator

For attaching to the outer mounting level of the TS 8 enclosure and for the configuration of stacking insulators. C rail may also be used as cable management bar.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

For enclosure width mm	Packs of	Model No. SV
600	2	**9676.196**
800	2	**9676.198**

Stabiliser

for connection kit

To increase short-circuit resistance of the connection kits from 75 kA to 100 kA, 1 sec.
2 stabilisers are required per connection kit.
May be used for 3- and 4-pole connector kits.
One stabiliser is used in place of a normal stacking insulator arrangement.

Material:
Reinforcement section:
Fibreglass-reinforced plastic

Supply includes:
– 2 reinforcement sections
– 10 stacking insulators
– Assembly parts

For enclosure width mm	Packs of	Model No. SV
600	2	**9676.186**
800	2	**9676.188**

Also required:

Support rail for stacking insulator,
see page 337.

Connector kits for Maxi-PLS/Flat-PLS

For air circuit-breakers

For connecting air circuit-breakers (ACB) to Maxi-PLS/Flat-PLS busbar systems in SV-TS 8 enclosures. Please include the design code of the specification below in the order text for your connector kit.
We recommend the **Rittal Power Engineering software from Version 5.0, Model No. SV 3020.500** for easier configuration of the connector kits, see page 523.

Material:
E-Cu

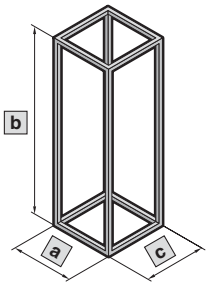
Note:
Please quote the complete design code on all enquiries and orders.

Design code

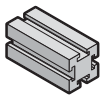
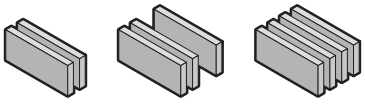
Model No. SV		Enclosure			Underneath the air circuit-breaker		Air circuit-breaker						Above the air circuit-breaker		Compartment height of air circuit-breaker
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
Top	**9676.910**														
Bottom	**9676.912**														

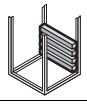
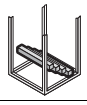
Also required:

- M12 screw connections, see page 337.
- Terminal studs Maxi-PLS see page 329.
- Screw connections Flat-PLS, see page 335.

Enclosure						Selection
	a	Width mm	4 400	6 600	8 800	0 1000	☐
	b	Height mm	8 1800	0 2000	2 2200		☐
	c	Depth mm	6 600	8 800			☐

Busbar support underneath the air circuit-breaker

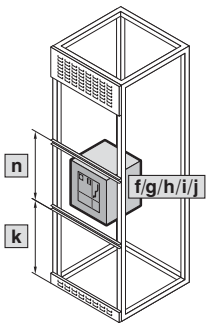
Busbar type					Selection
d		**Maxi-PLS**	1600	3-pole A	☐
				4-pole B	
			2000	3-pole C	
				4-pole D	
			3200	3-pole E	
				4-pole F	
		**Flat-PLS**	60	3-pole I	
				4-pole J	
			100	3-pole M	
				4-pole N	

Busbar system configuration				Selection
e		in the base section	6	☐
		in the lower rear section	7	
		as cable connection system	8	
		directly underneath the circuit-breaker	9	

Connector kits for Maxi-PLS/Flat-PLS

For air circuit-breakers

Air circuit-breakers



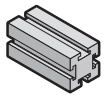
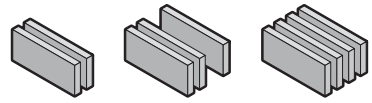
			Selection
f	**Brand**	ABB A	
		Eaton/Moeller E	
		Mitsubishi J	
		Schneider Electric M	
		Siemens/ Moeller S	
		Terasaki T	
		Various V	
g	**Size**	1/none 1	
		2 2	
		3 3	
		4 4	

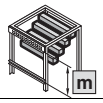
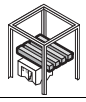
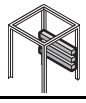
				Selection
h	**Rated current**	630 A A		
		800 A B		
		1000 A C		
		1250 A D		
		1600 A E		
		2000 A F		
		2500 A G		
		3200 A H		
		4000 A I		
i	**No. of poles/ version**	Static	3-pole 3	
			4-pole 4	
		Rack-mounted	3-pole 6	
			4-pole 8	
j	**Position**	Behind the door H		
		In front of the door (in door cut-out) V		

			Selection
k	**Compartment height directly underneath the circuit-breaker**	0 mm 0	
		150 mm 1	
		200 mm 2	
		250 mm 3	
		300 mm 4	
		400 mm 5	
		600 mm[1] 6	
		800 mm 7	
		1000 mm 8	
n[2]	**Compartment height of circuit-breaker**	600 mm 6	
		800 mm 7	
		1000 mm 8	

[1] Standard height in Form 1
[2] For Form 1 please select a 6

Busbar system underneath the air circuit-breaker

Busbar type					Selection
l		**Maxi-PLS**	1600	3-pole A	
				4-pole B	
			2000	3-pole C	
				4-pole D	
			3200	3-pole E	
				4-pole F	
	 2 bars 3 bars 4 bars	**Flat-PLS**	60	3-pole I	
				4-pole J	
			100	3-pole M	
				4-pole N	

Busbar system configuration				Selection
m		in the roof section	1	
		in the top rear section	2	
		as cable connection system 600 mm	3	
		as cable connection system 800 mm	8	
		as cable connection system 1000 mm	9	
		directly above the circuit-breaker	4	
		in rear section, Form 1	5	

Sample design code

Model No. SV		Enclosure			Underneath the air circuit-breaker		Air circuit-breaker						Above the air circuit-breaker		Compartment height of circuit-breaker
		a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**	**l**	**m**	**n**
Top	**9676.910**	8	2	8	C	8	S	2	G	3	V	6	J	1	6
Bottom	**9676.912**														

Busbar systems (100/185/150 mm)

NH slimline fuse-switch disconnectors Page 306/307 **NH fuse-switch disconnectors** Page 300 **Accessories** Page 310 – 325

Material:
Busbar supports, inserts
– Fibreglass-reinforced, thermoplastic polyester (PBT)
– Fire protection corresponding to UL 94-V0

Colour:
RAL 7035

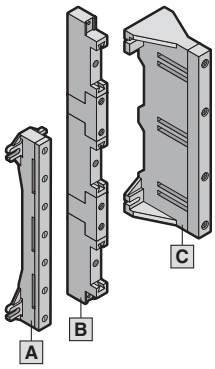
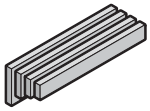
Note:
The base component of the busbar support SV 3052.000 may also be used as a single-pole support.

Short-circuit resistance diagrams:
Available on the Internet.

Technical information:
Available on the Internet.

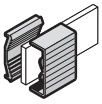
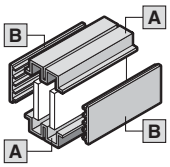
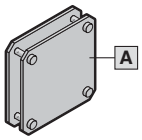
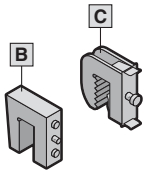
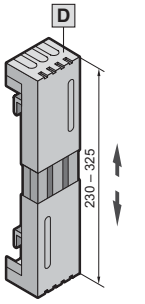
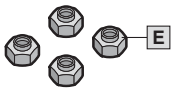
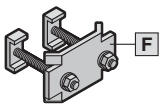
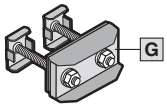
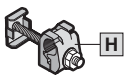
Detailed drawings:
Available on the Internet.

Busbar systems up to 1250 A (100 mm), 1600 A (185 mm), 2500 A (150 mm), 3000 A (150 mm)

Busbar support, 3-pole			Packs of	**Model No. SV**				Page
				A 1250 A	**B 1600 A**	**C 2500 A**	**C 3000 A**	
	Width x height x depth mm			22 x 320 x 70	24 x 515 x 51	30 x 420 x 160	30 x 420 x 170	
	Max. bar accommodation			60 x 10	80 x 10	2 x 80 x 10	2 x 100 x 10	
	Inserts for a) Cross-section reduction to mm			30 x 10 up to 50 x 10	50/60 x 10	–	–	
	b) Reducing the bar width in 10 mm increments			–	–	■	■	
	Bar centre distance mm			100	185	150	150	
	Packs of			4	2	2	2	
				3073.000	**3052.000**	**3055.000**	**3057.000**	
	Accessories							
	Inserts to adapt the bar dimensions	30 x 10 mm	24	**3074.000**	**–**	**–**	**–**	
		40 x 10 mm	24	**3075.000**	**–**	**–**	**–**	
		50 x 10 mm	24	**3076.000**	**3074.000**	**–**	**–**	
		60 x 10 mm	24	**–**	**3075.000**	**–**	**–**	
	Spacing element for reducing the bar width in 10 mm increments		12	**–**	**–**	**3056.000**	**3056.000**	
Busbars E-Cu[1] to DIN EN 13 601. Length 2400 mm.								
	Dimensions mm							
	30 x 10		6	3586.000	–	–	–	
	40 x 10		3	3587.000	–	–	–	
	50 x 10		3	3588.000	3588.000	–	–	311
	60 x 10		3	3589.000	3589.000	3589.000	3589.000	
	80 x 10		3	–	3590.000	3590.000	3590.000	
	100 x 10		3	–	–	–	3590.010	
Accessories								
	Baying bracket E-Cu for	30 x 10 mm	4	9661.350	–	–	–	
		40 x 10 mm	4	9661.050	–	–	–	694
		80 x 10 mm	4	–	9661.150	–	–	
	Longitudinal connector for 2 x bar width x 10 mm		1	–	–	9676.621[2]	9676.621[2]	333

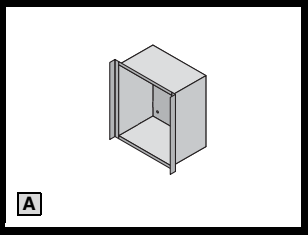
[1] Other busbar lengths, see page 693.
[2] Must be ordered additionally according to the busbar width (length = B + 40 mm, see page 335).

Busbar systems (100/185/150 mm)

Contact hazard protection			Packs of	Model No. SV 1250 A	1600 A	2500 A	3000 A	Page
	End covers for busbar supports		10	**3083.000**	–	–	–	
	Busbar cover section, length 1 m for E-Cu	30 x 10 mm	10	3092.000	–	–	–	311
		40 x 10 to 60 x 10 mm	10	3085.000	3085.000	–	–	
	**A** Edge cover section for bar systems with 10 mm space between the strands, length 1 m	for 1 busbar per conductor	10	9676.041	9676.041	–	–	333
		for 2 busbars per conductor	10	–	–	9676.052	9676.052	
	B Side cover section for bar systems, to match the edge cover sections, length 1 m	For busbar width						
		60 mm	10	9676.056	9676.056	9676.056	9676.056	
		80 mm	10	9676.058	9676.058	9676.058	9676.058	
		100 mm	10	9676.059	9676.059	9676.059	9676.059	
Connection system, see page 316 (system accessories)								
	**A** **Plate clamps** for connecting laminated copper bars; no drilling required.							
	For busbars mm	Clamping area for laminated copper bars mm						
	30 x 10	34 x 10	3	3554.000	–	–	–	316
	40 x 10	34 x 10	3	3559.000	–	–	–	
	50 x 10	34 x 10	3	3560.000	3560.000	–	–	
	50 x 10	54 x 10	3	3562.000	3562.000	–	–	
	60 x 10	34 x 10	3	3561.000	3561.000	–	–	
	60 x 10	54 x 10	3	3563.000	3563.000	–	–	
	80 x 10	65 x 10	3	–	3460.500	–	–	
	**Conductor connection clamps** for 10 mm bar thickness.							
	Connection of round conductors[1] mm²	Clamping area for laminated copper bars mm						
	B 1 – 4	–	15	3555.000	3555.000	3555.000	3555.000	316
	1 – 4	–	15	3455.500	3455.500	3455.500	3455.500	
	2.5 – 16	8 x 8	15	3456.500	3456.500	–	–	
	C 16 – 50	10.5 x 11	15	3457.500	3457.500	–	–	
	35 – 70	16.5 x 15	15	3458.500	3458.500	–	–	
	70 – 185	22.5 x 20	15	3459.500	3459.500	–	–	
	**D** **System covers** for conductor connection clamps and plate clamps.							
	Width x depth mm							
	50 x 80		4	3086.000	–	–	–	316
	100 x 80		4	3087.000	–	–	–	
	100 x 110		4	3090.000	–	–	–	
	200 x 80		4	3088.000	–	–	–	
	200 x 110		4	3091.000	–	–	–	
	**E** **Inserted screw nuts M12,** self-holding nuts with knurled ring for mounting NH slimline fuse-switch disconnectors.							
	For drilled holes in busbars Ø 14.5 mm.		30	3591.060	3591.060	–	–	311
	**F** **Connection plates,** material: E-Cu nickel-plated							
	Connection for	1 ring terminal M10[2] up to 240 mm²	3 sets	**–**	**–**	**3058.000**	**–**	
		2 ring terminals M10[2] up to 240 mm²	3 sets	**–**	**–**	**3059.000**	**3061.000**	
		Laminated flat copper[3] up to 40 x 10 mm	3 sets	**–**	**–**	**3061.000**	**–**	
	Bar insulation		9	**–**	**–**	**3060.000**	**3060.000**	
	**G** **Connection plates for laminated copper bars**							
	For connecting laminated copper bars up to 2 x 10 x 100 x 1.0 mm (Flexibar) to a busbar system with 2 bars per conductor.	For laminated copper bars up to						
		2 x 10 x 32 x 1 mm	1	–	–	9676.747[4]	9676.747[4]	335
		2 x 10 x 63 x 1 mm	1	–	–	9676.748[4]	9676.748[4]	
		2 x 10 x 100 x 1 mm	1	–	–	9676.749[4]	9676.749[4]	
	**H** **Direct connection terminals**							
	For the direct connection of round conductors 95 – 300 mm² (single-wire and multi-wire).		1	–	–	9676.730[4]	9676.730[4]	335

[1] Wire end ferrules should be used with fine and extra-fine wire conductors.
[2] T-head screw M10 x 100.
[3] T-head screw M10 x 120.
[4] The required screw connection must be ordered additionally according to the busbar width, see page 335.

Form 1



Device module

For use in air circuit breaker outgoing/incoming sections with a minimum depth of 600 mm.
The removable mounting plate may be used for the configuration e.g. of fuses, power circuit-breakers and switchgear.

Material:
– Side parts, centre parts: Sheet steel
– Mounting plate: Sheet steel, zinc-plated
– Front panel: Aluminium, anodised

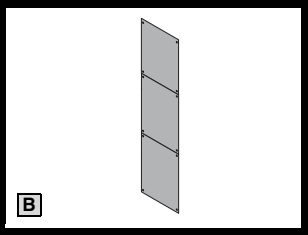
Colour:
Side parts, centre parts: RAL 7035

Supply includes:
– 2 side parts
– 2 centre parts
– Connector parts
– Mounting plate
– Optional front panel

Note:
Please observe the manufacturer-specific data regarding the arcing space of air circuit-breakers.

Design of front panel	For enclosure width mm		Mounting plate		Packs of	Model No. SV	Page
	600	800	Width mm	Height mm			
without	■	–	420	250	1	**9660.700**	
	–	■	620	250	1	**9660.710**	
vertically hinged	■	–	420	250	1	**9660.760**	
	–	■	620	250	1	**9660.770**	
Also required							
Mounting bracket[1)]					24	9660.090	344

[1)] 4 mounting brackets are required to attach a device module.



Contact hazard protection cover

For SV-TS 8 enclosures with air circuit-breaker
To cover incoming and outgoing sections and NH slimline fuse-switch disconnectors with the Maxi-PLS busbar system in the rear enclosure section so that they are safe from finger contact (IP 2X).

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
3 front covers

Note:
– Cut-outs for air circuit-breakers must be provided by the customer.
– SV-TS 8 enclosures, see page 84.

For 1-door enclosures							
Width mm		Height mm	Device module version		Packs of	Model No. SV	Page
600	800		with	without			
■	–	2000	■	–	1 set	**9660.280**	
■	–	2000	–	■	1 set	**9660.780**	
–	■	2000	■	–	1 set	**9660.380**	
–	■	2000	–	■	1 sets	**9660.880**	
Also required							
Mounting bracket[1)]					24	9660.090	344

For 3-door enclosures							
Width mm		Height mm	Device module version		Packs of	Model No. SV	Page
600	800		with	without			
■	–	2000	■	–	1 set	**9660.290[2)]**	
■	–	2000	–	■	1 set	**9660.790**	
–	■	2000	■	–	1 set	**9660.390[2)]**	
–	■	2000	–	■	1 set	**9660.890**	
Also required							
Mounting bracket[1)]					24	9660.090	344

[1)] 12 mounting brackets are required to attach the contact hazard protection cover plates.
[2)] Including trim panel

Contact hazard protection cover

for SV-TS 8 enclosures with NH slimline fuse-switch disconnectors

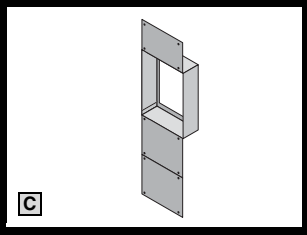
To cover incoming and outgoing sections and NH slimline fuse-switch disconnectors with the Maxi-PLS busbar system in the rear enclosure section so that they are safe from finger contact (IP 2X).

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– 3 front covers
– 2 depth covers
– 2 side covers
– Connector parts

Note:
– SV-TS 8 enclosures, see page 84.
– NH slimline fuse-switch disconnectors, see page 306/307.



For enclosures			Free installation width mm[1] when using longitudinal connectors			Packs of	Model No. SV	Page
Width mm	Height mm	Depth mm	without	one side	both sides			
600	2000	600	500	450	400	1 set	**9660.460**	
800	2000	600	700	650	600	1 set	**9660.470**	
1000	2000	600	900	850	800	1 set	**9660.480**	
1200	2000	600	1100	1050	1000	1 set	**9660.490**	
Also required								
Mounting bracket[2]						24	9660.090	344
Accessories								
Blanking cover for NH slimline disconnectors	Size 00					4	9660.180	344
	Sizes 1 – 3					4	9660.190	344

[1] When using the top-mounted busbars SV 9649.160/SV 9659.160, see page 328.
Longitudinal connectors SV 9640.191/SV 9650.191 for Maxi-PLS busbars, see page 328.
[2] 2 mounting brackets are required to attach the contact hazard protection cover plates.

Form 1

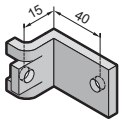
Mounting brackets

For attaching the device modules and cover plates for contact hazard protection.
Tapped hole M6.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. SV
24	**9660.090**



Blanking cover

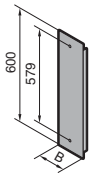
To cover free NH slimline fuse-switch disconnector slots.

Material:
Sheet steel, spray-finished

Colour:
RAL 7035

Supply includes:
Assembly screws.

For NH size	Width (B) mm	Packs of	Model No. SV
00	49.5	4	**9660.180**
1 to 3	99.5	4	**9660.190**



Functional space side panel modules

For internal compartmentalisation

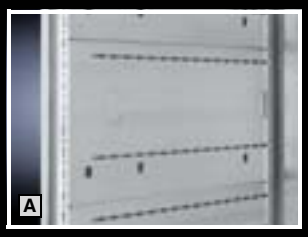
- Side divider panel for compartments, for locating into the TS pitch pattern.
- Prepared for the location of mounting brackets for horizontal compartment dividers or mounting plates
- Two TS system punchings allow the use of additional TS accessories.
- The side panel modules for reduced compartment depth and an auxiliary construction using TS punched rails 17 x 17 mm can be used to provide a separate enclosure space in the side panel area, e.g. for the provision of a busbar system.

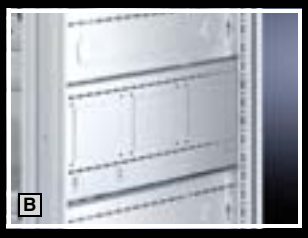
Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

Accessories:

– TS 17 x 17 mm punched rails and connector pieces, see page 656.
– Gland plates, see page 346.





A Without gland plate[1)]

Height mm	For compartment depth	Packs of	**Model No. SV**
100	425 mm	6	**9673.051**
150	425 mm	6	**9673.055**
200	425 mm	6	**9673.052**
100	600 mm	6	**9673.061**
150	600 mm	6	**9673.065**
200	600 mm	6	**9673.062**
600	600 mm	2	**9673.066**
100	800 mm	6	**9673.081**
150	800 mm	6	**9673.085**
200	800 mm	6	**9673.082**
600	800 mm	2	**9673.086**

[1)] Version without gland plate has pre-punched cable entries M40.

B With gland plate[1)]

Height mm	For compartment depth	Packs of	**Model No. SV**
150	425 mm	6	**9673.155**
200	425 mm	6	**9673.152**
150	600 mm	6	**9673.165**
200	600 mm	6	**9673.162**
600	600 mm	2	**9673.166**
150	800 mm	6	**9673.185**
200	800 mm	6	**9673.182**
600	800 mm	2	**9673.186**

[1)] Version with plastic plate has pre-punched knockouts for cable entry.

Functional space side panel modules

for cable connection space
For mounting a Maxi-PLS cable connection bar system

Material:
Sheet steel, zinc-plated, passivated, 2 mm

Supply includes:
Assembly parts.

Height mm	Packs of	**Model No. SV**	
		For enclosure depth	
		600 mm	800 mm
450	2	**9673.069**	**9673.089**
Suitable for cable connection busbar system			
Maxi-PLS	Number of poles		
1600/2000	3-pole	■	■
1600/2000	4-pole	■	■
3200	3-pole	■	■
3200	4-pole	–	■

Also required:

– 2 functional space side panel modules with height 150 mm, see page 345.
– End support, see page 328.

Form 1-4

Gland plates

For closing cable entries.

Material:
PVC, 3 mm,
fire protection corresponding to UL 94-V0

Colour:
RAL 7004

Supply includes:
Assembly parts.

For side panel modules height mm	Packs of	Model No. SV
150	10	**9673.195**
200/600	10	**9673.192**

Cover plates

for rear busbar system in the cable chamber
To separate an area of the cable chamber enclosure for a rear-mounted busbar system.
Attachment requires an auxiliary construction made from Mini-TS sections, to which the cover plates are attached and fastened.

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

Also required:

- Frame connection piece (4 x SV 9673.901), see page 663.
- Corner connector (2 x SV 9673.902), see page 663.
- TS punched rail 17 x 17 mm for SV 9673.5X0 (2 x SV 9673.915, 2 x SV 9673.953), see page 656.
- TS punched rail 17 x 17 mm for SV 9673.5X2 (2 x SV 9673.920 or 2 x SV 9673.940, 2 x SV 9673.983), see page 656.

For enclosure depth mm	For enclosure width mm	Width mm	Height mm	Depth mm	Packs of	Model No. SV
600	300	297	540	170.5	2 sets	**9673.530[1)]**
600	400	397	540	170.5	2 sets	**9673.540[1)]**
600	600	597	540	170.5	2 sets	**9673.560[1)]**
600/800	300	297	841	245.5	1 set	**9673.532[2)]**
600/800	400	397	841	245.5	1 set	**9673.542[2)]**
600/800	600	597	841	245.5	1 set	**9673.562[2)]**

[1)] Suitable for RiLine60 and Maxi-PLS 1600/2000
[2)] Suitable for RiLine60, Maxi-PLS 1600/2000/3200 and Flat-PLS

Terminal box Form 4b

for modular outgoing section
For shielding the connections (terminals) of the functional space, busbar space and cable chamber in accordance with Form 4b to IEC 61 439-2.
The terminal boxes are externally mounted on the functional space side panel modules in the cable chamber to match the heights of the compartments.
If necessary, a clamping strip may be mounted on the cable retainer included with the supply.

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

Note:
For installation of the terminal boxes, the width of the cable chamber must be at least 400 mm!

For compartment height mm	For enclosure width mm[1)]	Packs of	Model No. SV
150	400/600	1 set	**9674.701**
200	400/600	1 set	**9674.702**
250	400/600	1 set	**9674.707**
300	400/600	1 set	**9674.703**
400	400/600	1 set	**9674.704**
600	400/600	1 set	**9674.706**

[1)] Enclosure width of the cable chamber

Also required:

Functional space side panel modules for internal compartmentalisation, see page 345.

Mounting bracket

for functional space divider

- The mounting bracket is secured
  - to the TS frame,
  - to the side panel module or
  - between a frame section and an auxiliary construction.
- Pre-machined mounting openings allow slide-in attachment of functional space dividers.

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

For functional space depth mm	Length mm	Packs of	Model No. SV
425	427	8	**9673.405**[1)]
600	552	8	**9673.406**
800	752	8	**9673.408**

[1)] In conjunction with vertical busbar space separation.

Mounting bracket

for functional space divider and air circuit-breaker support rail

- The mounting bracket is secured to the side panel module.
- Pre-machined mounting openings allow slide-in attachment of functional space dividers.
- The air circuit-breaker support bar may be attached to the upper level.

Material:
Sheet steel, zinc-plated, passivated, 2 mm

Supply includes:
Assembly parts.

For functional space depth mm	Length mm	Packs of	Model No. SV
600	552	2	**9673.426**
800	752	2	**9673.428**

Also required:

- Functional space side panel modules, see page 345.
- Air circuit-breaker support rail, see page 347.

Air circuit-breaker support bar

- For the configuration of air circuit-breakers (ACB) in compartments.
- The support rail is secured using a mounting bracket.

Material:
Sheet steel, zinc-plated, passivated, 2.5 mm

Supply includes:
Assembly parts.

For enclosure width mm	Length mm	Packs of	Model No. SV
400	351	2	**9673.004**
600	551	2	**9673.006**
800	751	2	**9673.008**

Also required:

- Mounting bracket for functional space divider and air circuit-breaker support bar see page 347.
- Attachment set for air circuit-breaker installation, see page 347.

Attachment set

for air circuit-breaker installation
For attaching air circuit-breakers (ACB) to air circuit-breaker support bars.

Material:
Sheet steel, zinc-plated

Supply includes:
4 threaded plates (M8/M12).

Packs of	Model No. SV
1 set	**9660.970**

Form 1-4

Functional space divider

- For the horizontal separation of compartments.
- In combination with the side panel modules, creates separation to Form 3 or 4.
- 2 mounting brackets each are required to install the functional space dividers.

Material:
Sheet steel, zinc-plated, passivated, 1.25 mm

Also required:

– Mounting brackets, 2, see page 347.
– Cross members, see page 590.

With louvres

For enclosure width mm	For functional space depth mm	Width mm	Depth mm	Packs of	Model No. SV
400	425	306	445	4	**9673.444**
400	600	306	588	4	**9673.445**
400	800	306	788	4	**9673.448**
600	425	506	445	4	**9673.464**
600	600	506	588	4	**9673.465**
600	800	506	788	4	**9673.468**
800	425	706	445	4	**9673.484**
800	600	706	588	4	**9673.485**
800	800	706	788	4	**9673.488**

Functional space divider

for Rittal RiLine60 busbar systems

- For the horizontal separation of compartments with integrated RiLine60 distribution busbar system.
- In combination with the side panel modules, creates separation to Form 3 or 4.
- 2 mounting brackets each are required to install the functional space dividers.

Material:
Sheet steel, zinc-plated, passivated, 1.25 mm

Also required:

– Mounting brackets, 2, see page 347.
– Cross members, see page 590.

With louvres

For enclosure width mm	For functional space depth mm	Width mm	Depth mm	Position of the bar system in the functional space	Packs of	Model No. SV
600	401	506	413	–	4	**9673.454**
800	401	706	413	Right	4	**9673.474**
800	401	706	413	Left	4	**9673.475**

Functional space divider

with duct for vertical busbar systems

- For the horizontal separation of compartments with vertical busbars.
- In combination with the side panel modules, creates separation to Form 3 or 4.
- 2 mounting brackets each are required to install the functional space dividers.

Material:
Sheet steel, zinc-plated, passivated, 1.25 mm

Also required:

– Mounting brackets, 2, see page 347.
– Cross members, see page 590.
– Gland plate, see page 349.

Detailed drawings:
Available on the Internet.

With louvres

For enclosure width mm	For functional space depth mm	Width mm	Depth mm	Width of entry mm	Depth of entry mm	Packs of	**Model No. SV**
400	600	306	588	212	201	4	**9673.436**
400	800	306	788	212	201	4	**9673.438**
600	600	506	588	412	201	4	**9673.456**
600	800	506	788	412	201	4	**9673.458**
800	600	706	588	612	201	4	**9673.476**
800	800	706	788	612	201	4	**9673.478**

Gland plate

To shroud the opening for vertical busbar systems.

Material:
ABS PMMA

For enclosure width mm	Width mm	Height mm	Packs of	**Model No. SV**
400	250	223.5	4	**9673.504**
600	450	223.5	4	**9673.506**
800	650	223.5	4	**9673.508**

Form 1-4

Partial mounting plates

With or without duct

- For direct attachment to the functional space side panel modules.
- Universal internal installation with switchgear and control devices.
- Additional mounting levels.
- In combination with functional space dividers and side panel modules, internal separation in accordance with Form 2, 3 or 4 is possible.

Material:
Sheet steel, zinc-plated, passivated, 2 mm

Supply includes:
– Angle brackets and assembly parts
– For the version with duct:
Additional square cut-out with insulating plates for sealing the cut-out.

Also required:

Functional space side panel modules,
see page 345.

With duct

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No. SV
600	150	502	143	1	**9673.671**
600	200	502	193	1	**9673.672**
600	250	502	243	1	**9673.677**
600	300	502	293	1	**9673.673**
600	400	502	393	1	**9673.674**
800	150	702	143	1	**9673.691**
800	200	702	193	1	**9673.692**
800	250	702	243	1	**9673.697**
800	300	702	293	1	**9673.693**
800	400	702	393	1	**9673.694**

Without duct

For enclosure width mm	For compartment height mm	Width mm	Height mm	Packs of	Model No. SV
400	150	302	143	1	**9673.641**
400	200	302	193	1	**9673.642**
400	250	302	243	1	**9673.647**
400	300	302	293	1	**9673.643**
400	400	302	393	1	**9673.644**
400	600	302	593	1	**9673.646**
400	800	302	793	1	**9673.648**
400	1000	302	993	1	**9673.640**
600	150	502	143	1	**9673.661**
600	200	502	193	1	**9673.662**
600	250	502	243	1	**9673.667**
600	300	502	293	1	**9673.663**
600	400	502	393	1	**9673.664**
600	600	502	593	1	**9673.666**
600	800	502	793	1	**9673.668**
600	1000	502	993	1	**9673.660**
800	150	702	143	1	**9673.681**
800	200	702	193	1	**9673.682**
800	250	702	243	1	**9673.687**
800	300	702	293	1	**9673.683**
800	400	702	393	1	**9673.684**
800	600	702	593	1	**9673.686**
800	800	702	793	1	**9673.688**
800	1000	702	993	1	**9673.680**

Support frame

for DIN rail-mounted devices

- Support frame set for accepting DIN rail-mounted devices (e.g. MCBs).
- The support rails are fastened with two mounting brackets to the functional space side panel modules. The cover is fastened to the support frame with knurled screws.
- In combination with functional space dividers, partial mounting plates and side panel modules, internal compartmentalisation in accordance with Form 2, 3 or 4 is possible.

Material:
– Support frame: Sheet steel, zinc-plated, passivated, 1.5 mm
– Cover: Sheet steel, spray-finished, 1.5 mm

Supply includes:
– Support rails
– 2 mounting brackets
– 1 cover with cut-out
– Assembly parts

For enclosure width mm	For compartment height mm	No. of pitch units 17.5 mm	Packs of	Model No. SV
600	150	1 x 24	1 set	**9674.761**
600	300	2 x 24	1 set	**9674.762**
600	600	4 x 24	1 set	**9674.764**
800	300	2 x 36	1 set	**9674.782**
800	600	4 x 36	1 set	**9674.784**

Also required:

– Functional space side panel modules, see page 345.
– Partial mounting plates, see page 350.

Coupling set mounting kit

for busbar enclosure or riser

The mounting kit is used as a base support for a vertical Maxi-PLS busar system/Flat-PLS busbar system.

Material:
Sheet steel, zinc-plated

Supply includes:
– Support plate and punched sections with mounting flanges, assembly parts.
– With the version for 300 and 400 mm enclosure widths, additionally with insulating plate for the installation of Flat-PLS.

For enclosure width mm	For enclosure depth mm	Packs of	Model No. SV
200	600	1 set	**9674.196**[1)]
200	800	1 set	**9674.198**[1)]
300	600	1 set	**9674.036**
300	800	1 set	**9674.038**
400	600	1 set	**9674.046**
400	800	1 set	**9674.048**

[1)] Only suitable for Maxi-PLS.

Also required:

End support, see page 328.

Rail system

System attachments

for RiLine60 main busbar system
System attachment with threaded holes M5 and M6 on a 50 mm pitch pattern for rear assembly of a RiLine60 main busbar system.
For locating into the TS frame.

Material:
Sheet steel, zinc-plated, passivated

Supply includes:
Assembly parts.

Note:
RiLine60 busbar systems,
see page 275.

For enclosure width mm	Width mm	Height mm	Packs of	Model No. SV
300	238.5	362	1	**9674.003**
400	338.5	362	1	**9674.004**
600	538.5	362	1	**9674.006**
800	738.5	362	1	**9674.008**

Distribution busbars

Prepared for the connection of T-connector kits.

Material:
E-Cu

Flat bar Cu 30 x 10 mm

For distribution busbar systems behind the compartment	For distribution busbar system in the compartment (indoors)	Packs of	Length mm	Model No. SV
For enclosure height mm				
1800	–	1	1210	**9675.218**
2000	–	1	1410	**9675.210**
2200	1800[1)]	1	1610	**9675.212**
–	2000[1)]	1	1810	**9675.220**

[1)] Also suitable as a vertical busbar for PE/PEN/N.

PLS 1600

For distribution busbar systems behind the compartment	For distribution busbar system in the compartment (indoors)	Packs of	Length mm	Model No. SV
For enclosure height mm				
1800	–	1	1150	**9675.238**
2000	–	1	1350	**9675.230**
2200	1800[1)]	1	1550	**9675.232**
–	2000[1)]	1	1750	**9675.240**
–	2200[1)]	1	1950	**9675.242**

[1)] Also suitable as a vertical busbar for PE/PEN/N.

T-connector kits

for RiLine60 busbar systems
For connecting horizontal main busbar systems to vertical distribution busbar systems.

Material:
E-Cu

Supply includes:
Assembly parts.

Also required:
Distribution busbars,
see page 352.

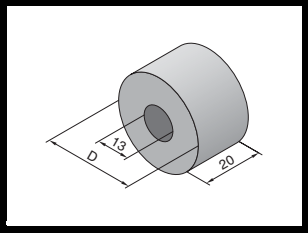
Main busbar system	Distribution busbar system	3-pole	4-pole	Packs of	**Model No. SV**
Behind the compartment					
PLS 1600	Cu 30 x 10/5 mm	■	–	1 set	**9675.130**
Cu 30 x 10/5 mm	Cu 30 x 10/5 mm	■	–	1 set	**9675.133**
PLS 1600	PLS 1600	■	–	1 set	**9675.136**
PLS 1600	Cu 30 x 10/5 mm	–	■	1 set	**9675.140**
Cu 30 x 10/5 mm	Cu 30 x 10/5 mm	–	■	1 set	**9675.143**
PLS 1600	PLS 1600	–	■	1 set	**9675.146**
Inside the compartment					
PLS 1600/Cu 30 x 10/5 mm	Cu 30 x 10/5 mm	■	–	1 set	**9675.153**[1)]
PLS 1600	PLS 1600	■	–	1 set	**9675.156**[1)]
PLS 1600/Cu 30 x 10/5 mm	Cu 30 x 10/5 mm	–	■	1 set	**9675.163**[1)]
PLS 1600	PLS 1600	–	■	1 set	**9675.166**[1)]

[1)] Only suitable for enclosure depth 600 mm.

Spacer rolls

for Maxi-PLS busbars and flat copper bars
For use as a universal spacer.
Height: 20 mm, hole diameter: 13 mm

Material:
E-Cu



Diameter (D) mm	For connecting						Packs of	**Model No. SV**
	Cu bar – Cu bar		Maxi-PLS – Cu bar		Flat-PLS – Cu bar			
	Cross-section size mm²	Max. rated current A	Contact area mm²	Max. rated current A	Contact area mm²	Max. rated current A		
30	550	1100	360	800	380	850	4	**9676.503**
40	1100	2200	780	1600	670	1400	4	**9676.504**
50	1800	3400	1380	2800	990	2000	4	**9676.505**

Switch-disconnector-fuse section

Front trim panels

for switch-disconnector-fuse section
The front trim panels cover above and below the mounting area of the NH switch-disconnector fuse on the front.
With integral vent openings, protection categories IP 3X/IP 2X of the switch-disconnector-fuse section are achieved.

Material:
Sheet steel, 2 mm

Colour:
Textured RAL 7035

Supply includes:
– 2 front trim panels
– Assembly parts

Front trim panels height mm		Packs of	Model No. SV
			Design
Top	Bottom		IP 3X[1] With ventilation hole
336	136	1 set	**9674.340**
186	336	1 set	**9674.342**

[1] For IP 2X the inner perforated plate must be removed.

Also required:

Assembly kit for switch-disconnector-fuse section, see page 354.

Assembly kit

for switch-disconnector-fuse section
Assembly kit for installing switch-disconnector-fuse brands ABB or Jean Müller and attaching the distribution busbar system.

Material:
– Section corner piece left/right, sheet steel, zinc-plated, 2 mm
– Trim panel left/right, sheet steel, 2 mm, spray-finished

Colour:
Textured RAL 7035

Supply includes:
– 2 section corner pieces
– 2 trim panels
– Incl. assembly parts

For switch-disconnector-fuse brand	For enclosure height mm	Packs of	Model No. SV
Jean Müller SASIL	2000	1 set	**9674.350**
Jean Müller SASIL	2200	1 set	**9674.352**
ABB SlimLine	2000	1 set	**9674.356**
ABB SlimLine	2200	1 set	**9674.358**

Also required:

Divider panel for switch-disconnector-fuse section,
see page 355.

Divider panel

for switch-disconnector-fuse section
The divider panel is required for interior configuration of the switch-disconnector-fuse section, and divides the connection space from the functional space. Depending on the chosen position of the main busbar system, the divider panel is fitted in the prepared switch-disconnector-fuse enclosures.
The prepared cut-outs are suitable for the connection of Jean Müller Sasil and ABB SlimLine switch-disconnector fuses.

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

For main busbar system in the roof section

For enclosure height mm	For enclosure depth mm	Packs of	Model No. SV
2000	600	1	**9674.306**
2000	800	1	**9674.308**
2200	600	1	**9674.326**
2200	800	1	**9674.328**

For main busbar system in the rear section, top or bottom

For enclosure height mm	For enclosure depth mm	Packs of	Model No. SV
2000	600	1	**9674.305**
2000	800	1	**9674.307**
2200	600	1	**9674.325**
2200	800	1	**9674.327**

Dividing plate

for switch-disconnector-fuse section
Dividing plate to divide the busbar chamber and NH switch-disconnector-fuse chamber (compartment).

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

For switch-disconnector-fuse brand	Mounting position	Packs of	Model No. SV
Jean Müller SASIL	top/bottom	1	**9674.346**
ABB SlimLine	top/bottom	1	**9674.348**

Also required:

Assembly kit for switch-disconnector-fuse section, see page 354.

Contact hazard protection cover

for switch-disconnector-fuse section (cable chamber)
The contact hazard protection cover plate shields the main busbar in the cable chamber, enabling the safe connection of cables and lines.
Suitable for Maxi-PLS and Flat-PLS busbar systems.

Material:
Sheet steel, zinc-plated, passivated, 1.5 mm

Supply includes:
Assembly parts.

For main busbar system in the roof section

For enclosure width mm	For enclosure depth mm	Packs of	Model No. SV
1000	600	1 set	**9674.362**
1000	800	1 set	**9674.364**
1200	600	1 set	**9674.366**
1200	800	1 set	**9674.368**

For main busbar system in the rear section, top or bottom

For enclosure width mm	Packs of	Model No. SV
1000	1 set	**9674.372**
1200	1 set	**9674.376**

Also required:

Divider panel for switch-disconnector-fuse section,
see page 355.

Switch-disconnector-fuse section

Distribution busbar cover

for Jean Müller switch-disconnector-fuse section

To cover the distribution busbar system of a switch-disconnector-fuse section, designed to accommodate Jean Müller devices. The 150 mm high busbar and cable connection space covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

Material:
PVC, black

Supply includes:
Busbar cover and cable connection space cover for enclosure height 2000 mm and 2200 mm.

Packs of	Model No. SV
1 set	**9674.380**

Also required:

Punched rail cover, distribution busbar, see page 356.

Punched rail for distribution busbar cover

for Jean Müller switch-disconnector-fuse section

Required for mounting the distribution busbar cover.
Suitable for use in enclosures with height 2000 mm and 2200 mm.

Material:
Sheet steel, zinc-plated, passivated

Supply includes:
2 punched rails.

Packs of	Model No. SV
1 set	**9674.381**

Note:
For 1 switch-disconnector-fuse section, 1 pack of punched rails is required.

Distribution busbar cover

for ABB/Siemens switch-disconnector-fuse section

To cover the distribution busbar system of a switch-disconnector-fuse section, designed to accommodate ABB (SlimLine) or Siemens (3NJ62) devices.
The 200 mm high busbar compartment covers shield the busbar compartment from the functional space so that it is safe from finger contact, with a protection category of IP 20.

Material:
PVC, black

Note:
The distribution busbar cover for switch-disconnector-fuse sections from ABB/Siemens may be ordered from ABB under order number NHP 407062R000X. For enclosure height 2000 mm, a height of 1500 mm should be covered, and for enclosure height 2200 mm, a height of 1700 mm should be covered.

Busbar support

for switch-disconnector-fuse section
Busbar support for the distribution busbar system of the switch-disconnector-fuse section.

Material:
Fibreglass-reinforced plastic

Supply includes:
Mounting bracket and screws.

For busbars mm	Number of poles	Packs of	Model No. SV
50 x 10	3/4-pole	1	**9674.415**
60 x 10	3/4-pole	1	**9674.416**
80 x 10	3/4-pole	1	**9674.418**
100 x 10	3/4-pole	1	**9674.410**

Also required:

- Assembly kit for switch-disconnector-fuse section, see page 354.
- End support for switch-disconnector-fuse section, see page 357.
- Distribution busbar for switch-disconnector-fuse section, see page 357.

End support

for switch-disconnector-fuse section
End support for the distribution busbar system of the switch-disconnector-fuse section, for vertical support of the distribution busbar system with infeed from above.

Material:
Fibreglass-reinforced plastic

Supply includes:
Mounting bracket and screws.

For busbars mm	Number of poles	Packs of	Model No. SV
50 x 10	3/4-pole	1	**9674.435**
60 x 10	3/4-pole	1	**9674.436**
80 x 10	3/4-pole	1	**9674.438**
100 x 10	3/4-pole	1	**9674.430**

Also required:

- Assembly kit for switch-disconnector-fuse section, see page 354.
- Distribution busbar for switch-disconnector-fuse section, see page 357.

Distributor busbar

for switch-disconnector-fuse section
Distribution busbar to fit the main busbar systems Maxi-PLS and Flat-PLS for installation in the switch-disconnector-fuse sections.

Material:
E-Cu

Also required:

- Busbar support for switch-disconnector-fuse section, see page 357.
- End support for switch-disconnector-fuse section, see page 357.
- Terminal block, distribution busbar, see page 358.

For enclosure height 2000 mm

Size mm	Length mm	Packs of	Model No. SV
50 x 10	1632.5	1	**9674.405**
60 x 10	1632.5	1	**9674.406**
80 x 10	1632.5	1	**9674.408**
100 x 10	1632.5	1	**9674.400**

For enclosure height 2200 mm

Size mm	Length mm	Packs of	Model No. SV
50 x 10	1832.5	1	**9674.425**
60 x 10	1832.5	1	**9674.426**
80 x 10	1832.5	1	**9674.428**
100 x 10	1832.5	1	**9674.420**

Switch-disconnector-fuse section

Connection bracket

for switch-disconnector-fuse section
For connecting Maxi-PLS or Flat-PLS main busbar systems to distributor busbar systems of the switch-disconnector-fuse sections, no drilling required.

Material:
E-Cu

Supply includes:
Assembly parts.

Also required:

- Maxi-PLS contact makers, 60 mm, see page 329.
- Flat-PLS contact makers, 60 mm, see page 334.
- Terminal block, distribution busbar, see page 358.

For enclosure depth 600 mm

For system	For application	For conductor	Packs of	Model No. SV
Flat-PLS 60	Roof section/base section	L1, L2, L3	1 set	**9674.451**
Flat-PLS 60	Roof section/base section	N	1 set	**9674.452**
Flat-PLS 100	Roof section/base section	L1, L2, L3	1 set	**9674.455**
Maxi-PLS 1600/2000	Roof section/base section	L1, L2, L3	1 set	**9674.441**
Maxi-PLS 1600/2000	Roof section/base section	N	1 set	**9674.442**
Maxi-PLS 1600/2000	Rear section top/bottom	L1, L2, L3	1 set	**9674.461**
Maxi-PLS 1600/2000	Rear section top/bottom	N	1 set	**9674.462**
Maxi-PLS 3200	Roof section/base section	L1, L2, L3	1 set	**9674.445**

For enclosure depth 800 mm

For system	For application	For conductor	Packs of	Model No. SV
Flat-PLS 60	Roof section/base section	L1, L2, L3	1 set	**9674.453**
Flat-PLS 60	Roof section/base section	N	1 set	**9674.454**
Flat-PLS 60	Rear section top/bottom	L1, L2, L3	1 set	**9674.473**
Flat-PLS 60	Rear section top/bottom	N	1 set	**9674.474**
Flat-PLS 100	Roof section/base section	L1, L2, L3	1 set	**9674.457**
Flat-PLS 100	Roof section/base section	N	1 set	**9674.458**
Flat-PLS 100	Rear section top/bottom	L1, L2, L3	1 set	**9674.477**
Flat-PLS 100	Rear section top/bottom	N	1 set	**9674.478**
Maxi-PLS 1600/2000	Roof section/base section	L1, L2, L3	1 set	**9674.443**
Maxi-PLS 1600/2000	Roof section/base section	N	1 set	**9674.444**
Maxi-PLS 1600/2000	Rear section top/bottom	L1, L2, L3	1 set	**9674.463**
Maxi-PLS 1600/2000	Rear section top/bottom	N	1 set	**9674.464**
Maxi-PLS 3200	Roof section/base section	L1, L2, L3	1 set	**9674.447**
Maxi-PLS 3200	Roof section/base section	N	1 set	**9674.448**
Maxi-PLS 3200	Rear section top/bottom	L1, L2, L3	1 set	**9674.467**
Maxi-PLS 3200	Rear section top/bottom	N	1 set	**9674.468**

Terminal block, distribution busbar

for switch-disconnector-fuse section
For connecting the connection brackets to the distribution busbar system of the switch-disconnector-fuse section, no drilling required.

Material:
E-Cu

Supply includes:
Assembly parts.

Detailed drawings:
Available on the Internet.

For bar width mm	Packs of	Model No. SV
50/60	1	**9674.485**
80/100	1	**9674.488**

Also required:

- Connection bracket for switch-disconnector-fuse section, see page 358.
- Distribution busbar for switch-disconnector-fuse section, see page 357.

Documentation

Tightening torques for Flat-PLS busbar systems

There is separate documentation available containing all the requisite torque information for the configuration of Ri4Power systems with the Flat-PLS busbar system. Organised according to item numbers, information is provided on screws, screw drive and rated torque.

This documentation is available for downloading at the Rittal website **www.rittal.com** under “Download brochures”. Alternatively, a printed copy may be ordered quoting the following item number.

Packs of	**Model No. SV**
1	**9676.001**

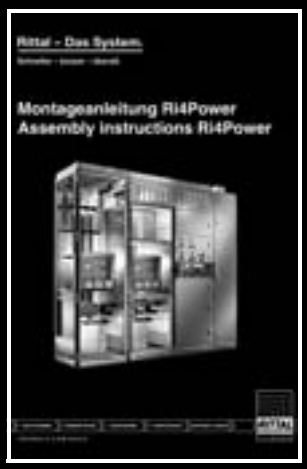
Assembly instructions for Ri4Power low-voltage switchgear

for Form 1-4, with Flat-PLS, Maxi-PLS and RiLine60

These assembly instructions explain the configuration of type-tested Ri4Power field types and possible busbar systems, divided into 3 sections. The first section explains the assembly sequence for the individual stages of the possible field types in diagrammatic form.
The second section provides detailed assembly instructions using diagrams and data tables. The final section explains the installation of optional accessories and general work operations.

This documentation is available for downloading at the Rittal website **www.rittal.com** under “Download brochures”. Alternatively, a printed copy may be ordered quoting the following item number.

Packs of	**Model No. SV**
1	**9676.000**



Engineering support for project handling

For individual project handling, Rittal offers an extra service with specially trained expert advisors and technical support staff for the generation of quotes, technical order handling, and after-sales service.

Following technical coordination, individual low-voltage switchgear may be configured. On request, we can supply you with assembly drawings and bills of materials to match your project. As a planner, you have the option of requesting a tender text for your project based on Power Engineering project planning.

During the execution of your plant, our expert advisors can also provide technical support with the assembly and execution.

For initial contact with our engineering support team, please contact your local expert advisor. He or she will make a note of your request and forward it to our technical team. Further information is available at **www.rittal.com.**

Ri4Power ISV distribution enclosures

ISV distribution enclosures

- Based on baying system TS 8 up to 630 A, see page 82
- Based on baying system TS 8 up to 1600 A, see page 83

ISV wall-mounted distributor

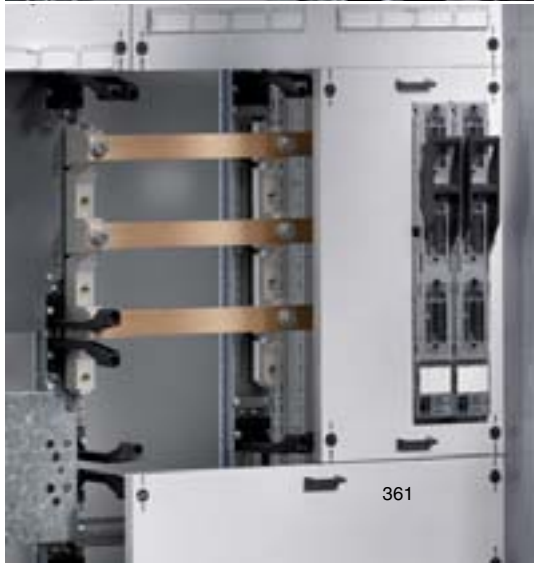
- Compact, robust wall-mounted enclosures
- Based on compact enclosure AE, see page 47

ISV expansion modules

- Easy mounting on support frame or support plate
- Individual combination and configuration
- Pitch pattern 150 x 250 mm
- Expansion modules, see page 362

Power distribution components

- Busbar systems up to 1600 A (185 mm), see page 340
- Maxi-PLS, see page 328
- Fuse elements, see page 294
- NH slimline fuse-switch disconnectors, see page 306



ISV distribution enclosures

Contact hazard protection modules

- For covering free installation areas
- Cover is prepared for a lead seal

Colour:
RAL 9002

Mechanical interior installation	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
Empty module	1	250 mm	1	150 mm	1	**9665.000**
	1	250 mm	2	300 mm	1	**9665.010**
	1	250 mm	3	450 mm	1	**9665.020**
	1	250 mm	4	600 mm	1	**9665.030**
	2	500 mm	1	150 mm	1	**9665.040**
	2	500 mm	2	300 mm	1	**9665.050**
	2	500 mm	3	450 mm	1	**9665.060**
	2	500 mm	4	600 mm	1	**9665.070**
	3	750 mm	4	600 mm	1	**9665.510**
Accessories						
Terminal block	see page 369					

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Mounting plate modules

- With mounting plate made from 2 mm zinc-plated sheet steel
- Cover is prepared for a lead seal
- Maximum usable depth 142 mm

Colour:
RAL 9002

Detailed drawings:
Available on the Internet.

Mechanical interior installation: Mounting plate (W x H)	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
200 x 150 mm	1	250 mm	1	150 mm	1	**9665.080**
200 x 300 mm	1	250 mm	2	300 mm	1	**9665.090**
200 x 450 mm	1	250 mm	3	450 mm	1	**9665.100**
200 x 600 mm	1	250 mm	4	600 mm	1	**9665.110**
450 x 150 mm	2	500 mm	1	150 mm	1	**9665.120**
450 x 300 mm	2	500 mm	2	300 mm	1	**9665.130**
450 x 450 mm	2	500 mm	3	450 mm	1	**9665.140**
450 x 600 mm	2	500 mm	4	600 mm	1	**9665.150**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Support rail modules

- For installing terminal blocks, cable ties, etc.
- Support rails 35/15 mm
- Adjustable on a 25 mm pitch pattern
- Cover is prepared for a lead seal

Colour:
RAL 9002

Detailed drawings:
Available on the Internet.

Mechanical interior installation: Number of support rails	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
1	1	250 mm	1	150 mm	1	**9665.160**
	1	250 mm	2	300 mm	1	**9665.170**
2	1	250 mm	3	450 mm	1	**9665.180**
3	1	250 mm	4	600 mm	1	**9665.190**
1	2	500 mm	1	150 mm	1	**9665.200**
	2	500 mm	2	300 mm	1	**9665.210**
2	2	500 mm	3	450 mm	1	**9665.220**
3	2	500 mm	4	600 mm	1	**9665.230**
Accessories						
Spacers	see page 369					
Terminal block	see page 369					

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

ISV distribution enclosures

Support modules

- For mounting switchgear
- Solid mounting plate
- Cover is prepared for a lead seal

Colour:
RAL 9002

Mechanical interior installation: Mounting surface	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
W x H 190 x 210 mm, installation depth variable from 86 – 161 mm	1	250 mm	3	450 mm	1	**9665.360**
W x H 190 x 210 mm, installation depth variable from 86 – 153 mm	2	500 mm	3	450 mm	1	**9665.370**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Connection modules

- For connecting copper and aluminium conductors
- Single-wire or multi-wire conductors with crimped wire end ferrule or laminated copper bar
- Cover is prepared for a lead seal

Colour:
RAL 9002

Mechanical interior installation: Terminal connection top and bottom		Size				Packs of	Model No. SV
		Width unit (WU)[1]		Height unit (U)[2]			
250 A, 5-pole	Round conductor: 1 x 16 – 150 mm² or 2 x 16 – 70 mm² Laminated flat copper: Clamping area W x H 17 x 21 mm	1	250 mm	3	450 mm	1	**9665.310**
400 A, 5-pole	Round conductor: 1 x 50 – 240 mm² or 2 x 25 – 120 mm² Laminated flat copper: Clamping area W x H 25 x 21 mm	1	250 mm	3	450 mm	1	**9665.330**
630 A, 5-pole	Round conductor: 1 x 120 – 300 mm² or 2 x 120 – 185 mm² Laminated flat copper: Clamping area W x H 41 x 21 mm	2	500 mm	3	450 mm	1	**9665.350**

Accessories

Laminated copper bars	see page 314

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

DIN rail mounted device modules

- To accommodate DIN rail mounted devices
- Support rails 35/7.5 mm
- Cover is prepared for a lead seal

Colour:
RAL 9002

Detailed drawings:
Available on the Internet.

Mechanical interior installation	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
12 divider units (1 x 12 x 18 mm)	1	250 mm	1	150 mm	1	**9665.240**
24 divider units (2 x 12 x 18 mm)	1	250 mm	2	300 mm	1	**9665.250**
36 divider units (3 x 12 x 18 mm)	1	250 mm	3	450 mm	1	**9665.260**
48 divider units (4 x 12 x 18 mm)	1	250 mm	4	600 mm	1	**9665.270**
24 divider units (2 x 12 x 18 mm)	2	500 mm	1	150 mm	1	**9665.280**
48 divider units (4 x 12 x 18 mm)	2	500 mm	2	300 mm	1	**9665.290**
72 divider units (6 x 12 x 18 mm)	2	500 mm	3	450 mm	1	**9665.500**

Accessories

Cover strips	see page 369
Terminal block	see page 369

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

ISV distribution enclosures

NH fuse-switch disconnector modules

- Suitable for accommodating RiLine NH fuse-switch disconnectors for mounting plate assembly
- Cover is prepared for a lead seal

Colour:
RAL 9002

Mechanical interior installation			Size				Packs of	Model No. SV
			Width unit (WU)[1]		Height unit (U)[2]			
Assembly block slotted and positioned plus cut-out in the cover to fit NH fuse-switch disconnectors	1 x size 00 160 A	1	1	250 mm	2	300 mm	1	**9665.385**
	2 x size 00 160 A	1	1	250 mm	2	300 mm	1	**9665.395**
	1 x size 1 250 A	2	1	250 mm	3	450 mm	1	**9665.405**
	1 x size 2 400 A	3	1	250 mm	3	450 mm	1	**9665.415**
	1 x size 3 630 A	4	2	500 mm	3	450 mm	1	**9665.425**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

NH fuse-switch disconnectors for mounting plate assembly (RiLine NH)

	Size	Model No. SV	Model No. SV[1]	Page
1	Size 00	9344.000/010	9344.020/030	298/299
2	Size 1	9344.100/110	9344.130	300
3	Size 2	9344.200/210	9344.230	302
4	Size 3	9344.300/310	9344.330	304

[1] With electronic fuse monitoring.

Power circuit-breaker modules

- Suitable for accommodating commercially available air circuit-breakers of brands ABB, Schneider Electric, Eaton and Siemens in 3-pole versions, up to 630 A
- Cover is prepared for a lead seal

Colour:
RAL 9002

Note:
The pitch patterns of holes for attachment of the air circuit-breakers and the corresponding cut-out dimensions for the covers are shown in the ISV assembly instructions, see **www.rittal.com.**

Power circuit-breakers are not included with the supply.

Mechanical interior installation		Size				Packs of	Model No. SV
		Width unit (WU)[1]		Height unit (U)[2]			
Mounting plate slotted and positioned for power circuit-breakers	1	1	250 mm	2	300 mm	1	**9665.430**
	2	1	250 mm	3	450 mm	1	**9665.440**
	3	1	250 mm	2	300 mm	1	**9665.450**
	4	1	250 mm	3	450 mm	1	**9665.460**
	5	1	250 mm	3	450 mm	1	**9665.470**
	6	1	250 mm	3	450 mm	1	**9665.480**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Air circuit-breakers

I_N	Brand							
	ABB		Schneider Electric		Eaton		Siemens	
160 A	1	Tmax T1 Tmax T2	3	Compact NS (X) 100 Compact NS (X) 160	1 3	NZM 1 NZM 7	3	Sentron VL160 Sentron VL160X
250 A	2	Tmax T3	4	Compact NS (X) 250	1 5	NZM 2 NZM 7	4	Sentron VL250
400 A	5	SACE Isomax S5	6	Compact NS (X) 400	5	NZM 3 NZM 10	5	Sentron VL400
630 A	5	SACE Isomax S5 SACE Isomax S6	6	Compact NS (X) 630	5	NZM 3 NZM 10	5	Sentron VL630

Busbar support

5-pole, 60 mm bar centre distance

Note:
- The busbars must be cut to length prior to installation, in accordance with the "ISV" assembly instructions, depending on the configuration and connection versions being used.
- 5-pole busbar variant only suitable for the configuration of busbar connections and NH bus-mounting fuse-switch disconnectors, size 00.
- With bus-mounting fuse bases, only 3-pole configuration (L1/L2/L3) is supported. In such cases, N and PE must be configured via busbar support SV 9340.040 (see page 310) or busbar module (Model No. SV 9665.590 or SV 9665.600, see page 368).

Mechanical interior installation		Usable busbar dimensions E-Cu	Packs of	**Model No. SV**
Busbar support for 2 height units[1] and max. 2 width units[2]		Busbars L1/L2/L3 30 x 5 mm (400 A) 30 x 10 mm (630 A)	4	**9665.495**
		Busbar N 25 x 10 mm		
		Busbar PE 12 x 10 mm		
Assembly components				Page
Conductor connection clamps for bar thickness	5 mm	3450.500 – 3453.500/3550.000		316
	10 mm	3455.500 – 3458.500/3555.000		316
Plate clamp		3554.000		316
Bus-mounting fuse bases				see below
NH bus-mounting fuse-switch-disconnector, size 00				see below
Also required				
Contact hazard protection cover for	Conductor connection clamps			366
	Plate clamp			366
	Bus-mounting fuse bases			366
	NH bus-mounting fuse-switch-disconnector, size 00			366
Accessories				
Busbars E-Cu		see page 311		
Busbar connectors for E-Cu[3]	30 x 5/10 mm (L1/L2/L3)	9320.020		313
	25 x 10 mm (N)	9320.020		313
	12 x 10 mm (PE)	9350.075		313
Laminated copper bars		see page 314		

[1] 1 U ≙ 150 mm
[2] 1 WU ≙ 250 mm
[3] for busbar connections from enclosure to enclosure

Bus-mounted fuse bases and accessories

Type	Bus-mounting fuse base	Contact hazard protection cover	End caps	Page
	Model No. SV	Model No. SV	Model No. SV	
D 02-E 18	3418.000	3419.000	3420.000	294
D II-E 27	3427.000	3428.000	3429.000	294
D III-E 33	3433.000	3434.000	3435.000	294
D 02-E 18-D-Switch	9340.950	–	–	295

NH fuse-switch disconnectors (RiLine NH)

Size	Model No. SV	Model No. SV[1]	Page
Size 00	9343.000 9343.010	9343.020 9343.030	298/299

[1] With electronic fuse monitoring.

ISV distribution enclosures

Contact hazard protection cover

for conductor connection clamps and plate clamp
Cover is prepared for a lead seal

Colour:
RAL 9002

Design	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
Solid	1	250 mm	2	300 mm	1	**9665.530**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Contact hazard protection cover

for bus-mounting fuse bases
Cover is prepared for a lead seal

Colour:
RAL 9002

For	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
7 x D 02-E 18, 7 x D 02-E 18-D-Switch	1	250 mm	2	300 mm	1	**9665.525**
4 x D II-E 27, 3 x D III-E 33	1	250 mm	2	300 mm	1	**9665.545**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Contact hazard protection cover

for NH bus-mounting fuse-switch disconnectors, size 00 (RiLine NH)
Cover is prepared for a lead seal

Colour:
RAL 9002

For	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
1 x size 00	1	250 mm	2	300 mm	1	**9665.555**
2 x size 00	1	250 mm	2	300 mm	1	**9665.565**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

NH slimline fuse-switch-disconnector modules

- With busbars E-Cu (100 mm bar centre distance)
- For NH slimline fuse-switch disconnectors size 00 or busbar connections

Note:
– In order to be able to ensure trouble-free cable connection, a contact hazard protection module (Model No. SV 9665.000, see page 362) must be installed beneath the NH slimline fuse-switch-disconnector modules.
– Busbar connection in accordance with “ISV” assembly instructions, see **www.rittal.com**

Mechanical interior installation: Busbar system	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
630 A, 3-pole with busbars E-Cu 30 x 10 mm	1	250 mm	3	450 mm	1	**9665.570**
	2	500 mm	3	450 mm	1	**9665.580**
Assembly components						Page
NH slimline fuse-switch-disconnector, size 00	9346.020/9346.030					306
Conductor connection clamps	3455.500 – 3459.500/3555.000					316
Plate clamp	3554.000					316
Also required						
Contact hazard protection cover for NH slimline fuse-switch-disconnector, size 00	9665.625/9665.635					367
Contact hazard protection cover for Conductor connection clamps	9665.610					367
Contact hazard protection cover for Plate clamp	9665.610					367
Accessories						
Laminated copper bars	see page 314					

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Contact hazard protection cover

for NH slimline fuse-switch disconnector size 00 (SV 9346.020, SV 9346.030)
Cover is prepared for a lead seal

Colour:
RAL 9002

For	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
2 x size 00	1	250 mm	3	450 mm	1	**9665.625**
4 x size 00	1	250 mm	3	450 mm	1	**9665.635**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Contact hazard protection cover

for conductor connection clamps and plate clamp
Cover is prepared for a lead seal

Colour:
RAL 9002

Design	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
Solid	1	250 mm	3	450 mm	1	**9665.610**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

ISV distribution enclosures

Busbar modules

2-pole
- For connecting N and PE
- Contact hazard protection cover included
- Cover is prepared for a lead seal

Colour:
RAL 9002

Mechanical interior installation: Busbar system	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
2-pole for N and PE with busbars E-Cu 30 x 10 mm	1	250 mm	2	300 mm	1	**9665.590**
	2	500 mm	2	300 mm	1	**9665.600**
Assembly components	Model No. SV					Page
Conductor connection clamps	3455.500 – 3459.500/3555.000					316
Plate clamp	3554.000					316
Accessories						
Laminated copper bars	see page 314					

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Meter mounting board module

- Open module for internal measurements
- Clearance depth available for meter installation 170 mm

Colour:
RAL 9002

Note:
The meter mounting board module does not comply with meter mounting board standard DIN 43 870/VDE 0603 and does not meet the conditions for total insulation. Use in unmetered areas only by arrangement with the local electricity supply company.

Mechanical interior installation	Size				Packs of	Model No. SV
	Width unit (WU)[1]		Height unit (U)[2]			
Attachment rails to accommodate a meter	1	250 mm	3	450 mm	1	**9665.790**

[1] 1 WU ≙ 250 mm
[2] 1 U ≙ 150 mm

Cover strips

For blanking spare component cut-outs in DIN rail mounted device modules, max. 12 divider units (12 x 18 mm), divisible every 9 mm.

Packs of	Model No. SV
1	**9665.650**

Blanking cover

For blanking unnecessary cut-outs for bus-mounting fuse bases, 108 mm wide.

Packs of	Model No. SV
1	**9665.660**

Wiring brackets

for installing

- C rails 30/15 mm
- TS punched section with mounting flange
- TS frame section

Packs of	Model No. SV
10	**9665.670**

Spacers

For configuring support rails with attachment screws, 53 mm high.

Packs of	Model No. SV
2	**9665.680**

Terminal block

For installation into 250 mm wide contact hazard protection and support rail modules 2-pole for N and PE, each with 20 x 4 mm^2, 5 x 25 mm^2.

Packs of	Model No. SV
1	**9665.690**

Air circuit breake

Power

UPS – Power Modular Concept

PMC 12/PMC 12 compact 372
PMC 40 (type 1-4) 373
PMC 40 (type 5) 374
PMC 120 375
PMC 200 376
PMC 800 377
PMC accessories 378

Power Distribution Rack

Power Distribution Rack PDR 382
Power Distribution Module PDM 382

Power System Module

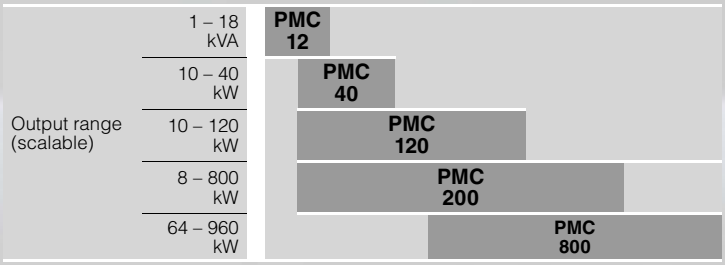
PSM Plus busbar 383
PSM Plus plug-in modules 383
PSM busbars 384
PSM socket modules 385
PSM accessories 386

Fuel cell system

RiCell Flex 387

Rittal UPS systems Power Modular Concept

Ensuring UPS protection of all processes whose availability is crucial is more than just a question of kilowatts, autonomy and UPS redundancy. The key here is to protect the critical load with a high UPS efficiency.



UPS – Power Modular Concept

Shutdown software Page 529 **Battery packs** Page 378

Double conversion technology to the highest classification VFI-SS-111.

Supply includes:
- Single-phase UPS system
- Operating manual
- Software on CD-ROM
- RS232 cable
- For 1 – 3 kVA: UPS, earthing-pin connection cable, USB cable

Also required:

Country-specific connection cables and slide rails are required to operate the UPS systems,
see page 775/749.

Technical information:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

PMC 12, single-phase, output range 1 – 12 kVA n+1

UPS for 482.6 mm (19˝) racks or as floor-standing enclosures		UPS with integral battery					UPS control unit		Page
Internal hot swap-compatible batteries		■	■	■	■	■	–	–	
Model No. DK PMC 12		**7857.482**	**7857.483**	**7857.430**	**7857.431**	**7857.432**	**7857.433**	**7857.434**	
Width x height mm		440 (19˝) x 176 (4 U)		440 (19˝) x 88 (2 U)					
Depth mm		420	420	405	650	650	680	680	
Weight kg		26	27	15.7	26	29	24	24	
Power	VA	2000	3000	1000	2000	3000	4500	6000	
	Watts	1600	2400	800	1600	2400	3500	4800	
	Max. heat loss (W)	105	262	105	210	252	315	420	
Input	Rated voltage	230 V (160 – 288 V)							
	Frequency	50/60 Hz ±5%							
	Power factor	> 0.99 with linear load							
Output	Voltage	230 V ≤ ±1% (200/208/220/230/240 V adjustable)							
	Frequency, synchronised	±1 Hz							
	Efficiency, AC mode	88%	90%	88%	88%	90%	90%	90%	
	Power factor	0.8							
Battery 5 years EUROBAT	Autonomy at 100% load	≥ 7 min.	≥ 5 min.	≥ 7 min.	≥ 7 min.	≥ 5 min.	≥ 12 min.[1]	≥ 8 min.[1]	
Communication	Interface	1 x USB, 1 x RS232					1 x RS232		
	SNMP	Optional network monitoring card DK 7857.420/relay card 7857.410							
	Operating systems supported	Windows, Unix, Linux, Novell, Apple; RCCMD shutdown licence DK 7857.421							
	Emergency Power Off (EPO)	■							
Connection	Input connection 230 V	10 A C14	16 A C20	10 A C14		16 A C20	Compact connector		
	Output connection 230 V	6 x 10 A, C13, 2 units switched	4 x 10 A, C13, 2 units switched, 1 x 16 A, C19	6 x 10 A, C13, 2 units switched		4 x 10 A, C13, 2 units switched, 1 x 16 A, C19	Compact connector		
Standards and certifications	Power	IEC/EN 62 040-3							
	EMC	EN 50 091-2/EN 62 040-2 class A, EN 61 000-4-2/-3/-4/-6-8/-11, EN 61 000-3-2/-3							
	Labelling	CE, FCC							
Accessories									
Battery pack PMC 12		see page 378							
Connection cable at output end, UPS, single-phase, for PSM busbar		7856.027	7856.030	7856.027	7856.027	7856.030	–	–	386

■ Included with the supply. [1] With an external battery pack

UPS – Power Modular Concept

Shutdown software Page 529

Double conversion technology to the highest classification VFI-SS-111.

Supply includes:
– Basic module and UPS module(s) fitted to specifications.
– Battery pack(s), separate

Service:
Commissioning by Rittal.

Technical information:
Available on the Internet.

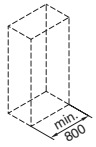
Photo shows a configuration example with equipment not included in the scope of supply.

PMC 40 (type 1-4), 3-phase, output range scalable 10 – 40 kW

			Type 1	Type 2	Type 3	Type 4	Page
Number of UPS modules		Qty.	1	1	2	2	
Number of battery packs		Qty.	1	2	2	4	
Maximum UPS output (with 10 kW/20 kW module)		kW	10	10/20	20	20/40	
UPS output with 1+1 redundancy (with 10 kW/20 kW module)		kW	–	–	10	10/20	
Approx. autonomies at 100% load (10 kW/20 kW modules)		min.	6/–	15/5	6/–	16/5	
Approx. autonomies at 50% load (10 kW/20 kW modules)		min.	12/–	30/10	12/–	32/10	
RS232 (D-Sub 9) and USB interface (configuration and shutdown)		Qty.	1/1	1/1	1/1	1/1	
Fault signal contacts (floating)		Qty.	5	5	5	5	
Clamping strip input/output (3L+N+PE) max. conductor cross-section		mm^2	10/16	10/16	10/16	10/16	
Dimensions	Width	mm	485 (19″)	485 (19″)	485 (19″)	485 (19″)	
	Height	U	11	15	18	26	
	Depth	mm	735	735	735	735	
Required distance between 482.6 mm (19″) levels (min./max.)		mm	690 – 800	690 – 800	690 – 800	690 – 800	
Weight (approx. incl. batteries and UPS modules)		kg	162	278	310	537	
Model No. DK basic unit			**7040.010**	**7040.020**	**7040.030**	**7040.040**	
Model No. DK PMC 40 10 kW module (order quantity acc. to type)		Qty.	**1 x 7040.110**	**1 x 7040.110**	**2 x 7040.110**	**2 x 7040.110**	
Model No. DK PMC 40 20 kW module (order quantity acc. to type)		Qty.	**–**	**1 x 7040.120**	**–**	**2 x 7040.120**	
Model No. DK PMC 40 battery pack each n x 4 x 10 batteries (12 V/7 Ah) prewired		Packs of	**7040.211**	**7040.212**	**7040.212**	**7040.214**	
Model No. DK PMC 40 battery preparation (for export or air freight) Drawers and battery cabling (excluding battery, quantity depending on type)		Packs of	**7040.201**	**7040.202**	**7040.202**	**7040.204**	
Accessories							
SNMP monitoring card (Budget)		Packs of	7857.420				380
RCCMD licence, bundle of 5 licences		Packs of	7857.423				529
RCCMD licence, bundle of 25 licences		Packs of	7857.424				529

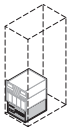
Note: Only UPS modules with an identical output may be combined.

PMC 40 modules, rack-independent



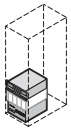
482.6 mm (19″) rack, at least 800 mm deep.

+



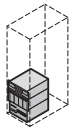
Basic module ...

+



... plus UPS module ...

+



... plus battery pack produces a complete UPS system

UPS – Power Modular Concept

Shutdown software Page 529

UPS rack with integral power modules and batteries
- Thanks to the double conversion technology (VFI-SS-111) the output voltage is independent from the input voltage and frequency
- Efficient IGBT power transistor technology achieves a high operating ratio of 95% even in part-load operation
- "Safe swap" compatibility with a redundant design, i.e. the module may be exchanged while operational
- Every UPS module includes power electronics as well as the control unit including display
- Installation, commissioning and servicing to be carried out by authorised experts only

Supply includes:
– UPS system in the TS 8 rack
– Vented front and rear door
– Fitted with UPS power modules (depending on configuration) and batteries
– The batteries must only be installed at the point of assembly and are delivered separately

Note:
Only UPS modules with an identical output may be combined.

Technical information/battery configurations:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

PMC 40 (type 5), 3-phase, output range scalable 10 – 40 kW, redundant

Dimensions (UPS rack, without base/plinth) width x height x depth mm	Packs of	600 x 2000 x 800	600 x 2000 x 1000	Page
Model No. UPS basic rack		**7040.065**	**7040.060**	
Maximum no. of UPS modules		3		
Maximum no. of batteries		240 (4 x 50, 6 x 40)		
Maximum UPS output (with 10 kW/20 kW modules)		30/60 kW		
UPS output with n+1 redundancy (with 10 kW/20 kW modules)		20/40 kW		
RS232 (D-Sub 9) and USB interface (configuration and shutdown)		1/1		
Fault signal contacts (floating)		5		
Clamping strip input/output (3L+N+PE) max. conductor cross-section		35/50 mm²		
Weight (approx. incl. batteries and 3 UPS modules)		740 kg		
Protection category of UPS system		IP 20		
Operating temperature range (UPS with batteries, recommended)		20 – 25°C		
Accessibility only required to front (for servicing, maintenance)		900 mm		
Distance from wall at rear (due to fan cooling)		200 mm		
Model No. PMC 40 10 kW module (order quantity acc. to output)	1	**7040.110**		
Model No. PMC 40 20 kW module (order quantity acc. to output)	1	**7040.120**		
Model No. PMC 40 battery pack 1 x 4 x10 batteries, when using 10 kW modules (12 V/7 Ah) prewired (service life 5 years under EUROBAT) Order volume n = 1-6 x	40	**7040.311**		
Model No. PMC 40 battery pack 1 x 5 x10 batteries, when using 10 kW modules (12 V/7 Ah) prewired (service life 5 years under EUROBAT) Order volume n = 1-4 x	50	**7040.315**		
Model No. PMC 40 battery preparation n x 4 x 10 (for export or air freight) Drawers and battery cabling (n = 1-6 x, **without batteries**), cable set of 40	1 set	**7040.301**		
Model No. PMC 40 battery preparation n x 5 x 10 (for export or air freight) Drawers and battery cabling (n = 1-4 x, **without batteries**), cable set of 50	1 set	**7040.305**		
Accessories				
UPS monitoring/SNMP monitoring card	1	7857.420		380
Base/plinth components, front and rear, RAL 7035, 100 mm high	1 set	8601.605		543
Base/plinth components, sides, RAL 7035, 800 mm deep/100 mm high	1 set	8601.085		544
Base/plinth components, sides, RAL 7035, 1000 mm deep/100 mm high	1 set	8601.015		544

UPS – Power Modular Concept

Shutdown software Page 529

Modular UPS system (up to 120 kW)
- UPS power modules operate according to the double conversion principle (classification to VFI-SS-111) and have a transformerless design thanks to the high intermediate circuit voltage
- Efficient IGBT power transistor technology achieves a high operating ratio of 95% even in part-load operation
- "Safe swap" compatibility with a redundant design, i.e. the module may be exchanged while operational
- Every UPS module includes power electronics as well as the control unit including display
- Installation, commissioning and servicing to be carried out by authorised experts only

Supply includes:
– UPS system in the TS 8 rack
– Vented front door and rear panel
– Fitted with UPS power modules (depending on configuration) and batteries

Note:
Only UPS modules with an identical output may be combined.

Technical information/battery configurations:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

PMC 120, 3-phase, output range scalable 10 – 120 kW

Dimensions (UPS rack, without base/plinth) width x height x depth mm	Packs of	600 x 2000 x 800	600 x 2000 x 1000	Page
Model No. UPS basic rack		**7040.075**	**7040.070**	
Maximum no. of UPS modules		6		
Maximum UPS output (with 10 kW/20 kW modules)		60/120 kW		
UPS output with n+1 redundancy (with 10 kW/20 kW modules)		50/100 kW		
No. of batteries (12 V/28 Ah) per module/battery bank (per 10 kW/20 kW)		40/50		
No. of battery banks per battery rack[1)], max.		3		
No. of batteries (12 V/28 Ah) per battery rack[1)], max.		150		
Operating ratio (from 50% load)		95%		
Operating ratio in ECO-mode (100% load)		98%		
RS232 (D-Sub 9) and USB interface (configuration and shutdown)		1/1		
Fault signal contacts (floating)		5		
Input (3L+N+PE) conductor cross-section		70/95 mm²		
Output (3L+N+PE) conductor cross-section		70/95 mm²		
Battery connection (3 x M10, joint batteries) conductor cross-ection		150 mm²		
Weight (approx., UPS rack with 6 UPS modules)		285 kg		
Protection category of UPS system		IP 20		
Operating temperature range (UPS with batteries, recommended)		20 – 25°C		
Accessibility only required to front (for servicing, maintenance)		900 mm		
Distance from wall at rear (due to fan cooling)		200 mm		
Model No. PMC 40 10 kW module (order quantity acc. to output)	1	**7040.110**		
Model No. PMC 40 20 kW module (order quantity acc. to output)	1	**7040.120**		
Also required				
Battery rack, width 800 mm (max. 150 batteries)	1	**7040.361[1)]**	**7857.364[1)]**	
Accessories				
Base/plinth components, front and rear, RAL 7035, 600 mm wide/100 mm high	1 set	8601.605		543
Base/plinth components, sides, RAL 7035, 800 mm deep/100 mm high	1 set	8601.085		544
Base/plinth components, sides, RAL 7035, 1000 mm deep/100 mm high	1 set	8601.015		544

[1)] Batteries not included with the supply of the battery rack.

UPS – Power Modular Concept

Shutdown software Page 529

Rittal PMC 200 ensures optimum availability for critical applications by combining modularity (flexible scalability and redundancy, whereby up to 20 modules may be switched in parallel) with decentralised parallel architecture or DPA (redundant protection without a “single point of failure”). Transformerless, genuine online, double-conversion UPSs with static bypass and classification code VFI-SS-111.

This modular concept keeps the purchasing and operating costs of redundant solutions low. As your performance requirements grow, the UPS grows with you – even in the most confined spaces, and with the system operational. The benefits to you:

Less capital tie-up, inexpensive expansion, and minimal space requirements.

Technical information:
Available on the Internet.

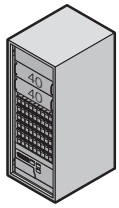
Photo shows a configuration example with equipment not included in the scope of supply.

PMC 200, 3-phase, output range scalable 8 – 800 kW

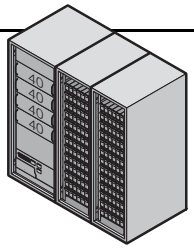
Up to 20 PMC modules may be gradually switched in parallel e.g. in order to supply 800 kW without redundancy or 760 kW n+1 (with 40 kW modules) uninterrupted. May be upgraded with the system operational; no need to switch over to an unprotected network.

Note:
This table contains only sample configurations. We would be pleased to configure your individual solution with you.

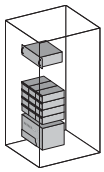
Examples of 32 and 40 kW module configurations and autonomies

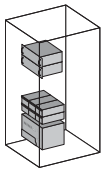


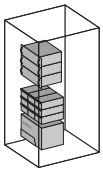
UPS racks:
W 800 x H 2000 x
D 1000 mm

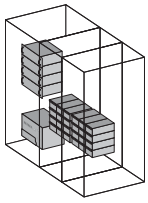


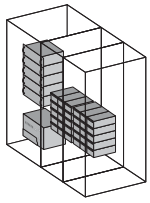
Battery racks:
W 800 x H 2000 x
D 1000 mm











Redundancy	without	with	without	with	without	with	without	with	without	with
UPS rack/battery rack	1/–	–	1/–	1/–	1/–	1/–	1/2	1/2	1/2	1/2
Number of UPS modules	1	–	2	2	3	3	4	4	5	5
PMC 32 module type, output in kW	**32**	–	**64**	**32**	**96**	**64**	**128**	**96**	**160**	**128**
Battery autonomy[1)]	18	–	9	9	9	9	12	12	12	12
PMC 40 module type, output in kW	**40**	–	–	–	–	–	**160**	**120**	**200**	**160**
Battery autonomy[1)]	15	–	–	–	–	–	9	9	9	9

[1)] Minutes/modules with cos φ 1.0/autonomy may be extended to order. Delivery times available on request.

PMC 200 modules

UPS rack | UPS module | Battery packs | PMC 200

Minimum floor space is required by a rack with three modules (2+1 redundancy) and batteries with autonomy integrated into a single rack. The Rittal PMC 200 allows the integration of up to 5 modules (4+1 redundancy) in one rack. For this configuration, an additional battery rack is required. The autonomy may be flexibly adapted to suit your requirements.

UPS – Power Modular Concept

Shutdown software Page 529

Rittal PMC 800 is the solution for data centres with a high power consumption. The modular architecture allows optimum, tailored configuration of the UPS.

The PMC 800 may be extended to accommodate up to 12 modules, facilitating a maximum output of up to 960 kW or 880 kW (n+1), redundant. If a UPS with a higher output is required, this can of course be achieved with the PMC 800.

UPS PMC 800 at a glance:

- Topology: On-line, double conversion, VFI-SS-111.
- Technology: transformerless
- Architecture: Modular, supports parallel connection
- Maximum output in standard configuration: 800 kW (higher outputs available on request)
- Operating ratio at 25/50/75/100% load (cos phi = 0.8): 92/93.5/95/95%
- Use of battery racks:

Technical information:
Available on the Internet.

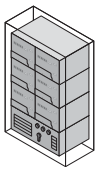
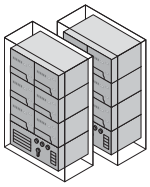
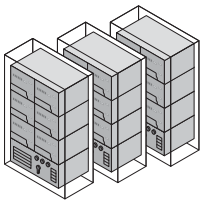
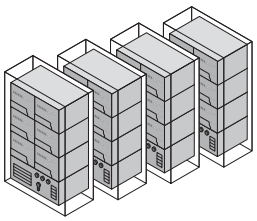
Photo shows a configuration example with equipment not included in the scope of supply.

PMC 800, 3-phase, output range scalable 64 – 960 kW

The separation into one power module and one control module is exemplary for UPS systems in this output class. This ensures a high level of service-friendliness and allows precise planning of maintenance work.

Note:
This table contains only sample configurations. We would be pleased to configure your individual solution with you.

Examples of 64 and 80 kW module configurations

PMC 800								
Redundancy (n+1)	without	with	without	with	without	with	without	with
Module with 64 kW	192	128	384	320	576	512	768	704
Module with 80 kW	240	160	480	400	720	640	960	880
Batteries	Battery rack, e.g. 28 Ah batteries or battery racks, e.g. 70 Ah batteries							
UPS racks W x H x D mm	1400 x 1900 x 870							

Accessories

Battery packs

for PMC 12

To operate or increase the power of PMC 12 UPS systems. With overload protection. Vertical siting is also possible. Battery packs are “hot plug”-compatible (replacement of batteries while operational). Batteries can be exchanged from the front, without removing the battery pack from the 482.6 mm (19″) level. Depending on the UPS version, 2 – 3 battery packs may be connected together to increase the autonomy. Cooling of the UPS and the battery packs is absolutely essential.

Material:
Maintenance-free lead gel accumulators, service life 5 years (to EUROBAT)

Supply includes:
– Fully preassembled and populated with accumulators (12 V/7 Ah)
– 0.5 m connection cable with connector
– Feet.

Note:
For mounting in the 482.6 mm (19″) rack, a slide rail DK 7063.883 is required.

UPS PMC 12 system	7857.482	7857.483	7857.430	7857.431	7857.432	7857.433	7857.434
Battery packs Model No. DK	**7857.488**	**7857.488**	**7857.435**	**7857.437**	**7857.437**	**7857.442**	**7857.442**
Width mm	465	465	465	465	465	465	465
Height mm	178 (4 U)	178 (4 U)	89 (2 U)	89 (2 U)	89 (2 U)	133.5 (3 U)	133.5 (3 U)
Depth mm	420	420	650	650	650	650	650
Weight kg	35	35	20	20	20	55	55
Qty.	12	12	6	6	6	20	20

Autonomy (min.) at 100% load:

UPS type	In supplied state	Battery packs				
		1	1 (XL version)	2	2 (XL version)	3
1 kVA	7 min.	28 min.	–	55 min.	–	–
2 kVA	7 min.	17 min.	26 min.	29 min.	54 min.	–
3 kVA	5 min.	12 min.	24 min.	20 min.	46 min.	–
4.5 kVA	–	9 min.	–	23 min.	–	39 min.
6 kVA	–	8 min.	–	20 min.	–	33 min.

Mechanical maintenance bypass

for PMC 12

Facilitates uninterrupted removal/maintenance of the UPS. Various designs are required depending on the UPS output category.
Connection of the bypass for 1 – 3 kVA UPS models is via a connector (Plug & Play), while the 4.5 and 6 kVA UPS variant must be installed by a qualified electrician. It is important to ensure the correct prefuse of the UPS bypass depending on the UPS power used.

Dimensions:
W x H x D (mm):
– 465 x 88 (2 U) x 80 (DK 7857.440)
– 465 x 88 (2 U) x 350 (DK 7857.441)

		Model No. DK
1	1 – 3 kVA (incl. UPS fuse 16 A)	**7857.440**
2	4.5 – 6 kVA (incl. UPS fuse 32 A)	**7857.441**

Relay card

for PMC 12

This card allows the UPS alarm messages (5 UPS alarms) to be forwarded to external indicator devices (e.g. building services management) via floating contacts.
The card is plugged into the extension slot on the rear of the PMC 12 UPS.

Packs of	Model No. DK
1	**7857.410**

Note:
Cannot be used together with the SNMP card.

Sub-distribution

for PMC 12

Outlets 4 x C19 and 2 x 32 A CEE-conforming, single-phase, individually fused. Allows the direct connection of up to 6 pieces of equipment.
A qualified electrician must carry out the installation.

Dimensions:
W x H x D (mm): 482.6 (19˝) x 131 (3 U) x 300

Packs of	Model No. DK
1	**7857.445**

Technical specifications:
Ambient conditions:
– Temperature: 5 – 40°C
– Humidity:
  5 – 90% rel. humidity (non-condensing)
– Input (open ends with wire end ferrules)
  3 x 6 mm² (2 m)
– Output:
  4 x C19 jack, 2 x CEE 32 A coupling
– Fuses:
  4 x 16 AC, 2 x 32 A type C

Plug & play sub-distribution

for PMC 12, 4.5 and 6 kVA

This sub-distribution facilitates simple installation and commissioning of the PMC 12 UPS, 4.5 and 6 kVA. All that is needed is a single-phase 32 A connection to DIN/EN 60 309.

Dimensions:
W x H x D (mm): 482.6 (19˝) x 88 (2 U) x 300

Packs of	Model No. DK
1	**7857.448**

Technical specifications:
Ambient conditions:

Temperature: 5 – 40°C
– Humidity:
  5 – 90% rel. humidity (non-condensing)
– UPS connection PMC 12:
  Via connection cables with fitted Harting connector (1,5 m)
– Input (connection cable):
  3 x 4 mm² (3 m) with 32 CEE connector, 1-phase
– Output:
  2 x C19 jack, 4 x C13 jack
– Fuses:
  2 x 16 AC, 4 x 10 A type C

Parallel hot swap chassis

for PMC 12, 4.5 and 6 kVA

Facilitates parallel switching of 2 (or 3) PMC UPS systems to increase the output or redundancy of the UPS. A mechanical maintenance bypass is also integrated.
Parallel connection is only possible with the 4.5 and 6 kVA PMC 12 version. The two UPS systems to be connected in parallel must have identical battery configurations (number/type of battery packs). The autonomy of the system will not be increased as a result of parallel connection. Installation must be carried out by a qualified electrician.

Dimensions:
W x H x D (mm): 482.6 (19˝) x 88 (2 U) x 300

	for UPS systems	Packs of	Model No. DK
1	2	1	**7857.443**
2	3	1	**7857.444**

Technical specifications:
Ambient conditions:
– Temperature: 5 – 40°C
– Humidity:
  5 – 90% rel. humidity (non-condensing)
– UPS connection PMC 12:
  Via connection cables with fitted Harting connector (1 m)
– Input (connection cable):
  3 x 10/16 mm² (2 m) with open cable end and wire end ferrules
– Output (connection cable):
  3 x 10/16 mm² (2 m) with open cable end and wire end ferrules
– Fuses (UPS input):
  2 x 2 x 32 A type C (for DK 7857.442)
  3 x 2 x 32 A type C (for DK 7857.443)

Note:
Commissioning of a PMC 12 UPS connected in parallel must only be carried out by a member of the Rittal Service team because the UPS may be destroyed if wrongly configured.
Additionally, we recommend the use of the PMC 12 sub-distribution (DK 7857.445).

Accessories

Sub-distribution

for PMC 40 UPS

Allows the direct, fused connection of single- and 3-phase equipment. In this way, up to 4 PSM busbars may be connected directly to the PMC 40 UPS via the relevant connection cables. Additionally, there are six single-phase outlets (16 A) available via C19 jacks.
Connection to the PMC 40 UPS must be carried out by a qualified electrician.

Dimensions:
W x H x D: 482.6 (19˝) x 131 mm (3 U) x 300 mm

Packs of	**Model No. DK**
1	**7040.500**

Technical specifications:
Ambient conditions:
– Temperature: 5 – 40°C
– Humidity:
5 – 90% rel. humidity (non-condensing)
– Input (open ends with wire end ferrules):
5 x 16 mm² (2 m)
– Output:
4 x GST18 (3-phase), 6 x C19 (1-phase)
– Fuses:
18 x 16 AC

Note:
Observe the country-specific connection data.

Plug & play connection cable for server enclosures:

Length	Packs of	**Model No. DK**
3 m	1	7857.130
5 m	1	7857.150
8 m	1	7857.180
9 m	1	7857.190

Sub-distribution, modular

for PMC 200

The distributor may be fitted directly in the UPS PMC 200 rack. This allows the configuration of a complete, compact system with a 0.6 m² footprint containing a rack-mounted modular UPS PMC 200, batteries and distributor.

Application range:
UPS systems Rittal Power Modular Concept PMC 200 up to 20 kW N+1.

Technical specifications:
- 482.6 mm (19˝), 6 U
- 12 outlets, three-phase 400 V / 50 Hz with 10 A
- On-load isolator for disconnecting
- Circuit-breaker 10 A per phase

Design	**Model No. DK**
482.6 mm (19˝), 6 U	**7857.372**

Supply includes:
482.6 mm (19˝) modules, 6 U, instructions.

Note:
Observe the country-specific connection data.

Plug & play connection cable for server enclosures:

Length	Packs of	**Model No. DK**
3 m	1	7857.130
5 m	1	7857.150
8 m	1	7857.180
9 m	1	7857.190

Also required:

UPV PMC 200, 60 kW, see page 376.

UPS monitoring card (SNMP card)

This optional monitoring card facilitates monitoring of the UPS via Web browsers. In this way, various monitoring states of the UPS (e.g. input voltage, output currents/power per phase, battery charging status, autonomies etc.) may be remotely monitored.However, the main application is a controlled server shutdown via the network interface. To this end, a UPS shutdown client (RCCMD software) must be installed and configured on every server.

Design	Packs of	**Model No. DK**
SNMP card, budget version	1	**7857.420**
SNMP card CS121 with swtiching contacts	1	**7857.366**

Note:
Only one extension card may be installed per UPS system.
Redundant monitoring solutions for UPS systems available on request.

RCCMD software, see page 529.

Battery Manager RiBat

for PMC 200/800

Management system for the batteries in a UPS. RiBat can extend the service life of a battery by up to 30%.

Benefits:

- Optimised charging for each individual battery.
- Temperature monitoring per battery.
- Early identification of defective batteries.
- Supports preventive maintenance of batteries.
- Defective batteries can be restored rather than replaced before reaching the end of their useful life.
- RiBat Manager replaces the internal SNMP card of the UPS.

The Rittal battery manager RiBat determines all relevant data such as battery voltage, internal resistance, discharge curve, temperature etc. throughout the service life of the monitored batteries. This data is evaluated and used to control the charging process. RiBat facilitates optimum charging of each individual battery.

The RiBat module regulates the charging process for each connected battery. This avoids overcharging of a battery which is connected to other batteries. This technology can extend the service life of a battery by up to 30%. The RiBat modules are connected using preassembled cables and connected to the RiBat Manager.
Up to 250 modules may be connected to one RiBat Manager.

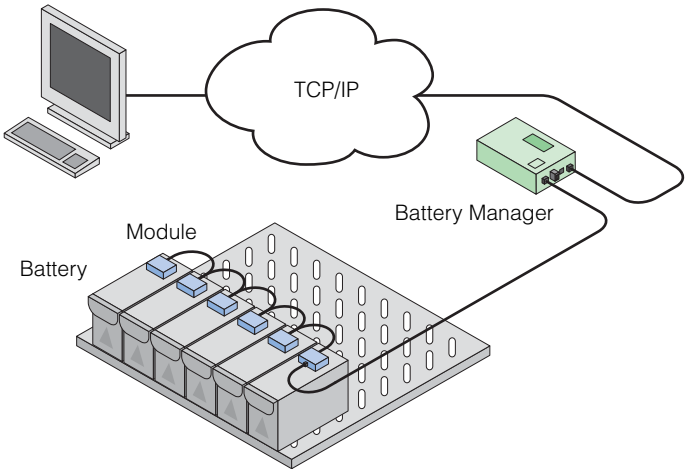
Designation	Model No. DK
1 RiBat Manager	7857.800
2 RiBat module	7857.801
RiBat cable kit 120 batteries	7857.802[1)]
RiBat cable kit 150 batteries	7857.803[2)]

Delivery times available on request.
[1)] In conjunction with a battery rack for 120 batteries
[2)] In conjunction with a battery rack for 150 batteries

Technical specifications

RiBat Manager:
– Supply voltage: 9 – 30 V DC
– Serial interface: 3 x RS232
– LAN interface: 10/100 MBit full/half
– Supported protocols:
SNMP, RCCMD, SNMP, HTTP
– Alarm contact: 1 floating contact
– Display: LCD display
Temperature range: 5°C – 45°C,
– 90% humidity, non-condensing
– Certifications: CEE, WEEE, RoHS

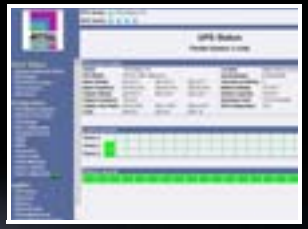
RiBat module:
– Battery voltage: 12 V DC
– Battery capacity: 7 – 300 Ah
– W x H x D: 800 x 55 x 27 mm
– Certifications: CEE, WEEE, RoHS



RCCMD software

Client software for controlled server shutdown

see page 529.



Power Distribution Rack

Power Distribution Rack PDR

- To accommodate a maximum of 8 PDM
- Height 1.20 m for 4 PDMs and 2 m height for 8 PDMs
- PDM may be retrofitted whilst operational
- A maximum of 32 racks may be fitted to the sub-distributor
- Fully shock-hazard protected
- Main switch in various options:
  – Isolator switch
  – On-load isolator
  – Air circuit-breaker
  – RC circuit-breaker
- Low-voltage distribution up to 250 A

Material:
Sheet steel

Surface finish:
– Enclosure frame: Dipcoat-primed
– Doors, roof and base/plinth: Dipcoat-primed
– Gland plates, punched sections with mounting flanges and mounting angles: Zinc-plated, clear-chromated

Colour:
RAL 7035

Supply includes:
– Enclosure frame with door (without tubular door frame),
– Rear panel,
– Side panels and roof plate,
– Levelling feet incl. base/plinth adaptor,
– Earthing of all enclosure panels,
– Busbars shock-hazard-protected
– Main switch integral.

Note:
Observe the standards of the local power supply companies.

Approvals:
VDE

Detailed drawings:
Available on the Internet.

Power Distribution Module PDM

- Mechanically latchable in the PDR
- Scalable
- RC circuit-breaker, optional

Supply includes:
– 482.6 mm (19˝) module, 3 U
– Incl. master switch
– 4 fused 3-phase outlets to the rack
– 3 x 230 V/16 A per outlet
– Connected load 400 V/3 AC, max. 63 A

Photo shows a configuration example with equipment not included in the scope of supply.

Power Distribution Rack PDR

		Packs of			Page
Possible number of PDM modules			4	8	
Dimensions mm	W x H x D		800 x 1200 x 500	800 x 2000 x 500	
Model No. DK		1	**7857.310**[1)]	**7857.300**[1)]	
Accessories					
Base/plinth components front and rear	Height 100 mm	1 set	8601.800	8601.800	543
	Height 200 mm	1 set	8602.800	8602.800	543
Base/plinth trim, side	Height 100 mm	1 set	8601.050	8601.050	544
	Height 200 mm	1 set	8602.050	8602.050	544

[1)] Extended delivery times.

Power Distribution Module PDM

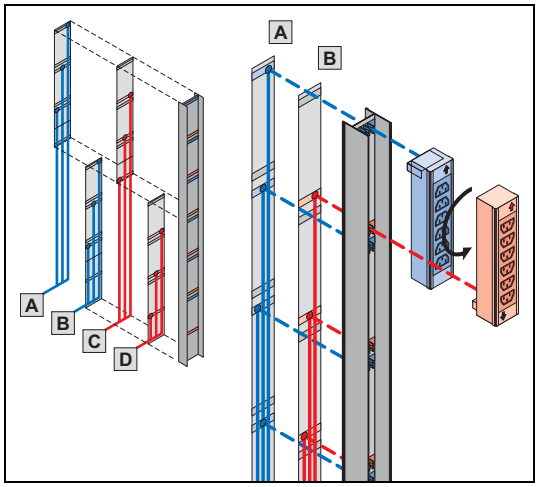
		Packs of			
Design			4 outlets per 10 kW	4 outlets project-specific	
Dimensions mm	W x H		19˝ (482.6 mm) x 3 U		
Model No. DK		1	**7857.320**	**7857.350**	
Also required					
Plug & play connection cable for PSM busbar to the server enclosures	Length 3 m	1	**7857.130**		
	Length 5 m	1	**7857.150**		
	Length 8 m	1	**7857.180**		
	Length 9 m	1	**7857.190**		
Connection cable 32 A CEE-conforming connector, for operation without PDR		1	**7857.321**		

Power System Module PSM Plus

Current carrying capacity up to 192 A per rack
Busbar with redundant design and 3-phase infeed.
By integrating two **further** three-phase circuits the PSM Plus now has **four** independent three-phase infeeds. Each of the feeds can be supplied with up to 3 x 16 A, producing a total of max. 192 A. With four independent infeeds, it is possible to assemble a redundant, high-MTBF power supply system for IT racks.

The benefits at a glance:
- 2 m busbar with four independent infeeds (**A, B, C, D** each 400 V/3~, 50/60 Hz, 3 x 16 A).
- Shock-hazard-protected; may be retrofitted whilst the system is operational.
- With four integral connection cables, each 3 m long, 5 x 2.5 mm² and Wieland GST connectors.
- Directly suitable for connecting to Rittal PDM.
- Easily integrated into existing applications with standard extension cables.
- 6 slots per 2 m busbar
- Attachment with no loss of U in the rack.

Note:
– PSM Plus bar for modules with two infeeds. This means that redundancy can now be achieved at module level.
– Only fits PSM Plus socket modules.



PSM Plus busbar

For enclosure height mm	Number of modules	Model No. DK
2000	6	**7856.015**

PSM Plus plug-in modules

Connector pattern	Number of sockets	
C13	6 (3 x per infeed)	**7856.081**
C19	4 (2 x per infeed)	**7856.231**
Earthing-pin	2 (1 x per infeed)	**7856.101**

PSM Plus connection cable

Length	Type	Connections	
5 m	3-phase supply connection cable	Three-phase connector EN 60 309 on Wieland GST socket	**7856.018**
5 m	Extension cable	Wieland GST socket on Wieland GST 18 connector	**7856.017**

PSM busbars

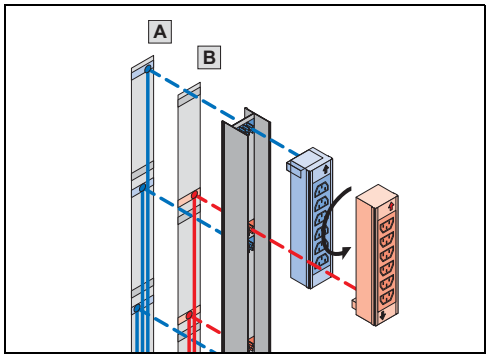
PSM busbars + PSM socket modules

PSM busbars
The modular system facilitates basic configuration of the racks, thanks to a vertical support rail with 1/3-phase infeed. The various socket modules to supply the active components may be snap-fitted into the support rail. This can even be done whilst the system is operational, because the support section is shock-hazard protected.

PSM socket modules
The various modules, earthing pins, IEC320 etc. may be inserted into the support rail in any combination. This is easily achieved, even by non-electricians, thanks to the shock hazard protected plug & play system.

Approvals:
Available on the Internet.

Technical specifications/benefits:
- Each plug-in module picks off a phase on the support rail, either from infeed **A** or from the redundant infeed **B**, depending on the direction of connection.
- 1-/3-phase construction with a maximum current of 2 x (3 x 16 A).
- 3-phase redundant infeed supported.
- The redundant circuit is completely separate from the 3 phases of the support rail.
- Modules may be retrofitted whilst operational.
- Modules may be equipped with integral overcurrent protection, so that only the affected module is deactivated in the event of an excessively high current. The other modules remain operational.
- Overvoltage protection may be integrated into the supply line.
- Various modules also available with current measurement and switchable outputs.



PSM busbars

For enclosure height mm	Phases per infeed	No. of infeeds	Input current (A)	Maximum no. of module slots	Connection, connector type	Circuit-breaker 16 A	Earth-leakage circuit-breaker	Packs of	Model No. DK
1 With measurement of voltage, current and power (consumption), via CMC, remote-controllable									
2000	3	2	16	6	Jack	–	–	1	**7856.016**
2000	1	1	32	6	CEE	2	–	1	**7856.003**
2 With 2 infeeds (jack), 3-phase redundancy									
1200	3	2	16	4	Jack	–	–	1	**7856.010**
2000	3	2	16	7	Jack	–	–	1	**7856.020**
2200	3	2	16	8	Jack	–	–	1	**7856.008**
3 With 3 m connection cable (wire end ferrules)									
2000	3	1	16	7	Wire end ferrules	–	–	1	**7856.005**
2000	3	2	16	7	Wire end ferrules	–	–	1	**7856.006**
4 With 3 m connection cable (connector type CEE/EN 60 309)									
2000	1	1	32	6	CEE	2	–	1	**7856.321**
2000	3	1	32	6	CEE	6	–	1	**7856.323**
2000	1	1	32	6	CEE	2	■	1	**7856.043**

Also required:

PSM socket modules,
see page 385.

Accessories:

- Mounting kit for PSM busbars, see page 386.
- Connection cables, see page 386.
- Cable lock, see page 386.
- Overvoltage protection, see page 386.

PSM socket modules

Module slots required in PSM busbar	Connector pattern	Slots	Thermal overcurrent protection	Packs of	Model No.
1 Standard socket modules/non-switchable					
1	C13	6	–	1	**7856.080**
1	C13	6	■	1	**7856.070**
1	C13	4	■/per output	1	**7856.220**
1	Earthing-pin	4	–	1	**7856.100**
1	Earthing-pin	4	■	1	**7856.090**
1	C19	4	–	1	**7856.230**
1	C13 red	6	–	1	**7856.082**
1	Earthing-pin, red	4	–	1	**7856.240**
2	C13	8	RCD	1	**7856.095**
2 International socket modules					
1	France/Belgium	4	–	1	**7856.120**
1	France/Belgium	4	■	1	**7856.110**
1	Switzerland	5	–	1	**7856.190**
1	Switzerland	4	■	1	**7856.180**
1	UK	3	–	1	**7856.160**
1	UK	3	■	1	**7856.150**
1	USA (120 V/208 V)	5	–	1	**7856.140**
1	USA (120 V/208 V)	5	■	1	**7856.130**
3 Socket modules with LED display/current measurement per module					
1	C13	6	–	1	**7859.120**
1	C19	4	–	1	**7859.130**
4 Socket modules with switchable slot/aggregate current measurement per module					
2	C13	8	■	1	**7856.201**
2	Earthing-pin/C13	4/2	■	1	**7856.203**
2	C19/C13	4/2	■	1	**7856.204**
5 Socket modules with switchable slot/individual current measurement per module					
2	Earthing-pin/C13	4/2	■	1	**7859.212**
2	C13	8	■	1	**7859.222**
2	C19/C13	4/2	■	1	**7859.232**

Approvals:
Available on the Internet.

Accessories

Mounting kit

for PSM busbars

Without cable routing

For		Model No. DK
TS	For static installation	**7856.011**
TE	For static installation	**7000.684**

With cable routing

For		Model No. DK
TS	For static installation	**7856.022**
	Adjustable, for freely accessible 482.6 mm (19″) level	**7856.023**

Connection cable

for PSM-busbar

	Length	Packs of	Model No. DK
Connection cable, 3-phase			
CEE-conforming 5-pole/16 A	3 m	1	**7856.025**
Connection cable, 1-phase			
CEE-conforming 3-pole/16 A	3 m	1	**7856.026**
Connection cable, UPS, single-phase			
C14/X-Com 10 A	3 m	1	**7856.027**
C20/X-Com 16 A	3 m	1	**7856.030**
Connection cable C19/C20			
16 A	2 m	1	**7200.217**
Connection cable C13/C14			
16 A	0.5 m	2	**7856.014**

Cable lock PSM

for all modules with EN 60 320 C13 connector configurations

All terminal connection cables are therefore protected against unintentional disconnection of the power supply. Two bars are needed for two cables.

Design	Packs of	Model No. DK
Bar	20	**7856.013**

Accessories:

Optimum locking function is only achieved with connection cable DK 7856.014, see page 386.

Measurement module PSM

For power measurement of existing PSM or for new installations.

Suitable for for PSM busbar:
DK 7856.010, DK 7856.020, DK 7856.008.

Note:
For detailed information, see PSM busbar with measurement, page 384.

Packs of	Model No. DK
1	**7856.019**

Overvoltage protection PSM

Is connected upstream of the busbar.

- Fine fuse
- Connection:
  – Socket Wago X-Com
  – Connector Wago X-Com

Overvoltage protection	Packs of	Model No. DK
With adaptor connector	1	**7856.170**

Note:
One adaptor is required for each infeed.

RiCell Flex fuel cell system

Application:
- Emergency power supplies, e.g. for mobile telecommunication base stations
- Indoor and outdoor use
- Temporary power supplies
- UPS applications
- High-MTBF applications
- Balancing energy supplies

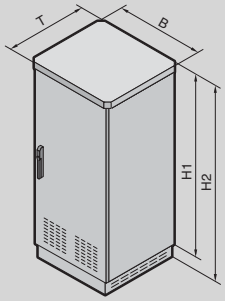
Material:
– Enclosure frame: Stainless steel 1.4301 (AISI 304)
– Door, side panels, roof: Aluminium AlMg3, powder-coated

Colour:
RAL 7035

Supply includes:
– Ready-to-connect fuel cell system including climate control. Hydrogen supply not included.
– 3 fuel cell modules fitted for 7.5 kW
– Controller

Project planning:
– Higher level of cascading
– Different output voltages
– Housing for gas cylinders
– Primary power supply

Photo shows a configuration example with equipment not included in the scope of supply.



Width (B) mm	850
Height (H1) mm	2000
Depth (T) mm	850
Base/plinth height mm	100
Overall height (H2) mm	2100
Model No. FC	**1782.135**
Fuel cell module	
Power consumption	2000 watts
Maximum power output	2500 watts[1)]
Output voltage	–44.0 to –55.5 V DC
Noise generation	< 60 dB (A) at distance of 1 m
Weight	28 kg
Hydrogen supply	
Gas type	Hydrogen, purity 99.9%, class 3.0
Consumption	10 slpm (standard litres per minute) per kW
Typical autonomy time	Freely scalable with bottle batteries; 600 l (1 bundle), 200 bar hydrogen provides for more than 24 h autonomy at 6 kW full load
Input pressure	12.0 to 20.0 bar
Ambient conditions	
Temperature range	–33°C to +45°C
Rel. humidity	5% to 95%, non-condensing
Height above mean sea level	–60 m to 2000 m; thereafter 5% power reduction per 1000 m
Monitoring	
Interfaces	Ethernet TCP/IP
Software	Web-based user interface with display for status messages, event log and parameters
Alarm outputs	4 floating contacts: “H2 low”; “Non-critical error”; “Serious error”; “FC in operation”

[1)] Begin of life (BOL).

RITTAL

Climate control

Cooling with ambient air

TopTherm fan-and-filter units 394
Rack-mounted fans/tangential fans....399
Fan systems 401
Air/air heat exchangers 408

Cooling units

Thermoelectric cooler....414
Wall-mounted cooling units 415
Roof-mounted cooling units 426
Modular climate control concept....430

Liquid cooling

Air/water heat exchangers 434
Cold Plate 444
Chillers for water....446

Enclosure heaters

Enclosure heaters....471

IT liquid cooling

Chillers for IT cooling....454
CRAC system 456
Aisle containment 460
Liquid Cooling Package 461

CS Outdoor climate control

Air/air heat exchangers and cooling units for CS Toptec 468
Air/air heat exchangers and cooling units for CS modular enclosures....469

Accessories for climate control

Air routing 473
Control/regulation 475
Mounting accessories 478
Filter technology 481
General....484

Generation “Blue e”

Save energy permanently with Rittal cooling units.

Experts in climate control

As system providers, Rittal are the world's top suppliers of exceptionally effective, energy-saving and environmentally-friendly climate control solutions, precisely tailored to the customer's individual requirements.

Your benefits

Planning and engineering
- RiTherm climate calculation software for requirement-based dimensioning
- Rittal system consulting for optimised cost and energy efficiency

Products
- Energy-saving enclosure climate control for all ambient conditions in the industrial sector
- Effective, application-oriented product solutions for machine and process cooling
- Efficient, cost-saving IT climate control concepts, from individual server enclosures through to high-MTBF data centres

Service
- Contiguous global delivery and service network
- Global spare parts service
- Our own accredited laboratories for testing and simulation of climate conditions

Cooling with ambient air

TopTherm fan-and-filter units

TopTherm fan-and-filter unit ..... 20 – 66 m³/h 394
TopTherm fan-and-filter unit ..... 105 – 120 m³/h 395
TopTherm fan-and-filter unit ..... 180 – 250 m³/h 396
TopTherm fan-and-filter unit ..... 550 – 770 m³/h 397
TopTherm fan-and-filter unit ..... 900 m³/h 398
Conversion table old/new 398

Rack-mounted climate control

Rack-mounted fan ..... 320/480 m³/h 399
Vario rack-mounted fan ..... 320/480 m³/h 400
Tangential fan ..... 320 m³/h 400

Fan systems

RTT roof-mounted fan ..... 400/800 m³/h 401
Roof-mounted fan ..... 360 m³/h 402
Roof-mounted fan for the office sector ..... 1500 m³/h 402
Enclosure internal fan ..... 160 m³/h 403
Fan mounting plate ..... 180 m³/h 403
Mini-fan ..... 21 m³/h 404
Fan expansion kit ..... 108 – 184 m³/h 404
Fan roof, modular, two-piece ..... 160/180 m³/h 405
Fan unit, active ..... 160 m³/h 406
Fan mounting plate DC ..... 1050 m³/h 406
Fan cross member ..... 600 m³/h 407
Fan expansion kit 407

Air/air heat exchanger

Wall-mounted ..... 12/62 W/K 408
Wall-mounted with controller ..... 17.5 – 90 W/K 409
Wall-mounted, railway-compatible version ..... 27 – 98 W/K 410
Roof-mounted ..... 66 W/K 411

TopTherm fan-and-filter units

Climate control accessories Page 473 **Software & services** Page 515

Colour:
RAL 7035

Protection category:
See tables.

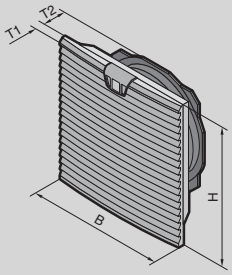
Supply includes:
– Unit ready for installation
– Filter mat

Note:
For energy-efficient operation of the fan-and-filter units, we recommend using the enclosure internal thermostat SK 3110.000, the speed control SK 3120.200 or the digital thermostat with display SK 3114.200 (see accessories).

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



Air throughput 20 – 66 m³/h

Model No. SK fan-and-filter unit		**3237.100**	**3237.600**	**3237.110**	**3237.124**	**3238.100**	**3238.600**	**3238.110**	**3238.124**	Page
EMC version		**–**	■	**–**	**–**	**–**	■	**–**	**–**	
Rated operating voltage V, Hz		230, 50/60		115, 50/60	24 (DC)	230, 50/60		115, 50/60	24 (DC)	
Dimensions mm	W (B) x H	116.5 x 116.5				148.5 x 148.5				
	D (T1)	16				16				
Max. installation depth mm	D (T2)	43				58.5				
Air throughput, unimpeded air flow		**20/25 m³/h**			**20 m³/h**	**55/66 m³/h**			**55 m³/h**	
Air throughput with outlet filter including standard filter mat		1 x SK 3237.200: **15/18 m³/h**				1 x SK 3238.200: **43/50 m³/h** 2 x SK 3238.200: **48/57 m³/h**				

Diagonal fan		Self-starting shaded pole motor			DC motor	Self-starting shaded pole motor			DC motor	
Rated current		0.065 A/ 0.052 A		0.12 A/ 0.10 A	0.125 A	0.12 A/ 0.11 A		0.24 A/ 0.22 A	0.23 A	
Power consumption		11 W/9 W			3 W	19 W/18 W			5.5 W	
Pre-fuse		2 A								
Noise level		38/43 dB (A)			38 dB (A)	46/49 dB (A)			46 dB (A)	
Operating temperature range		–15°C to +55°C								
Storage temperature range		–30°C to +70°C								
Protection category										
Standard		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
With hose-proof hood		IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	
Accessories	Packs of									
SK outlet filter	1	3237.200	–	3237.200	3237.200	3238.200	–	3238.200	3238.200	485
SK outlet filter – EMC	1	–	3237.060	–	–	–	3238.060	–	–	485
Spare filter mats	5	3321.700	3237.066	3321.700	3321.700	3322.700	3238.066	3322.700	3322.700	483
Fine filter mats	5	–	–	–	–	3238.055	3238.055	3238.055	3238.055	484
Hose-proof hood	1	3237.080	3237.080	3237.080	3237.080	3238.080	3238.080	3238.080	3238.080	485
Blanking cover	1	3237.020	3237.020	3237.020	3237.020	3238.020	3238.020	3238.020	3238.020	485
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	476
Speed control	1	3120.200	3120.200	3120.200	–	3120.200	3120.200	3120.200	–	477

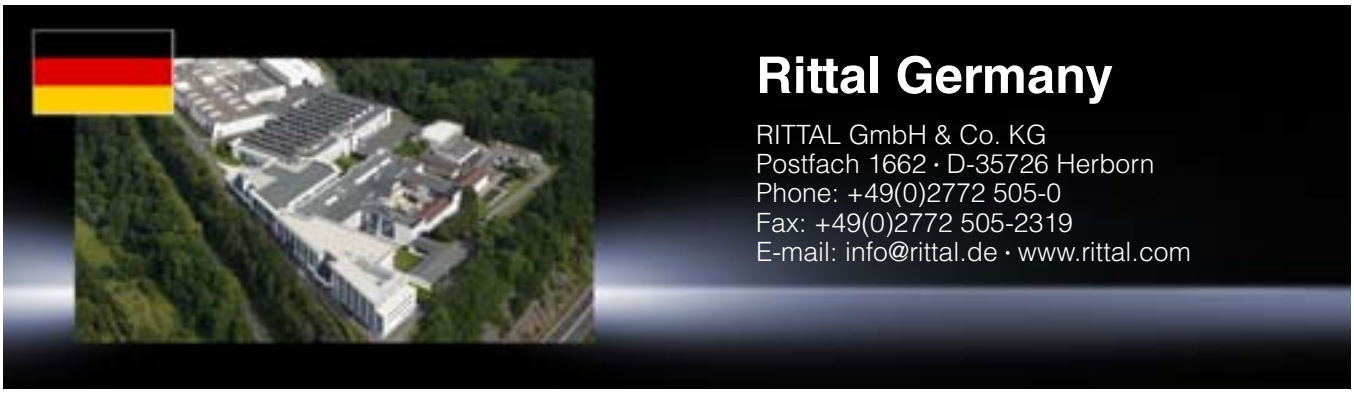
Special voltages available on request. We reserve the right to make technical modifications.

Air throughput 105 – 120 m³/h

Model No. SK fan-and-filter unit		**3239.100**	**3239.600**	**3239.110**	**3239.124**	Page
EMC version		**–**	■	**–**	**–**	
Rated operating voltage V, Hz		230, 50/60		115, 50/60	24 (DC)	
Dimensions mm	W (B) x H	204 x 204				
	D (T1)	24				
Max. installation depth mm	D (T2)	90				
Air throughput, unimpeded air flow		**105/120 m³/h**			**105 m³/h**	
Air throughput with outlet filter including standard filter mat		1 x SK 3239.200: **87/100 m³/h** 2 x SK 3239.200: **93/108 m³/h** 1 x SK 3240.200: **98/111 m³/h**				

Diagonal fan		Self-starting shaded pole motor			DC motor	
Rated current		0.12 A/0.11 A		0.24 A/0.22 A	0.23 A	
Power consumption		19 W/18 W			5.5 W	
Pre-fuse		2 A				
Noise level		46/49 dB (A)			46 dB (A)	
Operating temperature range		–15°C to +55°C				
Storage temperature range		–30°C to +70°C				
Protection category						
Standard		IP 54	IP 54	IP 54	IP 54	
With additional fine filter mat or hose-proof hood		IP 55	IP 55	IP 55	IP 55	
With hose-proof hood		IP 56	IP 56	IP 56	IP 56	
Accessories	Packs of					
SK outlet filter	1	3239.200	–	3239.200	3239.200	485
SK outlet filter – EMC	1	–	3239.060	–	–	485
Spare filter mats	5	3171.100	3239.066	3171.100	3171.100	483
Fine filter mats	5	3181.100	3181.100	3181.100	3181.100	484
Hose-proof hood	1	3239.080	3239.080	3239.080	3239.080	485
Blanking cover	1	3239.020	3239.020	3239.020	3239.020	485
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	475
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	476
Speed control	1	3120.200	3120.200	3120.200	3120.200	477

Special voltages available on request. We reserve the right to make technical modifications.



TopTherm fan-and-filter units

Air throughput 180 – 250 m³/h

Model No. SK fan-and-filter unit		**3240.100**	**3240.600**	**3240.110**	**3240.124**	**3241.100**	**3241.600**	**3241.110**	**3241.124**	Page
EMC version		**–**	**■**	**–**	**–**	**–**	**■**	**–**	**–**	
Rated operating voltage V, Hz		230, 50/60		115, 50/60	24 (DC)	230, 50/60		115, 50/60	24 (DC)	
Dimensions mm	W (B) x H	255 x 255								
	D (T1)	25								
Max. installation depth mm	D (T2)	107								
Air throughput, unimpeded air flow		**180/160 m³/h**			**180 m³/h**	**230/250 m³/h**			**230 m³/h**	
Air throughput with outlet filter including standard filter mat		1 x SK 3240.200: **138/115 m³/h** 2 x SK 3240.200: **165/140 m³/h** 1 x SK 3243.200: **165/140 m³/h**				1 x SK 3240.200: **183/195 m³/h** 2 x SK 3240.200: **203/230 m³/h** 1 x SK 3243.200: **203/230 m³/h**				

Diagonal fan		Self-starting shaded pole motor			DC motor	Self-starting shaded pole motor			DC motor	
Rated current		0.21 A/ 0.19 A		0.42 A/ 0.38 A	0.43 A	0.26 A/ 0.24 A		0.52 A/ 0.48 A	0.78 A	
Power consumption		35 W/34 W			11 W	40 W/42 W			19 W	
Pre-fuse		2 A		4 A	2 A	4 A			2 A	
Noise level		51/46 dB (A)			51 dB (A)	54/56 dB (A)			54 dB (A)	
Operating temperature range		–30°C to +55°C								
Storage temperature range		–30°C to +70°C								
Protection category										
Standard		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
With additional fine filter mat or hose-proof hood		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	
With hose-proof hood		IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	
Accessories	Packs of									
SK outlet filter	1	3240.200	–	3240.200	3240.200	3240.200	–	3240.200	3240.200	485
SK outlet filter – EMC	1	–	3240.060	–	–	–	3240.060	–	–	485
Spare filter mats	5	3172.100	3240.066	3172.100	3172.100	3172.100	3240.066	3172.100	3172.100	483
Fine filter mats	5	3182.100	3182.100	3182.100	3182.100	3182.100	3182.100	3182.100	3182.100	484
Hose-proof hood	1	3240.080	3240.080	3240.080	3240.080	3240.080	3240.080	3240.080	3240.080	485
Blanking cover	1	3240.020	3240.020	3240.020	3240.020	3240.020	3240.020	3240.020	3240.020	485
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	476
Speed control	1	3120.200	3120.200	3120.200	–	3120.200	3120.200	3120.200	–	477

Special voltages available on request. We reserve the right to make technical modifications.

Air throughput 550 – 770 m³/h

Model No. SK fan-and-filter unit		3243.100	3243.600	3243.110	3244.100	3244.600	3244.110	3244.140	Page
EMC version		–	■	–	–	■	–	–	
Rated operating voltage V, Hz		230, 50/60		115, 50/60	230, 50/60		115, 50/60	400/460, 3~, 50/60	
Dimensions mm	W (B) x H	323 x 323							
	D (T1)	25							
Max. installation depth mm	D (T2)	118.5			130.5				
Air throughput, unimpeded air flow		**550/600 m³/h**			**700/770 m³/h**				
Air throughput with outlet filter including standard filter mat		1 x SK 3243.200: **440/490 m³/h** 2 x SK 3243.200: **510/560 m³/h**			1 x SK 3243.200: **544/610 m³/h** 2 x SK 3243.200: **630/690 m³/h**				

Diagonal fan		1~ capacitor motor						Rotary current motor	
Rated current		0.37 A/0.39 A		0.78 A/0.80 A	0.43 A/0.60 A		0.9 A/1.25 A	0.17 A/0.21 A	
Power consumption		70 W/87 W		75 W/90 W	95 W/135 W		100 W/145 W	93 W/140 W	
Pre-fuse		4 A		6 A	4 A		6 A	Motor circuit-breaker	
Noise level		59/61 dB (A)			65/66 dB (A)				
Operating temperature range		–30°C to +55°C							
Storage temperature range		–30°C to +70°C							
Protection category									
Standard		IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	IP 54	
With additional fine filter mat or hose-proof hood		IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	IP 55	
With hose-proof hood		IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	IP 56	
Accessories	Packs of								
SK outlet filter	1	3243.200	–	3243.200	3243.200	–	3243.200	3243.200	485
SK outlet filter – EMC	1	–	3243.060	–	–	3243.060	–	–	485
Spare filter mats	5	3173.100	3243.066	3173.100	3173.100	3243.066	3173.100	3173.100	483
Fine filter mats	5	3183.100	3183.100	3183.100	3183.100	3183.100	3183.100	3183.100	484
Hose-proof hood	1	3243.080	3243.080	3243.080	3243.080	3243.080	3243.080	3243.080	485
Blanking cover	1	3243.020	3243.020	3243.020	3243.020	3243.020	3243.020	3243.020	485
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	476
Speed control	1	3120.200	3120.200	3120.200	3120.200	3120.200	3120.200	3120.200	477

Special voltages available on request. We reserve the right to make technical modifications.

TopTherm fan-and-filter units

Air throughput 900 m³/h, with EC technology

Model No. SK fan-and-filter unit		**3245.500**[1]	**3245.600**[1]	**3245.510**[1]	Page
EMC version		**–**	■	**–**	
Rated operating voltage V, Hz		230, 50/60		115, 50/60	
Dimensions mm	W (B) x H	323 x 323			
	D (T1)	25			
Max. installation depth mm	D (T2)	130.5			
Air throughput, unimpeded air flow		**900 m³/h**			
Air throughput with outlet filter including standard filter mat		1 x SK 3243.200: **680 m³/h** 2 x SK 3243.200: **820 m³/h**	1 x SK 3243.060: **680 m³/h** 2 x SK 3243.060: **820 m³/h**	1 x SK 3243.200: **680 m³/h** 2 x SK 3243.200: **820 m³/h**	

Diagonal fan		EC motor			
Rated current		1.25 A		2.5 A	
Power consumption		170 W			
Pre-fuse		4 A		6 A	
Noise level		72 dB (A)			
Operating temperature range		–30°C to +55°C			
Storage temperature range		–30°C to +70°C			
Protection category					
Standard		IP 51	IP 51	IP 51	
With additional fine filter mat		IP 52	IP 52	IP 52	
With hose-proof hood		IP 56	IP 56	IP 56	
Accessories	Packs of				
SK outlet filter	1	3243.200	–	3243.200	485
SK outlet filter – EMC	1	–	3243.060	–	485
Spare filter mats	5	3173.100	3243.066	3173.100	483
Fine filter mats	5	3183.100	3183.100	3183.100	484
Hose-proof hood	1	3245.080	3245.080	3245.080	485
Blanking cover	1	3243.020	3243.020	3243.020	485
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	475
Hygrostat	1	3118.000	3118.000	3118.000	476
Speed control and monitoring for EC fan-and-filter units	1	3235.440[2]	3235.440[2]	3235.440[2]	476

[1] 0 – 10 V input and tacho signal output
[2] On request.
Special voltages available on request. We reserve the right to make technical modifications.

Conversion table old/new

Output class		**20/25 m³/h**	**55/66 m³/h**	**105/120 m³/h**	**180/160 m³/h**	**230/250 m³/h**	**550/600 m³/h**	**700/770 m³/h**
Cut-out dimensions (old = new)		92 x 92	124 x 124	177 x 177	224 x 224		292 x 292	
24 V	**new**	**3237.124**	**3238.124**	**3239.124**	**3240.124**	**3241.124**	–	–
	old	3321.027	3322.027	3323.027	3324.027	3325.027	–	–
230 V	**new**	**3237.100**	**3238.100**	**3239.100**	**3240.100**	**3241.100**	**3243.100**	**3244.100**
	old	3321.107	3322.107	3323.107	3324.107	3325.107	3326.107	3327.107
115 V	**new**	**3237.110**	**3238.110**	**3239.110**	**3240.110**	**3241.110**	**3243.110**	**3244.110**
	old	3321.117	3322.117	3323.117	3324.117	3325.117	3326.117	3327.117
400 V	**new**	–	–	–	–	–	–	**3244.140**
	old	–	–	–	–	–	–	3327.147
EMC fan-and-filter unit, 230 V	**new**	**3237.600**	**3238.600**	**3239.600**	**3240.600**	**3241.600**	**3243.600**	**3244.600**
	old	3321.607	3322.607	3323.607	3324.607	3325.607	3326.607	3327.607
Outlet filter	**new**	**3237.200**	**3238.200**	**3239.200**	**3240.200**		**3243.200**	
	old	3321.207	3322.207	3323.207	3325.207		3326.207	
EMC outlet filter	**new**	**3237.060**	**3238.060**	**3239.060**	**3240.060**		**3243.060**	
	old	3321.267	3322.267	3323.267	3325.267		3326.267	
Hose-proof hood	**new**	**3237.080**	**3238.080**	**3239.080**	**3240.080**		**3243.080**	
	old	3321.800	3322.800	3323.800	3324.800		3326.800	
Blanking cover	**new**	**3237.020**	**3238.020**	**3239.020**	**3240.020**		**3243.020**	
	old	–	–	–	–	–	–	–
Standard filter mat (IP 54)	**new**	**3321.700**	**3322.700**	**3171.100**	**3172.100**		**3173.100**	
	old	3321.700	3322.700	3171.100	3172.100		3173.100	3327.700
Fine filter mat (IP 55)	**new**	–	**3238.055**	**3181.100**	**3182.100**		**3183.100**	
	old	–	–	3181.100	3182.100		3183.100	

Rack-mounted fans/tangential fans for 482.6 mm (19˝)

Climate control accessories Page 473 **Software & services** Page 515

Supply includes:
- Fully wired unit ready for connection
- Clamping strip and assembly parts (for rack-mounted fan/ Vario rack-mounted fan)
- Filter mat (for tangential fan)

Guide frame supply includes:
- Guide frame
- Connector and fitted connection cable (3 m)
- Mounting bracket for optional attachment to the 482.6 mm (19˝) system
- Assembly parts

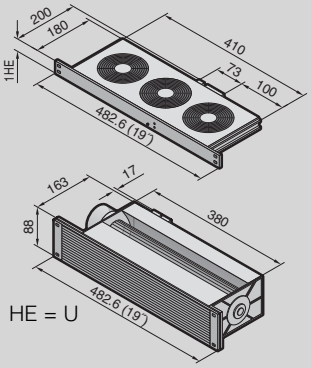
Also required:

Order a guide frame according to the application (only for Vario rack-mounted fan)

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



Rack-mounted fan, air throughput 320/480 m³/h

Model No. SK	3340.024[1]	3340.115[1]	3340.230	3341.024[1]	3341.115	3341.230	Page
2 fans, distance between axes 85 mm	■			–			
3 fans, distance between axes 85 mm	–			■			
Rated operating voltage V, Hz	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	
Dimensions mm W x H x D	482.6 (19˝) x 44 (1 U) x 200						
Air throughput, unimpeded air flow	**320 m³/h**			**480 m³/h**			
Rated current max.	0.49 A	0.46 A/0.46 A	0.24 A/0.22 A	0.74 A	0.69 A/0.69 A	0.36 A/0.33 A	
Pre-fuse T	6.0 A						
Operating temperature range	–10°C to +55°C						
Noise level	51 dB (A)	52 dB (A)	51 dB (A)		52 dB (A)	51 dB (A)	
Accessories							
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Speed control	–	3120.200	3120.200	–	3120.200	3120.200	477

Model No. SK	3342.024[1]	3342.115[1]	3342.230	3342.500[2][3]	Page
3 fans, distance between axes 105 mm	■				
Rated operating voltage V, Hz	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	24 (DC) 115 – 230 (AC)	
Dimensions mm W x H x D	482.6 (19˝) x 44 (1 U) x 200				
Air throughput, unimpeded air flow	**480 m³/h**				
Rated current max.	0.74 A	0.69 A/0.69 A	0.36 A/0.33 A	0.85 A	
Pre-fuse T	6.0 A				
Operating temperature range	–10°C to +55°C				
Noise level	51 dB (A)	52 dB (A)	51 dB (A)		
Accessories					
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	476
Speed control	–	3120.200	3120.200	–	477

[1] Extended delivery times. [2] Rack-mounted fan for metric mounting angles available on request. [3] Version with monitoring.

Rack-mounted fans/tangential fans for 482.6 mm (19˝)

Vario rack-mounted fan, air throughput 320/480 m³/h

Model No. SK	**3350.024**[1]	**3350.115**[1]	**3350.230**	**3351.024**[1]	**3351.115**	**3351.230**	Page
2 fans, distance between axes 85 mm	■			–			
3 fans, distance between axes 85 mm	–			■			
Rated operating voltage V, Hz	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	
Dimensions mm W x H x D	482.6 (19˝) x 44 (1 U) x 200						
Air throughput, unimpeded air flow	**320 m³/h**			**480 m³/h**			
Rated current max.	0.49 A	0.46 A/0.46 A	0.24 A/0.22 A	0.74 A	0.69 A/0.69 A	0.36 A/0.33 A	
Pre-fuse T	6.0 A						
Operating temperature range	–10°C to +55°C						
Noise level	51 dB (A)	52 dB (A)	51 dB (A)		52 dB (A)	51 dB (A)	
Accessories							
Guide frame	**3356.100**	**3355.100**	**3355.100**	**3356.100**	**3355.100**	**3355.100**	–
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Speed control	–	3120.200	3120.200	–	3120.200	3120.200	477

Model No. SK	**3352.024**[1]	**3352.115**[1]	**3352.230**	**3352.500**[1][2]	Page
3 fans, distance between axes 105 mm	■				
Rated operating voltage V, Hz	24 (DC)	115 (AC), 50/60	230 (AC), 50/60	24 (DC) 115 – 230 (AC)	
Dimensions mm W x H x D	482.6 (19˝) x 44 (1 U) x 200				
Air throughput, unimpeded air flow	**480 m³/h**				
Rated current max.	0.74 A	0.69 A/0.69 A	0.36 A/0.33 A	0.85 A	
Pre-fuse T	6.0 A				
Operating temperature range	–10°C to +55°C				
Noise level	51 dB (A)	52 dB (A)	51 dB (A)		
Accessories					
Guide frame	**3356.100**	**3355.100**	**3355.100**	**3357.100**[1]	–
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	476
Speed control	3120.200	3120.200	3120.200	–	477

[1] Extended delivery times.
[2] Version with monitoring.

Centrifugal fans, air throughput 320 m³/h

Model No. SK	**3145.000**	**3144.000**	Page
Rated operating voltage V, Hz	115, 50/60	230, 50/60	
Dimensions mm W x H x D	482.6 (19˝) x 88 (2 U) x 158		
Air throughput, unimpeded air flow	**320 m³/h**		
Rated current max.	0.32 A	0.16 A	
Power	37 W		
Noise level	52 dB (A)		
Speed	2245 rpm		
Operating temperature range	–10°C to +55°C		
Maximum static pressure difference	65 – 70 Pa		

Accessories	Packs of			
Digital temperature display/thermostat	1	3114.200	3114.200	475
Enclosure internal thermostat	1	3110.000	3110.000	476
Filter mats	5	3177.000	3177.000	481
Front outlet grille 2 U	1	3176.000	3176.000	486
Roof vent	1	3148.007	3148.007	402
Speed control	1	3120.200	3120.200	477

Special voltages available on request. We reserve the right to make technical modifications.

RTT roof-mounted fan and vent attachment

for TS

The active roof-mounted fan and the passive vent attachment (TS 8801.380) integrate perfectly into the system-wide mounting concept of the Rittal TopTherm platform. They fit precisely onto the cut-outs of the small and medium performance category of TopTherm roof-mounted cooling units.

Of course, they may also be mounted on any sufficiently large roof surface.

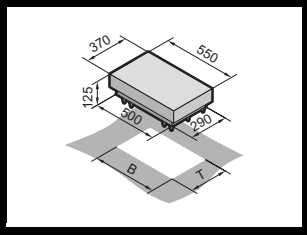
TS roof plates with prepared mounting cut-outs are additionally available.

Roof-mounted fan supply includes:
– Unit ready for connection with built-in radial fan
– Sealing and assembly parts

Vent attachment TS:
see page 478.

Protection category:
IP 43 to IEC 60 529

Detailed drawings:
Available on the Internet.

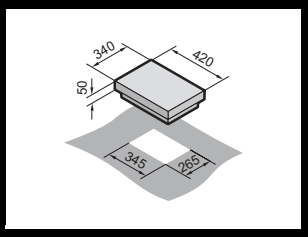


Air throughput 400 m³/h

Model No. SK	**3149.410**	**3149.420**	**3149.440**	Page
Rated operating voltage V, Hz	115, 50/60	230, 50/60	400, 3~, 50/60 460, 3~, 60	
Air throughput, unimpeded air flow	**400 m³/h**			
Required mounting cut-out W (B) x D (T) mm	475 x 260			
Power consumption of fan	120 W/170 W		95 W/140 W	
Rated current of fan	1.1/1.6 A	0.55/0.88 A	0.35/0.35 A	
Operating temperature range	–10°C to +55°C			
Noise level	68/69 dB (A)			
Weight	10 kg			
Colour	RAL 7035			
Accessories				
Roof plate 800 x 600 mm for TS 8 with cut-out	8801.320	8801.320	8801.320	478
Roof plate 1200 x 600 mm for TS 8 with cut-out	–	–	–	478
Digital temperature display/thermostat	3114.200	3114.200	–	475
Speed control	3120.200	3120.200	–	477

Air throughput 800 m³/h

Model No. SK	**3149.810**	**3149.820**	**3149.840**	**8801.380**	Page
Rated operating voltage V, Hz	115, 50/60	230, 50/60	400, 3~, 50/60 460, 3~, 60	Roof vent	
Air throughput, unimpeded air flow	**800 m³/h**			**Without motor**	
Required mounting cut-out W (B) x D (T) mm	475 x 260			490 x 390	
Power consumption of fan	170 W/225 W		180 W/310 W	–	
Rated current of fan	1.5/2.2 A	0.75/1.1 A	0.35/0.55 A	–	
Operating temperature range	–10°C to +55°C			–	
Noise level	69/70 dB (A)			–	
Weight	11 kg			6 kg	
Colour	RAL 7035				
Accessories					
Roof plate 600 x 600 mm for TS 8 with cut-out	8801.300	8801.300	8801.300	8801.310	478
Roof plate 800 x 600 mm for TS 8 with cut-out	8801.320	8801.320	8801.320	8801.330	478
Roof plate 1200 x 600 mm for TS 8 with cut-out	–	–	–	8801.350	478
Digital temperature display/thermostat	3114.200	3114.200	–	–	475
Speed control	3120.200	3120.200	–	–	477



Roof-mounted fan, roof ventilation

- The roof-mounted fan is easily installed using 6 screws. The sealing tape supplied can be used to seal it against the enclosure.
- The assembly screws are invisible from the outside.
- The roof-mounted fan casing has a large air outlet surface and labyrinth air ducting.

Protection category:
IP 43 to IEC 60 529. Via additional installation of the filter holder with filter mat SK 3175.000, a protection category of IP 44 is achieved with roof vent SK 3148.007.

Supply includes:
– Unit ready for connection with built-in radial fan
– Sealing and assembly parts
– Connection cable (3 m)
– Drilling template

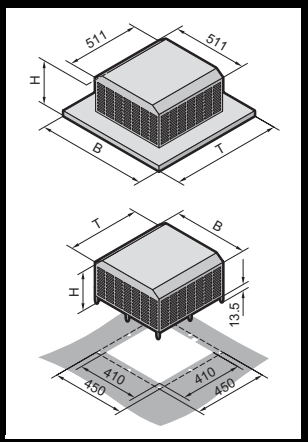
Accessories:

Filter holder, see page 486.

Detailed drawings:
Available on the Internet.

Model No. SK	**3149.007**	**3169.007**	**3148.007**
Rated operating voltage V, Hz	230, 50/60	115, 50/60	Without fan motor
Air throughput	**360 m³/h**		
Rated current max.	0.2 A	0.55 A	
Power consumption	42 W	65 W	
Operating temperature range	–10°C to +60°C		
Noise level	53 dB (A)		
Weight	78 kg		
Colour	RAL 7035, textured enamel		

Special voltages available on request. We reserve the right to make technical modifications.



Roof-mounted fan

for TS in the office sector

This new roof ventilation concept offers a wealth of performance, assembly and cost benefits associated with the use of integrated ventilation systems. This roof-mounted fan may be ordered with and without a roof plate. Another outstanding feature is the enormous volumetric flow in proportion to exceptionally low noise levels, making it ideal for use in sensitive office areas.

Technical specifications:
– Fitted onto a roof plate based on TS.
– Easy assembly; mounting cut-outs have been provided.
– Radial fan.

Supply includes:
– Fully wired ready for connection
– Assembly parts.

Detailed drawings:
Available on the Internet.

Model No. SK	**3164.610**	**3164.620**	**3164.115**	**3164.230**	Page
Rated operating voltage V, Hz	115, 50/60	230, 50/60	115, 50/60	230, 50/60	
Air throughput, unimpeded air flow	**1500 m³/h[1)]**				
Design	with roof plate		without roof plate		
Dimensions mm W (B) H D (T)	800 240 800		511 227 511		
Power consumption	68 W/81 W				
Rated current	0.6 A/0.7 A	0.3 A/0.35 A	0.6 A/0.7 A	0.3 A/0.35 A	
Noise level	40 dB (A)				
Operating temperature range	+20°C to +55°C				
Colour	RAL 7035				
Accessories					
Temperature indicator in 1 U patch panel	7109.035	7109.035	7109.035	7109.035	475
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	476

[1)] 800 m³/h at 40 Pa counterpressure using two integrated louvres, type DK 7825.801, in the enclosure base/plinth.
Special voltages available on request. We reserve the right to make technical modifications.

Enclosure internal fan

for TS
To prevent hot-spots and support the air routing of active enclosure climate control components. Adjustable in two axes. Attached to the TS 8 frame section. Several fans may be cascaded using the quick-release clamping strip.

Supply includes:
– Complete unit with radial fan ready for connection
– Snap-on pivot device
– Assembly parts

Air throughput (unimpeded air flow)	Power consumption W	Rated current A	Rated voltage V, Hz	**Model No. SK**
160 m³/h	19.0/18.0	0.12/0.11	230, 50/60	**3108.100**
160 m³/h	19.0/18.0	0.24/0.23	115, 50/60	**3108.115**
160 m³/h	3.5	0.15	24 V (DC)	**3108.024**

Detailed drawings:
Available on the Internet.

Fan tray

for TS
The fan mounting plate may be retro-fitted in all TS 8 network enclosures from above. The plate is mounted at the front of the enclosure, whilst the rear section is left free for cable entry. A rubber cable clamp strip is supplied loose for optional sealing at the rear.

The following combinations are also possible:

- Solid roof plate raised with 20 or 50 mm roof spacers.
- Roof plate for cable entry raised with 20 or 50 mm roof spacers.
- Vented roof plate for cable entry.

In conjunction with the large swing frame, usage is only possible from an enclosure depth of 800 mm, in conjunction with a roof plate for cable entry from 1000 mm.

Note:
– Not suitable for crane transportation
– Not suitable for combination with 482.6 mm (19˝) mounting frame

Technical specifications for one fan:
– Rated operating voltage: 230 V
– Power consumption: 15/14 W at 50/60 Hz
– Air throughput (unimpeded air flow): 160/180 m³/h, 50/60 Hz
– Operating temperature range: –10°C to +55°C

Technical specifications of thermostat:
– Rated operating voltage: 250 V
– Operating temperature range: +5°C to +55°C

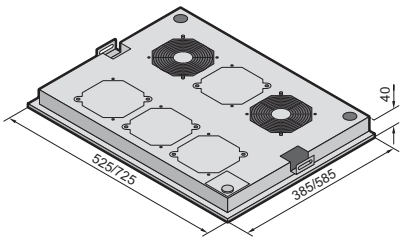
Colour:
RAL 7035

Supply includes:
– 2 fans
– 2/4 cut-outs to extend to 4/6 fans
– Thermostat
– Foam rubber cable clamp strip
– Thermostat and fan fully wired to connection cable (3.5 m).

For enclosures		Number of fans	Max. number of fans	**Model No. DK**
Width mm	Depth mm			
600	600	2	4	**7966.035**
600	800 1000 1200	2	6	**7968.035**
800	600	2	6	**7986.035**
800	800 1000 1200	2	6	**7988.035**

The air throughput can be increased with the fan expansion kit DK 7980.000.

Accessories:
– Fan expansion kit, see page 404.
– Self-adhesive foam cable clamp strip SZ 2573.000 for sealing at the sides and targeted air routing when bayed, see page 703.



Mini-fan

Compact DC fan for enclosure and component cooling in enclosures.

Technical specifications:
- Rated operating voltage: 24 V (DC)
- Power consumption: 1 W
- Air throughput (unimpeded air flow): 21 m^3/h
- Noise level (unimpeded air flow): 20 dB (A)
- Operating temperature range: –20°C to +70°C

Dimensions W x H x D mm	Packs of	Model No. SK
60 x 60 x 25.4	1	**3236.124**

Supply includes:
- Fans
- Assembly screws
- Contact hazard protection

Fan expansion kit

For retro-fitting various fan units or to supplement the fan mounting plate and modular fan roof.

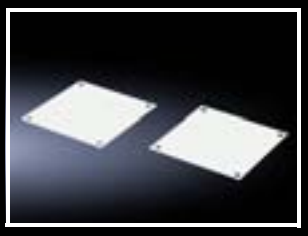
Technical specifications DK 7980.000:
- Rated operating voltage: 230 V~
- Power consumption: 15/14 W at 50/60 Hz
- Air throughput (unimpeded air flow): 160/180 m^3/h, 50/60 Hz
- Noise level (unimpeded air flow): 37 dB (A)
- Operating temperature range: –10°C to +55°C

Technical specifications DK 7980.100:
- Rated operating voltage: 230 V~
- Power consumption: 14/12 W at 50/60 Hz
- Air throughput (unimpeded air flow): 108/120 m^3/h, 50/60 Hz
- Noise level (unimpeded air flow): 34 dB (A)
- Operating temperature range: –20°C to +70°C

Technical specifications DK 7980.148:
- Rated operating voltage: 48 V (DC)
- Power consumption: 7.7 W
- Air throughput (unimpeded air flow): 184 m^3/h
- Noise level (unimpeded air flow): 43 dB (A)
- Operating temperature range: –20°C to +70°C

Dimensions W x H x D mm	Packs of	Model No. DK
119 x 119 x 38	1 set	**7980.000**
119 x 119 x 25	1 set	**7980.100**
119 x 119 x 38	1 set	**7980.148**

Supply includes:
- Fans
- Assembly parts
- Connection cable (0.61 m)



Cover plates for fan panels

for FlatBox
To cover unused fan panels when using fans in the FlatBox.

Material:
Sheet steel

Surface finish:
Powder-coated

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. DK
6	**7507.760**

Fan roof, modular, two-piece

for TS
The modular roof plate consists of individual components and can be configured for enclosure ventilation in various ways.

The modules:

Roof plate, two-piece with cut-out
For fan mounting and cable entry at the rear via a sliding angular bracket with rubber cable clamp strip. Replaces the existing roof plate. The two-piece design allows convenient retrofitting of cables at any time.

Cover plate
To cover the cut-out, optionally solid or vented options. The top-mounted cover plate may be raised for extra air throughput using the supplied spacers.

Fan insert
For active ventilation:
A fully pre-wired fan tray including 2.5 m connection cable, with two fan motors and additional cutouts. The air throughput may be increased with a fan expansion kit.

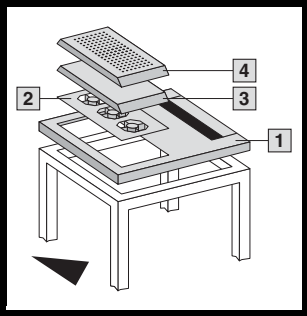
Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Technical specifications for one fan:
– Rated operating voltage: 230 V
– Power consumption: 15/14 W at 50/60 Hz
– Air throughput (unimpeded air flow): 160/180 m^3/h at 50/60 Hz
– Temperature range: –10°C to +55°C

Detailed drawings:
Available on the Internet.



Accessories:
– Fan expansion kit DK 7980.000, see page 404.
– Enclosure internal thermostat SK 3110.000, see page 476.
– Speed control SK 3120.200, see page 477.

Roof plate TS with cut-out

For enclosures		Model No. DK
Width mm	Depth mm	1
600	600	**7826.366**
600	800	**7826.368**
600	1000	**7826.360**
800	600	**7826.486**
800	800	**7826.488**
800	1000	**7826.480**

Fan insert

For enclosures		Model No. DK	Fan insert	
Width mm	Depth mm	2	Fans pre-wired	Maximum no. of fans
600	600	**2102.320**	2	2
600	800	**2102.490**	2	6
600	1000	**2102.490**	2	6
800	600	**7885.000**	2	3
800	800	**7886.000**	2	8
800	1000	**7886.000**	2	8

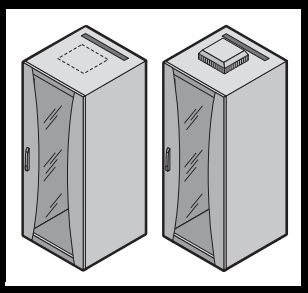
Roof plate, solid

For enclosures		Model No. DK
Width mm	Depth mm	3
600	600	**2102.180**[1)]
600	800	**2102.190**[1)]
600	1000	**2102.190**[1)]
800	600	**7885.100**
800	800	**7886.100**
800	1000	**7886.100**

[1)] Extended delivery times.

Roof plate, vented

For enclosures		Model No. DK
Width mm	Depth mm	4
600	600	**2102.400**
600	800	**2102.410**
600	1000	**2102.410**
800	600	**7885.200**
800	800	**7886.200**
800	1000	**7886.200**



Fan unit, active

for TE

For active ventilation of the TE 7000. The fan unit is installed in the prepunched cut-out. An additional fan may optionally be integrated.

Supply includes:
- Fan unit
- Assembly parts
- 2 fans
- 1 thermostat
- Open connection cable

Technical specifications for one fan:
Fan expansion kit DK 7980.000,
see page 404.

Technical specifications of thermostat:
- Rated operating voltage: 250 V
- Temperature range: +5°C to +55°C

For enclosures W x D mm	Number of pre-wired fans	Possible number of fans	Model No. TE
All sizes available	2	3	**7000.670**

Note:
Connection via distributor box or country-specific connector.

Accessories:

Fan expansion kit,
see page 404.

Active kit

for TE

consisting of fan unit including thermostat, complete, wired ready for connection, socket strip (DK 7000.630) for up to 8 earthing pin plugs, version D and connection cable (DK 7200.210).

Packs of	Model No. DK
1 set	**7000.680**

Fan mounting plate DC

for TS

Exceptionally low-noise thanks to FCS speed control, fully fitted

Suitable for TS 8 enclosures with a raised roof (> 20 mm) or TS 8 roof plate, vented. The fan mounting plate may be used as an alternative to fan mounting plate 7988.035. It is installed from above. Cable entry is prepared in the rear section of the plate.
Not suitable for combination with 482.6 mm (19˝) mounting frame.

Advantages of the DC fan mounting plate with FCS technology:
- Exceptionally low-noise thanks to speed control.
- All fans are individually monitored for failure.
- High air throughput thanks to DC technology (unimpeded air flow 6 x 175 m^3/h = 1050 m^3/h).
- EMC compatibility.
- Temperature monitoring and control.
- High level of safety (low safety voltage with 24 V DC power supply).
- Visual and acoustic alarm messages, plus relay alarm output.
- Freely selectable installation location for the FCS control unit (included with the supply of the fan mounting plate, in 482.6 mm (19˝) with 7320.440).
- Suitable for international use, thanks to wide-range power supply 100 – 240 V AC and socket to IEC 320.
- Pre-configured.
- Network-compatible via CMC-TC (all relevant data such as temperature etc. is displayed in the web browser, or alarms are sent in the form of an SNMP trap).

For enclosures width mm	For enclosures depth mm	Number of DC fans	Model No. DK
800	800 900 1000	6	**7858.488**

Technical specifications:
- Rated voltage of power supply: 100 – 240 V AC, 50/60 Hz
- Rated current of power supply: max. 1.5 A
- Secondary range of power supply: 24 V DC, 3 A
- Temperature range: +5°C to +40°C
- Total air throughput (unimpeded air flow): 6 x 175 m^3/h = 1050 m^3/h

Technical specifications for one fan:
- Rated voltage: 24 V DC
- Rated current: max. 0.3 A
- Air throughput (unimpeded air flow): 175 m^3/h
- Speed: 2650 rpm
- Noise level: up to 45 dB (A) at maximum speed activation

Also required:

Connection cable 230/115 V.
For example, D version, Model No. DK 7200.210,
see page 775.

Accessories:

1 U mounting unit, Model No. DK 7320.440,
see page 776.

Note:
For more information on the Fan Control System (FCS) system,
see page 777.

Door-mounted fan

for server enclosures TS, TE

Specifically for installing in perforated doors.
Given the growing packaging density in data communications and network enclosures, active, direct ventilation of the enclosure is essential. The door-mounted fan, which is attached to the rear or front door, supports horizontal air routing via the servers and therefore facilitates faster heat dissipation from active components.

Technical specifications:
- Standard assembly with two fans.
- Air throughput, unimpeded air flow 600 m³/h.
- By adding two fan expansion kits, the air throughput is increased to 1200 m³/h.
- The direction of air flow is easily reversed by rotating the fan.
- Several units may be positioned in a cascade arrangement.
- Simple mounting on the tubular door frame.

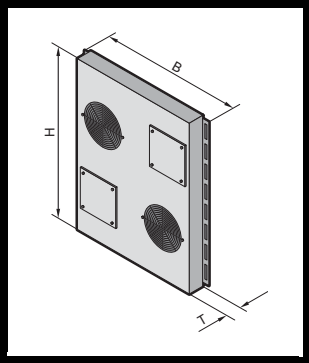
Supply includes:
- Fully wired ready for connection
- Connection cable 2.5 m
- Assembly parts

Accessories:

Fan expansion kit,
see page 407.

Note:
- Only for mounting on the tubular door frame!
- Door configuration for installation in 2 and 4-door ISP racks available on request.

Detailed drawings:
Available on the Internet.



For doors with width 600 mm

Model No. SK	**3165.624[1)]**	**3165.648[1)]**	**3165.615[1)]**	**3165.630[1)]**	Page
Rated operating voltage V, Hz	24 (DC)	48 (DC)	115, 50/60	230, 50/60	
Air throughput (unimpeded air flow)	**600 m³/h**				
Power consumption for two fans	40 W	48 W	70 W/64 W	70 W/70 W	
Rated current of fan	1.5 A	1.0 A	0.76 A/0.72 A	0.38 A/0.36 A	
Dimensions mm W (B) / H / D (T)	493 / 606 / 64.5				
Noise level	55 dB (A)				
Temperature range	+20°C to +55°C				
Colour	RAL 7035				
Accessories					
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	476

For doors with width 800 mm

Model No. SK	**3165.824[1)]**	**3165.848[1)]**	**3165.815[1)]**	**3165.830[1)]**	Page
Rated operating voltage V, Hz	24 (DC)	48 (DC)	115, 50/60	230, 50/60	
Air throughput (unimpeded air flow)	**600 m³/h**				
Power consumption for two fans	40 W	48 W	70 W/64 W	70 W/70 W	
Rated current of fan	1.5 A	1.0 A	0.76 A/0.72 A	0.38 A/0.36 A	
Dimensions mm W (B) / H / D (T)	693 / 606 / 64.5				
For doors with width mm	800				
Noise level	55 dB (A)				
Temperature range	+20°C to +55°C				
Colour	RAL 7035				
Accessories					
Digital temperature display/thermostat	3114.200	3114.200	3114.200	3114.200	475
Enclosure internal thermostat	3110.000	3110.000	3110.000	3110.000	476

[1)] Extended delivery times.
Special voltages available on request. We reserve the right to make technical modifications.

Fan expansion kit

for door-mounted fan
To increase the air throughput of the door-mounted fan.

To fit door mounted fan	**Model No. SK**
SK 3165.624, SK 3165.824	**3165.024**
SK 3165.648, SK 3165.848	**3165.048**
SK 3165.615, SK 3165.815	**3165.115**
SK 3165.630, SK 3165.830	**3165.230**

Air/air heat exchanger

Climate control accessories Page 473 **Software & services** Page 515

Colour:
RAL 7035

Protection category:
Internal circuit IP 54 to IEC 60 529

Supply includes:
Complete unit ready for connection.

Note:
For precise temperature control inside the enclosure, we recommend the digital temperature indicator/thermostat SK 3114.200, the enclosure internal thermostat SK 3110.000 or the speed control SK 3120.200.

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

Wall-mounted

Model No. SK		**3125.800**	**3129.800**	Page
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W H D	200 400 146	400 1360 110	
Specific thermal output		**12 W/K**	**62 W/K**	

Max. rated current per fan		0.11 A/0.13 A	0.45 A/0.55 A	
Pre-fuse T		2.0 A		
Output per fan		25 W/30 W	100 W/130 W	
Operating temperature range		–5°C to +55°C		
Air throughput of fans (unimpeded air flow)	External circuit	265 m^3/h / 315 m^3/h	860 m^3/h / 900 m^3/h	
	Internal circuit	265 m^3/h / 315 m^3/h	860 m^3/h / 900 m^3/h	
Type of connection		Connection cable		
Weight		8 kg	30 kg	

Accessories	Packs of			
Enclosure internal thermostat	1	3110.000	3110.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	475
Speed control	1	3120.200	3120.200	477

Special voltages available on request. We reserve the right to make technical modifications.

Air/air heat exchanger

Climate control accessories Page 473 **Software & services** Page 515

Colour:
RAL 7035

Protection category:
Internal circuit IP 54 to IEC 60 529

Supply includes:
– Fully wired unit ready for connection
– Plug-in terminal strip
– With controller and digital temperature display
– Floating fault signal contact in case of overtemperature

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

Wall-mounted with controller, 17.5 – 45 W/K

Model No. SK		**3126.100**	**3126.115**	**3127.100**	**3127.115**	**3128.100**	**3128.115**	Page
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	
Dimensions mm	W x H x D	280 x 550 x 150		400 x 950 x 205				
Specific thermal output		**17.5 W/K**		**30 W/K**		**45 W/K**		
Max. rated current per fan		0.11 A/0.13 A	0.23 A/0.25 A	0.28 A/0.34 A	0.55 A/0.7 A	0.3 A/0.4 A	0.6 A/0.8 A	
Pre-fuse T		2.0 A						
Output per fan		23 W/27 W		60 W/75 W		70 W/90 W		
Operating temperature range		–5°C to +55°C						
Air throughput of fans (unimpeded air flow)	External circuit	265 m^3/h / 315 m^3/h		480 m^3/h / 525 m^3/h		600 m^3/h / 625 m^3/h		
	Internal circuit	265 m^3/h / 315 m^3/h		480 m^3/h / 525 m^3/h		600 m^3/h / 625 m^3/h		
Weight		10 kg		18 kg		19 kg		
Accessories	Packs of							
Filter mats	3	3286.300	3286.300	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.310	3286.310	3286.410	3286.410	3286.410	3286.410	482

Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted with controller, 60 – 90 W/K

Model No. SK		**3129.100**	**3129.115**	**3130.100**	**3130.115**	Page
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	230, 1~, 50/60	115, 1~, 50/60	
Dimensions mm	W x H x D	400 x 950 x 225		400 x 1580 x 215		
Specific thermal output		**60 W/K**		**90 W/K**		
Max. rated current per fan		0.38 A/0.4 A	0.65 A/0.8 A	0.67 A/0.88 A	1.3 A/1.8 A	
Pre-fuse T		2.0 A		4.0 A		
Output per fan		85 W/90 W		150 W/200 W		
Operating temperature range		–5°C to +55°C				
Air throughput of fans (unimpeded air flow)	External circuit	860 m^3/h / 900 m^3/h		850 m^3/h / 945 m^3/h		
	Internal circuit	860 m^3/h / 900 m^3/h		850 m^3/h / 945 m^3/h		
Weight		21 kg		34 kg		
Accessories	Packs of					
Filter mats	3	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	482

Special voltages available on request. We reserve the right to make technical modifications.

Air/air heat exchanger

Climate control accessories Page 473 **Software & services** Page 515

Rittal air/air heat exchangers in a railway-compatible version are used specifically in the mobile railway engineering sector, e.g. for local trains, locomotives and high-speed trains.
Products are available both in 24 V DC and in 110 V DC.

Railway-compatible design of the units means construction to EN 50 155, halogen-free connection cables, screw protection, shock and vibration testing to EN 61 373, preparation for EN 45 545, and spray-finishing in RAL 7035 S to DB TL 918340, among other things.

Benefits:
- External and internal fans may be controlled separately
- Simple maintenance

Colour:
RAL 7035

Protection category:
Internal circuit IP 54 to IEC 60 529

Supply includes:
Complete unit ready for connection.

Detailed drawings:
Available on the Internet.

Wall-mounted, railway-compatible version

Model No. SK		**3126.424**	**3128.424**	**3129.424**	**3130.424**	**3126.410**	**3128.410**	**3129.410**	**3130.410**	Page
Rated operating voltage		24 V (DC)	24 V (DC)	24 V (DC)	24 V (DC)	110 V (DC)	110 V (DC)	110 V (DC)	110 V (DC)	
Dimensions mm	W H D	280 650 127	400 950 140	400 950 150	400 1580 150	280 650 127	400 950 140	400 950 150	400 1580 150	
Specific thermal output		**27 W/K**	**47 W/K**	**66 W/K**	**98 W/K**	**27 W/K**	**47 W/K**	**66 W/K**	**98 W/K**	
Max. rated current per fan		2.7 A	7.5 A	10.5 A	9.2 A	2.7 A	1.9 A	2.47 A	2.3 A	
Output per fan		65 W	180 W	240 W	220 W	65 W	203 W	256 W	230 W	
Air throughput of fans (unimpeded air flow)	External circuit	360 m^3/h	560 m^3/h	1055 m^3/h	1125 m^3/h	360 m^3/h	560 m^3/h	1055 m^3/h	1125 m^3/h	
	Internal circuit	360 m^3/h	560 m^3/h	1055 m^3/h	1125 m^3/h	360 m^3/h	560 m^3/h	1055 m^3/h	1125 m^3/h	
Operating temperature range		–30°C to +60°C								
Weight		10 kg	16 kg	18 kg	25 kg	125 kg	185 kg	205 kg	275 kg	
Accessories	Packs of									
Adjustable frame	1	3286.260	3286.270	3286.270	3286.280	3286.260	3286.270	3286.270	3286.280	479
Metal filters	1	3286.230	3286.240	3286.240	3286.250	3286.230	3286.240	3286.240	3286.250	482

Delivery times available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Software & services** Page 515

Colour:
RAL 7035/9005

Protection category:
Internal circuit IP 54 to IEC 60 529

Supply includes:
– Complete unit ready for connection
– The fans are connected via two 3-wire connection cables, with wire end ferrules.

Note:
For precise temperature control inside the enclosure, we recommend the digital temperature indicator/thermostat SK 3114.200, the enclosure internal thermostat SK 3110.000 or the speed control SK 3120.200.

Detailed drawings:
Available on the Internet.

Roof-mounted

Model No. SK		**3248.000**	Page
Rated operating voltage V, Hz		230, 1~, 50/60	
Dimensions mm	W H D	595 362 440	
Specific thermal output		**66 W/K**	

Fans	2 per heat exchanger	
Max. rated current per fan	0.45 A/0.55 A	
Pre-fuse T	4.0 A	
Output per fan	75 W	
Air throughput of fans (unimpeded air flow) External circuit	965 m^3/h	
Air throughput of fans (unimpeded air flow) Internal circuit	965 m^3/h	
Operating temperature range	–5°C to +55°C	
Type of connection	Connection cable	
Weight	168 kg	

Accessories	Packs of		
Digital temperature display/thermostat	1	3114.200	475
Enclosure internal thermostat	1	3110.000	476
Hygrostat	1	3118.000	476
Speed control	1	3120.200	477

Special voltages available on request. We reserve the right to make technical modifications.

Cooling units

Thermoelectric cooler

Thermoelectric cooler ..... 100 W 414

Wall-mounted cooling units

Horizontal format, with Basic controller ..... 300 W 415
With Basic controller ..... 300 W 416
TopTherm ..... 500 W 417
TopTherm ..... 750 W 418
TopTherm ..... 1000 W 419
TopTherm ..... 1500 W 420
TopTherm ..... 2000 W 421
TopTherm ..... 2500 W 422
TopTherm ..... 4000 W 422
TopTherm, slimline ..... 1500 W 423
TopTherm, design NEMA 4X ..... 500/1000/1500 W 424
TopTherm, design NEMA 4X ..... 2000/2500 W 425
Explosion-proof cooling units
for zone 22 (dust) ..... 500/1000/1500 W 425

Roof-mounted cooling units

TopTherm ..... 500 W 426
TopTherm ..... 750 W 427
TopTherm ..... 1000 W 427
TopTherm ..... 1100/3000 W 428
TopTherm ..... 1500 W 428
TopTherm ..... 2000 W 429
TopTherm ..... 3000/4000 W 429

Modular climate control concept

Cooling module ..... 1500/2500 W 430
Section doors for installing cooling modules 431

Thermoelectric cooler

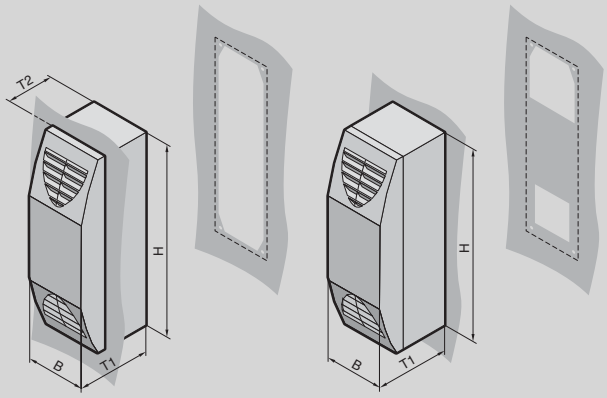
Climate control accessories Page 473 **Therm software** Page 523

Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Thermoelectric climate control unit
- Fully wired ready for connection
- Mounting accessories
- Parameterization software.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



Useful cooling output 100 W/thermal output 100 W

Model No. SK		**3201.200**	**3201.300**	Page
Dimensions mm	W (B) H D (T1)	125 400 155		
Installation depth mm	D (T2)	100		
Rated operating voltage V, Hz		100 – 230 V, 50/60	24 V DC	
Start-up current		4.6 A	4.5 A	
Rated current		0.7 A	4.5 A	
Refrigeration factor/COP	L 35 L 35	1.0	1.2	
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**100 W**	**100 W**	
Thermal output		**100 W**	**100 W**	
Power pack integrated		■	–	
Colour of cover/unit		RAL 7024/Anodised aluminium		
Weight		3.0 kg	2.4 kg	
Operating temperature range		–30°C to +55°C	–30°C to +60°C	
Air throughput, unimpeded air flow		50 m³/h		
Type of connection		Plug-in spring connection terminal		
Pre-fuse T		4 A	10 A	
Accessories	Packs of			
Auto Range power pack 240 W	1	–	3201.040	484
Spare filter mat	1	3201.050	3201.050	483
Digital temperature display/thermostat	1	3114.200	3114.200	475
Master/slave adaptor	1	3201.070	3201.070	477
Condensate hose, 5 m length	1	3301.606	3301.606	485

We reserve the right to make technical modifications. Special voltages available on request.

Climate control accessories Page 473 **Software & services** Page 515

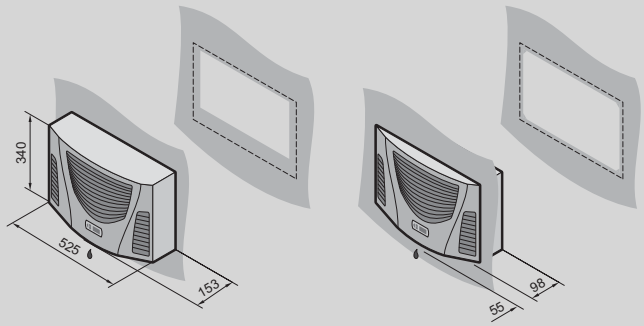
Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



Horizontal format, with Basic controller, useful cooling output 300W

Model No. SK		**3302.300**	**3302.310**	Page
Material		Sheet steel		
Colour		RAL 7035		
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 60	
Dimensions mm	W x H x D	525 x 340 x 153		
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**300 W/320 W** **150 W/160 W**	**300 W** **150 W**	
Rated current max.		1.6 A/1.7 A	4.0 A	
Start-up current		4.3 A/5.3 A	12.0 A	
Pre-fuse T		10.0 A	10.0 A	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	285 W/300 W 320 W/340 W	290 W 340 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.1		
Refrigerant		R134a, 100 g	R134a, 95 g	
Permissible operating pressure p. max.		25 bar		
Operating temperature range		+20°C to +55°C		
Setting range		+30°C to +55°C		
Weight		13 kg		
Air throughput of fans	External circuit	345 m^3/h		
	Internal circuit	310 m^3/h		
Temperature control		Basic controller		

Accessories	Packs of			
Digital temperature display/thermostat	1	3114.200	3114.200	475
Condensate hose	1	3301.608	3301.608	485
Filter mats	3	3286.110	3286.110	481
Metal filters	1	3286.120	3286.120	482
Door-operated switch	1	4127.010	4127.010	684

Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted cooling units

Climate control accessories Page 473 **Software & services** Page 515

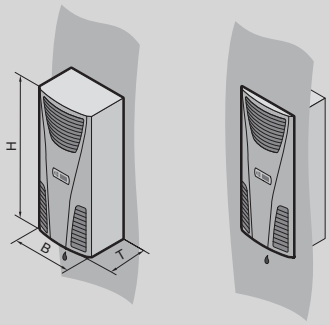
Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



With Basic controller, useful cooling output 300W

Model No. SK		**3302.100**	**3302.110**	**3302.200**[1)]	**3302.210**[1)]	Page
Material		Sheet steel		Stainless steel		
Colour		RAL 7035		–		
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 60	230, 1~, 50/60	115, 1~, 60	
Dimensions mm	W (B) x H x D (T)	280 x 550 x 140				
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**300 W/320 W** **150 W/170 W**	**300 W** **150 W**	**300 W/320 W** **150 W/170 W**	**300 W** **150 W**	
Rated current max.		1.6 A/1.7 A	3.3 A	1.6 A/1.7 A	3.3 A	
Start-up current		3.0 A/3.4 A	8.0 A	3.0 A/3.4 A	8.0 A	
Pre-fuse T		10.0 A	10.0 A	10.0 A	10.0 A	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	245 W/255 W 255 W/275 W	290 W 340 W	245 W/255 W 255 W/275 W	290 W 340 W	
Refrigeration factor ε = Q_K/P_{el}	L 35 L 35	1.2				
Refrigerant		R134a, 100 g				
Permissible operating pressure p. max.		25 bar				
Operating temperature range		+20°C to +55°C				
Setting range		+30°C to +55°C				
Weight		13 kg				
Air throughput of fans	External circuit	310 m^3/h				
	Internal circuit	345 m^3/h				
Temperature control		Basic controller (factory setting +35°C)				
Accessories	Packs of					
Filter mats	3	3286.300	3286.300	3286.300	3286.300	481
Metal filters	1	3286.310	3286.310	3286.310	3286.310	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	684
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	475
Condensate hose	1	3301.608	3301.608	3301.608	3301.608	485

[1)] Extended delivery times.
Special voltages available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Software & services** Page 515

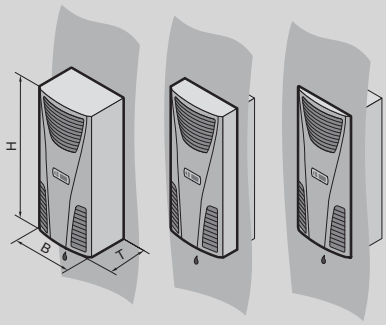
Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



TopTherm, useful cooling output 500 W

Model No. SK		**3303.500**	**3303.510**	**3303.600[1)]**	**3303.610[1)]**	Page
Material		Sheet steel		Stainless steel		
Colour		RAL 7035		–		
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 60	230, 1~, 50/60	115, 1~, 60	
Dimensions mm	W (B) x H x D (T)	280 x 550 x 210				
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**500 W/610 W 280 W/350 W**	**500 W 280 W**	**500 W/610 W 280 W/350 W**	**500 W 280 W**	
Rated current max.		2.6 A/2.6 A	5.7 A	2.6 A/2.6 A	5.7 A	
Start-up current		5.1 A/6.4 A	11.5 A	5.1 A/6.4 A	11.5 A	
Pre-fuse T		10.0 A	10.0 A	10.0 A	10.0 A	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	360 W/380 W 420 W/390 W	470 W 500 W	360 W/380 W 420 W/390 W	470 W 500 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.4				
Refrigerant		R134a, 170 g				
Permissible operating pressure p. max.		28 bar				
Operating temperature and setting range		+20°C to +55°C				
Weight		17 kg				
Air throughput of fans	External circuit	345 m^3/h				
	Internal circuit	310 m^3/h				
Temperature control		e-Comfort controller (factory setting +35°C)				

Accessories	Packs of					
Filter mats	3	3286.300	3286.300	3286.300	3286.300	481
Metal filters	1	3286.310	3286.310	3286.310	3286.310	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.610	3301.610	3301.610	3301.610	485

[1)] Extended delivery times.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted cooling units

TopTherm, useful cooling output 750 W

Model No. SK		3361.500	3361.510	3361.540	3361.600[1]	3361.610[1]	3361.640[1]	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60[3]	115, 1~, 60[3]	400[2], 2~, 50/60[3]	230, 1~, 50/60[3]	115, 1~, 60[2]	400[2], 2~, 50/60[3]	
Dimensions mm	W x H x D	280 x 550 x 206						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**750 W/790 W** **570 W/570 W**	**750 W** **500 W**	**750 W/790 W** **570 W/570 W**	**750 W/790 W** **570 W/570 W**	**750 W** **500 W**	**750 W/790 W** **570 W/570 W**	
Rated current max.		2.7 A/2.7 A	5.3 A	1.2 A/1.4 A	2.7 A/2.7 A	5.3 A	1.2 A/1.4 A	
Start-up current		6.0 A/9.6 A	12.0 A	3.1 A/3.3 A	6.0 A/9.6 A	12.0 A	3.1 A/3.3 A	
Pre-fuse T		10.0 A	10.0 A	6.3 A – 10.0 A[4]	10.0 A	10.0 A	6.3 A – 10.0 A[4]	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	420 W/450 W 480 W/510 W	570 W 670 W	450 W/470 W 520 W/550 W	420 W/450 W 480 W/510 W	570 W 670 W	450 W/470 W 520 W/550 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.8	1.3	1.7	1.8	1.3	1.7	
Refrigerant		R134a, 280 g	R134a, 260 g	R134a, 280 g	R134a, 280 g	R134a, 260 g	R134a, 280 g	
Permissible operating pressure p. max.		28 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		22 kg						
Air throughput of fans	External circuit	480 m³/h						
	Internal circuit	600 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Filter mats	3	3286.300	3286.300	3286.300	3286.300	3286.300	3286.300	481
Metal filters	1	3286.310	3286.310	3286.310	3286.310	3286.310	3286.310	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.610	3301.610	3301.610	3301.610	3301.610	3301.610	485

[1] Extended delivery times. [2] External toroidal core transformer Ø 126 x 65 mm deep for mounting in the enclosure.
[3] T_u max. = 53°C/60 Hz. [4] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Software & services** Page 515

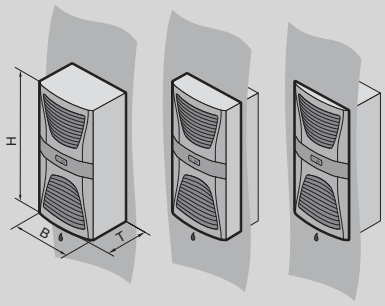
Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Integral electric condensate evaporation
- Wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.



TopTherm, useful cooling output 1000 W

Model No. SK		**3304.500**	**3304.510**	**3304.540**	**3304.600[1)]**	**3304.610[1)]**	**3304.640[1)]**	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W (B) x H x D (T)	400 x 950 x 260						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**1000 W/1450 W**	**1000 W/1450 W**	**1000 W/1460 W**	**1000 W/1450 W**	**1000 W/1450 W**	**1000 W/1460 W**	
	L 35 L 50	**1050 W/1100 W**	**980 W/1050 W**	**880 W/890 W**	**1050 W/1100 W**	**1050 W/1100 W**	**880 W/990 W**	
Rated current max.		3.9 A/4.3 A	8.0 A/8.8 A	2.2 A/2.1 A	3.9 A/4.3 A	8.0 A/8.8 A	2.2 A/2.1 A	
Start-up current		12.0 A/14.0 A	26.0 A/28.0 A	11.5 A/12.7 A	12.0 A/14.0 A	26.0 A/28.0 A	11.5 A/12.7 A	
Pre-fuse T		10.0 A	11.0 A – 16.0 A	6.3 A – 10.0 A[2)]	10.0 A	11.0 A – 16.0 A	6.3 A – 10.0 A[2)]	
Power consumption P_{el} to DIN 3168	L 35 L 35	640 W/720 W	670 W/750 W	670 W/820 W	640 W/720 W	670 W/750 W	670 W/820 W	
	L 35 L 50	750 W/850 W	780 W/880 W	760 W/930 W	750 W/850 W	780 W/880 W	760 W/930 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.6		1.7	1.6		1.7	
Refrigerant		R134a, 325 g						
Permissible operating pressure p. max.		25 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		39 kg	44 kg	40 kg	39 kg	44 kg	40 kg	
Air throughput of fans	External circuit	900 m³/h						
	Internal circuit	600 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						

Accessories	Packs of							
Filter mats	3	3286.400	3286.400	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	3286.410	3286.410	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Motor circuit-breaker
Special voltages and other output categories available on request. Technical modifications reserved.

Wall-mounted cooling units

TopTherm, useful cooling output 1500 W

Model No. SK		3305.500	3305.510[1]	3305.540	3305.600[1]	3305.610[1]	3305.640[1]	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W x H x D	400 x 950 x 260						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**1500 W/1510 W**	**1500 W/1660 W**	**1500 W/1510 W**	**1500 W/1510 W**	**1500 W/1660 W**	**1500 W/1510 W**	
	L 35 L 50	**1150 W/1200 W**	**1150 W/1270 W**	**1230 W/1250 W**	**1150 W/1200 W**	**1150 W/1270 W**	**1230 W/1250 W**	
Rated current max.		5.5 A/5.8 A	11.5 A/12.5 A	2.5 A/2.8 A	5.5 A/5.8 A	11.5 A/12.5 A	2.5 A/2.8 A	
Start-up current		12.0 A/14.0 A	26.0 A/28.0 A	12.2 A/11.3 A	12.0 A/14.0 A	26.0 A/28.0 A	12.2 A/11.3 A	
Pre-fuse T		16.0 A/16.0 A	14.0 A – 20.0 A[3]	6.3 A – 10.0 A[2]	16.0 A/16.0 A	14.0 A – 20.0 A[3]	6.3 A – 10.0 A[2]	
Power consumption P_{el} to DIN 3168	L 35 L 35	870 W/890 W	1010 W/900 W	820 W/1000 W	870 W/890 W	1010 W/900 W	820 W/1000 W	
	L 35 L 50	1030 W/1150 W	1180 W/1060 W	980 W/1170 W	1030 W/1150 W	1180 W/1060 W	980 W/1170 W	
Refrigeration factor ε = $\dot{Q}_K/P_{el}$	L 35 L 35	1.7	1.5	1.8	1.7	1.5	1.8	
Refrigerant		R134a, 600 g						
Permissible operating pressure p. max.		25 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		41 kg	46 kg	42 kg	41 kg	46 kg	42 kg	
Air throughput of fans	External circuit	900 m³/h						
	Internal circuit	800 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						

Accessories	Packs of							
Filter mats	3	3286.400	3286.400	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	3286.410	3286.410	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1] Extended delivery times. [2] Motor circuit-breaker. [3] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Software & services** Page 515

Protection category:
– External circuit IP 34 to IEC 60 529
– Internal circuit IP 54 to IEC 60 529

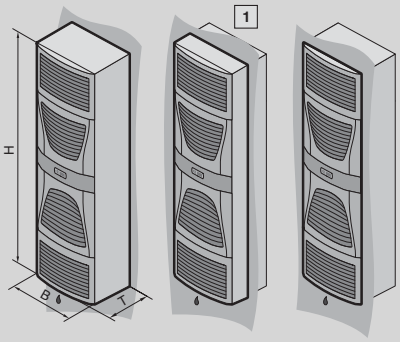
Supply includes:
– Nano-coated condenser
– Integral electric condensate evaporation
– Wired ready for connection (plug-in terminal strip)
– Drilling template
– Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

1 Cannot be installed with SK 3332.XXX.



TopTherm, useful cooling output 2000 W

Model No. SK		3328.500	3328.510	3328.540	3328.600[1)]	3328.610[1)]	3328.640[1)]	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W (B) x H x D (T)	400 x 1580 x 295						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 / L 35 L 50**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2350 W 1450 W/1690 W**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2350 W 1450 W/1690 W**	
Rated current max.		6.1 A/6.6 A	13.4 A/14.8 A	2.8 A/3.3 A	6.1 A/6.6 A	13.4 A/14.8 A	2.8 A/3.3 A	
Start-up current		20.0 A/22.0 A	40.0 A/38.0 A	6.8 A/7.8 A	20.0 A/22.0 A	40.0 A/38.0 A	6.8 A/7.8 A	
Pre-fuse T		16.0 A	18.0 A – 25.0 A[3)]	6.3 A – 10.0 A[2)]	16.0 A	18.0 A – 25.0 A[3)]	6.3 A – 10.0 A[2)]	
Power consumption P_{el} to DIN 3168	L 35 L 35 / L 35 L 50	935 W/1055 W 1080 W/1250 W	965 W/1085 W 1110 W/1280 W	920 W/1145 W 1145 W/1395 W	935 W/1055 W 1080 W/1250 W	965 W/1085 W 1110 W/1280 W	920 W/1145 W 1145 W/1395 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.1	2.1	2.2	2.1	2.1	2.2	
Refrigerant		R134a, 950 g						
Permissible operating pressure p. max.		28 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		66 kg	73 kg	67 kg	66 kg	73 kg	67 kg	
Air throughput of fans	External circuit	640 m³/h						
	Internal circuit	550 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						

Accessories	Packs of							
Filter mats	3	3286.400	3286.400	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	3286.410	3286.410	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Motor circuit-breaker. [3)] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted cooling units

TopTherm, useful cooling output 2500 W

Model No. SK		**3329.500**	**3329.510**	**3329.540**	**3329.600[1)]**	**3329.610[1)]**	**3329.640[1)]**	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W (B) x H x D (T)	400 x 1580 x 295			400 x 1580 x 295			
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**2500 W/2660 W**		**2500 W/2700 W**	**2500 W/2660 W**		**2500 W/2700 W**	
	L 35 L 50	**1840 W/1920 W**		**1900 W/1950 W**	**1840 W/1920 W**		**1900 W/1950 W**	
Rated current max.		8.2 A/9.3 A	17.0 A/20.0 A	3.7 A/3.8 A	8.2 A/9.3 A	17.0 A/20.0 A	3.7 A/3.8 A	
Start-up current		20.0 A/24.0 A	44.0 A/42.0 A	6.8 A/7.6 A	20.0 A/24.0 A	44.0 A/42.0 A	6.8 A/7.6 A	
Pre-fuse T		16.0 A	18.0 A – 25.0 A[3)]	6.3 A – 10.0 A[2)]	16.0 A	18.0 A – 25.0 A[3)]	6.3 A – 10.0 A[2)]	
Power consumption P_{el} to DIN 3168	L 35 L 35	1270 W/1410 W	1300 W/1440 W	1295 W/1495 W	1270 W/1410 W	1300 W/1440 W	1295 W/1495 W	
	L 35 L 50	1470 W/1700 W	1500 W/1730 W	1545 W/1845 W	1470 W/1700 W	1500 W/1730 W	1545 W/1845 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.0	1.9	1.9	2.0	1.9	1.9	
Refrigerant		R134a, 950 g						
Permissible operating pressure p. max.		28 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		69 kg	76 kg	70 kg	69 kg	76 kg	70 kg	
Air throughput of fans	External circuit	710 m³/h						
	Internal circuit	640 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						

Accessories	Packs of							
Filter mats	3	3286.400	3286.400	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	3286.410	3286.410	482
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Motor circuit-breaker. [3)] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, useful cooling output 4000 W

Model No. SK		**3332.540**	**3332.640[1)]**	Page
Material		Sheet steel	Stainless steel	
Colour		RAL 7035	–	
Rated operating voltage V, Hz		400, 3~, 50/ 460, 3~, 60		
Dimensions mm	W (B) x H x D (T)	500 x 1580 x 340		
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**4000 W/4400 W**		
	L 35 L 50	**3070 W/3570 W**		
Rated current max.		4.2 A/4.2A		
Start-up current		9.2 A/11.0 A		
Pre-fuse T		6.3 A – 10.0 A[2)]		
Power consumption P_{el} to DIN 3168	L 35 L 35	1720 W/2120 W		
	L 35 L 50	1990 W/2460 W		
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.3		
Refrigerant		R134a, 3000 g		
Permissible operating pressure p. max.		28 bar		
Operating temperature and setting range		+20°C to +55°C		
Weight		91 kg		
Air throughput of fans	External circuit	2000 m³/h		
	Internal circuit	1500 m³/h		
Temperature control		e-Comfort controller (factory setting +35°C)		

Accessories	Packs of			
Filter mats	3	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	482
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Motor circuit-breaker.
Special voltages available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Software & services** Page 515

Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Integral electric condensate evaporation
- Wired ready for connection (plug-in terminal strip)
- Drilling template
- Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

TopTherm, slimline, useful cooling output 1500 W

Model No. SK		**3366.500**	**3366.510**	**3366.540**	**3366.600[1)]**	**3366.610[1)]**	**3366.640[1)]**	Page
Material		Sheet steel			Stainless steel			
Colour		RAL 7035			–			
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W x H x D	435 x 1590 x 205						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**1500 W/1500 W 1050 W/1100 W**		**1500 W/1500 W 980 W/1080 W**	**1500 W/1500 W 1050 W/1100 W**		**1500 W/1500 W 980 W/1080 W**	
Rated current max.		6.7 A/6.9 A	13.6 A/13.8 A	2.7 A/2.9 A	6.7 A/6.9 A	13.6 A/13.8 A	2.7 A/2.9 A	
Start-up current		22.0 A/24.0 A	43.0 A/47.0 A	8.0 A/8.8 A	22.0 A/24.0 A	43.0 A/47.0 A	8.0 A/8.8 A	
Pre-fuse T		10.0 A	14.0 A – 20.0 A[3)]	6.3 A – 10.0 A[2)]	10.0 A	14.0 A – 20.0 A[3)]	6.3 A – 10.0 A[2)]	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	940 W/1070 W 1115 W/1230 W	940 W/1070 W 1115 W/1230 W	970 W/1120 W 1140 W/1310 W	940 W/1070 W 1115 W/1230 W	940 W/1070 W 1115 W/1230 W	970 W/1120 W 1140 W/1310 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.6		1.5	1.6		1.5	
Refrigerant		R134a, 700 g						
Permissible operating pressure p. max.		28 bar						
Operating temperature and setting range		+20°C to +55°C						
Weight		45 kg	49 kg	46 kg	45 kg	49 kg	46 kg	
Air throughput of fans (unimpeded air flow)	External circuit	910 m³/h						
	Internal circuit	860 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Filter mats	3	3286.400	3286.400	3286.400	3286.400	3286.400	3286.400	481
Metal filters	1	3286.410	3286.410	3286.410	3286.410	3286.410	3286.410	482
Trim frame	1	3377.000	3377.000	3377.000	3377.000	3377.000	3377.000	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Motor circuit-breaker. [3)] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted cooling units

Climate control accessories Page 473 **Software & services** Page 515

Protection category:
See tables.

Supply includes:
– Nano-coated condenser
– Integral electric condensate evaporation
– Wired ready for connection (plug-in terminal strip)
– Drilling template
– Assembly parts

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

TopTherm, design NEMA 4X, useful cooling output 500/1000/1500 W

Model No. SK		**3303.504**[2]	**3303.514**[2]	**3304.504**	**3304.514**	**3304.544**	**3305.504**	**3305.514**	**3305.544**	Page
Material		Stainless steel								
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W x H x D	285 x 620 x 298		405 x 1020 x 358			405 x 1020 x 358			
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**500 W/ 610 W**	**500 W**	**1000 W/ 1450 W**	**1000 W/ 1450 W**	**1000 W/ 1460 W**	**1500 W/ 1510 W**	**1500 W/ 1660 W**	**1500 W/ 1510 W**	
	L 35 L 50	**280W/ 350 W**	**280 W**	**1050 W/ 1100 W**	**980 W/ 1050 W**	**880 W/ 990 W**	**1150 W/ 1200 W**	**1150 W/ 1270 W**	**1230 W/ 1250 W**	
Rated current max.		2.6 A/ 2.6 A	5.7 A	3.9 A/ 4.3 A	8.0 A – 8.8 A	2.2 A – 2.1 A	5.5 A – 5.8 A	11.5 A – 12.5 A	2.6 A – 2.8 A	
Start-up current		5.1 A/ 6.4 A	11.5 A	12.0 A/ 14.0 A	26.0 A/ 28.0 A	11.5 A/ 12.7 A	12.0 A/ 14.0 A	26.0 A/ 28.0 A	12.2 A/ 11.3 A	
Pre-fuse T		10.0 A	10.0 A	10.0 A	11.0 A – 16.0 A	6.3 A – 10.0 A[1]	16.0 A	14.0 A – 20.0 A[3]	6.3 A – 10.0 A[1]	
Power consumption P_{el} to DIN 3168	L 35 L 35	360 W/ 380 W	470 W	640 W/ 720 W	670 W/ 750 W	670 W/ 820 W	870 W/ 890 W	1010 W/ 900 W	820 W/ 1000 W	
	L 35 L 50	420 W/ 390 W	500 W	750 W/ 850 W	780 W/ 880 W	760 W/ 930 W	1030 W/ 1150 W	1180 W/ 1060 W	980 W/ 1170 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.4		1.6	1.6	1.7	1.7	1.5	1.8	
Refrigerant		R134a, 170 g		R134a, 325 g		R134a, 325 g	R134a, 600 g			
Permissible operating pressure p. max.		28 bar		25 bar						
Operating temperature and setting range		+20°C to +55°C								
Protection category		NEMA 4X								
Weight		25 kg		49 kg	54 kg	50 kg	51 kg	56 kg	52 kg	
Air throughput of fans	External circuit	345 m³/h		900 m³/h			900 m³/h			
	Internal circuit	310 m³/h		600 m³/h			800 m³/h			
Temperature control		e-Comfort controller (factory setting +35°C)								
Accessories	Packs of									
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	–	–	–	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.610	3301.610	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1] Motor circuit-breaker. [2] Without integral condensate evaporation. [3] Transformer protection switch.
Extended delivery times. Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, design NEMA 4X, useful cooling output 2000/2500 W

Model No. SK		**3328.504**	**3328.514**	**3328.544**	**3329.504**	**3329.514**	**3329.544**	Page
Material		Stainless steel						
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W x H x D	405 x 1650 x 388						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2360 W 1620 W/1745 W**	**2000 W/2350 W 1450 W/1690 W**	**2500 W/2660 W 1840 W/1920 W**	**2500 W/2660 W 1840 W/1920 W**	**2500 W/2700 W 1900 W/1950 W**	
Rated current max.		6.1 A/6.6 A	13.4 A – 14.8 A	2.8 A/3.3 A	8.2 A/9.3 A	17.0 A/20.0 A	3.7 A/3.8 A	
Start-up current		20.0 A/22.0 A	40.0 A/38.0 A	6.8 A/7.8 A	20.0 A/24.0 A	44.0 A/42.0 A	6.8 A/7.6 A	
Pre-fuse T		16.0 A	18.0 A – 25.0 A[2)]	6.3 A – 10.0 A[1)]	16.0 A	18.0 A – 25.0 A[2)]	6.3 A – 10.0 A[1)]	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	935 W/1055 W 1080 W/1250 W	965 W/1085 W 1110 W/1280 W	920 W/1145 W 1145 W/1395 W	1270 W/1410 W 1470 W/1700 W	1300 W/1440 W 1500 W/1730 W	1295 W/1495 W 1545 W/1845 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.1	2.1	2.2	2.0	1.9	1.9	
Refrigerant		R134a, 900 g						
Permissible operating pressure p. max.		28 bar						
Operating temperature and setting range		+20°C to +50°C						
Protection category		NEMA 4X						
Weight		80 kg	87 kg	80 kg	83 kg	90 kg	83 kg	
Air throughput of fans	External circuit	640 m³/h			710 m³/h			
	Internal circuit	550 m³/h			640 m³/h			
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)]Motor circuit breaker. [2)] Transformer protection switch.
Extended delivery times. Special voltages available on request. We reserve the right to make technical modifications.

Explosion-proof cooling units for zone 22 (dust); useful cooling output 500/1000/1500 W

Model No. SK		**3303.530**	**3304.530**	**3304.560**	**3305.530**	**3305.560**	Page
Material		Sheet steel					
Colour		RAL 7035					
Rated operating voltage V, Hz		230, 1~, 50/60	230, 50/60	400, 3~, 50/ 460, 3~, 60	230, 50/60	400, 3~, 50/ 460, 3~, 60	
Dimensions mm	W x H x D	280 x 550 x 210	400 x 950 x 260		400 x 950 x 260		
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**500 W/610 W 280 W/350 W**	**1000 W/1450 W 1050 W/1100 W**	**1000 W/1460 W 880 W/990 W**	**1500 W/1510 W 1150 W/1200 W**	**1500 W/1510 W 1230 W/1250 W**	
Rated current max.		2.6 A/2.6 A	3.9 A/4.3 A	2.1 A/2.2 A	5.4 A/6.0 A	2.3 A/2.6 A	
Start-up current		5.1 A/6.4 A	12.0 A/14.0 A	11.5 A/12.7 A	22.0 A/24.0 A	12.2 A/11.3 A	
Pre-fuse T		10.0 A	10.0 A/10.0 A	6.3 A – 10.0 A[1)]	16.0 A/16.0 A	6.3 A – 10.0 A[1)]	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	360 W/380 W 420 W/390 W	640 W/720 W 750 W/850 W	670 W/820 W 760 W/930 W	870 W/980 W 1030 W/1150 W	820 W/1000 W 980 W/1170 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.4	1.4	1.7	1.7	1.8	
Refrigerant		R134a, 170 g	R134a, 325 g	R134a, 325 g	R134a, 600 g		
Permissible operating pressure p. max.		28 bar	25 bar				
Operating temperature and setting range		+20°C to +50°C					
Protection category	External circuit	IP 54					
	Internal circuit	IP 54					
Weight		17 kg	39 kg		41 kg		
Air throughput of fans	External circuit	345 m³/h	900 m³/h				
	Internal circuit	310 m³/h	600 m³/h		800 m³/h		
Temperature control		e-Comfort controller (factory setting +35°C)					
Accessories	Packs of						
Filter mats	3	3286.300	3286.400	3286.400	3286.400	3286.400	481
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	684
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	475
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Motor circuit breaker.
Without electric condensate evaporation
Extended delivery times. We reserve the right to make technical modifications.

Roof-mounted cooling units

Climate control accessories Page 473 **Software & services** Page 515 **RiDiag II** Page 529

Technical specifications:
- Permissible operating pressure p. max.: 25 bar
- Duty cycle: 100%
- Type of connection: Plug-in terminal strip

Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

Supply includes:
- Nano-coated condenser
- Integral electric condensate evaporation
- Fully wired ready for connection
- Drilling template
- Assembly parts

Accessories:

Roof plate for TS 8 with mounting cut-out, see page 478.

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

TopTherm, useful cooling output 500 W

Model No. SK		**3382.500**	**3382.600**[1]	**3382.510**	**3382.610**[1]	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		230, 1~, 50/60		115, 1~, 50/60		
Dimensions mm	W x H x D	597 x 417 x 380				
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**500 W/586 W** **273 W/429 W**				
Rated current max.		2.3 A/2.6 A		4.1 A/5.4 A		
Start-up current		9.1 A/8.8 A		18.2 A/15.9 A		
Pre-fuse T		10.0 A		6.3 A – 10.0 A[2]		
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	302 W/347 W 342 W/402 W		312 W/357 W 352 W/422 W		
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.6				
Refrigerant		R134a, 300 g				
Operating temperature and setting range		+20°C to +55°C				
Weight		30 kg		35 kg		
Air throughput of fans (unimpeded air flow)	External circuit	800 m^3/h				
	Internal circuit	170 m^3/h				
Temperature control		e-Comfort controller (factory setting +35°C)				

Accessories	Packs of					
Filter mats	3	3286.500	3286.500	3286.500	3286.500	481
Metal filters	1	3286.510	3286.510	3286.510	3286.510	482
Quick-change frame	1	3286.700	3286.700	3286.700	3286.700	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	473
Stoppers	2	3286.780	3286.780	3286.780	3286.780	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	485

[1] Extended delivery times. [2] Transformer protection switch.
Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, useful cooling output 750 W

Model No. SK		**3359.500**	**3359.600[1)]**	**3359.510**	**3359.610[1)]**	**3359.540**	**3359.640[1)]**	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		230, 1~, 50/60		115, 1~, 50/60		400, 2~, 50/60		
Dimensions mm	W x H x D	597 x 417 x 380						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**750 W/625 W 304 W/368 W**						
Rated current max.		2.8 A/3.7 A		5.6 A/7.4 A		1.6 A/2.1 A		
Start-up current		9.2 A/9.0 A		18.4 A/18.0 A		5.4 A/5.2 A		
Pre-fuse T		10.0 A		11.0 A – 16.0 A[2)]		6.3 A – 10.0 A[2)]		
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	401 W/494 W 444 W/536 W		411 W/509 W 454 W/526 W				
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.8						
Refrigerant		R134a, 300 g						
Operating temperature and setting range		+20°C to +55°C						
Weight		32 kg		37 kg				
Air throughput of fans (unimpeded air flow)	External circuit	800 m³/h						
	Internal circuit	585 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Filter mats	3	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	481
Metal filters	1	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	482
Quick-change frame	1	3286.700	3286.700	3286.700	3286.700	3286.700	3286.700	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	473
Stoppers	2	3286.780	3286.780	3286.780	3286.780	3286.780	3286.780	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Transformer protection switch
Special voltages available on request. Technical modifications reserved.

TopTherm, useful cooling output 1000 W

Model No. SK		**3383.500**	**3383.600[1)]**	**3383.510**	**3383.610[1)]**	**3383.540[1)]**	**3383.640**	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		230, 1~, 50/60[3)]		115, 1~, 50/60[3)]		400, 2~, 50/60[3)]		
Dimensions mm	W x H x D	597 x 417 x 475						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**1000 W/1088 W 709 W/807 W**						
Rated current max.		2.9 A/3.9 A		5.6 A/7.7 A		2.9 A/3.9 A		
Start-up current		8.8 A/10.1 A		14.4 A/15.8 A		4.6 A/5.7 A		
Pre-fuse T		10.0 A		11.0 A – 16.0 A[2)]		6.3 A – 10.0 A[2)]		
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	426 W/514 W 485 W/606 W		456 W/524 W 495 W/616 W				
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.3		2.2				
Refrigerant		R134a, 650 g						
Operating temperature and setting range		+20°C to +55°C						
Weight		40 kg		46 kg				
Air throughput of fans (unimpeded air flow)	External circuit	1600 m³/h						
	Internal circuit	491 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Filter mats	3	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	481
Metal filters	1	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	482
Quick-change frame	1	3286.800	3286.800	3286.800	3286.800	3286.800	3286.800	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	473
Stoppers	2	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Transformer protection switch. [3)] T_u max = 53°C/60 Hz.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted cooling units

TopTherm, useful cooling output 1100/3000 W, especially for office applications

Model No. SK		**3273.500**	**3273.515**[1]		**3301.800**	Page
Material		Sheet steel				
Colour		RAL 7035				
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60		230, 1~, 50	
Dimensions mm	W x H x D	597 x 417 x 475			597 x 417 x 895	
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**1100 W/1200 W 850 W/870 W**		**L 35 L 25 L 45 L 35**	**3000 W 3200 W**	
Rated current max.		5.2 A/5.4 A	11.0 A/11.5 A		9.2 A	
Start-up current		15.5 A/16.5 A	32.0 A/35.0 A		36.0 A	
Pre-fuse T		10.0 A	11.0 A – 16.0 A[2]		Air circuit-breaker 16.0 A	
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	760 W/780 W 830 W/970 W	790 W/810 W 860 W/1010 W	L 35 L 25 L 45 L 35	1820 W 2325 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.4			1.6	
Refrigerant		R134a, 700 g				
Operating temperature and setting range		+20°C to +50°C				
Weight		42 kg	47 kg		72 kg	
Air throughput of fans (unimpeded air flow)	External circuit	1760 m³/h			1850 m³/h	
	Internal circuit	440 m³/h			1450 m³/h	
Temperature control		e-Comfort controller (factory setting +35°C)				

Accessories	Packs of					
Filter mats	3	3286.500	3286.500	3286.600		481
Metal filters	1	3286.510	3286.510	3286.610		482
Quick-change frame	1	3286.700	3286.700	3286.800		479
Door-operated switch	1	4127.010	4127.010	4127.010		684
SK BUS system	1	3124.100	3124.100	3124.100		477
Interface board	1	3124.200	3124.200	3124.200		477
Air duct system	1	3286.870	3286.870	3286.970		473
Stoppers	2	3286.880	3286.880	3286.980		474
Condensate hose	1	3301.612	3301.612	3301.612		485

[1] Extended delivery times. [2] Transformer protection switch.
In order to avoid increased condensation, we recommend enclosures with a protection category of at least IP 54.
Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, useful cooling output 1500 W

Model No. SK		**3384.500**	**3384.600**[1]	**3384.510**	**3384.610**[1]	**3384.540**	**3384.640**[1]	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		230, 1~, 50/60[3]		115, 1~, 50/60[3]		400, 2~, 50/60[3]		
Dimensions mm	W x H x D	597 x 417 x 475						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**1500 W/1637 W 1207 W/1308 W**						
Rated current max.		4.2 A/4.9 A		8.7 A/10.1 A		2.5 A/2.9 A		
Start-up current		14.7 A/13.6 A		27.2 A/23.2 A		8.7 A/7.6 A		
Pre-fuse T		10.0 A		14.0 A – 20.0 A[2]		6.3 A – 10.0 A[2]		
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	641 W/743 W 741 W/857 W		666 W/757 W 775 W/899 W				
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.4		2.3				
Refrigerant		R134a, 500 g						
Operating temperature and setting range		+20°C to +55°C						
Weight		41 kg		47 kg				
Air throughput of fans (unimpeded air flow)	External circuit	1600 m³/h						
	Internal circuit	491 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						

Accessories	Packs of							
Filter mats	3	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	481
Metal filters	1	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	482
Quick-change frame	1	3286.800	3286.800	3286.800	3286.800	3286.800	3286.800	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	473
Stoppers	2	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1] Extended delivery times. [2] Transformer protection switch. [3] T_u max = 53°C/60 Hz.
Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, useful cooling output 2000 W

Model No. SK		**3385.500**	**3385.600[1)]**	**3385.510**	**3385.610[1)]**	**3385.540**	**3385.640[1)]**	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		230, 1~, 50/60[3)]		115, 1~, 50/60[3)]		400, 2~, 50/60[3)]		
Dimensions mm	W x H x D	597 x 417 x 475						
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**2000 W/2030 W** **1454 W/1547 W**		**2000 W/2140 W** **1409 W/1511 W**				
Rated current max.		5.9 A/6.3 A		13.3 A/13.5 A		3.5 A/3.7 A		
Start-up current		19.7 A/17.9 A		42.2 A/31.1 A		11.7 A/11.7 A		
Pre-fuse T		10.0 A		14.0 A – 20.0 A[2)]		6.3 A – 10.0 A[2)]		
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	970 W/1155 W 1081 W/1511 W		1020 W/1235 W 1441 W/1310 W				
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.1		2.0				
Refrigerant		R134a, 900 g						
Operating temperature and setting range		+20°C to +55°C						
Weight		42 kg		48 kg				
Air throughput of fans (unimpeded air flow)	External circuit	2100 m³/h						
	Internal circuit	657 m³/h						
Temperature control		e-Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Filter mats	3	3286.500	3286.500	3286.500	3286.500	3286.500	3286.500	481
Metal filters	1	3286.510	3286.510	3286.510	3286.510	3286.510	3286.510	482
Quick-change frame	1	3286.800	3286.800	3286.800	3286.800	3286.800	3286.800	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	3286.870	3286.870	473
Stoppers	2	3286.880	3286.880	3286.880	3286.880	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times. [2)] Transformer protection switch. [3)] T_u max = 53°C/60 Hz.
Special voltages available on request. We reserve the right to make technical modifications.

TopTherm, useful cooling output 3000 W/4000 W

Model No. SK		**3386.540**	**3386.640[1)]**	**3387.540**	**3387.640[1)]**	Page
Material		Sheet steel	Stainless steel	Sheet steel	Stainless steel	
Colour		RAL 7035	–	RAL 7035	–	
Rated operating voltage V, Hz		400, 3~, 50/460, 3~, 60				
Dimensions mm	W x H x D	796 x 470 x 580				
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**3000 W/3300 W** **2200 W/2500 W**		**4000 W/4200 W** **3250 W/3490 W**		
Rated current max.		3.4 A/3.4 A		3.9 A/3.9 A		
Start-up current		8.0 A/9.0 A		17.0 A/19.0 A		
Pre-fuse T		Motor circuit breaker 6.3 A – 10.0 A				
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	1190 W/1500 W 1440 W/1780 W		1630 W/2070 W 1880 W/2350 W		
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.3				
Refrigerant		R134a, 1600 g				
Operating temperature and setting range		+20°C to +55°C				
Weight		70 kg		77 kg		
Air throughput of fans (unimpeded air flow)	External circuit	3450 m³/h		3870 m³/h		
	Internal circuit	1280 m³/h		1420 m³/h		
Temperature control		e-Comfort controller (factory setting +35°C)				
Accessories	Packs of					
Filter mats	3	3286.600	3286.600	3286.600	3286.600	481
Metal filters	1	3286.610	3286.610	3286.610	3286.610	482
Quick-change frame	1	3286.900	3286.900	3286.900	3286.900	479
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	477
Interface board	1	3124.200	3124.200	3124.200	3124.200	477
Air duct system	1	3286.970	3286.970	3286.970	3286.970	473
Stoppers	2	3286.980	3286.980	3286.980	3286.980	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	485

[1)] Extended delivery times.
Special voltages available on request. We reserve the right to make technical modifications.

Modular climate control concept

Climate control accessories Page 473 **TS 8 enclosures** Page 71 **Software & services** Page 515

Colour:
RAL 7035

Protection category:
- External circuit IP 34 to IEC 60 529
- Internal circuit IP 54 to IEC 60 529

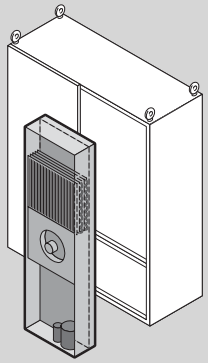
Supply includes:
- Cooling module prepared for installation in section door
- Nano-coated condenser
- Integral electric condensate evaporation

Also required:
- Section door, fits TS 8 enclosures, 600, 800, 1200 mm widths and 1800, 2000 mm heights, see page 431.
- Base/plinth, 100 or 200 mm high, see page 543.

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

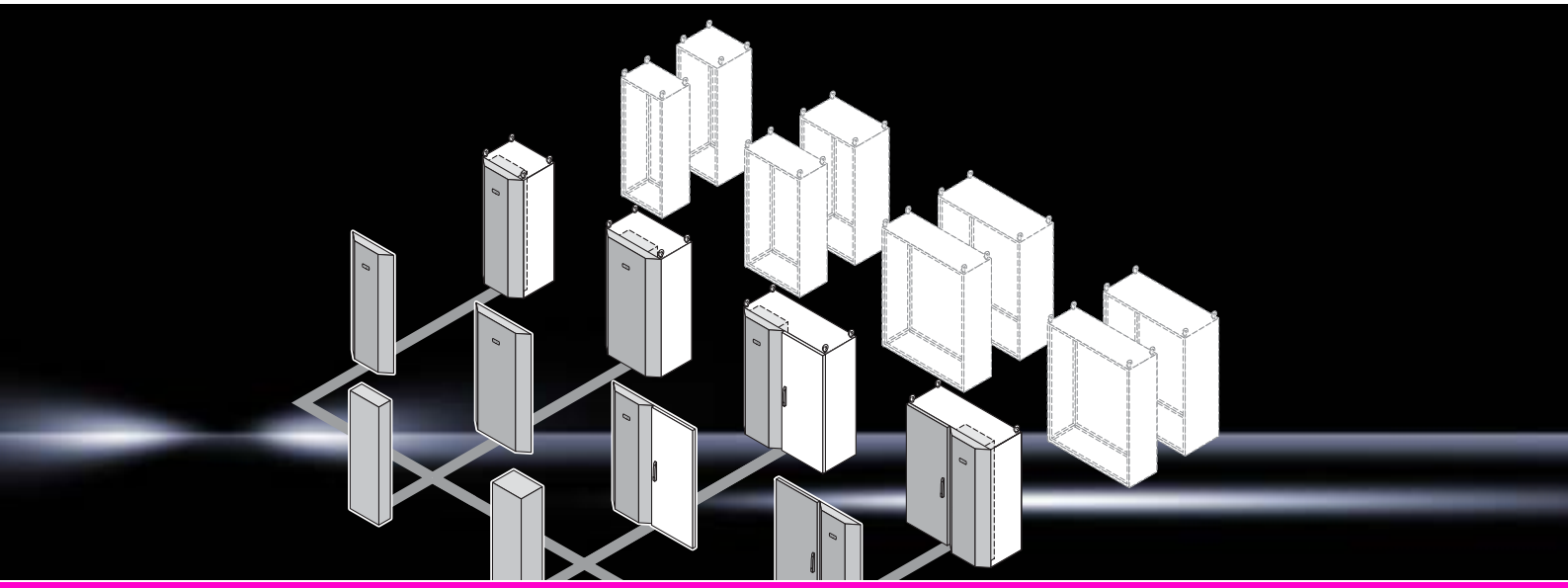
Performance diagrams:
Available on the Internet.



Cooling modules, 1500/2500 W useful cooling output

Model No. SK with Comfort controller		**3307.700**	**3307.710**	**3307.740**	**3310.700**	**3310.710**	**3310.740**	Page
Rated operating voltage V, Hz		230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/ 460, 3~, 60	
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35**	**1500 W/1550 W**		**1500 W/1550 W**	**2500 W/2520 W**		**2500 W/2500 W**	
	L 35 L 50	**850 W/900 W**		**930 W/950 W**	**1620 W/1730 W**		**1760 W/1800 W**	
Rated current max.		6.0 A/6.1 A	11.2 A/11.8 A	2.5 A/2.7 A	7.6 A/9.4 A	17.3 A/19.0 A	3.5 A/3.7 A	
Start-up current		22.0 A/24.0 A	36.0 A/39.0 A	8.5 A/9.2 A	22.0 A/24.0 A	36.0 A/39.0 A	13.0 A/14.0 A	
Pre-fuse T		16.0 A/16.0 A	11.0 A – 16.0 A[3]	6.3 A – 10.0 A[1]	16.0 A/16.0 A	18.0 A – 25.0 A[3]	6.3 A – 10.0 A[1]	
Power consumption P_{el} to DIN 3168	L 35 L 35	850 W/1050 W	870 W/1080 W	790 W/1000 W	1310 W/1520 W	1360 W/1570 W	1130 W/1480 W	
	L 35 L 50	1000 W/1150 W	1070 W/1180 W	900 W/1100 W	1480 W/1850 W	1530 W/1900 W	1400 W/1750 W	
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	1.8	1.7	1.9	1.9	1.8	2.2	
Refrigerant		R134a, 700 g			R134a, 1175 g			
Operating temperature and setting range		+20°C to +55°C						
Weight[2]		68 kg	72 kg	68 kg	73 kg	78 kg	72 kg	
Air throughput of fans (unimpeded air flow)	External circuit	1100 m³/h			1100 m³/h			
	Internal circuit	600 m³/h			1100 m³/h			
Temperature control		Comfort controller (factory setting +35°C)						
Accessories	Packs of							
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	3124.100	3124.100	3124.100	3124.100	3124.100	477
RiDiag II	1	3159.100	3159.100	3159.100	3159.100	3159.100	3159.100	529
Interface board	1	3124.200	3124.200	3124.200	3124.200	3124.200	3124.200	477

Special voltages available on request. We reserve the right to make technical modifications.
[1] Motor circuit breaker
[2] Includes section door weight
[3] Transformer protection switch



Climate control accessories Page 473 **TS 8 enclosures** Page 71 **Software & services** Page 515

Colour:
RAL 7035

Supply includes:
– Section door without pre-configured cooling module
– TS 8 hinges, door opening angle approx. 110°

Note for 1200 mm wide TS 8 enclosures:
– With the unit positioned on the right, one pack consists of a section door for installing in the right-hand half of the enclosure plus a special lockable door for the left-hand half.
– With the unit positioned on the left, one pack consists of a section door for installing in the left-hand half of the enclosure. The existing lockable door on the right may be used.

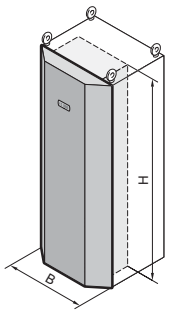
Also required:
– Cooling module, see page 430.
– Base/plinth, 100 or 200 mm high, see page 543.

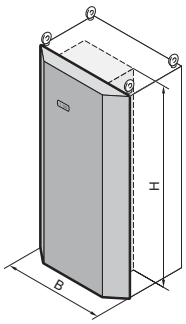
Approvals:
Available on the Internet.

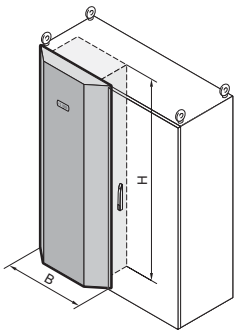
Detailed drawings:
Available on the Internet.

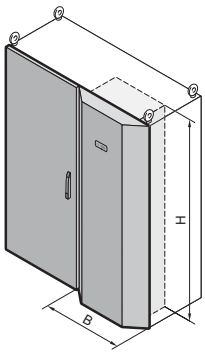
Performance diagrams:
Available on the Internet.

Section doors for installing cooling modules









Model No. SK		**3300.040**	**3300.050**	**3300.060**	**3300.070**	**3300.080**	**3300.090**	**3300.110**	**3300.120**
Dimensions to fit TS enclosures	Height mm	1800	2000	1800	2000	1800	2000	1800	2000
Dimensions to fit TS enclosures	Width (B) mm	600		800		1200 (unit positioned on the left)		1200 (unit positioned on the right)	
Accessories	Packs of								
Metal filters	1	3284.210		3284.210		3284.210		3284.210	

All SK 3307.700/.710/.740 or 3310.700/.710/.740 cooling module models, see page 430, can be integrated into one of the section doors mentioned above.

Liquid cooling

Air/water heat exchangers

Roof-mounted, water-carrying parts CuAL ..... 2500 W 434
Roof-mounted, water-carrying parts CuAL ..... 4000 W 435
Roof-mounted, water-carrying parts V4A (1.4571) ..... 1875 W 435
Roof-mounted, water-carrying parts V4A (1.4571) ..... 3000 W 436
Wall-mounted ..... 300/600/1250 W 437
Wall-mounted, water-carrying parts CuAL ..... 500 W 438
Wall-mounted, water-carrying parts CuAL ..... 1000 W 438
Wall-mounted, water-carrying parts CuAL ..... 2000 W 439
Wall-mounted, water-carrying parts CuAL ..... 3000 W 439
Wall-mounted, water-carrying parts CuAL ..... 5000 W 440
Wall-mounted ..... 7000 W 440
Wall-mounted, water-carrying parts V4A (1.4571) ..... 500 W 441
Wall-mounted, water-carrying parts V4A (1.4571) ..... 750 W 441
Wall-mounted, water-carrying parts V4A (1.4571) ..... 1750 W 442
Wall-mounted, water-carrying parts V4A (1.4571) ..... 2500 W 442
Wall-mounted, water-carrying parts V4A (1.4571) ..... 4000 W 443

Cold Plate

Cold Plate incl. T channel for frequency converters .... 2500/3000 W 444
Accessories for Cold Plate 445

Chillers for water

TopTherm ..... 1/1.5 kW 446
TopTherm ..... 3/4.5/6 kW 447
TopTherm, for wall mounting ..... 1/2.5/4 kW 448
TopTherm ..... 8 – 40 kW 449
In a floor-standing enclosure ..... 2.1 – 7.7 kW 450
In a floor-standing enclosure ..... 10 – 25 kW 451
In a floor-standing enclosure ..... 32 – 59 kW 451

Air/water heat exchangers

Climate control accessories Page 473 **Recooling systems** Page 446 **Software & services** Page 515

Colour:
RAL 7035

Supply includes:
– Wired ready for connection, with connector
– Drilling template, sealing mat and assembly parts

Also required:
Cooling water system such as recooling systems, from page 446.

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

Roof-mounted, useful cooling output 2500 W, water-carrying parts CuAL

Model No. SK		**3209.500**	**3209.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**2500 W**		
Rated operating voltage V, Hz		230, 50/60		
Dimensions mm	W x H x D	597 x 417 x 475		

Rated current max.		0.40 A/0.48 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		> +1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		235 kg		
Air throughput of fan (unimpeded air flow)		1030 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Air duct system	1	3286.870	3286.870	473
Stoppers	1	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted, useful cooling output 4000 W, water-carrying parts CuAL

Model No. SK		**3210.500**	**3210.100**	**3210.540**[1]	**3210.140**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	■	–	
	Basic controller	–	■	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**4000 W**				
Rated operating voltage V, Hz		230, 50/60		400, 2~, 50/60		
Dimensions mm	W x H x D	597 x 417 x 475				

Rated current max.		0.44 A/0.5 A		0.25 A/0.3 A		
Pre-fuse T		4.0 A				
Cooling medium		Water (for specifications see Internet; user manual)				
Water inlet temperature		> +1°C to +30°C				
Permissible operating pressure p. max.		1 to 10 bar				
Operating temperature and setting range		+1°C to +70°C				
Protection category to IEC 60 529		IP 55[2]				
Duty cycle		100%				
Type of connection		Plug-in terminal strip				
Weight		255 kg		295 kg		
Air throughput of fan (unimpeded air flow)		925 m³/h				
Accessories	Packs of					
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	684
SK BUS system	1	3124.100	–	3124.100	–	477
Interface board	1	3124.200	–	3124.200	–	477
Air duct system	1	3286.870	3286.870	3286.870	3286.870	473
Stoppers	1	3286.880	3286.880	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	3301.612	3301.612	485
Flow regulator valve	1	see page 486				

[1] Extended delivery times.
[2] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted, useful cooling output 1875 W, water-carrying parts V4A (1.4571)

Model No. SK		**3209.504**[1]	**3209.104**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**1875 W**		
Rated operating voltage V, Hz		230, 50/60		
Dimensions mm	W x H x D	597 x 417 x 475		

Rated current max.		0.40 A/0.48 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		> +1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		235 kg		
Air throughput of fan (unimpeded air flow)		1030 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Air duct system	1	3286.870	3286.870	473
Stoppers	1	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1] Extended delivery times.
[2] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Air/water heat exchangers

Roof-mounted, useful cooling output 3000 W, water-carrying parts V4A (1.4571)

Model No. SK		**3210.504**[1]	**3210.104**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**3000 W**		
Rated operating voltage V, Hz		230, 50/60		
Dimensions mm	W x H x D	597 x 417 x 475		

Rated current max.		0.44 A/0.5 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		> +1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		255 kg		
Air throughput of fan (unimpeded air flow)		925 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Air duct system	1	3286.870	3286.870	473
Stoppers	1	3286.880	3286.880	474
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1] Extended delivery times.
[2] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Climate control accessories Page 473 **Recooling systems** Page 446 **Software & services** Page 515

Colour:
RAL 7035

Supply includes:
– Fully wired ready for connection
– Drilling template and assembly parts

Also required:
Cooling water system such as recooling systems,
see page 446 onwards.

Approvals:
Available on the Internet.

Detailed drawings:
Available on the Internet.

Performance diagrams:
Available on the Internet.

Wall mounted, useful cooling output 300/600/1250 W

Model No. SK		**3212.230**	**3212.115**[1]	**3212.024**	**3214.100**	**3215.100**	Page
Temperature control		–			Thermostat-controlled magnetic valve		
Useful cooling output	**L 35 W 10, 200 l/h** **L 35 W 10, 400 l/h**	**300 W**			**600 W** **650 W**	**1250 W** **1300 W**	
Rated operating voltage V, Hz		230, 50/60	115, 50/60	24 V (DC)	230, 50/60		
Dimensions mm	W x H x D	150 x 300 x 85			200 x 500 x 100	200 x 950 x 100	
Rated current max.		0.11 A/0.13 A	0.23 A/0.24 A	1.20 A	0.17 A/0.18 A	0.38 A/0.4 A	
Pre-fuse T		2.0 A				4.0 A	
Cooling medium		Water (for specifications see Internet; user manual)					
Water inlet temperature		> +1°C to +30°C					
Permissible operating pressure p. max.		1 to 10 bar					
Operating temperature and setting range		+1°C to +70°C					
Protection category to IEC 60 529		IP 55[2]					
Duty cycle		100%					
Type of connection		Connection clamp			Terminal strip		
Weight		3 kg			7 kg	13 kg	
Air throughput of fan (unimpeded air flow)		280 m³/h		250 m³/h	120 m³/h	200 m³/h	
Temperature monitoring		–			Internal thermostat, with change-over contact, switching load 16 A, setting range +20°C to +60°C (factory setting +35°C)		
Accessories	Packs of						
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	475
Door-operated switch	1	4127.010	4127.010	4127.010	4127.010	4127.010	684
Condensate hose	1	3301.610	3301.610	3301.610	3301.612	3301.612	485
Flow regulator valve	1	see page 486					

[1] Extended delivery times.
[2] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Air/water heat exchangers

Roof-mounted, useful cooling output 500 W, water-carrying parts CuAL

Model No. SK		**3363.500**	**3363.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**500 W**		
Rated operating voltage V, Hz		230, 1~, 50/60	230, 1~, 50/60	
Dimensions mm	W x H x D	280 x 550 x 120		

Rated current max.		0.17 A/0.18 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Water connection		Quick-release fastener system		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		12 kg		
Air throughput of fan (unimpeded air flow)		270/320 m^3/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Threaded adaptor for quick-release fastener with G3/8″ internal thread	2	3201.900	3201.900	486
Threaded adaptor for quick-release fastener with G3/8″ external thread	2	3201.910	3201.910	486
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted, useful cooling output 1000 W, water-carrying parts CuAL

Model No. SK		**3364.500**	**3364.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**1000 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	280 x 550 x 120		

Rated current max.		0.2 A/0.19 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Water connection		Quick-release fastener system		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		15 kg		
Air throughput of fan (unimpeded air flow)		270/320 m^3/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Threaded adaptor for quick-release fastener with G3/8″ internal thread	2	3201.900	3201.900	486
Threaded adaptor for quick-release fastener with G3/8″ external thread	2	3201.910	3201.910	486
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted, useful cooling output 2000 W, water-carrying parts CuAL

Model No. SK		**3373.500**	**3373.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**2000 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	400 x 950 x 140		

Rated current max.		0.38 A/0.43 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Water connection		Quick-release fastener system		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		20 kg		
Air throughput of fan (unimpeded air flow)		600/625 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Threaded adaptor for quick-release fastener with G3/8″ internal thread	2	3201.900	3201.900	486
Threaded adaptor for quick-release fastener with G3/8″ external thread	2	3201.910	3201.910	486
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Roof-mounted, useful cooling output 3000 W, water-carrying parts CuAL

Model No. SK		**3374.500**	**3374.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**3000 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	400 x 950 x 140		

Rated current max.		0.57 A/0.78 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Water connection		Quick-release fastener system		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		20 kg		
Air throughput of fan (unimpeded air flow)		700/730 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Threaded adaptor for quick-release fastener with G3/8″ internal thread	2	3201.900	3201.900	486
Threaded adaptor for quick-release fastener with G3/8″ external thread	2	3201.910	3201.910	486
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Air/water heat exchangers

Roof-mounted, useful cooling output 5000 W, water-carrying parts CuAL

Model No. SK		**3375.500**	**3375.100**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**5000 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	450 x 1400 x 220		

Rated current max.		1.0 A/1.35 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Water connection		Quick-release fastener system		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[1)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Weight		56 kg		
Air throughput of fan (unimpeded air flow)		2365/2750 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Threaded adaptor for quick-release fastener with G3/8″ internal thread	2	3201.900	3201.900	486
Threaded adaptor for quick-release fastener with G3/8″ external thread	2	3201.910	3201.910	486
Flow regulator valve	1	see page 486		

[1)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Wall mounting, useful cooling output 7000 W

Model No. SK		**3216.480[1)]**		Page
Temperature control		Thermostat-controlled magnetic valve		
Useful cooling output	**L 35 W 10, 500 l/h** **L 35 W 20, 500 l/h**	**7000 W** **4500 W**		
Rated operating voltage V, Hz		400, 3~, 50/60	460, 3~, 60	
Dimensions mm	W x H x D	450 x 1800 x 300		

Rated current max.		1.4 A/1.6 A	1.2 A	
Pre-fuse T		4.0 A, 3-pole		
Power consumption P_{el}		450 W/700 W	630 W	
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2)]		
Duty cycle		100%		
Type of connection		Terminal strip		
Weight		79 kg		
Air throughput of fan (unimpeded air flow)		2400 m³/h		
Accessories	Packs of			
Digital temperature display/thermostat	1	3114.200		475
Door-operated switch	1	4127.010		684
Condensate hose	1	3301.612		485
Flow regulator valve	1	see page 486		

[1)] Extended delivery times.
[2)] IP 65 available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted, useful cooling output 500 W, water-carrying parts V4A (1.4571)

Model No. SK		**3363.504**[1]	**3363.104**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**500 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
External transformer		–	–	
Dimensions mm	W x H x D	280 x 550 x 120		

Rated current max.		0.17 A/0.18 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Water connection		Quick-release fastener system[3]		
Weight		12 kg		
Air throughput of fan (unimpeded air flow)		270/320 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1] Extended delivery times.
[2] IP 65 available on request.
[3] Threaded adaptor for quick-release fastener available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted, useful cooling output 750 W, water-carrying parts V4A (1.4571)

Model No. SK		**3364.504**[1]	**3364.104**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**750 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
External transformer		–	–	
Dimensions mm	W x H x D	280 x 550 x 120		

Rated current max.		0.2 A/0.19 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Water connection		Quick-release fastener system[3]		
Weight		15 kg		
Air throughput of fan (unimpeded air flow)		270/320 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1] Extended delivery times.
[2] IP 65 available on request.
[3] Threaded adaptor for quick-release fastener available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Air/water heat exchangers

Wall-mounted, useful cooling output 1750 W, water-carrying parts V4A (1.4571)

Model No. SK		**3373.504[1)]**	**3373.104[1)]**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**1750 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	400 x 950 x 140		

Rated current max.		0.38 A/0.43 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Water connection		Quick-release fastener system[3)]		
Weight		20 kg		
Air throughput of fan (unimpeded air flow)		600/625 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1)] Extended delivery times.
[2)] IP 65 available on request.
[3)] Threaded adaptor for quick-release fastener available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted, useful cooling output 2500 W, water-carrying parts V4A (1.4571)

Model No. SK		**3374.504[1)]**	**3374.104[1)]**	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**2500 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	400 x 950 x 140		

Rated current max.		0.57 A/0.78 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; user manual)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2)]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Water connection		Quick-release fastener system[3)]		
Weight		20 kg		
Air throughput of fan (unimpeded air flow)		700/730 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1)] Extended delivery times.
[2)] IP 65 available on request.
[3)] Threaded adaptor for quick-release fastener available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Wall-mounted, useful cooling output 4000 W, water-carrying parts V4A (1.4571)

Model No. SK		**3375.504**[1]	**3375.104**[1]	Page
Thermostat (factory setting +35°C)	e-Comfort controller	■	–	
	Basic controller	–	■	
Useful cooling output	**L 35 W 10, 400 l/h**	**4000 W**		
Rated operating voltage V, Hz		230, 1~, 50/60		
Dimensions mm	W x H x D	450 x 1400 x 220		

Rated current max.		1.0 A/1.35 A		
Pre-fuse T		4.0 A		
Cooling medium		Water (for specifications see Internet; assembly instructions)		
Water inlet temperature		+1°C to +30°C		
Permissible operating pressure p. max.		1 to 10 bar		
Operating temperature and setting range		+1°C to +70°C		
Protection category to IEC 60 529		IP 55[2]		
Duty cycle		100%		
Type of connection		Plug-in terminal strip		
Water connection		Quick-release fastener system[3]		
Weight		56 kg		
Air throughput of fan (unimpeded air flow)		2365/2750 m³/h		
Accessories	Packs of			
Door-operated switch	1	4127.010	4127.010	684
SK BUS system	1	3124.100	–	477
Interface board	1	3124.200	–	477
Condensate hose	1	3301.612	3301.612	485
Flow regulator valve	1	see page 486		

[1] Extended delivery times.
[2] IP 65 available on request.
[3] Threaded adaptor for quick-release fastener available on request.
Special voltages available on request. We reserve the right to make technical modifications.

Cold Plate

Recooling systems page 446 **Accessories for climate control** page 473

Liquid-cooled partial mounting plate with drilling surface and T channel
Whole surface can be used by the customer for own tapped holes (blind holes) to a maximum drilling depth of 12 mm. Alternatively, drive units may be secured to the T channel depending on the version.

Design:
- Press-fitted copper or stainless steel tubes, dependent on the application, in closed recooling systems or existing (open) water infrastructure.
- Cooling water connection: G1/4″, anti-twist

Supply includes:
Mounting accessories for system integration into TS 8.

Accessories:
- Quick-action vent valve, see page 445.
- Accessories for fluid distributor connection, see page 445.
- TS punched section with mounting flange 17 x 73 mm for the outer mounting level, see page 647.
- Recooling systems for closed cooling circuits, see from page 446.
- System attachment SK 8616.700, see page 445.

Further technical information is available at www.rittal.com

Detailed drawing:
Available on the Internet.

Cold Plate incl. T channel for frequency converters

Model No. SK		8616.602	8616.622	8616.802	8616.822
For installation in	Enclosure width mm	600	600	800	800
	Enclosure depth (side) mm	600	600	800	800
Dimensions mm	W H D	499 399 20	499 399 20	699 399 20	699 399 20
Output[1)]		**2500 W**	**2500 W**	**3000 W**	**3000 W**
Material		CU	VA	CU	VA
Packs of		1	1	1	1

[1)] At 25°C medium inlet temperature, Cold Plate surface temperature ≈ 50°C, medium flowrate Q̇ = 200 l/h, surface roughness: 1.2 µm.
Special sizes available on request.

Fluid distribution manifold

For the connection of up to 4 Cold Plate units.

Supply includes:
– 2 fluid distribution manifold blocks (inlet and return)
– Screw plugs G1/4″, G3/8″,
– Connector sleeves G1/2″
– Seals

Packs of	Model No. SK
1 set	**8616.750**

Accessories:

Flexible hose, see page 445.

Also required:

Quick-action vent valve, see page 445.

Flexible hose

For connection of the Cold Plate to a fluid distribution manifold or direct fluid connection.

Supply includes:
– 2 flexible hoses G1/4″
– Seals

Packs of	Length mm	Material	Model No. SK
1 set	500	CU	**8616.772**
1 set	1000	CU	**8616.773**
1 set	500	VA	**8616.760**[1)]
1 set	1000	VA	**8616.761**[1)]

[1)] Extended delivery times.

Quick-action vent valve

To vent the complete Cold Plate system.
Easily mounted on the fluid distribution manifold.

Supply includes:
– Quick-action vent valve G3/8″
– Seal

Packs of	Model No. SK
1	**8616.762**

System attachment

for frequency converters
For mounting frequency converters on the Cold Plate.

Supply includes:
– Wire clamp system
– T-slot blocks

For the attachment of frequency converters	Packs of	Model No. SK
with all-round clamping surface	1	**8616.700**
with side clamping surfaces	1	**8616.710**
with clamping surfaces top and bottom	1	**8616.720**

Chillers for water

Air/water heat exchangers From page 434 **Overflow valve** Page 486 **Cooling medium** Page 487

Technical design:
- Compact, modular layout of the refrigeration components
- With RiNano coating
- Pump to convey the medium
- Precise temperature control, based on microprocessor technology
- Collective fault signal with floating contact

Colour:
RAL 7035

Protection category:
IP 44 (electrics)

Supply includes:
- Recooling system wired ready for connection
- Multi-lingual documentation
- Functional diagram and wiring plans

Approvals:
Available on the Internet.

Layout diagram:
Available on the Internet.

Characteristic curves of pump:
Available on the Internet.

Other options:
Available on the Internet.

TopTherm, cooling output 1/1.5 kW

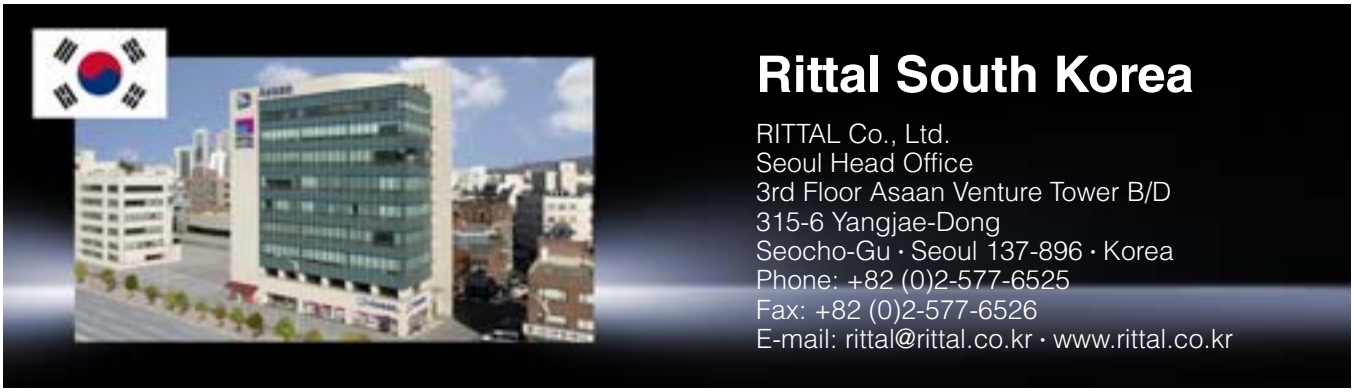
Model No. SK		**3318.600**	**3318.610**	**3319.600**	**3319.610**	Page
Rated operating voltage V, Hz		230, 50/60				
Dimensions mm	W H D	600 400 430				
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		**0.8 kW/0.9 kW** **1.0 kW/1.1 kW**		**1.2 kW/1.3 kW** **1.5 kW/1.7 kW**		
Power consumption		0.63 kW/0.78 kW		0.85 kW/1.05 kW		
Rated current max.		4.2 A/4.1 A		5.4 A/5.3 A		
Pre-fuse T		10 A				
Refrigerant		R134a				
Number of cooling circuits		1				
Temperature range	Environment	+15°C to +43°C				
	Liquid media	+10°C to +30°C				
Pump capacity		See characteristic curve of pump.				
Design		Pressure-sealed	Open	Pressure-sealed	Open	
Tank		–	Made from PP plastic	–	Made from PP plastic	
Tank capacity		–	2.5 l	–	2.5 l	
Water connections		$^1/_2$″ internal thread				
Weight		48 kg		51 kg		
Air throughput of fans		900 m³/h				
Temperature control		Microcontroller control (factory setting +20°C)				
Accessories	Packs of					
Metal filter	1	3286.510	3286.510	3286.510	3286.510	482

Customised solutions and technical modifications available on request.
We reserve the right to make technical modifications.

TopTherm, cooling output 3/4.5/6 kW

Model No. SK		3320.600	3334.600	3334.660[2)]	Page
Rated operating voltage V, Hz		400, 3~, 50/60/460, 3~, 60[1)]			
Dimensions mm	W H D	602 676 645		602 1050 645	
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		**2.7 kW/3.0 kW** **3.0 kW/3.4 kW**	**3.9 kW/4.7 kW** **4.5 kW/5.4 kW**	**4.8 kW/5.2 kW/5.2 kW** **6.0 kW/6.6 kW/6.6 kW**	
Power consumption		1.72 kW/1.95 kW	2.00 kW/2.51 kW	4.3 kW/5.1 kW/5.1 kW	
Rated current max.		3.8 A/4.6 A/3.9 A	4.9 A/5.9 A/5.0 A	8 A/9.7 A/8 A	
Pre-fuse T		10 A		16 A	
Refrigerant		R134a			
Number of cooling circuits		1			
Temperature range	Environment	+15°C to +43°C			
	Liquid media	+10°C to +30°C			
Pump capacity		See characteristic curve of pump.			
Tank		Made from PP plastic			
Tank capacity		30 l			
Water connections		$^1/_2$″ internal thread		$^3/_4$″ internal thread	
Weight (empty)		88 kg	94 kg	125 kg	
Air throughput of fans		1785 m³/h		2200/2500 m³/h	
Temperature control		Microcontroller control (factory setting +20°C)			
Accessories					
Metal filter		3286.520	3286.520	3286.510	482
	Packs of	1	1	2	

[1)] Supports multiple voltages without rewiring.
[2)] Integral fill level display.
Customised solutions and technical modifications available on request.
We reserve the right to make technical modifications.



Chillers for water

Air/water heat exchangers From page 434 **Overflow valve** Page 486 **Cooling medium** Page 487

Technical design:
- Compact, modular configuration of the cooling components with integral water tank
- With RiNano coating
- Pump to convey the medium
- Precise temperature control, based on microprocessor technology
- Open system with tank
- Collective fault signal with floating contact

Colour:
RAL 7035

Protection category:
IP 44 (electrics)

Supply includes:
- Recooling system wired ready for connection
- Multi-lingual documentation
- Functional diagram and wiring plans

Approvals:
Available on the Internet.

Layout diagram:
Available on the Internet.

Characteristic curves of pump:
Available on the Internet.

Other options:
Available on the Internet.

TopTherm, for wall mounting, cooling output 1/2.5/4 kW

Model No. SK		**3360.100**	**3360.250**	**3360.470**	Page
Rated operating voltage V, Hz		400, 3~, 50/60/460, 3~, 60[1)]			
Dimensions mm	W H D	400 950 310	400 1580 290	500 1580 390	
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		 **0.8 W/0.9 kW** **1.0 kW/1.1 kW**	 **2.1 kW/2.3 kW** **2.5 kW/2.8 kW**	 **3.3 kW/3.7 kW** **4.0 kW/4.5 kW**	
Power consumption		0.7 kW/0.76 kW	1.55 kW/2.0 kW	1.85 kW/2.74 kW	
Rated current max.		2.7 A/3.0 A	3.7 A/3.8 A	4.6 A/5.2 A	
Pre-fuse T		10 A			
Refrigerant		R134a			
Number of cooling circuits		1			
Temperature range	Environment	+15°C to +43°C			
	Liquid media	+10°C to +30°C			
Pump capacity		See characteristic curve of pump.			
Tank		Plastic			
Tank capacity		5 l	10 l	15 l	
Water connections		Quick-release coupling (counterpart included in accessory bag)		$^3/_4$″ internal thread	
Weight		47 kg	78 kg	103 kg	
Air throughput of fans		500 m³/h	710 m³/h	2000 m³/h	
Temperature control		Microcontroller control (factory setting +20°C)			
Accessories	Packs of				
Filter mat	1	3286.400	3286.400	3286.400	481
Metal filter	1	3286.410	3286.410	3286.410	482

[1)] Supports multiple voltages without rewiring.
Customised solutions and technical modifications available on request.
We reserve the right to make technical modifications.

Climate control accessories Page 473

Benefits:
- Modular design
- Small footprint
- Convenient servicing
- High reliability thanks to standard water bypass
- One version for two frequencies = international compatibility
- Series product available from stock
- Fast delivery, as pre-assembled modules can simply be combined into a recooling system

Colour:
RAL 7035

Protection category:
IP 44

Supply includes:
Fully wired unit
ready for connection with side panels and door.

Layout diagram:
Available on the Internet.

Characteristic curves of pump:
Available on the Internet.

Other options:
Available on the Internet.

TopTherm, cooling output 8 – 40 kW

Model No. SK		**3335.590**	**3335.600**	**3335.610**	**3335.620**	**3335.630**	**3335.640**	**3335.650**	**3335.660**	Page
Rated operating voltage V, Hz		400, 3~, 50 Hz/460, 3~, 60 Hz								
Dimensions mm	W H D	805 1600 805	805 2000 805			1205 2000 805		1605 2000 805	2405 2000 805	
Cooling output[1] at T_w = 10°C/T_u = 32°C		**6.5/7.6 kW**	**6.5/7.6 kW**	**10.3/11.3 kW**	**13.8/15.2 kW**	**16.6/18.7 kW**	**21.6/23.8 kW**	**27.6/30.4 kW**	**33.5/37.5 kW**	
Cooling output[1] at T_w = 18°C/T_u = 32°C		**8/8.6 kW**	**8/8.6 kW**	**12/13.1 kW**	**16/17.6 kW**	**20/21.8 kW**	**25/27.6 kW**	**32/35.2 kW**	**40/44 kW**	
Power consumption max. kW		3.4/4.0	3.4/4.0	5.9/6.4	6.7/8.0	8.0/9.9	10.5/12.9	13.5/15.9	16.0/19.8	
Rated current max. A		6.4/6.0	6.4/6.0	8.2/9.5	11.1/11.3	15.9/13.9	20.3/20.7	22.2/22.6	31.7/31.5	
Refrigerant		R410A								
Number of cooling circuits		1						2		
Ambient temperature range		+10°C to +43°C								
Water temperature range		+7°C to +25°C								
Pump capacity at 2.5 bar (l/min.) 50/60 Hz		35/70		30/85		50/140		60/40 (at 60 Hz 3.7 bar)		
Tank capacity l		80				170				
Water connections		1˝						1 1/4˝		
Weight (empty) kg		245	250	270	325	425	425	580	940	
Temperature control		Microcontroller cotnrol (factory setting +18°C, differential value control also possible)								
Accessories	Packs of									
Metal filter	1	3286.550	3286.550	3286.530	3286.530	3286.540	3286.540	3286.530[2]	3286.540[2]	482
Levelling feet	4	7493.100	7493.100	7493.100	7493.100	7493.100	7493.100	7493.100	7493.100	553
Levelling feet with vibration dampening	4	7493.230	7493.230	7493.230	7493.230	7493.230	7493.230	7493.230	7493.230	555
Base/plinth components front and rear	100 mm	8601.805	8601.805	8601.805	8601.805	8601.200	8601.200	8601.805[2]	8601.200[2]	543
	200 mm	8602.805	8602.805	8602.805	8602.805	8602.200	8602.200	8602.805[2]	8602.200[2]	543
Base/plinth trim panels, side	100 mm	8601.085	8601.085	8601.085	8601.085	8601.085	8601.085	8601.085	8601.085	544
	200 mm	8602.085	8602.085	8602.085	8602.085	8602.085	8602.085	8602.085	8602.085	544
Cooling medium Canister	10 l	3301.960	3301.960	3301.960	3301.960	3301.960	3301.960	3301.960	3301.960	487
	25 l	3301.965	3301.965	3301.965	3301.965	3301.965	3301.965	3301.965	3301.965	487
Barrel	200 l	3301.967	3301.967	3301.967	3301.967	3301.967	3301.967	3301.967	3301.967	487

[1] Excluding pump heat loss. [2] 2 packs. Technical modifications reserved.

Chillers for water

Air/water heat exchangers from page 434 **Climate control accessories** Page 473 **Cooling medium** Page 487

Technical design:
- Robust industrial standard
- Variable air routing is possible via the l/h or r/h side panel
- Floating contact for collective fault signal

Colour:
RAL 7035

Protection category:
IP 44 (electrics)

Supply includes:
- Recooling system wired ready for connection
- Multi-lingual documentation
- Functional diagram and wiring plans

Accessories:
- Metal filter mats
- Castors
- Bypass valve on request

Approvals:
Available on the Internet.

Layout diagram:
Available on the Internet.

Characteristic curves of pump:
Available on the Internet.

Other options:
Available on the Internet.

In floor-standing enclosure, cooling output 2.1 to 7.7 kW

Model No. SK		**3336.100**	**3336.200**	**3336.300**	**3336.500**	**3336.600**	**3336.650**
Rated operating voltage V, Hz		400, 3~, 50					
Dimensions mm	W H D	470 725 540	485 965 650		595 1180 800		
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		**1.7 kW** **2.1 kW**	**2.1 kW** **2.6 kW**	**2.3 kW** **3.4 kW**	**3.6 kW** **5.0 kW**	**4.8 kW** **6.2 kW**	**5.2 kW** **7.7 kW**
Power consumption		1.5 kW	1.7 kW	2.3 kW	2.9 kW	3.7 kW	3.9 kW
Rated current max.		3.4 A	3.0 A	4.2 A	5.5 A	6.2 A	7.3 A
Refrigerant		R134a					
Number of cooling circuits		1					
Temperature range	Environment	+15°C to +43°C					
	Liquid media	+10°C to +25°C					
Pump capacity		See characteristic curve of pump.					
Tank		Made from stainless steel 1.4301 (AISI 304)					
Tank capacity		17 l	33 l		57 l		
Water connections		$^3/_4$″ internal thread			1″ internal thread		
Weight		75 kg	97 kg	99 kg	141 kg	143 kg	147 kg
Air throughput of fans		700 m³/h	1250 m³/h	1785 m³/h	3140 m³/h		
Temperature control		Electronic control with digital display (factory setting +18°C)					

Extended delivery times
Special voltages, other frequencies, and technical modifications available on request.
We reserve the right to make technical modifications.

In floor-standing enclosure, cooling output 10 to 25 kW

Model No. SK		**3336.700**	**3336.710**	**3336.720**	**3336.730**	**3336.740**	**3336.750**
Rated operating voltage V, Hz		400, 3~, 50/460, 3~, 60					
Dimensions mm	W H D	615 1178 1160			715 1178 1360		
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		**8.3/10.4 kW** **10.0/12.6 kW**	**11.9/15.5 kW** **14.4/18.7 kW**	**13.5/16.6 kW** **16.3/20.1 kW**	**15.0/18.1 kW** **18.5/22.4 kW**	**17.0/20.7 kW** **20.9/25.4 kW**	**20.6/26.4 kW** **25.2/32.3 kW**

Power consumption		3.8 kW	4.8 kW	5.3 kW	6.4 kW	7.1 kW	13.1 kW
Rated current max.		10.6 A	13.1 A	14.1 A	16.2 A	18.2 A	23.7 A
Refrigerant		R407C					
Number of cooling circuits		1					
Temperature range	Environment	+15°C to +43°C[1)]					
	Liquid media	+10°C to +25°C					
Pump capacity		See characteristic curve					
Tank		Made from stainless steel 1.4301 (AISI 304)					
Tank capacity		60 l			100 l		
Water connections		1″ internal thread					
Weight		215 kg	225 kg	235 kg	240 kg	250 kg	260 kg
Air throughput of fans		6280 m³/h			10880 m³/h		
Temperature control		Electronic control with digital display (factory setting +18°C)					

[1)] SK 3336.720 and SK 3336.750 +15°C to +40°C at 60 Hz.
Extended delivery times
Customised solutions and technical modifications available on request.
We reserve the right to make technical modifications.

In floor-standing enclosure, cooling output 32 to 59 kW

Model No. SK		**3339.100**	**3339.200**	**3339.250**	**3339.280**
Rated operating voltage V, Hz		400, 3~, 50/460, 3~, 60		400, 3~, 50	
Dimensions mm	W H D	815 1400 1560		1000 1800 2000	
Cooling output at **T_w = 10°C/T_u = 32°C** **T_w = 18°C/T_u = 32°C**		**26.2/31.4 kW** **32.0/38.4 kW**	**29.6/35.5 kW** **36.2/43.5 kW**	**40.0 kW** **46.7 kW**	**52.0 kW** **59.0 kW**

Power consumption		18.3 kW	18.6 kW	20.6 kW	36.8 kW
Rated current max.		29.2 A	30.7 A	36.8 A	41.1 A
Refrigerant		R407C			
Number of cooling circuits		1			
Temperature range	Environment	+15°C to +43°C		+15°C to +40°C	
	Liquid media	+15°C to +25°C			
Pump capacity		See characteristic curve			
Tank		Made from stainless steel 1.4301 (AISI 304)			
Tank capacity		150 l		220 l	
Water connections		1 x 1/4″ internal thread		1 x 1/2″ internal thread	
Weight		260 kg	300 kg	680 kg	740 kg
Air throughput of fans		16000 m³/h		32000 m³/h	
Temperature control		Electronic control with digital display (factory setting +18°C)			

Extended delivery times
Customised solutions and technical modifications available on request.
We reserve the right to make technical modifications.

IT liquid cooling

Chillers for IT cooling

Chillers for IT cooling ..... 15 – 123 kW 454
Chillers for IT cooling ..... 155 – 481 kW 455

CRAC system

CRAC system CW ..... 27.8 – 137.4 kW 456
CRAC system DX ..... 19.2 – 56.2 kW 458

Aisle containment

Aisle containment 460

Liquid Cooling Package

TopTherm LCP Rack CW and DX ..... up to 60 kW 461
TopTherm LCP Inline CW and DX ..... up to 60 kW 462
TopTherm LCP T3+ CW ..... up to 25 kW 463
TopTherm LCP Passive CW ..... 20 kW 464
Accessories 465

Chillers for IT cooling

Climate control accessories Page 473

Application:
Especially for cooling IT applications, such as LCP or air/water heat exchangers. Safety-relevant features such as redundant speed-controlled pumps, compressors or buffer stores are the distinguishing features of these atmospherically sealed systems.

Technical design:
- Compact design with control components in the front and air intake via both side panels, air outlet upwards
- Pressure-sealed system
- Digital thermostat for temperature control with setpoint and actual value display
- Monitoring interface with Rittal CMC II supported
- Flow monitor

Protection category:
IP 54

Supply includes:
- Chiller wired ready for connection
- Multi-lingual documentation
- Functional diagram and wiring plans

Options:
- Free cooling may be integrated from 63 kW. Please follow the instructions!
- Buffer store for separate siting
- Emergency cooling with mains water infeed
- Integral bypass
- Special voltages

Note:
Technical deviations in terms of cooling output, dimensions or weight are possible for unit types with free cooling.

Layout diagram:
Available on the Internet.

Cooling output 15 to 124 kW

Model No. SK		**3232.700**	**3232.710**	**3232.720**	**3232.730**	**3232.740**	**3232.750**	**3232.760**	**3232.770**	**3232.780**	**3232.790**
Rated operating voltage V, Hz		400, 3~, 50									
Dimensions mm	W	810	810	810	1000	1100	1100	1100	1100	1100	1100
	H	1542	1542	1542	1780	1606	1606	1606	1606	1875	1875
	D	1560	1560	1560	2000	2450	2950	2950	2950	2950	2950
Cooling output[1]		**15 kW**	**24 kW**	**36 kW**	**48 kW**	**67 kW**	**77 kW**	**88 kW**	**99 kW**	**117 kW**	**124 kW**
Power consumption		6.9 kW	9.7 kW	14.6 kW	21 kW	21 kW	24 kW	26 kW	29 kW	36 kW	41 kW
Rated current max.		23.0 A	25.0 A	37.0 A	46.5 A	52.2 A	59.2 A	64.2 A	69.2 A	84.1 A	89.1 A
Refrigerant		R407C				R410A					
$P_{max.}$ cooling circuit		28 bar				45 bar					
Temperature range	Environment	–20°C to +43°C									
	Liquid media	+5°C to +15°C									
Pump capacity		60 l/min.		120 l/min.		240 l/min.				500 l/min.	
Pump pressure		2.5 bar									
Number of cooling circuits		1				2					
Tank with 10 mm condensate insulation		Steel									
Tank capacity		48 l			100 l	300 l			500 l		
Water connections		1″		1 1/4″	2″		2 1/2″				
Operating weight		375 kg	390 kg	480 kg	710 kg	831 kg	896 kg	906 kg	912 kg	1119 kg	1123 kg
Colour		RAL 7035				RAL 9002					
Air throughput of fans	m^3/h	10880		14000	18000	22000		27000		34100	
Temperature control		Electronic control with digital display (factory setting +15°C)									

[1] The performance data varies according to the option package chosen, and should be taken from the IT chiller configurator (see Internet).
Extended delivery times. We reserve the right to make technical modifications.

Cooling output 155 to 481 kW

Model No. SK		3232.800	3232.810	3232.820	3232.890	3232.830	3232.840	3232.850	3232.860	3232.870	3232.880
Rated operating voltage V, Hz		400, 3~, 50									
Dimensions mm	W	1100	1100	1100	1500	2200	2200	2200	2200	2200	2200
	H	1875	1875	1875	1975	2450	2450	2450	2450	2450	2450
	D	2950	2950	3950	4350	3400	3400	3400	4250	4250	4250
Cooling output[1)]		**155 kW**	**172 kW**	**196 kW**	**235 kW**	**262 kW**	**291 kW**	**326 kW**	**387 kW**	**430 kW**	**481 kW**
Power consumption		47 kW	52 kW	60 kW	70 kW	80 kW	93 kW	106 kW	121 kW	141 kW	159 kW
Rated current max.		108 A	120 A	127 A	149 A	181 A	203 A	225 A	293 A	307 A	336 A
Refrigerant		R410A									
$P_{max.}$ cooling circuit		45 bar									
Temperature range	Environment	–20°C to +43°C									
	Liquid media	+5°C to +15°C									
Pump capacity		500 l/min.			500 l/min.	810 l/min.			1200 l/min.		
Pump pressure		2.5 bar									
Number of cooling circuits		2									
Tank with 10 mm condensate insulation		Steel									
Tank capacity		500 l			700 l				1000 l		
Water connections		2 1/2″			3″				4″		
Operating weight		1308 kg	1321 kg	1489 kg	1933 kg	2546 kg	2693 kg	2843 kg	3148 kg	3354 kg	3576 kg
Colour		RAL 9002									
Air throughput of fans	m³/h	32600		50000	49000	72800	71500	70200	106200	104100	102000
Temperature control		Electronic control with digital display (factory setting +15°C)									

[1)] The performance data varies according to the option package chosen, and should be taken from the IT chiller configurator (see Internet).
Extended delivery times. We reserve the right to make technical modifications.

CRAC system CW

Chillers for IT cooling Page 454 **Liquid Cooling Package** Page 461

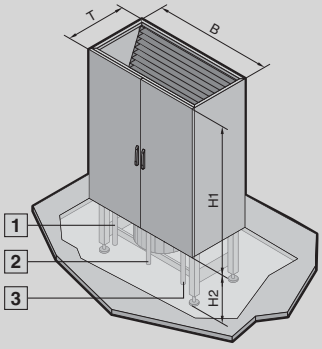
Application and mode of operation:
The CRAC system draws warm waste air from the top of your data centre, cools it using water in a closed heat exchanger, and blows the cooled, filtered supply air into the raised floor with overpressure.

The heated cooling water is cooled in an external recooling system outside of the building.

Benefits:
- Broad output range, suitable for use with a wide range of cooling media.
- The unit supports optimum integration of both hardware and software.
- Optimum energy and space efficiency thanks to intelligent design features, such as the slanted heat exchanger and base-integrated fan.
- Frame based on the popular TS 8 system.

Equipment:
– User-friendly, high-quality controller with an extensive range of functions and connectivity.
– Space-saving, readily accessible, high-efficiency fan.
– Flow and energy-optimised special heat exchanger with a generous safety factor.

Colour:
RAL 7035



1 Water inlet, condensate discharge, humidifier inlet
2 Electrical connection
3 Water return

Base unit

Top piece		Model No. SK			
		3301.620	**3301.660**	**3301.830**	**3301.870**
Dimensions mm	W (B) H1 D (T)	1100 1950 650	1100 1950 850	1800 1950 850	2600 1950 850
Connection voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50

Fan unit in base

Supporting structure with fan		Model No. SK			
		3300.310	**3300.320**	**3300.330**	**3300.340**
No. of fans	Quantity	1	1	2	3
Height of supporting structure mm[1)]	H2	500	550	550	550
Min. raised floor height mm		350	350	350	350

[1)] Other supporting structure heights available on request.

Base unit

Model No. SK		3301.620	3301.660	3301.830	3301.870
Rated volumetric flow					
Air volume	m^3/h	6000	11000	22000	33000
External compression	Pa	20	20	20	20
Support area	m^2	0.72	0.94	1.53	2.21
Weight	kg	340	385	585	843
Cooling – cold water 7°C/12°C and air inlet 24°C/50% relative humidity					
Cooling output, total	kW	27.8	45.7	90.2	137.4
Cooling output, sensitive	kW	23.4	39.8	79.4	119.5
SHR[1)]		0.84	0.87	0.88	0.87
Volumetric flow of medium	m^3/h	4.78	7.85	15.49	23.6
Cooler pressure loss	kPa	33.4	39	37.6	37.5
Valve pressure loss	kPa	22.8	24.1	38.4	34.8
Connection		Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 2
Cooling – cold water 10°C/15°C and air inlet 26°C/45% relative humidity					
Cooling output, total	kW	22.9	39.1	77.4	117.2
Cooling output, sensitive	kW	22.9	39.1	77.4	117.2
SHR[1)]		1	1	1	1
Volumetric flow of medium	m^3/h	3.94	6.72	13.3	20.2
Cooler pressure loss	kPa	23.4	29.1	28.2	27.8
Valve pressure loss	kPa	15.5	17.6	28.3	25.5
Connection		Rp 1	Rp 1 1/4	Rp 1 1/2	Rp 2
Filter in intake					
Design		Cassette filter			
Filter class to DIN EN 779		G4	G4	G4	G4
Noise data					
Sound power level, intake end	dB (A)	69	74	77	79
Sound power level, discharging end	dB (A)	79	82	85	87
Enclosure radiation	dB (A)	55	60	63	65
Sound pressure level in empty space (2 m distance)	dB (A)	57	62	65	67

[1)] SHR = Sensible Heat Ratio. We reserve the right to make technical modifications in line with progress.

Fan unit

Design		EC motor, directly driven, free-running			
Qty.	Quantity	1	1	2	3
Power consumption, total	kW	0.6	1.4	3.1	4.6
Max. current rating	A	1.5	4.6	9.2	13.8

Options

Steam humidification					
Design		Electrode steam humidifier			
Max. steam output	kg/h	8	8	15	15
Max. power consumption	kW	6	6	11.3	11.3
Max. current rating	A	8.7	8.7	16.3	16.3
Water inlet connection	Inches	G 1/2	G 1/2	G 1/2	G 1/2
Water discharge connection	mm	40	40	40	40

Electric heater					
Design		Bare-tube heater, permanently controlled			
Max. thermal output	kW	4.5	7.5	15	22.5
Max. current rating	A	6.5	10.8	21.7	32.5

CRAC system DX

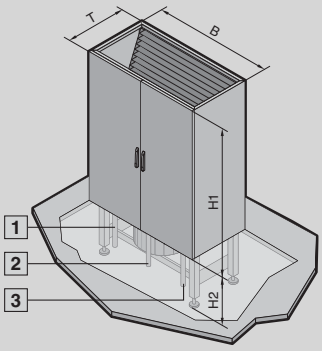
Chillers for IT cooling Page 454 **Liquid Cooling Package** Page 461

Application and mode of operation:
The air-cooled DX units with direct evaporation discharge the heat to the external air via an air-cooled condenser installed outside of the building. The climate control enclosure has one, two or three compressors, depending on size, which are combined into **one** cooling circuit. For this reason, connection to the air-cooled condenser is via just **one** refrigerant line.

Benefits:
- Broad output range, suitable for use with a wide range of cooling media.
- The unit supports optimum integration of both hardware and software.
- Optimum energy and space efficiency thanks to intelligent design features, such as the slanted heat exchanger and base-integrated fan.
- Frame based on the popular TS 8 system.

Equipment:
– User-friendly, high-quality controller with an extensive range of functions and connectivity.
– Space-saving, readily accessible, high-efficiency fan.
– Flow and energy-optimised special heat exchanger with a generous safety factor.

Colour:
RAL 7035



1 Refrigerant pressure line, condensate discharge, humidifier inlet
2 Electrical connection
3 Refrigerant fluid line

Base unit

Top piece		Model No. SK			
		3300.510	3300.560	3300.710	3300.760
Dimensions mm	W (B) H1 D (T)	1100 1950 850	1100 1950 850	1400 1950 850	1800 1950 850
Connection voltage	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50

Fan unit in base

Supporting structure with fan		Model No. SK			
		3300.360	3300.320	3300.370	3300.330
Height of supporting structure mm[1)]	H2	500	550	550	550
Min. raised floor height mm		350	350	350	350

[1)] Other supporting structure heights available on request.

Condenser unit

		Model No. SK			
		3300.353	3300.354	3300.355	3300.356
No. of fans	Quantity	1	2	2	2
Max. volumetric flow	m^3/h	8500	12400	18000	18400
Connection voltage	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50

Base unit

Model No. SK		3300.510	3300.560	3300.710	3300.760
Rated volumetric flow					
Air volume	m^3/h	6000	8500	12500	16000
External compression	Pa	20	20	20	20
Support area	m^2	0.94	0.94	1.19	1.53
Weight	kg	455	505	585	871
Cooling – condensation temperature 45°C and air inlet 24°C/50% relative humidity					
Design		Scroll compressor			
No. of compressors	Quantity	1	2	3	3
Cooling output, total	kW	19.2	31.4	46.4	56.2
Cooling output, sensitive	kW	18.3	28.3	41.5	51.9
SHR[1)]		0.95	0.90	0.89	0.92
Power consumption, total	kW	4.4	7.7	11.5	13.3
Max. operating temperature	A	13.1	25.6	38.4	39.3
Filter in intake					
Design		Cassette filter			
Filter class to DIN EN 779		G4	G4	G4	G4
Noise data					
Sound power level, intake end	dB (A)	69	69	77	72
Sound power level, discharging end	dB (A)	79	76	84	79
Enclosure radiation	dB (A)	54	56	62	59
Sound pressure level in empty space (2 m distance)	dB (A)	57	57	64	59

[1)] SHR = Sensible Heat Ratio. We reserve the right to make technical modifications in line with progress.

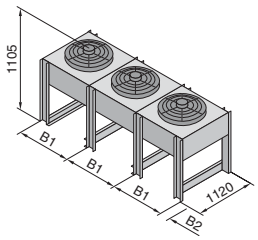
Fan unit

Design		EC motor, directly driven, free-running			
Qty.	Quantity	1	1	1	2
Power consumption, total	kW	0.5	0.8	1.8	1.6
Max. current rating	A	1.8	4.6	4.6	9.2

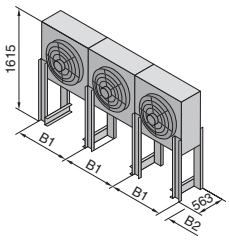
Condenser unit

Design		Axial fan condenser			
Condenser output	kW	27	38	49	71
Max. power consumption	kW	0.67	1.28	1.34	1.34
Max. current rating	A	3.3	6	6.0	6.6
Max. noise level in empty space (5 m distance)	dB (A)	56	60	59	59
Dimensions mm	Width (B1 + B2)	1415	1420	2130	2680
Weight	kg	109	132	160	217

Design
Vertically blowing



Design
Horizontally blowing



Options

Steam humidification					
Design		Electrode steam humidifier			
Max. steam output	kg/h	8	8	8	15
Max. power consumption	kW	6	6	6	11.3
Max. current rating	A	8.7	8.7	8.7	16.3
Water inlet connection	Inches	G 1/2	G 1/2	G 1/2	G 1/2
Water discharge connection	mm	40	40	40	40

Electric heater					
Design		Bare-tube heater, permanently controlled			
Max. thermal output	kW	4.5	7.5	7.5	15
Max. current rating	A	6.5	10.8	10.8	21.7

Aisle containment

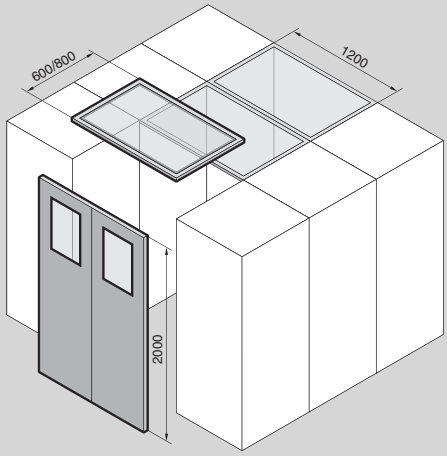
TopTherm LCP Passive CW from page 464

Application and mode of operation:
Aisle containment is a combination of door and roof components which facilitate consistent separation of the hot and cold air in the data centre. Such separation is pivotal to saving energy and increasing the efficiency of the available climate control technology. Depending on the application, aisle containment may be used with CRAC systems or TopTherm LCP Inline CW and DX as hot or cold aisle containment.

Benefits:
- Increased energy efficiency and performance capability of climate control.
- Superior output density is facilitated, thanks to guaranteed cold air supply.
- Easily installed and retrofitted, as it is fully compatible with the TS 8 enclosure system.
- An inexpensive way to boost the performance of your existing plant, lengthening the investment cycle until a replacement needs to be purchased.

Equipment:
– Slimline door element with viewing window, sliding door
– Stable roof elements in a composite metal with a high level of light permeability
– Where required, safety glass may also be used

Note:
Other size variants and individually modified systems available on request.



Element	Roof element				Door element
Position	Start/end		Centre		–
Model No. SK	**3300.270**	**3300.280**	**3300.170**	**3300.180**	**3300.160**
Width of element (identical to enclosure width), mm	600	800	600	800	–
Width of cold aisle mm	1200	1200	1200	1200	1200
Height of cold aisle mm	–	–	–	–	2000

Liquid Cooling Package

Accessories for climate control Page 473 **Chillers for IT cooling** Page 454 **Server enclosures** Page 114

Benefits:
- Maximum energy efficiency thanks to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Optimum adaptability thanks to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Thanks to six modular, box-type plug-in fan units, the cooling output can be adapted to actual requirements
- The box-type plug-in fan units are configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- With redundant temperature sensor integrated at the air end as standard
- The separation of cooling and rack prevents water from penetrating the server enclosure
- Up to 60 kW cooling output on a footprint of just 0.36 m²
- The low weight means a minimal load area
- Touchscreen display may be retrofitted

Monitoring:
Monitoring of all system-relevant parameters such as:
- Server air intake temperature
- Server waste air temperature
- Water inlet/return temperature
- Water flow
- Cooling output
- Fan speed
- Leakage
- Optional sensors
- Direct connection of the unit via SNMP/Ethernet
- Integration into RiZone

Application and mode of operation:
The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides.

Colour:
RAL 7035

Protection category:
IP 40 to IEC 60 529

TopTherm LCP rack CW and DX

Design		CW	CW	CW	DX	Page
Cooling medium		Water (for specifications see Internet)			Refrigerant R410a	
Model No. SK		**3311.130**	**3311.230**	**3311.260**	**3311.110**	
Rated operating voltage V, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Dimensions mm	W x H x D	300 x 2000 x 1000	300 x 2000 x 1200	300 x 2000 x 1200	300 x 2000 x 1000	
Usable U		42	42	42	42	
Useful cooling output		**Up to 30 kW**	**Up to 30 kW**	**Up to 60 kW**	**Up to 10 kW**	
Duty cycle		100%				
Electrical connection		Connection cable				
Temperature control		Linear fan control				
		Two-way control valve			–	
Fans may be exchanged with the system operational		■	■	■	■	
EC fan		■	■	■	■	
Also required	Packs of					
Condenser unit	1	–	–	–	3311.310	465
Accessories						
Fan module	1	**3311.010**	**3311.010**	**3311.010**	**3311.010**	–
Touchscreen display, coloured	1	3311.030	3311.030	3311.030	3311.030	465
Connection hose, top	1	3311.040	3311.040	3311.040	3311.040	465
Connection hose, bottom	1	3311.050	3311.050	3311.050	3311.050	465

Liquid Cooling Package

Accessories for climate control Page 473 **Chillers for IT cooling** Page 454 **Server enclosures** Page 114 **Aisle containment** Page 460

Benefits:
- Maximum energy efficiency thanks to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Optimum adaptability thanks to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Thanks to six modular, box-type plug-in fan units, the cooling output can be adapted to actual requirements
- The box-type plug-in fan units are configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- With redundant temperature sensor integrated at the air end as standard
- The separation of cooling and rack prevents water from penetrating the server enclosure
- Up to 60 kW cooling output on a footprint of just 0.36 m²
- The low weight means a minimal load area
- Touchscreen display may be retrofitted

Monitoring:
Monitoring of all system-relevant parameters such as:
- Server air intake temperature
- Server waste air temperature
- Water inlet/return temperature
- Water flow
- Cooling output
- Fan speed
- Leakage
- Optional sensors
- Direct connection of the unit via SNMP/Ethernet
- Integration into RiZone

Application and mode of operation:
The LCP is designed for siting within a bayed enclosure suite. The hot air is drawn in from the room or hot aisle at the rear of the device and expelled at the front into the cold aisle after cooling.
The LCP achieves maximum performance and efficiency in conjunction with Rittal cold aisle containment. With this product, a raised floor is not necessary.

Colour:
RAL 7035

Protection category:
IP 40 to IEC 60 529

TopTherm LCP Inline CW and DX

Design		CW	CW	DX	Page
Cooling medium		Water (for specifications see Internet)		Refrigerant R410a	
Model No. SK		**3311.530**	**3311.560**	**3311.210**	
Rated operating voltage V, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Dimensions mm	W x H x D	300 x 2000 x 1200	300 x 2000 x 1200	300 x 2000 x 1200	
Usable U		42	42	42	
Useful cooling output		**Up to 30 kW**	**Up to 60 kW**	**Up to 10 kW**	
Duty cycle		100%			
Electrical connection		Connection cable			
Temperature control		Linear fan control			
		Two-way control valve		–	
Fans may be exchanged with the system operational		■	■	■	
EC fan		■	■	■	
Also required	Packs of				
Condenser unit	1	–	–	3311.310	465
Accessories					
Front cover	1	3311.060	3311.060	3311.060	465
Fan module	1	**3311.020**	**3311.020**	**3311.020**	–
Touchscreen display, coloured	1	3311.030	3311.030	3311.030	465
Connection hose, top	1	3311.040	3311.040	3311.040	465
Connection hose, bottom	1	3311.050	3311.050	3311.050	465

Liquid Cooling Package

Accessories for climate control Page 473 **Chillers for IT cooling** Page 454 **Server enclosures** Page 114

Benefits:
- Error-tolerant, efficient cooling of server racks with high thermal loads
- Fully redundant – Two active cooling circuits and two switchable power circuits ensure optimum fail-safeness
- The built-in controllers are capable of adapting all device parameters automatically to preserve the required climate conditions
- A separate decentralised intelligence which automatically recognises emergency situations and responds appropriately with the "auto load balancing" and "auto recovery" functions
- Interfaces which facilitate user-friendly operation and monitoring via the network or BSM systems

Optional:
– Fully integrated fire detection and extinguisher system
– Automatic server enclosure door opening
– Various sensors

Application and mode of operation:
The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosures at the sides.

Colour:
RAL 7035

Protection category:
IP 40 to IEC 60 529

TopTherm LCP T3+ CW

Cooling medium		Water (for specifications see Internet)	Page
Model No. SK		**3311.400**	
Rated operating voltage V, Hz		230, 1~, 50/60 400, 3~, 50/60	
Dimensions mm	W x H x D	300 x 2000 x 1200	
Usable U		42	
Useful cooling output, redundant		**Up to 25 kW**	

Duty cycle		100%	
Electrical connection		C19/C20	
Temperature control		Linear fan control	
		Two-way control valve	
Fans may be exchanged with the system operational		■	
EC fan		■	
Auto-load balancing		■	
Auto-recovery		■	
Accessories			
Fan module	1	**3311.010**	–
Touchscreen display, coloured	1	3311.030	465
Connection hose, top	1	3311.040	465
Connection hose, bottom	1	3311.050	465

Liquid Cooling Package

Accessories for climate control Page 473 **Chillers for IT cooling** Page 454 **Server enclosures** Page 114

Benefits:
- High cooling output of 20 kW in a minimal space
- Easily exchanged for the standard rear door of the server enclosure
- Retrofitting is not a problem
- A door opening angle of 120° allows rear access to the server enclosure and makes assembly and configuration inside the enclosure easier
- The LCP does not require its own fan, and therefore does not need an integrated control
- Maximum energy efficiency, as there is no electrical power consumption whatsoever

Application and mode of operation:
Air/water heat exchanger mechanically integrated into a rear door for server enclosures. The 482.6 mm (19˝) equipment built into the server enclosure must have suitable airflow capabilities in order to route the heated waste air through the heat exchanger rear door. The waste air is cooled down to room temperature. The heat energy absorbed by the water is transported to the external cold water supply, where it is cooled back down to the required inlet temperature.

Colour:
RAL 7035

Approvals:
Available on the Internet.

TopTherm LCP Passive CW

Model No. SK		**3311.600**
Dimensions mm	W x H x D	600 x 2000 x 170
Usable U		42
Useful cooling output		**Up to 20 kW**

Rittal China

RITTAL Electro-Mechanical Technology (Shanghai) Co. Ltd.
No. 1658 Minyi Road · Songjiang District
Shanghai, 201612
Phone: +86 (0) 21 5115 7799
Fax: +86 (0) 21 5115 7788
E-mail: marketing@rittal.cn · www.rittal.cn

Touchscreen display, colour

for LCP rack, inline, T3+

The display offers the opportunity of directly monitoring key LCP functions and implementing settings.

Packs of	Model No. SK
1	**3311.030**

Front cover

for LCP Inline CW and DX

The optional front cover ensures an even air exhaust and reduces the air outlet speed, thereby preventing draught effects.

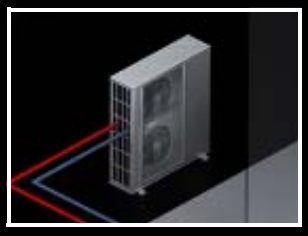
Packs of	Model No. SK
1	**3311.060**

Condenser unit

The condenser unit is needed to operate the refrigerant-based LCPs, and comprises the external condenser, fan and inverter-controlled compressor.

Refrigerant:
R410a

For LCP	Packs of	Model No. SK
SK 3311.110, SK 3311.210	1	**3311.310**



Vertical shielding

To block the airflow on the left and right of the 482.6 mm (19″) level, for enclosure height 2000 mm.

Material:
- Cellular PU foam
- Flame-inhibiting to UL 94 (HF1)
- Length: 1900 mm
- Self-adhesive on one side

For sealing between	For enclosure width mm	Packs of	Model No. SK
Side panel and 482.6 mm (19″) level	600	1	**3301.380**
	800	1	**3301.390**
LCP and 482.6 mm (19″) level	600	1	**3301.370**
	800	1	**3301.320**

Connection hose, bottom and top

Flexible connection hose, may be shortened, including union nuts on both sides for connecting the LCP to existing pipework.

For LCP	Thread	Water connection from	Packs of	Model No. SK
SK 3311.130, SK 3311.230, SK 3311.260, SK 3311.530, SK 3311.560, SK 3311.400, SK 3311.110, SK 3311.210	1 1/4″	Bottom	2	**3311.050**
		Top	2	**3311.040**

Add-on cover

For height compensation with 2200 mm high racks in conjunction with the LCP (H = 2000 mm).

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

For LCP	Packs of	Model No. SK
SK 3311.130, ...110	1	**3301.221**
SK 3311.230, ...260, SK 3311.530, ...560, SK 3311.400, ...210	1	**3301.421**

Delivery times available on request.

CS Outdoor climate control

Air/air heat exchangers

For CS Toptec ..... 85/105 W/K 468
For CS modular enclosures ..... 30 W/K 469

Cooling units

For CS Toptec ..... 1000/1600 W 468
For CS modular enclosures ..... 900/1500 W 469

CS Outdoor climate control

CS Toptec Page 207 **Enclosure heaters** Page 471

With sealing frame for universal mounting on the CS Toptec in 3 positions: Internal, partial internal and external.

Material:
Enclosure: Aluminium

Surface finish:
Powder-coated, pure polyester

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529 (internal circuit to external circuit)

Air/air heat exchangers and cooling units for CS Toptec

			Air/air heat exchanger		Cooling units	
Model No. CS			**9776.102**	**9776.152**	**9776.500**	**9776.550**
Installation			Universal			
Rated operating voltage		DC	48 V		–	
		AC	–		230 V, 50/60 Hz	
Enclosure dimensions mm (including sealing frame and designer cover)		W H D	500 (550) 1000 (1050) 150 (175)	500 (550) 1000 (1050) 200 (225)	500 (550) 1000 (1050) 150 (175)	500 (550) 1000 (1050) 260 (285)
Minimum enclosure dimensions (mm)		W x H	800 x 1200			
Spec. thermal output			**85 W/K**	**105 W/K**	**–**	**–**
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**		**–**	**–**	**1000 W/1150 W** **650 W/700 W**	**1600 W/1750 W** **1200 W/1250 W**
Heater			–	–	400 W	
Rated current max.		DC	4.2 A	4.5 A	–	–
		AC	–		5.0 A/5.0 A	6.0 A/6.8 A
Start-up current max.			–		24.0 A/22.0 A	34.0 A/32.0 A
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50		–		640 W/760 W 780 W/920 W	960 W/1170 W 1125 W/1310 W
Coolant			–		R134a	
Permissible operating pressure p. max.			–		28 bar	28 bar
Temperature range			–33°C to +65°C		–33°C to +55°C	
Air throughput of fans – unimpeded air flow	Internal/external circuit fan		570 m³/h	1200 m³/h	600/625 m³/h 600/625 m³/h	880/950 m³/h 1000/1090 m³/h
Temperature control			Comfort controller[1)]	Comfort controller[1)]	Comfort controller	Comfort controller
Type of connection			Plug-in terminal strip			
Weight			22 kg	30 kg	35 kg	45 kg

Extended delivery times. Products are manufactured to order. The units are assembled and supplied connected to the Toptec enclosure.
[1)] Setpoint settings may be altered via software.

CS modular enclosures Page 208 **Enclosure heaters** Page 471

For roof mounting
With Comfort controller as standard[1)] and 400 W heater or control via thermostat.
Heat exchanger CS 9764.040 without Comfort controller.

Mounting frame:
Required for CS 9762.012.

For wall mounting
With Comfort controller[1)] and 400 W heater as standard.

For partial installation
With Comfort controller[1)] and 800 W heater as standard.

Installation options:
- in the door or rear panel
- in the side panel

Surface finish:
Powder-coated, pure polyester

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529 (internal circuit to external circuit)

[1)] Units with Comfort controller. The Comfort controller is installed on the inside of the cooling units, and is not accessible from the outside.

Air/air heat exchangers and cooling units for CS modular enclosures

		Air/air heat exchanger	Cooling units		
Model No. CS		**9764.040**	**9762.212**	**9761.212**	**9768.152**
Installation		Roof-mounted	Roof-mounted	Wall-mounted	Partial internal mounting
Rated operating voltage	DC	48 V	–		
	AC	–	230 V, 50/60 Hz		
Unit dimensions (mm)	W x H x D	470 x 158 x 380	535 x 390 x 400	515 x 1170 x 152	400 x 1050 x 310
Minimum enclosure dimensions (mm)		W x D 600 x 500	W x D 600 x 500	W x H 600 x 1200	W/D x H 600 x 1200
Spec. thermal output		**30 W/K**	**–**	**–**	**–**
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35 L 35 L 50**	**–**	**900 W/1020 W 720 W/780 W**	**900 W/1050 W 750 W/820 W**	**1500 W/1600 W 1250 W/1250 W**
Heater		–	400 W	400 W	800 W
Rated current max.	DC	1.3 A	–	–	–
	AC	–	3.1 A/4 A	3.2 A/4.2 A	5.8 A/6.7 A
Start-up current max.		–	10.6 A	10.8 A	19.0 A
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	–	460 W/570 W 520 W/655 W	605 W/790 W 690 W/880 W	940 W/1145 W 1045 W/1270 W
Temperature control		without[2)]	Comfort controller	Comfort controller	Comfort controller
Coolant	R134a	–	550 g	600 g	650 g
Permissible operating pressure p. max.		–	27 bar	24 bar	28 bar
Temperature range		–33°C to +65°C	–33°C to +55°C		
Air throughput of fans – unimpeded air flow	Internal/external circuit fan	345 m³/h	570 m³/h 570 m³/h	880 m³/h 880 m³/h	850 m³/h 680 m³/h
Type of connection		Plug panel	Plug-in terminal strip		
Weight		7 kg	29 kg	45 kg	40 kg
Material (enclosure)	Aluminium/sheet steel	■/–	■/–	–/■	■/–
Accessories					
Mounting frame		–	**9765.051**	–	–
Enclosure internal thermostat		**3110.000**	–	–	–

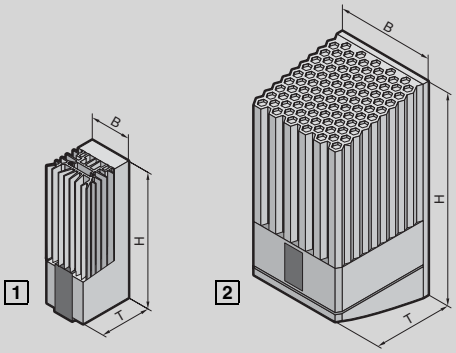
Extended delivery times. The partially internally mounted CS 9768.152 may be inserted directly. Cooling units are manufactured to order.
The units are assembled and supplied connected to the modular enclosure. Adaptations to other enclosure platforms are available on request.
[2)] Customers may fit their own thermostat (SK 3110.000).

Enclosure heaters

Climate control accessories Page 473 **Software & services** Page 515

Supply includes:
- PTC heater
- Quick-connection terminal
- Assembly parts

Note:
- For precise temperature control inside the enclosure, we recommend the enclosure internal thermostat SK 3110.000 or the digital thermostat SK 3114.200 with display (see accessories).
- In order to prevent condensation on assemblies, hygrostat SK 3118.000 (see accessories) is recommended to regulate heating.
- In larger enclosures, even heat distribution is best achieved by installing several low-output heaters.
- The installation of heaters is generally advisable, in order to prevent condensation.



1 Without fan, continuous thermal output 10 – 150 W

Model No. SK		**3105.310**	**3105.320**	**3105.330**	**3105.340**	**3105.350**	**3105.360**	**3105.370**	Page
Dimensions mm	W (B) H D (T)	45 120 46	45 120 46	64 155 56	64 155 56	64 230 56	90 165 75	90 180 75	
Rated operating voltage V, Hz		110 – 240 V, 50/60 Hz							
Continuous thermal output at T_u = 10°C		**8 – 10 W**	**18 – 20 W**	**23 – 30 W**	**49 – 50 W**	**63 – 75 W**	**86 – 100 W**	**130 – 150 W**	
Pre-fuse T		2 A	2 A	4 A	4 A	4 A	4 A	4 A	
Accessories	Packs of								
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475

Special voltages available on request. We reserve the right to make technical modifications.

2 With fan, continuous thermal output 250 – 800 W

Model No. SK		**3105.410**	**3105.380**	**3105.420**	**3105.390**	**3105.430**	**3105.400**	Page
Dimensions mm	W (B) H D (T)	103 200 103		103 200 103		103 200 103		
Rated operating voltage V, Hz		110 V, 50/60 Hz	230 V, 50/60 Hz	110 V, 50/60 Hz	230 V, 50/60 Hz	110 V, 50/60 Hz	230 V, 50/60 Hz	
Continuous thermal output at T_u = 10°C		**250 W[1)]**		**400 W[1)]**		**800 W[1)]**		
Pre-fuse T		4 A	4 A	6 A	6 A	10 A	6 A	
Accessories	Packs of							
Enclosure internal thermostat	1	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	476
Hygrostat	1	3118.000	3118.000	3118.000	3118.000	3118.000	3118.000	476
Digital temperature display/thermostat	1	3114.200	3114.200	3114.200	3114.200	3114.200	3114.200	475

[1)] Thermal output with fan.
Special voltages available on request. We reserve the right to make technical modifications.

Air duct system

for roof-mounted cooling units and air/water heat exchangers

It is possible to route the cold air directly to specific areas of the enclosure using the air duct system. The risk of “short circuits” in the air circulation due to self-ventilated installed devices is therefore eliminated.
The dimensions of the shallow duct are W x H x D 229 x 1500 x 29 mm, and can be shortened to the required length.

Material:
Flame-resistant plastic to DIN 4102/B1

Supply includes:
Shallow duct, compensating hose.

Note:
Do not direct cold air straight at active components. When using the ducting system, the performance of the cooling unit may be reduced, depending on the application in question.

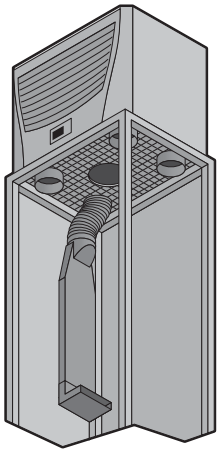
Also required:

TS support strips, see page 650.

Accessories:

– Deflector 90°, see page 473.
– Stopper, see page 474.

For unit	Packs of	Model No. SK
SK 3209. . . ./SK 3210. . . ./SK 3273. . . ./SK 3359. . . ./SK 3382. . . ./ SK 3383. . . ./SK 3384. . . ./SK 3385. . . .	1	**3286.870**
SK 3386. . . ./SK 3387. . . .	1	**3286.970**



Deflector, 90°

for air duct system

For targeted air deflection at the end of the shallow duct.

Material:
Flame-resistant plastic to DIN 4102/B1

Packs of	Model No. SK
1	**3286.990**

Air routing

Shallow air duct system

for roof-mounted cooling units and air/water heat exchangers, to fit TS 8 enclosures from a width of 800 mm and a depth of 600 mm.
It is possible to route the cold air directly to specific areas of the enclosure using the air duct system. The risk of "short circuits" in the air circulation due to self-ventilated installed devices is therefore eliminated.
The dimensions of the shallow duct are W x H x D 229 x 1500 x 29 mm, and can be shortened to the required length.

Material:
Flame-resistant plastic to DIN 4102/B1

Supply includes:
– Shallow duct
– Adaptor
– Compensating piece
– Deflector, 90°

Note:
Do not direct cold air straight at active components. When using the ducting system, the performance of the cooling unit may be reduced, depending on the application in question.

Also required:
– Shallow duct extension SK 3286.860 to compensate for the enclosure width and height.
– TS support strips, see page 650.

Accessories:
– Deflector 90°, see page 473.
– Stopper, see page 474.

For unit	Packs of	Model No. SK
SK 3209. . . ./SK 3210. . . ./SK 3273. . . ./SK 3383. . . ./SK 3384. . . ./ SK 3385. . . .	1	**3286.850**

Shallow duct extension

Extension kit for shallow air duct system SK 3286.850 for width, depth or height length extensions in TS 8 enclosures.

Material:
Flame-resistant plastic to DIN 4102/B1

Packs of	Model No. SK
1	**3286.860**

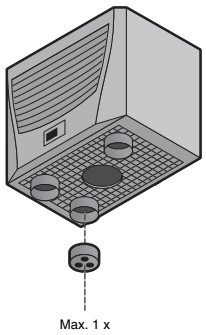
Supply includes:
– Shallow duct 1500 mm
– Connecting piece

Stoppers

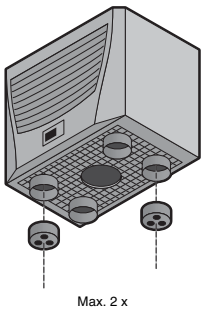
for roof-mounted cooling units
To cover unneeded cold air outlets in roof-mounted cooling units.

Material:
Polyurethane foam

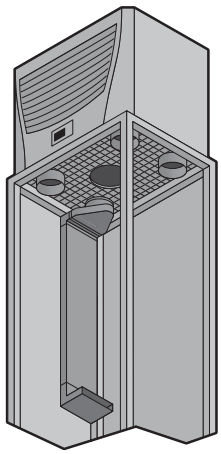
For units	Max. no. of stoppers per unit	Packs of	Model No. SK
SK 3359. . . ./SK 3382. . . .	1	2	**3286.780**
SK 3209. . . ./SK 3210. . . ./SK 3273. . . ./SK 3383. . . ./ SK 3384. . . ./SK 3385. . . .	2	2	**3286.880**
SK 3386. . . ./SK 3387. . . .	1	2	**3286.980**



SK 3359. . . . / SK 3382. . . .
SK 3386. . . . / SK 3387. . . .



SK 3209. . . . / SK 3210. . . .
SK 3383. . . . / SK 3384. . . .
SK 3385. . . . / SK 3273. . . .

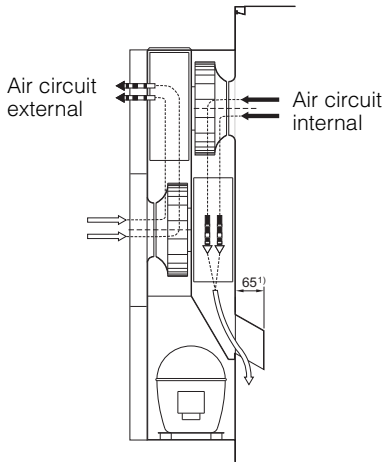


Air diverter

For use with wall-mounted cooling units
For targeted air routing of the cold air in a downward direction.
Particularly well-suited for densely-packed electrical components in the lower section of the enclosure.

Material:
Sheet steel

For units	Model No. SK
SK 3304. . . ./SK 3305. . . .	**3213.310**
SK 3328. . . ./SK 3329. . . .	**3213.320**
SK 3332. . . .	**3213.330**[1)]



[1)] 115 mm for SK 3213.330

Digital enclosure internal temperature display and thermostat

For installation in the enclosure door or wall.

Technical specifications:
- 2 voltage ranges for 100 – 230 V, 50/60 Hz and 24 – 60 V (DC)
- Depth: 100 mm
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Temperature range: +5°C to +55°C
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)

Packs of	Model No. SK
1	**3114.200**

Special requirements can be accommodated on request.

- Freely selectable switching difference
- The freely adjustable setpoint values can be set using the membrane keyboard at the front Setting range: +5°C to +55°C
- Display and switching accuracy +/– 2 K
- The minimum and maximum recorded temperatures are stored until it is next reset

Digital enclosure internal temperature display and thermostat

Integrated into a panel 1 U.
Including cable attachment for connection cable and label holder.

Technical specifications:
- 2 voltage ranges for 100 – 230 V, 50/60 Hz and 24 – 60 V (DC)
- Depth: 100 mm
- Three-digit, 7-segment display
- Option of switching between °C/°F
- Temperature range: +5°C to +55°C
- Includes 1800 mm long NTC sensor
- Two relay outputs as change-over contact and normally open contact (max. contact load 230 V, 6 A)

Packs of	Model No. DK
1	**7109.035**

Special requirements can be accommodated on request.

- Freely selectable switching difference
- The freely adjustable setpoint values can be set using the membrane keyboard at the front Setting range: +5°C to +55°C
- Display and switching accuracy +/– 2 K
- The minimum and maximum recorded temperatures are stored until it is next reset

Colour:
RAL 7035

Control/regulation

Enclosure internal thermostat

Especially suitable for controlling fan-and-filter units, heaters and heat exchangers, this thermostat can also be used as a signal generator for monitoring the enclosure internal temperature.

Technical specifications:
- Bi-metal controller as a temperature-sensitive element with thermal feedback.
- Contact population: Single-pole change-over contact as a quick-break contact.
- Permissible contact load:
  Cat. 5 – 3 (heating)
  AC 10 (4)[1] A,
  DC = max. 30 W
  Cat. 5 – 4 (cooling)
  AC 5 (4)[1] A,
  DC = max. 30 W
  [1] = inductive load at cos φ = 0.6
- Setting range: +5°C to +60°C

Rated operating voltage	Model No. SK
230/115/60/48/24 V (AC)	**3110.000**
60/48/24 V (DC)	

- Weight: approx. 105 g
- Dimensions: 71 x 71 x 33.5 mm
- Switching difference approx. 1 K ± 0.8 K.
- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor.

Accessories:

Mounting plate TS with integral top-hat rail, see page 658.

Hygrostat

The hygrostat switches on the heater and/or fan when a preset relative humidity in the enclosure is exceeded.
In this way, the relative humidity is raised above the dew point, and condensation on assemblies or electronic components is avoided.

Technical specifications:
- Contact population: Single-pole change-over contact as a quick-break contact.
- Permissible contact load:
  AC ~ 5 (0.2)[1] A
  DC = max. 20 W
  [1] = inductive load at cos φ = 0.6
- Setting range: 50 – 100% relative humidity
- Weight: approx. 100 g
- Dimensions: 71 x 71 x 33.5 mm
- Switching hysteresis

Rated operating voltage	Model No. SK
24 – 230 V (AC), 24 – 75 V (DC)	**3118.000**

- Flexible mounting on a vertical or horizontal 35 mm support rail to EN 50 022, and snap fastening in the TS/SE enclosure section or on the mounting plate using the supplied adaptor.

Accessories:

Mounting plate TS with integral top-hat rail, see page 658.

Bottom-mounted adaptor

for enclosure internal thermostat SK 3110.000 and hygrostat SK 3118.000

Bottom-mounted adaptor with mounting option for screwed cable glands, for targeted cable infeed from appropriate equipment such as SK fan-and-filter units and enclosure heaters. In conjunction with screwed cable glands, it is also suitable for use as strain relief.

Packs of	Model No. SK
1	**3110.200**

Control unit for EC fan-and-filter units

Temperature-dependent speed control for EC fan-and-filter units to reduce noise and save energy. The function of the fan can also be monitored.

- Activation and monitoring of up to 4 EC fan-and-filter units (caution: EC fan-and-filter units cannot be controlled with speed control 3120.200!)
- Rated operating voltage: 24 V (DC)
- Top-hat rail assembly
- Temperature setting range:
  +5°C to +55°C/41°F to 131°F
- External temperature sensor to record the ACTUAL temperature
- Status LED to display the operating status
- Alarm relay for reporting overtemperature, fan defect, cable interruption and sensor failure

For fan-and-filter units	Model No. SK
SK 3245.XXX	**3235.440**

Supply includes:
NTC sensor, length 1.80 m.

Speed control

Temperature-dependent speed control for TopTherm fan-and-filter units and air/air heat exchangers for noise reduction and to save energy in part-load operation.

Technical specifications:
- For mounting on a 35 mm support rail DIN EN 50 022
- Dimensions (W x H x D): 105 x 90.5 x 60.2 mm
- Rated operating voltage: 100 – 230 V (AC)
- Setting range: +20°C to +55°C
- Phase cross-over with microcontroller
- Maximum fan output 300 W or 2 A

Packs of	Model No. SK
1	**3120.200**

Supply includes:
- Speed control
- NTC sensor, length 1.80 m.

Note:
Only suitable for use with 1-phase AC motors and equipment.

Accessories:

Mounting plate TS with integral top-hat rail, see page 658.

Interface board

for equipment with e-Comfort controller

The interface board is an extension for equipment with e-Comfort controller. In this way it is possible, e.g. to monitor a master/slave combination of up to 10 cooling units in conjunction with a Rittal CMC III. Control is achieved via standardised interfaces: RS232 (DB9) or RS485, one PLC interface (DB9). RS422 (RJ 45 jack) is the connection to the Rittal CMC III. In this way, remote monitoring via TCP-IP, graphical interfaces for operation, evaluation and control, documentation, and connection to additional sensors for access control are possible. The extension board is built into a 1 U plastic housing.
A voltage supply of 24 V (DC) is required. This may be supplied from the CMC III via a wide-range power pack DK 7320.425 (100 to 240 V (AC), 50/60 Hz) or externally via a Kycon connector.

Packs of	Model No. SK
1	**3124.200**

Supply includes:
- Interface board integrated into a plastic box W x H x D (mm): 136 x 44 (1 U) x 129
- Serial SUB-D cable, 1.5 m.

Note:
Networking and monitoring plan may be found on the relevant product page on the Internet, under “Download”.

SK BUS system

The SK bus system facilitates communications between several enclosure cooling units and air/water heat exchangers .500/.510/.540/.600/.610/.640. via a master/slave construction such as that required e.g. in complex bayed enclosure systems for optimum operating conditions.

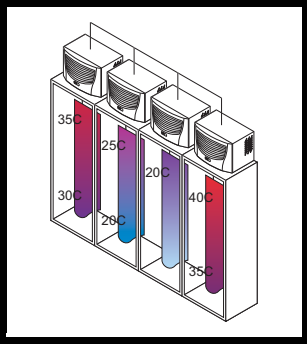
Technical specifications:
The master/slave construction facilitates common activation and deactivation via door limit switches, parallel activation and deactivation via a temperature setpoint, and common collective fault signals and temperature logging, thereby eliminating the need for intricate wiring.

Packs of	Model No. SK
1	**3124.100**

Supply includes:
- 3 m shielded interface cable
- Operating instructions on programming the cooling units.

Note:
- $n_B = n_K - 1$
- n_B: Number of order units (SK bus system)
- n_K: Number of cooling units to be linked

Networking and monitoring plan may be found on the relevant product page on the Internet, under “Download”.



Master/slave adaptor

for Thermoelectric Cooler

Parallel operation of up to 5 thermoelectric coolers to increase cooling output or for redundant use.

For units	Model No. SK
SK 3201.200, SK 3201.300	**3201.070**

Also required:

Per slave 1 x RJ 45 network cable DK 7320.470 or DK 7320.472, see page 786.

Mounting accessories

Roof plates TS

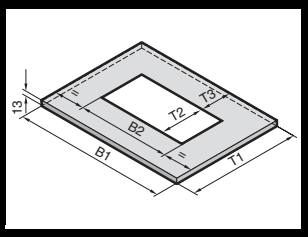
For mounting:
- Roof-mounted units
- Air/water heat exchangers
- Roof-mounted fan
- Vent attachment TS

The cut-outs in the roof plate are arranged in such a way that the roof-mounted cooling units are positioned centrally on the enclosure.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.



For enclosures W (B) x D (T) mm	For mounting	B1 mm	B2 mm	T1 mm	T2 mm	T3 mm	Model No. TS
800 x 600	SK 3382. . . ./SK 3359. . . ./ SK 3149.4 . ./SK 3149.8 . .	767.5	475	567.5	260	129.3	**8801.320**
600 x 600	SK 3209. . . ./SK 3383. . . ./ SK 3210. . . ./SK 3384. . . ./ SK 3273. . . ./SK 3385. . . ./ TS 8801.380	567.5	490	567.5	390	61.3	**8801.310**[1)]
800 x 600		767.5	490	567.5	390	61.3	**8801.330**
1200 x 600		1167.5	490	567.5	390	61.3	**8801.350**
800 x 600	SK 3386. . . ./SK 3387. . . .	767.5	692	567.5	392	57.8	**8801.340**[2)]

[1)] When mounting the cooling units, there may be a collision with the eyebolts of the enclosure; for this reason, roof fastening screws are supplied loose with the roof plates.
[2)] Attachment is from the inside using metal brackets and retaining clamps.

Vent attachment TS

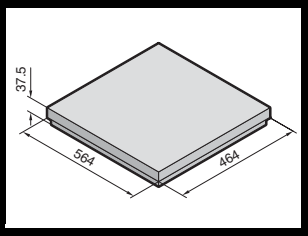
For passive ventilation with labyrinthine air flow routing, to match the roofs for roof-mounted cooling units.

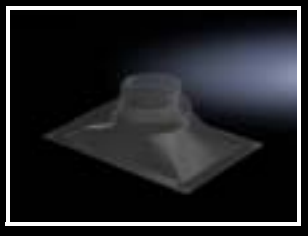
Colour:
RAL 7035

Protection category:
IP 43

Supply includes:
Assembly parts.

For roof plates with cut-out	Model No. TS
490 x 390 mm	**8801.380**





Vent cover

The ideal addition for incorporating sealed racks into an existing central climate control system. The stepped connection is suitable for standard pipe diameters 150 mm and 200 mm, thereby ensuring effective cooling thanks to targeted air exchange inside the rack.

Design:
Diameter of hose connection:
150 mm/200 mm
Maximum cut-out on roof plate:
380 mm x 230 mm

Material:
PET-G, transparent

Supply includes:
Assembly parts.

Width mm	Height mm	Depth mm	Packs of	Model No. DK
450	144	300	1	**7826.750**

Delivery times available on request.

Rittal service:

Mounting on the enclosure on request.

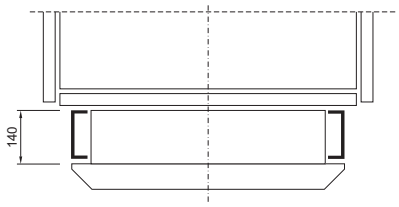
Trim frame

for slimline cooling units
Slimline cooling units can be internally or externally mounted on an enclosure door or wall. The trim frame presents a closed front for the cooling unit.

Material:
Sheet steel

Colour:
RAL 7035

For cooling unit	Model No. SK
SK 3366. . . .	**3377.000**



Quick-change frame

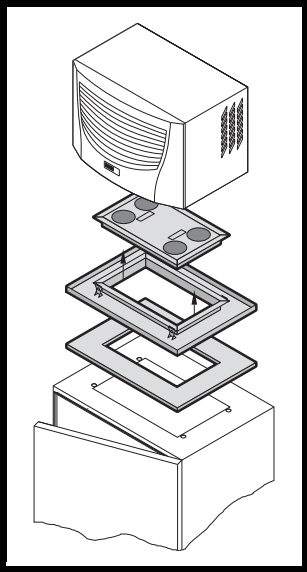
for roof-mounted cooling units
The quick-change frame is more than just an alternate frame. Together with the seal, the lower part of the frame is screw-fastened to the enclosure. In this way, it is possible install and remove the connector-ready cooling unit with the upper part of the alternate frame previously mounted on the cooling unit with quick-release fasteners. During servicing work, this means shorter assembly times and hence minimised downtime. What is more, the quick-change frame offers effective protection against the ingress of oil into the enclosure in oily atmospheres, thanks to its integral drainage trough.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Quick-change frame
– Seal
– Quick-release fasteners

For roof-mounted cooling units	Model No. SK
SK 3359. . . ./SK 3382. . . .	**3286.700**
SK 3209. . . ./SK 3210. . . ./ SK 3383. . . ./SK 3384. . . ./ SK 3385. . . .	**3286.800**
SK 3386. . . . /SK 3387. . . .	**3286.900**



Adjustable frame

for air/air heat exchangers, railway-compatible version

The adjustable frame allows variable partial installation of air/air heat exchangers on enclosures, to facilitate optimum space utilisation.

Material:
Sheet steel

Colour:
RAL 7035

For heat exchangers	Model No. SK
SK 3126.4..	**3286.260**
SK 3128.4../SK 3129.4..	**3286.270**
SK 3130.4..	**3286.280**

Mounting accessories

Adaptor frame

for wall-mounted cooling units

To compensate for the rear tilt of the TP consoles.

Material:
Sheet steel

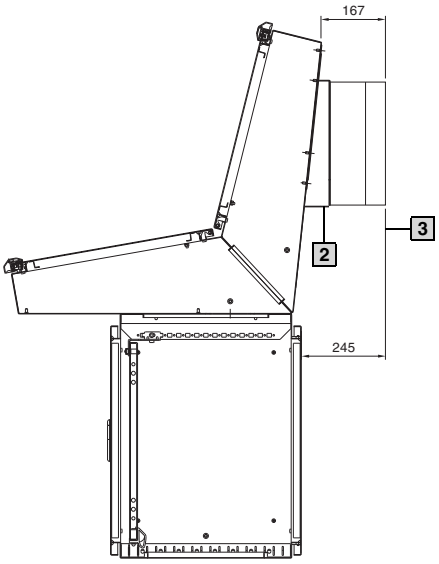
Surface finish:
– Powder-coated
– Textured paint

Colour:
RAL 7035

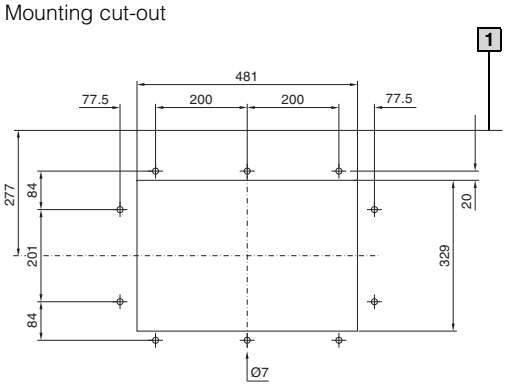
Supply includes:
Assembly parts.

For cooling units 300 W	Packs of	Model No. TP
SK 3302.300/.310	1	**6730.600**

Delivery times available on request.



Mounting cut-out



1 Top edge of console
2 Adaptor frame
3 Cooling units SK 3302.3X0

Integrated louvres

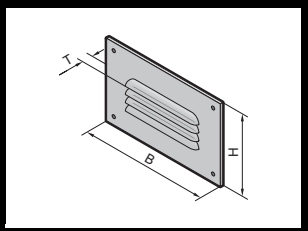
For ventilation by convection; easily retro-fitted using 4 screws.

Material:
Sheet steel

Colour:
RAL 7035

W (B) x H x D (T) mm	Packs of	Model No. SK
160 x 110 x 8	4	**2541.235**
210 x 100 x 8	4	**2542.235**
330 x 110 x 8	4	**2543.235**

Detailed drawings:
Available on the Internet.



Filter mats

for tangential fans

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to 100°C, self-extinguishing category F1 to DIN 53 438.
Dust-laden air side: Open structure.
Clean-air side: Closed structure.
Reliable filtering of virtually all types of dust from a particle size of 10 µm.

Material:
Chemical fibres

For tangential fans/front outlet grilles 2 U	W x H x D mm	Packs of	Model No. SK
SK 3144.000/SK 3145.000/SK 3176.000	425 x 85 x 8	5	**3177.000**

Filter mats

For

- **Cooling units**
- **Air/air heat exchanger**

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

Material:
– Open-celled polyurethane foamed plastic
– Outstanding physical and mechanical properties
– Temperature resistant from –40°C to +80°C.
– Thickness: 10 mm

For cooling units	W x H x D mm	Packs of	Model No. SK
SK 3302.300/SK 3302.310	190 x 95 x 10	3	**3286.110**
SK 3302. . . ./SK 3303. . . ./SK 3361. . . .	265 x 200 x 10	3	**3286.300**
SK 3304. . . ./SK 3305. . . ./SK 3328. . . ./SK 3329. . . ./ SK 3332. . . ./SK 3366. . . .	344 x 268 x 10	3	**3286.400**
SK 3273. . . ./SK 3382. . . ./SK 3383. . . ./SK 3384. . . ./ SK 3385. . . ./SK 3359. . . .	530 x 255 x 10	3	**3286.500**
SK 3386. . . ./SK 3387. . . .	720 x 300 x 10	3	**3286.600**
SK 3377. . . .	205 x 210 x 10	3	**3253.010**

For discontinued cooling units	W x H x D mm	Packs of	Model No. SK
SK 3296. . . ./SK 3272.100/SK 3290. . . ./SK 3280.100/ SK 3299. . . ./SK 3261. . . .	539 x 332 x 10	3	**3286.100**
SK 3265.100/SK 3266.100	270 x 332 x 10	3	**3267.100**
SK 3256. . . .	395 x 300 x 10	3	**3254.000**
SK 3293. . . ./SK 3281.100/SK 3298. . . ./SK 3279.100/ SK 3260. . . ./SK 3269. . . ./SK 3262.100/SK 3393. . . ./ SK 3381.100/SK 3391. . . .	334 x 313 x 10	3	**3294.100**
SK 3255. . . ./SK 3395. . . .	350 x 245 x 10	3	**3253.000**
SK 3394. . . .	315 x 200 x 10	3	**3285.000**
SK 3292.134/SK 3278.134	325 x 250 x 10	3	**3286.000**

For air/air heat exchangers	W x H x D mm	Packs of	Model No. SK
SK 3126.100/SK 3126.115	265 x 200 x 10	3	**3286.300**
SK 3127.100/SK 3127.115/SK 3128.100/SK 3128.115/ SK 3129.100/SK 3129.115/SK 3130.100/SK 3130.115	344 x 268 x 10	3	**3286.400**

Filter technology

Metal filters

Particularly when cooling units are used in dusty and damp environments, it is advisable to use washable metal filters.
If air or steam condenses on the metal surfaces, any particles present will adhere to the metal, and can easily be washed out with water or grease-dissolving solvents.

Material:
– Aluminium
– Thickness: 10 mm

For cooling units	W x H x D mm	Packs of	**Model No. SK**
SK 3302.300/SK 3302.310	190 x 95 x 10	1	**3286.120**
SK 3302.100/SK 3302.110/SK 3303. . . ./SK 3361. . . .	265 x 200 x 10	1	**3286.310**
SK 3304. . . ./SK 3305. . . ./SK 3328. . . ./SK 3329. . . ./ SK 3332. . . ./SK 3366. . . .	344 x 268 x 10	1	**3286.410**
SK 3273. . . ./SK 3382. . . ./SK 3383. . . ./SK 3384. . . ./ SK 3385. . . ./SK 3359. . . .	530 x 255 x 10	1	**3286.510**
SK 3386. . . ./SK 3387. . . .	720 x 300 x 10	1	**3286.610**
SK 3377. . . .	225 x 200 x 10	1	**3253.220**

For discontinued cooling units	W x H x D mm	Packs of	**Model No. SK**
SK 3296. . . ./SK 3272.100/SK 3290. . . ./SK 3280.100	520 x 290 x 10	1	**3286.210**
SK 3299. . . ./SK 3261. . . .	520 x 315 x 10	1	**3286.200**
SK 3265.100/SK 3266.100	265 x 320 x 10	1	**3267.200**
SK 3256. . . .	315 x 365 x 10	1	**3254.200**
SK 3293. . . ./SK 3281.100/SK 3298. . . ./SK 3279.100/ SK 3260. . . ./SK 3269. . . ./SK 3262.100/SK 3393. . . ./ SK 3381.100/SK 3391. . . .	300 x 328 x 10	1	**3294.200**
SK 3255. . . ./SK 3395. . . .	348 x 210 x 10	1	**3253.200**
SK 3394. . . .	375 x 415 x 10	1	**3285.200**

For climate control door/section door	W x H x D mm	Packs of	**Model No. SK**
SK 3300.040/SK 3300.050/SK 3300.060/SK 3300.070/ SK 3300.080/SK 3300.090/SK 3300.110/SK 3300.120	425 x 78 x 10	1	**3284.210**

For discontinued climate control doors	W x H x D mm	Packs of	**Model No. SK**
SK 3306. . . ./SK 3307. . . ./SK 3309. . . ./SK 3310. . . .	424 x 100 x 10	1	**3284.200**
SK 3308. . . .	624 x 100 x 10	1	**3288.200**

For discontinued climate control side panel	W x H x D mm	Packs of	**Model No. SK**
SK 3331. . . .	380 x 150 x 10	1	**3289.200**

For air/air heat exchangers	W x H x D mm	Packs of	**Model No. SK**
SK 3126.100/SK 3126.115	265 x 200 x 10	1	**3286.310**
SK 3127.100/SK 3127.115/SK 3128.100/SK 3128.115/ SK 3129.100/SK 3129.115/SK 3130.100/SK 3130.115	344 x 268 x 10	1	**3286.410**

For air/air heat exchangers, wall-mounted, railway-compatible version	W x H x D mm	Packs of	**Model No. SK**
SK 3126.4XX	130 x 130 x 10	1	**3286.230**
SK 3128.4XX/SK 3129.4XX	208 x 208 x 10	1	**3286.240**
SK 3130.4XX	225 x 225 x 10	1	**3286.250**

For recooling systems	W x H x D mm	Packs of	**Model No. SK**
SK 3318.600/SK 3318.610/SK 3319.600/SK 3319.610	530 x 255 x 10	1	**3286.510**
SK 3320.600/SK 3334.600	500 x 558 x 8	1	**3286.520**
SK 3360. . . .	344 x 268 x 10	1	**3286.410**

For chillers	W x H x D mm	Packs of	**Model No. SK**
SK 3335.590/SK 3335.600	600 x 800 x 20	1	**3286.550**
SK 3335.610/SK 3335.620/SK 3335.650	600 x 1050 x 20	1	**3286.530**
SK 3335.630/SK 3335.640/SK 3335.660	1000 x 1035 x 20	1	**3286.540**

Lint screen

Especially for the use of cooling units and air/air heat exchangers where there is a high proportion of lint in the ambient air.

Material:
Stainless steel mesh

For units	Packs of	Model No. SK
SK 3304. . . ./SK 3305. . . ./ SK 3328. . . ./SK 3329. . . ./ SK 3332. . . ./SK 3360. . . ./ SK 3126. . . ./SK 3127. . . ./ SK 3128. . . ./SK 3129. . . ./ SK 3130. . . .	1	**3329.904**

Delivery times available on request.

Also required:

Louvred grille for lint screen.

Louvred grille for lint screen

Material:
ABS

For lint screen	Packs of	Model No. SK
SK 3329.904	1	**3329.903**

Delivery times available on request.

Spare filter mats

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to +100°C, self-extinguishing category F1 to DIN 53 438.
Dust-laden air side: Open structure.
Clean-air side: Closed structure.
Reliable filtering of virtually all types of dust from a particle size of 10 µm.

For thermoelectric cooler	Material	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3201.200/SK 3201.300	Chemical fibres	G2	5	**3201.050**

For fan-and-filter units	Material	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3237. . . .	Chemical fibres	G2	5	**3321.700**
SK 3238. . . .		G2	5	**3322.700**
SK 3239. . . .		G3	5	**3171.100**
SK 3240. . . ./SK 3241. . . .		G3	5	**3172.100**
SK 3243. . . ./SK 3244. . . .		G3	5	**3173.100**

For discontinued fan-and-filter units/ outlet filters	Material	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3321. . . .	Chemical fibres	G2	5	**3321.700**
SK 3322. . . .		G2	5	**3322.700**
SK 3323. . . .		G3	5	**3171.100**
SK 3324. . . ./SK 3325. . . .		G3	5	**3172.100**
SK 3326. . . .		G3	5	**3173.100**
SK 3327. . . .		G3	5	**3327.700**

For filter holders	Material	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3175.000	Chemical fibres	G2	3	**3174.000**

For EMC fan-and-filter units	Material	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3237. . . .	Copper-nickel coated chemical fibres	G2	5	**3237.066**[1)]
SK 3238. . . .		G2	5	**3238.066**[1)]
SK 3239. . . .		G3	5	**3239.066**[1)]
SK 3240. . . ./SK 3241. . . .		G3	5	**3240.066**[1)]
SK 3243. . . ./SK 3244. . . ./SK 3245. . . .		G3	5	**3243.066**[1)]

[1)] To achieve the shielding/dampening properties of EMC fan-and-filter units.

Filter technology/general

Fine filter mats

for fan-and-filter units

Made of chopped-fibre mat with a progressive structure. Temperature-resistant to +100°C, self-extinguishing category F1 to DIN 53 438.
Dust-laden air side: Open structure.
Clean-air side: Closed structure.
Reliable filtering of virtually all types of dust from a particle size of 10 µm.

Material:
Chemical fibres

For fan-and-filter units	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3238. . . .	F5	5	**3238.055**
SK 3239. . . .	F5	5	**3181.100**
SK 3240. . . ./SK 3241. . . .	F5	5	**3182.100**
SK 3243. . . ./SK 3244. . . ./SK 3245. . . .	F5	5	**3183.100**

For discontinued fan-and-filter units/outlet filters	Filter class to DIN EN 779	Packs of	Model No. SK
SK 3323. . . .	F5	5	**3181.100**
SK 3324. . . ./SK 3325. . . .	F5	5	**3182.100**
SK 3326. . . ./SK 3327. . . .	F5	5	**3183.100**

Auto Range power pack 240 W

for 24 V (DC) components

For power supply e.g. to DC fan-and-filter units or the Thermoelectric Cooler SK 3201.300 with primary 115/230 V (AC) voltage supply input.

Technical specifications:
- Approvals: CE, UL-listed
- Dimensions W x H x D: 83 x 125 x 116 mm
- Operating temperature range: –10°C to +71°C
- Snaps onto a 35 mm top-hat rail

Packs of	Model No. SK
1	**3201.040**

Electric condensate evaporator

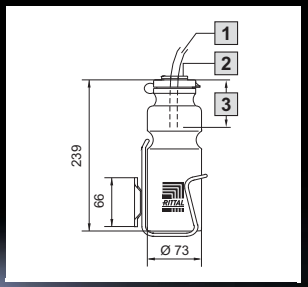
For external mounting on enclosures.
For use with all enclosure cooling units and air/water heat exchangers.
Evaporation performance:
[1] 2.4 l/d
[2] 4.2 l/d

Colour:
RAL 7035

Supply includes:
Electric condensate evaporator, ready to connect.

For cooling units	Rated operating voltage	Model No. SK
SK 3302. . . ./ SK 3303. . . .	230 V, 50/60 Hz	**3301.560**[1]
	115 V, 50/60 Hz	**3301.580**[1]
400 mm wide	230 V, 50/60 Hz	**3301.570**[2]
	115 V, 50/60 Hz	**3301.590**[2]

Detailed drawings:
Available on the Internet.



Condensate collecting bottle

For mounting on the enclosure.
For use with all enclosure cooling units and air/water heat exchangers.
Safety overflow at the side.
Capacity approximately 0.75 l.

1 Condensate discharge tube
2 Membrane grommet
3 Max. 70 mm

Packs of	Model No. SK
1	**3301.600**

Supply includes:
- Condensate collecting bottle
- Bottle holder
- Mounting accessories

Condensate hose

For removing and directing condensate.
For connecting to enclosure cooling units.

Material:
PVC, transparent

For units	Hose length	Material thickness Ø	Model No. SK
SK 3201. . . .	5 m	6 x 1 mm	**3301.606**
SK 3302. . . ./SK 320.	10 m	8 x 1.5 mm	**3301.608**
SK 3303. . . ./SK 3361. . . .	10 m	10 x 1.5 mm	**3301.610**
SK 3273. . . ./SK 3304. . . ./SK 3305. . . ./SK 3328. . . ./ SK 3329. . . ./SK 3332. . . ./SK 3359. . . ./SK 3366. . . ./ SK 3377. . . ./SK 3382. . . ./SK 3383. . . ./SK 3384. . . ./ SK 3385. . . ./SK 3386. . . ./SK 3387. . . .	10 m	12 x 2 mm	**3301.612**

Outlet filter

For ventilation by convection, an outlet filter can be installed in the upper and lower sections of the enclosure.

Material:
ABS,
material resistance to UL 94-V0.

Colour:
RAL 7035

Supply includes:
– Outlet filter
– Filter mat

Dimensions W x H x D in mm	Model No. SK	
	Standard	EMC
116.5 x 116.5 x 16	**3237.200**	**3237.060**
148.5 x 148.5 x 24	**3238.200**	**3238.060**
204 x 204 x 24	**3239.200**	**3239.060**
255 x 255 x 25	**3240.200**	**3240.060**
323 x 323 x 25	**3243.200**	**3243.060**

Accessories:

– Spare filter mats, see page 483.
– Fine filter mats, see page 484.

Hose-proof hood

For fan-and-filter units/outlet filters. Easy cleaning thanks to exterior silicon coating approved for use with foodstuffs. When mounted over the fan-and-filter unit and outlet filter, a protection category of IP 56 to IEC 60 529 is achieved.

Material:
– Stainless steel
– Silicone

Protection category:
– In conjunction with the fan-and-filter units/outlet filters, NEMA 3R + 12 is met.
– Protection category is met by type 1, 12, 3, 3R, 4, 4X.
– With SK 3237.080 and SK 3245.080, the protection category is only met by type 1, 12, 3R.

For fan-and-filter units	Dimensions mm	Model No. SK
SK 3237. . . .	150 x 230 x 40	**3237.080**
SK 3238. . . .	176 x 245 x 55	**3238.080**
SK 3239. . . .	233 x 330 x 55	**3239.080**
SK 3240. . . ./SK 3241. . . .	282 x 390 x 85	**3240.080**
SK 3243. . . ./SK 3244. . . .	350 x 480 x 110	**3243.080**
SK 3245. . . .	350 x 480 x 160	**3245.080**

Blanking cover

If existing mounting cut-outs for fan-and-filter units/outlet filters need to be closed to achieve a higher protection category, the filter mat of the fan-and-filter unit/outlet filter can simply be replaced with a blanking cover; welding or other mechanical modification of the enclosure is not necessary.

Material:
Plastic

Protection category:
IP 54

For fan-and-filter units/ outlet filters	Packs of	Model No. SK
SK 3237. . . .	2	**3237.020**
SK 3238. . . .	2	**3238.020**
SK 3239. . . .	2	**3239.020**
SK 3240. . . ./SK 3241. . . .	2	**3240.020**
SK 3243. . . ./SK 3244. . . .	2	**3243.020**

General

Front outlet grille 2 U

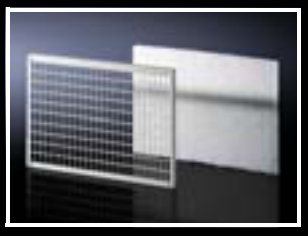
for tangential fans

This front outlet grille is required if a 482.6 mm (19″) cross-flow blower (SK 3144.000/SK 3145.000) is used in the lower section of the electronic enclosure and the hot air is to be expelled to the outside from the upper section of the enclosure. The design of the grille matches that of the intake grille in the cross-flow blower.
These grilles can also be used as simple inflow and outflow grilles with natural convection.

Packs of	Model No. SK
1	**3176.000**

Accessories:

Filter mat, see page 481.



Filter holder

for roof ventilation

The use of a filter mat is required in order to increase the protection category of the roof vent (SK 3148.007).
Protection category IP 44 to IEC 60 529 is achieved.

Material:
Sheet steel

Supply includes:
Filter holder including filter mat.

W x H x D mm	Model No. SK
340 x 244 x 15	**3175.000**

Accessories:

Spare filter mat, see page 483.

Overflow valve

Pressostat for use in the water cycle between the recooling system and the air/water heat exchanger. It prevents an increase in pump pressure in the recooling system against the closed magnetic valve of the air/water heat exchanger outside of the cooling cycle.

Setting range:
2 – 12 bar

Presetting:
3 bar

Material:
Brass

Design	Packs of	Model No. SK
1/2″ bypass valve	1	**3301.900**
3/4″ bypass valve	1	**3301.910**
1″ bypass valve	1	**3301.920**

Flow regulator valve

For use with air/water heat exchangers, especially if more than one heat exchanger (n > 1) is used in the water cooling circuit. The correctly set valve then ensures the same quantity of cooling medium for all equipment. The valve is used for hydraulic balancing.

Setting range:
3 – 12 l/min

Material:
Brass

Design	Packs of	Model No. SK
3/4″ x 1/2″ for volumetric flow control	1	**3301.930**
3/4″ x 3/4″ for volumetric flow control	1	**3301.940**

Thread adaptor for quick-release fastener

For use with air/water heat exchangers with quick-release fastener. This thread adaptor enables simple adaptation to fixed and flexible pipework.

Material:
Brass

For units	Design	Packs of	Model No. SK
SK 3363..../ SK 3364..../ SK 3373..../ SK 3374..../ SK 3375....	3/8″ internal thread	2	**3201.900**
	3/8″ external thread	2	**3201.910**

Stainless steel V4A version available on request.

Cooling medium

For recooling systems

Ready mix
Apart from the recooling systems for oil and emulsion, all other recooling systems are only suitable for the cooling of water or a water/glycol mixture.

As well as protecting against frost, this cooling medium also serves to inhibit bacterial growth and provide optimum corrosion protection.

Supply includes:
– 10 l canister
– 25 l canister
– 200 l barrel

Cooling medium	Antifreeze/ water mixture	Container	Model No. SK
Outdoor	1 : 2	10 l	**3301.950**
		25 l	**3301.955**
		200 l	**3301.957**[1)]
Standard	1 : 4	10 l	**3301.960**
		25 l	**3301.965**
		200 l	**3301.967**[1)]

[1)] Extended delivery times.

Connection kit

for connecting the CRAC system CW to the customer's pipework when using water as a cooling medium.
The connection kit is preassembled and is connected to an outgoing pipe with stop valve (to be provided by the customer) in both the inlet and outlet.

Supply includes:

Inlet side in direction of flow
High-pressure hose for flexible connection to the CRAC system CW.

Return side in direction of flow
High-pressure hose for flexible connection to the CRAC system CW.

For CRAC system CW	Nominal width	Model No. SK
SK 3301.620 to 3301.650	1″	**3300.260**
SK 3301.660 to 3301.690	1 1/4″	**3300.261**
SK 3301.830 to 3301.860	1 1/2″	**3300.262**
SK 3301.870 to 3301.990	2″	**3300.263**

Energy-saving extractor plenum

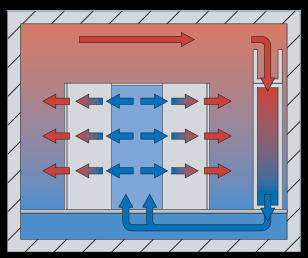
for top-mounting on CRAC systems CW/DX.

The extractor plenum is used to raise the extraction height of the return air and return it to the CRAC system CW/DX at the highest possible temperature level. In this way, the energy efficiency of the unit can be increased significantly.
The extractor plenum is comprised of an empty enclosure tailored to the width and depth of the CRAC system CW/DX. The equipment enclosure and extractor plenum are screw-fastened together using the assembly kit supplied loose.

Supply includes:
Empty enclosure including assembly kit.

For CRAC system CW/DX	Height mm	Model No. SK
SK 3301.620 to 3301.650	550	**3300.290**
SK 3301.660 to 3301.690	550	**3300.291**
SK 3301.830 to 3301.860	550	**3300.292**
SK 3301.870 to 3301.990	550	**3300.293**
SK 3300.510 to 3300.540	550	**3300.294**
SK 3300.560 to 3300.590	550	**3300.295**
SK 3300.710 to 3300.740	550	**3300.296**
SK 3300.760 to 3300.790	550	**3300.297**

Note:
Special heights to adapt to the available room height are available on request.



IT infrastructure

IT competence

System overview – Wall-mounted/floor-standing network enclosures 493
System overview – Server enclosures 495
System overview – Power 497
System overview – Cooling 499
System overview – Monitoring 501
System overview – Security solutions 503

1
2
3
7
8
9
10

IT competence

Wall-mounted/floor-standing network enclosures

Wall-mounted enclosures 55
Network enclosures 101

Server enclosures

Server enclosures 113

Power

Power Distribution 265
UPS systems 371
Power Distribution Rack 382
Power System Module Plus 383
Power System Module 384
RiCell Flex fuel cell system 387

Cooling

Chillers for IT cooling 454
CRAC system 456
Aisle containment 460
Liquid Cooling Package 461

Monitoring

Monitoring system CMC III 768
Door Control System 779
Monitor/keyboard unit 780
KVM switches 781
Dynamic Rack Control 787

Security solutions

Compact data centre 503
Data Centre Container 509
Fire alarm and extinguisher system 510
Security rooms 513

Software

RiZone 527

Your benefits

- Standardised server racks and network enclosures
- Modular power distribution and back-up
- Scalable IT cooling concepts
- High-MTBF IT security rooms, including certificates
- Complete system accessories for IT environments and data centres
- Software-based IT and infrastructure management system

Examples of uses

1 Wall-mounted enclosures, see page 55
2 Network enclosures, see page 101
3 Server enclosures, bayed in combination with LCP, see page 116/461
4 Power distribution, see page 265
5 UPS systems, see page 371
6 Power Distribution Rack, see page 382
7 Chillers for IT cooling, see page 454
8 Monitoring system CMC III, see page 768
9 Compact data centre, see page 503
10 Data center container, see page 509

1
2
3
4
5
5
6

Wall-mounted/floor-standing network enclosures

Wall-mounted network enclosures

VerticalBox 56
FlatBox with 482.6 mm (19˝) mounting angles 57
FlatBox with 482.6 mm (19˝) mounting frame 58
QuickBox with glazed door 59
QuickBox with sheet steel door 60
QuickBox with vertical 482.6 mm (19˝) level 61
Wall-mounted enclosure EL, 3-part, depth 573/673 mm, pre-configured 62
Wall-mounted enclosure EL, 3-part, depth 473 mm, with punched rails 63
Wall-mounted enclosure EL, 3-part, depth 373 mm, with mounting plate 64
Wall-mounted enclosure EL, 3-part, depth 473 mm, with mounting plate 65
Wall-mounted enclosure EL, 2-part, depth 369 mm, with swing frame 66
Wall-mounted enclosure AE with 482.6 mm (19˝) mounting angles 67
Wall-mounted enclosure AE with 482.6 mm (19˝) pull-out frame 68
Small fibre-optic distributor 69

Floor-standing network enclosure

Network enclosures TS 8

Preconfigured, doors unvented 102
Preconfigured, doors vented 103
Preconfigured, doors/rear wall unvented 104
Preconfigured, doors unvented, divided 104
Network enclosures TS 8 105

Network enclosures TE 7000

Pre-configured 107
Width 600 mm 108
Width 800 mm 109

Distributor racks

TE 7000 open 110
Data Rack 111

Your benefits

Network enclosures

- Network enclosures for stand-alone installation and data centres
- Complete system solutions for small to large networks
- Maximum configuration diversity and protection for installed equipment
- Investment protection and flexibility thanks to simple conversions and use of the comprehensive modular system

Wall-mounted enclosures

- The right enclosure to suit all applications – up to protection category IP 55
- Sizes available from 3 U to 21 U
- Wide choice of accessories with “Rittal – The System.”
- Fast assembly, conversion and simple installation based on the modular principle

Examples of uses

1 Wall-mounted enclosures EL, see page 62

2 FlatBox, see page 57

3 QuickBox wall-mounted enclosure with vertical 482.6 mm (19˝) level, see page 61

4 QuickBox wall-mounted enclosure with glazed door, see page 59

5 TE 7000 network enclosure with base/plinth and installation accessories, see page 107

6 TS 8 network enclosures, bayed with base/plinth, roof-mounted fan and installation accessories, see page 102

1
1
2
2

Server enclosures

Server enclosures

TS 8 server enclosures 114
TS 8 server enclosures, colocation 115
TS 8 server enclosures for High Performance Cooling systems HPC 116
TE 7000 server enclosures 117

Your benefits

- Broad spectrum of sizes
- Integrated system, from small server racks to bayed rack suites in the data centre
- First-class finish for maximum protection
- High-quality lock systems for optimum access protection
- Comprehensive, system-compatible complete range for cooling, power distribution/power backup and monitoring

Examples of uses

1 TS 8 server enclosures in combination with aisle containment and LCP, see page 460

2 TS 8 server enclosures, colocation, see page 115

3 TS 8 server enclosures in combination with LCP, see page 116

5
2
3
4
1

Power

Power distribution

Ri4Power 265

UPS systems

UPS PMC 12 372
UPS PMC 40 (type 1-4) 373
UPS PMC 40 (type 5) 374
UPS PMC 120 375
UPS PMC 200 376
UPS PMC 800 377
UPS PMC accessories 378

Power Distribution Rack

Power Distribution Rack 382
Power Distribution Module 382

Power System Module

PSM Plus busbar 383
PSM Plus plug-in modules 383
PSM busbars 384
PSM socket modules 385
PSM accessories 386

Fuel cell system

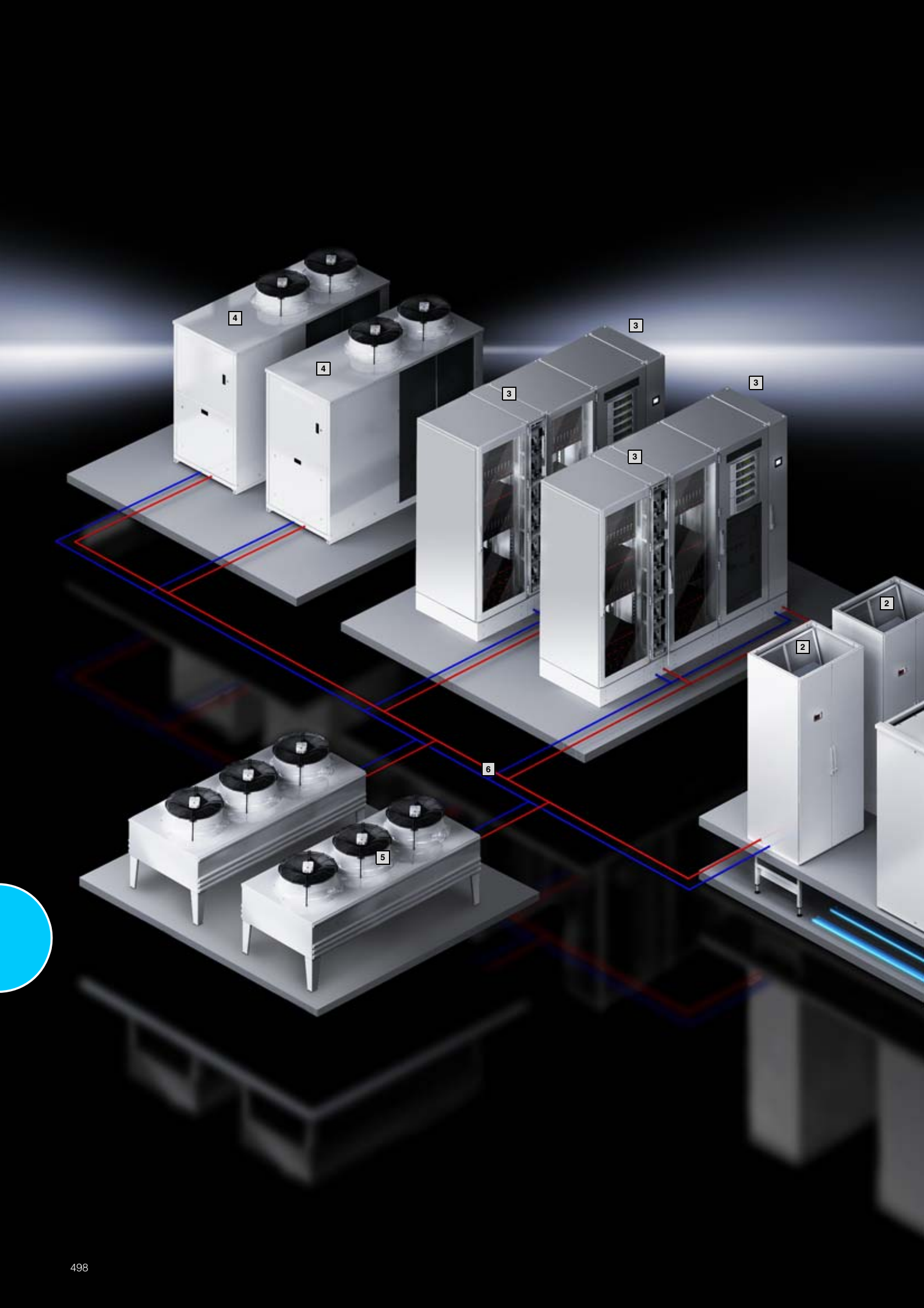
RiCell Flex fuel cell system 387

Your benefits

- Holistic, systematic energy management concepts
- Comprehensive, complete solutions for power distribution and back-up, consistently modular, and flexibly extendible at any time
- Optimum energy and cost efficiency with maximum availability of the entire system
- Reduced costs for installation, administration and manpower
- High level of investment certainty
- All from a single source!

Examples of uses

1 Power Modular Concept PMC 200, see page 376
2 Power Distribution Rack PDR, see page 382
3 Power Distribution Module PDM, see page 382
4 Power System Module PSM, see page 383
5 Power distribution, see page 265


4
4
3
3
3
2
2
6
5

Cooling

Chillers for IT cooling

Chillers for IT cooling ..... 15 – 123 kW 454
Chillers for IT cooling ..... 155 – 481 kW 455

CRAC system

CRAC system CW ..... 27.8 – 137.4 kW 456
CRAC system DX ..... 19.2 – 56.2 kW 458

Aisle containment

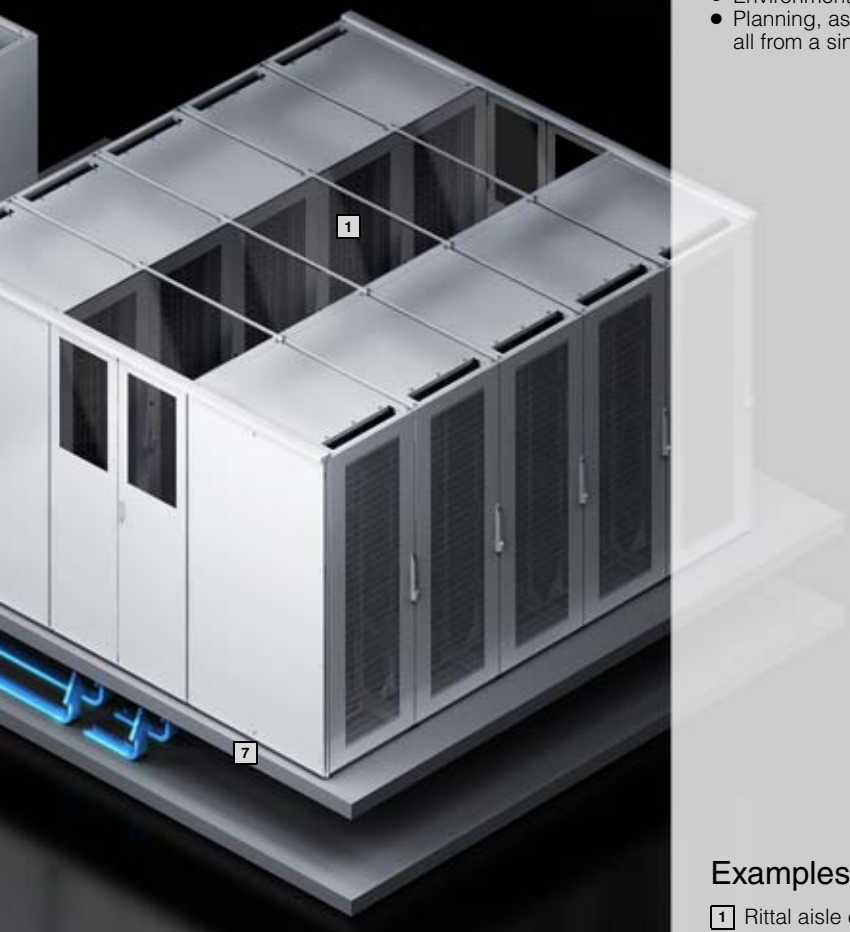
Aisle containment 460

Liquid Cooling Package

TopTherm LCP Rack CW and DX ..... up to 60 kW 461
TopTherm LCP Inline CW and DX ..... up to 60 kW 462
TopTherm LCP T3+ CW ..... up to 25 kW 463
TopTherm LCP Passive CW ..... 20 kW 464
Accessories 465

Your benefits

- State-of-the-art climate control technology, from cooling a single rack through to entire data centres
- Individual climate control concepts for rack, suite and room cooling
- Enhanced security plus superior energy and cost efficiency
- Optimisation with aisle containment and cross-system control concepts
- Energy-efficient cooling with IT chillers
- Minimises operating costs with free cooling
- Environmentally friendly thanks to resource and CO_2 savings
- Planning, assembly, commissioning and servicing – all from a single supplier!



Examples of uses

1 Rittal aisle containment, see page 460
2 CRAC systems, see page 456
3 Liquid Cooling Package LCP, see page 461
4 IT chiller, see page 454
5 Free cooling
6 Pipework
7 Raised floor for cold air supply

4
1
2
1
8
3
6
5
7

Monitoring

Monitoring system CMC III

CMC III system representation 768
CMC III system overview 770
CMC III processing unit/Compact 772
CMC III sensors 773
CMC III accessories 774

Door Control System

Door Control System 778

Monitor/keyboard unit

Monitor/keyboard unit 780

KVM switch

SSC view 8 USB, SSC view 32 Cat, SSC compact 32 Cat 781
SSC premium 2/16, 4/32, 8/32 782
SSC Duo 16 783

Dynamic Rack Control

RFID mounting frame, tags, controller 787

Software

RiZone 527

Your benefits

- Overview of your IT infrastructure
- Enhanced security
- Automated processes
- High cost efficiency
- Enormous energy savings
- Simple project management
- Fast installation
- Flexible, individual solutions with standard products from Rittal
- High standard of quality with coordinated standard products

Sample applications:

1 CMC III, see page 771

2 Power System Module PSM, Power Control Unit PCU incl. current measurement, see page 383

3 Liquid Cooling Package LCP, see page 461

4 Connection of up to 10 cooling units with Comfort control via one unit

5 Sensors/actuators, see page 773
- Temperature sensor
- Humidity sensor
- Access and vandalism sensors
- Motion detectors
- Airflow monitors
- Smoke detectors
- Voltage monitor
- Power supply
- Leaks

6 Monitor/keyboard unit, see page 780

7 Electric comfort handle TS 8, see page 603

8 Fire alarm and extinguisher system DET-AC XL, see page 511

1
2

Security solutions

Compact data centre

Basic Safe 504
Modular Safe 505
Modular Safe Extend 506
Climate control for Modular Safe/Modular Safe Extend 507

Data Centre Container DCC

Data Centre Container DCC 509

Fire alarm and extinguisher system

DET-AC Plus 510
DET-AC XL 511

Security rooms

Data centres 513

Sample applications

1 Modular Safe with climate control, see page 505, 507

2 Basic Safe with CMC and extinguisher system, see page 504

3 Modular Safe Extend as compact data centre, see page 506

Basic Safe

System accessories Page 537

Applications:
- Micro data centre for small businesses
- Protection for servers and storage applications
- Protection for business-critical data
- Storage of personal data, e.g. doctors' surgeries or tax advisors

Benefits:
- Complete system with built-in climate control
- High level of operational and service-friendliness thanks to the two-door system
- Compatibility with other infrastructure elements

Protection standards:
- Fire protection F90 based on DIN 4102
- Compliance with limit values $\Delta T < 50$ K, relative humidity < 85% for 10 minutes
- Tested burglary protection WK II EN 1627
- Protection against dust and water jets IP 55 to IEC 60 529

The tests were performed as system tests and confirmed by way of test reports.

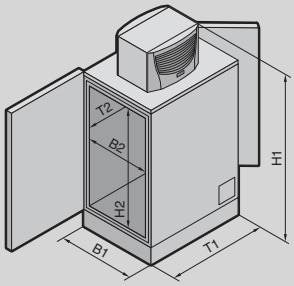
Material:
Pladur plate

Colour:
Enclosure: RAL 7035

Supply includes:
- Security enclosure with operating and service doors (three-point locking)
- Cable entry in both side elements
- Climate control 2.4 kW

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.



U	15
Cooling capacity kW	2.4
Width (B1) mm	806
Height (H1) mm	1699
Depth (T1) mm	1270
Clearance width (B2) mm	620
Clearance height (H2) mm	827
Clearance depth (T2) mm	1024
Weight excluding internal installation approx. kg	360
Model No. LS Basic Safe with built-in 482.6 mm (19˝) rack	**7999.999**
Model No. LS Basic Safe without built-in 482.6 mm (19˝) rack	**7999.898**
Accessories	
482.6 mm (19˝) rack, 15 U, depth 1000 mm	**7995.992**
Early fire detection system EFD Plus	see page 510
Fire alarm and extinguisher system DET-AC Plus	see page 510
CMC monitoring system	see page 767

Standard protection from:

Fire | Extinguishing water | Vandalism | Unauthorised access | Dust | Theft/ burglary

Modular Safe

System accessories Page 537

Applications:
- Solid protection against potential physical threats for IT components
- Targeted configuration components transform the safe into a complete, compact data centre.

Benefits:
- Modular assembly
- Prepared for the installation of various IT climate control solutions
- Low weight
- User-friendly, thanks to operator and service door

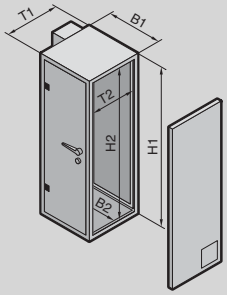
Protection standards:
- Fire protection F90 based on DIN 4102
- Burglary protection resistance class II to EN 1627
- Protection against dust and water jets IP 56 to IEC 60 529
- Protection from acrid gases to DIN 18 095

Material:
Pladur plate

Colour:
Enclosure: RAL 7035

Supply includes:
- Security safe as a two-door system
- Cable duct in both side elements
- Both doors with semi-cylinder and two locks
- Optional cable routing in the top element, selectable positioning

Detailed drawings:
Available on the Internet.



		Two-door-system	
U		33	47
External dimensions mm	Width (B1)	1500	1500
	Height (H1)	1942	2321
	Depth (T1)	1238	1238
Internal dimensions mm	Width (B2)	979[1)]	979[1)]
	Height (H2)	1840	2219
	Depth (T2)	1010	1010
Clearance height of door opening mm		1678	2057
Model No. LS		**7999.892**	**7999.893**
Accessories			
482.6 mm (19″) rack, based on TS 8, 482.6 mm (19″) level front and rear, 6 support strips for mounting on the 482.6 mm (19″) level, 2 punched sections with mounting flanges	W 800 x H 1600 x D 1000	**7831.429**	–
	W 800 x H 2000 x D 1000	–	**7995.969**
	W 800 x H 2200 x D 1000	–	**7999.970**
Early fire detection system EFD Plus		see page 510	
Fire alarm and extinguisher system DET-AC Plus		see page 510	
CMC monitoring system		see page 767	
Climate control for Modular Safe		see page 507/508	

[1)] With built-in heat exchanger.

Standard protection from:

Fire · Extinguishing water · Vandalism · Unauthorised access · Dust · Theft/ burglary

Modular Safe Extend

System accessories Page 537

Applications:
- A high level of protection against potential physical threats for IT
- Targeted configuration components transform the safe into a complete, compact data centre.

Benefits:
- Modular assembly
- Expandability for graduated investment in line with IT growth
- Prepared for the installation of various IT climate control solutions
- Systems may be dismantled and reassembled, for maximum investment security

Protection standards:
- Fire protection F90 based on DIN 4102
- Compliance with limit values $\Delta T < 50$ K, relative humidity < 85% for 30 minutes
- Theft protection optionally resistance class II, III or IV EN 1627
- Protection against dust and water jets IP 56 to IEC 60 529
- Protection from acrid gases to DIN 18 095

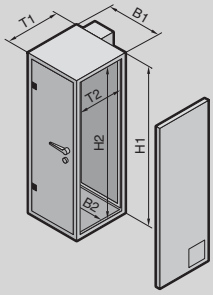
The tests were performed as system tests and confirmed by way of test reports.

Material:
Pladur plate

Colour:
Enclosure: RAL 7035

Supply includes:
- Security safe with operator door and servicing door
- Cable entry in both side elements
- Both doors with key lock

Optional:
- Electronic combination lock
- Electronic lock pre-equipped for activation by an external access control system
- Cable entry in the top and base unit
- Twin-walled doors
- Choice of door hinges



Detailed drawings:
Available on the Internet.

U			42	47	42	47
External dimensions mm		Width (B1)	1100	1100	1100	1100
		Height (H1)	2210	2410	2210	2410
		Depth (T1)	1200	1200	1400	1400
Internal dimensions mm		Width (B2)	920	920	920	920
		Height (H2)	2030	2230	2030	2230
		Depth (T2)	1000	1000	1200	1200
Model No. LS	Individual solution		**7999.896**	**7999.897**	**7999.983**	**7999.987**
	Suite creation	Left	**7999.977**	**7999.980**	**7999.984**	**7999.988**
		Centre	**7999.978**	**7999.981**	**7999.985**	**7999.989**
		Right	**7999.979**	**7999.982**	**7999.986**	**7999.990**
Accessories						
482.6 mm (19″) rack, based on TS 8, 482.6 mm (19″) level front and rear, 6 support strips for mounting on the 482.6 mm (19″) level, 2 punched sections with mounting flanges	W 800 x H 2000 x D 1000		**7995.969**	**7995.969**	**7995.969**	**7995.969**
	W 800 x H 2200 x D 1000		**7999.970**	**7999.970**	**7999.970**	**7999.970**
Early fire detection system EFD Plus			see page 510			
Fire alarm and extinguisher system DET-AC Plus			see page 510			
CMC monitoring system			see page 767			
PSM busbar			see page 384			
Climate control for Modular Safe			see page 507/508			

Standard protection from:

Climate control for Modular Safe/Modular Safe Extend

System accessories Page 537 **Modular Safe/Modular Safe Extend** Page 505/506

- All climate control units are designed as split units to ensure hermetic separation between the cooling circuits inside and outside of the safe. This prevents the ingress of dust and corrosive gases.
- Air routing inside the safe is horizontal. The hot air is drawn in at the rear, and the cooled air is expelled in front of the 482.6 mm (19″) level.

Compact climate control
Suitable for use in rooms with climate control in the building or adequate ventilation, and low or no noise level requirements. The climate control unit is available in the output categories 2.5 kW and 4 kW.
The evaporator coil is fastened to the side panel on the inside of the modular safe, and the external device on the service door (Modular Safe Extend) or side panel (Modular Safe).

Outdoor climate control
When using the outdoor variant, the internal circuit of the climate control unit is secured to the side panel on the inside of the safe.
The external unit is positioned outside of the building. The internal and external units are connected to one another via coolant lines and control cables. The hot air from the servers is drawn in at the rear of the safe, and the cooled air is expelled in front of the 482.6 mm (19″) level.
Benefits of the outdoor model:
The waste heat is routed directly to the outside. As a result, room ventilation or air-conditioning is not necessary.

Outdoor climate control solution with inverter technology
The external unit with inverter technology allows targeted speed control of the compressor. The volume of refrigerant is regulated via the electronic expansion valve. Adaptation to cooling requirements facilitates energy savings of up to 40%.
The cold air is expelled in front of the 482.6 mm (19″) level by the internal unit (evaporator coil), while the hot air is drawn in at the rear. Modified air baffle plates achieve additional efficiency gains and help to avoid hot spots.

Compact climate control

Model No. SK		**3126.230**	**3126.240**
Rated operating voltage V, Hz		400/460, 3~, 50/60	
Dimensions mm	W x H x D external unit	500 x 1580 x 231	
	W x H x D internal unit	804 x 1544 x 100	
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 35 L 35** **L 35 L 50**	**2500 W/3090 W** **2070 W/2300 W**	**4000 W/4010 W** **3020 W/3250 W**
Rated current max.		3.3 A/3.5 A	4.1 A/4.8 A
Start-up current		14.2 A/14.7 A	15.2 A/15.8 A
Pre-fuse T		6.3 – 10.0 A	
Motor circuit-breaker		■	■
Power consumption P_{el} to DIN 3168	L 35 L 35 L 35 L 50	1275 W/1615 W 1525 W/1920 W	1620 W/2125 W 1825 W/2835 W
Refrigeration factor $\varepsilon = \dot{Q}_K/P_{el}$	L 35 L 35	2.0	2.5
Refrigerant		R134a,1500 g	R134a, 2900 g
Permissible operating pressure p. max.		28 bar	25 bar
Temperature and setting range		+20°C to +55°C	
Noise level dB (A)		< 70	< 72
Protection category to IEC 60 529	Internal circuit	IP 54	
	External circuit	IP 24	
Weight	External unit	65 kg	
	Internal unit	70 kg	
Colour		RAL 7035	
Temperature control		Comfort controller (factory setting +25°C)	

Climate control for Modular Safe/Modular Safe Extend

Outdoor climate control

Model No. SK		**7999.963**	**7999.965**	**7999.964**	**7999.966**
Redundancy		–	–	■	■
Rated operating voltage V, Hz		230 V, 50 Hz, 1~	400 V, 50 Hz, 3~	230 V, 50 Hz, 1~ (2 x)	400 V, 50 Hz, 3~ (2 x)
Dimensions mm	W x H x D	795 x 610 x 290	900 x 680 x 340 (2 x)	795 x 610 x 290	900 x 680 x 340 (2 x)
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 25 L 35**	**2400 W**	**5000 W**	**2400 W**	**5000 W**

Rated current per unit, max.		3.8 A	4.1 A	3.8 A	4.1 A
Start-up current per unit		19.5 A	35 A	19.5 A	35 A
Pre-fuse T		16 A	3 x 16 A	16 A (2 x)	3 x 16 A (2 x)
Refrigerant		R410 a			
Temperature and setting range		–15°C to +35°C			
Weight	External unit	38 kg	74 kg	2 x 38 kg	2 x 74 kg
	Internal unit	59 kg	59 kg	63 kg	66 kg
Colour		RAL 7035			
Accessories					
Refrigerant line incl. electric control cable for 2400 W, length 20 m		**7999.961**	**7999.961**	**7999.961**	**7999.961**
Refrigerant line incl. electric control cable for 5000 W, length 20 m		**7999.962**	**7999.962**	**7999.962**	**7999.962**

Outdoor climate control with inverter technology

Model No. SK		**7999.991**	**7999.992**
Redundancy		–	■
Rated operating voltage V, Hz		230 V, 50 Hz, 1~	230 V, 50 Hz, 1~ (2 x)
Dimensions mm	W x H x D	900 x 795 x 320	900 x 795 x 320 (2 x)
Useful cooling output $\dot{Q}_K$ to DIN 3168	**L 18[1]/L 35 L 18/L 43**	**7850 W 7030 W**	

Rated current max.		13.9 A	
Start-up current		36 A	
Pre-fuse T		25 A	25 A (2 x)
Refrigerant		R 410a	
Temperature and setting range		–15°C to +43°C	
Noise level		48 – 49 dB (A)	
Weight	External unit	63 kg	63 (2 x) kg
	Internal unit	70 kg	70 (2 x) kg
Colour		RAL 7035	
Also required			
Heat exchanger (evaporator coil)		**3126.270**	**3126.270[2]**

[1] Server inlet temperature
[2] 2 heat exchangers are required.

Rittal Czech Republic

RITTAL Czech, s.r.o.
Ke Zdibsku 182 · 250 66 Zdiby u Prahy
Phone: +420 234 099 000
Fax: +420 234 099 099
E-mail: info@rittal.cz · www.rittal.cz

Data Centre Container DCC

Technical specifications:

Fire protection:
– Fire protection, internal panels: F30, optionally F90 based on DIN 4102/EN1363, component-tested

Duct system:
– Type: Hard duct DN200
– Dimensions of packing space: 120 x 120 mm

Raised floor:
– Substructure type: Control room
– Number of slotted plates dependent on number of racks
– Total raised height: 300 mm

Climate control – direct free cooling:
– Available with 7 and 10 kW units. Up to 3 units can be integrated
– Targeted cooling via aisle containment

Power distribution:
– Infeed: CEE connector 125 A, 3-phase/N/PE, 400 V/50 Hz
– Enclosure dimensions (W x H x D): 600 x 2000 x 400 mm

Note on standard and customised solutions:
There is a standard range of models available with 12 pre-configured data centre types. Ask for the Rittal Data Centre Container project planning form. Within just a few days, you will receive an initial quote.

Customised solutions:
Bayed containers, higher cooling outputs e.g. using LCP technology or more than seven racks – we would be happy to design your own individual data centre container.

Optional:
– Up to seven 482.6 mm (19″) IT racks with power supply
– UPS, with up to 15 minutes autonomy
– Fire alarm/gas extinguisher system (Novec 1230)
– Access systems, access door (keyboard, code card)
– Monitoring and management (CMC, RiZone)

Detailed drawings:
Available on the Internet.

Photo shows a configuration example with equipment not included in the scope of supply.

Version	R7A	R7B	R7C	R7D	R14A	R14B	R14C	R14D	R20A	R20B	R20C	R20D
Width mm	3000											
Height mm	3250											
Depth mm	6055											
Useful area	15.2 m²											
Model No.	Project planning on request											

Cooling capacity kW	7	7	7	7	14	14	14	14	20	20	20	20
Redundancy cooling	1+1	1+1	1+1	1+1	2+1	2+1	2+1	2+1	2+1	2+1	2+1	2+1
Available area mm (racks, UPS, DET-AC)	4500	4500	4500	4500	4000	4000	4000	4000	4000	4000	4000	4000
Heavy-duty raised floor	■	■	■	■	■	■	■	■	■	■	■	■
Plug-and-play power distribution	■	■	■	■	■	■	■	■	■	■	■	■
Hard ducts 2 x DN200	■	■	■	■	■	■	■	■	■	■	■	■
Security door WK2	■	■	■	■	■	■	■	■	■	■	■	■
Optional fittings												
UPS (uninterruptible power supply)	□	■	□	■	□	■	□	■	□	■	□	■
DET-AC XL fire alarm/extinguisher system	□	□	■	■	□	□	■	■	□	□	■	■
Max. no. of racks 42 U (600 mm wide)	7	6	7	6	7	6	6	5	7	6	6	5
Max. no. of racks 42 U (800 mm wide)	5	4	5	4	5	4	4	4	5	4	4	4
Higher racks (47 U)	□	□	□	□	□	□	□	□	□	□	□	□
Rack power supply (PSM, PDM)	□	□	□	□	□	□	□	□	□	□	□	□
Monitoring package (CMC)	□	□	□	□	□	□	□	□	□	□	□	□
Security door WK3	□	□	□	□	□	□	□	□	□	□	□	□
Additional hard ducts	□	□	□	□	□	□	□	□	□	□	□	□
Metal sun shade	□	□	□	□	□	□	□	□	□	□	□	□

■ Standard □ Option

Fire alarm and extinguisher system DET-AC/EFD Plus

System accessories Page 537 **Server enclosures** Page 113

EFD Plus
The EFD Plus system is a compact early fire detection system with active smoke extraction system.
The integral fan system continuously extracts the air from the enclosure, and passes it over two smoke detectors. The first smoke detector is extremely sensitive and triggers a pre-alarm. The second smoke detector triggers the main alarm.

DET-AC Plus
The DET-AC Plus is a compact fire alarm and active extinguisher system with smoke extraction system, built into one height unit. The detection system is identical to that used in the EFD Plus system. Fire extinguishing with the extinguisher gas NOVEC 1230 is automatically activated when a main alarm is triggered. With the extinguisher gas supply provided, a volume of up to 3 m³ can be extinguished.

DET-AC Plus Slave
In conjunction with the DET-AC Plus slave system, up to five bayed enclosures may be extinguished. In addition to the DET-AC Plus unit, a DET-AC Plus Save unit is used for each additional enclosure and contains the extinguisher gas for one enclosure. For detection purposes, the pipework from the DET-AC Plus system is laid in all enclosures.

Benefits:
- Early fire detection
- Automatic extinguishing
- Innovative extinguisher gas NOVEC 1230
  – Eco-friendly
  – Uncritical for IT components
- 482.6 mm (19˝) rack mount with just 1 U

	Fire alarm and extinguisher system DET-AC Plus	**Add-on unit DET-AC Plus Slave**	**Early fire detection system EFD Plus**
Width mm	482.6 mm (19˝) rack mount		
Height mm	44 (1 U)		
Depth mm	640	570	500
Weight kg	Approx. 15	Approx. 12	Approx. 8
Model No. DK	**7338.120**	**7338.320**	**7338.220**

Protection category	IP 20		
Ambient temperature (operation)	+10°C to +35°C		
Battery storage	–10°C to +50°C		
Operating voltage	100/240 V AC 50/60 Hz	24 V DC	100/240 V AC 50/60 Hz
Uninterruptible mains electricity operation	2 x 12 V; 2.2 A/approx. 4 h		
Connections	3 RJ 12 connectors for connecting to the CMC, alternatively 3 relay outputs, max. contact load 24 V DC/0.5 A		
Sensors	2 different scattered-light sensors	–	2 different scattered-light sensors
Display	LCD display with plain text information	–	LCD display with plain text information
No. of slave modules	Max. 4	–	Max. 5
No. of monitored enclosures	Max. 5	–	Max. 5
Extinguisher gas	NOVEC 1230	NOVEC 1230	–
Fill volume of extinguisher gas	32 kg	32 kg	–
Admissible max. protection volume	3 m³	3 m³	–

Also required				
Pipe kit	**7338.130**	**7338.130**	**7338.130**	Page
RJ 12 cable for alarm relaying to CMC, packs of 2	7320.814[1)]	7320.814[1)]	7320.814[1)]	775
Access sensors	7320.530	7320.530	–	773
Depth-variable slide rails	–	–	7063.883	749

[1)] 2 packs are required.

Fire alarm and extinguisher system DET-AC XL

System accessories Page 537 **Server enclosures** Page 113

Standardised solution for extinguishing individual bayed enclosure suites with up to 24 enclosures or entire rooms. All components of the system are built into a 300 mm wide TS 8 enclosure, facilitating optimum baying to a suite of server enclosures. The integral early-warning fire detection system with active smoke extraction detects fire from a very early stage. The fire is extinguished automatically. NOVEC 1230 is used as the extinguisher gas.

Benefits:
- Extinguisher system for room volumes up to 84 m^3
- Rack extinguisher system for up to 24 racks
- Suitable for incorporation into TS 8 server rack suites
- Simple project planning on the basis of standard packages
- Innovative extinguisher gas NOVEC 1230
  – Eco-friendly
  – Uncritical for IT components

Three solutions are available in the standard version:

For extinguishing up to:
- 8 racks
- 16 racks
- 24 racks

In addition, Rittal is able to configure both room and rack extinguisher systems to your individual specifications.

Function principle:
The detection system of the DET-AC XL draws room or rack air in continuously and detects even the tiniest smoke particles during the initial phase of a fire, the pyrolysis phase.
After a defined delay time, the extinguisher gas bottle is opened electrically and the gas flows out into the room or racks via the extinguisher nozzles.

Photo shows a configuration example with equipment not included in the scope of supply.

Fire alarm and extinguisher system DET-AC XL	S-08-40-10	S-16-40-10	S-24-40-10	S-08-40-12	S-16-40-12	S-24-40-12
Width mm	300			300		
Height mm	2000			2000		
Depth mm	1000			1200		
Model No. DK	**7338.160**	**7338.161**	**7338.162**	**7338.163**	**7338.164**	**7338.165**
Accessories						
Nozzle piping kit for extinguisher system	**7338.166**	**7338.166**	**7338.166**	**7338.166**	**7338.166**	**7338.166**
Piping kit for smoke extraction system	**7338.167**	**7338.167**	**7338.167**	**7338.167**	**7338.167**	**7338.167**
Nozzle piping kit for extinguisher system between enclosure suites	**7338.168**	**7338.168**	**7338.168**	**7338.168**	**7338.168**	**7338.168**
Piping kit for smoke extraction system between enclosure suites	**7338.170**	**7338.170**	**7338.170**	**7338.170**	**7338.170**	**7338.170**
Pressure relief valve for enclosures	**7338.171**	**7338.171**	**7338.171**	**7338.171**	**7338.171**	**7338.171**

We plan and implement data centres

Whether you are planning a new build, an extension or an optimisation to your data centre, we are at your side as a trustworthy partner and leading provider with decades of experience.

- Basic protection or high-MBTF protection for data centres
- Extendible
- Dismantling and reassembly = investment protection
- Dust- and noise-reduced installation
- System-tested
- Multi-functional risk coverage

Criterion	Standards	Conventional design[2]	Basic protection		High-MTBF
			LER Extend	**LER** Basic	**LSR** 18.6 E
System testing	Testing of the following standards as complete system or structure[1]	–	■	■	■
Fire protection Testing at temperatures of up to 1000°C and above	ECB·S certifications to EN 1047-2, 50 K temperature increase and 85% rel. humidity up to 24 hours (reheating period), 60 minutes flame impingement time	–	–	–	■
	50 K temperature rise and 85% rel. humidity over 30 minutes, without reheat period	–	■	–	■
	F120 as system test, according to the limits of EN 1363 (DIN 4102), for the cellular structure and its built-in modules	–	–	–	■
	F90 as system test, according to the limits of EN 1363 (DIN 4102), for the cellular structure and its built-in modules	–	■	■	■
	F180 only as component testing to EN 1363 (DIN 4102), wall system only	–	–	–	■
	F120 only as component testing to EN 1363 (DIN 4102), wall system only	■	■	■	■
	F90 only as component testing to EN 1363 (DIN 4102), wall system only	■	■	■	■
Explosion	Detonation test as system testing of 200 kg TNT from 40 m	–	–	–	■
Water	Standing water, 72 hours, 40 cm, maximum 20 drops	–	–	–	■
	Extinguisher water, IP x 6 as system testing to IEC 60 529, for the cellular structure and its built-in modules	–	■	■	■
	Relative humidity, 85%, over 24 hours (reheat period), 60 minutes flame impingement time, to EN 1047-2	–	–	–	■
	Relative humidity, 85%, over 30 minutes	–	■	–	■
Dust-tightness	IP 5x as system testing to IEC 60 529, for the cellular structure and its built-in modules	–	■	■	■
Corrosive fire gases	Acrid gas-tightness, based on EN 1634-3 (DIN 18095)	–	■	■	■
Unauthorised access	WK 3 as system test to EN 1627/1630, for the cellular structure and its built-in modules, such as doors	–	■	■	■
	WK 2 as system test to EN 1627/1630, for the cellular structure and its built-in modules, such as doors	–	■	■	■
	WK 4 only as component testing to EN 1627/ DIN 1630, door system only	–	–	–	■
Falling debris	Shock test as system test, 3 shocks of 200 kg from 1.5 m after 45 minutes flame impingement time	–	–	–	■
	Shock test as system test, 1 shock of 200 kg from 1.5 m after 30 minutes flame impingement time	–	■	■	■
EMC protection	Protection against high-frequency irradiation and radiation, verified by tests on comparable components by TU Aachen	–	■	■	■
EMC optional package	Extended high-frequency shielding in accordance with BSI TL-03304	–	–	–	■

[1] System-tested products are tested as a complete construction. This comprises the cellular structure and installation modules such as doors, cable shields or ventilation units. By contrast, component testing only refers to individual parts.

[2] The conventional design refers to room structures of plasterboard, concrete and other standard construction materials which do not offer sufficient protection for data centre applications. Conventional designs are generally tested for use as fire walls.

Power
Engineering
ePLAN
electric P8
ePLA
cabine

Software & services

Expertise 517

Planning 519

Project management 523

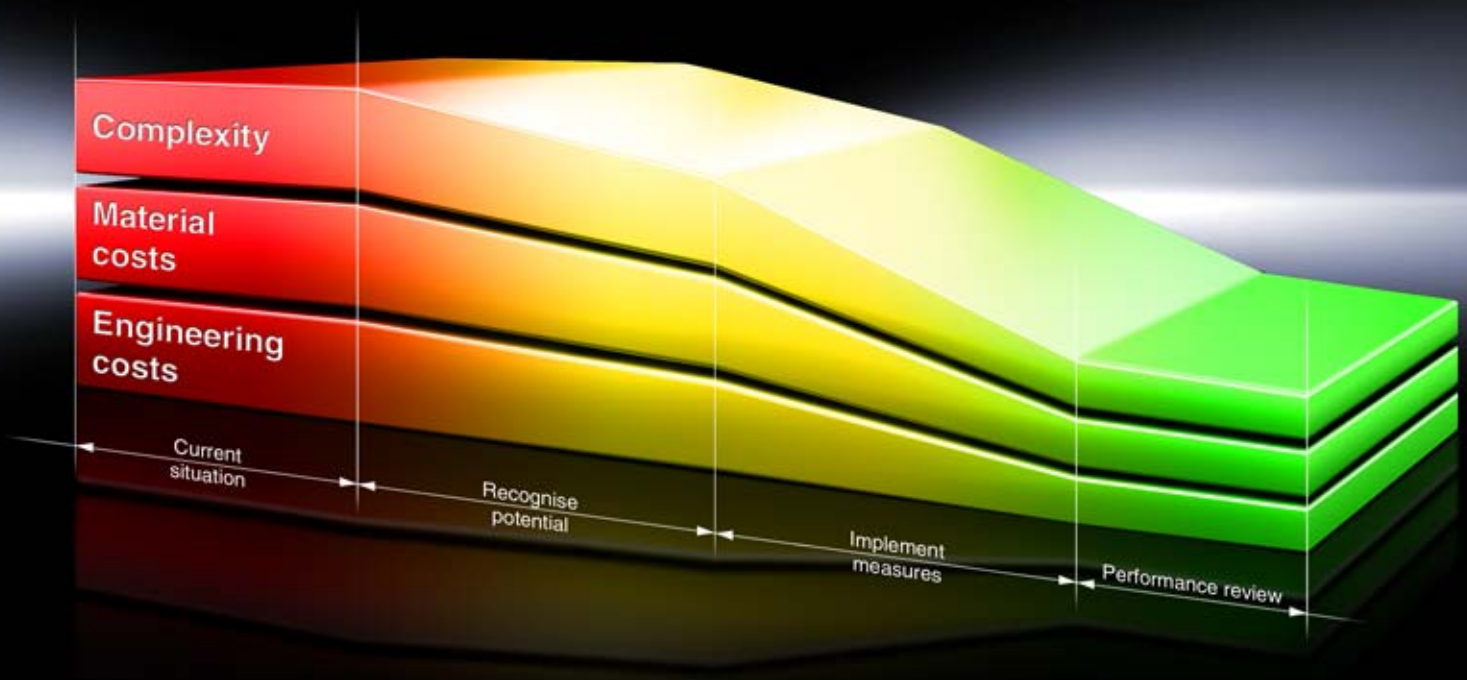
Configuration 525

Monitoring 527

Service 531

Quality management 535

Training courses, seminars and workshops
See our website www.rittal.com


Complexity
Material costs
Engineering costs
Current situation
Recognise potential
Implement measures
Performance review

Rittal system consulting

Rittal offers you more than just efficient products. Rittal can help you to save costs throughout the entire value creation chain. It is a question of uncovering and tapping into hidden potential. A whole team of Rittal experts – who know exactly what they are talking about – are waiting to give you their support. Together with your own specialists, they investigate the full process chain, from initial development and engineering, through to the actual manufacturing. Always on the lookout for optimisation potential.

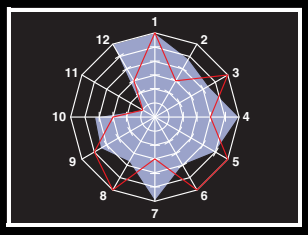
Rittal offers you an ingenious and integrated concept combining consulting, software, products, services and support. A conclusive approach, but nevertheless open to all your individual contributions. Benefit from our proven expertise and long-standing experience. Put our promise to the test.

Rittal has both the consultants and the requisite know-how.

Step 1: Analysis of current situation

Rittal follows a systematic approach to solution-finding.
The starting point is a customer-specific analysis of the current situation at all levels:

- Products, tools and software used
- Defined processes and procedures
- Efficiency of the solution



Step 2: Identify potential

The second step is to uncover the potential for time and cost savings. An individual evaluation scrutinises data consistency, technology efficiency and the options for process optimisation. In many cases, the first savings are already apparent here.

Step 3: Implement measures

With corresponding support from Rittal, the customer can now translate the theoretical results into concrete efficiency-boosting measures.
Rittal possesses all the necessary intelligent tools, solutions and systems. Each component is perfectly integrated – without compromise, without the need for improvisation.

Step 4: Performance review

A systematic approach is the key to significantly enhanced efficiency. To this end, Rittal offers a complete package (products, planning and software, service and support). After a defined period, we join you to review the success of the implemented measures.

RiCAD 3D

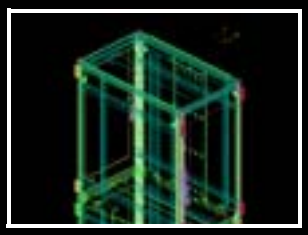
The download platform for seamless integration of Rittal CAD data into your plant designs – 3D data for efficient planning
Regardless of which CAD system you use, RiCAD 3D effectively supports the efficiency and productivity of your plant design work.

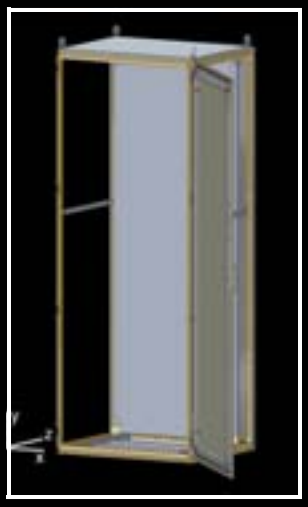
It includes both 2D and 3D drawings for virtually all Rittal products, together with an extensive range of system accessories.

Benefits:
- Precisely detailed CAD product data
- Export in all standard CAD formats
- Simple integration into the most varied CAD systems
- Considerable reduction of engineering and design work
- Error-free, detailed Rittal data
- Generic original data in 3D and 2D format
- No conversion of neutral formats

CAD data in the following formats:
- DWG.3D
- ProE 2001
- ProE Wildfire
- SolidWorks 3D
- Neutral Step format

Fast online access to original data in many other CAD formats with direct downloading facility available at: **www.rittal.com**





AE Laser Express

Rittal provides a very special service: You will receive an enclosure that has been assembled as defined in your specifications, finished with cut-outs and drilled holes and painted in the special colour that you stipulated within just 7 days!

Benefits:
- Send us your drawing via our Internet portal. You will receive your quote within the next 24 hours.
- Production will start as soon as we receive your order.
- Within 7 days, customers in Germany will receive their own compact enclosure, custom-manufactured for their particular application.

www.rittal.com

EPLAN platform

- EPLAN electric P8
- EPLAN pro panel
- EPLAN fluid
- EPLAN ppe
- EPLAN cabinet
- EPLAN data portal
- EPLAN engineering center

All applications on the same, consistent platform technology

- Uniform project planning environment for electrical, fluid, EI&C engineering and 3D assembly design
- Consistent project data and component management
- Modularisation for individual system configuration
- Open system architecture for seamless system integration
- Cross-platform basic functions

www.eplan.com

EPLAN electric P8

The new dimension in engineering.

- Professional project planning, documentation and administration of electrical engineering automation projects
- Optimisation of the engineering process through standardisation, reuse and automated circuit diagram generation
- Variant technology – unique, powerful, convincing
- High-end electrical project planning – process-oriented and automated
- Transfer and processing of data from upstream processes
- Qualified master data ready to use “out-of-the-box”
- Consistent support in circuit diagram generation

EPLAN pro panel

- High-end 3D assembly layouts for electrical and fluid design
- Description of the assembly layout with virtual 3D prototypes
- EPLAN eTouch technology for the simplest handling
- Positioning aids for optimum dimensioning and utilisation of the available space
- Planning confidence by taking manufacturer data into account
- 50% or more time savings with layout
- Early availability of precise production documents
- Precise-fit components for greater assembly efficiency
- Complete consistency with participating engineering disciplines
- Improved communications thanks to high-quality documentation

EPLAN fluid

From drawing to engineering.

- Clear project structures instead of a single drawing
- The latest symbol data based on the current standard ISO 1219
- Consistency in electro-hydraulic system documentation
- Direct connection of parts lists and hydraulic diagrams
- Automatic documentation of revisions

EPLAN ppe

For consistent engineering with process technology in mechanical and plant engineering

- Professional planning and project management of EI&C technology in process-related machinery and plant
- Generation of plant overviews, P&I diagrams, administration of PIC points, and documentation
- Smooth-running interdisciplinary cooperation thanks to deep platform integration
- Optimum support for both preplanning and detailed planning

EPLAN cabinet

Efficient enclosure production in the product development process

- Transfer of equipment and wiring information from the upstream electrical design
- 3D configuration of mounting plates and enclosures
- Automatic calculation of optimum wiring routes and wire lengths
- Transfer of production data to NC machines
- Transfer of assembly data to wire assembly machines
- High-quality product data thanks to links with RiCAD 3D

EPLAN data portal

Web-based supply of high-quality equipment data.

- Seamless integration into the EPLAN platform
- Fast project planning with no media interruptions
- Minimal effort required for master data maintenance
- Enhanced quality, thanks to high-quality templates
- Extensive additional information
- Multi-lingualism at no extra cost
- Uniform layout and complete documentation

EPLAN engineering center

Functional engineering for unimaginable productivity benefits.

- Functional engineering is the crucial link between sales, design and service
- Existing projects indicate potential savings of up to 80%
- EEC guarantees rapid commissioning on the basis of tested, standardised machine functions
- Cross-disciplinary engineering minimises the need for coordination and speeds up the time to market
- EEC proves that: module-based engineering cuts costs and permanently improves quality
- The EPLAN EC automatisms prevent the usual last minute changes from becoming a project cost trap
- A central database ensures engineering expertise and allows rapid induction during peak project times

ABB
ABB

Therm 6.1 software

The Therm 6.1 software package takes care of the complex calculation of climate control requirements. A user-friendly interface guides the operator to the most suitable, correctly dimensioned climate control component.
All evaluations are closely based on the requirements of IEC/TR 60 890 AMD 1/02.95 and DIN 3168 for enclosure cooling units.

Rittal Therm 6.1 is a calculation program for enclosure climate control.

- Improved user guidance via tabs and simple selection menus
- Express and expert versions
- Configurator for recooling systems
- Heat loss calculator for busbars
- Key calculation data is visible at all times
- Internet updates
- Fast and thorough determination of the required climate control measures
- Determining the correct climate control measures leads to cost savings
- Easy calculation of the required actual cooling output, as well as any upgrades or enhancements to the switchgear
- Detailed documentation is supplied with the calculation

Packs of	**Model No. SK**
1	**3121.000**

Supply includes:
CD-ROM, with 19 languages

Note:
Your free 30-day trial version may be downloaded at **www.rittal.com**

Rittal Power Engineering

Planning software for RiLine60 busbar systems and Ri4Power low-voltage switchgear with design certificate

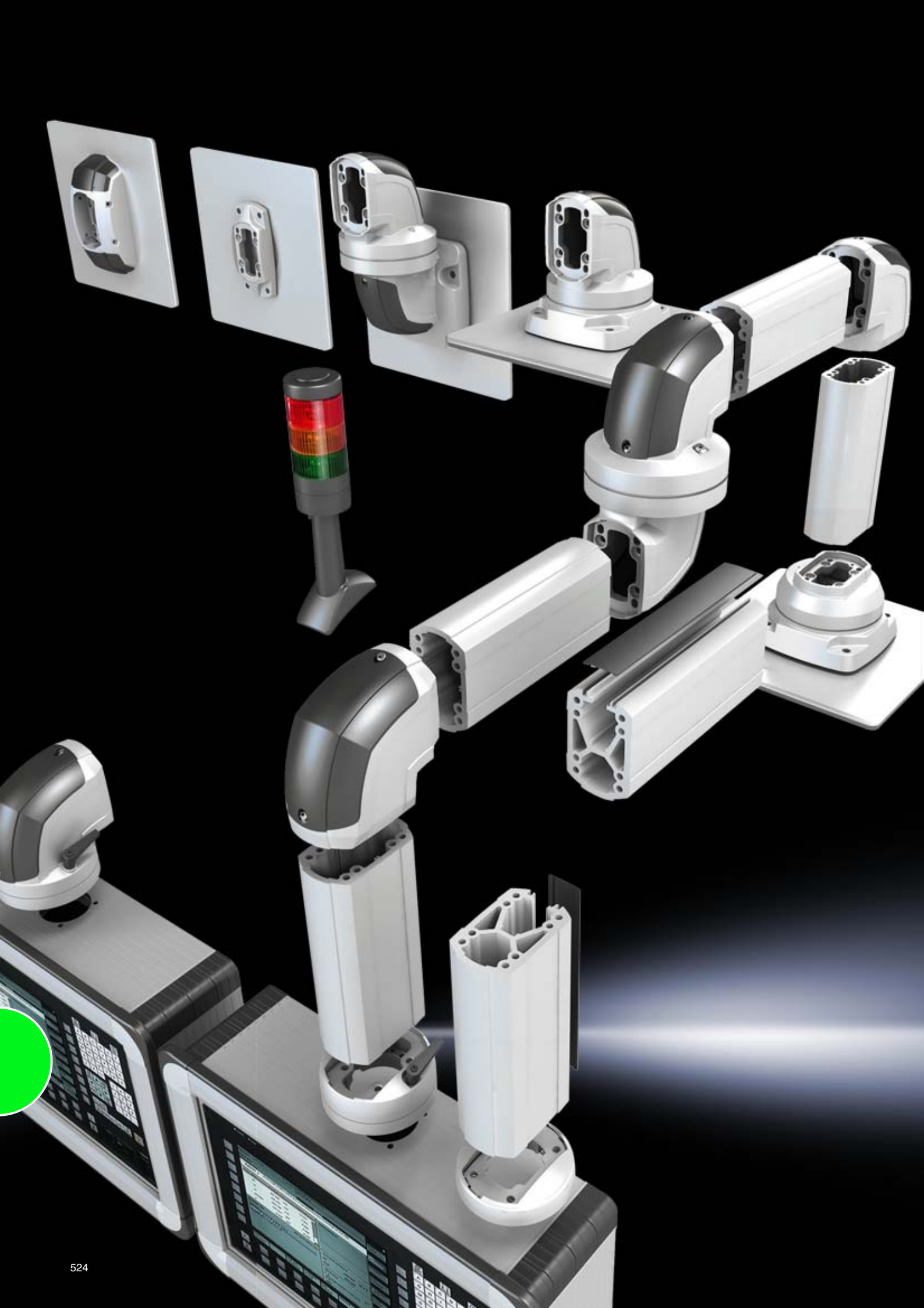
The multi-lingual software package includes the following functions:

- Project handling, from the initial enquiry through to ordering
- Configuration of RiLine60 busbar systems in the Top enclosure system TS 8. Compact enclosures AE, CM, KS and free-standing enclosure ES 5000
- Configuration of low-voltage switchgear with Ri4Power systems Form 1-4 and ISV
- Complete, automatic function for the generation of bills of materials and a calculation program for quote preparation
- Input and evaluation of assembly times to calculate man hours
- Access to the entire range of Rittal products
- Output of automatically generated plant documentation with rated current and heat loss calculation

Packs of	**Model No. SV**
1	**3020.500**

- Generation of special fields configured by the customer with graphical processing in the CAD view
- Import/export interfaces for product and CAD data
- Export function for order lists and bills of materials in Excel format
- Interface to EPLAN Electric P8, for the export of CAD data and bills of materials
- The extra benefit for engineering and planning offices: output of detailed tender texts based on plants that have been project-planned in Power Engineering in MS Word format.
- Output of project-specific assembly plans together with field and plant definitions
- Integral configurator for the generation of drawings and bills of materials to create connector kits for connecting open air circuit-breakers (ACB).

Supply includes:
CD-ROM
Languages: German/English/French/Dutch/Danish/Swedish/Czech/Italian/Spanish/Polish/Russian



TS 8 configurator

A complete enclosure configured in just eight clicks, including parts list and 3D model.

Benefits:
- Easy menu-assisted configuration of a bayed TS 8 enclosure with base/plinth, side panels and the handle system required
- Mounting rails and punched sections with mounting flanges can be pre-assembled for interior installation
- This will produce a 3D drawing that can be incorporated directly into the system design or integrated into EPLANCabinet

www.rittal.com

Command panel configurator

Optimised, coordinated solutions for the human/machine interface based on Rittal Comfort Panel and Optipanel

Benefits:
- Select the enclosure that holds the panels to be used (the integrated database contains a variety of commercial panels from various manufacturers)
- Easy navigation thanks to the list of related questions
- Quick compilation of the features required
- Request a quote based on the selected data
- Request the 3D data for integration in the system design

www.rittal.com

Support arm configurator

The system is able to precisely define the correct support arm system using important user-specific parameters such as the jib length, enclosure weight or required cable cross-section.

Benefits:
- Individual assembly tailored to the user's specific requirements
- Integrated consistency checking
- Configured system parts list

www.rittal.com

CM configurator

Rittal CM compact system enclosures combine the advantages of the AE compact system enclosure with the configuration diversity of the TS 8 top enclosure system.

Benefits:
- Simple menu-assisted selection of a CM enclosure together with a base/plinth and gland plates that meet the requirements
- The relevant interior installation accessories can also be selected to match the chosen enclosure
- The end result will enable you to request a quote that reflects the actual configuration selected

www.rittal.com

Subrack configurator

Generate a component-based order list for a subrack in just a few clicks

Benefits:
- Fast, reliable selection of individually coordinated systems in the Ripac Easy and Ripac Vario series
- Simple prompt masks reliably create technically feasible solutions with error-free order lists
- Intelligent plausibility checking of admissible component combinations
- Request a quote based on the order list generated
- Parts list for the configured subrack

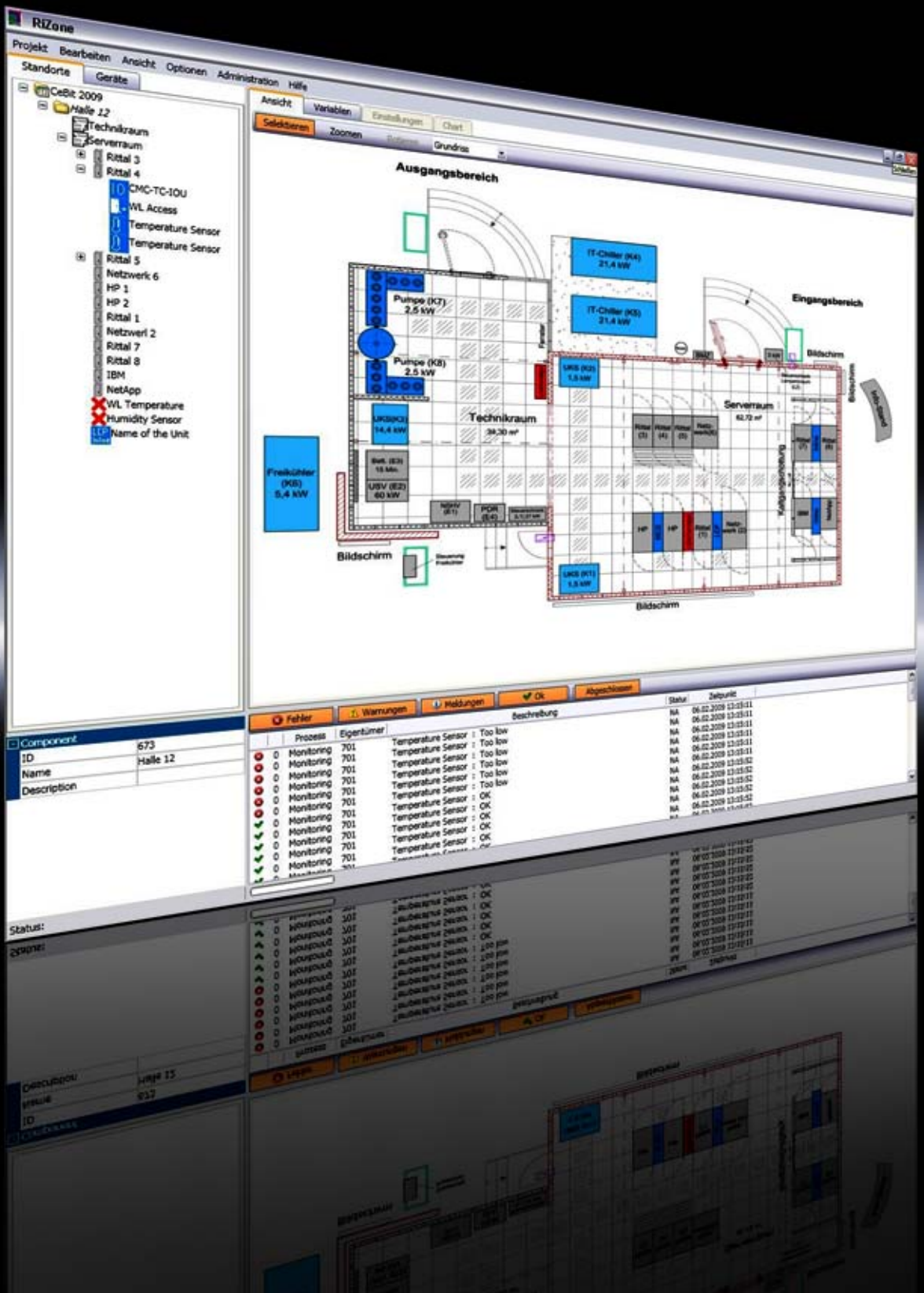
www.rittal.com

IT configurator

Rittal offers the ideal system solution for every networking task, matched to the user's individual demands.

Benefits:
- A specific enclosure can be selected
- Accessories can be configured
- Plausibility checking
- The end result will enable you to request a quote that reflects the actual configuration selected

www.rittal.com


RiZone
Projekt Bearbeiten Ansicht Optionen Administration Hilfe
Standorte
Geräte
CeBit 2009
Halle 12
Technikraum
Serverraum
Rittal 3
Rittal 4
CMC-TC-IOU
WL Access
Temperature Sensor
Temperature Sensor
Rittal 5
Netzwerk 6
HP 1
HP 2
Rittal 1
Netzwerl 2
Rittal 7
Rittal 8
IBM
NetApp
WL Temperature
Humidity Sensor
Name of the Unit
Ansicht
Variablen
Selektieren
Zoomen
Grundriss
Ausgangsbereich
Eingangsbereich
IT-Chiller (K4) 21,4 kW
IT-Chiller (K3) 21,4 kW
Pumpe (K7) 2,5 kW
Pumpe (K8) 2,5 kW
Technikraum
Serverraum
Freikühler (K6) 5,4 kW
USV (E2) 60 kW
Bildschirm
Component
ID
Name
Description
673
Halle 12
Fehler
Warnungen
Meldungen
Ok
Abgeschlossen
Prozess
Eigentümer
Beschreibung
Status
Zeitpunkt
Monitoring
701
Temperature Sensor : Too low
Temperature Sensor : OK
Status:

RiZone Appliance Standard

RiZone is supplied as an appliance or a software appliance.

As an appliance, RiZone is supplied with global support, installed on a powerful server. The software appliance is available as a virtual server which can easily be used on existing hardware in the data centre.

Also required:

RiZone Appliance IP node licence according to the number of IP nodes available.

Standard version	Model No. DK		
Hardware appliance[1)]	Server with Windows	RiZone software	RiZone graphics tool
	7990.101	**7990.201**	**7990.301**
Software appliance[1)]	Hard drive + Windows	RiZone software	RiZone graphics tool
	7990.103	**7990.203**	**7990.303**

[1)] All Model Nos. on the same line belong together, and must always be ordered together.

RiZone Appliance High-MTBF

In addition to the standard version, the high-MTBF version scales up to Tier IV availability as per the Uptime Institute's definition.

RiZone is supplied as an appliance or a software appliance.

As an appliance, RiZone is supplied with global support, installed on a powerful server. The software appliance is available as a virtual server which can easily be used on existing hardware in the data centre.

Also required:

RiZone Appliance IP node licence according to the number of IP nodes available.

High-MTBF version	Model No. DK		
Hardware appliance[1)]	Server with Windows	RiZone software	RiZone graphics tool
	7990.102	**7990.202**	**7990.302**
Software appliance[1)]	Hard drive + Windows	RiZone software	RiZone graphics tool
	7990.104	**7990.204**	**7990.304**

[1)] All Model Nos. on the same line belong together, and must always be ordered together.

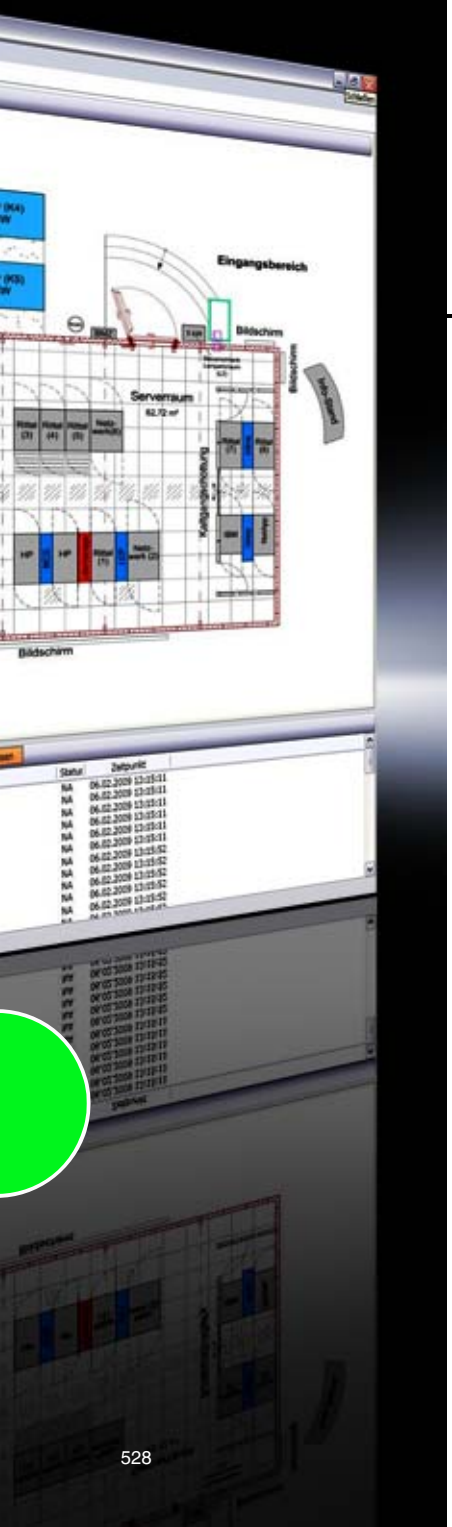
RiZone Appliance IP node licence

The flexible RiZone licence model allows optimum adaptation to any project size, while at the same time allowing the opportunity to grow with the data centre.

The volume licences for the IP nodes are graduated from 10 to 1000 nodes and may be adapted precisely to the size of the data centre. For each active component or other SNMP-compatible component to be covered, one node licence is required.

For no. of IP nodes[1)]	Console licences included	Model No. DK	
		RiZone software	RiZone graphics tool
10	2	**7990.205**	**7990.305**
25	4	**7990.206**	**7990.306**
50	4	**7990.207**	**7990.307**
100	8	**7990.208**	**7990.308**
250	10	**7990.209**	**7990.309**
500	15	**7990.210**	**7990.310**
1000	20	**7990.211**	**7990.311**

[1)] All Model Nos. on the same line belong together, and must always be ordered together.



Client Access licence

Additional licence for operation of another RiZone console.

	Model No. DK	
For 10 IP nodes[1)]	RiZone software	RiZone graphics tool
	7990.213	**7990.313**

[1)] All Model Nos. on the same line belong together, and must always be ordered together.

RiZone module SNMP support for units from other manufacturers

For the incorporation of SNMP-compatible units from other manufacturers into RiZone. With MIB browser.

Extension	Model No. DK
RiZone SNMP support for units from other manufacturers	**7990.014**

Microsoft Operations Manager Management Pack

For integrating RiZone into the Microsoft Operations Manager.

Extension	Model No. DK
Microsoft SCOM Management Pack	**7990.012**

RCCMD software

Client software to control the server shutdown via the PMC UPS. The software supports all common operating systems and versions (e.g. Windows 7, VISTA, XP, Server 2003/2008, UNIX/LINUX and VMWARE Sphere/ESX Server, CITRIX XEN etc). One licence is required for each server to be shut down on an event-controlled basis.

Licences	**Model No. DK**
Single licence	**7857.421**
Licence bundle (5 servers)	**7857.423**
Licence bundle (25 servers)	**7857.424**

Note:
Software updates and a complete list of currently supported operating systems may be found at **www.rittal.com**.

RiDiag II

For the diagnosis, maintenance and long-term data capture of TopTherm units with Comfort controller. RiDiag logs equipment data and prepares an error list. RiDiag also offers the option of displaying and setting the device's operating parameters. The logging of measurement data can be tracked in real time in the form of a diagram.

Supply includes:
– CD-ROM
  Languages: German/English/Italian/French/Spanish/Portuguese
– Connection cable

Packs of	**Model No. SK**
1	**3159.100**

Rittal Global Service: Always on hand, whenever you need us!

Perfect service for individual requirements, all from a single supplier. That's Rittal Global Service. Wherever in the world you use our products, we are happy to ensure that every aspect of "Rittal – The System." is exactly as it should be. With this in mind, every minute and every kilometre counts when it comes to service. We have set up five strategic service hubs to ensure proximity to our customers: In Germany, the USA, Brazil, China and India. Every hub forms the central heart of our regional service organisations and ensures rapid response times (on-site service engineers) and efficient service handling.

Faster
- Short paths, fast communications: Thanks to regional service support points
- A perfect interplay between sales, project management and service

Better
- Individual service solutions from a single source
- A high standard of qualifications among Rittal service technicians worldwide
- A uniform global service ticket system

Worldwide
- 5 strategic service support points
- Service representation in more than 60 subsidiaries
- More than 250 service partners and over 1000 service technicians

Around the globe, we can be contacted 365 days a year on the following numbers:

Rittal Europe (Herborn)
✉ **service@rittal.de**
☎ **+49(0)2772 505 1855**

Rittal Asia-Pacific (Shanghai)
✉ service@rittal.cn
☎ +86 800 820 0866

Rittal North America (Urbana)
✉ service@rittal.us
☎ +1 (800) 477 4000 Option 3

Rittal Middle East (Bangalore)
✉ service@rittal-india.com
☎ +91 80 22 890 78

Rittal South America (São Paulo)
✉ service@rittal.com.br
☎ +55 11 36 22 23 77

Service from a single partner

- 24/7/365 service availability
- Highly qualified service specialists
- Service engineers on site within 8 hours
- Automated incident and emergency management
- Individual availability of spare parts
- Global service ticket system

Configuration and assembly
Commissioning
Repair and maintenance
Spare part management
Availability 24/7/365
Manufacturer's guarantee up to 5 years
Advice and training
Service agreements
Customer

Individual service throughout the entire product lifecycle

Rittal's added value begins with the perfect quality of our products, and extends throughout every phase, from planning and commissioning, right through to support and servicing once the system is up and running.

The added extra for customers with the Rittal system: Firstly, our comprehensive global service network, which complements the high quality and reliability of our products. And secondly, an extended guarantee above and beyond the statutory warranty for defects, thereby ensuring maximum availability during operation.

We have developed a range of individual service offerings for our customers, so that every potential requirement profile is covered.

In this way, we permanently ensure the systems' productivity on behalf of our customers. Services play a decisive role in our lifecycle management approach. You decide for yourself which service you need.

We are committed to perfection at every phase

PRE-SALES

- Advice/information
- Requirement analysis (on site)
- Load tests
- Simulation and calculation
- Thermal imaging
- Laboratory testing in our own accredited laboratories
- Project meeting
- Prototyping
- Planning/team-building (sales, service, project management, quality assurance, customer)

IMPLEMENTATION

- Installation/integration
- Assembly and system connection
- Commissioning/parameterisation
- Final inspection and handover
- Instruction (training)
- Site coordination/project management
- Certification

AFTER-SALES

- Service contracts
- Training
- Inspection, maintenance/servicing, repair
- Management/sale of spare parts
- Round-the-clock availability
- Thermal analyses

Flexible service contracts: The right solution to suit every requirement.

Rittal Global Service is just as flexible and individual as your requirements.
An overview of the features of the various Rittal service packages:

	Availability	Response time	Spare parts availability	Repair	Warranty extension
BASIC	Business hours	Next working day	Standard	1 x per annum	Optional
COMFORT	Business hours	Next day	Standard	2 x per annum	Optional
ADVANCED	24 hours 365 days a year	Next day	24 hours	2 x per annum	Yes
FULL	24 hours 365 days a year	8 hours	Individual concept	Individual (at least 2 x/annum)	Yes
CUSTOMIZED	Individual by arrangement				

Warranty extension

Rittal products are always an excellent choice. Day after day, around the globe, they prove their high quality and reliability in tough industrial production environments. With regular preventive maintenance, you can help to further extend the product's service life and the cost-effectiveness of your plant. Anyone purchasing an “Advanced” or “Full” contract will be rewarded with a 1-year to 3-year warranty extension, up to a maximum of 5 years. With “Basic”, “Comfort” and “Customised” contracts, warranty extensions are optional.

055
055
055

Quality management is a must. Quality philosophy is an attitude.

“Rittal – The System.” stands for consistent quality management and on-going refinements to products, services and internal processes.
Rittal quality management ensures that regulations and standards are observed, and individual customer requirements are met. In addition to this, we also define our exacting product quality demands in supplementary Rittal standards. The consistent Rittal quality philosophy guarantees perpetually high standards and ensures the global usability of all products with countless international approvals and licences.

Alongside product quality, we also focus on process and service quality.
All internal processes are continuously refined by quality control groups, and reviewed during in-house audits. Each year, our improvements and high standards are verified by countless successful external system and customer audits.

Rittal offers support from day one
- Project planning of technical specifications
- Prototype assembly, testing and simulations
- Manufacturing and assembly
- Warehousing service and on-time delivery
- Your own personal point of contact throughout the entire project

Accredited Rittal test laboratory in Germany
- Simulation of climatic conditions
- Dynamic and static load tests
- 3D measurement
- Particle density testing
- Hosed water tests
- Salt spray tests
- Electrical safety and function tests
- Performance testing of all active products
- Various material tests

CERTIFICATE OF PARTICIPATION

Underwriters Laboratories Inc.

Client Test Data Program (CTDP)

Zertifikat

FRIEDHELM LOH GROUP
Rittal GmbH & Co. KG
Auf dem Stützelberg
DE-35745 Herborn

ISO 9001:2008 Qualitätsmanagement-System
ISO 14001:2004 Umweltmanagement-System
OHSAS 18001:2007 Arbeitssicherheits- und Gesundheitsschutz-Managementsystem

System accessories

Enclosures

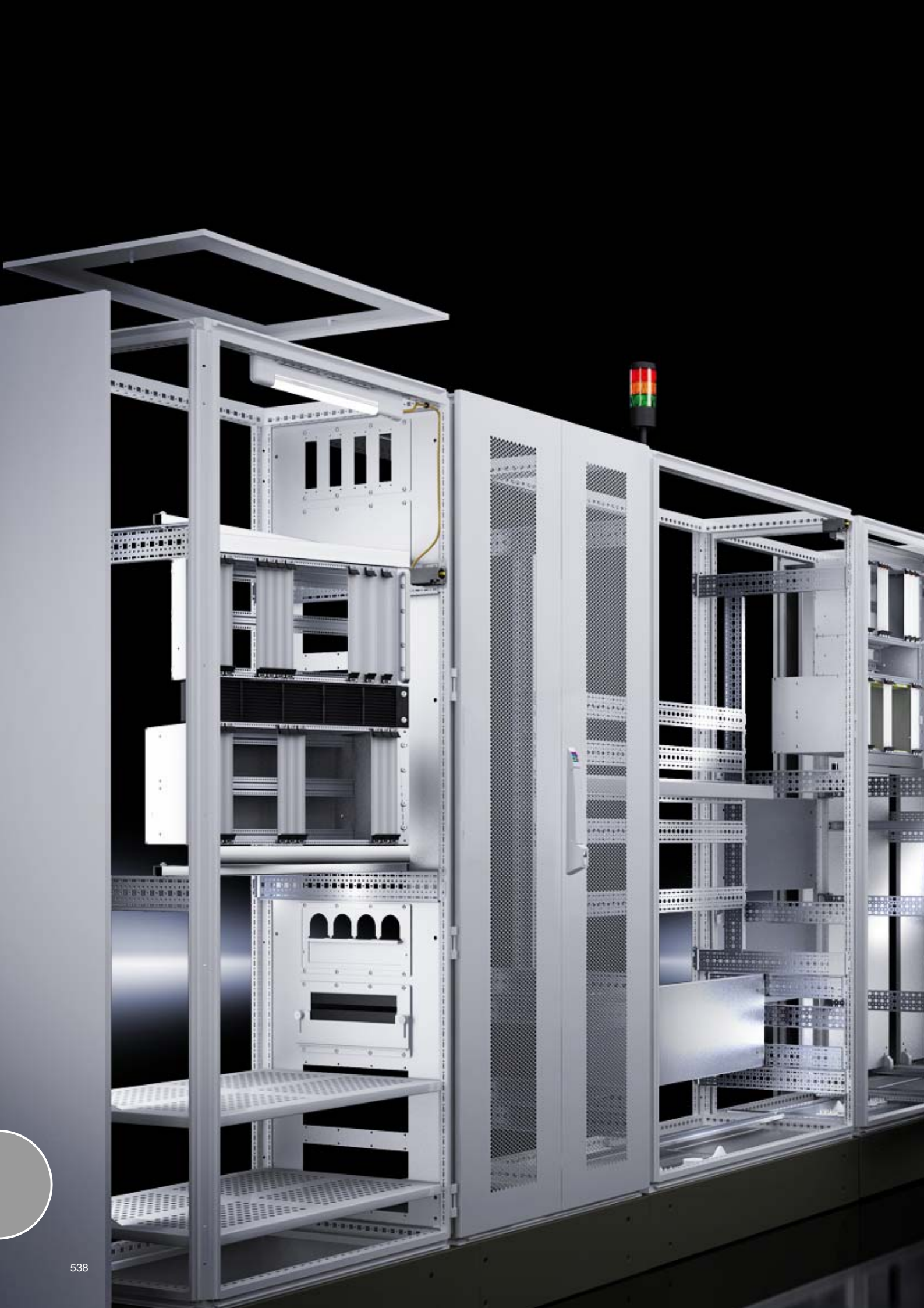
Base 540
Walls 567
Baying system 576
Doors/locks 584
Roof/wall mounting 619
Interior installation 631
Voltage supply 695
Cable management 701
482.6 mm (19″) installation 733

Monitoring

CMC III Processing Unit/Compact 768
CMC III sensors 773
CMC III accessories 774
Door Control System 778
Monitor/keyboard unit 780
KVM switch 781
Dynamic Rack Control 787

Human/machine interface

Handles 790
External mounting accessories 792
Front assembly 794
Monitors 796
Keyboards, supports and drawers 798
Interfaces 806
Signal pillars 808



System accessories for enclosures

Base

Flex-Block base/plinth 540
TS base/plinth 542
Base/plinths 550
Base 555

Walls

Side panels 567
Divider panels/partitions 571
Isolator door locking 575

Baying system

Enclosure suites 576
TS 8 corner enclosures 583

Door/locks

Door variants 584
Modular front design for TS 8 589
Modular front design for Form 2-4 592
Viewing panels/operating panels 595
Lock systems 599
Hinges 613
Door, internal 614

Roof/wall mounting

Roof 619
Wall mounting bracket 627

Interior installation

Mounting plates 631
Rail systems 640
Assembly components 659
Component shelves 668
System lights 679
EMC 686
Earthing 689
Socket strips 695

Cable management

Cable entry 701
Gland plates 704
Cable gland 709
Cable gland 712
Cable management 715
482.6 mm (19˝) cable routing 727

482.6 mm (19˝) installation system

Swing frame 733
Mounting angles 739
Mounting kits for mounting angles 745
Accessories for Data Rack 748
Slide rails 749
482.6 mm (19˝) installation 752
Patch panels 759
Splicing boxes 762
LSA connection system 764

Flex-Block base/plinth system

Flex-Block

For TS and SE

– For fast, toolless assembly
– Individual cable management
– Fully symmetrical base/plinth
– Base/plinth height: 100 mm

Solid, RAL 9005

For enclosure size mm		Packs of	Model No. SO
400	500	1	**8001.450**
400	600	1	**8001.460**
600	500	1	**8001.650**
600	600	1	**8001.660**
600	800	1	**8001.680**
800	400	1	**8001.840**
800	500	1	**8001.850**
800	800	1	**8001.880**
800	1000	1	**8001.800**
1000	400	1	**8001.040**
1000	500	1	**8001.050**
1000	600	1	**8001.060**
1200	400	1	**8001.240**
1200	500	1	**8001.250**
1200	600	1	**8001.260**
1200	800	1	**8001.280**
1600	400	1	**8001.940**
1800	500	1	**8001.950**

We reserve the right to make technical modifications.
Delivery times available on request.

Solid, RAL 7035

For enclosure size mm		Packs of	Model No. SO
600	600	1	**8001.665**
600	800	1	**8001.685**
600	1000	1	**8001.605**
600	1200	1	**8001.625**
800	800	1	**8001.885**
800	1000	1	**8001.805**
800	1200	1	**8001.825**

We reserve the right to make technical modifications.
Delivery times available on request.

Vented in enclosure width, RAL 7035

For enclosure size mm		Packs of	Model No. SO
Width mm	Depth mm		
600	600	1	**8001.661**
600	800	1	**8001.681**
600	1000	1	**8001.601**
600	1200	1	**8001.621**
800	600	1	**8001.861**
800	800	1	**8001.881**
800	1000	1	**8001.801**
800	1200	1	**8001.821**

We reserve the right to make technical modifications.
Delivery times available on request.

Baying clip

for baying the Flex-Block corner pieces
Simply insert the clip from behind into the recesses provided (no need for tools).

Material:
Fibreglass-reinforced polyamide

Packs of	Model No. SO
12	**8000.100**

We reserve the right to make technical modifications.
Delivery times available on request.

Adaptor sleeve

for levelling feet and twin castors
To hold levelling feet and twin castors on the Flex-Block

Packs of	Model No. SO
12	**8000.500**

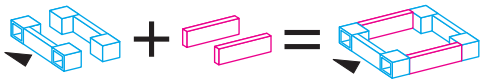
We reserve the right to make technical modifications.
Delivery times available on request.

TS base/plinth

Modular base/plinth diversity

Regardless of the enclosure depth:
The base/plinth components at the front and rear, pre-configured with corner pieces, are always the same for the chosen width.
Only the side trim panels are selected according to the enclosure depth and the required base/plinth configuration. The modular concept produces exceptional advantages in terms of cost and function.

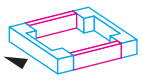
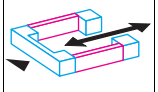
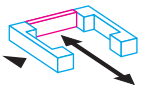
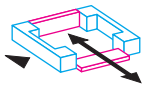
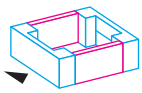
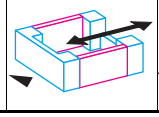
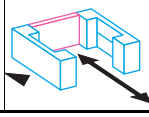
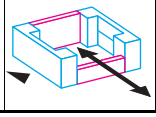
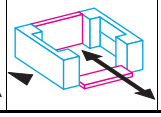
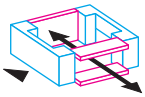
Mounting on the enclosure is conveniently carried out from the outside. The base/plinth interior offers diverse opportunities for mounting levels for cable management.



One Model No. for the **base/plinth components** front and rear.

One Model No. for the **base/plinth trim,** side.

A complete **base/plinth TS.**

Base/pl. height	Basic form	Cable gland options			Stabilisation of bayed base/plinth	
100 mm						
200 mm						

Function and cost benefits

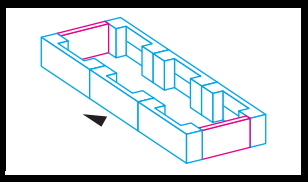
Fewer parts, more opportunities, lower purchasing, storage and assembly costs – this is the formula behind the new modular base/plinth system.

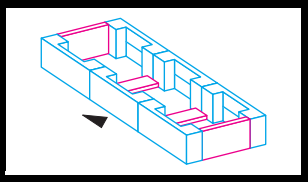
The following table shows three bayed base/plinths in 200 mm height illustrating a wide range of possible solutions and the potential savings with trim panels compared with the previous 200 mm base/plinth system each with two trim panels of 100 mm height at the sides.

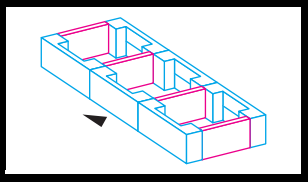
New supply includes	Functional benefits	Savings potential compared with twelve 100 mm trim panels
3 Packs of base/plinth components 1 Packs of base/plinth trim panel 200 mm high	Continuous cable chamber	2 trim panels 200 mm
3 packs of base/plinth components 1 pack of base/plinth trim panels 200 mm high 1 pack of base/plinth trim panels 100 mm high 1 pack of base/plinth baying brackets TS 8601.100 (packs of 20) 4 are required for this solution	Additional stabilisation for transportation purposes with base/plinth trim rotated through 90°	2 trim panels 200 mm 2 trim panels 100 mm
3 Packs of base/plinth components 2 Packs of base/plinth trim panel 200 mm high	Shielding of the base/plinths in relation to one another	4 trim panels 200 mm
3 packs of base/plinth components 1 pack of base/plinth trim panels 200 mm high 1 pack of base/plinth trim panels 100 mm high	Additional connection of the base/plinths	2 trim panels 200 mm 2 trim panels 100 mm

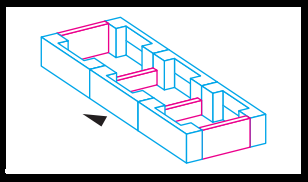
Other options:

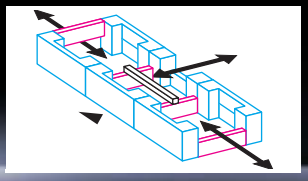
- Cable entry at the side by mounting a 100 mm base/plinth trim panel (top or bottom).
- Cable entry from the rear by dismantling one or more trim panels of the base/plinth components.
- Cable clamp rail fitted on the 100 mm high trim panel.











Base/plinth components front and rear

Sheet steel for TS, CM, TP, PC, IW, TE
Base/plinth component consisting of one trim panel and two pre-configured corner pieces.
In 200 mm high base/plinth components, one trim panel is divided into two for cable entry.

Material:
– Base/plinth components: Sheet steel
– Cover caps: Plastic

Surface finish:
Spray-finished

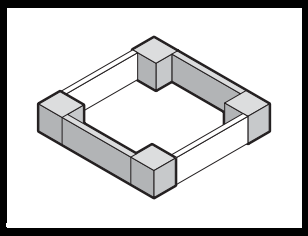
Colour:
Cover caps: RAL 9005/7035

Supply includes:
1 set =
2 base/plinth components, 4 cover caps,
4 screws and captive nuts M12 for mounting on the enclosure.

Accessories:

– Base mounting plate SO 2817.000, see page 546.
– Filter mat for vented versions, see page 548.

Detailed drawings:
Available on the Internet.



100 mm high, colour: RAL 7022

For enclosure width mm	Design	Model No. TS
300	Solid	**8601.915**
400	Solid	**8601.400**
500	Solid	**8601.500**
600	Solid	**8601.600**
800	Solid	**8601.800**
850	Solid	**8601.850**
1000	Solid	**8601.000**
1100	Solid	**8601.300**
1200	Solid	**8601.200**
1600	Solid	**8601.920**

200 mm high, colour: RAL 7022

For enclosure width mm	Design	Model No. TS
300	Solid	**8602.915**
400	Solid	**8602.400**
500	Solid	**8602.500**
600	Solid	**8602.600**
800	Solid	**8602.800**
850	Solid	**8602.850**
1000	Solid	**8602.000**
1100	Solid	**8602.100**
1200	Solid	**8602.200**
1600	Solid	**8602.920**

100 mm high, colour: RAL 7035

For enclosure width mm	Design	Model No. TS
300	Solid	**8601.905**
600	Solid	**8601.605**
	Vented	**7825.601**
	Vented with designer cover	**7825.603**
800	Solid	**8601.805**
	Vented	**7825.801**
	Vented with designer cover	**7825.803**

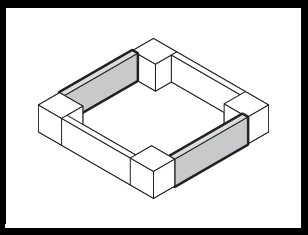
200 mm high, colour: RAL 7035

For enclosure width mm	Design	Model No. TS
300	Solid	**8602.905**
600	Solid	**8602.605**
800	Solid	**8602.805**

100 mm high, colour: RAL 9005

For enclosure width mm	Design	Model No. TS
600	Solid	**8601.602**
	Vented with designer cover	**7825.605**
800	Solid	**8601.802**
	Vented with designer cover	**7825.805**

TS base/plinth



Base/plinth trim panels, side

Sheet steel for TS, CM, TP, PC, IW, TE
For mounting between the base/plinth components. At 200 mm height, two 100 mm base/plinth trims may be used. Base/plinth trim (100 mm high) may be installed rotated through 90° in order to stabilise bayed base/plinth components.

Material:
Sheet steel

Surface finish:
Spray-finished

Supply includes:
1 set =
2 base/plinth trim panels, including parts for attaching to the base/plinth components.

Also required:

Base/plinth baying brackets TS 8601.100, see page 544,
when mounting base/plinth trim panels rotated through 90°.

Accessories:

Assembly bolts for base/plinth, see page 546.

Detailed drawings:
Available on the Internet.

100 mm high, colour: RAL 7022

For enclosure depth mm	Model No. TS
300	**8601.030**
400	**8601.040**
500	**8601.050**
600	**8601.060**
800	**8601.080**

200 mm high, colour: RAL 7022

For enclosure depth mm	Model No. TS
300	**8602.030**
400	**8602.040**
500	**8602.050**
600	**8602.060**
800	**8602.080**

100 mm high, colour: RAL 7035

For enclosure depth mm	Model No. TS
600	**8601.065**
800	**8601.085**
1000	**8601.015**
1200	**8601.025**

200 mm high, colour: RAL 7035

For enclosure depth mm	Model No. TS
600	**8602.065**
800	**8602.085**
1000	**8602.015**
1200	**8602.025**

100 mm high, colour: RAL 9005

For enclosure depth mm	Model No. TS
800	**8601.086**
1000	**8601.010**
1200	**8601.026**

Base/plinth baying brackets

for TS base/plinth
Essential if the trim panels are mounted rotated through 90° for additional stabilisation during the transportation of bayed enclosures.
Additionally required for each trim panel: 2 units.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Screws M8 x 16 mm.

Packs of	Model No. TS
20	**8601.100**

Cable chamber

for TS
With integral system punchings for individual system accessories.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Sheet steel trim panels front and rear
– Assembly parts for mounting on the enclosure.

For enclosures		Model No. TS
Width mm	Depth mm	
400	500	**8600.455**
400	600	**8600.465**
600	500	**8600.655**
600	600	**8600.665**
800	500	**8600.855**
800	600	**8600.865**
1200	500	**8600.255**
1200	600	**8600.265**

Accessories:

Side panels for cable chamber,
see page 545.

Detailed drawings:
Available on the Internet.

Side panels

for cable chamber

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. TS
500	2	**8600.510**
600	2	**8600.520**

Transport castors

for TS base/plinth
For locating onto the base/plinth corner piece 100 or 200 mm high.

Load capacity:
Maximum permissible load per twin castor:
Static 100 kg

Supply includes:
1 set =
4 twin castors,
2 x with, 2 x without locks.

Colour:
RAL 7022

Floor clearance mm	Model No. TS
100	**8800.390**

Also required:

Base/plinth trim, side,
see page 544.

TS base/plinth

Base mounting plate

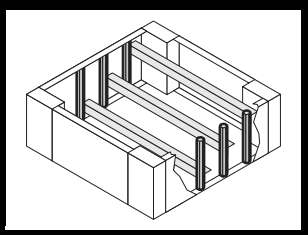
for
- **TS base/plinth**
- **base/plinth, complete**

For fastening the base/plinth to the floor without moving the enclosure or the bayed enclosure suite. For assembly screws up to 12 mm Ø.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	**Model No. SO**
10	**2817.000**



Fastening bolts

for
- **TS base/plinth**
- **Base/plinth, complete**
- **Base/plinth, stationary**

For mounting on base/plinth trim panels, side. The lockable assembly bolt allows the installation of cable clamp rails. Tighten with hex spanner, width across flats 19 mm.

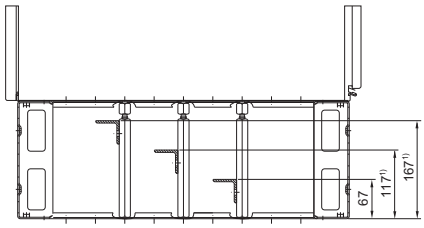
Material:
Hexagon steel

Surface finish:
Zinc-plated

Base/plinth trim panel mm high	Packs of	**Model No. SZ**
100	10	**2819.000**
200	10	**2819.200**

Accessories:

Cable clamp rail,
see page 717.



[1] Only for height 200 mm

Levelling component

for TS base/plinth

For retrospective levelling of floor unevenness at the installation site up to a maximum of 15 mm. Installed through the corner piece of the base/plinth component. Adjusted using a SW 19 hex spanner.

Benefits:
- A door offset caused by uneven flooring can be corrected.
- Installed on the assembled enclosure, i.e. no need to plan levelling in advance.

Max. admissible static load:
2500 N per levelling component (check the load capacity of the floor).

Supply includes:
Assembly parts.

For base/plinth height mm	Packs of	**Model No. SZ**
100	4	**2891.000**
200	4	**2892.000**

Cover cap

for TS base/plinth components
As a replacement.

Material:
Plastic ABS

Colour:
RAL 9005

For base/plinth height mm	Packs of	Model No. TS
100	4	**8601.130**
200	4	**8601.140**

Base/plinth trim

with brush strip
for TS base/plinth
To supplement the modular base/plinth concept. May also be exchanged retrospectively for the front or rear trim panel of the base/plinth components 100 or 200 mm high.
Open on one side for retrospective mounting if cables have already been inserted.

Material:
Sheet steel

Surface finish:
Spray-finished

For base/plinth width mm	Height mm	Colour RAL	Model No. TS
600	100	7035	**7825.607**
800	100	7035	**7825.807**
600	100	9005	**7825.608**
800	100	9005	**7825.808**

Connecting plinth trim

for TS base/plinth
For covering gaps in bayed back-to-back or corner enclosure suites. Simply push in between the trim panel and the corner piece before tightening the screws.

Material:
Sheet steel

Note:
For a base/plinth height of 200 mm, 2 trim panels must be fitted one above the other.

For base/plinth height mm	Colour RAL	Packs of	Model No. TS
100	7022	2	**8601.110**

TS base/plinth

Base/plinth trim

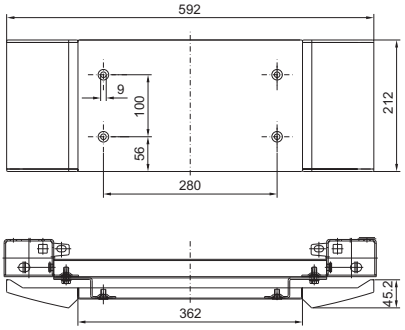
for TS base/plinth
To continue the design of the
- lower front door of PC enclosures
- door of the IW enclosure.

The base/plinth trim is screw-fastened to the corner pieces of the TS base/plinth components from the outside.

Material:
Sheet steel, spray-finished
Designer trim panels: Extruded aluminium section

Colour:
RAL 7015
Designer trim panels: RAL 7035

For base/plinth width mm	Height mm	Model No. PC
600	200	**8360.920**



Base/plinth, static

for PC-TS, IW
Design-coordinated with the enclosures, height 100 mm, with front projection.

Material:
Sheet steel, 2.0 mm

Colour:
RAL 7035
Design component, front: RAL 7015

Supply includes:
– 1 design component, front
– 1 base/plinth component, rear
– 2 base/plinth trims, side

For depth mm	Model No. PC
600	**8800.920**

Accessories:

Attachment opportunities for:
– Twin castors DK 7495.000, see page 556,
– Levelling feet PS 4612.000, see page 555.
– Fastening bolt for cable clamp rails SO 2819.000, see page 546,
– Support bracket PS 4183.000, see page 661.

Filter mat

for
- **Base/plinth component, vented**
- **Base/plinth component, vented, with designer trim panel**

To cover the trim panel in the base/plinth component.
The mounting frame slides into position behind the filter mat in the base/plinth trim panel.
Filter class G3 to DIN EN 779.

Supply includes:
Mounting frame.

For enclosure width mm	Packs of	Model No. DK
600	1	**7561.500**
800	1	**7581.500**

Spare filter mat

Spare filter mat for base/plinth trim panels up to 800 mm wide.

	Packs of	Model No. DK
Spare filter mats	5	**7582.500**

Base/plinth components front and rear

Stainless steel for TS, CM

Material:
Stainless steel 1.4301 (AISI 304)

Surface finish:
Brushed, grain 400

Supply includes:
Mounting accessories for mounting on the enclosure.

100 mm high:
2 trim panels front/rear

200 mm high:
– 2 corner pieces with removable trim panel
– 1 trim panel front/rear

For enclosure width mm	Height mm	Model No. TS
600	100	**8701.600**
800	100	**8701.800**
1200	100	**8701.200**
600	200	**8702.600**
800	200	**8702.800**
1200	200	**8702.200**

Accessories:

Base/plinth trim, modular (perforated plate), see page 549.

Base/plinth trim panels, side

Stainless steel for TS, CM
For mounting between the base/plinth components. At 200 mm height, two 100 mm base/plinth trims may be used.
Base/plinth trim (100 mm high) may be installed rotated through 90° in order to stabilise bayed base/plinth components.

Material:
Stainless steel 1.4301 (AISI 304)

Surface finish:
Brushed, grain 400

Supply includes:
2 base/plinth trim panels, including parts for attaching to the base/plinth components.

For enclosure depth mm	Height mm	Model No. TS
400	100	**8701.040**
500	100	**8701.050**
600	100	**8701.060**
400	200	**8702.040**
500	200	**8702.050**
600	200	**8702.060**

Also required:

Base/plinth baying brackets TS 8601.100, see page 544,
when mounting base/plinth trim panels rotated through 90°.

Accessories:

– Assembly bolts for base/plinth, see page 546.
– Levelling feet PS 4612.000, see page 555.

Detailed drawings:
Available on the Internet.

Base/plinth trim, modular

for
- **TS base/plinth**
- **base/plinth, complete, stainless steel**

For cable routing in the stainless steel base/plinth, e.g. if levelling feet SO 2890.000 or SO 2890.000, see page 553, are used. Width: 175 mm.

Material:
Stainless steel 1.4301 (AISI 304)

Supply includes:
4 base/plinth trim panels.

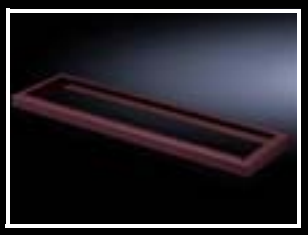
Note:
One base/plinth trim panel is needed per 200 mm base/plinth width.

For enclosure depth mm	Packs of	Model No. SO
400	4	**2907.000**
500	4	**2908.000**
600	4	**2913.000**

Accessories:

Cable tie SZ 2597.000, see page 720.

Base/plinths



Transport plinth

for TS
For the transportation of heavy, bayed enclosure suites. Available in 200 mm increments from 2 to 5 m.
Transport plinths can have 2 tubes welded to receive cross-bars for transportation.
Variable punchings to suit all enclosure widths of 600 mm and above.

Surface finish:
Primed in reddish-brown rust-inhibiting paint, optionally spray-finished.

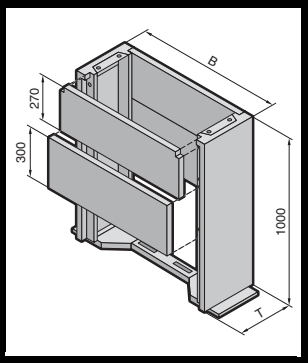
Supply includes:
With transport tubes.

Note:
Please state the required width and depth of the enclosure suite when ordering.

For mounting on the TS base frame

Transport plinth depth = enclosure depth – 31 mm		
Colour	Packs of	**Model No. SO**
Primed, reddish-brown rust-inhibiting paint	1	**1228.010**
Similar to RAL 7022	1	**1228.110**
Similar to RAL 7035	1	**1228.310**

Delivery times available on request.



Concrete base/plinth

for CS Toptec, CS modular and basic enclosures
The base/plinth is made from pre-cast concrete sections which are easily fitted in situ. Front/rear base/plinth plate screw-fastened from the inside may be removed for servicing purposes.
Overall height: approx. 1000 mm, excavation depth: approx. 700 mm.

Material:
Light-weight concrete

Surface finish:
Untreated

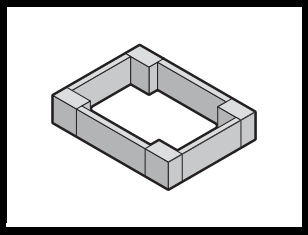
Supply includes:
– 1 base plate
– 2 side parts
– 2 divided base/plinth plates
– Assembly parts and fastening screws for mounting the enclosure.

for CS modular and basic enclosures		Model No. CS
Width (B) mm	Depth (T) mm	
600	400	**9765.182**
600	500	**9765.082**
600	600	**9765.083**
800	400	**9765.088**
800	500	**9765.084**
800	600	**9765.085**
1200	400	**9765.089**
1200	500	**9765.086**
1200	600	**9765.087**

Delivery times available on request.

For CS Toptec		Model No. CS
Width (B) mm	Depth (T) mm	
600	600	**9765.166**
800	600	**9765.186**

Delivery times available on request.



Base/plinth, complete

Sheet steel for AE, TP, ES
Trim panels at the front and rear with fitted corner pieces and side trim panels.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7022

Supply includes:
Mounting accessories for mounting on the enclosure.

100 mm high:
– 4 corner pieces
– 2 trim panels front/rear
– 2 trim panels, side

200 mm high:
– 4 corner pieces
– 1 trim panel front/rear x 200 mm
– 2 trim panels front/rear x 100 mm
– 4 trim panels, side

Base/plinth for ES, TP universal console, 100 mm high

For enclosures/consoles		Base/plinth depth mm	Model No. SO
Width (B) mm	Depth (T) mm		
600	400	350	**2804.200**
600	500	450	**2807.200**
800	400	350	**2823.200**
800	500	450	**2829.200**
1000	400	350	**2909.200**
1200	400	350	**2836.200**
1200	500	450	**2839.200**
1600	400	350	**2905.200**
1800	500	450	**2903.200**

Base/plinth for ES, TP universal console, 200 mm high

For enclosures/consoles		Base/plinth depth mm	Model No. SO
Width (B) mm	Depth (T) mm		
600	400	350	**2805.200**
600	500	450	**2808.200**
800	400	350	**2824.200**
800	500	450	**2830.200**
1000	400	350	**2910.200**
1200	400	350	**2837.200**
1200	500	450	**2840.200**
1600	400	350	**2906.200**
1800	500	450	**2904.200**

Base/plinth for AE, 100 mm high

For enclosures		Base/plinth depth mm	Model No. SO
Width (B) mm	Depth (T) mm		
600	300	279	**2816.200**
800	300	279	**2818.200**
1000	300	279	**2801.200**

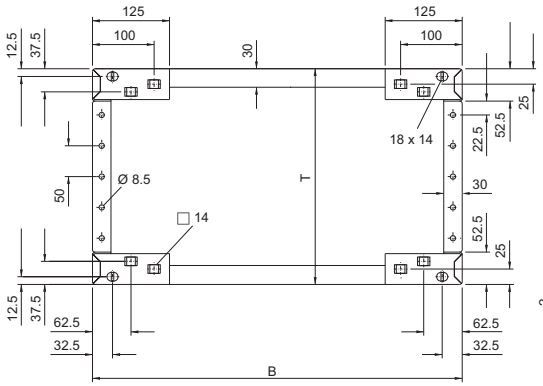
Base/plinth for AE, 200 mm high

For enclosures		Base/plinth depth mm	Model No. SO
Width (B) mm	Depth (T) mm		
600	300	279	**2826.200**
800	300	279	**2828.200**
1000	300	279	**2802.200**

Accessories:

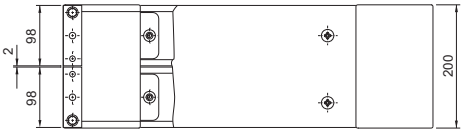
– Fastening bolt,
see page 546.
– Base assembly plate,
see page 546.

Detailed drawings:
Available on the Internet.

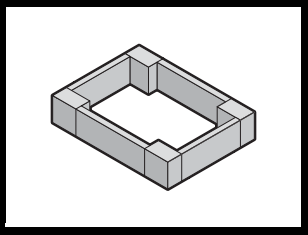


Base/plinth, 100 mm high

Base/plinth, 200 mm high



Base/plinths



Base/plinth, complete

Stainless steel for ES, PC-ES stainless steel, AP stainless steel

Material:
Stainless steel 1.4301 (AISI 304)

Surface finish:
Brushed

Supply includes:
Mounting accessories for mounting on the enclosure.

100 mm high:
– 2 trim panels front/rear
– 2 trim panels, side

200 mm high:
– 2 corner pieces with removable trim panel
– 1 trim panel front/rear
– 4 trim panels, side

Accessories:

– Levelling feet, see page 553.
– Base/plinth trim, modular (perforated plate), see page 549.

100 mm high

For enclosures		Model No. SO
Width mm	Depth mm	
600	400	**2865.000**
600	500	**2868.000**
600	600	**2855.000**
800	400	**2869.000**
800	500	**2866.000**
800	600	**2856.000**
1000	400	**2867.000**
1200	400	**2870.000**
1200	500	**2860.000**

200 mm high

For enclosures		Model No. SO
Width mm	Depth mm	
600	400	**2875.000**
600	500	**2876.000**
800	400	**2878.000**
800	500	**2879.000**
800	600	**2880.000**
1000	400	**2885.000**
1200	400	**2886.000**
1200	500	**2887.000**

Transport castors

for base/plinth, complete, sheet steel
For locating onto the base/plinth corner piece 100 or 200 mm high by raising or tilting.

Load capacity:
Max. admissible static load:
100 kg per twin castor

Colour:
RAL 7022

Supply includes:
1 set =
4 twin castors,
2 x with, 2 x without locks.

Floor clearance mm	Model No. PS
60	**4570.000**

Cross member

for TS, CM, TP, PC, IW, ES
adjustable
- To increase stability
- Height 70 mm
- Adjustable from the enclosure depth

To increase stability, the cross member is positioned 138 mm above the base frame of the enclosure at the front and rear. For deeper enclosures, the rear part may be extended and screw-fastened again. For screw-fastening to the floor and enclosure with mounting hole at the sides, front and rear. The castors and levelling feet may be secured to the welded nuts M12.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7015

For enclosure depth mm	Packs of	Model No. TS
400	2	**8601.450**
500		
600	2	**8601.680**
800		

Accessories:

Attachment opportunities for
– Twin castors DK 7495.000, see page 556,
– Levelling feet PS 4612.000, see page 555.

Detailed drawings:
Available on the Internet.

Cast feet

For secure siting of
- Enclosure for tower PC

or
- Other own assemblies

Depth 700 mm

Material:
Cast aluminium

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. IW
2	**6902.920**

Accessories:

– Base mount CP 6147.000, see page 173.
– Twin castors, see page 556.

Levelling feet

For direct mounting underneath the base/plinth TS and the base/plinth, complete.
For unhindered access e.g. when cleaning the floor, and to compensate for floor irregularities.

Load capacity:
Max. admissible static load:
400 kg per levelling foot

Adjustment range:
M12: 55 mm – 125 mm
M16: 45 mm –120 mm

Material:
Stainless steel 1.4301 (AISI 304)

Thread	Packs of	Model No. SO
M12	4	**2889.000**
M16	4	**2890.000**

Possible alternative:

Levelling feet Hygienic Design, see page 178.

Base/plinths

for FlatBox
The base/plinth may be mounted on any FlatBox with a base area of 600 x 600 or 700 x 700 mm. For attachment purposes, the base/plinth may be mounted on the pre-existing thread in the base area of the FlatBox. There is a rear recess provided for cable entry.

Material:
Sheet steel

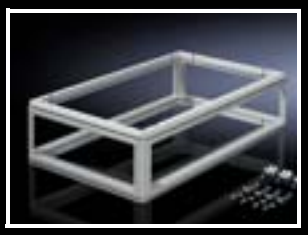
Surface finish:
Powder-coated

Colour:
RAL 7035

Supply includes:
4 levelling feet and assembly parts.

For base area		Packs of	Model No. DK
Width mm	Depth mm		
600	600	1	**7507.750**
700	700	1	**7507.755**

Base/plinths



Under-floor frame

for DK-TS
For siting the enclosure on a false floor when heavy equipment is installed.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Mounting accessories for mounting on the enclosure.

Width mm	Height mm	Depth mm	Model No. DK
600	400	1000	**7855.340**
800	400	1000	**7855.342**

Delivery times available on request.

Stabiliser bracket

for base/plinth TS
The stabiliser bracket may be retrospectively screw-fastened to the outside of the base/plinth corner pieces.

Load capacity:
Up to a maximum of 80 kg static load.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035, warning markings RAL 2002

Supply includes:
Assembly parts.

Packs of	Model No. DK
2	**7825.150**

Delivery times available on request.

Stabiliser

for TS 8 server enclosures
The pull-out stabiliser is quickly and easily retrofitted to the lower frame of the server racks and only extended when necessary.

Load capacity:
Up to a maximum of 150 kg static load.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

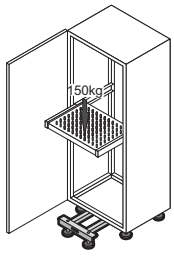
Note:
– The stabiliser cannot be used together with base plates, base frames or base/plinths.
– Combined use with the divided base frame (DK 7825.342), see page 559, is supported.

Enclosure depth mm	Model No. DK
1000	**7825.250**
1200	**7825.260**[1)]

[1)] Extended delivery times.

Accessories:

– Levelling feet, see page 555
and/or
– Transport kit for DK-TS, see page 557.



Levelling feet

18 – 43 mm high
To compensate for height differences with floor irregularities. Thread length 40 mm.
Assembly thread M12.

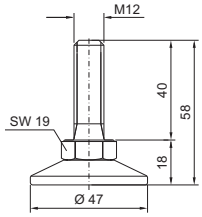
Max. admissible static load:
approx. 300 kg per levelling foot.

For:
- Baying system TS 8
- PC enclosure system
- Pedestal base plate CP 6137.035 – CP 6137.535
- Pedestal CP 6141.XXX
- Industrial workstations

Packs of	Model No. PS
4	4612.000

Also required:

For mounting on the TS base/plinth:
Base/plinth adaptor TS 8800.220,
see page 557.



Levelling feet

18 – 63 mm high, with hex socket for baying system TS 8
To compensate for floor irregularities.
Particularly in confined spaces, adjustments can be made quickly and easily from the enclosure interior.

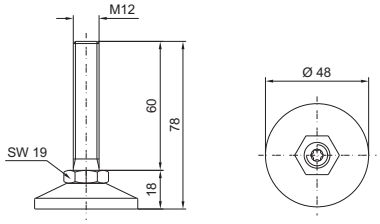
Mounting thread: M12
Hex socket: 6 mm
Thread length: 60 mm

Max. admissible static load:
300 kg per levelling foot.

Packs of	Model No. DK
4	7493.100

Also required:

For mounting on the TS base/plinth:
Base/plinth adaptor TS 8800.220,
see page 557.



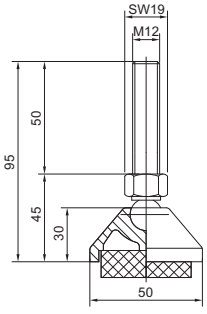
Levelling feet

with vibration dampening
For vibration insulation of enclosures and to compensate for floor irregularities.
The levelling foot is comprised of a disc of reinforced polyamide and an M12 screw, zinc-plated, with ball joint pendulum plus anti-slip and insulating plate for buffering.
The insulating plate is resistant to water, mineral oils, petrol, alkaline and acid solutions, salts, soap lye and detergents.
Also suitable for special applications such as chemical and laboratory environments.

Thread length: 50 mm

Max. admissible static load:
300 kg per levelling foot.

Packs of	Model No. DK
4	7493.230



Levelling feet

for Data Rack
To compensate for height differences with floor irregularities.
The levelling feet are attached to the die-cast zinc feet of the base/plinth.

Supply includes:
4 levelling feet M12,
levelling range 40 mm.

Packs of	Model No. DK
4	7493.000

Base

Levelling feet

for FlatBox, TE M10 x 20 mm
For screw-fastening onto the enclosure base when used as a floor-standing or desktop enclosure.
Width across flats 17, mounting thread multi-tooth 30.

Packs of	Model No. DK
4	**7507.740**

Levelling feet

85 – 115 mm high
For mounting on TS, ES and PC enclosures, for easier floor cleaning and to compensate for floor irregularities ±15 mm.
Height 100 mm.

Max. admissible static load:
350 kg per levelling foot.

Material:
– Feet: Brass, nickel-plated
– Threaded bolts and mounting plates: Stainless steel 1.4301 (AISI 304)

Supply includes:
Assembly parts to the enclosure.

Packs of	Model No. SO
4	**2859.000**

Possible alternative:

Levelling feet Hygienic Design, see page 178.

1

2

3

Twin castors

Mounting thread M12 x 20.

For:
- Baying system TS 8
- PC enclosure system
- Pedestal base plate CP 6137.035 – CP 6137.535
- Pedestal CP 6141.XXX
- TopConsole pedestals
- Industrial workstations
- Data Rack

Also required:

For mounting on the TS base/plinth:
Base/plinth adaptor for twin castors TS 8800.290, see page 557.

1	Maximum permissible static load (per castor)	40 kg
	Ground clearance	50 mm
	Lock	4 without
	Packs of	1 set
	Colour	Black
	Model No. PS	**4611.000**

2	Maximum permissible static load (per castor)	75 kg
	Ground clearance	85 mm
	Lock	2 with, 2 without
	Packs of	1 set
	Colour	Black with grey running surface
	Model No. CP	**6148.000**

3	Maximum permissible static load (per castor)	120 kg
	Ground clearance	125 mm
	Lock	2 with, 2 without
	Packs of	1 set
	Colour	Black
	Model No. DK	**7495.000**

Transport castors

for TE
The castors may be screw-fastened in the corner areas within the base frame in place of the levelling feet.
Ground clearance: 58 mm,
Mounting thread M10 x 20.

Permissible static load:
300 kg per enclosure

Packs of	Model No. TE
1 set	7000.672

Supply includes:
1 set = 4 baying clamps,
including assembly parts.

Transport kit

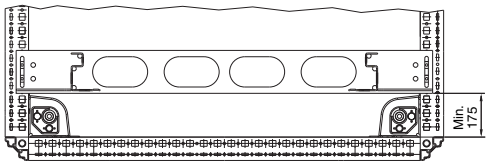
for DK-TS
Ground clearance: approx. 40 mm.

Permissible static load:
750 kg per enclosure

Supply includes:
1 set =
4 castors (2 steerable) including assembly parts.

Packs of	Model No. DK
1 set	7825.900

Note:
Only for enclosures without gland plates or gland plate frames.
For 800 mm wide enclosures with 482.6 mm (19˝) mounting frame, special installation dimensions must be observed (see drawing).



Base/plinth adaptor

for levelling feet
Connection component for fastening M12 levelling feet PS 4612.000 to the TS base/plinth.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. TS
4	8800.220

Also required:

Levelling feet, PS 4612.000,
see page 555.

Base/plinth adaptor

for twin castors
Connection component for mounting twin castors to the TS and TE base/plinth.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. TS
4	8800.290

Also required:

Base/plinth trim panels, side,
see page 544,
wherever a twin castor is fitted.

Base

Width divider

Divides 1200 mm wide TS enclosures into two halves.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
1 set =
1 bracket for right/left,
2 compensating plates for the top, mounting accessories.

Packs of	Model No. TS
1 set	**8800.200**

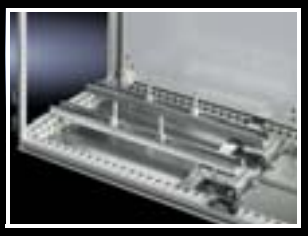
Also required:

Depending on the installation situation:
– TS punched rail 18 x 38 mm, see page 650.
– PS punched section without mounting flange, 23 x 73 mm, see page 652.

1. Mounting position:
Two mounting plates side by side.
Two mounting plates (from 600 mm wide enclosures) in a 1200 mm wide enclosure permit independent positioning and easy handling.

Also required:

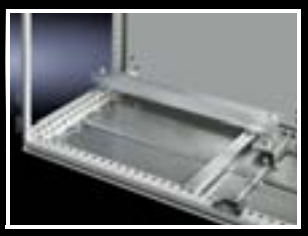
In accordance with the enclosure depth:
– 4 TS punched rails 18 x 38 mm, bottom, see page 650.
– 1 PS punched section without mounting flange 23 x 73 mm, top, see page 652.



2. Mounting position:
System support rails, fitted on the left.
Whilst heavy installed equipment rests on the system support rails, the remaining floor space is free, e.g. for unhindered cable entry.

Also required:

– 2 system support rails PS 4361.000, see page 654.
– 1 TS punched rail 18 x 38 mm in accordance with the enclosure depth (included with the supply of the standard enclosure).



3. Mounting position:
Cable clamp rail, installed on the left.
With 1200 mm wide enclosures, the width divider allows cable entry and cable clamping to be arranged differently on the left and right of the enclosure.

Also required:

– 1 cable clamp rail PS 4191.000, see page 717.
– 1 TS punched rail 18 x 38 mm in accordance with the enclosure depth (included with the supply of the standard enclosure).

Base mounting bracket

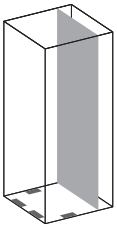
For TS, ES, TP universal console
For anchoring the enclosure at any position of the base frame, particularly in cases where the existing holes in the frame or base tray cannot be used due to the installed equipment or because the substructure prevents them from being used.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. TS
4	**8800.210**

Note:
Additional holes in the base are required for mounting.



Reinforcement bracket

for TS, ES, TP universal console
For use as an additional stabiliser to the clamping straps when populated enclosures are screw-fastened via the base tray to the base/plinth or pallet for transportation purposes.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**8800.830**

Base frame, divided

for TS 8 server enclosures
For retro-fitting gland plates or base modules.
Suitable for combining with the pull-out stabiliser.

Material:
Sheet steel

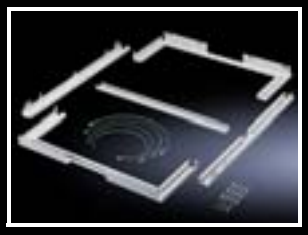
Surface finish:
Zinc-plated

Supply includes:
Packs of 1 set
Frame elements, assembly parts.

For enclosures		Model No. DK
Width mm	Depth mm	
600	1000	**7825.342**

Accessories:

– Multi-piece gland plate, see page 563.
– Stabiliser, see page 554.



Clips

for gland plates
As replacement and for additional gland plate attachments in TS, CM, TP.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. TS
50	**8800.075**

Base

Gland plate

for CM, TopConsole TP and one-piece console TP

Select suitable gland plates depending on the application. The following examples illustrate the individual options for cable entry structuring. Potential equalisation is provided via assembly components and earthing points.

Material:
Sheet steel

Surface finish:
Zinc-plated

Protection category:
IP 55 to IEC 60 529, subject to correct mounting.

Supply includes:
1 piece, including assembly parts.

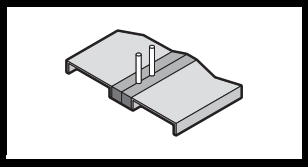
Note:
For greater stability and universal cable entry, the base opening is divided in the width for 1000, 1200 and 1600 mm wide enclosures, and is suitable for various configurations.

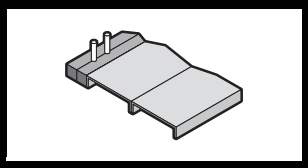
For enclosure depth 300 mm, complete module groups

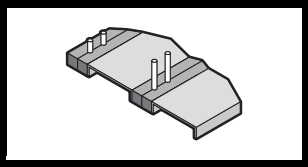
	For enclosure/console depth mm								
	One-piece base opening				Two-piece base opening				
For enclosure width	Packs of	Requires packs of	600	800	Packs of	Requires packs of	1000	1200	1600
Cable entry module groups			Model No.				Model No.		
Cable clamp strip, centre									
Gland plate, depth 50 mm	1	2	**5001.210**	**5001.211**	1	4	**5001.212**	**5001.213**	**5001.233**
Section for cable entry, centre	1 set	1	**8802.060**	**8802.080**	2 sets	1	**8802.100**	**8802.120**	**8802.160**
Cable clamp strip, rear									
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	**5001.234**
Section for cable entry, rear	1 set	1	**8802.065**	**8802.085**	2 sets	1	**8802.105**	**8802.125**	**8802.165**
Grommets, 1 x									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Cable entry plates for grommets	1	1	**5001.226**	**5001.227**	1	1	**5001.228**	**5001.229**	**5001.237**
Cable entry and connector grommets, see page 702.									
For cable glands									
One-piece									
Gland plate, depth 150 mm	1	1	**5001.218**	**5001.219**	1	2	**5001.220**	**5001.221**	**5001.235**
Two-piece									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	**5001.234**
Cable glands, see page 709.									

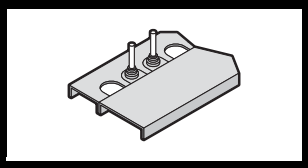
For enclosure depth 400 mm, complete module groups

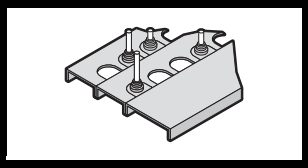
	For enclosure/console depth mm								
	One-piece base opening				Two-piece base opening				
For enclosure width	Packs of	Requires packs of	600	800	Packs of	Requires packs of	1000	1200	1600
Cable entry module groups			Model No.				Model No.		
Cable clamp strip, centre									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Gland plate, depth 150 mm	1	1	**5001.218**	**5001.219**	1	2	**5001.220**	**5001.221**	**5001.235**
Section for cable entry, centre	1 set	1	**8802.060**	**8802.080**	2 sets	1	**8802.100**	**8802.120**	**8802.160**
Cable clamp strip, rear									
Gland plate, depth 100 mm	1	2	**5001.214**	**5001.215**	1	4	**5001.216**	**5001.217**	**5001.234**
Section for cable entry, rear	1 set	1	**8802.065**	**8802.085**	2 sets	1	**8802.105**	**8802.125**	**8802.165**
Cable clamp strip, centre and rear									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	**5001.234**
Section for cable entry, centre	1 set	1	**8802.060**	**8802.080**	2 sets	1	**8802.100**	**8802.120**	**8802.160**
Section for cable entry, rear	1 set	1	**8802.065**	**8802.085**	2 sets	1	**8802.105**	**8802.125**	**8802.165**
Grommets, 1 x									
Gland plate, depth 150 mm	1	1	**5001.218**	**5001.219**	1	2	**5001.220**	**5001.221**	**5001.235**
Cable entry plates for grommets	1	1	**5001.226**	**5001.227**	1	2	**5001.228**	**5001.229**	**5001.237**
Cable entry and connector grommets, see page 702.									
Grommets, 2 x									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Cable entry plates for grommets	1	2	**5001.226**	**5001.227**	1	4	**5001.228**	**5001.229**	**5001.237**
Cable entry and connector grommets, see page 702.									
EMC									
EMC gland plate	1 set	1	**8800.660**	**8800.680**	1 set	2	**8800.600**	**8800.620**	–
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	–
Cable entry and connector grommets, see page 702.									
For cable glands									
One-piece									
Gland plate, depth 250 mm	1	1	**5001.222**	**5001.223**	1	2	**5001.224**	**5001.225**	**5001.236**
Two-piece									
Gland plate, depth 150 mm	1	1	**5001.218**	**5001.219**	1	2	**5001.220**	**5001.221**	**5001.235**
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	**5001.234**
Cable glands, see page 709.									

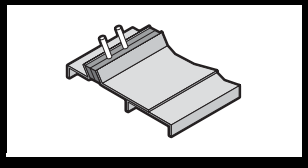


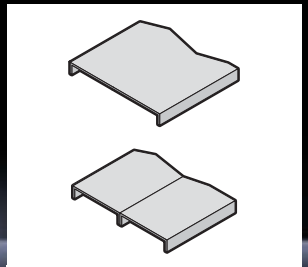








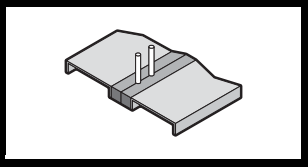


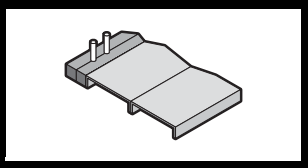


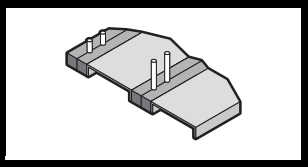
Base

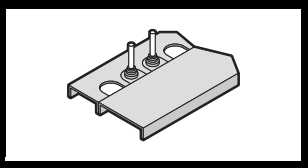
For enclosure depth 500 mm, complete module groups

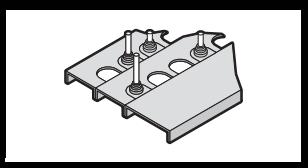
	For enclosure/console depth mm								
	One-piece base opening				Two-piece base opening				
For enclosure width	Packs of	Requires packs of	600	800	Packs of	Requires packs of	1000	1200	1600
Cable entry module groups			Model No.				Model No.		
Cable clamp strip, centre									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Gland plate, depth 250 mm	1	1	**5001.222**	**5001.223**	1	2	**5001.224**	**5001.225**	**5001.236**
Section for cable entry, centre	1 set	1	**8802.060**	**8802.080**	2 sets	1	**8802.100**	**8802.120**	**8802.160**
Cable clamp strip, rear									
Gland plate, depth 150 mm	1	2	**5001.218**	**5001.219**	1	4	**5001.220**	**5001.221**	**5001.235**
Section for cable entry, rear	1 set	1	**8802.065**	**8802.085**	2 sets	1	**8802.105**	**8802.125**	**8802.165**
Cable clamp strip, centre and rear									
Gland plate, depth 50 mm	1	1	**5001.210**	**5001.211**	1	2	**5001.212**	**5001.213**	**5001.233**
Gland plate, depth 100 mm	1	2	**5001.214**	**5001.215**	1	4	**5001.216**	**5001.217**	**5001.234**
Section for cable entry, centre	1 set	1	**8802.060**	**8802.080**	2 sets	1	**8802.100**	**8802.120**	**8802.160**
Section for cable entry, rear	1 set	1	**8802.065**	**8802.085**	2 sets	1	**8802.105**	**8802.125**	**8802.165**
Grommets, 1 x									
Gland plate, depth 250 mm	1	1	**5001.222**	**5001.223**	1	2	**5001.224**	**5001.225**	**5001.236**
Cable entry plates for grommets	1	1	**5001.226**	**5001.227**	1	2	**5001.228**	**5001.229**	**5001.237**
Cable entry and connector grommets, see page 702.									
Grommets, 2 x									
Gland plate, depth 150 mm	1	1	**5001.218**	**5001.219**	1	2	**5001.220**	**5001.221**	**5001.235**
Cable entry plates for grommets	1	2	**5001.226**	**5001.227**	1	4	**5001.228**	**5001.229**	**5001.237**
Cable entry and connector grommets, see page 702.									
EMC									
EMC gland plate	1 set	1	**8800.660**	**8800.680**	1 set	2	**8800.600**	**8800.620**	–
Gland plate, depth 100 mm	1	2	**5001.214**	**5001.215**	1	4	**5001.216**	**5001.217**	–
Cable entry and connector grommets, see page 702.									
For cable glands, two-piece									
Gland plate, depth 100 mm	1	1	**5001.214**	**5001.215**	1	2	**5001.216**	**5001.217**	**5001.234**
Gland plate, depth 250 mm	1	1	**5001.222**	**5001.223**	1	2	**5001.224**	**5001.225**	**5001.236**
Cable glands, see page 709.									

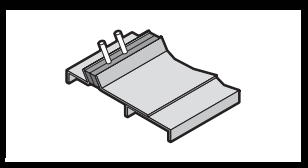


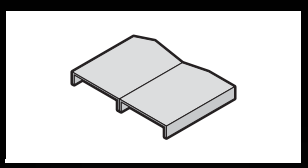












Trim panel

for CM
To conceal the entire base opening.

Material:
Sheet steel

Surface finish:
Textured paint

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
Assembly parts.

For enclosure		Model No. CM
Width mm	Depth mm	
600	400	**5001.130**
800	400	**5001.140**
1000	400	**5001.150**
1200	400	**5001.160**

Gland plate, multi-piece

for DK-TS
Any combination possible

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Packs of 1 set
Gland plates including sliding plate for cable entry, sealing tape and assembly parts.

Note:
For the size variant 800 x 800 mm, the gland plate included with the supply of pre-configured network enclosures should be additionally used.

For enclosures		Model No. TS
Width mm	Depth mm	
600	1000	**7825.364**
600	1200	**7825.365**
800	800	**7825.382**
800	1000	**7825.384**
800	1200	**7825.385**

Also required:

For integration of the gland plates, there must be a base frame inside the enclosure.
Base frame, divided, for retro-fitting,
see page 559.

Accessories:

All gland plates with a depth of 237.5 mm may be exchanged for gland plate modules on request.
- Base plate modules,
  see page 564.
- Base plate modules,
  vented with airflow regulator,
  see page 564.
- Base module for cable entry,
  see page 565.
- Section for cable entry,
  see page 702, 703.

One-piece gland plate

vented, for TS
- With ventilation holes
- Cut-out for cable entry at the rear, covered with brush strip.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Depth mm	
600	600	**7825.660**
600	800	**7825.680**
600	1000	**7825.610**
800	600	**7825.860**
800	800	**7825.880**
800	1000	**7825.810**
600	1200	**7825.612**
800	1200	**7825.812**

Accessories:

Filter mat for gland plate,
see page 564.

Base

Filter mat

for one-piece gland plate
The filter mat may be cut to size according to the required cut-out.

Material:
PPI 35-5/polyamide

Packs of	Model No. DK
1	**7825.620**

Gland plate modules

for DK-TS
For use in the base frame of the network enclosure. Used in exchange for an existing gland plate of the same depth or in conjunction with a multi-piece gland plate for pre-configured TS 8 enclosures, see page 563.

Gland plate depth:
237.5 mm

Version for cable entry, rear:
With brush strip.

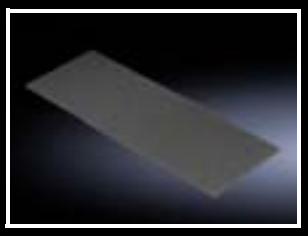
Version for cable entry, side:
With rubber cable clamp strip.

Vented version:
With filter mat for concealing the holes and nylon tape for securing from the inside or outside.

For enclosure width mm	Design	Model No. DK
600	For cable entry, rear	**7825.361**
800		**7825.381**
800	For cable entry, side	**7825.388**
600	Vented	**7825.360**
800		**7825.380**

Material:
Sheet steel

Surface finish:
Zinc-plated



Spare filter mat

for gland plate modules, vented
To be used in exchange for the existing filter mat.

Material:
PPI 35-5/polyamide

Supply includes:
Assembly parts.

Packs of	Model No. DK
2	**7825.350**

Gland plate modules, vented

with airflow regulator for DK-TS
Allows controlled air routing from the twin base to the installed components. Individually adjustable membranes allow control of the air inlet opening between 10% and 80% free space.
If the rear area of the enclosure is partitioned by base/gland plates, the required volumetric airflow may be individually regulated, and distribution of the airflow inside the twin base adapted to suit the requirements of each enclosure.
The gland plate module may be combined with all gland plates as required. Gland plate module including contacting assembly screws; the additional installation of PE conductors is not required.

Material:
Sheet steel

Supply includes:
Packs of 1
– Gland plate module, vented
– Filter mat
– Assembly parts

For enclosure width mm	Model No. DK
600	**7825.366**
800	**7825.386**

Also required:

For integration of the gland plates, there must be a base frame inside the enclosure. Base frame, divided, for retro-fitting,
see page 559.

Accessories:

Spare filter mat,
see page 565.

Spare filter mat

for gland plate modules, vented, with airflow regulator
To be used in exchange for the existing filter mat.

Material:
PPI 35-5/polyamide

Supply includes:
Assembly parts.

Packs of	Model No. DK
1	**7825.622**

Base module for cable entry

super-airtight for DK-TS
The two-part base module has a special cable entry with alternate offset brush strips which guarantee an excellent seal even with large cable quantities.

Material:
– Module plate: Sheet steel
– Brush strip: Plastic, UL 94-V0

Surface finish:
Module plate: Zinc-plated

Supply includes:
Brush strip and assembly parts.

For enclosure width mm	Packs of	Model No. DK
600	1	**7825.367**
800	1	**7825.387**

Module plates

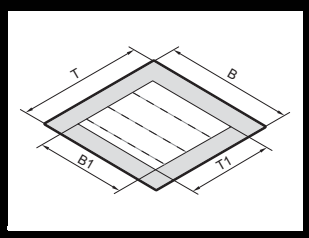
for TE
The base area of the TE may be varied as required using the module plates.

Material:
Sheet steel

Supply includes:
Assembly parts.

Design	Width (B) mm	Depth (H) mm	Model No. TE
Solid	450	200	**7526.760**
	450	550	**7526.770**
	450	750	**7526.780**
	650	550	**7526.785**[1)]
	650	200	**7526.800**
	650	750	**7526.820**[1)]
With brush strip	450	200	**7526.850**
	650	200	**7526.860**
Vented	450	200	**7526.829**
	650	200	**7526.834**
Compensating panel	450	50	**7526.750**
	450	150	**7526.755**
	650	50	**7526.790**
	650	150	**7526.795**

[1)] Extended delivery times.



Enclosure dimensions mm	W (B)	600	600	600	800	800	800
	D (T)	600	800	1000	600	800	1000
Base cut-out dimensions mm	W (B1)	450	450	450	650	650	650
	D (T1)	550	750	950	550	750	950

Base

Pressure relief stoppers

Especially when enclosures are exposed to changing climatic conditions (e.g. with outdoor siting), condensation may form in sealed enclosures due to pressure differences. The integral sealing membrane largely prevents such pressure differences and hence condensation; additionally, it also prevents the ingress of moisture from the outside.
Installed in vertical surfaces to protect against dirt.

Packs of	Model No. SZ
5	**2459.500**

Technical specifications:
– Air permeability up to 120 litres/hour with a pressure difference of 70 mbar
– Connection thread M12 x 1.5
– For fitting in wall thicknesses up to 4 mm

Material:
Polyamide

Colour:
Similar to RAL 9005

Protection category:
– IP 66, 68 to IEC 60 529
– IP 69K to DIN 40 050-9

Supply includes:
Lock nut

Condensate discharge

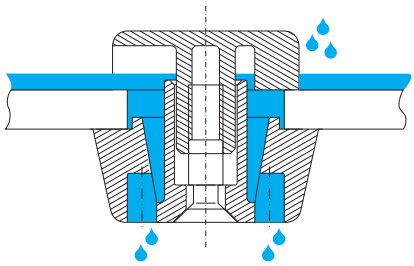
For reliable discharge from the inside and protection against splashes from the outside (labyrinth effect).
A hole diameter of 16 mm is required.
(With AE sheet steel, the holes are already provided in the base.)

Material:
Polyamide

Colour:
Similar to RAL 7035

Protection category:
IP 55 to IEC 60 529, subject to correct mounting at the bottom.

Packs of	Model No. SZ
6	**2459.000**



Gland plates

for CS New Basic enclosures
For sealing the base opening and for cable entry.

Material:
Sheet steel

Surface finish:
Powder-coated, zinc-plated

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure dimensions		Packs of	Model No. CS
Width mm	Depth mm		
600	400	1 set	**9785.511**
600	500	1 set	**9785.514**
800	400	1 set	**9785.512**
800	500	1 set	**9785.513**
1200	400	1 set	**2 x 9785.511**
1200	500	1 set	**2 x 9785.514**

Side panels, screw-fastened, sheet steel

for TS

- Automatic potential equalisation and higher EMC protection thanks to enclosure panel holders with earthing insert
- Easy positioning with the location aid
- Earthing bolt with contact surface

Material:
Sheet steel 1.5 mm, textured

Surface finish:
Dipcoat-primed, powder-coated on the outside

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
Assembly parts.

Note:
Enclosure panel holders may optionally be fitted from the inside or outside of the enclosure.
Area available for population:
External dimension – 100 mm.

1 Automatic potential equalisation

For enclosures		Packs of	Model No. TS
Height mm	Depth mm		
800	600	2	**8173.235**
1000	600	2	**8174.235**
1200	500	2	**8115.235**
1200	600	2	**8170.235**
1200	800	2	**8175.235**
1200	1000	2	**8176.235**
1400	500	2	**8145.235**
1400	600	2	**8146.235**
1400	800	2	**8148.235**
1600	500	2	**8165.235**
1600	600	2	**8166.235**
1600	800	2	**8168.235**
1800	400	2	**8184.235**
1800	500	2	**8185.235**
1800	600	2	**8186.235**
1800	800	2	**8188.235**
1800	1000	2	**8180.235**
2000	400	2	**8104.235**
2000	500	2	**8105.235**
2000	600	2	**8106.235**
2000	800	2	**8108.235**
2000	1000	2	**8100.235**
2200	600	2	**8126.235**
2200	800	2	**8128.235**

Accessories:

- Earth straps, see page 689.
- Enclosure panel holders, internal, see page 568, for heavy installed equipment and high dynamic pressures.

Side panels, screw-fastened, stainless steel

for TS

- Automatic potential equalisation and higher EMC protection thanks to enclosure panel holders
- Easy positioning with the location aid
- Earthing bolt with contact surface

Material:
Stainless steel 1.4301 (AISI 304), 1.5 mm

Surface finish:
Brushed, grain 400

Protection category:
IP 55 to IEC 60 529

Supply includes:
Assembly parts.

For enclosures		Packs of	Model No. TS
Height mm	Depth mm		
1800	400	2	**8700.840**
1800	500	2	**8700.850**
2000	600	2	**8700.060**

Accessories:

Enclosure panel holders, internal, see page 568, for heavy installed equipment and high dynamic pressures.

Detailed drawings:
Available on the Internet.

Side panels

Side panels, asymmetrical

for TS

The alternative to the standard side panel for improved visual appearance in the event of back-to-back, back-to-side or corner baying. The gap (A) which occurs with standard side panels is reduced to a standard dimension (B), see technical drawing. In the case of the TS 8 corner enclosure, an asymmetrical side panel is included in the supply.
The number of additional asymmetrical side panels required depends on the chosen baying variant.

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

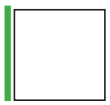
Supply includes:
Assembly parts.

For enclosures		Packs of	Model No. TS
Height mm	Depth mm		
1800	400	2	**8184.500**
1800	500	2	**8185.500**
1800	600	2	**8186.500**
2000	400	2	**8104.500**
2000	500	2	**8105.500**
2000	600	2	**8106.500**
2000	800	2	**8108.500**
2200	600	2	**8126.500**

Accessories:

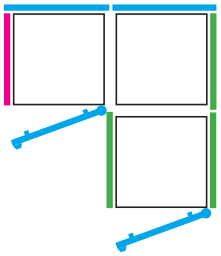
Enclosure panel holders, internal, see page 568, for heavy installed equipment and high dynamic pressures.

Asymmetrical side panel

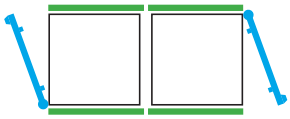


Side panel

Corner baying

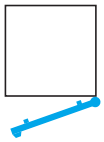


Back-to-back baying

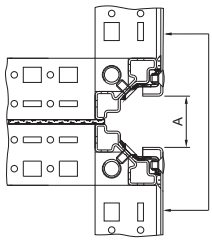


Rear panel

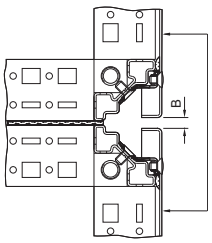
Door



Standard side panel



Asymmetrical side panel



Enclosure panel holders, internal

for TS

for additional fixing of the side or rear panel with heavy installed equipment and high dynamic pressures.

Packs of	Model No. TS
10	**8800.071**

Hinges

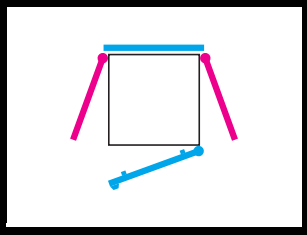
for
TS side panel, screw-fastened, sheet steel
TS side panel, asymmetrical
The 180° opening angle allows unhindered access. May be installed optionally from the inside or outside of the enclosure: Simply replace 3 enclosure panel fasteners with hinges. Despite the hinge, the protection category of the enclosure is retained.

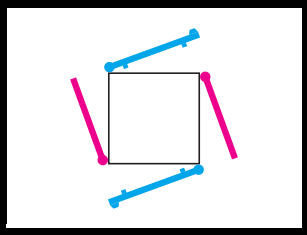
Material:
Die-cast zinc

Supply includes:
Assembly screws.

Design	Packs of	Model No. TS
RAL 7035	6	**8800.110**

Note:
– Side panel and door hinges may only be installed on the same enclosure section when using a 180° door hinge (see page 613).
– Please note: Red areas (side panels), hinged and unhinged, must always be opposite one another. Blue areas (doors/rear panels) must always be opposite one another. Only one surface on each vertical enclosure section may be hinged.





Side panel, lockable

for TS
- Simply locate from above
- Lock via security lock no. 3524 E
- Earthing bolt with contact lug.

Material:
Sheet steel, powder-coated

Protection category:
IP 20/NEMA 1 to IEC 60 529

Supply includes:
2 side panels each with 4 security locks no. 3524 E.

Note:
Side panels 1200 mm deep as divided variants, see page 570.

Accessories:

Internal latch DK 7824.510, see page 570.

For enclosures		Colour RAL		Model No. DK
Height mm	Depth mm	7035	9005	
800	600	■	–	**7824.086**
1000	600	■	–	**7824.106**
1200	600	■	–	**7824.126**
1200	800	■	–	**7824.128**
1200	1000	■	–	**7824.120**
1200	1000	–	■	**7816.120**
1400	600	■	–	**7824.146**[1)]
1400	800	■	–	**7824.148**
1600	600	■	–	**7824.166**
1600	800	■	–	**7824.168**
1800	600	■	–	**7824.186**
1800	800	■	–	**7824.188**
1800	1000	■	–	**7824.180**[1)]
2000	600	■	–	**7824.206**
2000	800	■	–	**7824.208**
2000	1000	■	–	**7824.200**
2000	1000	–	■	**7816.200**[1)]
2200	600	■	–	**7824.226**
2200	800	■	–	**7824.228**
2200	1000	■	–	**7824.220**

[1)] Extended delivery times.

Side panels

Internal latch

for side panel, lockable
Additional security is achieved via the option of latching the side panel from the inside.
The side panels on the frame section are screw-fastened from the inside with latching brackets.

Supply includes:
Assembly parts.

For enclosure system	Packs of	Model No. DK
TS	4	**7824.510**

Side panel, plug-type, divided

for DK-TS
The horizontally divided side panel offers clear advantages for storage, transportation and assembly, thanks to the reduced weight and smaller dimensions of its individual parts. The lower side panel part is inserted into the base frame and secured in the centre of the enclosure via a punched section with mounting flange. After attaching, the complete side panel is locked at the top with 2 locks.

Material:
Sheet steel

Colour:
RAL 7035

For enclosures		Packs of	Model No. DK
Height mm	Depth mm		
2000	1200	1	**7824.310**
2200	1200	1	**7824.312**

Supply includes:
– Side panel with security lock 3524 E
– Punched sections with mounting flanges
– Earth conductor
– Assembly parts

Side panels

for TE
- Simple assembly with insertion aid at the bottom and lock at the top
- Earthing bolt with contact lug

Material:
Sheet steel

Surface finish:
Powder-coated

Protection category:
IP 20

Supply includes:
Security lock 3524 E.

For enclosures		Packs of	Colour RAL		Model No. TE
Height mm	Depth mm		7035	9005	
2000	800	2	■	–	**7000.652**
2000	1000	2	■	–	**7000.653**
2000	1000	2	–	■	**7000.663**

Primer/paint

For touching up and repairing powder-coated and wet-painted surfaces, air-drying.

	Colour RAL	Model No. SZ
Touch-up pen 12 ml	7032	**2436.732**
	7035	**2436.735**
Tin 1000 ml	7035	**2438.735**
Spray can 150 ml	7022	**2581.000**
	7032	**2437.000**
	7035	**2440.735**

Cable management panel

for DK-TS

The universal routing aid for network enclosures where large quantities of cables and lines are managed. Can also be used as a partition with cable management option.
By attaching to the inner level, cables may be routed inside and out, also in conjunction with a side panel.

Mounting options:
- Directly onto the inner mounting level of TS 8 enclosures
- On the outer mounting level on punched sections with mounting flanges.

Material:
Sheet steel

Surface finish:
Powder-coated

Colour:
RAL 7035

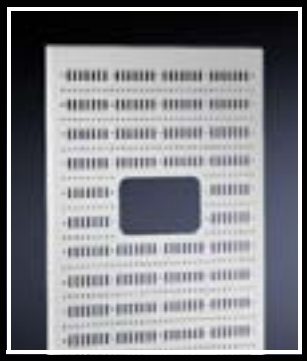
Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width/depth mm	Height mm	
600	2000	**7824.560**
800	2000	**7824.580**[1)]

[1)] Extended delivery times.

Accessories:

- Nylon loop fasteners, see page 720.
- Cable route, see page 726.
- Cable ties, see page 720.
- Cable shunting rings, see page 724.
- Cable manager, see page 723.



Divider panel

for TS

For shielding individual enclosure cells. Thanks to the symmetry of the frame system, the divider panel can also be used at the rear. All-round, double fold for stability and to hold the seal. Notches in the corners and half-way up the sides permit the use of angular baying brackets and baying brackets, even with a divider panel fitted. For mounting on the outer mounting level. This leaves the inner level free for further population.

Material:
Sheet steel, 1.5 mm, zinc-plated

Protection category:
IP 54 to IEC 60 529, subject to the correct use of module plates.

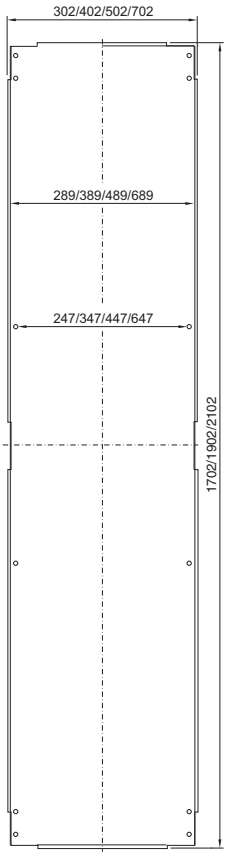
Supply includes:
Assembly parts.

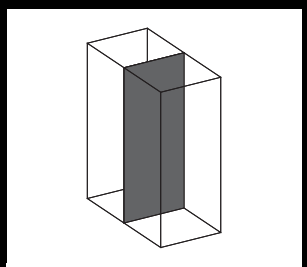
Note:
The divider panel may also be fitted at the rear. This allows, e.g. frequency converters for heat dissipation to be installed in a divider panel with the cooling units facing outwards and protected/ finished off with a cover (see page 574).

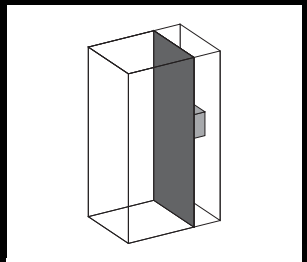
Accessories:

- Cover with door, see page 574.
- Baying attachment, vertical (TS 8800.470) for enclosures with fitted divider panel, see page 580.

For enclosures		Model No. TS
Height mm	Depth mm	
1800	400	**8609.840**
1800	500	**8609.850**
1800	600	**8609.860**
2000	400	**8609.040**
2000	500	**8609.050**
2000	600	**8609.060**
2000	800	**8609.080**
2200	600	**8609.260**







Divider panels/partitions

Partition

for DK-TS

For rack mounting, suspended between two TS 8 enclosures.
With three Ø 40 mm holes in all 4 corner areas for the insertion of cables, conduits etc.
Drilled holes may be sealed with the enclosed stepped collars. For cable entry, simply cut off at a suitable level to match the required cross-section.

Material:
– Partition: Sheet steel
– Stepped collar: Plastic to UL 94-HB

Surface finish:
Partition: Zinc-plated

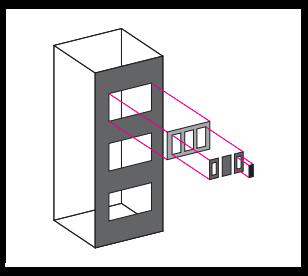
Supply includes:
12 stepped collars Ø 40 mm.

For enclosures		Model No. DK
Height mm	Depth mm	
2000	1000	**7831.723**
2000	1200	**7831.724**
2200	1200	**7831.726**

Note:
Use baying connector TS 8800.490.
Not suitable for use in conjunction with a baying seal. Any seals that may be present must be removed prior to installation.

Accessories:

Baying clamp TS 8800.490,
see page 578.



The divider panel and module plate system

More options:
The cut-outs of a divider panel are individually equipped with module plates for 16-pole or 24-pole connectors, with module plates for cable entry and with solid module plates.

Faster assembly:
Usually only some of the total number of connector cut-outs are used. Thanks to the new divider panel technique, the cut-outs do not need to be covered individually. The solid module plate is used instead.
The benefit: Less plates, less screws, less assembly work.

Divider panel

for module plates TS

With cut-outs for the installation of module plates for connectors or for cable entry, and also for the entry of busbar systems and other installed equipment. All-round, double fold for stability and to hold the seal. Thanks to the symmetry of the enclosure frame, divider panels may also be fitted at the rear, dimensions permitting.
For mounting on the outer mounting level. This leaves the inner level free for further population.

Material:
Sheet steel, 2 mm

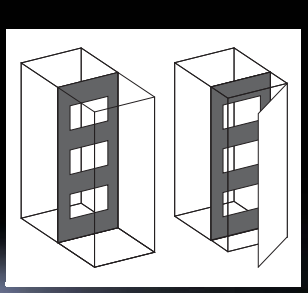
Surface finish:
Zinc-plated

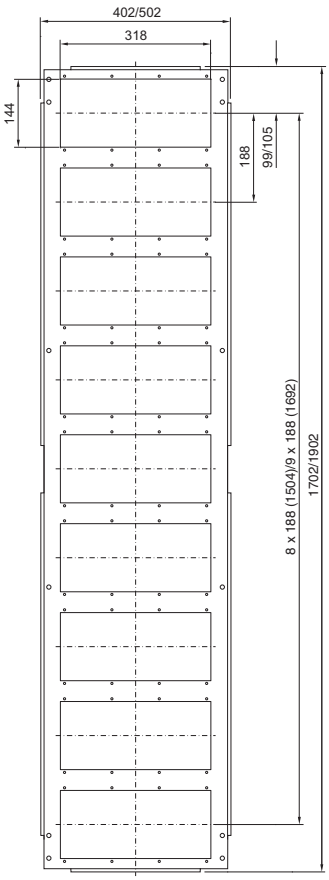
Supply includes:
Assembly parts and multi-tooth screws M5 x 12 mm for mounting the module plates.

Note:
Notches in the corners and half-way up the sides permit the use of angular baying brackets and baying brackets, even with a divider panel fitted.

Accessories:

– Module plates,
see page 573.
– Cover with door,
see page 574.
– Baying attachment (TS 8800.470)
for enclosures with fitted divider panel,
see page 580.





For enclosures		Number of cut-outs	Model No. TS
Height mm	Depth mm		
1800	500	9	**8609.100**
1800	600	9	**8609.110**
2000	500	10	**8609.120**
2000	600	10	**8609.130**

Module plates

Material:
Sheet steel, 2 mm

Surface finish:
Zinc-plated

Supply includes:
Seal.

Design	Cut-outs	Packs of	Model No. TS
Solid	–	1	**8609.160**
For 16-pole connectors	4	1	**8609.150**
For 24-pole connectors	4	1	**8609.140**
For cable entry	1	1	**8609.170**
For cable entry grommets	4	1	**8609.190**
With cable sleeve	1	1	**8609.390**

Solid
For sealing unused cut-outs. Easily machined for individual cut-outs.

Detailed drawings:
Available on the Internet.

for 16/24-pole connectors
With cut-outs to accommodate connectors. In addition to mounting on divider panels, module plates may also be attached to the 25 mm pitch pattern of the enclosure and to the rails of the TS/PS system.

Accessories:

- Adaptor, cover plate, see page 574.
- Connector gland for connector cut-outs, see page 712.
- Connector gland sealing frame and sealing module, see page 713.

For cable entry
For the entry of pre-assembled cables. Sealed, secure routing is achieved via adjustable angle brackets with inserted foam cable clamp strip. Attachment bracket, punched, for cable clamping.

Accessories:

Cable tie for fast assembly SZ 2597.000, see page 720.

For cable entry grommets
For mounting on the divider panel for module plates TS. Slide the grommets into the cut-outs, slide the clamp plate with seal down over them, and screw-fasten.

Also required:

- Cable entry grommets, see page 702 or
- Connector grommets, see page 702.

With cable sleeve
For 10 – 65 mm cable diameters. The flexible grommet adapts to the cable's bending radius.

Divider panels/partitions

Adaptor

for connector cut-outs
For using connectors with varying numbers of poles.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Seal for adaptor and mounting accessories.

For reduction	Packs of	Model No. SZ
From 24 to 16 poles	5	**2479.000**
From 24 to 10 poles	5	**2480.000**
From 24 to 6 poles	5	**2481.000**
From 16 to 10 poles	5	**2401.000**
From 16 to 6 poles	5	**2402.000**

Cover plate

for connector cut-outs
For unused cut-outs.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Seal and mounting accessories.

For	Packs of	Model No. SZ
24-pole cutouts	20	**2477.000**
16-pole cutouts	20	**2478.000**

Cover with door

for TS
- To protect and finish off connectors or other installed equipment.
- Optional cable entry from above or below.

Material:
– Cover: Sheet steel, 1.5 mm
– Door: Sheet steel, 2.0 mm

Colour:
RAL 7035

Supply includes:
– Cover
– Door with locking rod and double-bit lock insert
– 1 cover plate for top or bottom.

For enclosures		Model No. TS
Height mm	Depth mm	
2000	500	**8609.020**
2000	600	**8609.030**

Accessories:

– Lock inserts, version F, see page 609.
– Comfort handle, see page 603.
– 180° hinge, see page 613.

Noise protection kit

for TS
Noise insulating mats for equipping or retro-fitting enclosures.
Thanks to their self-adhesive rear, the noise insulating mats are easily attached to existing surfaces. Sound is absorbed, leading to significant noise reduction. The kit is designed to reduce noise from the roof, sides and rear of an enclosure with dimensions WHD 800 x 2000 x 800 mm.

Other dimensions can be accommodated by cutting to size individually.

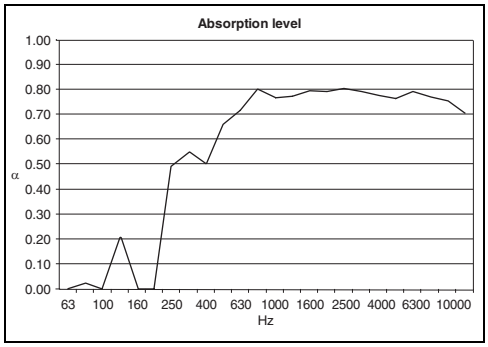
Material:
Soft foam based on melamine resin, 20 mm

Colour:
Pale grey

Supply includes:
Spacer bolts for sound insulation of the roof plate.

Material category:
B1 to DIN 4102

For enclosures W x H x D mm	Packs of	Model No. DK
800 x 2000 x 800	1 set	**7824.650**



Absorption level α: share of absorbed output, 1 = 100% (averaged).
Averaged noise reduction (comparison source, 50 Hz – 20 kHz): 1 m standard distance, averaged level

TS isolator door cover (US version)

Including main door lock for safety locking of enclosures and bayed enclosure suites in accordance with US regulations, only in conjunction with actuator lever for master switches:

- Allen Bradley 1494 F-M1/P1/S1 and 140 U-K-FCX04
- Square D 9422 A1
- ITE Siemens Max-Flex series/FHOH (only available in the USA)
- General Electric TDA Type 1 and 2
- Moeller NZM-XSHGVR 12-NA

Benefits:

- In combination with
  – Operating mechanism
  – Adjacent door latch
  – Interconnecting rods
  meets the requirements of UL 508 A
- Compact design with a width of just 100 mm.
- May be mounted instead of a side panel. With this cover, all standard single-door TS 8 enclosures may be configured as isolator door enclosures. The complete installation surface of the enclosure is retained.
- May be mounted optionally on the left or right of the enclosure.
- In conjunction with the integrable TS 8 mounting plate infill, (see page 631), the mounting surface of the main enclosure can be enlarged by around 14%.

Material:
Sheet steel

Surface finish:
Powder-coated

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529, complies with NEMA 12

Supply includes:
Main door lock, cover plate and assembly parts.

Width mm	Height mm	Depth mm	Model No. TS
100	1800	400	**8900.840**
100	1800	500	**8900.850**
100	2000	500	**8900.050**
100	2000	600	**8900.060**

Also required:

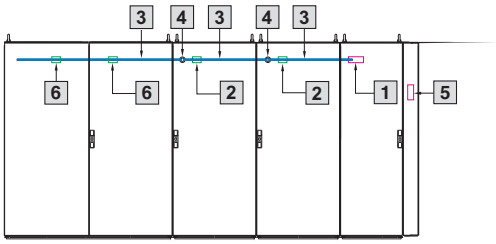
– Operating mechanism, TS 4912.000, for enclosure with isolator door cover and additionally every fourth adjacent enclosure, see page 575.
– Adjacent door latch, TS 4911.000, TS 4911.100, for every adjacent enclosure, see page 575.
– Interconnecting rods, for every adjacent enclosure in the appropriate enclosure width, see page 575.

Accessories:

Mounting plate infill, see page 631.

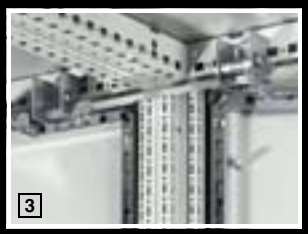
Isolator door locking (US version)

1 Operating mechanism
2 Adjacent door latch (single-door)
3 Interconnecting rod
4 Connection component
5 Main door latch
6 Adjacent door latch (two-door)



Door latch for bayed enclosure suites

For extending the door locking of **commercially available master switches** to bayed suites TS. Adjacent doors cannot be opened until the main door has been opened.



1 Operating mechanism
(Fitted in the enclosure with master switch and additionally in every fourth adjacent enclosure)

	Packs of	Model No. TS
Operating mechanism	1	**4912.000**

2 Adjacent door latch
(Installation in adjacent enclosure)

Adjacent door latch for	Packs of	Model No. TS
Single-door enclosures	1	**4911.000**
Two-door enclosures	1	**4911.100**

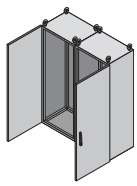
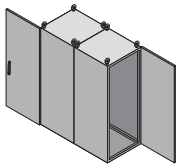
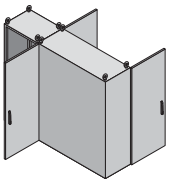
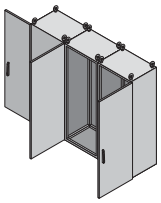
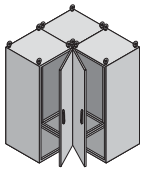
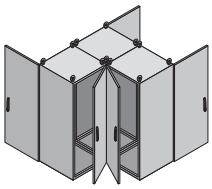
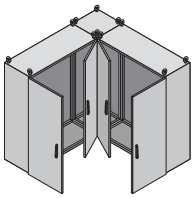
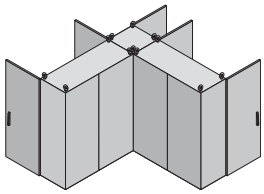
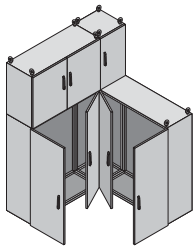
3 Interconnecting rods
To extend locking from the main enclosure to the adjacent enclosures of a bayed suite. An interconnecting rod corresponding to the width of the enclosure is required for each adjacent enclosure.

For enclosure width mm	Packs of	Model No. TS
600	10	**4916.000**
800	10	**4918.000**
1200	10	**4920.000**

Enclosure suites

Bayable on all sides

Whether around corners, forwards, backwards, to the left or right or even upwards if required, the baying options are unlimited.

For baying at the installation site or for provisional siting in the workshop

1 Quick-fit baying clamps, one-piece

2 Quick-fit baying clamps, three-piece

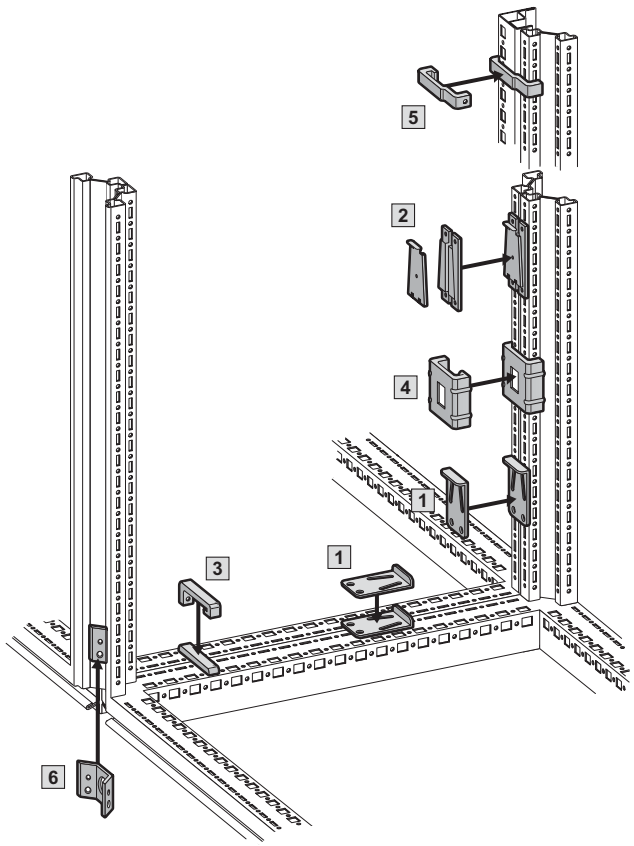
3 Baying clamp, horizontal

4 Baying clamp, vertical for TS/TS

5 Baying clamp, vertical for TS/PS

6 Baying connectors, external

Notes on the transportation of bayed enclosures, see page 578.



1 Quick-fit baying clamp, one-piece

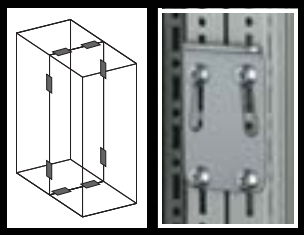
for TS/TS
Simply attach the screws, insert the quick-fit baying clamp, tap in with a hammer and lock.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
6	**8800.500**



2 Quick-fit baying clamp, three-piece

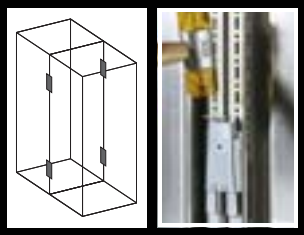
for TS/TS
Simply locate, connect with the lock plate, and secure.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
6	**8800.590**



3 Baying clamp, horizontal

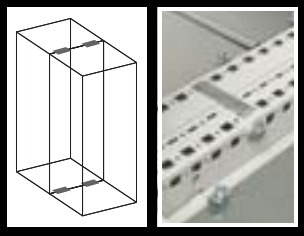
for TS/TS, TS/PS
For mounting on the horizontal enclosure sections.

Material:
Cast steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**8800.400**



4 Baying clamp, vertical

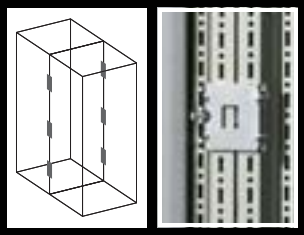
for TS/TS
For mounting on the vertical enclosure sections.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
6	**8800.410**



Enclosure suites

5 Baying clamp, vertical

for TS/PS
For mounting on the vertical enclosure sections.

Material:
Cast steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
6	**8800.420**

6 Baying connectors, external

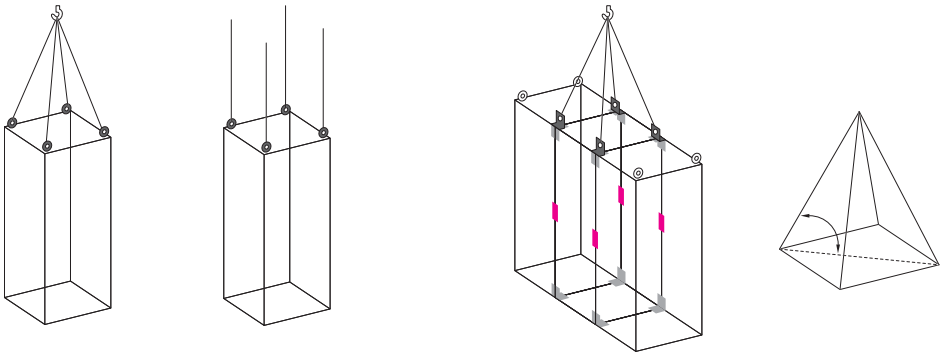
for TS/TS
For mounting on the vertical enclosure sections.

Simply position on the outside and screw-fasten either from the inside or outside.

Supply includes:
Assembly parts.

Material/surface finish	Packs of	Model No. TS
Sheet steel, zinc-plated	6	**8800.490**
Stainless steel 1.4301 (AISI 304)	6	**8700.000**

Note on the transportation of bayed enclosures



Individual enclosures may be safely transported using the eyebolts included with the supply.
For symmetrical loads, the following maximum permissible loads apply:
for 45° cable pull angle 4,800 N,
for 60° cable pull angle 6,400 N,
for 90 cable pull angle 13,600 N.

Note:
The eyebolts must be aligned in the direction of the cable pull.
For larger baying combinations, we recommend the use of a transport base/plinth,
see page 550.

For the enclosure combination with angular baying brackets, quick-fit baying clamps and combination angles shown here, the load capacity with a cable pull angle of 60° is as follows:
for the left-hand enclosure 7,000 N,
for the central enclosure 14,000 N,
for the right-hand enclosure 7,000 N.

The cable pull angle between the roof plate and the cable has a significant influence on the total permissible load.
The cable pull angle must not be less than 45°, and where possible, should be less than 60°.

When transporting bayed enclosures

7 Baying bracket for TS/TS

8 Baying bracket for TS/TS and TS/PS

Note:
- In addition, the outer baying connector (see page 578), can be used.
- When transporting large, heavy enclosure combinations by crane, we additionally recommend the use of combination angles TS 4540.000, see page 580.

Also required:

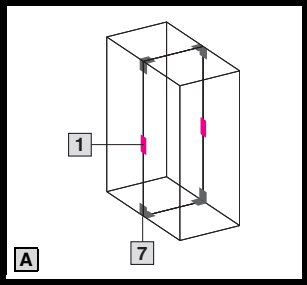
For protection category IP 55:
One connector/clamp is required half-way up the enclosure height, see page 577.
Baying clamp, see page 577/578.

Notes on the transportation of bayed enclosures, see page 578.

A

1 2 quick-fit baying clamps **TS 8800.500** (see page 577).

7 4 angular baying brackets **TS 8800.430** (see page 579).

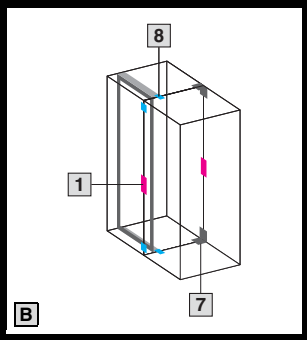


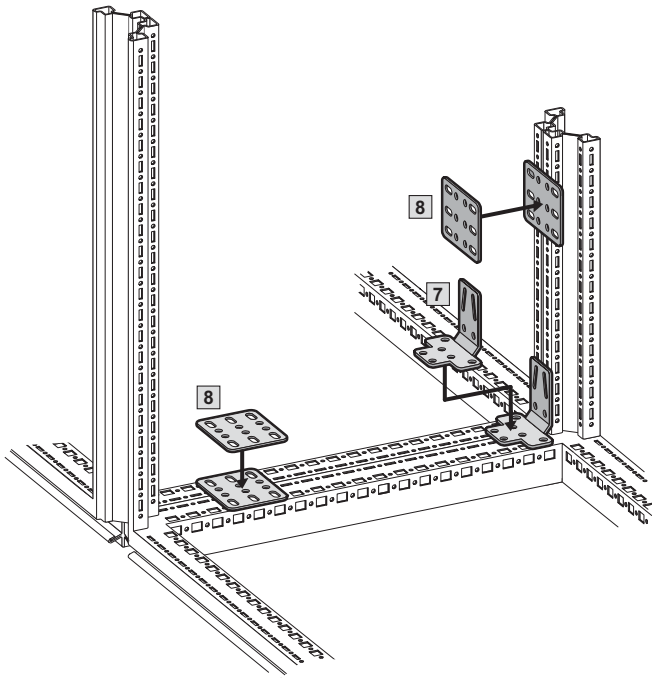
B

1 2 quick-fit baying clamps **TS 8800.500** (see page 577).

7 2 angular baying brackets **TS 8800.430** (see page 579).

8 4 baying brackets **TS 4582.500** (see page 580) if the angular baying brackets cannot be fitted in the foremost installation position due to installed equipment such as large swing frames.





7 Angular baying brackets

for TS/TS

For a stable connection when transporting bayed enclosure suites.

Screw-fastening either
- Horizontally and vertically with 8 screws
- Horizontally with 2 screws and M8 threaded blocks, vertically with 4 screws

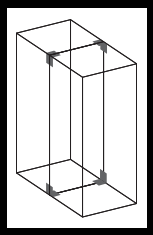
is supported.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**8800.430**



Enclosure suites

8 Baying brackets

for TS/TS and TS/PS

For additional stabilistation, or in cases where:
- Mounting plate brackets
- Swing frame
- Busbar support

prevent the installation of angular baying brackets.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**4582.500**

Accessories:

For mounting on the vertical TS enclosure section:
Snap-on nut M8, TS 8800.808,
see page 659.

Angular baying brackets

The alternative to baying bracket TS 4582.500 and for individual interior installations.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
24 hex screws M8 x 16 mm.

Packs of	Model No. PS
4	**4582.000**

Also required:

For mounting on:
– Horizontal TS enclosure section, captive nuts/threaded blocks M8, see page 665,
– Vertical TS enclosure section, snap-on nut M8, TS 8800.808, see page 659.

Combination angle

For optimum distribution of tensile forces during transportation of bayed enclosures by crane.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**4540.000**

Accessories:

Top baying cover,
see page 581.

Notes on the transportation of bayed enclosures,
see page 578.

Baying attachment, vertical

for TS/TS with divider panel

Only suitable for mounting in conjunction with the angle brackets of the divider panel (included with the supply).

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
8	**8800.470**

Note:
May also be used for side or rear wall attachment/ fastening of enclosures. In such cases, additional holes must be drilled in the side or rear panel.

Baying attachment, vertical

for TS/TS

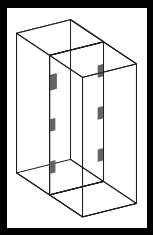
For baying two populated enclosures on the vertical enclosure section.
Simply locate into the vertical TS punchings, secure and connect both brackets by using the hex screws (supplied loose).
Using the fastening bolts, the enclosure is pulled into a defined end position, with a height or side offset of up to ± 2 mm.

Material:
Sheet steel, 3 mm

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
6	**8800.670**



Baying clamp, horizontal

for back-to-back mounting

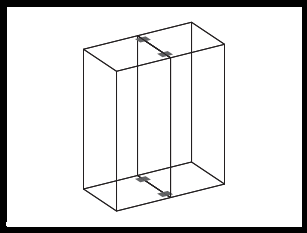
Two-piece, for in situ assembly of enclosures with mounting plate in the rearmost installation position.

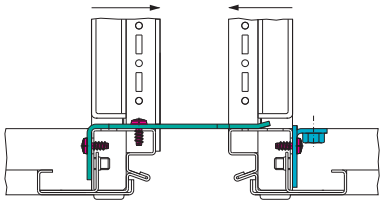
Material:
Sheet steel

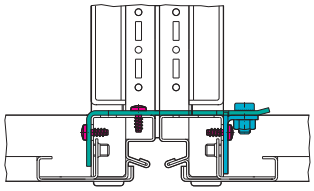
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
4	**8800.170**







Baying cover, top

A cover with two end caps may additionally be clipped over the seal between the two enclosures. This prevents dirt and liquid from collecting on the baying seal.

Material:
– Cover section: Sheet steel or stainless steel
– End caps: Plastic

Surface finish:
Spray-finished

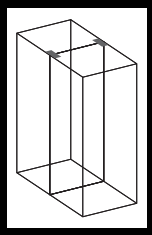
Supply includes:
– Cover section
– 2 end caps

Note:
May also be fitted in the width with enclosure suites bayed back-to-back.

May also be used in conjunction with dust guard trim, see page 620.

For enclosure depth mm	Packs of	RAL 7035	Stainless steel 1.4301 (AISI 304)	Model No. TS
400	1	■	–	**8800.840**
500	1	■	–	**8800.850**
600	1	■	–	**8800.860**
800	1	■	–	**8800.880**
1000	1	■	–	**8800.892**
400	1	–	■	**8700.140**
500	1	–	■	**8700.150**
600	1	–	■	**8700.160**

Enclosure suites



Baying connectors, external

for DK-TS/DK-TS with side panels
For retrospective baying of enclosures with screw-fastened or lockable side panels.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. DK
4	**7824.540**

Compensating panel

for TS
The panel is screw-fastened to the outside of the enclosure frame and serves as an infill panel when baying 2000 mm high enclosures of varying depths.
No seal between the enclosures.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Depth difference mm	Model No. DK
100	**7067.100**[1)]
200	**7067.200**

[1)] Extended delivery times.

Baying kit

for TE/TE
For connecting individual enclosures into bayed suites at the sides. The enclosures are connected between the base and roof frame.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TE
4	**7000.640**

Baying kit

for KL, AE
Special screws and nuts
- For fast, simple assembly without thread-tapping.
- Compression of the seal is limited to a predefined level, to ensure a long-lasting, permanent seal between enclosures.

Seal, self-adhesive
- Comprised of bayable sealing elements and corner pieces, for individual adaptation to various enclosure sizes.

One pack is sufficient for a baying point up to H x D = 800 x 350 mm.

Supply includes:
– Sealing elements
– Assembly parts

Packs of	Model No. SZ
1 set	**1199.100**

TS 8 corner enclosures

The corner enclosure and the supplied components will accommodate the various baying options of the TS 8 frame on all outer surfaces. Fitted with a rear panel and an asymmetrical side panel (see page 568, mounted on the l/h side), the corner enclosure also permits the option of baying in both the width and depth.
The gland plates are aligned parallel to the rear panel. In TS 8 enclosures with a square footprint, the gland plates may also be rotated through 90°. The baying system is identical to all other TS 8 enclosures.

Material:
Sheet steel, 1.5 mm

Surface finish:
– Enclosure frame, roof, rear wall and side panel: Dipcoat-primed, powder-coated on the outside, textured paint
– Gland plates: Zinc-plated

Colour:
RAL 7035

Supply includes:
– Enclosure frame
– Roof
– Rear wall (on the longest side)
– Side panel, asymmetrical
– Gland plates (divided in a longitudinal direction)

Width mm	Height mm	Depth mm	Model No. TS
400	1800	400	**8484.300**
500	1800	400	**8584.300**
600	1800	400	**8684.300**
500	1800	500	**8585.300**
600	1800	500	**8685.300**
600	1800	600	**8686.300**
400	2000	400	**8404.300**
500	2000	400	**8504.300**
600	2000	400	**8604.300**
800	2000	400	**8804.300**
500	2000	500	**8505.300**
600	2000	500	**8605.300**
800	2000	500	**8805.300**
600	2000	600	**8606.300**
800	2000	600	**8806.300**
600	2200	600	**8626.300**

Delivery times available on request.

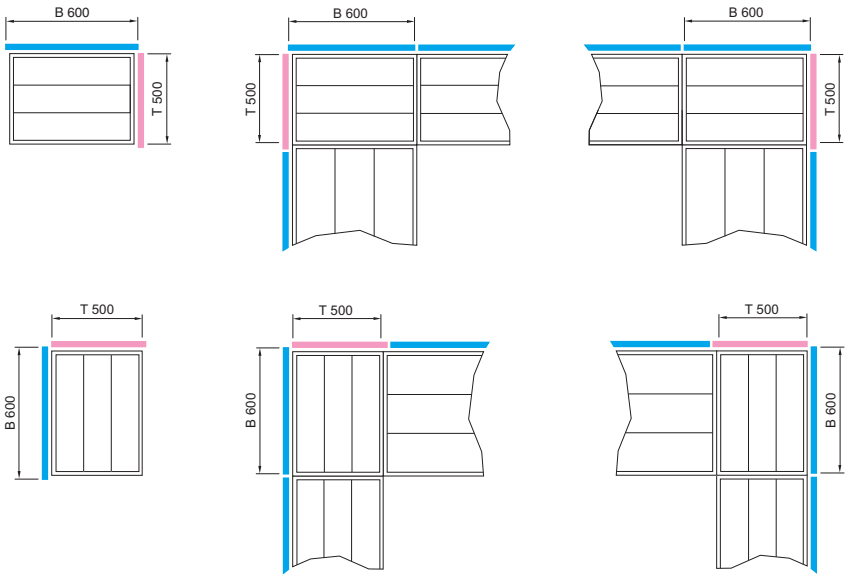
Accessories:

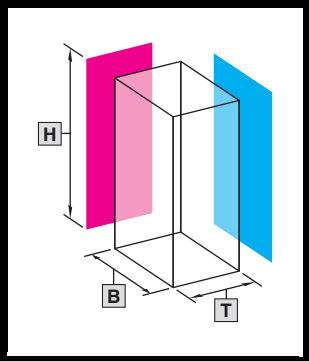
– TS base/plinth, see page 542.
– Base/plinth infill panel, see page 547.

Baying examples

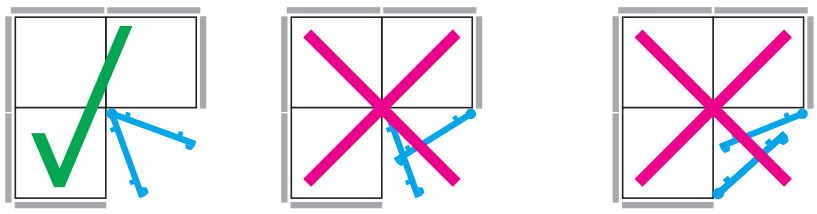
TS 8 corner enclosures

B = Width
T = Depth



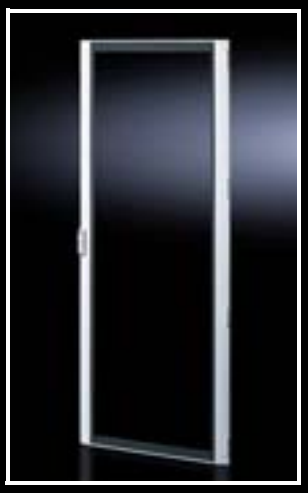


Note:



Correct **Incorrect** **Incorrect**

Door variants



Glazed door

for TS
Instead of a sheet steel door or rear panel.

Material:
– Front panel: Extruded aluminium section
– Corner pieces: Die-cast zinc
– Viewing window: Single-pane safety glass, 3 mm

Surface finish:
Powder-coated

Colour:
– Frame and corner pieces: RAL 7035
– Viewing window (printed mask on the inside): RAL 7015

Protection category:
IP 55 to IEC 60 529

Supply includes:
– Viewing door frame with safety glass
– Locking rod with double-bit insert
– 180° hinges (4)
– Visible area: W – 140 mm, H – 160 mm.

For enclosures		Model No. TS
Width mm	Height mm	
600	1800	**8610.680**
800	1800	**8610.880**
600	2000	**8610.600**
800	2000	**8610.800**
600	2200	**8610.620**
800	2200	**8610.820**

Also required:

When mounting instead of the rear panel:
Lock components for frame TS 8800.040, see page 584.

Accessories:

– Lock inserts, version F, see page 609.
– Comfort handle, see page 603.

Handle adaptor

The handle adaptor compensates for the design chamfer in the door profile to enable installation of the comfort handle.

Material:
Plastic

Supply includes:
– 1 adaptor plate
– 1 extension for drive
– 2 assembly screws

For glazed door TS

Colour	Model No. TS
RAL 7035	**8611.080**

For designer door IW and PC-TS, bottom door

Colour	Model No. PC
RAL 7035	**8611.300**

Lock components

for frame TS
For retrofitting a glazed door or sheet steel door in place of a rear panel.

Material:
Die-cast zinc

Supply includes:
Assembly screws.

Packs of	Model No. TS
4	**8800.040**

Sheet steel door

for DK-TS
To replace existing doors. With 180° hinges and swivel handle with security lock no. 3524 E, in exchange for comfort handle.

Material:
Sheet steel

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Height mm	
600	2000	**7824.205**
800	1200	**7824.127**
800	2000	**7824.207**
600	2200	**7824.225**
800	2200	**7824.227**

Accessories:

- Comfort handle, see page 603.
- 180° hinge for bayed TS enclosure suites with comfort handle, see page 613.

Sheet steel door, vented

for DK-TS
With 180° hinges and swivel handle with security lock no. 3524 E, in exchange for comfort handle. For optimum air throughput in network enclosures with a high proportion of active components. Slotted surface with air inlet opening > 78%.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Height mm	
600	1800	**7824.183**
600	2000	**7824.203**
800	2000	**7824.204**
600	2200	**7824.223**
800	2200	**7824.224**

Accessories:

- Comfort handle, see page 603.
- 180° hinge for bayed TS enclosure suites with comfort handle, see page 613.

Glazed door, vented

for DK-TS
With 180° hinges and comfort handle with security lock no. 3524 E. For optimum air throughput in network enclosures with a low proportion of active components.

Material:

- Front panel: Sheet steel
- Viewing window: Single-pane safety glass, 3 mm
- Slotted surfaces (SWG-6.7 hexagon) at the sides for air inlet

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Height mm	
600	2000	**7824.201**
800	2000	**7824.202**
800	2200	**7824.222**

Accessories:

180° hinge for bayed TS enclosure suites with comfort handle, see page 613.

Door variants

Sheet steel door, vertically divided

for DK-TS

With 130° hinges and locking rod, including comfort handle for semi-cylinder with security lock no. 3524 E. Thanks to the minimal rotation radius of the individual doors, the distance between individual bayed enclosure suites may be reduced. The extensive door perforations additionally support climate control of the installed equipment. Slotted surface with air inlet opening > 78%.

Material:
Sheet steel

Protection category:
– IP 55 to IEC 60 529 (unvented)
– IP 20 to IEC 60 529 (vented)

Colour:
RAL 7035

Supply includes:
Assembly parts.

Vented

For enclosures		Model No. DK
Width mm	Height mm	
600	2000	**7824.360**
600	2200	**7824.362**
800	2000	**7824.380**
800	2200	**7824.382**

Unvented[1)]

For enclosures		Model No. DK
Width mm	Height mm	
600	2000	**7816.360**
600	2200	**7816.362**
800	2000	**7816.380**
800	2200	**7816.382**

[1)] Without tubular door frame.
Tubular door frame available on request.

Accessories:

180° hinge TS 8800.190,
see page 613.

Sheet steel glazed door, vertically divided

for TS

With underlaid viewing panel, 4-point locking rod and comfort handle for semi-cylinder with security lock 3524 E.
The divided design allows room-optimised siting of the enclosures coupled with the best possible access, thanks to a reduced distance between the individual bayed enclosure suites. Max. door opening angle thanks to pre-integrated 180° hinges.

Material:
– Front panel: Sheet steel
– Viewing window: Single-pane safety glass, 3 mm

Surface finish:
Powder-coated

Colour:
RAL 7035

For enclosures		Model No. DK
Width mm	Height mm	
800	2000	**7824.280**
800	2200	**7824.282**

Protection category:
IP 55

Supply includes:
Assembly parts.

Note:
Height 2200 mm cannot be combined with swing frame 45 U.

All-glass door, vertically divided

for DK-TS

With 180° hinges and locking rod including comfort handle for semi-cylinder with security lock no. 3524 E. Thanks to the minimal rotation radius of the individual doors, the distance between individual bayed enclosure suites may be reduced.

Material:
– Frame elements: Aluminium
– Viewing window: Single-pane safety glass, 5 mm

Colour:
– Frame elements: RAL 7035
– Viewing windows: Tinted

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Height mm	
800	2000	**7824.490**

Note:
Not to be used in conjunction with a swing frame.

Lockable and adjacent door

for TS
For example, if two 400 mm doors instead of one 800 mm wide door are used to comply with escape routes.

Material:
Sheet steel

Surface finish:
Dipcoat-primed,
powder-coated on the outside

Supply includes:
2 doors, including hinges and lock parts.

For enclosures		Colour RAL	Model No. TS
Width mm	Height mm		
800	2000	7035	**8801.450**

Note:
Enclosure without door (TS 8806.512),
see page 79.

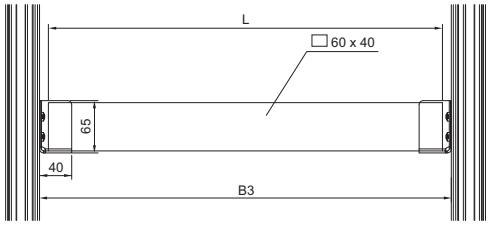
Accessories:

Lock system,
see page 603.

Protective bars

for TS
As an alternative to a door, e.g. in sealed switch rooms. Prevents people from falling into the open enclosure frame. Easily removable for maintenance purposes.
For 1200 mm enclosure width; may be shortened or divided for other sizes.

Material:
Wood, spray-finished, RAL 3000



For enclosure width mm	Length mm	Packs of	Model No. TS
1200	1090	1	**8801.010**

Enclosure width mm	Clearance between the enclosure frame (B3) mm	Length protective bar (L) mm
400	312	290[1)]
600	512	490[1)]
800	712	690[1)]
1000	912	890[1)]
1200	1112	1090

[1)] The protective bar TS 8801.010 (1090 mm) will need to be shortened.

Holder

for protective bars
For location into the vertical TS section.
The protective bar is simply inserted.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. TS
2	**8801.000**

Variable modular climate control concept

Instead of an enclosure door in a 600 mm/800 mm/1200 mm wide and 1800 mm/2000 mm high TS enclosure, section doors with integral cooling module may be retrofitted without major assembly work.

Possible alternative:

Modular climate control concept,
see page 430/431.

Door variants

Trim frame

for TS

To conceal the TS 8 front frame in enclosures without a door. Can be combined with large swing frames.

Possible application areas include, for example:
- Studio technology
- Electronic configuration

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Height mm	
600	2000	**7824.130**
800	2000	**7824.132**

Note:
The trim frame conceals the side system punchings in the inner mounting level.
The TS punched sections with mounting flange 23 x 73 mm (see page 648) may be used for installation.

Interior door

with mounting frame
for compact enclosure AE IP 69K

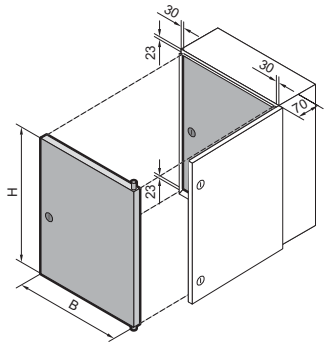
For the installation of control and display components. Mounting frame, depth-adjustable for a distance between the outer surface and the inside of the outer door of 35 to 85 mm (80 mm with AE 1101.010/.110).

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Supply includes:
– Mounting frame
– Door with cam lock and screwdriver insert
– Assembly parts

For AE enclosure	W (B) mm	H mm	Model No. AE
1101.010/.110	160	260	**1101.910**
1101.020/.120	330	330	**1101.920**
1101.030/.130	330	580	**1101.930**
1101.040/.140	580	580	**1101.940**



Modular front design

for TS 8606.512,
WHD 600 x 2000 x 600 mm,
for TS 8806.512,
WHD 800 x 2000 x 600 mm (see page 79) and all other 600 and 800 mm wide TS 8 enclosures instead of a door or rear panel, provided the modular front is positioned in a suite between two enclosures with normal doors. If positioned as a free-standing enclosure or at the end of an enclosure suite, special side panels such as TS 8106.512 (see page 591) are required.
The partial doors with and without viewing panels can be combined with cross members as required. A trim panel and a cross member are each required at the top and bottom.
The requirements for your individual front design and the considerations which must be taken into account are illustrated on the sample configuration opposite.

Protection category:
With a completed enclosure IP 55 to IEC 60 529, complies with NEMA 12.

Also required:

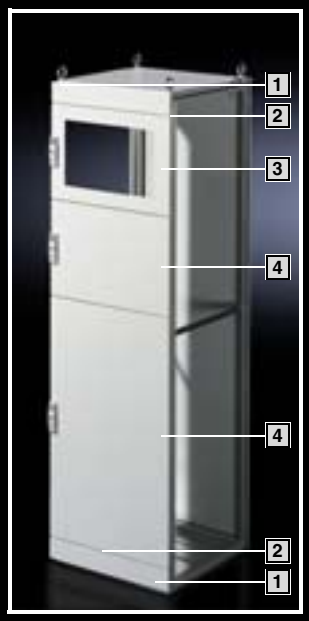
1 Trim panels, see page 590 or top-hinged trim panel, see page 589.

2 Cross member, see page 590.

Accessories:

3 Partial door with viewing window, see page 590.

4 Partial door without viewing window, see page 590.



1 Trim piece, hinged at the top

for TS
For the installation of control and display components, in conjunction with
- Modular front design
- Protective bar TS.

Material:
Sheet steel, 2 mm

Colour:
RAL 7035

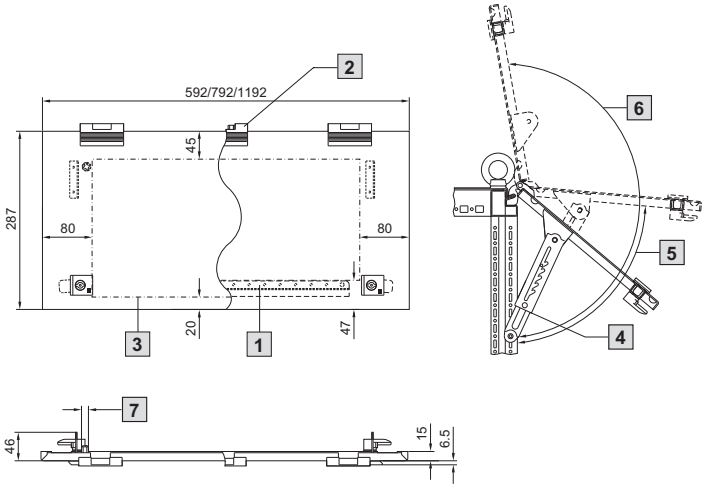
Supply includes:
Hinges, cam locks with double-bit insert and assembly parts.

Note:
Not in combination with top-mounted module for TS (see page 621).

Width mm	Height mm	Model No. TS
600	300	**8801.230**
800	300	**8801.240**
1200	300	**8801.250**

Accessories:

– Stay for trim panel, hinged at the top, see page 591.
– Lock inserts, type A, see page 609.
– Protective bar for TS, see page 587.



1 Only for width 800 and 1200 mm
2 Only for width 1200 mm
3 Usable interior area
4 Optional: Stay TS 8801.260
5 Maximum opening with stay approx. 85°
6 Maximum opening without stay approx. 190°
7 Earthing bolt M8

Modular front design for TS 8

1 Trim panels

for TS
Required as upper and lower height trim.

Material:
Sheet steel, 2 mm

Colour:
RAL 7035

Supply includes:
2 trim panels, assembly parts.

Height mm	Width mm	Model No. TS
100	600	**8801.510**
100	800	**8801.110**

! Also required:

Cross member for TS,
see page 590.

2 Cross member

for TS
For use as sealing member between:
- Trim panels
- Partial doors
- Trim piece, hinged at the top

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Width mm	Packs of	Model No. TS
600	5	**8801.630**
800	5	**8801.830**

3 4 Partial doors

for TS
Door may be optionally hinged on the right or left. In the case of doors without viewing panel (height 600 – 1000 mm), monitor frame SZ 2305.000 may be installed.
Standard double-bit lock insert may be exchanged for lock inserts, type F, and from 600 mm height, for comfort handle.

Material:
Sheet steel, 2 mm

Colour:
RAL 7035

Supply includes:
Hinges and lock.

! Also required:

Cross member for TS,
see page 590.

+ Accessories:

– Monitor frame SZ 2305.000,
see page 597.
– Lock inserts, version F,
see page 609.
– Comfort handle,
see page 603.

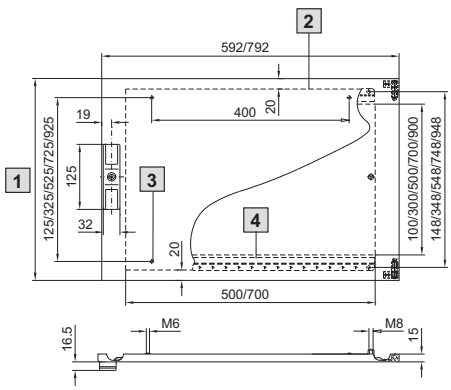
Solid

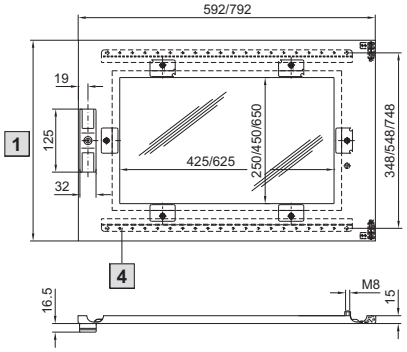
Height mm	Width mm	Model No. TS
200	600	**8801.520**
200	800	**8801.120**
400	600	**8801.540**
400	800	**8801.140**
600	600	**8801.560**
600	800	**8801.160**
800	600	**8801.580**
800	800	**8801.180**
1000	600	**8801.500**
1000	800	**8801.100**

With single-pane safety glass 3 mm

Height mm	Width mm	Model No. TS
600	600	**8801.570**
600	800	**8801.170**
800	600	**8801.590**

1 Height – 2 mm
2 Usable interior area
3 M6 bolt only for width 600 mm
4 Perforated strip only for width 800 mm





Drawer

for TS
For mouse and keyboard with a maximum width of 500/700 mm.
A high level of protection is retained, even with the flap open.
Standard double-bit lock insert may be exchanged for 27 mm lock inserts, type A, plastic handles, type B and T handles, type B.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Flap and assembly parts.

Height mm	Width mm	Model No. TS
200	600	**8801.715**
200	800	**8801.915**

Also required:

Cross member for TS,
see page 590.

Accessories:

- Lock inserts, 27 mm, version A, see page 609.
- Plastic handle, type B, see page 608.
- T handles, type B, see page 608.

Side panels for modular front design

for TS
Attachment on the inside vertical enclosure frame section.
The TS 8106.235 side panel retainers (page 567) could conflict with the partial door fasteners.

Material:
Sheet steel, 1.5 mm

Surface finish:
Dipcoat-primed, powder-coated on the outside, textured paint

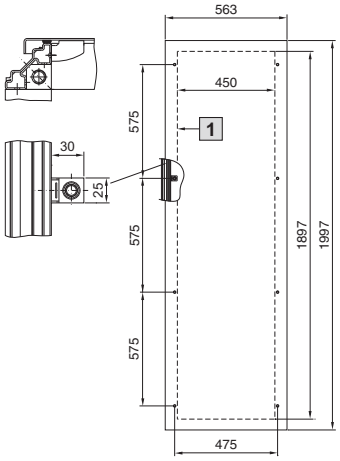
Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Supply includes:
2 side panels, 16 retainers with automatic potential equalisation.

Note:
Can also be used in enclosures without modular front design!

For enclosure		Model No. TS
Height mm	Depth mm	
2000	600	**8106.512**



1 Usable interior area

Stay

for trim panel, hinged at the top
5 pitch pattern positions up to a maximum opening of approx. 85°.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. TS
2	**8801.260**

Modular front design for Form 2-4

Partial doors

for SV-TS
Door hinges with non-drilled internal fastening.
Door may be optionally hinged on the right or left.

Material:
Sheet steel, 2 mm

Surface finish:
Textured

Colour:
RAL 7035

Supply includes:
Hinges and assembly parts.

Also required:

- Twist locks, see page 592.
- Cross members for SV-TS, see page 594.

For enclosure width 400 mm

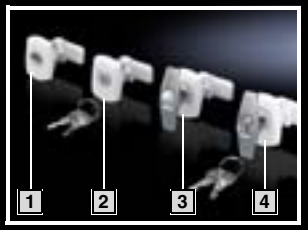
Height mm	No. of locks required	Packs of	Model No. SV
150	1	1	**9671.141**
200	1	1	**9671.142**
250	1	1	**9671.147**
300	1	1	**9671.143**
400	1	1	**9671.144**
600	2	1	**9671.146**
800	2	1	**9671.148**
1000	3	1	**9671.140**
1600	3	1	**9671.156**
1800	3	1	**9671.158**
2000	3	1	**9671.150**

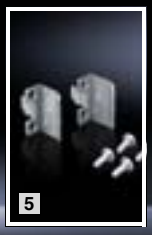
For enclosure width 800 mm

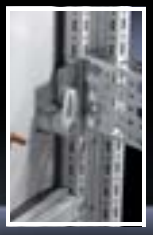
Height mm	No. of locks required	Packs of	Model No. SV
150	1	1	**9671.181**
200	1	1	**9671.182**
250	1	1	**9671.187**
300	1	1	**9671.183**
400	1	1	**9671.184**
600	2	1	**9671.186**
800	2	1	**9671.188**
1000	3	1	**9671.180**
1600	3	1	**9671.196**
1800	3	1	**9671.198**
2000	3	1	**9671.190**

For enclosure width 600 mm

Height mm	No. of twist locks required	Packs of	Model No. SV
150	1	1	**9671.161**
200	1	1	**9671.162**
250	1	1	**9671.167**
300	1	1	**9671.163**
400	1	1	**9671.164**
600	2	1	**9671.166**
800	2	1	**9671.168**
1000	3	1	**9671.160**
1600	3	1	**9671.176**
1800	3	1	**9671.178**
2000	3	1	**9671.170**







Twist locks

For installation in partial doors for SV-TS or in exchange for AE cam locks.

Material:
- Housing of fibreglass-reinforced plastic
- Bar made from PA

Colour:
RAL 7035

Supply includes:
- Enclosure
- Lock insert
- Bar
- Assembly parts

Design	Packs of	Model No. SV
1 With double-bit insert	1	**9671.130**
2 With cylinder insert, lock no. 3524 E	1	**9671.132**
3 With T handle	1	**9671.134**
4 With T handle and lock insert, lock no. 3524 E	1	**9671.135**
5 Fastener lug with end stop[1)]	2	**9671.138**

[1)] Must be used if the twist lock cannot be locked on the TS 8 frame.

Perforated mounting strip

for partial doors SV-TS

For retrospective external mounting on SV-TS partial doors. The perforated mounting strips have a 25 mm pitch pattern of holes and may be used for individual mountings on the rear of the door, e.g. cable ducts, hose holders etc.
Hole diameter of perforated mounting strip: 4.5 mm

Material:
Sheet steel, 1 mm

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width mm	400	600	800
Length mm	298	498	698
For partial door height mm	150 – 800	150 – 800	150 – 800
Packs of	10	10	10
Model No. SV	**9671.204**	**9671.206**	**9671.208**

Front trim panels

for SV-TS (busbar compartment)

Required to conceal a 300 mm high busbar compartment and for using partial doors as an upper and lower height filler.

Height of busbar compartment cover: 300 mm.
Height of front trim panel opposite: 100 mm.

Material:
Sheet steel, 2 mm

Surface finish:
Textured

Colour:
RAL 7035

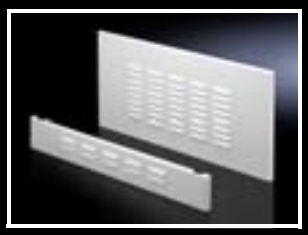
Supply includes:
2 front trim panels, including assembly parts.

Also required:

- Roof frame bars, see page 594.
- Cross members for SV-TS, see page 594.

Accessories:

Upgrade kit IP 43 for front trim panels IP 2X, see page 593.



IP 54, sealed

For enclosure width mm	Height of front trim panels top mm	Height of front trim panels bottom mm	Packs of	Model No. SV
400	300	100	1 set	**9672.014**
400	100	300	1 set	**9672.024**
600	300	100	1 set	**9672.016**
600	100	300	1 set	**9672.026**
800	300	100	1 set	**9672.018**
800	100	300	1 set	**9672.028**
1000	300	100	1 set	**9672.010**[1)]
1000	100	300	1 set	**9672.020**[1)]
1200	300	100	1 set	**9672.012**[1)]
1200	100	300	1 set	**9672.022**[1)]

[1)] Extended delivery times.

IP 2X, with ventilation hole

For enclosure width mm	Height of front trim panels top mm	Height of front trim panels bottom mm	Packs of	Model No. SV
400	300	100	1 set	**9672.034**
400	100	300	1 set	**9672.044**
600	300	100	1 set	**9672.036**
600	100	300	1 set	**9672.046**
800	300	100	1 set	**9672.038**
800	100	300	1 set	**9672.048**
1000	300	100	1 set	**9672.030**[1)]
1000	100	300	1 set	**9672.040**[1)]
1200	300	100	1 set	**9672.032**[1)]
1200	100	300	1 set	**9672.042**[1)]

[1)] Extended delivery times.

Upgrade kit IP 43

for front trim panels IP 2X

For enclosure width mm	Packs of	Model No. SV
400	1 set	**9672.054**
600	1 set	**9672.056**
800	1 set	**9672.058**
1000	1 set	**9672.050**[1)]
1200	1 set	**9672.052**[1)]

[1)] Extended delivery times.

Modular front design for Form 2-4

Front trim panels

for SV-TS

Required as an upper and lower height filler when partial doors are used.
Height: 100 mm.

Material:
Sheet steel, 2 mm

Surface finish:
Textured

Colour:
RAL 7035

Supply includes:
2 front trim panels, assembly parts.

Also required:

Cross members for SV-TS,
see page 594.

Accessories:

Upgrade kit IP 43 for front trim panels IP 2X,
see page 594.

IP 54, sealed

For enclosure width mm	Packs of	Model No. SV
400	1 set	**9671.014**
600	1 set	**9671.016**
800	1 set	**9671.018**

IP 2X, with ventilation hole

For enclosure width mm	Packs of	Model No. SV
400	1 set	**9671.034**
600	1 set	**9671.036**
800	1 set	**9671.038**

Upgrade kit IP 43

for front trim panels IP 2X

For enclosure width mm	Packs of	Model No. SV
400	1 set	**9671.044**
600	1 set	**9671.046**
800	1 set	**9671.048**

Cross member

for SV-TS

For use as sealing member between:
- Front trim panels
- Trim panels
- Partial doors

Material:
Sheet steel, 1 mm

Colour:
RAL 7035

Supply includes:
Assembly parts and sealing material.

For enclosure width mm	Packs of	Model No. SV
400	5	**9671.004**
600	5	**9671.006**
800	5	**9671.008**

Roof frame bars, horizontal

for SV-TS

Required as sealing bar between 300 mm high front trim panels and partial doors.

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Supply includes:
Assembly parts and sealing material.

For enclosure width mm	Width mm	Packs of	Model No. SV
400	308	2	**9672.004**
600	508	2	**9672.006**
800	708	2	**9672.008**
1000	908	2	**9672.000**[1)]
1200	1108	2	**9672.002**[1)]

[1)] Extended delivery times.

System window

To conceal display and operating instruments or cut-outs, and to protect against dirt and liquids as well as unauthorised access.

Consisting of the following 2 components:

1. Base frame:
- Easily screw-fastened to the door thanks to modified dimensions (tubular door frame may be used as a drilling template).
- Readily height-adjustable.
- Stabilises the door cut-out.
- Conceals the cut edge.
- The rain canopy
  – prevents dirt from landing on the seal,
  – protects the glass from being lifted out,
  – prevents the ingress of dirt and moisture when opening the window.
- Frame section height 30 mm or 60 mm

2. Viewing window:
- Made from single-pane safety glass:
  – high level of resistance to solvents and scratches,
  – anti-static,
  – reduced risk of injury if broken.
- Cam lock with double-bit insert, easily exchanged for lock inserts, type A, and semi-cylinders in the Ergoform-S lock system (not with FT 2735.500 and .560)
- Hinge with 180° opening angle, easily inserted.

Material:
Extruded aluminium sections with die-cast zinc corner pieces and single-pane safety glass.

Surface finish:
– Base frame: Powder-coated on the outside in RAL 7035,
– Hinge and lock section: Natural-anodised

Protection category:
IP 54 to IEC 60 529

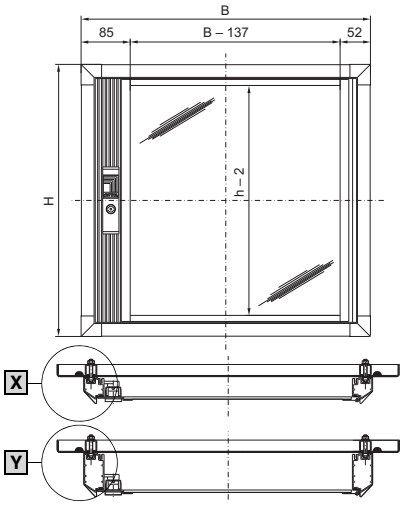
30 section

To fit TS, ES with width mm	Window size, exterior, mm		Model No. FT
	W (B)	H	
600	500	270	**2735.500**
		370	**2735.510**
		470	**2735.520**
		570	**2735.530**
		670	**2735.540**
800	700	270	**2735.560**
		370	**2735.570**
		470	**2735.580**
		570	**2735.590**
		670	**2735.250**

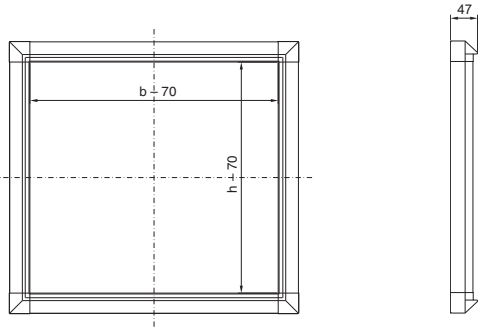
60 section

To fit TS, ES with width mm	Window size, exterior, mm		Model No. FT
	W (B)	H	
600	500	370	**2736.510**
		470	**2736.520**
		570	**2736.530**
		670	**2736.540**
800	700	670	**2736.500**

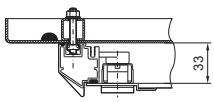
Standard double-bit lock insert may be exchanged for lock inserts 27 mm, type A, see page 609 and for lock system Ergoform-S (except H = 270 mm), see page 607.



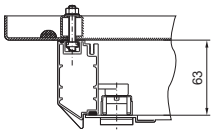
Viewing area (W (B) – 137) offset by 16.5 mm towards the hinge side.



View X
for profile height 30



View Y
for profile height 60



Viewing panels/operating panels

Viewing window

For mounting on
- AE instead of door
- Surfaces

Material:
– Front panel: Aluminium, natural-anodised
– Glass panel: Acrylic

Protection category:
IP 54 to IEC 60 529

Supply includes:
Plastic handle with lock insert no. 3524 E.

Max. installation depth: (depth – 4 mm)
Visible area: (width – 60 mm) x (height – 60 mm)

Note:
Other sizes available on request.

Depth = 34 mm

For use as door variant with	Width mm	Height mm	Model No. FT
AE 1050.500, AE 1350.500 AE 1007.600	497	497	**2733.000**
AE 1039.500, AE 1339.500 AE 1009.600, DK 7641.000	597	377	**2730.000**
AE 1010.500, AE 1054.500 AE 1060.500, AE 1360.500 DK 7643.000	597	597	**2731.000**
AE 1012.500, AE 1076.500 AE 1376.500, DK 7645.000	597	757	**2732.000**
for 3 U subrack	597	197	**2734.000**

Depth = 60 mm

For use as door variant with	Width mm	Height mm	Model No. FT
AE 1050.500, AE 1350.500 AE 1007.600	497	497	**2763.000**
AE 1039.500, AE 1339.500, AE 1009.600, DK 7641.000	597	377	**2760.000**
AE 1010.500, AE 1054.500 AE 1060.500, AE 1360.500 DK 7643.000	597	597	**2761.000**
AE 1012.500, AE 1076.500 AE 1376.500, DK 7645.000	597	757	**2762.000**

Horizontally hinged FT stay

A gas pressurised spring holds the viewing window securely open (top or side).
When the viewing window is closed, the gas pressurised spring disappears into the frame section.

Packs of	Model No. FT
2	**2772.000**

Acrylic glazed cover

With security lock, lock no. 3524 E.

Material:
– Frame: Extruded aluminium sections with die-cast corner pieces
– Glass panel: Smoked acrylic

Protection category:
IP 54 to IEC 60 529

Acrylic glazed covers, 482.6 mm (19˝)

U	Width mm	Height mm	Depth mm	Model No. FT
3	320	158	47.5	**2780.000**
3	534	158	47.5	**2781.000**
6	534	291.5	47.5	**2782.000**
9	534	425	47.5	**2796.000**

Max. installation depth: 43 mm
Visible area: (width – 40 mm) x (height – 20.5 mm)

Metric acrylic glazed covers

Width mm	Height mm	Depth mm	Model No. FT
400	200	47.5	**2784.000**
400	400	47.5	**2785.000**
500	200	47.5	**2786.000**
500	400	47.5	**2787.000**
600	200	47.5	**2788.000**
600	400	47.5	**2789.000**

Max. installation depth: 43 mm
Visible area: (width – 40 mm) x (height – 20.5 mm)

Viewing window

Stainless steel
Fitted as standard with internal 130° hinges and all-round seal.
The double-bit lock insert may be exchanged for 27 mm lock inserts, type A, and Ergoform-S handle SZ 2452.000.

Material:
Stainless steel 1.4301 (AISI 304)
Single-pane safety glass

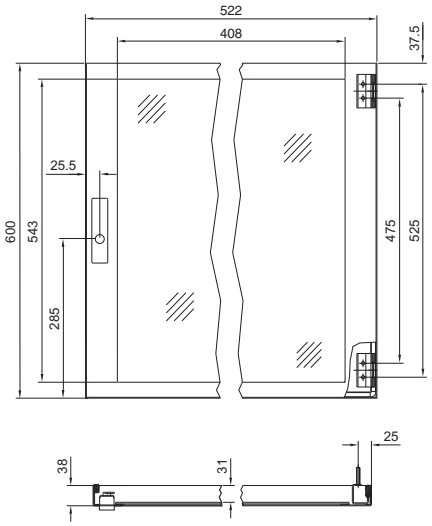
Protection category:
IP 54 to IEC 60 529

Supply includes:
Assembly parts.

Width mm	Height mm	Depth mm	Model No. FT
522	600	38	**2793.560**

Accessories:

– Lock inserts, 27 mm, version A, see page 609.
– Ergoform-S handle SZ 2452.000, see page 607.



Monitor frame

For door width 600 and 800 mm
For covering a door cut-out, for all standard monitors up to 482.6 mm (19″).

Protection category:
IP 54 to IEC 60 529

Supply includes:
Security glass panel.

Dimensions	Width mm	Height mm	Model No. SZ
External dimensions	470	430	**2305.000**
Viewing area	375	325	
Cut-out required	415	375	

Identification strips

For individual field identifiers on the door, including transparent cover and assembly parts.
For labels:
Width: Enclosure width – 150 mm
Height: 29 mm
Thickness: 0.75 mm.

Colour:
RAL 7033

For enclosure width mm	Model No. SZ
600	**2403.000**
800	**2404.000**

Viewing panels/operating panels

Operating panel

For mounting on:
- AE instead of door
- Surfaces

Frame construction with corner connectors on the inside, 3 mm aluminium plate secured from the inside and sealed against the frame

Material:
Aluminium, natural-anodised

Protection category:
IP 54 to IEC 60 529

Supply includes:
Aluminium frame, display panel, hinges, brackets.

For use as door variant for AE	Width mm	Height mm	Depth mm	**Model No. FT**
1001.600 1002.500 1002.600 1032.500 1035.500	197	297	34	**2740.000**[1)]
1004.600 1011.600 1030.500 1031.500	377	297	34	**2741.000**
1006.500 1006.600 1380.500	377	377	34	**2742.000**
1008.600 1038.500 1338.500	377	597	34	**2743.000**
1007.600 1013.600 1050.500 1350.500	497	497	34	**2745.000**
1009.600 1039.500 1339.500	597	377	34	**2744.000**
1010.500 1010.600 1060.500 1360.500	597	597	34	**2746.000**

[1)] With AE, only for use on the rear panel

Area available for population:
(width – 70 mm) x (height – 70 mm)

Dimensions of aluminium plate:
(width – 54 mm) x (height – 54 mm)

Accessories:

Cam lock FT 2749.000,
see page 598.

Cam lock

May be retrofitted to the operating area or enclosure panel of operating panels.
Standard double-bit lock insert may be exchanged for type C lock inserts and type C plastic handle.

Packs of	**Model No. FT**
1	**2749.000**

Accessories:

- Lock inserts, type C,
  see page 609.
- Plastic handle, type C,
  see page 608.

Viewing window

for operating panel
For the protection of display and control components. With a build height of max. 35 mm.

Material:
Front panel: Aluminium, natural-anodised
Glazed panel: Smoked acrylic

Supply includes:
Lock insert no. 3524 E.

For operating panel	**Model No. FT**
FT 2741.000	**2791.000**
FT 2742.000	**2792.000**

Compact enclosures, sheet steel

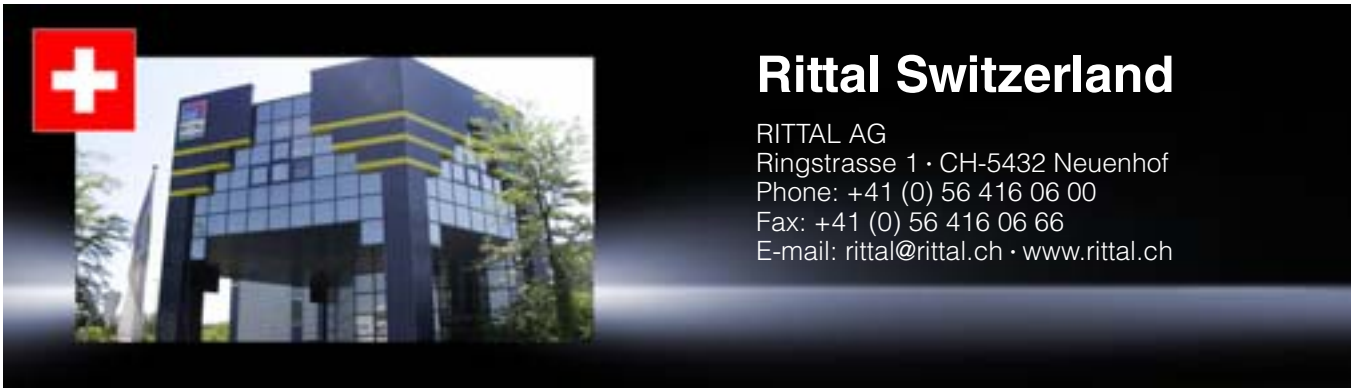
		Enclosure series									Lock inserts for handle systems				
		EB	BG	AE, wall-mounted enclosures AE		CM	KS		EL 3-part		Semi-cylinder		Lock inserts		
Condition		–	With cam	With cam	With 3-point lock	–	With cam	With 3-point lock	3 – 15 U	18 – 21 U	Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
	from page	37	39	44	46	50	52	53	62	62	604	604	609	609	604
Handle systems for enclosures															
Comfort handle															
For lock inserts	603	–	–	–	–	–	–	–	–	■	–	–	–	■	■
For padlock and lock inserts	603	–	–	–	–	–	–	–	–	■	–	–	–	■	■
With security lock insert E1	603	–	–	–	–	–	–	–	–	■	–	–	–	–	–
For semi-cylinder	603	–	–	–	–	–	–	–	–	■	■	■	–	–	–
Prepared for ASSA lock system	603	–	–	–	–	–	–	–	–	■	–	–	–	–	–
Mini-comfort handle (from AE enclosure height 380 mm, from AE enclosure width 300 mm)															
For lock inserts	606	–	–	■	–	–	–	–	■	–	–	–	–	■	■
For semi-cylinder	606	–	–	■	–	–	–	–	■	–	■	■	–	–	–
Ergoform-S handle															
Standard	607	–	–	–	■	–	–	–	–	–	■	■	■	–	–
Special with with lock insert, lock E1	607	–	–	–	■	–	–	–	–	–	–	–	–	–	–
Specially prepared for ASSA lock system	607	–	–	–	■	–	–	–	–	–	–	–	–	–	–
Standard for KS plastic enclosures	607	–	–	–	–	–	–	■	–	–	■	■	■	–	–
Folding lever handle															
For lock inserts	604	–	–	–	–	■	–	–	–	–	■	■	–	■	–
For padlock and lock inserts	604	–	–	–	–	■	–	–	–	–	■	■	–	■	–
With security lock insert E1	604	–	–	–	–	■	–	–	–	–	–	–	–	–	–
Semi-cylinder lock															
For AE	610	–	–	■	–	–	–	–	–	–	–	■	–	–	–
Plastic handles															
Version B	608	■	■	■	–	–	–	–	–	–					
Version E	608	–	–	–	–	–	■	–	–	–					
T handles															
Version B	608	■	■	■	–	–	–	–	–	–					
Lock inserts for enclosures															
Lock inserts															
Version A	609	■	■	■	■	–	–	–	–	–					
Version E	609	–	–	–	–	–	■	■	–	–					
Version F	609	–	–	–	–	■	–	–	■	■					
Lock cylinder inserts															
Version B	610	■	■	■	–	–	–	–	–	–					

Allocation of lock systems

Large enclosures, sheet steel

Condition		Enclosure series						Lock inserts for handle systems				
				PC enclosure TS 8				Semi-cylinder		Lock inserts		
		TS 8, SE 8	ES 5000	Door	For keyboard drawer or fold-out tray	DK-TS	TE 7000	Lock and push-button inserts	DIN 18 252	Version A	Version F	Lock and push-button inserts
	from page	72, 98	–	130	130	102	107	604	604	609	609	604
Handle systems for enclosures												
Comfort handle												
For lock inserts	603	■	–	■	–	■	–	–	–	–	■	■
For padlock and lock inserts	603	■	–	■	–	■	–	–	–	–	■	■
For semi-cylinder	603	■	–	■	–	■	–	■	■	–	–	–
With security lock insert E1	603	■	–	■	–	■	–	–	–	–	–	–
Prepared for ASSA lock system	603	■	–	■	–	■	–	–	–	–	–	–
Security handle with code	605	■	–	■ [1]	–	■ [1]	–	■	■	–	–	–
Ergoform-S handle												
Standard	607	–	■	–	–	–	■	■	■	■	–	–
Security handle with code	605	–	–	–	–	–	■	■	■	–	–	–
Special with with lock insert, lock E1	607	–	■	–	–	–	■	–	–	–	–	–
Special, prepared for ASSA lock system	607	–	■	–	–	–	■	–	–	–	–	–
Lock inserts for enclosures												
Lock inserts												
Version A	609	–	■	–	■	–	–					
Version F	609	■	–	■	–	–	–					

[1] Only suitable for use with rear door.



Console systems and industrial workstation, sheet steel

Condition		Enclosure series: TopConsole TP – Desk section and console	TopConsole TP – Pedestal	One-piece console TP – Console cover	One-piece console TP – Console door	Universal consoler TP	IW	IW enclosure for tower PC	Lock inserts for handle systems: Semi-cylinder – Lock and push-button inserts	Semi-cylinder – DIN 18 252	Lock inserts – Version A	Lock inserts – Version F	Lock inserts – Lock and push-button inserts
	from page	123	123	128	128	129	132	131	604	604	609	609	604
Handle systems for enclosures													
Comfort handle													
For lock inserts	603	–	–	–	–	–	■	–	–	–	–	■	■
For padlock and lock inserts	603	–	–	–	–	–	■	–	–	–	–	■	■
For semi-cylinder	603	–	–	–	–	–	■	–	■	■	–	–	–
With security lock insert E1	603	–	–	–	–	–	■	–	–	–	–	–	–
Prepared for ASSA lock system	603	–	–	–	–	–	■	–	–	–	–	–	–
Security handle with code	605	–	–	–	–	–	■	–	■	■	–	–	–
Ergoform-S handle													
Standard	607	–	■	–	■	■	–	–	■	■	■	–	–
Special with with lock insert, lock E1	607	–	■	–	■	■	–	–	–	–	–	–	–
Special, prepared for ASSA lock system	607	–	■	–	■	■	–	–	–	–	–	–	–
T handles													
Version B	608	■	–	■	–	–	–	–					
Lock inserts for enclosures													
Lock inserts													
Version A	609	■	■	■	■	■	–	–					
Version D	609	–	–	–	–	–	–	■					
Version F	609	–	–	–	–	–	■	–					
Lock cylinder inserts													
Version B	610	–	–	–	–	–	■	–					

Allocation of lock systems

Enclosures and cases, stainless steel

Condition		Enclosure series: AE – With cam	AE – With 3-point lock	One-piece console AP – Console cover	One-piece console AP – Console door	TS 8, SE 8	ES 5000, PC	Lock inserts for handle systems: Semi-cylinder – Lock and push-button inserts	Semi-cylinder – DIN 18 252	Lock inserts – Version A	Lock inserts – Version F	Lock inserts – Lock and push-button inserts
	Page	184/185	186	192	192	194/195	–/193	604	604	609	609	604
Handle systems for enclosures												
Comfort handle												
For lock inserts	603	–	–	–	–	■	–	–	–	–	■	■
For padlock and lock inserts	603	–	–	–	–	■	–	–	–	–	■	■
For semi-cylinder	603	–	–	–	–	■	–	■	■	–	–	–
With security lock insert E1	603	–	–	–	–	■	–	–	–	–	–	–
Prepared for ASSA lock system	603	–	–	–	–	■	–	–	–	–	–	–
Ergoform-S handle												
Standard	607	–	■	–	■	–	■	■	■	■	–	–
Special with with lock insert, lock E1	607	–	■	–	■	–	■	–	–	–	–	–
Special, prepared for ASSA lock system	607	–	■	–	■	–	■	–	–	–	–	–
Plastic handles												
Version C	608	■ [1]	–	■	–	–	–	–	–	–	–	–
T handles												
Version C	608	■ [1]	–	■	–	–	–	–	–	–	–	–
Semi-cylinder lock												
for AE	610	■ [2]	–	–	–	–	–	–	■	–	–	–
Lock inserts for enclosures												
Lock inserts												
Version A	609	–	■	–	–	–	■					
Version C	609	■	–	■	–	–	–					
Version F	609	–	–	–	–	■	–					
Lock cylinder inserts												
Version C	610	■	–	■	–	–	–					

[1] Not with AE 1018.600.
[2] Not with enclosures from stainless steel 1.4401 (AISI 316L) and use of cam lock SZ 2304.000.

Rittal comfort handle

for TS, DK-TS, PC, IW

As the handle does not take up any swing space, due to its folding mechanism, the door surface area may be maximised for installed equipment.

Material:
Die-cast zinc

Surface finish:
Powder-coated

Also required:

Handle adaptor for mounting on a
– Glazed door TS
– Bottom door PC-TS
– Designer door IW
see page 584.

	For lock inserts	For padlock and lock inserts	With lock insert E1[1]	For semi-cylinder[2]	Prepared for ASSA lock system
	Model No. TS				
RAL 7032	**8611.010**	**8611.030**	**8611.040**	**8611.060**	**8611.050**
RAL 7035	**8611.020**	**8611.290**	**8611.045**	**8611.070**	**8611.280**
RAL 8019	**8611.250**	**8611.260**	**–**	**8611.270**	**–**
RAL 9005	**8611.350**	**–**	**–**	**8611.360**	**–**
Matt nickel-plated	**8611.330**	**–**	**–**	**8611.340**	**–**
Lock inserts, type F					
7 mm square	8611.100	8611.100	–	–	–
8 mm square	8611.110	8611.110	–	–	–
7 mm triangular	8611.120	8611.120	–	–	–
8 mm triangular	8611.130	8611.130	–	–	–
Screwdriver	8611.140	8611.140	–	–	–
Daimler insert	8611.150	8611.150	–	–	–
3 mm double-bit	8611.160	8611.160	–	–	–
Fiat	8611.170	8611.170	–	–	–
6.5 mm triangular (CNOMO)	8611.220	8611.220	–	–	–
Lock and push-button inserts					
Security lock insert no. 3524 E[3]	8611.180	8611.180	–	2467.000	–
Push-button insert	8611.190	8611.190	–	2468.000	–
Push-button and lock insert[3]	8611.200[4]	8611.200[4]	–	2469.000[5]	–
Semi-cylinder					
to DIN 18 252[6]	–	–	–	9785.040	–
	–	–	–	9785.042[7]	–

[1] Only for use with VW, Audi, SEAT, SkodaAuto. Supplied without key.
Other VW locks available on request.
[2] Comfort handle for lock cylinder KESO/KABA with Model No. TS 8611.240 available on request.
[3] With 2 keys
[4] Lock no. 12321, no other lock is possible.
[5] Lock no. 2123, no other lock is possible.
[6] With 3 keys for each lock insert
[7] Packs of 2. Simultaneous locking within the same pack, no simultaneous locking for different packs.

Lock systems

Lock inserts

for installation in comfort handle, mini-comfort handle, Ergoform-S standard, folding lever handle

Installation in			
	Lock and push-button inserts		Semi-cylinder
	Comfort handle[6], mini-comfort handle[6]	Comfort handle[7], mini-comfort handle[7], Ergoform-S standard, folding lever handle for CM	Comfort handle, mini-comfort handle, Ergoform-S standard, folding lever handle for CM
	Model No. TS	**Model No. SZ**	**Model No. CS**
Security lock insert no. 3524 E[1]	**8611.180**	**2467.000**	**–**
Push-button insert	**8611.190**	**2468.000**	**–**
Push-button and lock insert[1]	**8611.200[2]**	**2469.000[3]**	**–**
to DIN 18 252[4]	**–**	**–**	**9785.040**
	–	**–**	**9785.042[5]**

[1] With 2 keys [2] Lock no. 12321, no other lock is possible. [3] Lock no. 2123, no other lock is possible.
[4] With 3 keys for each lock insert.
[5] Packs of 2. Simultaneous locking within the same pack, no simultaneous locking for different packs.
[6] For lock inserts. [7] For semi-cylinder.

Folding lever handle

for CM

As the handle does not take up any swing space, due to its folding mechanism, the door surface area may be maximised for installed equipment.

Colour:
- Enclosure: Similar to RAL 9005
- Handle: Similar to RAL 9006

Size:
- Length: 242 mm (with inserted trim panel)
- Width: 50 mm
- Depth: 17.5 mm

	For lock inserts	For padlock and lock inserts	With lock insert E1[1]
	Model No. CM		
	5001.060	**5001.062**	**5001.061**
Lock inserts, type F			
7 mm square	8611.100	8611.100	–
8 mm square	8611.110	8611.110	–
7 mm triangular	8611.120	8611.120	–
8 mm triangular	8611.130	8611.130	–
Screwdriver	8611.140	8611.140	–
Daimler insert	8611.150	8611.150	–
3 mm double-bit	8611.160	8611.160	–
Fiat	8611.170	8611.170	–
6.5 mm triangular (CNOMO)	8611.220	8611.220	–
Lock and push-button inserts			
Security lock insert no. 3524 E[2]	2467.000	2467.000	–
Push-button insert	2468.000	2468.000	–
Push-button and lock insert[2]	2469.000[3]	2469.000[3]	–
Semi-cylinder			
to DIN 18 252[4]	9785.040	9785.040	–
	9785.042[5]	9785.042[5]	–

[1] Only for use with VW, Audi, SEAT, SkodaAuto. Supplied without key. Other VW locks available on request.
[2] With 2 keys
[3] Lock no. 2123; no other lock is possible.
[4] With 3 keys for each lock insert
[5] Packs of 2. Simultaneous locking within the same pack, no simultaneous locking for different packs.

Security handle

with code

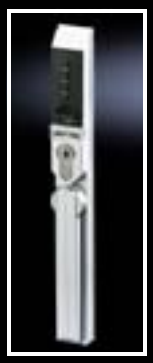
Flexible access opportunities with
- individual 3-digit code without key

or
- with the master key function via an additional semi-cylinder of 40 or 45 mm to DIN 18 252, irrespective of the code.

Design with	Model No. DK
Comfort handle for TS	**7200.800**
Ergoform-S handle for TE	**7200.810**

Accessories:

– SZ lock and push-button inserts, see page 604.
– Semi-cylinder, see page 604.



Adjacent door latch

for TS

For optimum operation of the adjacent door from the outside if the handle on the inside is difficult to access due to swing frames or 482.6 mm (19˝) installed equipment. Retrospective conversion of the adjacent door is easily achieved using the supplied drilling template.
The handle on the inside is no longer required.

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. TS
1	**8611.370**

Accessories:

Standard double-bit lock insert may be exchanged for 27 mm lock inserts, version A, see page 609.

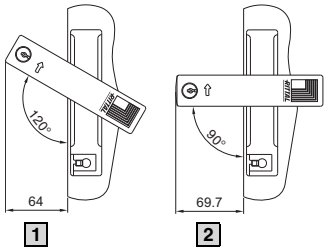
Swivel handle

for sheet steel door DK-TS

With lock insert, lock no. 3524 E.
The use of semi-cylinders is not supported.
Length: 150 mm.

Note:
The swivel handle cannot be used in conjunction with 180° hinges (TS 7824.520).

Design	Model No. DK
RAL 7035	**7829.300**



1 Position for door opening

2 Max. projection of the upper handle part

Lock systems

Locking bar latch to CNOMO[1)]

To fit all locking bars in TS doors and glazed doors with standard lock or comfort handle.
The latch prevents the locking bars from moving when the door is open.
For mounting on the bolt of the bar guide.

[1)] CNOMO is a specification by the French automobile industry. For safety reasons, it must not be possible to lock the handle whilst the door is open.

Packs of	Model No. TS
10	**8611.210**

Also required:

for CNOMO[1)]
Lock inserts, version F, 6.5 mm triangular insert TS 8611.220,
see page 609.

Spring washer

Upon dismantling the TS locking rods, the spring washers cannot be reused.

Material:
Spring steel

Surface finish:
Zinc-plated

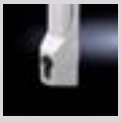
	Packs of	Model No. TS
Spring washer	100	**8800.070**

Mini comfort handle

for AE with cam, EL 3-part
Prepared for the installation of lock inserts and for the installation of commercially available 40 or 45 mm semi-cylinders, and of lock and push-button inserts.

Material:
Die-cast zinc

Colour:
RAL 7035

	For lock inserts		 For semi-cylinder	
	Model No. DK			
For enclosure system	EL	AE	EL	AE
	7705.110	**2537.010**	**7705.120**	**2537.000**
Lock inserts, type F				
7 mm square	8611.100	8611.100	–	–
8 mm square	8611.110	8611.110	–	–
7 mm triangular	8611.120	8611.120	–	–
8 mm triangular	8611.130	8611.130	–	–
Screwdriver	8611.140	8611.140	–	–
Daimler insert	8611.150	8611.150	–	–
3 mm double-bit	8611.160	8611.160	–	–
Fiat	8611.170	8611.170	–	–
6.5 mm triangular (CNOMO)	8611.220	8611.220	–	–
Lock and push-button inserts				
Lock insert, lock no. 3524 E[1)]	8611.180	8611.180	2467.000	2467.000
Push-button insert	8611.190	8611.190	2468.000	2468.000
Push-button and lock insert[1)]	8611.200[2)]	8611.200[2)]	2469.000[3)]	2469.000[3)]
Semi-cylinder				
to DIN 18 252[4)]	–	–	9785.040	9785.040
	–	–	9785.042[5)]	9785.042[5)]

[1)] With 2 keys
[2)] Lock no. 12321; no other lock is possible.
[3)] Lock no. 2123; no other lock is possible.
[4)] With 3 keys for each lock insert.
[5)] Packs of 2. Simultaneous locking within the same pack, no simultaneous locking for different packs.

Ergoform S lock system

The unlocked handle folds down forwards, and the lock is opened by swivelling.

Material:
Die-cast zinc

Surface finish:
Powder-coated

	Standard	Standard for KS plastic enclosures	Special with lock insert E1[1]	Specially prepared for ASSA lock system
	Model No. SZ	**Model No. KS**	**Model No. SZ**	
RAL 7032 with brown handle	**2450.000**	**–**	**–**	**–**
RAL 7035 with brown handle	**2450.010**	**–**	**2456.500**	**–**
Brown	**2451.000**	**–**	**–**	**2453.000**
Matt nickel-plated	**2452.000**	**–**	**–**	**–**
RAL 7032	**2454.000**	**–**	**–**	**–**
RAL 7035	**2435.000**	**1490.010**	**–**	**–**
RAL 7032 with brown handle and bracket	**2455.000**	**–**	**–**	**–**
RAL 7035 with brown handle and bracket	**2455.010**	**–**	**–**	**–**
Lock inserts, version A				
7 mm square	2460.000	2460.000	–	–
8 mm square	2461.000	2461.000	–	–
7 mm triangular	2462.000	2462.000	–	–
8 mm triangular	2463.000	2463.000	–	–
Screwdriver	2464.000	2464.000	–	–
Daimler insert	2465.000	2465.000	–	–
3 mm double-bit	2466.000	2466.000	–	–
Fiat	2307.000	2307.000	–	–
6.5 mm triangular (CNOMO)	2460.650	2460.650	–	–
Lock and push-button inserts				
Lock insert, lock no. 3524 E[2]	2467.000	2467.000	–	–
Push-button insert	2468.000	2468.000	–	–
Push-button and lock insert[2]	2469.000[3]	2469.000[3]	–	–
Semi-cylinder				
to DIN 18 252[4]	9785.040	9785.040	–	–
	9785.042[5]	9785.042[5]	–	–

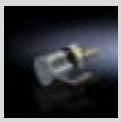
[1] Only for use with VW, Audi, SEAT, SkodaAuto. Supplied without key. Other locks available on request.
[2] With 2 keys
[3] Lock no. 2123; no other lock is possible.
[4] With 3 keys for each lock insert.
[5] Packs of 2. Simultaneous locking within the same pack, no simultaneous locking for different packs.

Lock systems

Plastic handles

With or without lock cylinder insert.

Supply includes:
Assembly parts and seals.

Design	B		C		E		G
							
	With lock cylinder insert, lock no. 3524 E[1]	Without lock insert	With lock cylinder insert, lock no. 3524 E[1]	Without lock insert	With lock cylinder insert, lock no. 3524 E[1]	Without lock insert	With lock cylinder insert, lock no. 3524 E[1]
	Model No. SZ				**Model No. KS**		**Model No. SZ**
RAL 9011	**2576.000**	**2533.000**	**2485.000**	**2485.100**	**–**	**–**	**2599.000**
RAL 7030	**2439.000**	**–**	**–**	**–**	**–**	**–**	**–**
RAL 8019	**–**	**–**	**–**	**–**	**1484.000**	**1484.001**	**–**

[1] With 2 keys

T handles

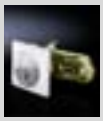
With or without lock cylinder insert.

Supply includes:
Seal

Design	B		C	
	With lock cylinder insert[1]	Without lock insert	With lock cylinder insert[1]	Without lock insert
	Model No. SZ			
	2575.000[2]	**2572.000**	**2535.000[2]**	**2536.000**

[1] With 2 keys
[2] Lock no. 3524 E

Cam locks

						
	With double-bit insert	With lock cylinder insert[3]	With double-bit insert	With lock cylinder insert[3]	With lock insert, lock E1[1] RAL 7035	With double-bit insert
Material: Enclosure	Die-cast zinc, nickel-plated		Fibreglass-reinforced polyamide			Made entirely from stainless steel 1.4404 (AISI 316L)
	Model No. SZ					
	2520.000	**2530.000**	**2420.000**	**2430.000**	**2540.500**	**2304.000**
Lock inserts						
7 mm square	2523.000	–	2460.000	–	–	–
8 mm square	2526.000	–	2461.000	–	–	–
7 mm triangular	2527.000	–	2462.000	–	–	–
8 mm triangular	2528.000	–	2463.000	–	–	–
Screwdriver	–	–	2464.000	–	–	–
Daimler insert	2522.000	–	2465.000	–	–	–
3 mm double-bit	2483.000	–	2466.000	–	–	–
Fiat	–	–	2307.000	–	–	–
6.5 mm triangular (CNOMO)	–	–	2460.650	–	–	–
Lock cylinder inserts						
With lock no. 3524 E[2]	–	–	2571.000	–	–	–

[1] Only for use with VW, Audi, SEAT, SkodaAuto. Supplied without key.
Other locks available on request.
[2] With 2 keys
[3] Lock no. 3524 E

Lock inserts

Design	A	C	D	E	F
Material	Die-cast zinc	Die-cast zinc	Die-cast zinc	Plastic	Die-cast zinc
Length	27 mm	41 mm	47 mm		
	Model No. SZ			**Model No. KS**	**Model No. TS**
7 mm square	**2460.000**	**2523.000**	–	**1487.000**	**8611.100**
8 mm square	**2461.000**	**2526.000**	–	**1488.000**	**8611.110**
7 mm triangular	**2462.000**	**2527.000**	–	**1485.000**	**8611.120**
8 mm triangular	**2463.000**	**2528.000**	–	**1486.000**	**8611.130**
Screwdriver	**2464.000**	–	–	**1489.000**	**8611.140**
Daimler insert	**2465.000**	**2522.000**	–	–	**8611.150**
3 mm double-bit	**2466.000**	**2483.000**	**2484.000**	**1492.000**	**8611.160**
Fiat	**2307.000**	–	–	–	**8611.170**
6.5 mm triangular (CNOMO)	**2460.650**	–	–	–	**8611.220**

Lock systems

Lock cylinder inserts

Design	B	C
	With lock no. 3524 E[1)]	With lock no. 3524 E[1)]
Material	Die-cast zinc	Die-cast zinc
	Model No. SZ	**Model No. SZ**
	2571.000	**2525.000**

[1)] With 2 keys

Semi-cylinder lock

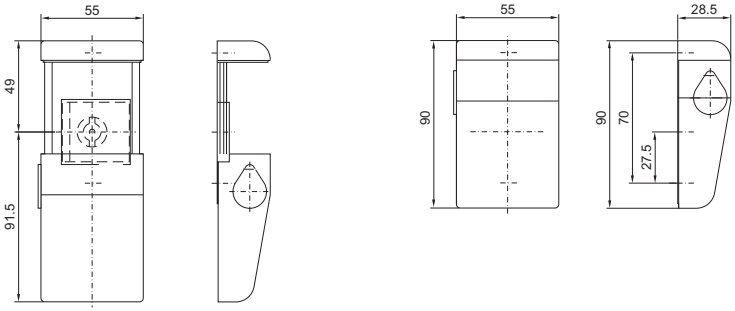
for compact enclosures AE
For retro-fitting to single-door enclosures with cam lock.
The cover plate is locked by semi-cylinders with a total length of 40/45 mm (to DIN 18 252).
An additional cover protects the cylinder against dirt. The protection category of the enclosure is not impaired.
Supplied without semi-cylinder.

Material:
Die-cast zinc

Design	Model No. SZ
RAL 7035	**2534.100**
Nickel-plated (matt)	**2534.500**

Accessories:

Semi-cylinder,
see page 604.



Lock cover

For padlocks or multiple locks
For retrospective mounting on all compact enclosures AE, of sheet steel and with cam lock.

Material:
Die-cast zinc

Surface finish:
Nickel-plated

Packs of	Model No. SZ
1	**2493.000**

Multiple lock

for 6 cam locks
The ideal solution in cases where individual access for several persons is required for maintenance and repair purposes.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. SZ
2	**2493.500**

Lock cover

Prepared for lead seal
For all enclosure types with Rittal-specific locks, such as AE and EB.

Material:
Polyamide

Colour:
RAL 7035

Packs of	Model No. SZ
2	**2476.000**

Security lock

Fitted to doors, to protect against contact with live electrical equipment whilst the master switch is ON.

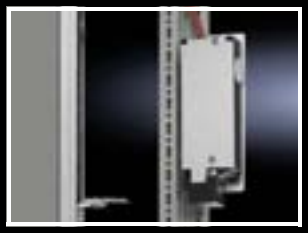
Function:
- Locks the door when the master switch is ON.
- Mains power (voltage) is only enabled whilst the door is closed.
- Monitoring of the lock magnet via an additional closing contact.

Supply includes:
– Lock
– Actuator
– Angle bracket
– Assembly parts

Connection voltage for lock magnet	Model No. SZ
230 V AC 11 VA	**2416.000**
24 V DC 8 W	**2418.000**
120 V AC 8 VA	**2419.000**

Also required:

For twin-door enclosures (for the overlapping door, to indicate “enclosure door closed”), Rittal door-operated switch SZ 4127.010, see page 684.



Lock systems

Enclosure keys

For lock inserts (one double-bit key is supplied with every enclosure).

	Model No. SZ/QB		**Model No. SZ**	
	–	**–**	**2549.000**	**2549.500**[2)3)]
Double-bit key no. 5	**2531.000**	**–**	■	■
Security key no. 3524 E	**–**	**2532.000**[1)]	**–**	**–**
7 mm triangular	**2545.000**	**–**	**–**	■
8 mm triangular	**2546.000**	**–**	■	■
7 mm square	**2547.000**	**–**	**–**	■
8 mm square	**2548.000**	**–**	■	■
For HD locks	**2549.600**	**–**	**–**	**–**
For Daimler	**2521.000**	**–**	**–**	**–**
For Fiat	**2308.000**	**–**	**–**	**–**
Lock 12321	**–**	**7526.050**[1)]	**–**	**–**

[1)] Packs of 2
[2)] With bit adaptor and reversible bit for multi-tooth size 25 and Phillips-head (Ph 2)
[3)] Bit for HD lock insert (Model No. HD 2549.510), see page 178.

Quick-release fastener

for QuickBox

The quick-release fastener is ideal for use in inaccessible areas. To facilitate locking, the quick-release fastener is screw-fastened to the mounting bracket at the front. This enables the QuickBox to be locked even when the fasteners of the sides are opened, allowing the enclosure cover to be attached and removed easily.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
2 mounting brackets, assembly parts and quick-release fasteners.

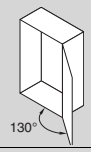
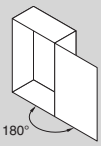
Packs of	**Model No. QB**
2	**7502.220**

130°/180° hinges

Supply includes:
Assembly parts

Also required:

1) Lock components for frame TS 8800.040, see page 584.

Enclosure type	Door variant	Material	Colour	Packs of		
					Model No.	
ES 5000	Sheet steel door	Die-cast zinc	–	6	**4190.000**	–
TS 8	Sheet steel door	Die-cast zinc	–	4	**8800.020**[1]	–
TS 8	Sheet steel door	Die-cast zinc	RAL 7035	4	–	**8800.190**
			RAL 7032		–	**8800.030**
			RAL 8019		–	**8800.230**
			RAL 9005		–	**8800.950**
			Matt nickel-plated		–	**8701.180**
TS 8	Doors with high dynamic loads, door installations up to 900 N	Precision casting/ die-cast zinc	RAL 7035	4	–	**8800.710**
TS 8 bayed enclosure suites with comfort handle	Sheet steel door	Die-cast zinc	RAL 7035	4	–	**7824.520**
	Glazed door	Die-cast zinc	RAL 7035			**7824.525**[2]
	Sheet steel door	Die-cast zinc	RAL 9005			**7824.522**
ES 5000, TP universal console, TP pedestals, TE 7000	Standard door	Aluminium	Powder-coated in RAL 8019	6	–	**4189.000**
ES 5000	Standard door	Stainless steel 1.4301 (AISI 304)	–	6	–	**4156.000**
AE	Standard door	Die-cast zinc	–	2	–	**2449.000**
CM	Standard door	Die-cast zinc	RAL 9011/9006	3	–	**5001.000**

2) Max. 140°

Hinge pin remover

For safe and easy removal of hinge pins.

For enclosure	Model No. SM
AE/CM	**2432.000**

Cover hinge

for KL
The cover hinge is simply screwed to the enclosure protection channel and to the edge fold.

Supply includes:
Assembly parts.

Material	Packs of	Model No. KL
Die-cast zinc	6	**1592.000**
Stainless steel 1.4404 (AISI 316L)	2	**1592.010**

Cover retainer

for KL
The cover retainer is easily fitted without drilling, and allows the covers to be opened upwards, even when the terminal box below is bayed.

Packs of	Model No. KL
3 pairs	**1591.000**

Door, internal

Support strips

For attachment of
- Cable ducts
- Cable conduit holders
- Contact hazard protection covers
- Equipment installed on the door
- Cable clamping and attachment

4.5 mm diameter hole on a 25 mm DIN pitch pattern.

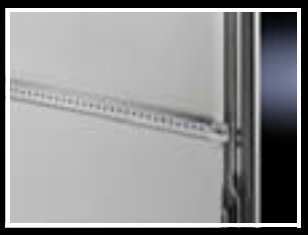
Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Packs of 20 (screws included).

Accessories:

Screws and self-tapping screws M5,
see page 666.



For TS, CM, ES, TP

For door width mm	Length mm	Model No. SZ
400	290	**4594.000**
500	390	**4309.000**
600	490	**4596.000**
800	690	**4598.000**
900	790	**4579.000**
1000	890	**4599.000**

For AE

For enclosures AE	Model No. SZ
1018.600[2], 1019.500[2] 1050.500[1], 1057.500 1100.500, 1110.500 1114.500[1], 1130.500 1213.500[1], 1350.500[1]	**2325.000**
1009.600[2], 1376.500 1012.500[2], 1039.500 1054.500, 1058.500 1060.500, 1076.500 1090.500, 1260.500[1] 1339.500, 1360.500	**2326.000**
1014.500[2], 1073.500 1077.500	**2327.000**
1016.500[2], 1017.500[2] 1055.500, 1180.500 1280.500[1]	**2328.000**

[1] For these AE models, the support strips should be cut to length at the knockout.
[2] Only in conjunction with perforated mounting strips (see page 615).

Spacers

The universal assembly component for all cases where a distance from the mounting level is required. With self-tapping thread for diameter 4.5 mm. The following components may be attached to the rear using 5.5 x 13 mm screws:

- Top-hat/cross rails
- Contact hazard protection covers
- Master switch trim panels
- Cable clamp rails,
  etc.

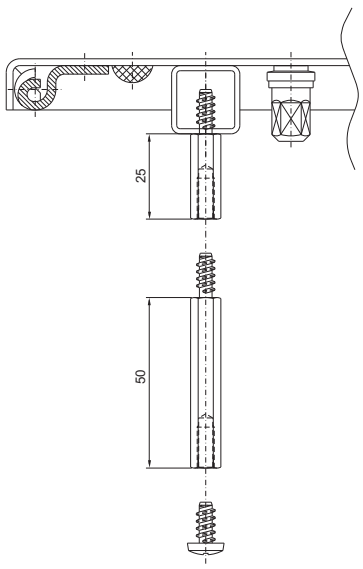
Material:
Hexagonal steel (SW8)

Surface finish:
Zinc-plated

Accessories:

Screws 5.5 x 13 mm,
see page 666.

Length mm	Packs of	Model No. TS
25	12	**2311.225**
50	12	**2311.250**



Perforated mounting strip

for AE stainless steel, AP universal console[1)]
For vertical mounting on the threaded bolts of the door, for attaching
- Support strips for AE, see page 614.
- Door stay SZ 2519.000, see page 617.

3.7 mm diameter hole on a 25 mm DIN pitch pattern.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Packs of 20 (nuts and serrated washers included).

To match AE	Length mm	Model No. SZ
1005.500, 1005.600, 1006.500, 1006.600, 1009.600	318	**2310.038[1)]**
1012.600, 1014.600	698	**2310.076**
1016.600, 1018.600	938	**2310.100**
1017.600, 1019.500, 1019.600	1138	**2310.120**

[1)] For door at top

Accessories:

Screws,
see page 666.

Utility lectern

For programming units etc. Prepared for mounting on the tubular door frame of TS, CM, ES, PC or on any sufficiently large surface.
When required for servicing, it folds down quickly with a maximum support area, and after use is stowed between the tubular door frames in a space-saving design.
Load capacity: max. 30 kg.

Material:
Sheet steel

Colour:
RAL 7035

Support area		For door width mm	Model No. TS
Width mm	Depth mm		
413	400	600	**4638.600**
613	400	800	**4638.800**

Wiring plan lectern

Holds wiring plans during fault finding and maintenance work.
The wiring plan lecterns can be bayed according to the door width.
For mounting on the tubular door frame.

Material:
– Utility lectern: Polypropylene
– Mounting bracket: Die-cast zinc

Colour:
Similar to RAL 7035

Supply includes:
– Wiring plan lectern (width 210 mm).
– Assembly parts

For enclosures	Packs of	Model No. TS
TS, CM, ES, PC, TP	1	**4120.000**

For door width mm	Required/possible number of wiring plan lecterns	
	min.	max.
400	1	1
500	1	1
600	2	2
800	2	3
1000	3	3

CD/disk box

For fixing to all flat, clean surfaces with double-sided adhesive tape.

Capacity:
Max. 10 CDs/DVDs or 18 (3 $^1/_2$″) disks.

Material:
Polyamide

Colour:
RAL 7033

Packs of	Model No. SZ
1	**2446.000**

Door, internal

Plastic wiring plan pockets

for AE

For installation options, refer to table
- B = Screw-fastened to the perforated door strip on both sides
- E = Screw-fastened on one side, other side stuck with adhesive

or stuck entirely with adhesive

Supply includes:
– 2 holders with double-sided adhesive tape
– Acrylic glazed pane
– Assembly parts

Note:
The acrylic glazed pane may be shortened to any required size for shorter doors.

Model No. SZ		**2514.500**	**2514.600**	**2514.800**
Usable width mm		340	415	615
Usable depth mm		18	18	18
Height of acrylic glazed pane mm		167	167	167
Installation options:				
For Model No. AE	Width mm			
1050.500	500	B	–	–
1054.500	600	E	E	–
1055.500	800	E	E	E
1057.500	500	B	–	–
1058.500	600	E	E	–
1060.500	600	E	E	–
1073.500	760	E	E	–
1076.500	600	E	E	–
1077.500	760	E	E	–
1090.500	600	E	E	–
1100.500	1000	B	–	–
1110.500	1000	B	–	–
1114.500	1000	B[1)]	–	–
1130.500	1000	B	–	–
1180.500	800	E	E	E
1213.500	1000	B[1)]	–	–
1260.500	600	E	B	–
1280.500	800	E	E	B
1350.500	500	B	–	–
1360.500	600	E	E	–
1376.500	600	E	E	–

[1)] Prepared for mounting on the l/h side door; for mounting on the r/h side door, the acrylic glazed pane can be shortened.

Plastic wiring plan pockets

For affixing to the inside surfaces of doors.

Material:
Polystyrene with self-adhesive fastening strips.

Colour:
Similar to RAL 7035

For format	Clearance opening mm			**Model No. SZ**
	W	H	D	
A3 landscape	438	286	45	**2513.000**
A4 portrait	228	254	17	**2514.000**
A5 landscape	228	174	17	**2515.000**

Wiring plan pockets with transparent pouch

With welded-on transparent pouch and self-adhesive backing.

For format	**Model No. SZ**
DIN A4	**2510.000**
DIN A3	**2512.000**

Sheet steel wiring plan pockets

for TS, CM, ES, PC, TP pedestal
For fastening to tubular door frames at any height.

Colour:
RAL 7035

Supply includes:
Assembly screws.

D = 90 mm

To fit door width mm	Clearance opening mm		Model No. TS
	W	H	
400	255	210	**4114.000**
500	355	210	**4115.000**
600	455	210	**4116.000**
800	655	210	**4118.000**
900	755	210	**4123.000**
1000	855	210	**4124.000**

D = 35 mm

To fit door width mm	Clearance opening mm		Model No. TS
	W	H	
500	355	260	**4115.500**
600	455	260	**4116.500**
800	655	260	**4118.500**

Door stay

To secure the door in the open position.

For	Assembly	Packs of	Model No.
TS, ES, PC, TP universal console	Bottom	5	**4583.000**
AP one-piece console	Top	5	**2518.000**
CM, TP	Top	2	**2519.200**
AE (except AE 1032.500 and AE 1035.500) and all AE stainless steel enclosures[1)]	Top	5	**2519.000**
AE IP 69K	Top	1	**1101.800**

[1)] With AE stainless steel, only in conjunction with perforated mounting strips, see page 615.

Door stay for escape routes

TS sheet steel/stainless steel doors with tubular door frames
In case of an emergency, conventional door stays can block the escape route. The new stay is actuated automatically in the event of pressure, releasing the door in both directions. In conjunction with 180° hinges, this ensures that no escape routes are blocked by locked doors in the event of an emergency.

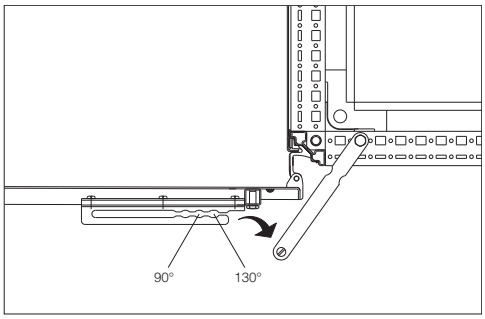
Supply includes:
Assembly parts.

Packs of	Model No. TS
1	**4583.500**

Accessories:

180° hinge,
see page 613.

180° hinge



Door, internal

Ride-up roller

for TS, ES, PC

Lifts the door with heavy installed equipment (e.g. cooling unit) as a closing aid. For attaching to the tubular door frame.

Packs of	Model No. TS
10	**4538.000**

Transport and mounting handle

for doors TS, ES

For safe installation and removal of the door and during relocation in the workshop. The matching hinge pin removal tool for 130° hinges is pre-integrated, and supplied loose for 180° hinges.

Packs of	Model No. SM
1	**2415.100**

Document clip, magnetic

For simple attachment of installation documentation as a reminder or for flexible accommodation of a wide range of documents, measurement records, test reports etc. May be attached to any magnet compatible surface via a permanent magnet.

Material:
- Plastic: Transparent
- Handle pieces: Black

Supply includes:
- 2 mounting clamps
- Permanent magnet

Packs of	Model No. DK
2	**7950.200**

Alternate frame, magnetic

For individual marking or labelling of the existing network infrastructure.
The magnetic surface facilitates flexible mounting on all magnet compatible surfaces. Adhesive strips are supplied for non-magnetic compatible surfaces.
The maximum size of the labels is 130 x 50 mm.

Material:
Plastic

Supply includes:
- Alternate frame, magnetic
- Labels
- Double-sided adhesive tape

Packs of	Model No. DK
10	**7950.150**

Rain canopies

for AE, CM
Reliable protection for outdoor siting – with water run-off to the rear. Easily retro-fitted.

Supply includes:
Assembly parts.

Accessories:

- Condensate discharge, see page 566.
- Pressure relief stopper, see page 566.
- Wall mounting brackets SZ 2503.010 and SZ 2508.010 may be used, see page 627.

Note:
For outdoor siting, we generally recommend a rain canopy above the enclosure or the gap between the door or screw-fastened rear panel and the enclosure, in order to protect against water and UV radiation.
Testing of IP protection categories for water protection (2nd code number to IEC 60 529) cannot be compared with an enclosure sited outdoors or under similar conditions.
Upon request, rain canopies of sheet steel, stainless steel or aluminium can also be produced for other enclosures.

for AE, sheet steel version

Material:
Sheet steel

Surface finish:
Powder-coated, textured paint

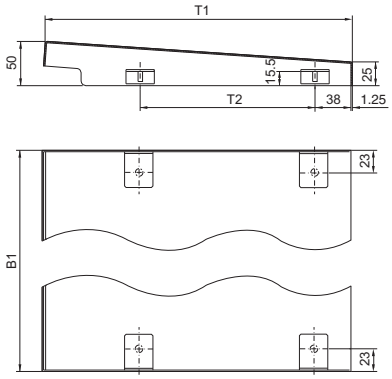
Colour:
RAL 7035

For		Model No. SZ
Enclosure width mm	Enclosure depth mm	
380	210	**2501.500**
600	210	**2502.500**
600	350	**2511.500**

for AE, stainless steel version

Material:
Stainless steel 1.4301 (AISI 304)

Surface finish:
Brushed, grain 240



For		Model No. SZ
Enclosure width mm	Enclosure depth mm	
200	155	**2470.000**
300	210	**2361.000**
380	155	**2471.000**
380	210	**2472.000**
500	210	**2362.000**
600	210	**2473.000**
760	300	**2474.000**
800	300	**2475.000**
1000	300	**2363.000**

Possible alternative:

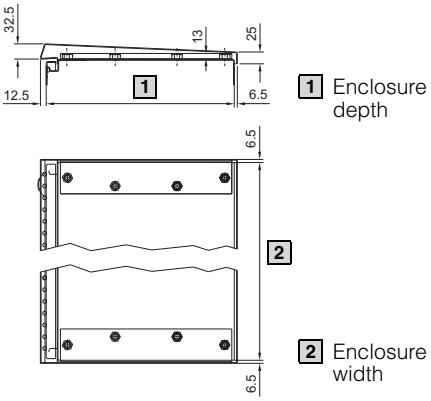
Compact enclosures Hygienic Design, see page 175.

B1 = Enclosure width + 11 mm
T1 = Enclosure depth + 25 mm
T2 = Enclosure depth – 90 mm, from enclosure width 600 mm: Enclosure depth – 115 mm

for CM, sheet steel version

Benefits:

- Mounting via the two holes in the top of the CM
- At the front, with integrated ventilation holes at the top



Width mm	Depth mm	Model No. CM
600	400	**5001.310**
800	400	**5001.330**
1000	400	**5001.350**
1200	400	**5001.360**

Material:
Sheet steel

Surface finish:
Powder-coated, textured paint

Colour:
RAL 7035

Roof

Dust guard trim

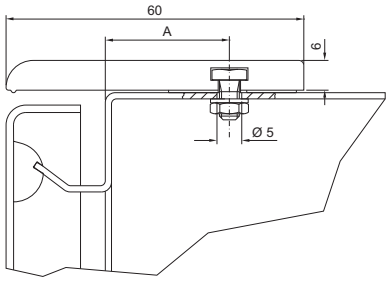
for AE, CM, EB, KL and BG

To protect against deposits on the upper edge of the door and between the enclosure and the door/lid. Cut the door protection strip to length according to the enclosure width. Drill the enclosure and mount the strip using the adhesive strips and screws.

Material:
Plastic, resistant to UV

Colour:
Similar to RAL 7024

For enclosure	Length mm	A mm	Model No. SZ
AE	1200	25	**2426.500**
CM		20	
KL, EB, BG		20.5	



Dust guard trim

for TS, ES

To protect against dust deposits on the upper edge of the door and between the door and upper horizontal enclosure section. The dust guard trim provides space for texts or company logos.

Colour:
RAL 7035

Supply includes:
Clear plastic strip for text labels (height 29.5 mm).

Length mm	Model No. SZ
600	**2424.100**
800	**2425.100**
1000	**2427.100**
1200	**2426.100**

Note:
Also suitable for use in conjunction with top baying cover, see page 581.

Top module

for TS
As a cable chamber for cable infeed from above or for power distribution with busbar systems across bayed enclosures. The TS cover plate is used as standard to finish off at the top. The enclosure height is increased by 200 mm with the top mounting module fitted.
The top baying cover cannot be fitted. Installation accessories for top and bottom, see diagram and explanations below.

Material:
Sheet steel, 1.5 mm

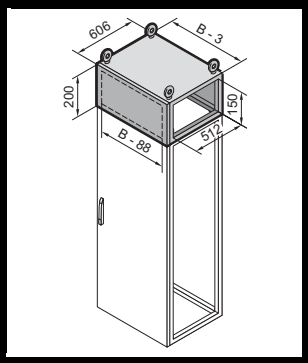
Surface finish:
Spray-finished, textured paint

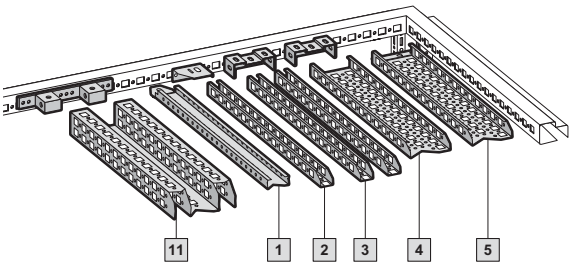
Colour:
RAL 7035

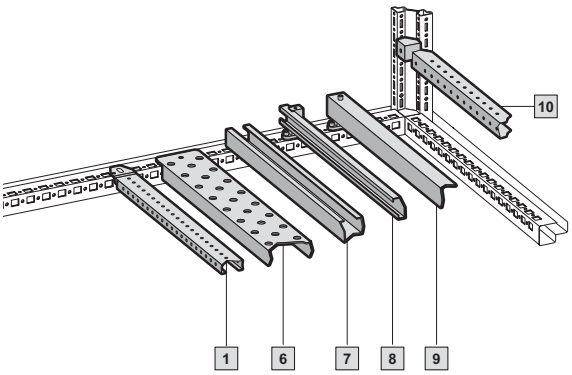
Protection category:
IP 55 to IEC 60 529, compliant with NEMA 12 (in conjunction with side panel for top mounting module, see page 621).

For enclosures		Model No. TS
Width (B) mm	Depth mm	
600	600	**8801.735**
800	600	**8801.745**
1000	600	**8801.755**
1200	600	**8801.765**

Supply includes:
– 1 frame module
– 2 trim panels (front and rear)
– 8 retainers with automatic potential equalisation
– 4 tapped rods with eyebolts







Accessories:

Designation	Page
1 TS punched rail 18 x 38 mm	650
2 PS punched rail 23 x 23 mm with angle bracket	651
3 PS punched rail 23 x 23 mm with support bracket PS	651
4 PS punched section without mounting flange 23 x 73 mm, with support bracket PS	652
5 PS punched section with mounting flange 23 x 73 mm	652
6 Support rail	654
7 System support rails	654
8 C rail 30/15 with support bracket or spacer	653
9 Cable clamp rail	717
10 TS punched rail 25 x 38 mm	649
11 TS punched sections without mounting flanges, 45 x 88 mm	649

Side panel

for top-mounting module
To finish off the side of a top-mounting module or bayed suite.

Material:
Sheet steel, 1.5 mm

Surface finish:
Spray-finished, textured paint

Colour:
RAL 7035

Supply includes:
– 2 side panels
– 8 retainers with automatic potential equalisation

Packs of	Model No. TS
2	**8801.775**

Roof

Roof plates

for SV-TS
For SV-TS 8 enclosures without roof plate and in exchange for the standard roof plate for other TS enclosures.

Material:
Sheet steel, 1.5 mm

Surface finish:
Textured paint

Colour:
RAL 7035

Supply includes:
Mounting accessories.

IP 55, solid

For enclosures		Packs of	Model No. SV
Width mm	Depth mm		
300	600	1	**9671.636**
400	600	1	**9671.646**
600	600	1	**9671.666**
800	600	1	**9671.686**
300	800	1	**9671.638**
400	800	1	**9671.648**
600	800	1	**9671.668**
800	800	1	**9671.688**

IP 43 with ventilation hole
Build height: 93 mm

For enclosures		Packs of	Model No. SV
Width mm	Depth mm		
300	600	1	**9671.736**
400	600	1	**9671.746**
600	600	1	**9671.766**
800	600	1	**9671.786**
300	800	1	**9671.738**
400	800	1	**9671.748**
600	800	1	**9671.768**
800	800	1	**9671.788**

For cable entry glands

For enclosures		Required number of glands	Packs of	Model No. SV
Width mm	Depth mm			
600	400	2	1	**9665.943**
850	400	3	1	**9665.953**
1100	400	4	1	**9665.963**
300	600	2	1	**9671.536**
400	600	3	1	**9671.546**
600	600	4	1	**9665.903**
800	600	8	1	**9671.586**
850	600	6	1	**9665.913**
1100	600	8	1	**9665.923**
300	800	2	1	**9671.538**
400	800	4	1	**9671.548**
600	800	8	1	**9671.568**
800	800	8	1	**9671.588**

Also required:

Cable entry gland,
see page 623.

IP 2X with ventilation hole
Build height: 72 mm

For enclosures		Packs of	Model No. SV
Width mm	Depth mm		
400	600	1	**9671.846**
600	600	1	**9660.235**
800	600	1	**9660.245**
1000	600	1	**9660.255**
1200	600	1	**9660.265**
400	800	1	**9671.848**
600	800	1	**9659.525**
800	800	1	**9659.535**
1000	800	1	**9659.545**
1200	800	1	**9659.555**

With pressure relief valve
Build height: 25 mm

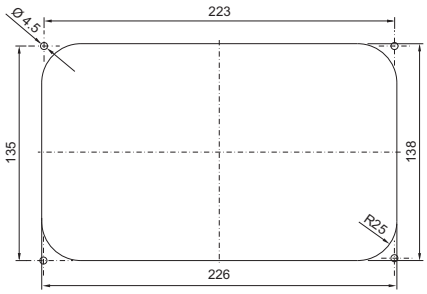
For enclosures		Packs of	Model No. SV
Width mm	Depth mm		
400	600	1	**9671.446**
600	600	1	**9660.935**
800	600	1	**9660.945**
1000	600	1	**9660.955**
1200	600	1	**9660.965**
400	800	1	**9671.448**
600	800	1	**9671.468**
800	800	1	**9671.488**

Extended delivery times.

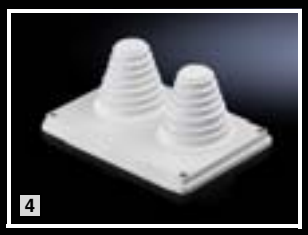
Cable entry glands

- Including seal
- External dimensions 250 x 160 mm
- Protection category IP 55

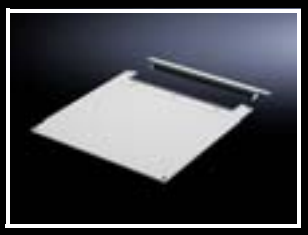
Design	Material	Colour	Packs of	Model No. SV
1 14 x M25/32	Insulating material	RAL 7032	1	**9665.750**
2 2 x M25/32/40, 1 x M32/40/50, 2 x M40/50/63	Insulating material	RAL 7032	1	**9665.760**
3 With sealing membranes 32 x Ø 7 – 16 mm, 4 x Ø 10 – 20 mm, 3 x Ø 14 – 26 mm	Insulating material	RAL 7032	1	**9665.770**
4 With entry glands up to 66 mm diameter	Insulating material	RAL 7032	1	**9665.780**
5 Solid	Sheet steel, spray-finished	RAL 7035	4	**9665.785**



Cut-out dimensions for
SV 9665.750 to SV 9665.785



Roof



Roof plate

for cable entry, two-piece
for DK-TS

In exchange for the standard roof. Equipped with a sliding angular bracket in the rear section. Rubber cable clamp strip on both sides for attaching cable bundles and bunched cables. Thanks to the symmetrical design of the TS 8 frame, side cable entry can also be achieved by rotating the roof plate.
The two-piece design additionally allows easy retro-fitting, by simply removing the front part of the plate for retrospective cable entry.
For active ventilation, a fan mounting plate may be fitted in the front section of the enclosure (not in conjunction with 482.6 mm (19″) mounting frames). To this end, the roof plate must be raised by at least 20 mm using spacers.

Material:
Sheet steel

Colour:
RAL 7035

For enclosures		Model No. DK
Width mm	Depth mm	
600	400	**7826.645**[1)]
600	600	**7826.665**
600	800	**7826.685**
600	1000	**7826.605**
600	1200	**7826.625**
800	400	**7826.845**
800	600	**7826.865**
800	800	**7826.885**
800	1000	**7826.805**
1200	400	**7826.245**
800	1200	**7826.825**

[1)] Extended delivery times.

Accessories:

– Fan mounting plate, see page 403.
– Spacers, see page 626.

Detailed drawings:
Available on the Internet.

Roof plate, multi-piece

for side cable entry in TS

The roof plate allows side cable entry on both sides across the entire enclosure depth. Sliding brackets at the sides allow variable adaptation of the entry opening. Additional rubber cable clamp strips secure the inserted cable bundles and cable sections.
The multi-piece design allows convenient retro-fitting, as the roof plate is removable even with the cables already inserted.
Passive ventilation is supported by raising the roof with spacers.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Depth mm	
800	1000	**7526.807**
800	1200	**7526.827**[1)]

[1)] Extended delivery times.

Accessories:

Spacers, see page 626.

Roof plate

for cable entry on all sides
for DK-TS
The roof plate has sliding plates for cable entry on all four sides, and therefore allows individual selection of cable routing tailored to the specific requirements. After cable entry, the sliding plate is closed again as far as possible, and the rubber cable clamp strips supplied loose then seal the cable entry area.

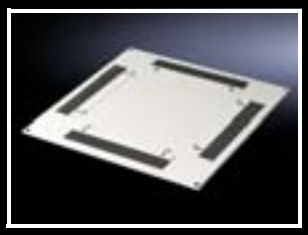
Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Depth mm	
800	800	**7826.588**

Detailed drawings:
Available on the Internet.



Roof plate, vented

for DK-TS
In exchange for the standard roof.

Variant 1:
72 mm high roof plate, all-round vent slots, optionally with clamp strip for cable entry. The two-piece design with cable entry allows easy retro-fitting, by simply removing the front part of the plate. The cables are held in position via a guide at the side.

Material:
Sheet steel

Colour:
RAL 7035

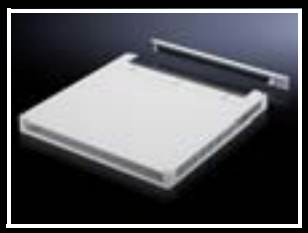
One-piece without cable entry

For enclosures		Model No. DK
Width mm	Depth mm	
600	600	**7826.766**
600	800	**7826.768**
600	1000	**7826.760**[1)]
800	600	**7826.786**
800	800	**7826.788**
800	1000	**7826.780**

[1)] Extended delivery times.

Two-piece with cable entry

For enclosures		Model No. DK
Width mm	Depth mm	
600	600	**7826.669**
600	800	**7826.689**
800	600	**7826.869**
800	800	**7826.889**
800	1000	**7826.809**



Variant 2:
Ventilation holes (Ø 5 mm) are incorporated all-round into the 97 mm high roof plate. In conjunction with the vented glazed and sheet steel door, the roof plate matches the door design to perfection.

Material:
Sheet steel

Colour:
RAL 7035

For enclosures		Model No. DK
Width mm	Depth mm	
800	600	**7826.866**
800	800	**7826.886**
800	1000	**7826.806**[1)]

[1)] Extended delivery times.

Accessories:

Fan mounting plate,
see page 403.

Detailed drawings:
Available on the Internet.

Roof

Roof mounting screw

For screw-fastening the roof plate instead of eyebolts. With the TS 8, the contact washers for potential equalisation may be taken from the eyebolts included with the supply of the enclosures.

Material:
Steel

Surface finish:
Zinc-plated

Packs of	Model No. PS
20	**4198.000**

Spacers

for roof plate TS
To raise the TS 8 roof for ventilation purposes, in three different heights.
Not suitable for crane transportation!

Material:
Hexagonal sectional steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Height mm	Packs of	Model No. SZ/DK
10	4	**2422.000**
20	4	**2423.000**
50	4	**7967.000**

Eyebolts

for TS, ES
For crane transportation of enclosures, where not already included in the supply.
Thread: M12

Packs of	Model No. PS
4	**4568.000**

Eyebolts

for CM
For crane transportation of enclosures, with reinforcement plate to be inserted underneath.
Mounting via the two holes in the top of the CM.
Thread: M12

Supply includes:
– Eyebolts
– Reinforcement plates

Packs of	Model No. CM
2	**2509.500**

Eyebolts

for AE
For crane transportation of enclosures, with reinforcement plate to be inserted underneath.
Thread: M12

Supply includes:
– Eyebolts
– Reinforcement plates

Packs of	Model No. SZ
4	**2509.000**

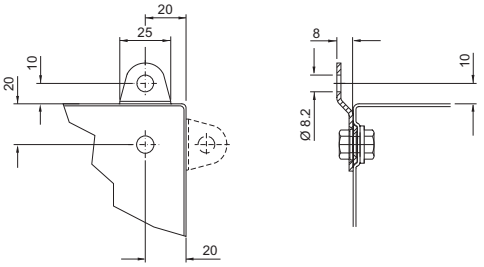
Wall mounting bracket

For the attachment of KL, EB, BG and EL enclosures as well as DK wall-mounted distributors.

Supply includes:
Assembly parts for mounting on the enclosure.

Note:
For hygiene reasons, and in view of the protection category, the stainless steel enclosures do not have any drilled holes for the wall mounting brackets.

Material	Wall distance mm	Packs of	Model No. SZ
Brass, nickel-plated	8	4	**1580.000**
Sheet steel, zinc-plated, passivated	8	4	**1590.000**
Stainless steel 1.4301 (AISI 304)	8	4	**1594.000**



Wall mounting bracket

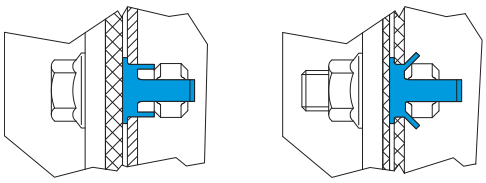
for AE
For attaching to the enclosure from the outside. Simply insert the expandable dowel into the enclosure hole from the outside, and screw-fasten the wall bracket from the outside.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Wall bracket pre-fitted with seal and expandable dowel.

Wall distance mm	Packs of	Model No. SZ
15	4	**2508.100**



Wall mounting bracket

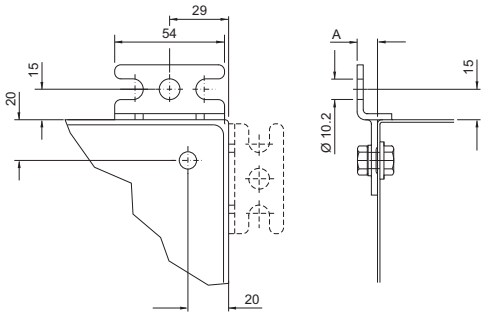
For the attachment of KL, EB, BG, AE, CM and EL enclosures, TP consoles as well as DK wall-mounted distributors and small fibre-optic distributors.

Supply includes:
Assembly parts for mounting on the enclosure.

Possible alternative:

Wall spacer bracket Hygienic Design, see page 178.

Material	Wall distance (A) mm	Packs of	Model No. SZ
Sheet steel, zinc-plated, passivated	40	4	**2503.010**
	10	4	**2508.010**
Stainless steel 1.4301 (AISI 304)	10	4	**2433.000**
Stainless steel 1.4404 (AISI 316L)	10	4	**2433.500**



Wall mounting

Wall mounting bracket

for KS

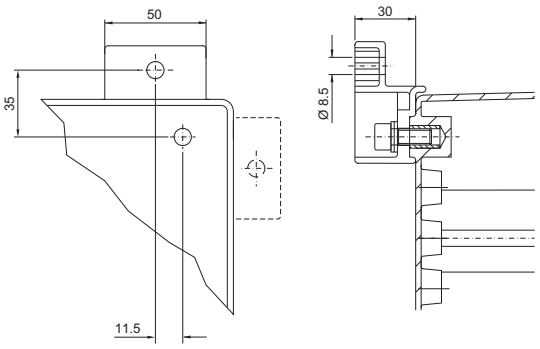
For attachment to the wall, only possible from the outside of the enclosure.

Material:
Fibreglass-reinforced polyamide[1)]

Supply includes:
Assembly parts for mounting on the enclosure.

Colour	Packs of	Model No. KS/KE
Similar to RAL 7035	4	**1483.010**
Similar to RAL 9011	4	**9266.000[1)]**

[1)] With graphite additive for Ex applications.

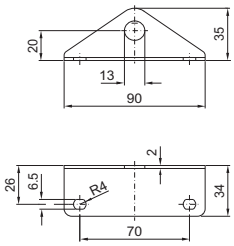


Wall angle

For compact enclosures (additional holes required in the enclosure).

Supply includes:
Assembly parts for mounting on the enclosure.

Material	Colour	Packs of	Model No. SZ
Sheet steel	RAL 7035	4	**2505.510**
Stainless steel 1.4301 (AISI 304)	–	4	**2583.010**



Wall bracket

For wall mounting of TS and ES enclosures at the roof, e.g. with heavy components on the door or built-in swing frame.

Material:
Sheet steel

Surface finish:
Zinc-plated

Packs of	Model No. PS
4	**4595.000**

Possible alternative:

With TS 8 inside the enclosure (without mounting plate), Baying bracket TS 8800.470, see page 580.

Wall mounting

for CS wall-mounted enclosures
For mounting on a wall or panel.

Material:
Stainless steel 1.4301 (AISI 304)

Packs of	Model No. CS
4	9765.120

Pole clamp

for KL, EB, BG, AE, KS and CS wall-mounted enclosures
For reliable, convenient fastening to round or square poles.

For pole diameter/size:
– Ø from 40 to 190 mm
– □ from 50 to 150 mm

Material:
– Mounting angles, clamping section: Sheet steel
– Clamping strap: Stainless steel 1.4301 (AISI 304)

Surface finish:
Mounting angle, clamping section: Zinc-plated

Supply includes:
– 2 mounting angles, 600 mm long
– 4 clamping sections
– 2 clamping straps
– 4 clamping brackets
– 4 screws and captive nuts M8 for mounting on the enclosure.

Packs of	Model No. SZ
1 set	2584.000

Enclosure connectors

Adjustable
Between Command Panels, terminal boxes, compact enclosures and horizontal or vertical surfaces.
Pre-mount the connector halves on both sides, screw together and secure with a locking screw, and/or adjust the angle of rotation.

Rotation range:
±105° adjustable in 7.5° stepped increments.

Material:
Die-cast zinc

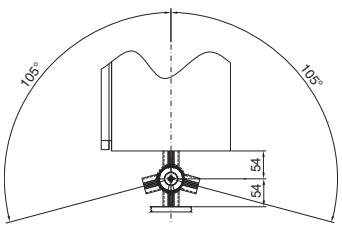
Surface finish:
Powder-coated

Colour:
RAL 7035

Supply includes:
Assembly parts for both sides.

Packs of	Model No. CP
1 set	6016.200

Note:
The locking screws may be exchanged for standard, commercially available clamping levers (M10 x 50 mm).



Wall mounting

Frame connector, adjustable

for Comfort Panel
Between the command panel and keyboard housing and horizontal or vertical surfaces.

Rotation range:
Adjustable in 8° stepped increments, see drawing.

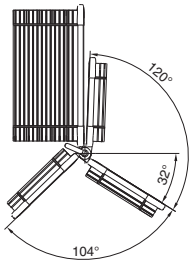
Material:
Die-cast zinc

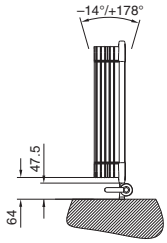
Surface finish:
Powder-coated

Colour:
RAL 7024

Supply includes:
Assembly parts and clamping levers for both sides.

Packs of	Model No. CP
1 set	**6005.500**





Wall mounting

Vertically hinged
Between the Compact Panel and horizontal or vertical surfaces.

Rotation range:
180° adjustable on a 7.2° pitch pattern.

Material:
– Wall mounting bracket: Sheet steel
– Knurled screw: Steel with plastic knurled handle

Supply includes:
Knurled screw and assembly parts for mounting on the Compact Panel.

Packs of	Model No. CP
1 set	**6341.000**

Mounting plates

for KL and KL-HD
For component installation outside of the enclosure. Assembly screws included as accessories with the enclosure.

Material:
Sheet steel, 2 mm

Surface finish:
Zinc-plated

Accessories:

Self-tapping screws SZ 2487.000,
see page 666.

Possible alternative:

Support rails,
see page 655

Detailed drawings:
Available on the Internet.

For size mm	for Model No. KL and KL-HD	**Model No. KL**
150 x 150	1500.510, 1514.510, 1521.010, 1527.010, 1670.600, 1671.600	**1560.700**
200 x 150	1528.510, 1529.510	**1575.700**
300 x 150	1501.510, 1515.510, 1522.010, 1530.510	**1561.700**
400 x 150	1589.510	**1576.700**
200 x 200	1502.510, 1516.510, 1523.010, 1528.010, 1672.600	**1562.700**
300 x 200	1503.510, 1517.510, 1524.010, 1529.010, 1531.510, 1674.600	**1563.700**
400 x 200	1504.510, 1518.510, 1525.010, 1532.510, 1675.600	**1564.700**
500 x 200	1505.510, 1533.510	**1565.700**
600 x 200	1506.510, 1519.510, 1534.510	**1566.700**
800 x 200	1527.510, 1542.510	**1574.700**
300 x 300	1507.510, 1526.010, 1535.510	**1567.700**
400 x 300	1508.510, 1530.010, 1536.510, 1676.600	**1568.700**
500 x 300	1509.510, 1537.510	**1569.700**
600 x 300	1510.510, 1538.510	**1570.700**
400 x 400	1511.510, 1539.510	**1571.700**
600 x 400	1512.510, 1540.510	**1572.700**
800 x 400	1513.510, 1541.510	**1573.700**

Mounting plate infill

for TS
For a continuous mounting surface in bayed suites where the mounting plate is set forward.

Material:
Sheet steel, 2 mm

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure height mm	**Model No. TS**
1800	**4590.700**
2000	**4591.700**
2200	**4592.700**

Mounting plates

Mounting plate attachment

For additional clamping and to reduce potential vibration of the mounting plate. Select according to mounting position, installation type and enclosure.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For TS
Installation options:
- Side, at half height in conjunction with mounting plate infill
- In the penultimate position
- Set forward (supplied state)

Benefit:
No impairment to the mounting surface, but mounting is only possible from the enclosure rear.

Packs of	Model No. TS
10	**8800.630**

Accessories:

Mounting plate infill,
see page 631.

For TS
Installation options:
- Side
- Rear, flush with enclosure frame

Benefit:
No impairment to the mounting surface, but mounting is only possible from the enclosure rear.

Packs of	Model No. TS
10	**8800.610**

For TS
Installation options:
- Side
- Rear, flush with enclosure frame
- Set forward on a 25 mm pitch pattern

Benefit:
No impairment to the mounting surface.
May optionally used for attachment or screw fastening.

Packs of	Model No. TS
10	**8800.090**

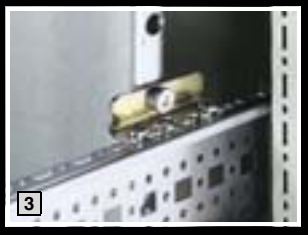
Also required:

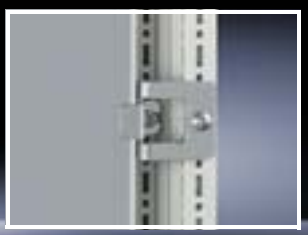
Punched section with mounting flange
17 x 73 mm for the inner mounting level,
see page 647 (with Fig. 3).

1 Mounting plate screw-fastened in the rearmost installation position.

2 Mounting plate screw-fastened from the rear in the rearmost installation position.

3 Mounting plate in a set forward position, either attached or screw-fastened (not shown).





For TS
Installation options:
- Side
- Rear, flush with enclosure frame

Slide over the plate at the side and secure with screws. Additionally, the mounting plate may be drilled and screw-fastened at the rear C-edge.

Packs of	Model No. TS
10	**8800.050**

Mounting plate attachment

For additional clamping and to reduce potential vibration of the mounting plate. Select according to mounting position, installation type and enclosure.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For TS, ES
Installation options:
- All-round
- Set forward on a 25 mm pitch pattern

Slide in between the bar and plate from below or above or from the side, and secure with screws.

Packs of	Model No. TS
10	**4593.000**

Also required:

– Support strip (with TS for inner level), see page 650 or
– Punched section with mounting flange (with TS for inner level), see page 647 or
– Punched rails and punched sections without mounting flange, see page 652.

For TS, ES
Installation options:
- On the top and bottom of the mounting plate (with ES all-round)
- Rear, flush with enclosure frame

Screw in the clip behind the plate and secure with screws.

Packs of	Model No. TS
10	**4576.000**

Installation kit

for mounting plates TS, back-to-back
The minimal distance between the two mounting plates ensures a maximum installation depth for installed equipment on both sides.

Material:
Sheet steel

Surface finish:
Zinc-plated

Note:
Build height front and rear,
with central installation =
(enclosure depth – 48 mm) : 2
Example:
TS 8806.521 = Depth 600 mm
Build depth = 2 x 276 mm

Packs of	Model No. TS
1 set	**8800.280**

Mounting plates

Mounting plate slide block

for CM
In this way, populated mounting plates slide easily into the mounting position for installation and/or clip-fastening.

Benefits:
- Installation without drilling
- Simply screw-fasten to the existing holes in the mounting plate
- May be reused, unscrew to detach

Material:
Polyamide

Colour:
Similar to RAL 9011

Supply includes:
Assembly parts.

Packs of	Model No. CM
2	**5001.070**

Slide rails

for mounting plate TS
Slides in from the side.
- Attachment of the mounting plate to the slide rails via captive nuts and screws.
- Mounting of the slide rails directly on the enclosure frame, depth-adjustable on a 25 mm pitch pattern.

Technical specifications:
Possible mounting depth T6 – 25 mm,
refer to the Internet.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width mm	Packs of	Model No. TS
600	2	**8802.260**
800	2	**8802.280**
1200	2	**8802.220**

Mounting plate adjustment bracket

for KS
Infinitely adjustable.
Other equipment can also be installed on a rail system, instead of the mounting plate.

Material:
Sheet steel

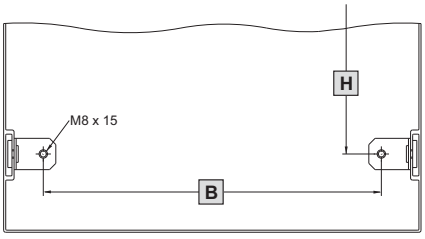
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

B Enclosure width:
– 76 mm (KS 1481.000)
– 104 mm (KS 1491.000)

H Enclosure height:
– 150 mm

For enclosures KS	Packs of	Model No. KS
1423.500, 1432.500, 1434.500, 1444.500, 1446.500, 1448.500, 1449.500, 1466.500, 1467.500	4	**1481.000**
1400.500, 1453.500, 1454.500, 1468.500, 1469.500, 1479.500, 1480.500	4	**1491.000**



Mounting plate attachment

for CM, TP one-piece console, TP pedestal for high dynamic loads
For example, if a direct connection between the mounting plate and the enclosure is required for mobile use (cranes etc.).
Tested as per DIN EN 60 721 severity 4M4, with a weight of 150 kg evenly distributed over the mounting plate.
Simply screw-fasten to the existing holes in the mounting plate to pre-assemble for:

Wall mounting from the inside
Direct using a bracket and wall/support mounted enclosure.

Wall mounting from the outside
Screws for wall mounting brackets (see page 627) can easily be screwed into the plate nuts from the outside.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. CM
1 set	**5001.075**

Cross-brace for mounting plates

for TS, ES
Additional horizontal rigidity for vibration resistance and/or stabilisation of wide mounting plates. This brace may also be used as an attachment aid for heavy components.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 2 sections
– 4 clamping sections
– 4 grub screws M10 x 16 mm

For enclosure width mm	Model No. TS
1200	**4333.120**
1600	**4333.160**
1800	**4333.180**

Other widths available on request.

Transport handles for mounting plates

for TS, ES
May be used at any given position in the side C-fold
Benefits include:
- Can be used for people of different heights
- Optimised force transmission
- Easy handling

Packs of	Model No. SZ
2	**2415.500**

Mounting plates

Partial mounting plates

for TS, CS Toptec

For

- Universal interior installation, also in conjunction with punched sections with mounting flanges and support strips. Defective assemblies are quickly and easily replaced
- Additional mounting levels.

Partial mounting plates are fastened directly onto the vertical enclosure sections via the inner mounting level using the assembly parts supplied loose. In this mounting position (in both the width and the depth) they form one level with TS punched sections with mounting flanges 17 x 73 mm and TS support strips for the inner mounting level.

Material:
Sheet steel, 2.5 mm

Surface finish:
Zinc-plated

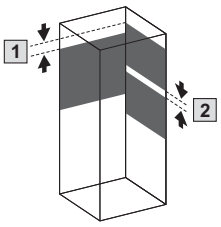
Supply includes:
Assembly parts.

Accessories:

– TS punched section with mounting flange 17 x 73 mm for the outer mounting level, see page 647.
– TS support strip, see page 650.
– Hinge attachment, see page 637.
– Self-tapping screws, SZ 2487.000, see page 666.

For installation in									Size mm	Packs of	Model No. TS
Enclosure width mm					Enclosure depth (side) mm						
400	600	800	1000	1200	400	500	600	800			
■	■				■		■		500 x 300	1	**8614.640**
	■					■	■		500 x 400	1	**8614.650**
	■						■		500 x 500	1	**8614.660**
	■	■					■	■	500 x 700	1	**8614.680**
	■						■		500 x 775	1	**8614.675**[1)]
■		■			■			■	700 x 300	1	**8614.840**
		■				■		■	700 x 400	1	**8614.850**
		■						■	700 x 700	1	**8614.880**
■			■		■				900 x 300	1	**8614.040**
			■			■			900 x 400	1	**8614.050**
	■		■				■		900 x 500	1	**8614.060**
■				■	■				1100 x 300	1	**8614.240**
				■		■			1100 x 400	1	**8614.250**
	■			■			■		1100 x 500	1	**8614.260**

[1)] Also suitable for installing in
– PC enclosures based on TS behind the lower front door
– IW enclosures, height 900 and 1000 mm

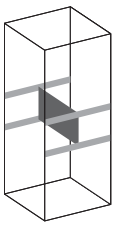


When **installing around corners** due to collision between the assembly components

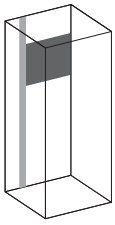
1 At least 75 mm (adjustable on a 25 mm pitch pattern).

Maximum space utilisation

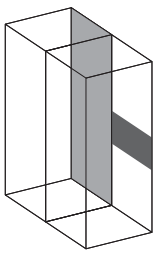
2 1 mm (adjustable on a 25 mm pitch pattern).



Set forward installation position
Quickly and easily achieved wtih four TS punched sections with mounting flanges 17 x 73 mm for the outer mounting level, see page 647.



Partial installation
Partial utilisation of the enclosure depth or width is also possible. In this example, using a PS punched section without mounting flange 23 x 73 mm, see page 652.



Continuously flush
In bayed enclosures, the partial mounting plate is in the rearmost position flush with the standard mounting plate. This facilitates continuous component mounting.

Hinge attachment

for partial mounting plate TS

Material:
Steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
1 set	**8614.100**

Also required:

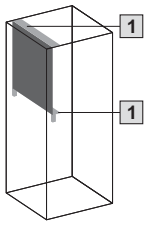
Depending on the installation position
1 Installation kit for swing frame, small,
for enclosure width
600 mm, Model No. SR 2377.860,
800 mm, Model No. SR 2377.880,
see page 733.
2 PS punched section without mounting flange
23 x 73 mm according to the enclosure depth,
see page 652.
Support brackets TS 8800.330,
see page 661.

Side installation:
In conjunction with hinge, for side panel,
see page 569, for an enclosure depth of 600 or
800 mm, side installation is identical to installation
parallel to the front.

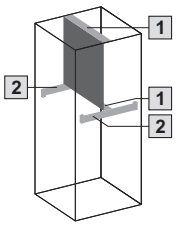
Examples

In the highest or lowest position

At the front

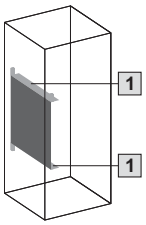


Set back

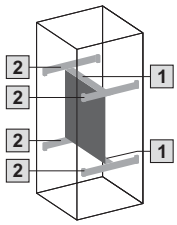


In a central position

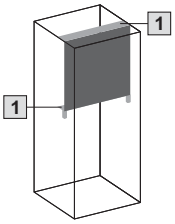
At the front



Set back



Side installation



Partial mounting plates

for ES, CS Basic and modular enclosures
For additional mounting levels.

Material:
Sheet steel, 2.5 mm

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width mm	Width x height mm	Packs of	Model No. PS
600	492 x 373	2	**4131.700**
600	492 x 573	2	**4132.700**
800	692 x 573	2	**4137.700**

Accessories:

– PS punched section without mounting flange,
23 x 73 mm, see page 652.
– Self-tapping screws, SZ 2487.000,
see page 666.

Mounting plates

Partial mounting plates, locatable into rails

for TP

For installation in:
- Console and desk unit on the interior installation system rails
- Punched sections with mounting flanges or support strips fitted to the side of the pedestal in the depth
- Other enclosures mounted on rails with 25 mm pitch pattern punchings

For easy mounting on pre-fitted assembly screws. Bayable by screw-fastening at the sides.

Material:
Sheet steel

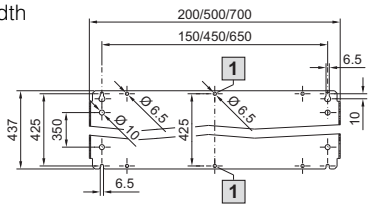
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Width mm	Height mm	Packs of	Model No. TP
200	437	1	**6730.310**
500	437	1	**6730.330**
700	437	1	**6730.340**

For console/desk unit Width mm	Max. partial mounting plate installation
600	1 x TP 6730.330
800	1 x TP 6730.340
1200	2 x TP 6730.310 1 x TP 6730.340
1600	3 x TP 6730.330

[1] From width 500 mm



Support rail, locatable

for TS, CM, PC, TP

To fit:
- Internal mounting behind the mounting compartment, small, of the PC enclosure,
- Mounting on the vertical TS enclosure section,
- Mounting in CM and TP on the interior installation rail.

Integral 25 mm pitch pattern of holes to accommodate:
– Mounting plate, small
– PS punched section without mounting flange via support brackets PS as a second mounting level if, due to an installed:
– Mounting plate infill
– Cable duct, vertical
no punched sections or other assemblies can be mounted in the depth.

Static load capacity: max. 15 kg.

Material:
Sheet steel, 2.0 mm

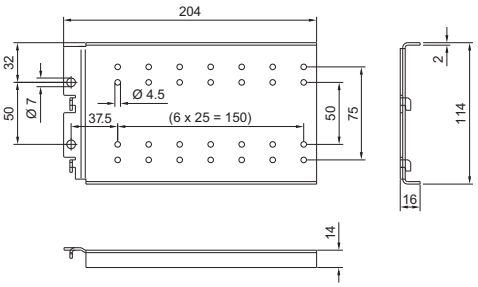
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. TS
1 set	**8612.200**

Accessories:

PS punched section without mounting flange, see page 652.



Mounting plate, small

For external mounting on:
- Support rail TS, locatable, depth-adjustable on a 25 mm pitch pattern,
- Punched sections with mounting flanges, attached to the outer mounting level.

Material:
Sheet steel, 1.5 mm

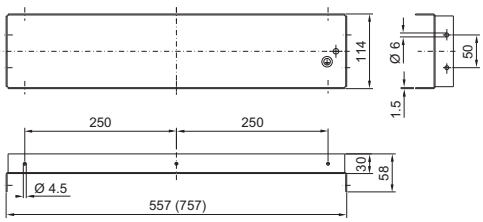
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Enclosure width mm	Packs of	Model No. TS
600	1	**8612.600**

Accessories:

– TS punched section with mounting flange, see page 647.
– Self-tapping screws, SZ 2487.000, see page 666.



Mounting plate

for TS, 400 mm wide
Depth-adjustable on a 25 mm pitch pattern,

Material:
Sheet steel, 3 mm

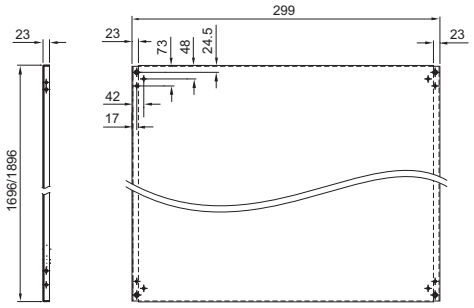
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Accessories:

– TS 18 x 38 mm punched rail, used as mounting plate slide rail, see page 650.
– TS width divider, for installation in wider enclosures, see page 558.

For enclosure height mm	Model No. TS
1800	**8614.180**
2000	**8614.200**



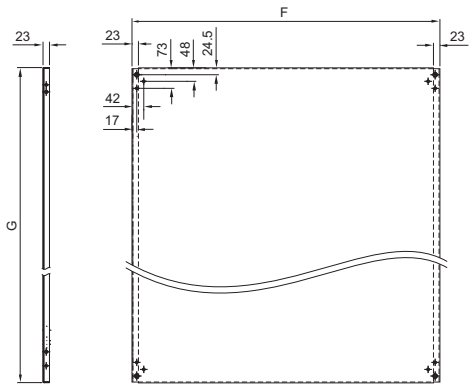
Mounting plates

for CS Toptec, Basic and modular enclosures
For the configuration of mounting levels.
The mounting plates are depth-adjustable on a 25 mm pitch pattern.

Material:
Aluminium, 3 mm

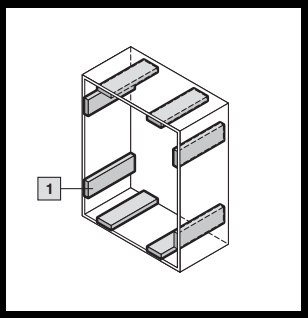
Supply includes:
Assembly parts.

Note:
For an enclosure width of 1200 mm, partial installation with one or two 600 mm wide mounting plates is possible.



For enclosure		F	G	Model No. CS
Width mm	Height mm			
600	800	499	696	**9765.090**
600	1200	499	1096	**9765.092**
800	800	699	696	**9765.097**
800	1200	699	1096	**9765.095**
800	1600	699	1496	**9765.096**
1200	1200	1099	1096	**9765.191**

Rail systems

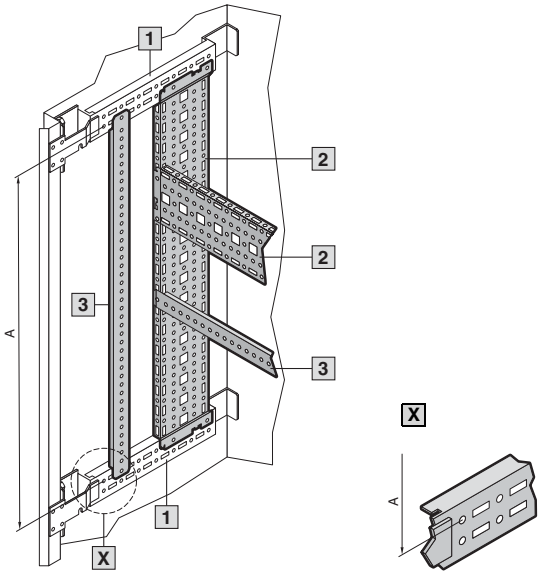


AE
Installation examples with TS system rails

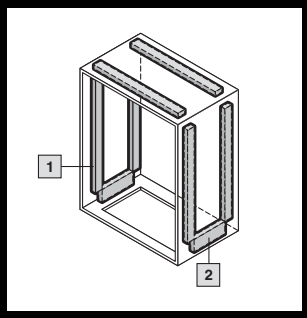
1 Rails for interior installation AE (preparing for installation)						
For enclosure depth mm	Packs of	210	250	300	350	Page
Model No. SZ	4	2373.210	2373.250	2373.300	2373.350	647

Interior installation in the width and height								
2 TS punched section with mounting flange, 17 x 73 mm	AE from enclosure width/height mm	A[1] mm	Packs of	Model No. TS				
	380	225	4	8612.130	8612.130	8612.130	8612.130	647
	500	325	4	8612.140	8612.140	8612.140	8612.140	
		375	4	8612.040	8612.040	8612.040	8612.040	
	600	425	4	8612.150	8612.150	8612.150	8612.150	
		475	4	8612.050	8612.050	8612.050	8612.050	
	760	525	4	8612.160	8612.160	8612.160	8612.160	
		575	4	8612.060	8612.060	8612.060	8612.060	
	1000	725	4	8612.180	8612.180	8612.180	–	
		775	4	8612.080	8612.080	8612.080	–	
		875	4	8612.090	8612.090	8612.090	–	
	1200	925	4	–	–	8612.100	–	
		975	4	–	–	8612.000	–	
	1400	1125	4	–	–	8612.120	–	
		1175	4	–	–	8612.020	–	
3 TS mounting bar	400	325	20	4694.000	4694.000	4694.000	4694.000	650
	500	425	20	4695.000	4695.000	4695.000	4695.000	
	600	525	20	4696.000	4696.000	4696.000	4696.000	
	800	725	20	4697.000	4697.000	4697.000	4697.000	

[1] A = Rail mounting distance



CM
Installation examples with TS system rails



1 Rails for interior installation (preparing for installation)							
For enclosure width/height mm	Packs of	600	800	1000	1200	1400	Page
Model No. CM	4	5001.050	5001.051	5001.052	5001.053	5001.054	647

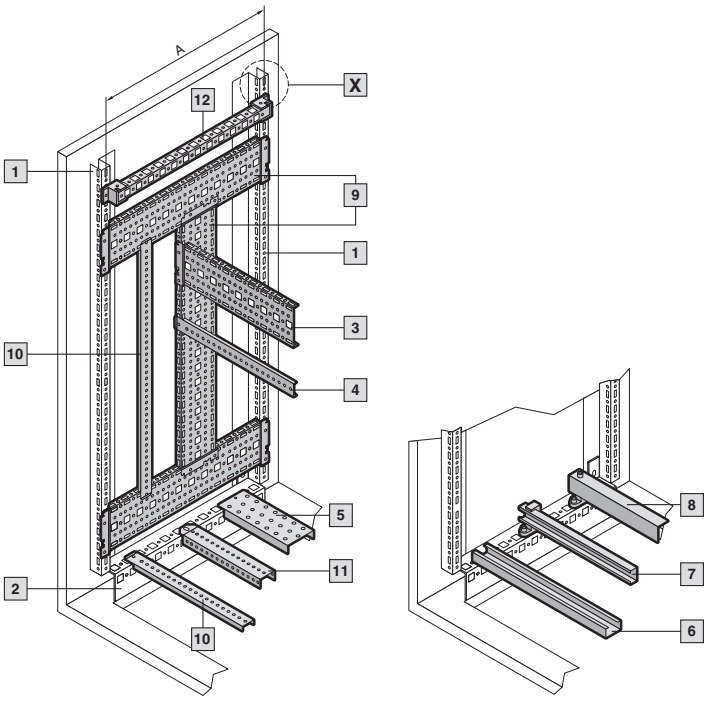
2 Base configuration rail (preparing for installation)							
For enclosure depth	Packs of	300	400	–	–	–	
Model No. CM	2	5001.371	5001.370	–	–	–	649

Installation in the width								
		Packs of	Model No. TS					
For enclosure width mm			600	800	1000	1200	1400	
A[1] mm			575	775	975	1175	–	
3 TS punched section with mounting flange, 17 x 73 mm		4	8612.060	8612.080	8612.000	8612.020	–	647
4 TS mounting bars		20	8800.130	4579.000	–	–	–	650
5 Support rail	slotted	4	4396.000	4398.000	–	–	–	654
	unslotted	4	4396.500	4398.500	–	–	–	654
6 System support rails		2	4361.000	4362.000	4347.000	4363.000	–	654
7 C rails 30/15		6	4944.000	4945.000	4946.000	4947.000	–	653
8 Cable clamp rail		2	4191.000	4192.000	4336.000	4196.000	–	717

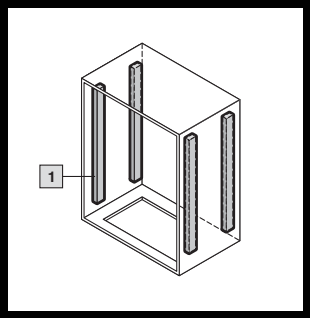
Installation in the height (individual installation e.g. with)	
TS punched section with mounting flange, 17 x 73 mm	see page 647
TS mounting bars	see page 650

Installation in the depth									
	For enclosure depth mm	A[1] mm	Packs of	Model No. TS /PS					
9 TS punched section with mounting flange, 17 x 73 mm	300	225	4	8612.130	8612.130	8612.130	8612.130	8612.130	647
	400	325	4	8612.140	8612.140	8612.140	8612.140	8612.140	
10 TS mounting bars	400	325	20	4694.000	4694.000	4694.000	4694.000	4694.000	650
11 TS punched rail, 18 x 38 mm	400	325	4	8612.240	8612.240	8612.240	8612.240	8612.240	650
12 PS punched rail, 23 x 23 mm	400	275	12	4169.000	4169.000	4169.000	4169.000	4169.000	651
With mounting bracket TS (2 per rail)			24	8800.370	8800.370	8800.370	8800.370	8800.370	660

[1] A = Rail mounting distance



Rail systems



TP pedestal
Installation examples with TS system rails

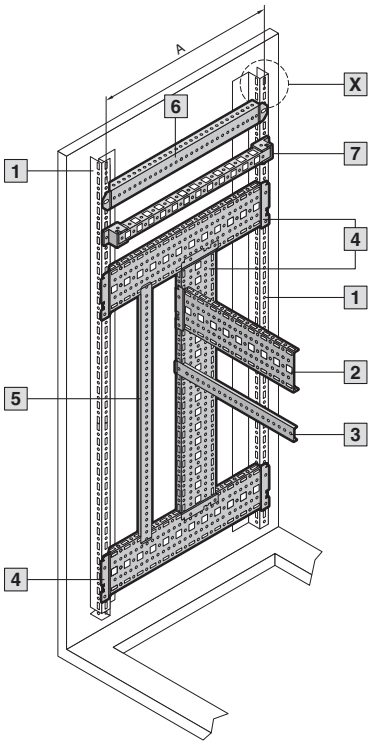
1 Rails for interior installation (preparing for installation)						
For enclosure width mm	Packs of	600	800	1200	1600	Page
For enclosure height mm		675	675	675	675	
Model No. CM	4	5001.050	5001.050	5001.050	5001.050	647

Installation in the width						
	Packs of	Model No. TS				
For enclosure width mm		600	800	1200	1600	
A[1] mm		575	775	1175	1575	
2 TS punched section with mounting flange, 17 x 73 mm	4	8612.060	8612.080	8612.020	–	647
3 TS mounting bars	20	8800.130	4579.000	–	–	650

Installation in the height (individual installation e.g. with)	
TS mounting bars	see page 650
TS punched rail 18 x 38 mm	see page 650

Installation in the depth								
	For enclosure depth mm	A[1] mm	Packs of	Model No. TS				
4 TS punched section with mounting flange, 17 x 73 mm	400	325	4	8612.140	8612.140	8612.140	8612.140	647
	500	425	4	8612.150	8612.150	8612.150	8612.150	
5 TS mounting bars	400	325	20	4694.000	4694.000	4694.000	4694.000	650
	500	425	20	4695.000	4695.000	4695.000	4695.000	
6 TS punched rail, 18 x 38 mm	400	325	4	8612.240	8612.240	8612.240	8612.240	650
	500	425	4	8612.250	8612.250	8612.250	8612.250	
7 PS punched rail, 23 x 23 mm	400	325	12	4169.000	4169.000	4169.000	4169.000	651
	500	425	12	4170.000	4170.000	4170.000	4170.000	
With mounting bracket TS (2 per rail)			24	8800.370	8800.370	8800.370	8800.370	660

[1] A = Rail mounting distance

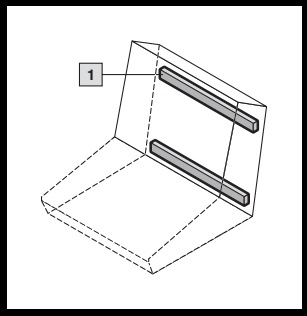


TP pedestal
Installation examples with TS system rails

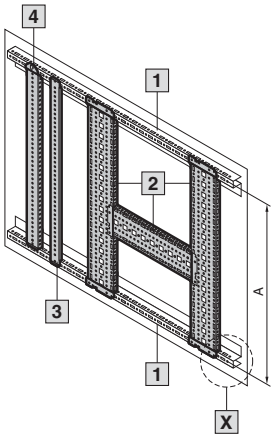
1 Rails for interior installation (preparing for installation)						
For enclosure width mm	Packs of	600	800	1200	1600	Page
Model No. CM	4	5001.050	5001.051	5001.053	–	647

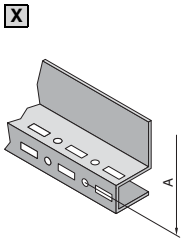
Installation in the height							
	A[1] mm	Packs of	Model No. TS				
For enclosure width mm			600	800	1200	1600	
2 TS punched section with mounting flange, 17 x 73 mm							
For cover	375	4	8612.040	8612.040	8612.040	8612.040	647
For enclosure	425	4	8612.150	8612.150	8612.150	8612.150	647
3 TS mounting bars							
For cover	375	4	4309.000	4309.000	4309.000	4309.000	650
For enclosure	425	4	4695.000	4695.000	4695.000	4695.000	650
4 TS punched rail 18 x 38 mm							
For enclosure	425	4	8612.250	8612.250	8612.250	8612.250	650

[1] A = Rail mounting distance

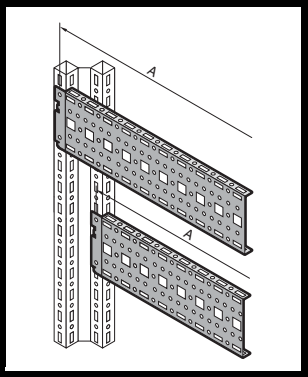


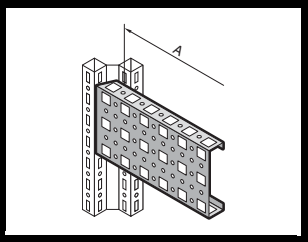
Console

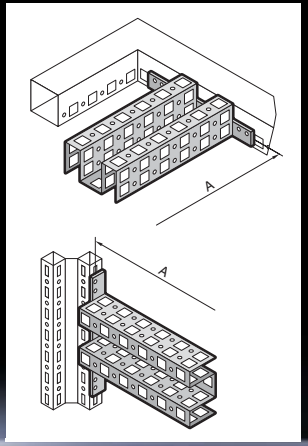




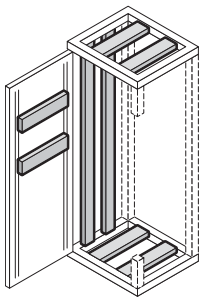
Rail systems

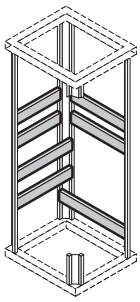


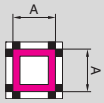
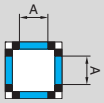




TS installation examples with TS system rails





	Installation in the roof and base frame in the width/depth	Installation between vertical sections in the width/depth		
		Internal level	External level	
				

TS punched section with mounting flange, 17 x 73 mm

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
300	4	–	–	275	8612.030	225	8612.130	
400	4	–	–	375	8612.040	325	8612.140	
500	4	–	–	475	8612.050	425	8612.150	
600	4	–	–	575	8612.060	525	8612.160	647
800	4	–	–	775	8612.080	725	8612.180	
1000	4	–	–	975	8612.000	925	8612.100	
1200	4	–	–	1175	8612.020	1125	8612.120	

[1] A = Rail mounting distance

TS punched section with mounting flange, 23 x 73 mm

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
500	4	–	–	425	8612.550	–	–	
600	4	–	–	525	8612.560	–	–	
800	4	–	–	725	8612.580	–	–	648
1000	4	–	–	925	8612.500	–	–	
1200	4	–	–	1125	8612.520	–	–	

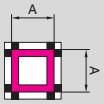
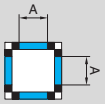
[1] A = Rail mounting distance

TS punched section without mounting flange, 45 x 88 mm

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
500	2	375	8612.650	–	–	375	8612.650	
600	2	475	8612.660	–	–	475	8612.660	649
800	2	675	8612.680	–	–	675	8612.680	

[1] A = Rail mounting distance

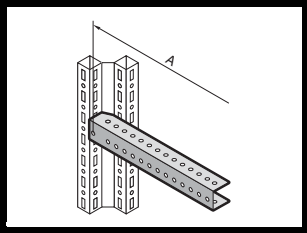
TS installation examples with TS system rails

	Installation in the roof and base frame in the width/depth	Installation between vertical sections in the width/depth	
		Internal level	External level
			

TS punched rail 25 x 38 mm (with snap-on nut M8)

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
500	2	–	–	435	8612.750	–	–	649
600	2	–	–	535	8612.760	–	–	
800	2	–	–	735	8612.780	–	–	

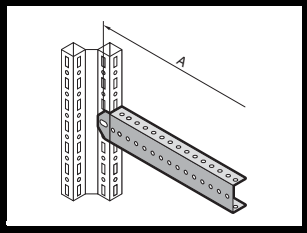
[1] A = Rail mounting distance



TS punched rail 18 x 38 mm

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
400	2	335	8612.240	–	–	335	8612.240	650
500	2	435	8612.250	–	–	435	8612.250	
600	2	535	8612.260	–	–	535	8612.260	
800	2	735	8612.280	–	–	735	8612.280	

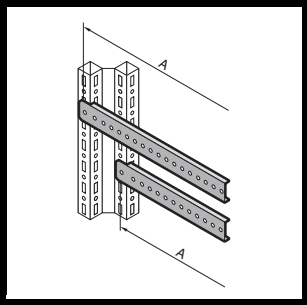
[1] A = Rail mounting distance
Two TS punched rails 18 x 38 mm are included in the supply of enclosures with a mounting plate. After installing the mounting plate, the TS punched rail may be inserted, as shown here.



TS mounting bars

For enclosure width/depth mm	Packs of	A[1] mm	Model No. TS	A[1] mm	Model No. TS	A[1] mm	Model No. TS	Page
400	20	–	–	–	–	325	4694.000	650
500	20	–	–	–	–	425	4695.000	
600	20	–	–	–	–	525	4696.000	
800	20	–	–	–	–	725	4697.000	
400	20	–	–	375	4309.000	–	–	
500	20		–	475	4596.000	–	–	
600	20		–	575	8800.130	–	–	
–	20		–	675	4598.000	–	–	
800	20		–	775	4579.000	–	–	
–	20		–	875	4599.000	–	–	

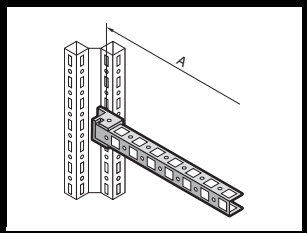
[1] A = Rail mounting distance
Alternatively, the TS support strip for the inner mounting level may also be used for mounting on the door.



PS punched rails 23 x 23 mm
(for installation options, see support bracket TS/PS, angle bracket, mounting bracket)

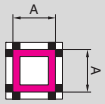
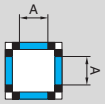
For enclosure width/depth mm	Packs of	A[1] mm	Model No. PS	A[1] mm	Model No. PS	A[1] mm	Model No. PS	Page
400	12	275	4169.000	275	4169.000	–	–	651
500	12	375	4170.000	375	4170.000	–	–	
600	12	475	4171.000	475	4171.000	–	–	
800	12	675	4172.000	675	4172.000	–	–	
1000	12	875	4173.000	875	4173.000	–	–	
1200	6	1075	4174.000	1075	4174.000	–	–	
1400	6	1275	4393.000	1275	4393.000	–	–	
1600	6	1475	4175.000	1475	4175.000	–	–	
1800	6	1675	4176.000	1675	4176.000	–	–	
2000	6	1875	4177.000	1875	4177.000	–	–	
2200	6	2075	4178.000	2075	4178.000	–	–	

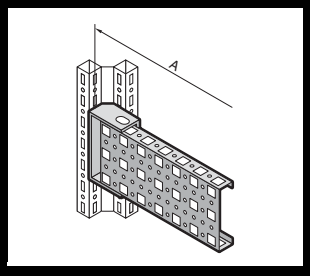
[1] A = Rail mounting distance



Rail systems

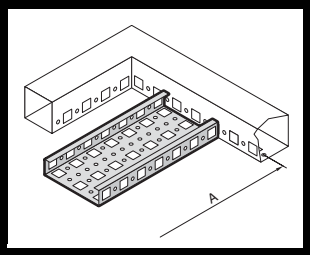
TS installation examples with TS system rails

	Installation in the roof and base frame in the width/depth	Installation between vertical sections in the width/depth		
		Internal level	External level	
				



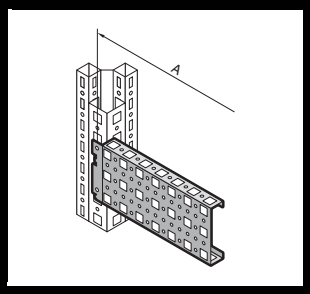
PS punched section without mounting flange 23 x 73 mm (installation option with support bracket TS)								
For enclosure width/depth mm	Packs of	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	Page
400	4	275	4374.000	275	4374.000	–	–	652
500	4	375	4375.000	375	4375.000	–	–	
600	4	475	4376.000	475	4376.000	–	–	
800	4	675	4377.000	675	4377.000	–	–	
1000	4	875	4382.000	875	4382.000	–	–	
1200	4	1075	4378.000	1075	4378.000	–	–	
1800	4	1675	4379.000	1675	4379.000	–	–	
2000	4	1875	4380.000	1875	4380.000	–	–	
2200	4	2075	4381.000	2075	4381.000	–	–	

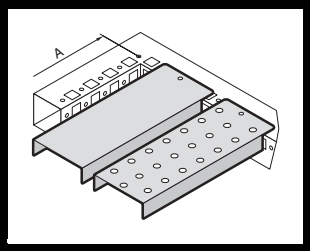
[1] A = Rail mounting distance



PS punched section with mounting flange 23 x 73 mm (installation options with TS adaptor rail when mounting on the vertical TS enclosure section)								
For enclosure width/depth mm	Packs of	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	Page
400	4	335	8800.640	–	8800.640	–	–	652
500	4	435	8800.650	–	8800.650	–	–	
600	4	535	4364.000	–	4364.000	–	–	
800	4	735	4365.000	–	4365.000	–	–	
1000	4	935	4373.000	–	4373.000	–	–	
1200	4	1135	4367.000	–	4367.000	–	–	

[1] A = Rail mounting distance





Support rails, slotted								
For enclosure width/depth mm	Packs of	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	A[1] mm	**Model No. PS**	Page
400	4	335	4394.000	–	–	–	–	654
500	2	435	4395.000	–	–	–	–	
600	2	535	4396.000	–	–	–	–	
800	2	735	4398.000	–	–	–	–	
Support rails, unslotted								
400	4	335	–	–	–	–	–	654
500	2	435	–	–	–	–	–	
600	2	535	4396.500	–	–	–	–	
800	2	735	4398.500	–	–	–	–	

[1] A = Rail mounting distance
Alternatively, the support rail (slotted and unslotted) can also be fitted with snap-on nut M8, adaptor rail or TS punched rail 25 x 38 mm on the vertical TS enclosure section.

Rails for interior installation

for AE

For mounting in the enclosure, no machining required. Suitable for all-round mounting on the sides, base and roof areas.

Variable with 2 rows of system punchings, creates additional mounting space e.g. for:
- TS punched section with mounting flange
- Enclosure lights
- Door-operated switch
- Door stay
- Cable conduit holder

Material:
Sheet steel

Surface finish:
Zinc-plated

For enclosure depth mm	Packs of	Model No. SZ
210	4	**2373.210**
250	4	**2373.250**
300	4	**2373.300**
350	4	**2373.350**

Note:
Other mounting options:
– Mounting plates, locatable, TS 8612.400, see page 657.
– Mounting plates, screw-fastening, large, TS 8612.410, see page 657.
– Mounting plates, screw-fastening, small, PS 4532.000, see page 658.
– Mounting brackets, PS 4597.000, see page 658.

Configuration examples:
See page 640.

Rails for interior installation

for CM, TP

For mounting on the existing threaded bolts. With TS system punchings on three sides.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Width mm		Height mm		Packs of	Model No. CM
CM	TP[1)]	CM	TP[2)]		
600	600	–	675	4	**5001.050**
800	800	800	–	4	**5001.051**
1000	–	1000	–	4	**5001.052**
1200	1200	1200	–	4	**5001.053**
–	–	1400	–	4	**5001.054**

[1)] Only with TP console and desk unit (cover or rear panel/base).
[2)] Only with TP pedestal.

Configuration examples:
See page 641.

TS punched section with mounting flange, 17 x 73 mm

Variable, with 5 rows of holes for universal skeleton structures or partial assembly. Simply locate into the TS punchings and secure.

Installation options:
- On the vertical TS enclosure section
  – On the outer mounting level, all-round, at the same height
  – On the inner mounting level, all-round, height-offset
- In CM and TP via rail for interior installation
  – In the depth, for outer mounting level
  – In the width, for inner mounting level

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Also required:

For installation in CM, TP:
Rail for interior installation, see page 647.

Accessories:

– Screws, see page 666.
– Cable tie for fast assembly SZ 2597.000, see page 720.

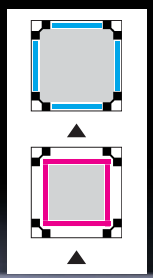
For the outer mounting level

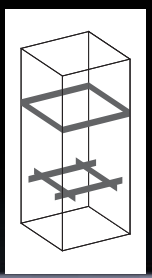
For enclosure width/depth mm	Packs of	Model No. TS
300	4	**8612.130**
400	4	**8612.140**
500	4	**8612.150**
600	4	**8612.160**
800	4	**8612.180**
1000	4	**8612.100**
1200	4	**8612.120**

For the inner mounting level

For enclosure width/depth mm	Packs of	Model No. TS
300	4	**8612.030**
400	4	**8612.040**
500	4	**8612.050**
600	4	**8612.060**
800	4	**8612.080**
1000	4	**8612.000**
1200	4	**8612.020**

Configuration examples:
From page 641.





Rail systems

Attachment TS

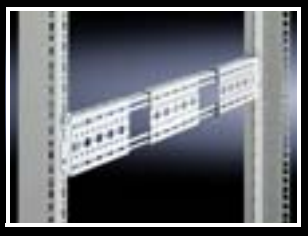
for TS punched section with mounting flange, 17 x 73 mm

Benefits:
- For attaching the TS punched section with mounting flange where access to installed equipment, such as mounting plates, is blocked by the screw fastening.
- May also be screw-fastened onto the punched section with mounting flange or enclosure frame and used as a support for contact hazard protection covers or master switch trim panels.

Packs of	Model No. TS
12	**8612.010**

Material:
Sheet steel

Surface finish:
Zinc-plated



TS punched section with mounting flange, 17 x 73 mm

Depth-variable for mounting frames for DK-TS, TE

For designing flexible interior installation, and/or to accommodate additional built-in components. The punched sections with mounting flanges may be located in the enclosure depth between two mounting frames. An additional screw fastening secures the unit. The depth variability of the rails facilitates flexible adaptation of their length to the existing attachment distance between the two 482.6 mm (19″) mounting frames. An additional punched section centre piece may be slid flexibly along the rail in the depth and secured to slots. This facilitates flexible attachment at any point between the mounting frames in the enclosure depth.

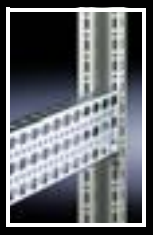
Length mm	Packs of	Model No. HP
300 – 470[1) 2)]	2	**7000.676**
530 – 700[1)]	2	**7000.678**

[1)] Distance between 482.6 mm (19″) levels = length + 120 mm
[2)] L < 420 mm, without centre piece

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 2 variable punched sections with mounting flanges
– One sliding centre part each
– Assembly parts



TS punched section with mounting flange, 23 x 73 mm

The alternative to the TS punched section with mounting flange 17 x 73 mm, see page 647, with punchings for captive nuts/threaded blocks instead of the slotted holes top and bottom. Simply locate and secure.

Installation options:
- On the vertical TS enclosure section

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

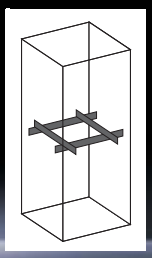
For the inner mounting level

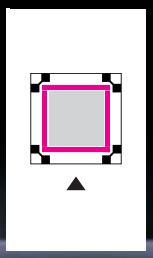
For enclosure width/depth mm	Packs of	Model No. TS
500	4	**8612.550**
600	4	**8612.560**
800	4	**8612.580**
1000	4	**8612.500**
1200	4	**8612.520**

Accessories:

– Screws,
see page 666.
– Threaded blocks, captive nuts,
see page 665.

Configuration examples:
See page 644.





TS punched sections without mounting flanges, 45 x 88 mm

Heavy top-mounted equipment mounted directly on the internal surfaces (e.g. roof) is supported. Mounted on the side or rear, the enclosure can then be screw-fastened securely to the machine. The twin profile with 11 rows of holes offers numerous additional opportunities for interior installation.

Installation options:
- On the vertical and horizontal TS enclosure section

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

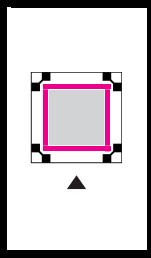
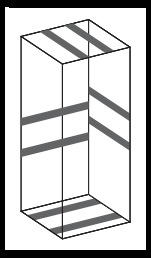
For the inner mounting level

For enclosure width/depth mm	Packs of	Model No. TS
500	2	**8612.650**
600	2	**8612.660**
800	2	**8612.680**

Accessories:

– Screws,
see page 666.
– Threaded blocks, captive nuts,
see page 665.

Configuration examples:
See page 644.

TS punched rail 25 x 38 mm

For heavy installations, with attachment holes.

Installation options:
- On the vertical TS enclosure section

With 9 mm round holes on a 25 mm pitch pattern on all sides, for mounting:
- Support rails, see page 654
- System support rails, see page 654
- C rails 30/15, see page 653
- Cable clamp rails (right angle section), see page 717
- Own assemblies.

Material:
Sheet steel, 3.0 mm

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

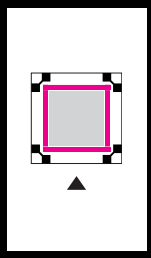
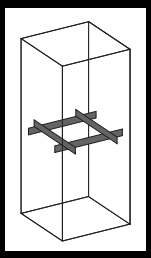
For enclosure width/depth mm	Packs of	Model No. TS
500	2	**8612.750**
600	2	**8612.760**
800	2	**8612.780**

Also required:

Snap-on nut M8, TS 8800.808,
see page 659.

Note:
In conjunction with the snap-on nut, particularly well-suited for dynamic connections.

Configuration examples:
See page 645.

Base configuration rail

for CM
For mounting in the enclosure depth, on the existing threaded bolts, no machining required. TS system punchings on 2 sides.
Creates additional installation options.

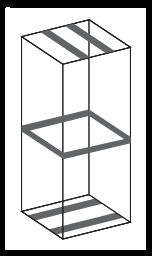
Material:
Sheet steel

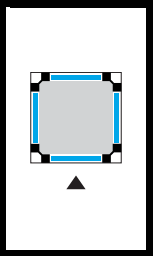
Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. CM
400	2	**5001.370**
300	2	**5001.371**

Rail systems





TS punched rail 18 x 38 mm

Simply locate and secure with a screw.
The location system makes assembly and dismantling easier. It only needs to be secured on one side, but may be secured on both sides if required.

Installation options:
- On the vertical TS enclosure section
  – On the outer mounting level
- On the horizontal TS enclosure section
- On base configuration rail for CM

Material:
Sheet steel

Surface finish:
Zinc-plated

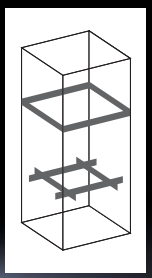
Supply includes:
Assembly screws.

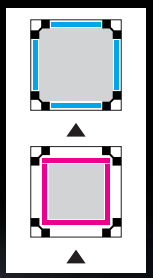
Note:
In enclosures with a mounting plate, 2 punched rails are already included with the supply.

For enclosure width/depth mm	Packs of	Model No. TS
400	4	**8612.240**
500	4	**8612.250**
600	4	**8612.260**
800	4	**8612.280**

Accessories:
- Screws,
  see page 666.
- Cable tie for fast assembly SZ 2597.000,
  see page 720.
- Cable clamps,
  see page 719.

Configuration examples:
From page 641.





TS support strips

Installation options:
- On the vertical and horizontal TS enclosure section
  – On the outer mounting level, all-round, at the same height
  – On the inner mounting level, all-round, height-offset
- On the tubular door frame TS, ES
- On the perforated door strip CM, TP
- On the ES system punchings, in the enclosure depth

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

For the outer mounting level

For enclosure width/depth mm	Length mm	Packs of	Model No. TS
400	340	20	**4694.000**
500	440	20	**4695.000**
600	540	20	**4696.000**
800	740	20	**4697.000**

Accessories:
- Screws,
  see page 666.
- Cable tie for fast assembly SZ 2597.000,
  see page 720.

Configuration examples:
From page 640.

For the inner mounting level and for mounting on doors

For enclosure width/depth mm	For door width mm	Length mm	Packs of	Model No. TS
–	400	290	20	**4594.000**
400	500	390	20	**4309.000**
500	600	490	20	**4596.000**
600	–	590	20	**8800.130**
–	800	690	20	**4598.000**
800	900	790	20	**4579.000**
–	1000	890	20	**4599.000**

TS assembly block

Installation in the vertical TS enclosure sections for mounting PS-compatible individual components.

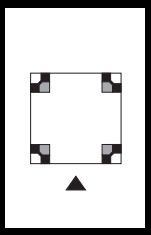
Material:
Die-cast zinc

Supply includes:
Assembly screws.

Packs of	Model No. TS
4	**8800.310**

Possible alternative:

Snap-on nut,
see page 659.



Adaptor rail

for PS compatibility

Installation in the vertical TS enclosure sections (across the entire enclosure height or in sub-sections) to create compatibility with:
- PS punched rail, 23 x 23 mm
- PS punched section without mounting flange, 23 x 73 mm
- PS punched section with mounting flange 23 x 73 mm

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

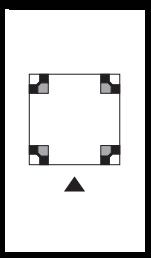
For enclosure height mm	Packs of	Model No. TS
1800	4	**8800.380**
2000	4	**8800.300**
2200	4	**8800.320**

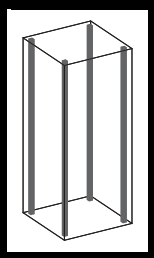
Accessories:

Screws,
see page 666.

Possible alternative:

Snap-on nut,
see page 659.





PS punched rails 23 x 23 mm

for TS, ES

Installation options:
- On the vertical enclosure section
  - Directly via support brackets TS
  - Via adaptor rail for PS compatibility in conjunction with angle brackets, mounting brackets or support brackets PS
- On the horizontal enclosure section
  - Directly via angle brackets, mounting brackets or support brackets PS

Material:
Sheet steel

Surface finish:
Zinc-plated

Length mm	For WHD mm	Packs of	Model No. PS
295	400	12	**4169.000**
395	500	12	**4170.000**
495	600	12	**4171.000**
695	800	12	**4172.000**
895	1000	12	**4173.000**
1095	1200	6	**4174.000**
1295	1400	6	**4393.000**
1495	1600	6	**4175.000**
1695	1800	6	**4176.000**
1895	2000	6	**4177.000**
2095	2200	6	**4178.000**

Also required:
- U nuts, see page 665.
- Mounting brackets TS/PS, see page 660 or
- Angle brackets, support brackets TS/PS, see page 661.

Accessories:
- Cable attachment, see page 720.
- Screws, see page 666.
- Cable tie for fast assembly SZ 2597.000, see page 720.

Configuration examples:
From page 641.

Rail systems

PS punched section without mounting flange, 23 x 73 mm

for TS, ES

Installation options:
- On the vertical enclosure section
  – Directly via support brackets TS
  – Via adaptor rail for PS compatibility in conjunction with support brackets PS
- On the horizontal enclosure section
  – Directly via support brackets PS

Material:
Sheet steel

Surface finish:
Zinc-plated

Length mm	For WHD mm	Packs of	Model No. PS
295	400	4	**4374.000**
395	500	4	**4375.000**
495	600	4	**4376.000**
695	800	4	**4377.000**
895	1000	4	**4382.000**
1095	1200	4	**4378.000**
1695	1800	4	**4379.000**
1895	2000	4	**4380.000**
2095	2200	4	**4381.000**

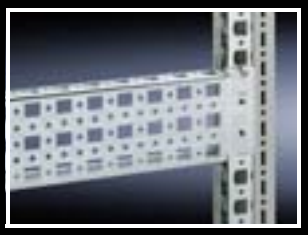
Also required:

Support brackets PS/TS,
see page 661.

Accessories:

– Screws, see page 666.
– Cable tie for fast assembly SZ 2597.000, see page 720.
– U nuts, see page 665.

Configuration examples:
See page 646.



PS punched section with mounting flange 23 x 73 mm

for TS, ES

Variable, with 5 rows of holes for universal skeleton structures or partial assembly. Simply locate into the system punchings and secure.

Installation options:
- On the vertical TS enclosure section
  – Via adaptor rail for PS compatibility
- On the horizontal TS enclosure section
- On the ES system punchings, in the enclosure depth

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Installation in enclosure width/depth TS mm	Packs of	Model No. PS
400	4	**8800.640**
500	4	**8800.650**
600	4	**4364.000**
800	4	**4365.000**
1000	4	**4373.000**
1200	4	**4367.000**

Installation in enclosure depth ES, TP universal console, CS modular enclosures mm	Packs of	Model No. PS
400	4	**4369.000**
500	4	**4370.000**
600	4	**4371.000**
800	4	**4372.000**

Also required:

Adaptor rail for PS compatibility
(when mounting on the vertical enclosure section),
see page 651.

Configuration examples:
See page 646.

C rails 30/15

to EN 60 715 for TS, ES

Installation options:
- On the vertical TS enclosure section
  – Via snap-on nut TS 8800.808 (Fig. 1)
  – Via adaptor rail for PS compatibility
- On the horizontal TS enclosure section (Fig. 2)
- On the ES system punchings
- On base configuration rail for CM

Material:
Sheet steel

Surface finish:
Zinc-plated

For enclosure width/depth mm	Length mm	Packs of	Model No. PS
500	455	6	**4943.000**
600	555	6	**4944.000**
800	755	6	**4945.000**
1000	955	6	**4946.000**
1200	1155	6	**4947.000**

Accessories:

– Cable clamps, see page 719.
– Support bracket or spacer, see page 662.
– Quick-assembly block, see page 662.
– Snap-on nut M8, TS 8800.808, see page 659.
– Adaptor rail, see page 651.

1

2

Possible alternative:

Rail for EMC shielding bracket and strain relief, see page 686.

C rails

for DK-TS, CS Toptec

For direct mounting on the vertical enclosure section. Thanks to the universally designed attachment piece, the C rails may optionally be attached to the inner or outer level of the TS 8 frame.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width/depth mm	Length mm	Packs of	Model No. DK
400	298	4	**7828.040**
500	398	4	**7828.050**
600	498	4	**7828.060**
800	698	4	**7828.080**
1000	898	4	**7828.100**
1200	1098	4	**7828.120**

Accessories:

Cable clamps, see page 719.

C rails

for DK-TS

Installation options:
- On the horizontal enclosure sections
- On the vertical TS enclosure section
  – Via adaptor rail for PS compatibility

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width/depth mm	Length mm	Packs of	Model No. DK
400	290	6	**7091.000**
600	490	6	**7095.000**
800	690	6	**7096.000**
1000	890	6	**7100.000**
1200	1090	6	**7102.000**

Also required:

Adaptor rail for PS compatibility (when mounting on the vertical enclosure section), see page 651.

Accessories:

Cable clamps, see page 719.

Rail systems

System support rails

For heavy installed equipment such as transformers. T-head screw and slot in the support rail accommodate all mounting dimensions.

Installation options:
- On the vertical TS enclosure section
  - Via snap-on nut TS 8800.808 (Fig. 1)
  - Via adaptor rail for PS compatibility
  - Offset in the height, via TS punched rail 25 x 38 mm (Fig. 2)
- On the horizontal TS enclosure section
  - In the width
  - In the depth (without mounting plate)
- On the ES system punchings
  - In the enclosure depth
- On base configuration rail for CM

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
- 2 system support rails (45 x 25 mm)
- 4 T-head screws M12 x 60 mm
- Assembly parts

For enclosure width mm	Packs of	Model No. PS
600	2	**4361.000**
800	2	**4362.000**
1000	2	**4347.000**
1200	2	**4363.000**

Accessories:
- Width divider e.g. for the installation of 2 system support rails (for 600 mm width) in 1200 mm wide enclosures, see page 558.
- Snap-on nut M8, TS 8800.808, see page 659.
- Adaptor rail, see page 651.
- TS punched rail 25 x 38 mm, see page 649.

Support rails

for TS, ES, CM

For heavy installations. Particularly suitable for the installation of base isolators.

Installation options:
- On the vertical TS enclosure section
  - Via snap-on nut TS 8800.808 (Fig. 1)
  - Via adaptor rail for PS compatibility
  - Offset in the height, via TS punched rail 25 x 38 mm (Fig. 2)
- On the horizontal TS enclosure section
  - In the width
  - In the depth
- On the ES system punchings, in the enclosure depth
- On base configuration rail for CM

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width/depth mm	Packs of	Model No. PS	Model No. TS
		slotted	unslotted
400	4	**4394.000**	**–**
500	4	**4395.000**	**–**
600	4	**4396.000**	**4396.500**
800	4	**4398.000**	**4398.500**

Accessories:
- Snap-on nut M8, TS 8800.808, see page 659.
- Adaptor rail, see page 651.
- TS punched rail 25 x 38 mm, see page 649.

Configuration examples:
From page 641.

Support rail 65 x 42 mm

for TS, ES

Benefits:
- For heavy assemblies up to 5000 N per support rail.

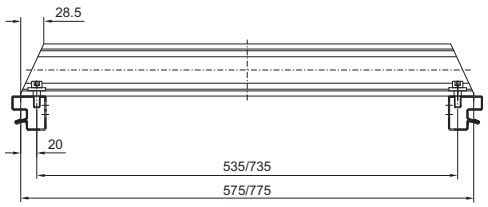
Permissible static load:
10000 N per enclosure

Material:
Steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure width mm	Packs of	Model No. TS
600	2	**8612.960**
800	2	**8612.980**



Support rails TS 35/15

to EN 60 715 for TS, ES

Mounting on the TS vertical section via
- Snap-on nut M8, TS 8800.808, see page 659
- Assembly block see page 651 or
- Adaptor rail, see page 651.

For enclosure width/depth mm	Support rails length mm	Packs of	Model No. PS
500	455	6	**4933.000**
600	555	6	**4934.000**
800	755	6	**4935.000**
1200	1155	6	**4937.000**

Support rails TS 35/7.5 and TS 35/15

to EN 60 715 for KL, KL-HD, AE

Length sized to the enclosure width

For enclosure width mm	Support rails length mm	Design	Packs of	Model No. SZ
150	137	TS 35/7.5	10	**2314.000**
200	187		10	**2315.000**
300	287		10	**2316.000**
400	387		10	**2317.000**
500	487	TS 35/15	10	**2318.000**
600	587		10	**2319.000**

Support rails

to EN 60 715

Standard length 2 m

Design	Length	Packs of	Model No. SZ
TS 35/15	2 m	6	**2313.150**
TS 35/7.5	2 m	6	**2313.750**

Mounting clip

for support rails

For fast, secure attachment of:
- Cable ducts
- Mounting plates
- Mounting angles

on support rail TS 35/7.5 and TS 35/15 to EN 60 715.
Simply pre-assemble the mounting clip on the part to be installed, then snap into position on the support rail.

Packs of	Model No. SZ
30	**2309.000**

C rails

for EL

For infinite adjustment of the mounting angles in the depth.

Material:
Sheet steel

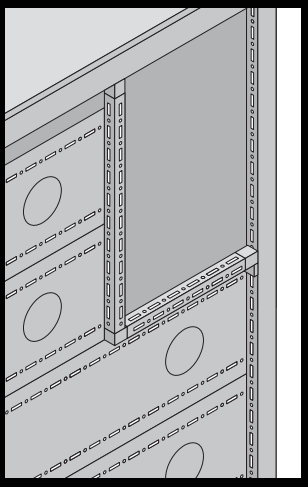
Supply includes:
Assembly parts.

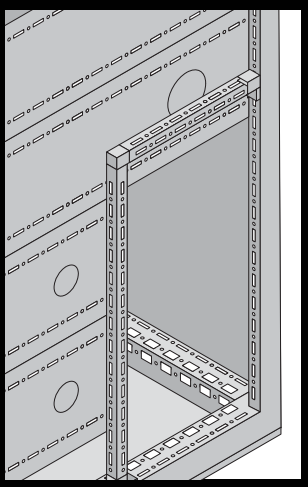
For centre part depth mm	Packs of	Model No. EL
216	4	**2238.000**[1)]
316	4	**2239.000**
416	4	**2237.000**

[1)] Extended delivery times.

Accessories:

Cable clamps,
see page 719.





TS punched rail 17 x 17 mm

for TS

Mounting angle with TS pitch on three sides.
Suitable for

- building an auxiliary construction for dividing the busbar space,
- individual use as mounting frame for low and medium loads,
- fastening to the internal or external mounting level of the TS 8 enclosure.

Material:
Sheet steel, 1.5 mm

Surface finish:
Zinc-plated

Also required:

– Frame connector piece, see page 663.
– T-connector piece, see page 663.
– Corner connector, see page 663.

For horizontal busbar space separation		Packs of	Model No. SV
For compartment depth mm	Length mm		
425	62.5	12	**9673.915**
600	137.5	12	**9673.920**

For vertical separation with busbar system in the top rear section		Packs of	Model No. SV
For compartment height mm	Length mm		
450 – 500[1)]	487.5	12	**9673.953**
650 – 800[1)]	787.5	12	**9673.983**

[1)] Rails should be shortened where necessary.

For vertical separation with busbar system in the bottom rear section		Packs of	Model No. SV
For compartment height mm	Length mm		
350	412.5	12	**9673.951**
400	462.5	12	**9673.960**
450	512.5	12	**9673.961**
650	712.5	12	**9673.981**
700 – 800[1)]	862.5	12	**9673.995**

[1)] Rails should be shortened where necessary.

For external mounting level		Packs of	Model No. SV
For enclosure width/depth mm	Length mm		
400	262.5	12	**9673.940**
500	362.5	12	**9673.950**
600	462.5	12	**9673.960**

For internal mounting level		Packs of	Model No. SV
For enclosure width/depth mm	Length mm		
400	312.5	12	**9673.941**
500	412.5	12	**9673.951**
600	512.5	12	**9673.961**
800	712.5	12	**9673.981**

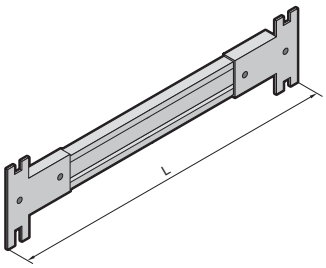
C rails

for cable chamber enclosures
For attaching cables and lines and for mounting stacking insulators.

Material:
Sheet steel

Supply includes:
– 4 C rails
– 8 brackets
– Assembly parts

For TS enclosures width/depth mm	Length (L) mm	Packs of	Model No. SV
600	600	4	**9660.210**
800	800	4	**9660.220**



Punched sections with mounting flanges

for coupling section
For assembling a Maxi-PLS or Flat-PLS busbar system directly beneath or above the circuit-breaker. This punched section with mounting flange may be used without conflict in conjunction with the compartment space side panel modules. It is attached to the outer level of the TS 8 enclosure system, but thanks to the PS punchings allows a mounting level as in the roof or base frame, thereby facilitating the use of busbar system attachment for the roof/base section.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For TS enclosures width/depth mm	Packs of	Model No. SV
600	2	**9674.056**
800	2	**9674.058**

Mounting plates

Locatable
on
- the vertical TS enclosure section
- TS punched section with mounting flange, 17 x 73 mm
- at the rear on the TE 482.6 mm (19˝) mounting frame

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. TS
4	**8612.400**

Detailed drawings:
Available on the Internet.

Mounting plates

Screw-fastened, large
On all enclosures and mounting parts with system punchings on a 25 mm pitch pattern.

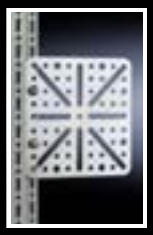
Material:
Sheet steel

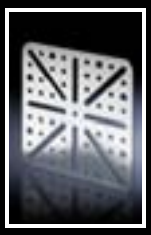
Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

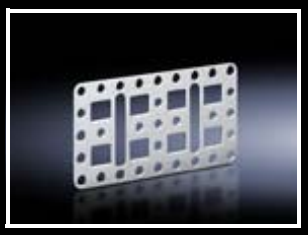
Packs of	Model No. TS
4	**8612.410**

Detailed drawings:
Available on the Internet.





Rail systems



Mounting plates

Screw-fastened, small

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. PS
4	**4532.000**

Detailed drawings:
Available on the Internet.

Mounting plate TS

with integral top-hat rail
For direct snap-mounting of components such as speed control, enclosure internal thermostat and hygrostat.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Mounting plate (mounting accessories included).

Packs of	Model No. DK
1	**7526.964**

Mounting bracket

May be screw-fastened onto all enclosures and mounting parts with system punchings on a 25 mm pitch pattern.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. PS
4	**4597.000**

Accessories:

- Screws,
  see page 666.
- Cable tie for fast assembly SZ 2597.000,
  see page 720.

Detailed drawings:
Available on the Internet.

Mounting bracket

for interior installation

For installing punched sections with mounting flanges and support strips in:
- Comfort Panel horizontal/vertical from 74 mm installation depth

or for installing in:
- Optipanel from an installation depth of 100 mm

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. CP
4	**6205.100**

Detailed drawings:
Available on the Internet.

		Comfort Panel	Page
		Front panel width 482.6 mm (19″)	
Punched sections with mounting flanges	Horizontal	8612.150	647
	Vertical		
Support strips	Horizontal	4695.000	650
	Vertical		

Snap-on nut TS

Metric thread for vertical TS enclosure section. To install, insert into slot and clip into position. The snap-on nut is then secure. By tightening the screw, it is securely tightened against the section, and potential equalisation is automatically created.

Installation options:
- On the vertical TS enclosure section
  – with metric thread M6 or M8
  – the alternative to metal screws
  – particularly well-suited for dynamically loaded connections.

Material:
Precision-cast stainless steel

Thread	Packs of	Model No. TS
M6	20	**8800.806**
M8	20	**8800.808**

Accessories:

Multi-tooth screw M6 x 12 or M8 x 12, see page 666.

Accessories for interior installation

1 Support rails, see page 654

2 Cable clamp rails, see page 717

3 C rails 30/15, see page 653

4 System support rails, see page 654

5 TS punched rail 25 x 38 mm, see page 649

Adaptor bracket TS

For external mounting of
- System lights
- Cable ducts

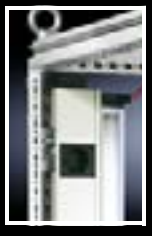
on the vertical TS enclosure section.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly screws.

Packs of	Model No. TS
6	**8800.360**



Assembly components

Mounting bracket TS

Offers variable mounting options for the punched rail 23 x 23 mm, e.g. for supporting external surfaces or creating an additional internal level.

Material:
Die-cast zinc

Supply includes:
24 screws 5.5 x 13 mm.

Packs of	Model No. TS
24	**8800.370**

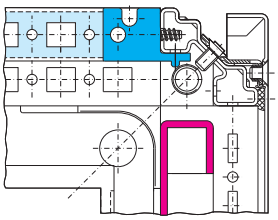
Accessories:

U nuts (recommendation: M6),
see page 665.

Installation options:
- On the vertical TS enclosure section
  – flush with the outer edge of the enclosure or
  – flush with the enclosure clearance width.

1 Support of the external surfaces with two mounting options:
- Without mounting plate (photo)
- With mounting plate (drawing)

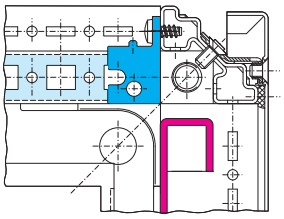
1



Two installation options for the inner mounting level:

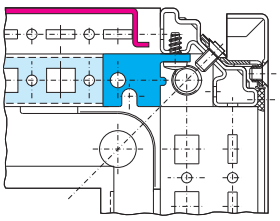
2 If there is no divider panel fitted.

2



3 With a divider panel fitted, and without or with a mounting plate in a set forward position.

3



Mounting bracket PS

For variable attachment of punched rail 23 x 23 mm.

Installation options:
- Optionally flush with:
  – Outer enclosure edge or
  – Enclosure clearance width
- On the vertical TS enclosure section via
  – Adaptor rail for PS compatibility,
  see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
Die-cast zinc

Supply includes:
1 set =
1 mounting bracket,
1 screw M6 x 12 mm,
1 cage nut M6.

Packs of	Model No. PS
24 set	**4182.000**

Also required:
- U nuts for punched rails (recommended: M6),
  see page 665.
- Multi-tooth screws M6 x 12 mm,
  see page 666.

Angle bracket PS

For quick attachment of punched rails 23 x 23 mm.

Installation options:
- On the vertical TS enclosure section via
  – Adaptor rail for PS compatibility, see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
1 set =
1 angle bracket, left,
1 angle bracket, right,
2 metal screws 5.5 x 13 mm.

Packs of	Model No. PS
12 set	4181.000

Also required:
– U nuts for punched rails (recommended: M6), see page 665.
– Multi-tooth screws M6 x 12 mm, see page 666.

Support bracket TS

For the attachment of punched sections without mounting flange 23 x 73 mm or punched rails 23 x 23 mm.

Installation options:
- On the vertical TS enclosure section
  – on a 25 mm pitch pattern
  – in 2 mm increments.

Material:
Die-cast zinc

Supply includes:
1 set =
1 support bracket,
1 stay,
3 metal screws 5.5 x 13 mm.

Packs of	Model No. TS
6 set	8800.330

Also required:
– U nuts for punched rails (recommended: M6), see page 665.
– Multi-tooth screws M6 x 12 mm, see page 666.

Support bracket PS

For the attachment of punched sections without mounting flange 23 x 73 mm or punched rails 23 x 23 mm.

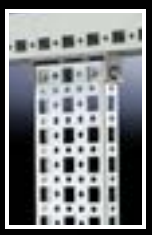
Installation options:
- On the vertical TS enclosure section via
  – Snap-on nut TS 8800.806, see page 659, or
  – Adaptor rail for PS compatibility, see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
Die-cast zinc

Supply includes:
1 set =
1 support bracket,
2 countersunk screws,
2 serrated lock washers.

Packs of	Model No. PS
24 set	4183.000

Also required:
– U nuts for punched rails (recommended: M6), see page 665.
– Multi-tooth screws M6 x 12 mm, see page 666.
– Adaptor rail for PS compatibility (when mounting on the vertical enclosure section), see page 651.



Assembly components

Bracket/spacer

For fastening C rails, punched rails or cable clamp rails (angle section). On the sides, to accommodate square sections or tubes (Ø 20 mm).
Attachment points with M8 thread.

Installation options:
- On the vertical TS enclosure section via
  – Snap-on nut TS 8800.808, see page 659, or
  – Adaptor rail for PS compatibility, see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
Die-cast zinc

Supply includes:
1 set =
1 bracket/spacer,
2 screws M8 x 16 mm,
2 spring lock washers,
2 cage nuts M8,
2 serrated lock washers,
2 metal screws.

Packs of	Model No. TS
6 set	**4199.000**

Accessories:

Angle piece TS 4134.000, see page 662.

Quick-assembly block

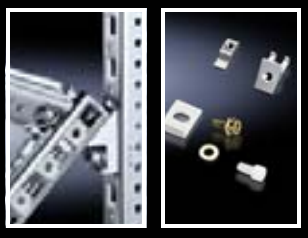
For a variety of installation options.

Installation options:
- On the vertical TS enclosure section via
  – Snap-on nut TS 8800.808, see page 659, or
  – Adaptor rail for PS compatibility, see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
Die-cast zinc

Supply includes:
– 12 quick-assembly blocks
– 12 threaded blocks M8
– 24 screws M8 x 12 mm
– 24 square nuts M8

Packs of	Model No. TS
12	**4133.000**



Angle piece

For assembling punched rails and mounting surfaces with a 45° incline.

Installation options:
- On the vertical TS enclosure section via
  – Snap-on nut TS 8800.806, see page 659, or
  – Adaptor rail for PS compatibility, see page 651
- On the horizontal TS enclosure section
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.

Material:
– Angle pieces: Die-cast zinc
– Insulating pieces: Plastic

Supply includes:
1 set =
1 angle piece,
1 insulating piece,
1 insulating screw,
2 assembly screws,
1 threaded block M6.

Packs of	Model No. TS
12 set	**4134.000**

Frame connector piece

for TS punched rail 17 x 17 mm
Mounting part with integral M4 threads for attaching the TS punched rail 17 x 17 mm to the horizontal and vertical TS frame section (external level). The frame adaptor piece can be used as a self-holding construction aid in the TS pitch and fastened with a screw to the frame. Can also be used for fastening other sections with TS pitch.

Material:
Die-cast zinc

Supply includes:
Assembly parts.

Packs of	Model No. SV
24	**9673.901**

T-connector piece

for TS punched rail 17 x 17 mm
Mounting piece with integral M4 threaded holes for attaching the TS punched rail 17 x 17 mm
- to horizontal and vertical TS chassis
- to TS punched rail 17 x 17 mm
- to the vertical TS frame section (internal level).

The T-connector piece can be used as a self-holding construction aid in the TS pitch and fastened with a screw to the frame. Can also be used for fastening other sections with TS pitch.

Material:
Die-cast zinc

Supply includes:
Assembly parts.

Packs of	Model No. SV
24	**9673.903**

Corner connector

for TS punched rail 17 x 17 mm
Mounting part with integral M4 threads for connecting two TS punched rails 17 x 17 mm at an angle of 90° across the corner. Required for building the auxiliary construction for the busbar space separation.

Material:
Die-cast zinc

Supply includes:
Assembly parts.

Packs of	Model No. SV
10	**9673.902**

Assembly components

Universal bracket

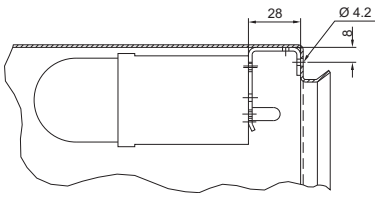
For installing
- Enclosure lights in
  – Compact enclosures AE
- Door-operated switches in
  – Compact enclosures AE
  – TopConsole system TP
- Cable conduit holders SZ 2593.000 and SZ 2591.000 in
  – Compact enclosures AE
- Support rails for terminals in
  – Command panels and command panel housings with door.

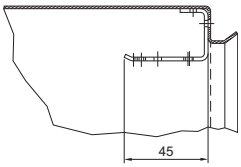
Mounting screws are concealed when the door is closed. Existing holes for mounting blocks or hinges may be used with AE.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. SZ
6	**2373.000**



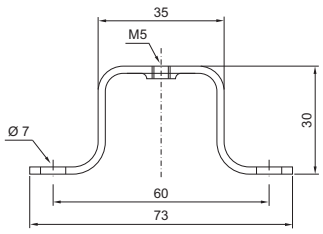


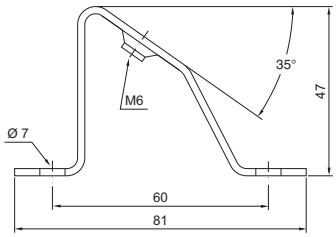
Cable retainer

For individual rail mounting.

Material:
Sheet steel, zinc-plated

Cable retainer	Packs of	Model No. SZ
flat	20	**2365.000**
inclined	20	**2366.000**





Mounting block

for AE
As an accessory for additional interior installation, e.g. mounting of cable ties, PS punched rails, top hat rails and C rails (e.g. for a second pair of mounting angles).

Supply includes:
Assembly parts.

Packs of	Model No. SZ
20	**2574.000**

U nuts

For
- Punched rail 23 x 23 mm
- Punched section without mounting flange, 23 x 73 mm
- Punched section without mounting flange, 45 x 88 mm
- Punched section with mounting flange, 23 x 73 mm

For mounting punched rails and punched sections without mounting flanges on angle brackets, mounting brackets and support brackets, we recommend U nuts with M6 thread (PS 4179.000).

Thread	Packs of	Model No. PS
M4	20	**4119.000**
M5	20	**4157.000**
M6	20	**4179.000**
M8	20	**4180.000**

Accessories:

Multi-tooth screws M6 x 12 mm, (for PS 4179.000), see page 666.

Captive nuts/threaded blocks

Installation options:
On enclosures and rails with rectangular system punching 12.5 x 10.5 mm, such as:
- TS enclosure section
  – vertically, via adaptor rail for PS compatibility
  – horizontally, direct
- ES enclosure body, all-round
- Punched rail 23 x 23 mm
- Punched section without mounting flange, 23 x 73 mm
- Punched section without mounting flange, 45 x 88 mm
- Punched section with mounting flange, 23 x 73 mm

Possible alternative:

On the vertical TS enclosure section
TS snap-on nuts, see page 659.

Captive nuts
The compression spring, designed as an insertion aid, ensures reliable mechanical and electrical connection in the system punchings.

Thread	Packs of	Model No. TS
M5	50	**4166.000**
M6	50	**4164.000**
M8	50	**4165.000**

Threaded block
With snap-off insertion aid, die-cast zinc.

Thread	Packs of	Model No. TS
M6	50	**4162.000**
M8	50	**4163.000**

Captive nuts
The nuts are inserted from the same side as screw-fastening takes place. Consequently, attachment points in the same height or width may also be used around corners.
The spring cage also ensures electrical connection in the system punchings.

Thread	Packs of	Model No. TS
M6	50	**8800.340**
M8	50	**8800.350**

Assembly components

Spring nut M5

For
- Comfort Panel from an installation depth of 74 mm
- Optipanel from an installation depth of 100 mm
- Compact Panel

The spring ensures reliable protection against unintentional displacement.
Further interior installation, e.g. with mounting bracket PS 4597.000 (see page 658) or mounting bracket CP 6205.100 (see page 658).

Material:
Sheet steel, zinc-plated

Packs of	**Model No. CP**
50	**6108.000**

Threaded inserts M6

for KS
For securing installed equipment to the moulded bosses in the door and in the enclosure rear panel.
Screw length available for insertion: 8 mm.

Packs of	**Model No. KS**
20	**1482.000**

Multi-tooth screws

M6 x 12 to fit:
- Snap-on nuts (TS 8800.806)
- U nuts for punched rails (PS 4179.000)
- Captive nuts (PS 4164.000)
- Threaded blocks (TS 4162.000)

M8 x 12 to fit:
- Snap-on nuts (TS 8800.808)

Metal multi-tooth screws

For the round holes 4.5 mm diameter in the enclosure section, punched rails and punched sections without mounting flanges.

Self-tapping screws

For the round holes 4.5 mm diameter in the enclosure section, punched rails and punched sections without mounting flanges.

Self-tapping screws

Mark, drill and tighten in a single operation using electric or pneumatic tools.

For metal thickness: 0.8 – 3 mm
Length: 16 mm
Usable length: 9.5 mm
Width across flats: 8 mm

Multi-tooth drive for optimum transmission of torques, an extended tool life and increased safety and reliability when tightening and loosening screw connections.

Type of screw	Dimensions mm	Packs of	**Model No. SZ**
Multi-tooth screws	M6 x 12 M8 x 12	300 300	**2504.500** **2504.800**
Metal multi-tooth screws	5.5 x 13	300	**2486.500**
Metal multi-tooth screws for stainless steel	5 x 13	300	**2486.300**
Self-tapping screws:			
• Hex screws	M5 x 10	500	**2504.000**
• Posidrive raised countersunk screws	M5 x 12	500	**2488.000**
• Pan-head screws, posidrive	M5 x 12	500	**2489.000**
• Multi-tooth pan-head screws	M5 x 12	500	**2489.500**
Self-tapping screws	ST 4.8 x 16	300	**2487.000**

TS adaptor for wiring systems

Adaptor rail for the Lütze LSC wiring system.

Supply includes:
1 set =
6 adaptor rails,
24 spring lock washers,
24 metal screws 5.5 x 13 mm.

Note:
Mounting parts for the LCS wiring system not included with the supply.

For enclosure depth mm	Packs of	Model No. TS
500	1 set	**8800.150**
600		**8800.160**
800		**8800.180**

Installation kit for the Moeller MR 25 wiring system.

Supply includes:
1 set =
2 mounting brackets,
4 mounting rails, assembly parts.

For enclosure depth mm	Packs of	Model No. TS
400	1 set	**8800.240**

Kit

for separate frame TS
Every TS 8 frame is easily converted to a rack suitable for dismantling. To this end, the frame sections in the roof and base frame are separated, optionally in the width or depth. The four connection components are inserted into the frame section and screw-fastened. The external dimensions of the frame remain unchanged.

Supply includes:
Assembly parts.

Note:
The maximum achievable IP protection category is restricted by separation of the frame.

Packs of	Model No. DK
4	**7829.400**

Component shelves for frame attachment

Component shelf for frame attachment

Enclosure width 600 and 800 mm for TS
For installation in enclosures **without** 482.6 mm (19″) accommodation.

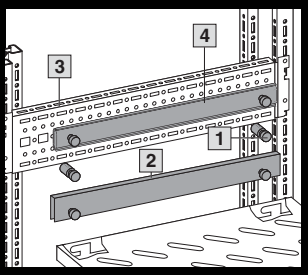
Max. depth of component shelves = Enclosure depth – 100 mm.

Technical specifications:
– Mounting bolts or mounting rails may be installed on a 25 mm pitch pattern in the enclosure depth.
– Mounting hole for handles provided.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.



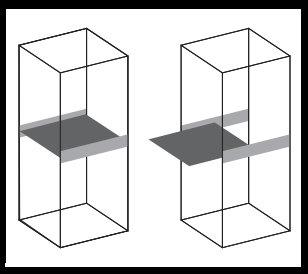
1 Fastening bolts
2 Mounting rails
3 Installation kit
4 Telescopic slides

Enclosure width 600 mm

Load capacity kg (static surface load)	50	50	50	50	100	100	100	100
Component shelf depth mm	400	500	600	700	400	500	600	700
Component shelf height mm	29	29	29	29	45	45	45	45
Model No. DK, slotted	**7164.035**	**7165.035**	**7166.035**	**7166.735**	**7464.035**	**7465.035**	**7466.035**	**7466.735**
Model No. DK, unslotted	**7264.035**	**7265.035**	**7266.035**	**–**	**–**	**–**	**–**	**–**

Enclosure width 800 mm

Load capacity kg (static surface load)	50	50	50	50	100	100	100	100
Component shelf depth mm	400	500	600	700	400	500	600	700
Component shelf height mm	29	29	29	29	45	45	45	45
Model No. DK, slotted	**7184.035**	**7185.035**	**7186.035**	**7186.735**	**7484.035**	**7485.035**	**7486.035**	**7486.735**



! Also required:

TS punched section with mounting flange, 17 x 73 mm, as installation kit for enclosure depth, see page 647	500	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050	8612.050
	600	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060	8612.060
	800	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080	8612.080
	1000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000	8612.000
	1200	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020	8612.020

+ Accessories:

Telescopic slides, see page 677	7061.000	7081.000	7161.000	7161.700	7064.000	7065.000	7066.000	7066.700
Handles for component shelves, see page 678	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010
Hinged cable support	see page 678							

Component shelf, pull-out

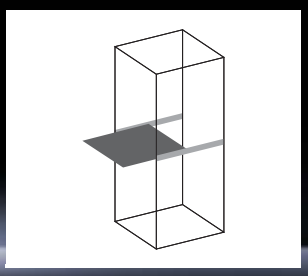
for TS, PC-TS, IW
For direct mounting on the vertical TS enclosure section.

Load capacity:
40 kg surface load, static

Material:
Sheet steel

Colour:
RAL 7015

Supply includes:
2 telescopic slides.



For enclosures[1]		Support area		Model No. IW
Width mm	Depth mm	Width mm	Depth mm	
600	600	465	545	**6902.960**[2]
600	800	465	745	**6902.980**

[1] For enclosures without a mounting plate.
[2] May also be installed in 800 mm deep enclosures based on TS (pull-out rear attachment).

Component shelves for frame attachment

Component shelf, static installation

for TS
Locate the mounting pieces in the frame and attach the component shelf. Attachment in the TS enclosure section offers the greatest possible support surface.

Dimensions:
– Height: 25 mm
– Width: Enclosure width minus 44 mm
– Depth: Enclosure depth minus 44 mm

Load capacity:
75 kg surface load, static

Material:
Sheet steel

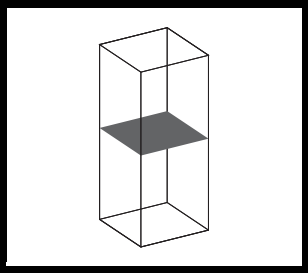
Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosures		Model No. DK
Width mm	Depth mm	
600	600	**7828.660**
600	800	**7828.680**
600	1000	**7828.600**[1)]
800	600	**7828.680**
800	800	**7828.880**
800	1000	**7828.800**

[1)] Extended delivery times.

Note:
– Combined use with vertically divided doors is not possible.
– Not suitable for combination with telescopic slides.



Component shelf, static installation

for TS, PC-TS, IW
prepared for fan expansion kit
For direct mounting on the vertical TS enclosure section. Simply located into 4 pre-fitted screws and secure.

Load capacity:
40 kg surface load, static

Material:
Sheet steel

Colour:
RAL 7015

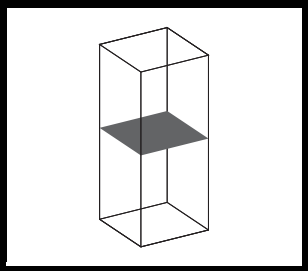
Supply includes:
Assembly parts.

For enclosures[1)]		Support area		Model No. PC
Width mm	Depth mm	Width mm	Depth mm	
600	600	507	550	**8800.900**
600	800	507	750	**8800.910**

[1)] For enclosures without a mounting plate.

Accessories:

Fan expansion kit DK 7980.XXX,
see page 404.



Drawer tray

pull-out
For enclosures with TS frame construction in series IW, PC-TS.
Width 600 mm and depth 600 – 800 mm.
Tray height: 83 mm

Load capacity:
40 kg surface load, static

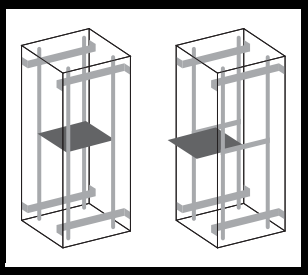
Material:
Sheet steel

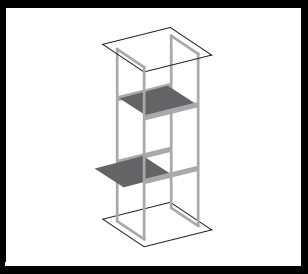
Colour:
RAL 7035

Supply includes:
2 telescopic slides.

Packs of	Model No. IW
1	**6902.700**

Component shelves for attachment to the 482.6 mm (19˝) section





Component shelf, 482.6 mm (19˝) configuration

Enclosures with two 482.6 mm (19˝) mounting levels
Depending on their depth, the component shelves have several attachment points, so the distance between the 482.6 mm (19˝) mounting angles is variable within certain limits. Each component shelf secured in this way can be retrospectively upgraded to full withdrawal using telescopic slides. For this purpose, the telescopic slides are screw-fastened in place of the spacers.

Load capacity:
50 kg surface load, static

Material:
Sheet steel

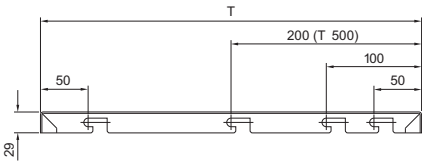
Supply includes:
Assembly parts.

Also required:

- Adaptor for L-shaped mounting angles TS, see page 676.
- Installation kit, depth-variable, for installation on mounting frames and L-shaped mounting angles, see page 676.

Possible alternative:

Component shelves, heavy duty, for 482.6 mm (19˝) configuration, see page 671 – 672.



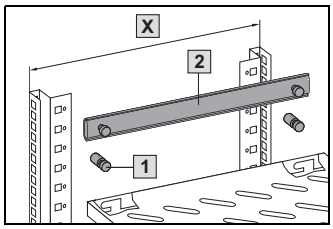
T = Depth

Component shelf width mm		409	409	409	409	409	409	409	409
Component shelf depth mm		300	400	500	600	700	500	600	700
Distance between levels (X)		298	348/398	348/448/498	448/548/598	548/648/698	348/448/498	448/548/598	548/648/698
Colour	RAL 7035	■	■	■	■	■	–	–	–
	RAL 9005	–	–	–	–	–	■	■	■
Model No. DK		**7143.035**	**7144.035**	**7145.035**	**7145.635**	**7145.735**	**7145.005**	**7145.605**	**7145.705**

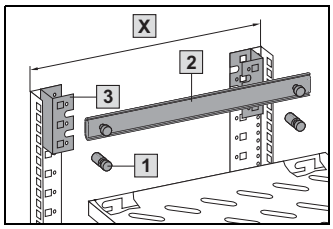
Accessories:

Telescopic slides for 50 kg, see page 677	7051.000	7061.000	7081.000	7161.000	7161.700	7081.000	7161.000	7161.700
Handles for component shelf, see page 678	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010	3636.010
Hinged cable support	see page 678							

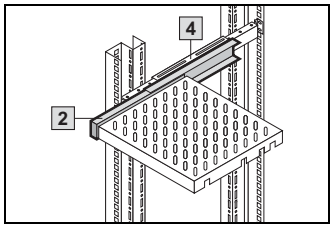
For TS:
Note for installation in network enclosures based on TS, cranked mounting angle:
The component shelves are mounted on the sides of the 482.6 mm (19˝) cranked mounting angles with spacers on a U pitch pattern.



For TS:
Note for installation in network enclosures based on TS, L-shaped mounting angle:
If L-shaped mounting angles are used, adaptor DK 7827.300 is required, see page 676.



For TE, TS, 482.6 mm (19˝) system punchings:
Note for installation between two mounting frames or L-shaped mounting angles:
May be mounted directly on the 482.6 mm (19˝) system punchings using the depth-variable installation kit, see page 676.



1 Spacers
2 Telescopic slides
3 Adaptor
4 Mounting kit, depth-variable
X Distance between angles

Component shelves for attachment to the 482.6 mm (19˝) section

Component shelf, static installation

on the 482.6 mm (19˝) mounting frame for TE, TS
The component shelf is attached directly to the front and rear 482.6 mm (19˝) mounting angles.

Load capacity:
30 kg surface load, static

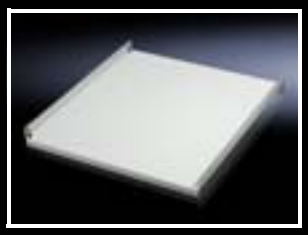
Material:
Sheet steel

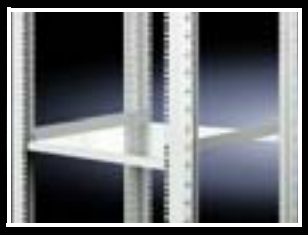
Colour:
RAL 7035

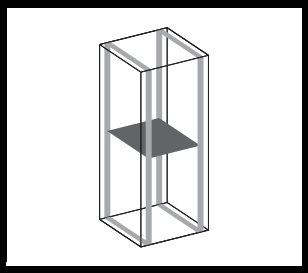
Supply includes:
Assembly parts.

Width mm	Height mm	Depth mm	482.6 mm (19˝) distance between levels mm	Model No. DK
511	22	413	495	**7000.620**

Note:
Not suitable for combination with telescopic slides.







Component shelf, heavy duty

for network enclosures TS with cranked mounting angles
For static installation between two 482.6 mm (19˝) mounting levels.
The component shelf is located directly onto the **cranked** mounting angles.

Zinc-plated version:
Load capacity:
75 kg surface load, static

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Spray-finished version:
Load capacity:
100 kg surface load, static

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Zinc-plated version:

Dimensions			Distance between levels (X) mm	Model No. DK
Width mm	Height mm	Depth mm		
452.5	20	478	498	**7828.950**
452.5	20	578	598	**7828.960**
452.5	20	678	698	**7828.970**

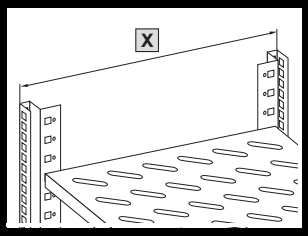
Spray-finished version:

Dimensions			Distance between levels (X) mm	Model No. DK
Width mm	Height mm	Depth mm		
453	44	470	498	**7145.535**

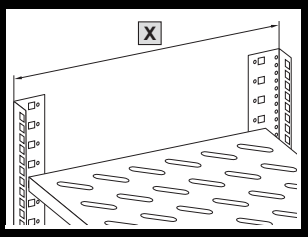
Note:
Not suitable for combination with telescopic slides.

Possible alternative:

Component shelf, heavy duty, for 482.6 mm (19˝) configuration, see page 672, may be combined with telescopic slides, see page 677.



Component shelves for attachment to the 482.6 mm (19˝) section



Component shelf, heavy duty

for network enclosures TS with L-shaped mounting angles
For static installation between two 482.6 mm (19˝) mounting levels.
The component shelf is located directly onto the **L-shaped** mounting angles.

Load capacity:
75 kg surface load, static

Material:
Sheet steel

Surface finish:
Zinc-plated

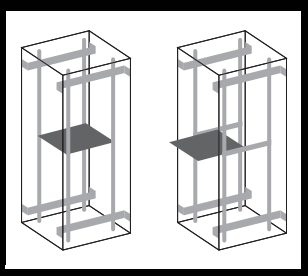
Supply includes:
Assembly parts.

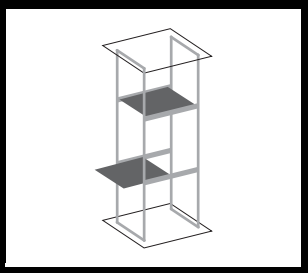
Dimensions			Distance between levels (X) mm	Model No. DK
Width mm	Height mm	Depth mm		
507.5	20	480	498	**7828.951**
507.5	20	580	598	**7828.961**
507.5	20	680	698	**7828.971**

Note:
Not suitable for combination with telescopic slides.

Possible alternative:

Component shelf, heavy duty, for 482.6 mm (19˝) configuration, see page 672, may be combined with telescopic slides, see page 677.





Component shelf, heavy duty

482.6 mm (19˝)
for TE, TS
- L-shaped mounting angles
- Mounting frame 482.6 mm (19˝)

Load capacity:
100 kg surface load, static

Material:
Sheet steel

Supply includes:
Assembly parts.

Colour: RAL 7035

Width mm	Height mm	Depth mm	Model No.
409	45	500	**7063.895**
409	45	700	**7063.897**

Colour: RAL 9005

Width mm	Height mm	Depth mm	Model No.
409	45	500	**7063.835**[1)]
409	45	700	**7063.837**

[1)] Extended delivery times.

Also required:

Installation kit, depth-variable DK 7063.890, see page 676.

Accessories:

– Telescopic slides (100 kg) for 482.6 mm (19˝) component shelf, see page 677.
– Handles for component shelf, see page 678.

Component shelves for attachment to the 482.6 mm (19˝) punchings

Component shelf 2 U

482.6 mm (19˝) for 482.6 mm (19˝) system punchings
Suitable for installation in all enclosures with only one 482.6 mm (19˝) recess and all swing frames with flange mounting, 482.6 mm (19˝).

Load capacity:
25 kg surface load, static

Material:
Sheet steel

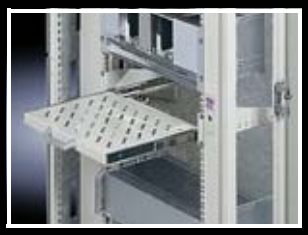
Colour:
RAL 7035

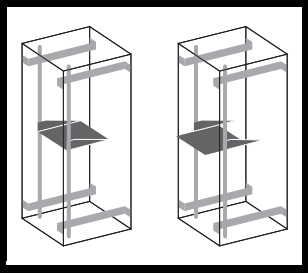
Supply includes:
Assembly parts.

Width mm	Depth mm	Model No. DK
390	300	**7148.035**

Accessories:

– Telescopic slides for component shelf, see page 677.
– Handles for component shelf, see page 678.





Component shelf 1 U, depth-variable

482.6 mm (19˝) for 482.6 mm (19˝) system punchings
For mounting between the front and rear 482.6 mm (19˝) levels. The component shelf is infinitely depth-adjustable from 488 mm to 750 mm.

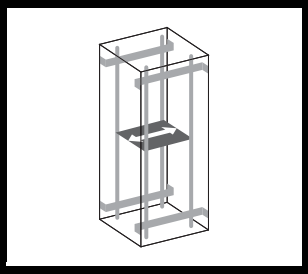
Load capacity:
50 kg surface load, static

Material:
Sheet steel

Colour:
RAL 7035

Distance between levels mm	Model No. VR
488 – 750	**3861.580**

Note:
Not suitable for combination with telescopic slides.



Component shelf 1/2 U, depth-variable

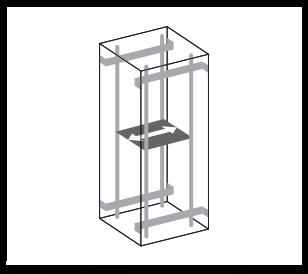
482.6 mm (19˝) for 482.6 mm (19˝) system punchings
For mounting between the front and rear 482.6 mm (19˝) levels. The component shelf is infinitely depth-adjustable from 488 mm to 750 mm.

Load capacity:
50 kg surface load, static

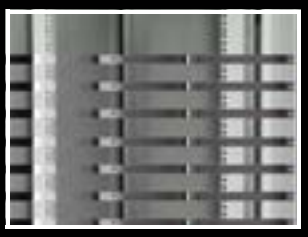
Material:
Sheet steel

Distance between levels mm	Colour	Model No. DK
400 – 600	RAL 7035	**7063.710**
600 – 900	RAL 7035	**7063.720**
600 – 900	RAL 9005	**7063.725**

Note:
Not suitable for combination with telescopic slides.



Component shelves for attachment to the 482.6 mm (19˝) punchings



Component shelf, complete set, pull-out

482.6 mm (19˝) for 482.6 mm (19˝) system punchings
Tailored to the distance between levels in enclosures as per their supplied state of 495 mm, this complete set contains a vented component shelf, telescopic slides and a mounting kit for direct attachment.
The mounting kit also offers depth-variable attachment within 395 – 645 mm on a 25 mm pitch pattern.

Load capacity:
50 kg, static

Material:
Base: Sheet steel

Surface finish:
– Base: Spray-finished
– Mounting kit/telescopic slides: Zinc-plated

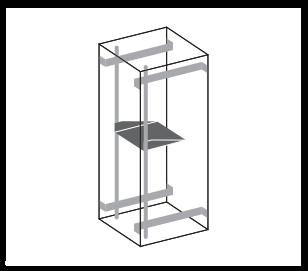
Colour:
RAL 7035

Supply includes:
– 1 component shelf
– Telescopic slides
– Installation kit

Base depth mm	Packs of	Model No. DK
500	1 set	**7000.625**

Accessories:

Handles for component shelf,
see page 678.



Component shelf 1 U, static installation

482.6 mm (19˝)/535 mm (metric) for 482.6 mm (19˝) system punchings
The ideal support surface for small active components such as modems or mini-hubs in 482.6 mm (19˝) or metric levels.

Load capacity:
10 kg surface load, static

Material:
Sheet steel

Colour:
RAL 7035

Component shelf depth mm	Model No. DK	
	482.6 mm (19˝)	Metric
140	**7119.140**	**7119.155**[1)]

[1)] Extended delivery times.

Note:
Not suitable for combination with telescopic slides.

Also required:

– Captive nuts,
see page 665.
– Screws,
see page 666.

Component shelves for attachment to the 482.6 mm (19˝) punchings

Component shelf 2 U, static installation

482.6 mm (19˝)/535 mm (metric) for 482.6 mm (19˝)/metric system punchings
If only one 482.6 mm (19˝) or metric mounting level is available for mounting a component shelf, this variant offers a particularly cost-effective solution.

Load capacity:
25 kg surface load, static

Material:
Sheet steel

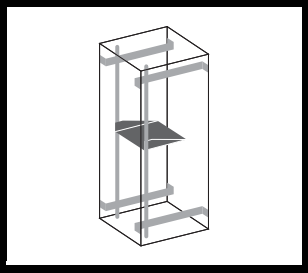
Colour:
RAL 7035

Note:
Not suitable for combination with telescopic slides.

Component shelf depth mm	482.6 mm (19˝)	Metric	Model No. DK
250	■	–	**7119.250**
400	■	–	**7119.400**
250	–	■	**7119.255**
400	–	■	**7119.455**

Also required:

- Captive nuts, see page 665.
- Screws, see page 666.



Utility table

for location in the 482.6 mm (19˝) level for 482.6 mm (19˝) system punchings
The utility table may be attached directly between the 482.6 mm (19˝) mounting angles without any additional assembly work. The utility table has a height of 3 U and a support area of 450 x 295 mm; it can be used as a support for measuring devices or splicing equipment during maintenance and wiring work.

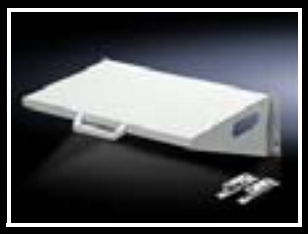
Material:
Sheet steel

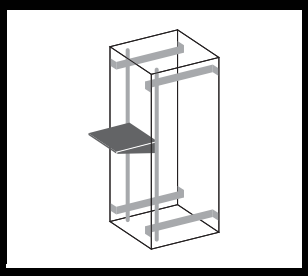
Colour:
RAL 7035

Supply includes:
Assembly parts.

Support surface mm	Model No. DK
450 x 295	**7183.100**

Note:
Installation in enclosures with a TS trim frame is not possible.





Shelf

for AE with pull-out frame
The vented shelf is inserted into the pull-out frame of wall-mounted distributor DK 7644.000 and may additionally be screw-fastened. In this way, an additional support surface can be created with very little effort. Captive nuts may be clipped into the punchings of the frame, even after the shelf has been inserted.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Width mm	Depth mm	Model No. DK
430	195	**7644.400**

Delivery times available on request.

Installation kits for component shelves

TS punched section with mounting flange, 17 x 73 mm

as installation kit for component shelves
Simply locate and secure. One pack is sufficient for 2 component shelves.

Load capacity:
100 kg surface load, static

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Installation in enclosure depth mm	Packs of	Model No. TS
500	4	**8612.050**
600	4	**8612.060**
800	4	**8612.080**
1000	4	**8612.000**
1200	4	**8612.020**

Mounting kit, depth-variable

for 482.6 mm (19˝) component shelf
In conjunction with
- L-shaped mounting angles or
- Mounting frame 482.6 mm (19˝)

Infinitely adjustable to the spacing between the two pairs of 482.6 mm (19˝) mounting angles. Suitable for all 482.6 mm (19˝) component shelves in 409 mm width.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
1 set =
2 mounting rails including assembly parts.

Length mm	Load capacity	U	Model No. DK
390 – 590	50 kg	1	**7063.858**
490 – 710	100 kg	1.5	**7063.892**[1)]
590 – 790	50 kg	1	**7063.860**
706.5 – 1006.5	100 kg	1.5	**7063.890**

[1)] Max. depth of component shelves: 500 mm

Accessories:

Telescopic slides,
see page 677.

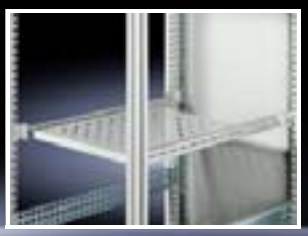
Adaptor for L-shaped mounting angles

for TS network enclosures
For mounting component shelves and slide rails on L-shaped mounting angles.

Material:
Sheet steel

Supply includes:
Assembly parts.

Packs of	Model No. DK
4	**7827.300**



Installation kit

for component shelves and drawers, with 482.6 mm (19˝) installation in TS
For installation between the front and rear adaptor sections or adaptor pieces, 482.6 mm (19˝) in 600 mm wide enclosures.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. TS
600	1 set	**8800.560**
800	1 set	**8800.580**

Max. depth of component shelves =
Enclosure depth minus 100 mm.

Also required:

– Mounting angles, 482.6 mm (19˝),
see page 741.
– Adaptor pieces, 482.6 mm (19˝),
see page 742.

Side parts 3 U

for static installation of component shelves, 482.6 mm (19˝)
For the attachment of component shelves to a single pair of 482.6 mm (19˝) mounting angles. The component shelves are screw-fastened to the 3 U side part.
Either one or two component shelves may be secured.

Load capacity:
30 kg surface load, static

Material:
Sheet steel

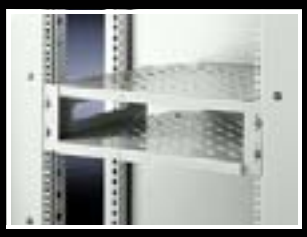
Colour:
RAL 7035

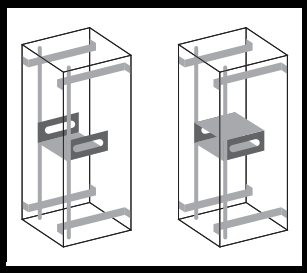
Supply includes:
2 side parts.

Note:
Not suitable for combination with telescopic slides.

Depth of side parts mm	For component shelf DK	Component shelf depth mm	Model No. DK
400	7143.035	300	**7147.035**
400	7144.035	400	
400	7145.035	500	

Note:
Component shelves, 482.6 mm (19˝), see page 670.





Telescopic slides

for component shelves
Fixed component shelves are easily converted to full withdrawal. For this purpose, the existing fastening bolts or mounting rails (heavy-duty version) are exchanged for the telescopic slides.

Technical specifications:
For installation and locking on a 25 mm pitch pattern in the enclosure depth.

Load capacity:
50 kg/100 kg per set

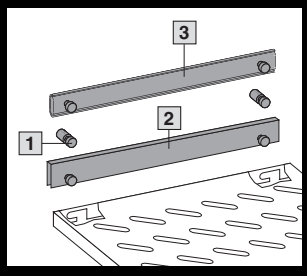
Material:
Sheet steel, zinc-plated

Load capacity 50 kg

For component shelf depth mm	Packs of	Model No. DK
300	2	**7051.000**
400	2	**7061.000**
500	2	**7081.000**
600	2	**7161.000**
700	2	**7161.700**

Load capacity 100 kg

For component shelf depth mm	Packs of	Model No. DK
400	2	**7064.000**
500	2	**7065.000**
600	2	**7066.000**
700	2	**7066.700**



1 Fastening bolts
2 Mounting rails
3 Telescopic slides

Accessories for component shelves

Cable support

hinged, with clamp
For secure routing of connection cables from the component shelf to the clamping point.
The attachment may be released on both sides thanks to clamps.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

For enclosure depth mm	Model No. DK
< 600	**7163.500**
> 600	**7163.550**

Cable support

hinged, with anti-kink device and clamp
For secure routing of connection cables from the component shelf to the clamping point. Kink-free cable routing in the central part via mobile chain links. The attachment may be released on both sides, thanks to clamps.

Material:
– Sheet steel, zinc-plated
– Centre part: Plastic

Supply includes:
Assembly parts.

For enclosure depth mm	Model No. DK
< 600	**7163.560**
> 600	**7163.565**

Handles

for pull-out component shelves
The component shelves are prepared for the attachment of handles.

Material:
Die-cast zinc

Surface finish:
Spray-finished, silver-grey

Supply includes:
Assembly parts.

Packs of	Model No. RP
2	**3636.010**

Fastening bolts

for slotted component shelves
For non-slip attachment of your components.
The bolts are screwed into the longitudinal slots of the component shelf support surface. Consequently, they are infinitely adjustable and can be adapted to suit any appliance.

Packs of	Model No. DK
4	**7115.000**

System lights

- for direct attachment in all large enclosures
- for mounting on compact enclosures, wall-mounted enclosures and in the console system with system accessories.

Protection category:
IP 20 to IC 60 529

Also required:

Connection accessories
see page 684.

Accessories:

- Adaptor bracket, see page 659.
- Universal bracket, see page 664.
- Rail for interior installation, see page 647.

Technical comparison/equipment			Standard light	Courtesy light	Universal light	Compact light	LED system light
Page			680	680	680	681	682
Voltage supply	100 – 240 V AC, 50/60 Hz		–	■	■	■	–
	120 V AC, 60 Hz		■	–	–	–	–
	230 V AC, 50 Hz		■	–	–	–	–
	24 V DC		–	–	–	■	■
Full-electronic ballast			–	■	■	■	–
Light	Fluorescent lamp, base G13		■	■	–	–	–
	Compact fluorescent lamp, base G24q-3		–	–	■	–	–
	Fluorescent lamp T5		–	–	–	■	–
	LEDs, cold white		–	–	–	–	■
Protection category	II (all-insulated)		–	–	–	■	–
	III (SELV)		–	–	–	–	■
Installation type	Screw-fastening		■	■	■	■	■
	Clip attachment		–	–	–	■	■
	Magnetic attachment (accessory)		–	–	–	■	■
Mounting options	TS roof frame (horizontal section)	direct	■	■	■	■	■
	TS vertical section	with adaptor bracket	■	■	■	–	–
		direct	–	–	–	■	■
	AE, CM, TP	with universal bracket	■	■	■	–	–
		with magnetic attachment	–	–	–	■	■
	AE	with rail for interior installation	■	■	■	–	–
Connection options	Infeed/connection cable		■	■	■	■[3)]	■
	Door-operated switch		■	■	–	■	■
	Through-wiring (series connection of several lights)		■	■	■	–	■
Approvals	UL/cUL		■[2)]	–	■[2)]	■[2)]	–[1)]
	ENEC		■[2)]	■	–	■[2)]	–
	VDE		–	–	■[2)]	–	–
Equipment	Light cover		–	■	■	■	■
	Light cone adjustment		–	–	■	–	■
	Integral sockets, earthing-pin		■[2)]	■	■	–	–
	Integral sockets, USA		■[2)]	–	–	–	–
	Integral motion detector		–	–	■	–	–
	Integral door-operated switch		■[2)]	■[2)]	–	–	–

[1)] Safety extra-low voltage, not required by the standard.
[2)] Depending on the equipment.
[3)] Integral

System lights

Standard light

Without door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	**Model No. SZ**	Approvals
14 kW, 230 V, 50 Hz	Earthing-pin	452	117	50	**4138.140**	ENEC
18 kW, 230 V, 50 Hz	Earthing-pin	682	117	50	**4138.180**	ENEC
30 kW, 230 V, 50 Hz	Earthing-pin	987	117	50	**4138.300**	ENEC
14 kW, 120 V, 60 Hz	USA	452	117	50	**4138.240**	cURus
18 kW, 120 V, 60 Hz	USA	682	117	50	**4138.280**	cURus
30 kW, 120 V, 60 Hz	USA	987	117	50	**4138.400**	cURus

With door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	**Model No. SZ**	Approvals
14 kW, 230 V, 50 Hz	Earthing-pin	452	117	50	**4138.150**	ENEC
18 kW, 230 V, 50 Hz	Earthing-pin	682	117	50	**4138.190**	ENEC
30 kW, 230 V, 50 Hz	Earthing-pin	987	117	50	**4138.350**	ENEC
14 kW, 120 V, 60 Hz	USA	452	117	50	**4138.250**	cURus
18 kW, 120 V, 60 Hz	USA	682	117	50	**4138.290**	cURus
30 kW, 120 V, 60 Hz	USA	987	117	50	**4138.450**	cURus

Also required:

Connection accessories,
see page 684.

Courtesy light

Without door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	**Model No. SZ**	Approvals
14 W, 100 – 240 V, 50/60 Hz	Earthing-pin	452	117	50	**4139.140**	ENEC
18 W, 100 – 240 V, 50/60 Hz	Earthing-pin	682	117	50	**4139.180**	ENEC
30 W, 100 – 240 V, 50/60 Hz	Earthing-pin	987	117	50	**4139.300**	ENEC

With door operated switch

Technical specifications	Socket	Width mm	Height mm	Depth mm	**Model No. SZ**	Approvals
14 W, 100 – 240 V, 50/60 Hz	Earthing-pin	452	117	50	**4139.150**	ENEC
18 W, 100 – 240 V, 50/60 Hz	Earthing-pin	682	117	50	**4139.190**	ENEC
30 W, 100 – 240 V, 50/60 Hz	Earthing-pin	987	117	50	**4139.350**	ENEC

Also required:

Connection accessories,
see page 684.

Universal light

With integral motion detector

Technical specifications	Socket	Width mm	Height mm	Depth mm	**Model No. SZ**	Approvals
26 W, 110 – 240 V, 50 – 60 Hz	Earthing-pin	345	95	55	**4155.100**	VDE
	–	345	95	55	**4155.000**	VDE
	–	345	95	55	**4155.500**	UL

Also required:

Connection accessories,
see page 684.

Compact light

Slimmer – Faster – Brighter

- Slimmer: Around 50% less height and depth and also around 75% less volume than conventional lights.
- Faster: Universal fast attachment via clips, screws, or powerful magnets (optional). Simply slide in at the side or rear, fit the light, and it's done!
- Brighter: Up to 75% greater luminous efficiency from the lamp with the same power helps to cut electricity costs.
- Door-operated switch can also be connected via a 2-pole connection.

Colour:
Similar to RAL 7035

Protection category:
IP 20 to IEC 60 529

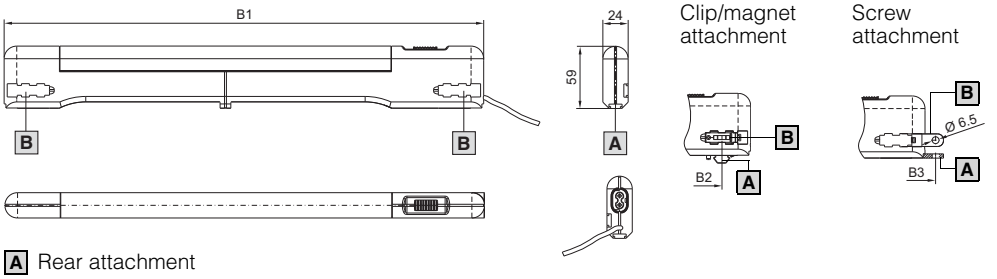
Supply includes:
Compact light with clip and screw mounting kits, including assembly parts.

Accessories:

– Mounting kit magnet, see page 681.
– Door-operated switch with connection cable, see page 684.

Model No. SZ	ENEC 24	4140.010	–	4140.020	–	4140.110	4140.120
	cURus	–	4140.210[1)]	–	4140.220[1)]	–	–
Rated voltage		100 – 240 V AC ±10% at 50 – 60 Hz				24 V DC ±10%	
Wattage		8		14		8	14
Protection category		II (all-insulated)					
Width (B1) mm		455		705		455	705
Mounting distance (B2) mm clip/magnet		400		650		400	650
Mounting distance (B3) mm		475		725		475	725
Connection cable		3 m (open end)					
Cover colour		Yellow	Grey	Yellow	Grey	Yellow	Yellow
Rated current (A) – at 230 V AC – at 110 V AC – at 24 V DC		0.045 – 0.088 0.083 – 0.149 –		0.073 – 0.127 0.149 – 0.216 –		– – 0.35	– – 0.57
Light		Fluorescent lamp T5					
Operating unit		Wide-range electronic ballast				Electronic ballast	
Circuit-breakers		Integral, on/off/door-operated switch mode					
Light cover		Transparent, grooved on the inside					
Cable deflector across rear		■	–	■	–	■	■

[1)] Only for the North American market.



Clip/magnet attachment

Screw attachment

A Rear attachment
B Side attachment

Mounting kit magnet

For reliable adhesion on all sheet steel surfaces.

Packs of	Model No. SZ
2	4140.000

System lights

LED system light

in 24 V DC version

- Max. EMC capacity
- Safe, thanks to use with safety extra-low voltage
- Economical energy use
- Low-maintenance thanks to the use of LEDs
- May be connected to a door operated switch
- Integral through-wiring
- Universal attachment options
- Vertically hinged light cone

Material:
– Light body: Extruded aluminium
– Light cover: Polycarbonate (halogen-free)
– Light ends: PC-ABS

Colour:
Similar to RAL 7035

Protection category:
IP 20 to IEC 60 529

Supply includes:
LED system light with clip and screw mounting kits, assembly parts.

Model No. SZ	4140.810	4140.820	4140.830	4140.840
Rated voltage	24 V DC (± 10%)			
No. of LEDs	10	20	30	40
Protection category	III (SELV)			
Width (B1) mm	230	330	430	530
Mounting distance CLIP (B2) mm	175	275	375	475
Mounting distance, screw attachment (B3) mm	250	350	450	550
Rated current (A)[1)]	0.04	0.08	0.12	0.16
Circuit-breakers	Integral on/off/door-operated switch mode			

1) Maximum baying up to a total rated current strength of 2 amps.

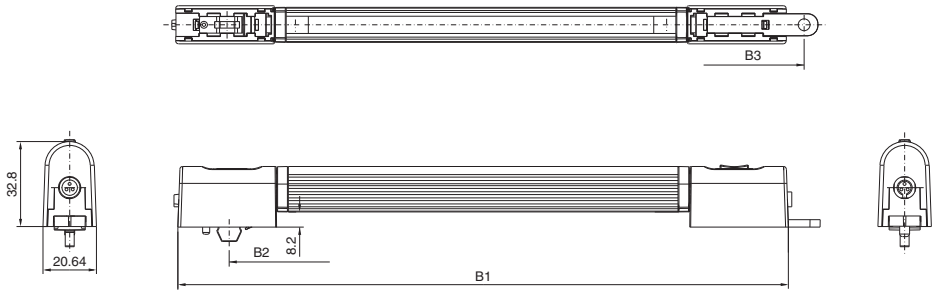
Also required:

– LED connection cable, see page 683 or
– Door-operated switch with LED connection cable, see page 683.

Accessories:

– Mounting kit magnet, see page 681.
– Door operated switch with LED connection cable, see page 683.
– LED connection cable, see page 683.
– Adaptor power pack, see page 683.

Note:
Only intended for use in enclosures and sealed cases!
When using on customer-supplied power packs, it is important to obtain the requisite approvals depending on the application!



Connection accessories

for LED system light

	Connection cable	Length mm	Packs of	Model No. SZ
1	LED connection cable	3000	1	**4315.800**

	Door-operated switch	Length mm	Packs of	Model No. SZ
2	With LED connection cable	3000	1	**4315.810**
3	With LED interconnecting cable	1000	1	**4315.820**

	Interconnecting cable	Length mm	Packs of	Model No. SZ
4	LED interconnecting cable	600	1	**4315.830**
		1000	1	**4315.840**
		3000	1	**4315.850**

	Adaptor power pack	Technical specifications	Packs of	Model No. SZ
5	Adaptor power pack	230 V AC/24 V DC, 1 A	1	**4315.860**

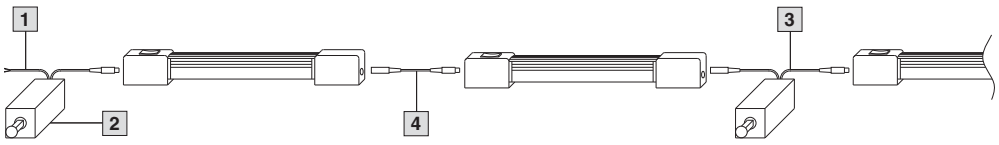
Layout diagram for LED system light 24 V DC:

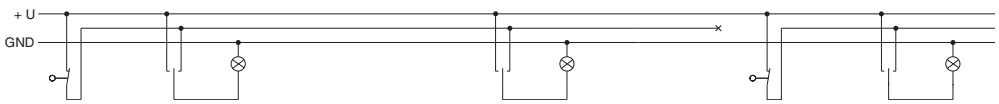
1 Connection cable

2 Door operated switch with LED connection cable (open end/cable bush)

3 Door operated switch with LED interconnecting cable

4 LED interconnecting cable for through-wiring





System lights

Connection accessories

The following components can be used for time-saving and simple installation of the lights:

Accessories:

Cable ties for quick assembly,
see page 720.

	Connection cable for	UL	Length mm	Packs of	Model No. SZ Orange	Model No. SZ Grey
1	Power supply (with jack, without connector)		3000	5	**4315.100**	–
1	Power supply (with socket and strain relief, without connector)	■	3000	1	–	**4315.150**
2	Through-wiring (with socket and connector)	■	600	1	–	**4315.450**
2	Through-wiring/power supply via connection component SZ 2507.500 (with socket and connector)		600	5	**4315.400**	–
			1000		**4315.200**	–
			4000	1	**4315.600**	–

	Door-operated switch With mounting accessories	UL	Length mm	Technical specifications	Packs of	Model No. SZ Orange	Model No. SZ Yellow	Model No. SZ Grey
3	With connection cable (not required for universal lights and standard/courtesy lights with integral door-operated switch)		600	240 V AC, 6 A 125 V DC, 8 A 24 V AC, 6 A 24 V DC, 6 A	1	**4315.520**	–	–
			1000		1	**4315.320**	–	–
		■	600		1	–	–	**4315.550**
			1000		1	–	–	**4315.350**
	Without connection cable	■	–		1	**4127.010**		
4	With connection cable (for compact light)		600		1	–	**4315.710**	–
		■	600		1	–	–	**4315.720**

Also required

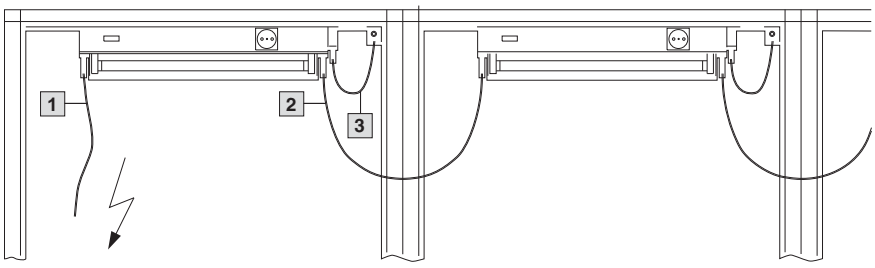
Mounting kit for installation in TE	Model No. FR
	7952.100

	Door-operated switch With toggle	UL	Technical specifications	Packs of	Model No. SZ
5	Without connection cable, for TS enclosures with installed large swing frame. The toggle is actuated via the tubular door frame of the sheet steel door, or in the case of glazed doors, via an adaptor included with the supply.	■	240 V AC, 6 A 125 V DC, 8 A 24 V AC, 6 A 24 V DC, 6 A	1	**4127.210**

	Connection component with circuit-breaker 10 A	Packs of	Model No. SZ
6	Reduce assembly costs: Power is supplied rapidly and reliably to system and workstation lights via connection cables. For independently configured cables, connector SZ 2507.200 must be used. Connection component to be snapped onto the top hat rail.	1	**2507.500**

	For self-assembly	Packs of	Model No. SZ
7	Sockets for power supply through-wiring	5	**2507.100**
	Connectors for connection component through-wiring	5	**2507.200**
	T distributor with 2 sockets, 1 connector	5	**2507.300**
	Connector for door-operated switch cable	5	**2507.400**

1 Connection cable for infeed
2 Connection cable for through-wiring/infeed
3 Door-operated switch with connection cable



Enclosure light, 48 V DC

with connection cable
Robust light. For attachment vertically or horizontally in the frame section via spring brackets, or may be used as a direct light source during maintenance work by inserting the plastic swivel hook. Impact-resistant lamp housing of PMMA (polymethylmethacrylate) protection category II.

Protection category:
IP 64

Supply includes:
– 2 spring clips
– Assembly parts

Packs of	Model No. CS
1	9765.150

Technical specifications:
– Luminosity: 11 W
– Luminous efficiency: 900 lm
– Fluorescent tube: TC-SEL 11 W, 4-pin
– Ambient temperature: –20°C to +40°C
– Voltage: 48 V DC ±10%
– Supply lead 3000 mm, H05RN – 2 x 1 mm, without connectors, with crimped ferrules
– Length:
  450 mm overall
  Protective tube 320 mm
– Light outlet 195 mm
– Diameter:
  62 mm overall
  Protective tube 38 mm

Light 1 U

Ready-to-connect light for installation in the 482.6 mm (19″) mounting angles. The slot attachment additionally allows it to be fastened to the 25 mm system punchings.

Technical specifications:
– Fluorescent tube 8 kW, 230 V, 50 Hz
– Mains switch
– 2.5 m connection cable
– Earthing-pin connector

Material:
– Aluminium, anodised
– Plastic

Packs of	Model No. DK
1	7109.200

EMC

Rail

for EMC shielding bracket and strain relief
Combined rail for strain relief and EMC contacting of inserted cables.

Mounting options:
- On the horizontal/vertical TS, PC, ES enclosure section
- On a mounting plate

May also be fitted without a retaining bracket. Additional contacting on the left or right of the rail via existing holes (9 mm diameter).

Material:
Sheet steel

Surface finish:
Zinc-plated

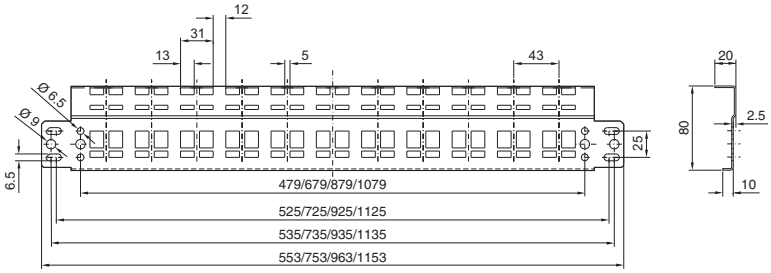
Supply includes:
– 1 rail
– 2 retaining brackets
– Assembly parts

Width mm	Packs of	Model No. SZ
600	1	**2388.600**
800	1	**2388.800**
1000	1	**2388.000**
1200	1	**2388.120**

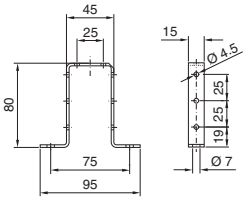
Also required:
– EMC shielding bracket, see page 686.
– Cable clamps for strain relief, see page 719.

Accessories:
– Earth straps, see page 689.
– Earthing braid, see page 689.

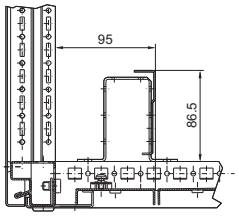
Rail



Retaining bracket



Mounting position



EMC shielding bracket

Quick assembly without the use of tools:
Press the EMC shielding bracket against the cable shield and clip into the rail.
Diameter changes are compensated in full by the spring of the EMC shielding bracket.

Material:
Sheet steel

Surface finish:
Zinc-plated

For shield diameter mm	Packs of	Model No. SZ
3 – 10	10	**2388.100**
4 – 15	10	**2388.150**
10 – 20	10	**2388.200**
15 – 28	10	**2388.280**

EMC gland plates

For shielded cables with a maximum diameter of 20 mm.
Combined EMC/IP seal provides low-resistance contact between cable shield and gland plate.
For all 400, 500, 600 and 800 mm deep enclosures in conjunction with standard gland plates.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 1 gland plate with T-head punching
– 1 sliding gland plate
– 2 IP/EMC gaskets

Width mm	Packs of	Model No. TS
600	1 set	**8800.660**
800	1 set	**8800.680**
1000	1 set	**8800.600**[1)]
1200	1 set	**8800.620**[1)]

[1)] For one enclosure half only

EMC cable glands

The cable sheathing may optionally be interrupted at the contact point or removed completely inside the enclosure.
The cable shield in the enclosure is retained.
The supplied lock nut cuts automatically into the paint when screwed down, thus creating a conductive connection.

Protection category:
IP 68 to IEC 60 529
IP 69K to DIN 40 050-9

Possible alternative:

Cable gland Hygienic Design,
see page 711.

Cable glands, metric

Size	Cable diameter mm	Minimum[1)] shield diameter mm	Packs of	Model No. SZ
M16	4.5 – 10	3	5	**2843.160**
M20	6 – 12	5	5	**2843.200**
M25	11 – 17	8	5	**2843.250**
M32	15 – 21	10	1	**2843.320**
M40	19 – 28	15	1	**2843.400**
M50	27 – 38	19	1	**2843.500**
M63	34 – 44	30	1	**2843.630**

[1)] Minimum shield diameter = cable diameter minus cable sheathing

Cable glands, PG

PG size	Cable diameter mm	Minimum[1)] shield diameter mm	Packs of	Model No. SZ
9	4 – 8	3	5	**2411.090**
11	5 – 10	4	5	**2411.110**
13.5	6 – 12	5	5	**2411.140**
16	10 – 14	8	5	**2411.160**
21	13 – 18	10	1	**2411.210**
29	18 – 25	15	1	**2411.290**

[1)] Minimum shield diameter = cable diameter minus cable sheathing

EMC shield bus

Made of clear chromated steel strip,
75 mm^2 cross section, for cable shield contact.

Supply includes:
Assembly parts.

Rail length mm	Connections	Packs of	Model No. SZ
375	10	1	**2413.375**
550	16	1	**2413.550**

EMC

EMC earth clamps

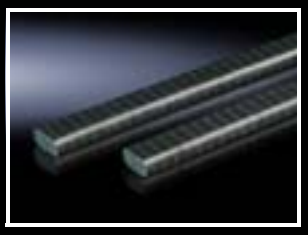
The clamps may be used directly on the device or operating equipment on the mounting plate for cable shield contact.

Material:
Sheet steel

Surface finish:
Zinc-plated

Size mm	Packs of	Model No. SZ
4	50	**2367.040**
6	50	**2367.060**
8	50	**2367.080**
12	50	**2367.120**
16	50	**2367.160**
20	25	**2367.200**[1)]

[1)] 2 assembly brackets



EMC baying seal

for TS
For baying enclosure systems.
Seal with all-round, electrically conductive sheathing.

Supply includes:
3 seals, length 2 m each.

Cross section mm	Model No. TS
6.3 x 6.3	**8800.690**

EMC divider panel seal

This seal ensures optimum contact in bayed EMC enclosure systems and when using a zinc-plated divider panel.

Material:
PU foam with electrically conductive sheathing

Supply includes:
1 roll (12.7 x 12.7 x 5300 mm).

Packs of	Model No. SZ
1	**4348.000**

Contact cutter

The contact cutter enables EMC-compatible preparation of the contact point e.g. for earthing straps.
Plastic-bound abrasive with guide pin for round system punchings.
With location point for drill, grinder etc.

For	Model No. SM
Frame section	**2414.000**
Earthing bolts[1)]	**2414.500**

[1)] Not necessary with TS

Contact paint

Contact paint prevents the corrosion of conductive, unprotected contact points.

Contents:
12 ml

Packs of	Model No. SZ
1	**2415.000**

Earth straps

For configuring a reliable earthing connection with perfect contact:

- With ring terminals in M6 and M8 to match the earthing screw
- Length-optimised and ready to install

Enclosure	Connection facility		
	Door/lid	Enclosure	Mounting plate
KL	M6	M6	M8
EB/BG	M6	M6/M8[1]	–
AE	M6	M6[2]/M8	M8
KE/KEL	M8	M8	M8
AP/CM/TP	M6	M8	M8
TS/ES	M8	M8	M8
PC	M8	M8	–

[1] M8 with BG 1050.900
[2] M6 with AE 1032.XXX/AE 1035.XXX

Connection	Cross-section mm²	Length mm	Packs of	**Model No. SZ**
M8 – M8	4	170	5	**2564.000**
M8 – M8	16	170	5	**2565.000**
M8 – M8	25	170	5	**2566.000**
M6 – M6	10	200	5	**2565.100**
M8 – M8	4	300	5	**2567.000**
M6 – M8	10	300	5	**2565.110**
M8 – M8	10	300	5	**2565.120**
M8 – M8	16	300	5	**2568.000**
M8 – M8	25	300	5	**2569.000**

Earthing strap

Tin-plated copper, in various lengths and cross-sections with press-fitted contact rings. Earthing straps counteract the current displacement effect at high frequencies, whilst at the same time offering highly flexible connection opportunities.

For	Cross-section mm²	Length mm	Packs of	**Model No. SZ**
M6	10	200	10	**2412.210**
M8	16	200	10	**2412.216**
M8	25	200	10	**2412.225**
M6	10	300	10	**2412.310**
M8	16	300	10	**2412.316**
M8	25	300	10	**2412.325**

Assembly parts

for system punchings

For fastening the earth straps and earthing braids to:

- Horizontal TS enclosure sections
- PS rail system
- ES system punchings.

Size	Packs of	**Model No. SZ**
M6	10 set	**2570.000**
M8	10 set	**2559.000**

Also required:

For mounting on the horizontal TS enclosure section: Captive nut, see page 665.

Assembly parts

for gland plates

For fastening the earth straps and earthing braids to:

- Gland plates

Fast assembly thanks to self-tapping screws.

Size	Packs of	**Model No. SZ**
M8	10 set	**2570.200**

Contact washers

Serrated contact washers facilitate secure PE conductor connection. As a result, there is no need to manually strip paint in the connection area.

Size	Packs of	**Model No. SZ**
M5	100	**2343.000**
M6	100	**2334.000**
M8	100	**2335.000**

Earthing

Earthing plate

For installation in:
- Comfort Panel
- Optipanel
- TS
- ES

One earthing cable can be screw-fastened to the threaded bolt for distribution to up to 8 components via 6.3 mm flat-pin connectors.

Packs of	Model No. SZ
1	**2570.500**

Supply includes:
Assembly parts.

Central earthing point

For connecting
- Earth straps
- Earthing braids

to the vertical and horizontal enclosure profile. The connection bracket is connected to the enclosure frame with 2 screws and is securely contacted.
Earth connection is carried out via the threaded bolt M8 x 20 mm.

Material:
Sheet steel, zinc-plated

Packs of	Model No. DK
1	**7829.200**

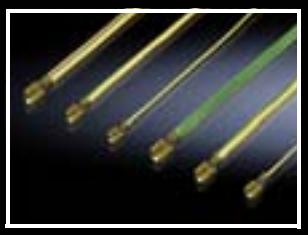
Supply includes:
– 1 connection bracket
– 2 screws 5.5 x 13 mm
– 2 serrated washers
– 1 nut M8
– 1 contact washer M8
– 1 washer

Potential equalisation star

for 8 mm earthing bolt
The earthing connector is used for simple potential equalisation on an 8 mm earthing bolt, or in conjunction with central earthing point DK 7829.200. Up to five flat connectors (6.3 mm) may be contacted on one earthing point.

Packs of	Model No. DK
10	**7548.210**

Supply includes:
– 10 earthing connectors
– Assembly parts



Complete earthing kit

for TS
To DIN EN 60 950/VDE 0805, Ø 4 mm², $I_{max.}$ 40 A
For system-compatible earthing of all enclosure parts on the enclosure frame according to VDE. The earth conductors are pre-assembled ready for connection with connectors and cut to the correct length.

Packs of	Model No. DK
1 set	**7829.150**

Supply includes:
– 8 earth straps
– Central earthing point and assembly parts

Extension kit for complete earthing kit

for TS
To DIN EN 60 950/VDE 0805, Ø 4 mm², $I_{max.}$ 40 A.
To extend the complete earthing kit DK 7829.150, in order to keep additional components potential-free.
Conductor length 300 mm in each case.
For 6.3 mm flat-pin connectors, 8 mm earthing bolts or for attachment with contact washers and screw.

Packs of	Model No. DK
1 set	**7829.152**

Supply includes:
– 5 earth straps
– Assembly parts and identification labels

Complete earthing kit

for TE

To DIN EN 60 950/VDE 0805, Ø 4 mm², $I_{max.}$ 40 A
For system-compatible earthing of all enclosure parts on the enclosure frame according to VDE. The earth conductors are pre-assembled ready for connection with connectors and cut to the right length.

Packs of	Model No. TE
1 set	**7000.675**

Supply includes:
– Earthing strip
– 4 earth straps, 300 mm
– 4 earth straps, 550 mm
– Assembly parts

Earthing kit KE

For producing the required external potential equalisation for painted series enclosures
- KL
- AE
- TS

For applications in Unit Group II, Category 3, in compliance with Directive 94/9 EU-Appendix VIII, internal production control.

Packs of	Model No. KE
5	**9214.000**

Earthing set

for KL

Consisting of all the screws, nuts, contact washers and earthing strip needed to earth the cover; length 250 mm, cross-section 4 mm².

Packs of	Model No. KL
5	**2570.100**

Earthing set

for QuickBox

Earth straps in the appropriate lengths to match the enclosure depth are included in the earthing set, for earthing all enclosure panels on the wall mounting part. The earth strap is a fast-on connector which is quickly disconnected and conveniently accessible when the door is open. In this way, the enclosure cover can be removed completely.

For enclosure depth mm	Packs of	Model No. QB
300/400	1 set	**7502.240**
500/600	1 set	**7502.260**

Supply includes:
– 5 earthing leads 1.5 mm²
– 4 cable retention clips
– Assembly parts

PE busbar

699 mm long PE busbar with pre-fitted screws, including terminal clamps up to 6 mm² (fine wire conductors), 10 mm² (single wire or multi-wire conductors) and main terminal clamp up to 35 mm².

Packs of	Model No. SZ
1	**2364.000**

Accessories:

Cable retainer,
see page 664.

Earthing

Earth rail, horizontal

for TS
Potential equalisation rail
Current carrying capacity approx. 200 A.

Supply includes:
– Earth rail made from E-Cu 57 to DIN 12 163, DIN EN 13 601, 15 x 5 mm,
– 20 connection points with M5 screws
– 2 earth connections 25 mm²
– 2 isolators, including assembly parts

Length mm	Packs of	Model No. DK
450	1	**7113.000**

Earthing kit, pre-assembled

for TS
For star earthing. With the pre-assembled earth conductors on a potential equalisation rail, star potential equalisation is easily integrated into network enclosures.

Supply includes:
– Earth rail made from E-Cu 57 to DIN EN 12 163, DIN EN 13 601
– 16 earthing leads 6 mm²
– 2 insulators
– Assembly parts

For TS enclosures up to W x H x D mm	Packs of	Model No. DK
800 x 2000 x 800	1 set	**7829.100**
800 x 2200 x 1000	1 set	**7829.110**

Earth rail, vertical

for TS
Easily fitted to the 25 mm DIN pitch pattern of distributors or to the 482.6 mm (19″) mounting angles. The supplied earth conductors facilitate star earthing of the cable clamp straps in the patch panels.
The earth terminals are fully adjustable.
Current carrying capacity of rail approx. 200 A.

Supply includes:
– Earth rail made from E-Cu 57 to DIN 12 163, DIN EN 13 601, 15 x 5 mm,
– 16 conductor connection clamps 2.5 – 16 mm²,
– 15 earthing leads 6 mm², L = 500 mm,
– Assembly parts

For enclosure height mm	Length mm	Packs of	Model No. DK
800	600	1 set	**7541.000**
1000	800	1 set	**7542.000**
1200	1000	1 set	**7543.000**
1400	1200	1 set	**7544.000**
1600	1400	1 set	**7545.000**
1800	1600	1 set	**7546.000**
2000	1800	1 set	**7547.000**
2200	2000	1 set	**7548.000**

Extension kit

for earth rail, vertical
For system-compatible expansion of the star earthing on the vertical potential equalisation rail.

Supply includes:
– 15 earthing leads 6 mm², L = 500 mm,
– Preassembled, with ring terminal and wire end ferrule
– Earth terminals, 2.5 – 16 mm²
– Assembly parts

Packs of	Model No. DK
10	**7549.000**

ESD connection point

Dangerously high potential differences can occur during maintenance or conversion work on the enclosure. To protect sensitive electronic components, this standardised connection point (push-button) provides potential equalisation. The connection point is directly conductively connected to the enclosure frame via two screws.

Packs of	Model No. DK
1	**7752.950**

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

Busbars E-Cu

with integral holes

Suitable for

- Direct installation in enclosures
- Busbar support
  - SV 9340.000/.010, see page 276
  - SV 9340.004, see page 276
  - SV 9342.014, see page 276
  - SV 3052.000, see page 340
  - SV 3073.000, see page 340
- PE/PEN combinations in conjunction with PE/PEN combination angles, see page 694 and baying bracket E-Cu, see page 694.

Detailed drawings:
Available on the Internet.

Size 30 x 5 mm (hole Ø 11 mm)

For enclosure width mm	Length mm	Packs of	**Model No. SV**	Page
300	265	2	**9661.335**	
400	365	2	**9661.345**	
600	565	2	**9661.365**	
800	765	2	**9661.385**	
1000	965	2	**9661.305**	
1200	1165	2	**9661.325**	
Accessories				
Baying bracket E-Cu	95	4	9661.355	694
PE/PEN combination angle	–	4	9661.235	694

Size 30 x 10 mm (hole Ø 11 mm)

For enclosure width mm	Length mm	Packs of	**Model No. SV**	Page
300	265	2	**9661.330**	
400	365	2	**9661.340**	
600	565	2	**9661.360**	
800	765	2	**9661.380**	
1000	965	2	**9661.300**	
1200	1165	2	**9661.320**	
Accessories				
Baying bracket E-Cu	95	4	9661.350	694
PE/PEN combination angle	–	4	9661.230	694

Size 40 x 10 mm (hole Ø 14 mm)

For enclosure width mm	Length mm	Packs of	**Model No. SV**	Page
300	292	2	**9661.030**	
400	392	2	**9661.040**	
600	592	2	**9661.060**	
800	792	2	**9661.080**	
1000	992	2	**9661.000**	
1200	1192	2	**9661.020**	
Accessories				
Baying bracket E-Cu	88	4	9661.350	694
PE/PEN combination angles for use with Form 2-4	–	4	9661.240	694
PE/PEN combination angles for other applications	–	4	9661.200	694

Size 80 x 10 mm (hole Ø 14 mm)

For enclosure width mm	Length mm	Packs of	**Model No. SV**	Page
300	292	2	**9661.130**	
400	392	2	**9661.140**	
600	592	2	**9661.160**	
800	792	2	**9661.180**	
1000	992	2	**9661.100**	
1200	1192	2	**9661.120**	
Accessories				
Baying bracket E-Cu	88	4	9661.150	694
PE/PEN combination angles for use with Form 2-4	–	4	9661.240	694
PE/PEN combination angles for other applications	–	4	9661.200	694

Earthing

Inserted screw nuts M12

Self-holding nuts with knurled ring for busbars E-Cu.
Hole diameter: 14.5 mm.

Packs of	Model No. SV
30	**3591.060**

PE/PEN combination angle E-Cu

for PE/PEN combinations
The PE/PEN combination, comprising busbars, combination angles and baying brackets, supports type-tested configurations as per IEC 61 439-1.
Thanks to the pre-assembled combination angles, baying brackets and busbars customised to match the enclosure width, assembly is time-saving with cost reduction.

Material:
E-Cu

Supply includes:
Assembly parts.

Technical specifications:
Tested short-circuit resistance
PE/PEN combination
- 30 x 5 mm:
  I_{cw} 18 kA, 1 sec.
- PE/PEN combination 30 x 10 mm:
  I_{cw} 30 kA, 1 sec.
- PE/PEN combination 40/80 x 10 mm:
  I_{cw} 60 kA, 1 sec.

For busbars mm	Application		Size mm	Packs of	Model No. SV
	Form 2-4	Others			
30 x 5	■	■	30 x 5	4	**9661.235**
30 x 10	■	■	30 x 10	4	**9661.230**
40 x 10 and	■	–	40 x 10	4	**9661.240**
80 x 10	–	■	40 x 10	4	1 **9661.200**

Baying bracket E-Cu

For busbars mm	Length mm	Packs of	Model No. SV
30 x 5	95	4	**9661.355**
30 x 10	95	4	**9661.350**
40 x 10	88	4	**9661.050**
80 x 10	88	4	**9661.150**

Socket strips

The socket strips in the aluminium channel are available in various lengths with different functional elements. Special attention has been devoted to practical, universal fastening: Variable attachment facilities have been created with an angle bracket which may be inserted in four positions. Hence, for example, the 482 mm long socket strip may optionally be mounted on 482.6mm (19″) mounting angles, the 482.6 mm (19″) mounting frame, on the enclosure frame, or in the rear section of the wall-mounted distributor. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern. This makes selection much easier, as well as providing additional flexibility and saving on warehousing. Provision has also been made for cable routing of the infeed, and when mounting in the 482.6 mm (19″) section there is adequate space to route the infeed between the socket strip and the mounting angle without kinks.
The arrangement of the sockets at a 45° angle allows unrestricted use of angular connectors.

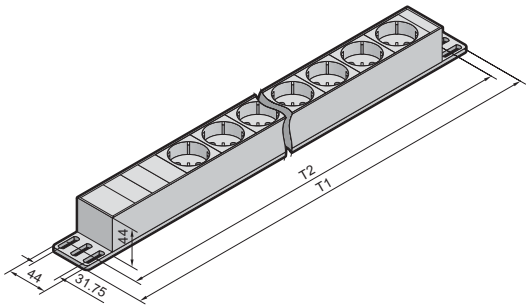
Technical specifications:
– Rated voltage: 250 V
– Rated current: 10/16 A
– Connection cable: 2 m long H05VV-F3G1.5

Material:
– Aluminium section: Natural-anodized
– Socket inserts: Polycarbonate

Supply includes:
– Socket strip
– Two mounting brackets
– Assembly parts

Standards:
– Sockets:
DIN VDE 0620-1
– Sockets B/F:
UTE NFC 61-303, CEE 7/NV
– Overvoltage protection for low voltage:
DIN EN 61 643-11
(VDE 0675 Part 6-11)
– EMC interference suppression filter:
DIN EN 60 939-2
(VDE 0565 Part 3),
DIN VDE 0620-1
(VDE 06204-1)

Detailed drawings and further information:
Available on the Internet.



Design	Number of sockets	Connector type	For attaching			Length (T1) mm	Mounting dimension (T2) mm[1)]	**Model No. DK**
			Frame	Wall-mounted distributor, horizontal	482.6 mm (19″) level			
Without rocker switch	3	Earthing-pin	■	–	–	262.6	232.5	**7240.110**
	7	Earthing-pin	■	■	■	482.6	452.5	**7240.210**
	12	Earthing-pin	■	–	–	658.6	628.5	**7240.310**
With rocker switch	3	Earthing-pin	■	■	–	306.6	276.5	**7240.120**
	7	Earthing-pin	■	■	■	482.6	452.5	**7240.220**
Overvoltage protection and interference suppression filter	5	Earthing-pin	■	■	■	482.6	452.5	**7240.230**
	9	Earthing-pin	■	–	–	658.6	628.5	**7240.330**
Miniature circuit-breaker	5	Earthing-pin	■	■	■	482.6	452.5	**7240.240**
Master-slave	1 + 3	Earthing-pin	■	■	■	482.6	452.5	**7240.250**
UPS strip	7	Earthing-pin	■	■	■	482.6	452.5	**7240.260**
RCCB	5	Earthing-pin	■	■	■	482.6	452.5	**7240.280**
RCCB and line protection	5	Earthing-pin	■	■	■	482.6	452.5	**7240.290**
For IEC 320 connectors, 10 A	12	C13	■	■	■	482.6	452.5	**7240.200**
For IEC 320 connectors with IEC 320 input, 10 A	9	C13	■	■	■	482.6	452.5	**7240.201**
For IEC 320 connectors with overvoltage protection and interference suppressor filter, 10 A	6	C13	■	■	■	482.6	452.5	**7240.205**
With 2 circuits	6 + 6	Earthing-pin	■	–	–	720.6	690.5	**7240.370**
B/F sockets (Belgium, France)	7	Earthing-pin	■	■	■	482.6	452.5	**7240.510**
B/F sockets (Belgium, France)	12	Earthing-pin	■	–	–	658.6	628.5	**7240.512**

[1)] Variable attachment distance within a range of 5 mm, the distance given is hole centre – hole centre of mounting bracket.

Socket strips

Socket strips

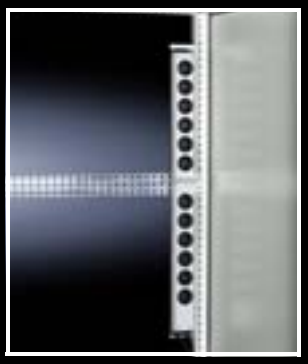
with C13/19 sockets

Socket strips with 2 m connection cable H05VV-F3G6 1.5 (PVC) with wire end ferrules.

Detailed drawings:
Available on the Internet.

Design	Number of sockets	For attaching			Length mm	Mounting dimension mm[1]	Model No. DK
		Frame	Wall-mounted distributor, horizontal	482.6 mm (19″) level			
C13 IEC 320 socket[3]	15	■	–	–	592.6	562.5	**7240.130**
C13 IEC 320 socket[3] with 2[2] infeeds	9 + 9	■	–	–	764.6	734.5	**7240.150**
C19 IEC 320 socket[4]	6	■	■	■	482.6	452.5	**7240.160**
C19 IEC 320 socket[4] with overvoltage protection device	4	■	■	■	482.6	452.5	**7240.170**
C19 IEC 320 socket[4] with 2[2] infeeds	3 + 3	■	■	■	478.6	448.5	**7240.190**

All socket strips may also be ordered with a Wieland GST infeed.
[1] Variable attachment distance within a range of 5 mm, the distance given is hole centre – hole centre of mounting bracket.
[2] In order to make allowance for the higher output density e.g. in an IT environment, the socket strips are equipped with 2 independent infeeds. This means it is possible to supply 2 x 16 A/250 V with one socket strip.
[3] With IEC 320 socket to standard F EN 60 320-2-2
[4] With IEC 320 socket to standard J EN 60 320-2-2



Socket strips 230 V

Technical specifications:
- Rated voltage 250 V AC
- Max. load
  CH 10 A,
  GB 13 A.

Material:
- Plastic, halogen-free
- Connection cable, 2 m long, without connector
  H05VV-F3G1 (CH)
  H05VV-F3G1,5 (GB)
- Unrestricted use, including angular connectors, thanks to the long row arrangement of plug-type contacts.

Number of sockets	Length mm	Design	Model No. DK
6	470[1]	GB	**7404.000**
12	793		**7408.510**
18	1153		**7412.510[2]**
6	470[1]	CH	**7604.000[2]**
12	793		**7608.510[2]**

[1] The socket strips can be mounted horizontally at the rear of the DK wall-mounted distributor based on EL/AE.
[2] Extended delivery times.

Socket strip TE

8-way socket strip for earthing-pin plug/version D. The strip is made of plastic and may be mounted vertically on the TE frame or in the rear 482.6 mm (19″) section. In the 482.6 mm (19″) section, more than 2 U of space is required. The sockets are arranged at an angle of 45° so that angular connectors are also easily used. The socket strip is supplied with a 2 m connection cable. The connection cable is contacted in a terminal slot in the strip.
The terminal slot has a separate cover. The socket strip has external terminals for separate earthing.

Socket strip TE	Model No. DK
8-way, earthing-pin	**7000.630**

Technical specifications:
- Rated voltage: 230 Volt AC
- Rated current: Max. 16 A
- Connection cable: Length 2 m, H05VV-F3G1, 1.5 mm^2, without connectors, with wire end ferrules

Socket strip, 482.6 mm (19˝), with fuse

with optional locking of the cable outlets

The socket strip constructed from an aluminium channel is 482.6 mm (19˝) wide and 1 U high, and may be integrated into all standard 482.6 mm (19˝) mounting frames.
Special attention has been devoted to practical, universal fastening. The universal mounting bracket creates variable mounting opportunities. For example, the 439 mm long socket strip may optionally be mounted on the 482.6 mm (19˝) mounting angle or on the punched section with mounting flange and enclosure frame.

Additionally, a locking option for the outgoing cables to the equipment has now been integrated. This protects the cables from unintentional loosening, which in turn increases the security and availability of applications.

Design	**Model No. DK**
12 x C13	**7240.600**

Technical specifications:
- 10 A fuse/slow
- Cable type: H05VV
- Mains voltage: 250 V
- Rated current: 10/10 A
- Connection cable: 1.5 m

Supply includes:
- Socket strip
- Two mounting brackets
- Assembly parts

Accessories:

PSM cable lock,
see page 386.

Socket strips

with ammeter

The socket strip with ammeter measures the active power of the connected equipment.
The two variants “earthing pin contact” and “IEC 320 socket C13” provide the most commonly used plug-in contacts in data centres. The 482.6 mm (19˝) long socket strip may optionally be mounted on the 482.6 mm (19˝) mounting angles, on the 482.6 mm (19˝) mounting frame, on the enclosure frame or in the rear section of wall-mounted distributors. The installation bracket may be mounted in four different positions for variable mounting. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern.

Material:
- Aluminium section: Natural-anodised
- Socket inserts: Polycarbonate

Supply includes:
- Socket strip
- Two installation brackets
- Assembly parts
- 1.5 m connection cable with open ends

Technical specifications:
- Mains voltage: 250 V
- Rated current: 10/16 A, C13/earthing-pin
- Connection cable: 1.5 m

Design	Number of sockets	For attaching			Length mm	Mounting dimension mm[1)]	**Model No. DK**
		Frame	Wall-mounted distributor, horizontal	482.6 mm (19˝) level			
Earthing-pin	6	■	■	■	482.6	464.1	**7240.300**
C13 IEC 320 socket	8	■	■	■	482.6	464.1	**7240.305**

[1)] Variable attachment distance within a range of 5 mm, the distance given is hole centre – hole centre of mounting bracket.

Socket strips

Socket strip CMC

With integral
- Interference suppressor filter
- Overvoltage protection
- Alarm contact

In the event of interference caused by overvoltage, the connected active network components are protected. With the relay message contact, undervoltage and any malfunctions caused by overvoltage can be reported via the CMC-TC in the network (SNMP trap). A green light on the strip indicates that the device is operational. The second protective device is the interference suppressor filter which protects valuable equipment as a passive component.

Technical specifications:
– Number of sockets: 9
– Length of strip: 650 mm
– Rated voltage: 230 V AC, 50/60 Hz
– Rated current: 16 A
– Relay alarm output: RJ 10 jack
– Relay load capacity: 50 Volt DC 100 mA

Packs of	Model No. DK
1	**7200.630**

Technical specifications, overvoltage protection:
– Arrester application category: D
– Surge current resistance per conductor: 2.5 kA
– Maximum surge current resistance: 8 kA

Also required:

For connecting the socket strip, the CMC III or CMC III Compact and an RJ 10 connection cable, DK 7200.420, are required.

Junction box

with multi-functional bracket

The angle bracket can be installed in all network enclosures in a system-compatible design. The junction box serves as a transfer point for the power supply to all equipment (fans, lamps and socket strips). As well as being used as a junction box or interchange point, the bracket may also accommodate the enclosure internal thermostat (SK 3110.000) or the hygrostat (SK 3118.000) thanks to its integral holes.

Packs of	Model No. DK
1 set	**7280.035**

Material of bracket:
Sheet steel

Colour of bracket:
RAL 7035

Supply includes:
– 1 bracket
– 1 junction box
– 6 m connection cable 3 x 1.5 mm^2 (flexible)

Socket

- For mounting on support rails TS 35/7.5 and TS 35/15 to EN 60 715
- Screw terminals uniformly from one side
- Enclosure width 45 mm

Technical specifications:
– Rated voltage: 250 V AC
– Rated current (AC): 16 A

Material:
Polyamide

Colour:
Grey

Standards:
– DIN VDE 0620-1
– DIN 49 440-1

Design	Packs of	Model No. SZ
Germany	2	**2506.100**

Service socket

for enclosure frame attachment/16 A
Integration of a service socket within a separate supply circuit, independently of the IT network and UPS.
Simple installation via an angle bracket for attaching to the enclosure frame.

Material:
– Angle bracket: Sheet steel
– Socket: Plastic

Surface finish:
Angle bracket: Zinc-plated

Supply includes:
– Angle bracket
– Damp-proof socket (IP 44)
– Assembly parts

Packs of	Model No. DK
1 set	**7280.100**

Energy-Box, 482.6 mm (19´)

Technical specifications:
A depth-variable top hat rail for installed equipment to DIN 43 880, sizes 1 – 3 (e.g. to accommodate built-in sockets, miniature circuit-breakers etc.). Cable clamping at the rear, one N and one PE rail on an insulated plinth. Plastic cover including extension cover (UL 94-V0), maximum accommodation of 22 installed devices (width 18 mm).
Maximum accommodation capacity = 22 HP (22 x 18 mm = 396 mm).

Packs of	U	Model No. DK
1	3	**7480.035**

Colour:
RAL 7035

Supply includes:
Energy-Box with plastic blanking covers.

Note:
Individual population with circuit-breakers at the factory available on request.

Energy-Box, 482.6 mm (19´)

Pull-out
This Energy-Box is designed to accommodate both DC and AC components. The pull-out component front affords optimum access to the wiring space from above and below.

Connection clamps for DC current:
2 clamps 35 mm^2,
9 clamps 16 mm^2 (per rail)

for AC current:
1 clamp 16 mm^2 (PE or N),
20 clamps 4 mm^2 (per rail)

Technical specifications:
Depth-adjustable top hat rail for snap-in attachment of installed equipment to DIN 43 880 in sizes 1 – 3 (e.g. to accommodate built-in sockets, miniature circuit-breakers etc. or entire installation assemblies such as the ABB “smissline” system). Cable clamping at the rear, two power distribution rails with connection clamps on isolated base/plinth. Plastic cover including extension cover, maximum accommodation of 22 installed devices (width 18 mm).
Maximum accommodation capacity = 22 HP (22 x 18 mm = 396 mm).
Depth: 220 mm.

U	Model No. DK
3	**7480.300**

Colour:
RAL 7035

Supply includes:
Energy-Box with plastic blanking covers.

Socket strips

Rittal Power Control Unit (PCU)

Socket strip, IP-compatible, 1 U
Featuring 8 current outlets with IEC 320 C13 slots. Each of the 8 slots is individually switchable (via the CMC III system). Furthermore, a current indicator, circuit display and thermal overload protection are integrated into the module. Installation on the enclosure frame or in the 482.6 mm (19˝) section (1 U) of a rack.

Operate the socket strip without CMC:
For operation of the socket strip, power pack DK 7201.210 and a connection cable are required. Up to 4 socket strips may be operated with one power pack.

Available functions: Current display, circuit display, automatic selective activation.

Operate the socket strip without CMC:
No additional power pack is required: The PCU is supplied via the CMC III system. You will need the CMC III or CMC III Compact, plus a CMC III CAN bus unit. See page 771 for details.

Available functions: Current display, automatic selective activation via CMC III in the network: individual switching of the 8 current outlets, current limit monitoring, time-delayed switching of the individual current outlets, status display of module.

Description of functions:
- 2-digit local LED 7-segment current display on the PCU. Legibility rotates according to the installation position.
- Measuring and monitoring of the current per PCU. Min./max. Adjustable limits. Measurement range 0 – 16 A.
- Alarm notifications via a flashing display.
- Monitoring of the thermo-fuse.
- PCUs may be combined via the bus system, thereby enabling selective activation.
- In conjunction with the CMC III, the 8 individual current outlets of the PCUs may be activated and deactivated individually via HTTP and SNMP.
- Remote administration of the power supply, editing and monitoring of remote limits, SNMP trap messages in case of alarm.
- 8 IEC 320 C13 slots per PCU.
- User administration.

Dimensions:
Width: 465 mm (19˝)
Height: 44.5 mm (1 U)

Material:
Aluminium section with plastic cover

Supply includes:
– 1 socket strip PCU 1 U (max. 10 A per socket strip)
– 1 bus cable
– 1 infeed cable 24 V DC
– 1 adaptor for power pack 24 V DC
– 1 connector for power supply
– 1 connection cable 0.3 m with Wieland connector

Designation	Pin pattern	Number of slots	Switchable outputs	With individual current measurement	Depth mm	**Model No. DK**
Earthing contact	C13	8	yes	–	60	**7200.001**
Earthing contact	C13	4/2	yes	–	60	**7856.203**[1)]
IEC 60 320	C19/C13	4/2	yes	–	60	**7856.204**[1)]
Earthing contact	C13	4/2	yes	■	160	**7859.215**
IEC 60 320	C13	8	yes	■	160	**7859.225**
IEC 60 320	C19/C13	4/2	yes	■	160	**7859.235**

[1)] Also required: PSM busbars, see page 384.

Cable entry plates

For
- Cable entry grommets
- Connector grommets

instead of segments of the standard divided gland plates.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For installation in TS and PC enclosures

Enclosure width mm	Cut-outs per plate	Packs of	Model No. TS
600	5	2	**8800.060**
800	8	2	**8800.080**
1000	4	4	**8800.100**
1200	6	4	**8800.120**

For installation in CM enclosures and TP TopConsole system

Enclosure width mm	Cut-outs per plate	Packs of	Model No. CM
600	5	1	**5001.226**
800	8	1	**5001.227**
1000	4	1	**5001.228**
1200	6	1	**5001.229**
1600	8	1	**5001.237**

For installation in ES enclosures and TP universal console, CS Basic enclosure

Enclosure width mm	Cut-outs per plate	Packs of[1)]	Model No. TS
600	5	2	**4320.700**
800	8	2	**4321.700**
1000	10	2	**4323.700**

[1)] Incl. compensating plate

For TS stainless steel

Material:
Stainless steel 1.4301 (AISI 304)

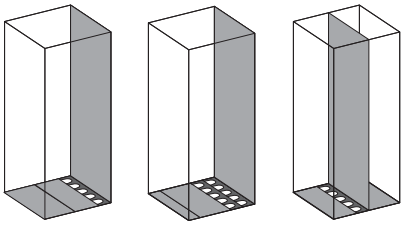
For installation in TS, stainless steel

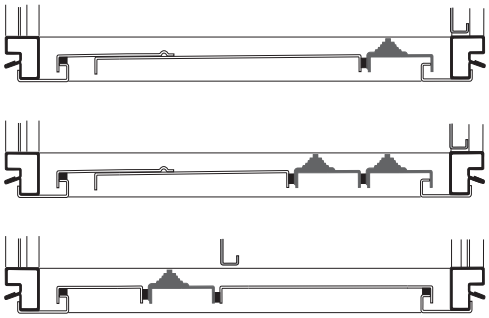
Enclosure width mm	Cut-outs per plate	Packs of	Model No. TS
600	5	2	**8700.600**
800	8	2	**8700.800**
1200	6	4	**8700.120**

Accessories:

Cable entry grommets,
see page 702.

Three examples from a wide range of possibilities
The diagrams show three TS examples for the positioning of cable entry plates instead of segments of the three-piece gland plates supplied as standard. This facilitates positioning to fit the mounting plate.
Thanks to the enclosure symmetry, where dimensions permit, cable entry plates may also be inserted in the enclosure depth, right and left, analogous to the gland plates.





Cable entry

Cable entry grommets

In conjunction with the cable entry plate, simple and fast sealing of cables inserted in the base area of enclosures.

Material:
– Body: Polypropylene
– Cover: Thermoplastic elastomer

Protection category:
IP 55 subject to correct mounting.

Cables per grommet	Max. Ø mm	Packs of	**Model No. PS**
8	13	25	**4316.000**
3	21	25	**4317.000**
1	47	25	**4318.000**

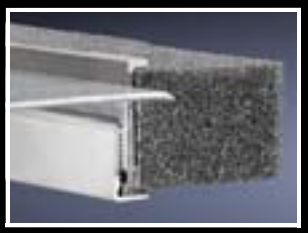
Connector grommets

Suitable for cable diameters from 8 to 36 mm.

Material:
– Outer cover: Polypropylene covered with thermoplastic elastomer
– Seal: Cellular rubber

Protection category:
IP 55 subject to correct mounting.

Packs of	**Model No. PS**
10	**4311.000**



Section for cable entry, centre

for TS, CM, TP

For top-mounting on gland plates. A superior alternative to the foam rubber cable clamp strip, thanks to:
- Easier mounting
- Full-surface support
- High level of sealing of cables inserted into the enclosure

Material:
– Extruded aluminium section
– Seal: PU foam
– Cross-section: 30 x 25 mm

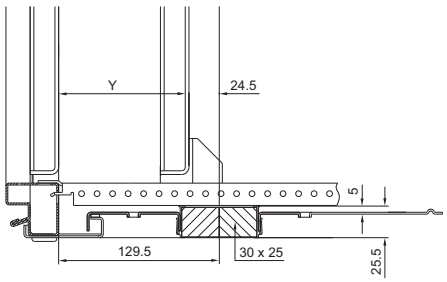
Protection category:
IP 55 subject to correct mounting.

Note:
1 set is sufficient for one base opening up to an enclosure width of 800 mm.
From an enclosure width of 1000 mm, two base openings are provided. 2 sets per enclosure may be fitted.

For enclosure width mm	Packs of	**Model No. TS**
600	1 set	**8802.060**
800	1 set	**8802.080**
1000	2 sets	**8802.100**
1200	2 sets	**8802.120**
1600	2 sets	**8802.160**

Accessories:

– Cable clamp rails (right angle section), see page 717.
– C rail 30/15, see page 653.



Y = Mounting plate depth-adjustable on a 25 mm pitch pattern (final pitch 30 mm).

Section for cable entry, rear

for TS, CM, TP

Unlike the section for cable entry, centre, the rear section is mounted directly onto the base opening. In this way, when installing the mounting plate in the rearmost position (TS) or with CM, the cables may be routed directly on a cable clamping rail with no large radii. In conjunction with the cable clamp rail, optimum adjustment between the cable entry and mounting plate can be achieved.

Material:
- Extruded aluminium section
- Seal: PU foam
- Cross-section: 30 x 25 mm

Protection category:
IP 55 subject to correct mounting.

For enclosure width mm	Packs of	Model No. TS
600	1 set	**8802.065**
800	1 set	**8802.085**
1000	2 sets	**8802.105**
1200	2 sets	**8802.125**
1600	2 sets	**8802.165**

Note:
1 set is sufficient for one base opening up to an enclosure width of 800 mm.
From an enclosure width of 1000 mm, two base openings are provided. 2 sets per enclosure may be fitted.

Accessories:

Cable clamp rail,
see page 717.

Foam rubber cable clamp strip

For sealing the cable entry between the gland plates. Particularly suitable for identical cable cross-sections.

Material:
- PU foam
- Cross-section: 30 x 30 mm

Protection category:
IP 55 subject to correct mounting.

Packs of	Model No. SZ
3 m	**2573.000**

EMC gland plates

see page 687.

Gland plates

Plastic cable gland plates

with metric knockouts
With pre-punched holes for cable glands.
Used for sealing standard gland plates.

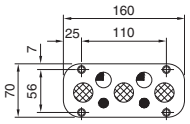
Temperature range:
May be used from –40°C to +70°C.

Colour:
RAL 7035

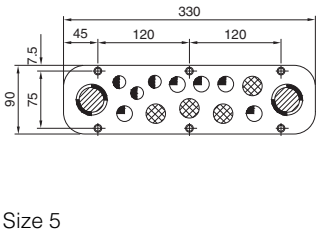
Note:
The applicable size may be taken from the respective product ordering page.

Size	Packs of	Model No. SZ
1	10	**2560.010**
3	10	**2561.010**
4	5	**2562.010**
5	5	**2563.010**

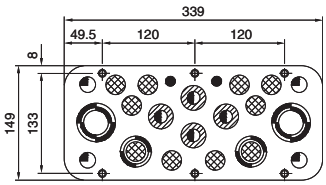
Size 1



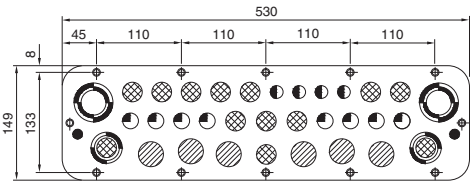
Size 3



Size 4



Size 5



Plastic cable gland plates

with PG knockouts
With pre-punched PG holes for cable glands.
Used for sealing standard gland plates.

Temperature range:
May be used from –40°C to +70°C.

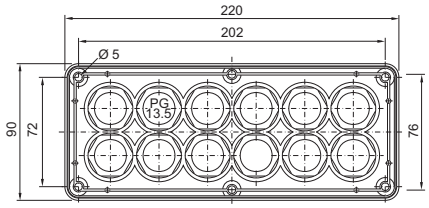
Material:
ABS

Colour:
RAL 7035

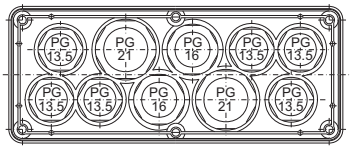
Note:
The applicable size may be taken from the respective product ordering page.

Size	PG	Qty.	Packs of	Model No. KL
2	13.5	12	5	**1581.000**
	13.5 16 21	6 2 2	5	**1582.000**

KL 1581.000



KL 1582.000



Plastic gland plates

with membranes
Simply pierce the plastic with a sharp object, and pull through the cable.

Material:
Plastic to UL 94-V0

Colour:
Similar to RAL 7035

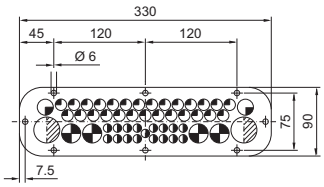
Protection category:
IP 65 with careful cable entry.

Note:
The applicable size may be taken from the respective product ordering page.

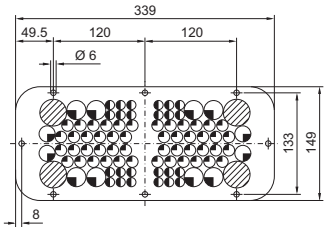
Size	Packs of	**Model No. SZ**
3	1	**2561.500**
4	1	**2562.500**
5	1	**2563.500**

	Diameter mm	No. of cable entries for Model No. SZ		
		2561.500	2562.500	2563.500
●	5 – 9	–	–	18
◑	6 – 11	17	–	–
◐	7 – 12	–	24	16
◔	10 – 15	27	48	36
◔	15 – 21	2	4	–
◕	15 – 24	–	–	6
◐	15 – 25	–	8	–
◕	16 – 25	4	–	–
◑	19 – 34	2	–	–
▩	23 – 30	–	–	2
▨	26 – 35	–	4	2
◑	26 – 54	–	–	4
○	50 – 110	–	–	1

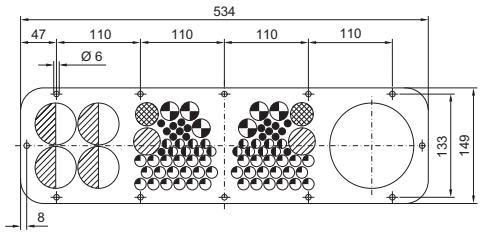
Size 3



Size 4



Size 5



Gland plates

Metal gland plates

with metric knockouts
Simply knock out the holes for the cable glands using a screwdriver.

Material:
Sheet steel

Colour:
RAL 7035

Protection category:
IP 66 when mounting in the usual position at the bottom.

Note:
The applicable size may be taken from the respective product ordering page.

Size	Packs of	**Model No. SZ**
2	1	**1581.100**
3	1	**2561.100**
4	1	**2562.100**
5	1	**2563.100**

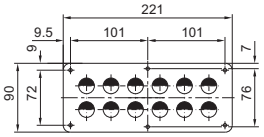
Number of cable entries

Diameter						Model No. SZ
M12	M16	M20	M25	M32	M40	
–	–	12	–	–	–	1581.100
–	–	9	4	2	–	2561.100
–	2	5	13	2	2	2562.100
1	–	12	11	8	4	2563.100

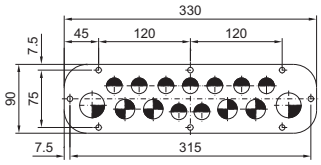
Accessories:

Cable glands made from polyamide or brass, see page 709.

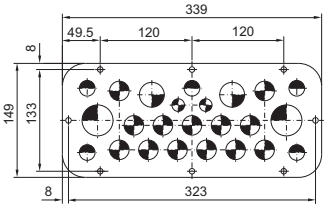
Size 2



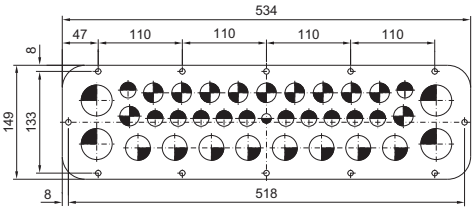
Size 3



Size 4



Size 5



Metal gland plates

As spare/replacement part for the standard gland plates supplied loose.

Material:
Sheet steel

Colour:
RAL 7035

Protection category:
IP 66 when mounting in the usual position at the bottom.

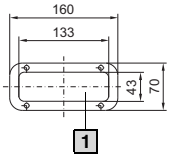
Note:
The applicable size may be taken from the respective product ordering page.

Accessories:

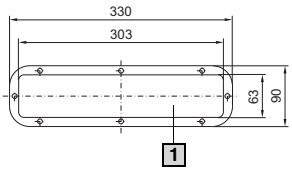
Cable glands made from polyamide or brass, see page 709.

Size	Design	Packs of	Model No. SZ/IN/KL
1	Solid	1	**2560.400**
2	Solid	6	**1158.500**
3	Solid	1	**2561.400**
4	Solid	1	**2562.400**
5	Solid	1	**2563.150**

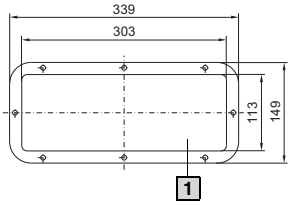
SZ 2560.400



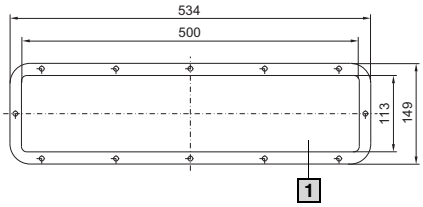
SZ 2561.400



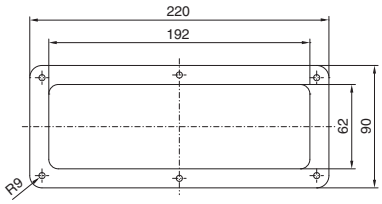
SZ 2562.400



IN 2563.150



KL 1158.500



1 Area available for population

Gland plate

solid, for QuickBox
To conceal the cable entry openings. In exchange for the brush strip at the top and bottom that is used as standard.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. QB
2	**7502.310**

Gland plate

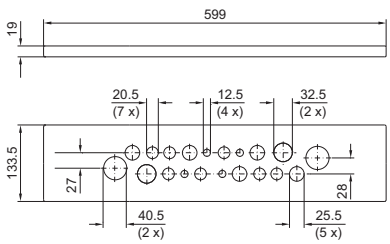
for metric cable glands, for EL
Folded gland plate with foamed-in seal and pre-punched, knock-out holes for metric cable glands M12, M20, M25, M32, M40.

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Protection category:
IP 55 to IEC 60 529

Packs of	Model No. DK
1	**7705.235**



Gland plates

Gland plate

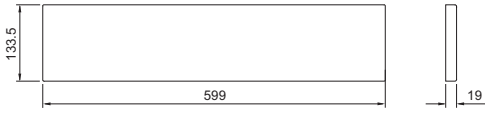
solid, for EL
Folded gland plate for the base box, with foamed-in seal.

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Packs of	Model No. EL
1	2235.135

Delivery times available on request.



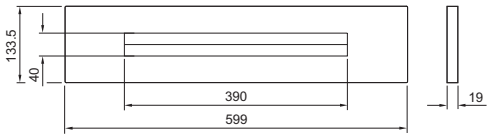
Gland plate

with brush insert, for EL
Folded gland plate with foamed-in seal and plastic brush inserts for simple cable entry.

Material:
Sheet steel, 1.5 mm

Colour:
RAL 7035

Packs of	Model No. DK
1	7705.035



Brush strip

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any given positions in the side panel, rear panel, doors, roof and gland plate may be finished off attractively by simply attaching the brush strip.

Packs of	Model No. DK
2 m	7072.200

Technical specifications:
- For metal thickness: 0.6 – 1.5 mm
- Bristle length: 30 mm
- Plastic sheathing: 18 mm
- Snap-on surface: 10 mm
- Maximum cut-out height: 38 mm

Brush strip, super-airtight

For individual installation of enclosure panels, gland plates and panels. Cut-outs for cable routing at any position in the side panel, rear panel, doors, roof and base plate.
These special brush strips may be used to create airtight entries for cable sections and conductors. The brush strips arranged in an offset configuration ensure good sealing from the routed cables even with large quantities of cables. In this way, unwanted system losses may be reduced to a minimum.

Packs of	Model No. DK
2 x 1 m	7825.375

Technical specifications:
- For metal thickness: 1.5 – 2 mm
- Bristle length: 58 mm
- Plastic sheathing: 14 mm
- Snap-on surface: 11.5 mm
- Cut-out width: 88 – 90 mm

Material:
Plastic, UL 94-V0

Supply includes:
1 brush strip each, 1 m in length, right-hand and left-hand version.

Cable gland, brass

Benefits:
- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage.
- Clamping membranes for even tightening and strain relief which protects the cables.
- Insulation via plastic insert.
- Optimum seal on the connection thread, thanks to O-ring.
- The lock nut cuts automatically into the spray-finish, thereby creating a conductive connection.

Material:
– Brass
– Seal: Neoprene

Surface finish:
Nickel-plated

Protection category:
– IP 68 (5 bar, 30 min.) to IEC 60 529
– IP 69K to DIN 40 050-9

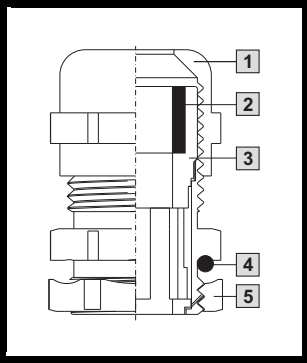
Approval:
VDE tested to EN 50 262

Size	Cable diameter mm	Packs of	Model No. SZ
M12 x 1.5	3 – 6.5	15	**2411.800**
M16 x 1.5	4.5 – 10	15	**2411.810**
M20 x 1.5	6 – 12	10	**2411.820**
M25 x 1.5	11 – 17	10	**2411.830**
M32 x 1.5	15 – 21	5	**2411.840**
M40 x 1.5	19 – 28	4	**2411.850**
M50 x 1.5	27 – 38	2	**2411.860**
M63 x 1.5	34 – 44	1	**2411.870**

Possible alternative:

Cable gland Hygienic Design,
see page 711.

Accessories:
– Sealing bungs,
see page 710.
– Multi-seal inserts,
see page 710.



1 Cap nut
2 Neoprene seal
3 Plastic insert
4 O-ring
5 Lock nut

Cable gland, polyamide

Benefits:
- Because the gland and lock nut are sold together in a single pack, this saves additional ordering and storage.
- Clamping membranes for even tightening and strain relief which protects the cables.
- Spray-moulded sealing lip ensures an optimum seal against the enclosure.
- Trapezoid thread for secure screw-fastening of the cap nut.

Material:
Polyamide 6, neoprene seal

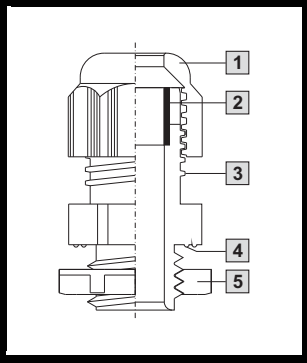
Colour:
RAL 7035

Protection category:
IP 68 (5 bar, 30 min.) to IEC 60 529

Approval:
– VDE tested to EN 50 262
– CSA for USA and Canada

Size	Cable diameter mm	Packs of	Model No. SZ
M12 x 1.5	3 – 6.5	50	**2411.600**
M16 x 1.5	4.5 – 10	50	**2411.610**
M20 x 1.5	6 – 12	50	**2411.620**
M25 x 1.5	11 – 17	25	**2411.630**
M32 x 1.5	15 – 21	15	**2411.640**
M40 x 1.5	19 – 28	5	**2411.650**
M50 x 1.5	27 – 38	5	**2411.660**
M63 x 1.5	34 – 44	3	**2411.670**

Accessories:
– Polyamide cable gland,
see page 710.
– Sealing bungs,
see page 710.
– Multi-seal inserts,
see page 710.



1 Cap nut
2 Neoprene seal
3 Trapezoid thread
4 Sealing lip
5 Lock nut

Cable gland

Polyamide reducers

for polyamide cable glands
For adapting metric cable glands to larger diameter holes or threads.

Benefit:
Reducer and locking nut are sold together in a single pack; this saves additional ordering and storage.

Material:
Polyamide 6 GF30

Colour:
RAL 7035

Note:
Polyamide cable gland,
see page 709.

Thread

Exterior:	Inside	Packs of	Model No. SZ
M16 x 1.5	M12 x 1.5	50	**2411.550**
M20 x 1.5	M12 x 1.5	50	**2411.551**
M20 x 1.5	M16 x 1.5	50	**2411.552**
M25 x 1.5	M16 x 1.5	50	**2411.553**
M25 x 1.5	M20 x 1.5	50	**2411.554**
M32 x 1.5	M16 x 1.5	50	**2411.555**
M32 x 1.5	M20 x 1.5	50	**2411.556**
M32 x 1.5	M25 x 1.5	50	**2411.557**
M40 x 1.5	M25 x 1.5	25	**2411.558**
M40 x 1.5	M32 x 1.5	25	**2411.559**
M50 x 1.5	M40 x 1.5	5	**2411.560**
M63 x 1.5	M40 x 1.5	5	**2411.561**
M63 x 1.5	M50 x 1.5	5	**2411.562**

Sealing bung

for cable glands M20 x 1.5

For use in all situations where pre-installed cable glands M20 x 1.5 must be kept free for future installations but properly sealed. Simply loosen the cap nut, mount the sealing bung, and retighten.

Material:
Polyamide 6

Colour:
RAL 7035

Packs of	Model No. SZ
25	**2411.532**

Multi-seal inserts

For the secure entry of several individual cables into a single cable gland.

Material:
Neoprene

Size	Cable diameter mm	Number of cables	Packs of	Model No. SZ
M25	3	7	25	**2411.504**
	4	6	25	**2411.505**
	5	4	25	**2411.506**
	6	3	25	**2411.507**

Cable gland HD

Applications:
- Manufacturing and packaging of foodstuffs etc.
- Clean room technology (e.g. pharmaceuticals)
- Biotechnology
- Chemical industry

Benefits:
- Smooth, solid exterior surfaces effectively prevent the depositing of harmful micro-organisms.
- Much easier, and therefore cheaper to clean compared with conventional cable glands.

Material:
– Cap nut: Stainless steel 1.4305 (AISI 303)
– Seal: Conforms to FDA 21 CFR 177.2600

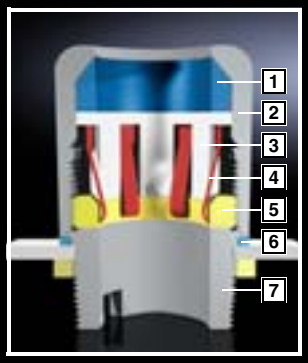
Protection category:
– IP 68 (5 bar, 30 min.) to IEC 60 529
– IP 69K to DIN 40 050-9

Standard version

Size	Cable diameter mm	Packs of	Model No. HD
M12 x 1.5	3 – 6.5	5	**2410.000**
M16 x 1.5	4,5 – 10	5	**2410.010**
M20 x 1.5	6 – 12	5	**2410.020**
M25 x 1.5	11 – 17	5	**2410.030**

EMC version

Size	Cable diameter mm	Packs of	Model No. HD
M16 x 1.5	5 – 10	5	**2410.110**
M20 x 1.5	6 – 12	5	**2410.120**
M25 x 1.5	12 – 17	5	**2410.130**

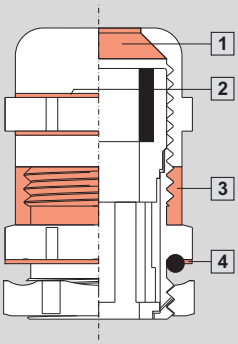


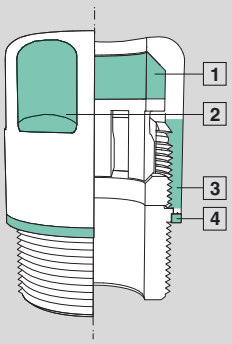
1 Seal
2 Cap nut
3 Gripper jaws
4 Shield spring (EMC version only)
5 Clamping ring
6 Enclosure seal
7 Base with locator for assembly tool

Why hygiene-compatible cable glands?

Critical points with conventional solutions

1 Cable entry in front of seal
2 No minimum radii on the hexagon
3 External thread
4 Gap caused by O-ring on the enclosure surface





Hygiene-compatible design features

1 Seal directly at the cable entry
2 Compliance with minimum radii on the hexagon
3 No external thread
4 Flush termination between the cap nut and the enclosure

Stainless steel lock nut

To match HD cable glands.

Material:
Stainless steel 1.4305 (AISI 303)

Size	Packs of	Model No. HD
M12 x 1.5	10	**2410.200**
M16 x 1.5	10	**2410.210**
M20 x 1.5	10	**2410.220**
M25 x 1.5	10	**2410.230**

Assembly tool

for HD cable glands
For attaching HD cable glands in an internal thread or using lock nuts. This can be achieved either from the inside or from the outside using an Allen key.

Supply includes:
1 set = Adaptor for sizes from M12 – M25.

Packs of	Model No. HD
1 set	**2410.290**

Cable gland/cable entry

Cable glands

for fibre-optic technology
The common size PG 13.5 has a slotted interior seal. This allows super-easy cable entry. Ideal for routing break-out cables, as this eliminates unnecessary bending of the fibre-optic cables.

Material:
– Cable gland: Brass
– Inner seal: Soft PVC insert

Surface finish:
Screw connection: Nickel-plated

Fibre-optic cable gland	Cable diameter mm	Packs of	**Model No. DK**
PG 13.5	2 x 3	12	**7455.030**

Connector gland

for connector cut-outs (24-pole)
For the entry of 2 pre-assembled cables in the connector cut-out, without dismantling the connector.
For cable diameter from 8 – 36 mm.

Material:
– Enclosure: Plastic
– Clamps: Sheet steel

Surface finish:
Clamps: Zinc-plated

Packs of	**Model No. SZ**
1 set	**2400.000**

Supply includes:
1 set =
2 half-shells, including seals, with fastening clamp.

Cable gland

for IW worktops
To fit drilled holes Ø 60 mm. For the entry of cables with pre-assembled connectors, the rotating flap and cover are easily removed.

Material:
Plastic

Colour:
RAL 7035

Packs of	**Model No. IW**
1	**6902.770**

Detailed drawings:
Available on the Internet.

Edge protector

For covering sharp edges of cut-outs. Provides protection from injuries and prevents damage to inserted cables. The edge protector is suitable for material thicknesses of approx. 1.0 – 2.0 mm, and may be cut to length individually.

Material:
Plastic PVC

Colour:
Black

Packs of	**Model No. DK**
10 m	**7072.100**

Cable gland

The Rittal connector gland proves that sometimes "less is more": significantly faster installation, a flexible sealing system for different cable diameters, and simple cable entry with pre-assembled cables. Low installation costs, a high degree of protection and flexible cable management – added value guaranteed with the latest generation of cable entry solutions from Rittal.

Benefits:
- Cable diameters 4 – 16 mm
- Simple cable entry for pre-assembled cables
- Individual cables can be added or replaced without dismantling the sealing frame
- Sealing modules remain safely attached to their cables

Sealing frame

For pre-assembled cables with connectors.

Mounting over 24-pole or 16-pole connector cut-outs in:
- Module plates for TS divider panels
- Metal gland plates

Material:
– Front panel: Polyamide
– Flat seal: CR

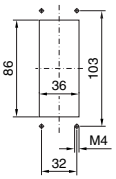
Protection category:
IP 64 to IEC 60 529, complies with NEMA 12.

Supply includes:
Assembly parts.

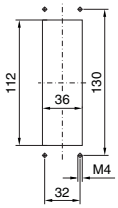
For modules 20 x 20 mm	For cut-out	Packs of	**Model No. SZ**
10	24-pole	1	**2400.900**
8	16-pole	1	**2400.910**

Accessories:

Module plates for TS divider panel, see from page 572.



16-pole



24-pole

Sealing module

To seal cables in conjunction with a sealing frame. It is possible to combine 20 x 20 mm and 40 x 40 mm sealing modules.

Material:
– Hard shell: Polyamide
– Seal: TPE 2

Protection category:
IP 64 to IEC 60 529, complies with NEMA 12.

Sealing modules 20 x 20 mm

Diameter range	Packs of	**Model No. SZ**
4 – 6 mm	10	**2400.920**
6 – 9 mm	10	**2400.930**
Solid	10	**2400.970**

Sealing modules 40 x 40 mm

Diameter range	Packs of	**Model No. SZ**
9 – 12 mm	10	**2400.940**
12 – 16 mm	10	**2400.950**
Solid	10	**2400.960**

Cable gland

Connector gland, small

For pre-assembled cables with connectors.
- For use with material thickness of up to 4 mm.
- Strain relief of the pre-assembled cables can be achieved with cable ties.

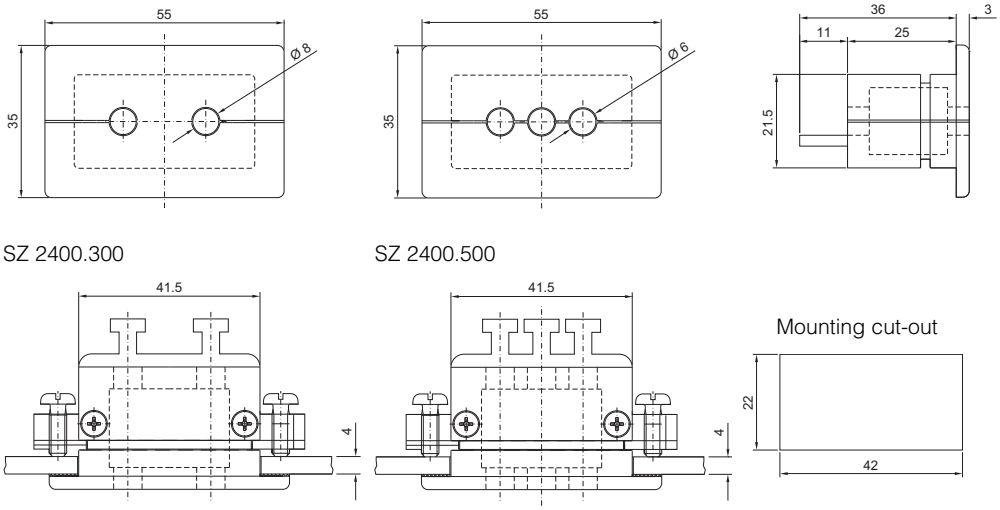
Material:
Plastic

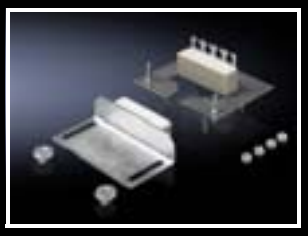
Colour:
RAL 9005

Protection category:
IP 65 subject to correct mounting.

Supply includes:
Assembly parts.

To fit	Packs of	Model No. SZ
2 cables Ø 6 to Ø 8 mm	1	**2400.300**
3 cables Ø 4 to Ø 6 mm	5	**2400.500**





Cable gland module

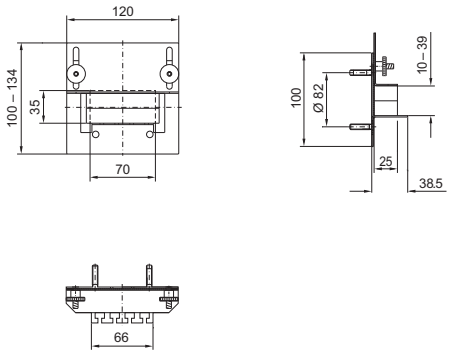
CP-L, Ø 130 mm
Use of the support arm cutout CP-L, round, with enclosures mounted on the wall, for sealed cable entry. May also be mounted retrospectively with the cables already inserted.
Fitted with T-heads for cable clamping. Particularly well-suited to cables with identical cross-sections.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. CP
1	**6052.500**



Stepped collar

for wall thicknesses from 1.5 to 4.5 mm
For cable entry, simply cut off at the required level to match the cable diameter.

Material:
Plastic to UL 94-HB

Protection category:
IP 54 with careful cable entry.

For hole	Sealing range mm	Packs of	Model No. SZ
M20	5 – 16	100	**2899.200**
M25	5 – 21	50	**2899.250**
M32	13 – 26.5	25	**2899.320**
M40	13 – 34	20	**2899.400**

Cable duct

for vertical TS section

For direct mounting on the vertical enclosure section.

Width 50 mm
For assembly on a vertical enclosure section in the area of the side panel.

Width 100 mm
For assembly on two bayed enclosure profiles in the baying area. Baying brackets and baying clamps which have already been fitted can be covered over with the cable duct.

The nominal break points of the bars are also designed for combination with the cable ducts for mounting plates; in addition a further nominal break at the level of the mounting plate enables direct insertion into the cable duct.

The cable duct fastening points are co-ordinated with the TS system hole pattern; time-consuming drilling work, as in the case of DIN ducts, is eliminated.

Width mm	Height mm	Packs of	Model No. TS
50	1600	8 sets	**8800.570**
50	1800	8 sets	**8800.520**
100	1600	4 sets	**8800.540**
100	1800	4 sets	**8800.510**

Technical specifications:
– Depth: 80 mm
– Length:
1600 mm (for enclosure height 1800 mm)
1800 mm (for enclosure height 2000 mm)
May be shortened for other enclosure dimensions
– Bar width: 5.5 mm
– Slot width: 4.5 mm

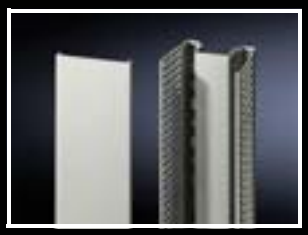
Material:
– Hard PVC
– Flame-resistant, self-extinguishing,
– Temperature resistant to +60°C

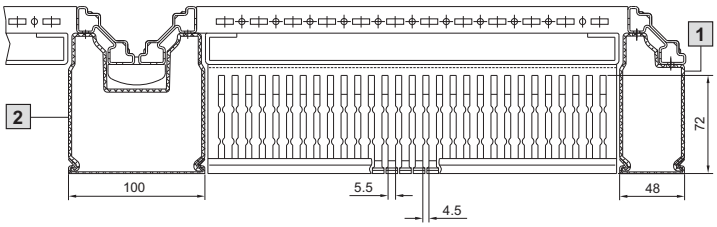
Colour:
Similar to RAL 7030

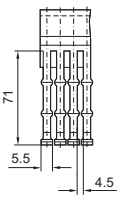
Supply includes:
1 set =
1 cable duct with cover.

Accessories:

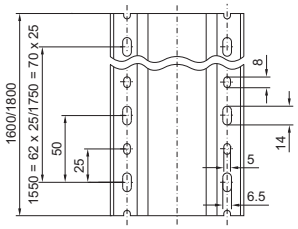
Aluminium rivet for attachment,
see page 716.

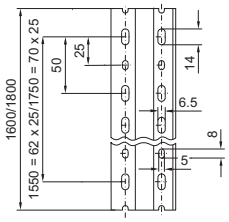


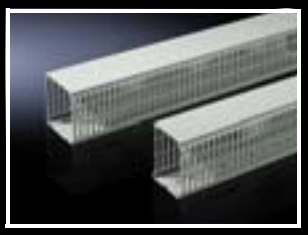




1 TS 8800.570/TS 8800.520
2 TS 8800.540/TS 8800.510







Cable duct

for mounting plate

- To fit the cable ducts for vertical TS sections. If the TS mounting plate is installed in the rear-most position, the horizontally mounted cable ducts are flush with the vertical ones.
- For external mounting on surfaces.

For enclosure width mm		Fixed length 2000 mm
Length (L) mm		
Width (B) mm	Packs of	**Model No. TS**
30	24 set	**8800.750**
40	20 set	**8800.751**
60	18 set	**8800.752**
80	12 set	**8800.753**
100	12 set	**8800.754**

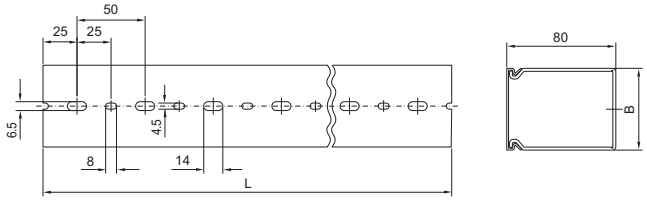
Material:
– Hard PVC
– Flame-resistant, self-extinguishing,
– Temperature resistant to +60°C

Colour:
Similar to RAL 7030

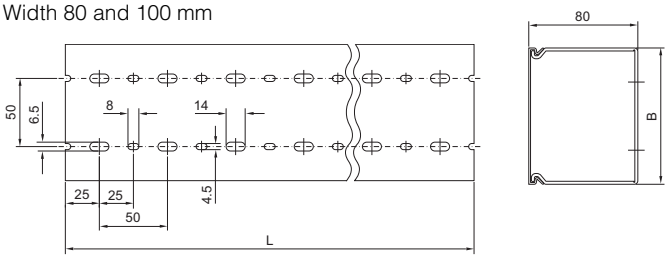
Supply includes:
1 set =
1 cable duct with cover.

Technical specifications:
– Depth: 80 mm
– Length: 2000 mm, may be cut to length
– Bar width: 5.5 mm
– Slot width: 4.5 mm

Width 30, 40 and 60 mm



Width 80 and 100 mm



Aluminium rivet

For secure assembly of cable ducts in conformity with the relevant standards. Also suitable for the attachment of support rails and punched rails.

To fit:
- TS system punchings
- Drilled hole Ø 4.5 mm.

Packs of	**Model No. TS**
100	**8800.531**

Accessories:

– Cable ducts for vertical TS section, see page 715.
– Cable ducts for mounting plate, see page 716.

Cable clamp rails

Mounting angle for TS, ES, PC, TP universal console, base/plinths
For strain relief with cable entry. Depth-variable mounting on a 25 mm pitch pattern on the horizontal enclosure section or in side base/plinth trim panels with assembly bolts.

Material:
Steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Enclosure width mm	Length mm	Packs of	**Model No. PS**
400	385	2	**4193.000**
600	585	2	**4191.000**
800	785	2	**4192.000**
1000	985	2	**4336.000**
1200	1185	2	**4196.000**
1600	1585	2	**4338.000**
1800	1785	2	**4339.000**

Accessories:

Assembly bolts for base/plinth,
see page 546.

Cable clamps

for cable clamp rails
For fastening the cables to the cable clamp rails.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Plastic insert.

For cable diameter mm	Packs of	**Model No. SZ**
6 – 12	25	**2350.000**
12 – 16	25	**2351.000**
14 – 18	25	**2352.000**
18 – 22	25	**2353.000**
22 – 26	25	**2354.000**
26 – 30	25	**2355.000**
30 – 34	25	**2356.000**
34 – 38	25	**2357.000**
38 – 42	25	**2358.000**
42 – 46	25	**2359.000**
46 – 50	25	**2360.000**

Possible alternative:

Rail for EMC shielding bracket and strain relief,
see page 686.

Cable clamp rails

C section
for TS, CM, TP
For strain relief with cable entry.
The length of the cable clamp rail is tailored to the width of the mounting plate. The mounting bracket included with the supply supports three different installation situations on the mounting plate:

1 straight, at a distance of 23 mm from the mounting plate

2 straight, at a distance of 10 mm from the mounting plate

3 tilted, towards the mounting plate

Material:
Sheet steel

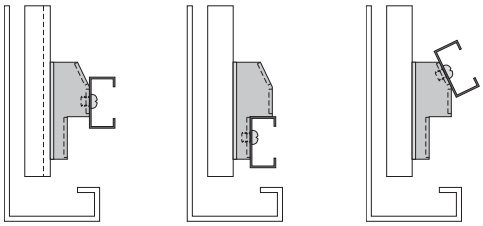
Surface finish:
Zinc-plated

Supply includes:
Two mounting brackets and assembly screws.

For enclosure width mm	Length mm	Packs of	**Model No. CM**
600	499	1	**5001.080**
800	699	1	**5001.081**
1000	899	1	**5001.082**
1200	1099	1	**5001.083**

Accessories:

Cable clamps for C rails,
see page 719.



1 2 3

Cable clamping bracket

For installing in the operating housing with mounting cut-out CP-L and CP-XL.
Cable clamping optionally via:
- Cable clamps
  or
- Cable tie SZ 2597.000
- Commercially available cable ties.

Bracket height = 25 mm with fitted C rail 40 mm.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
C rail and screws.

Packs of	**Model No. CP**
1 set	**6052.000**

Accessories:

– Cable clamps,
see page 719.
– Cable ties,
see page 720.

Cable clamp rails

see page 722.

Combination rails

for QuickBox
For cable clamping and routing.
Cables and leads can be fastened to the T-heads top and bottom with cable ties. In addition, the C section of the combination rail will accommodate cable clamps with inserts. In order to achieve a contacting connection, the anodised coating of the rail must be broken.

Material:
Aluminium

Surface finish:
Anodised

Supply includes:
Assembly parts.

For enclosure depth mm	Length mm	Packs of	**Model No. QB**
300/400	200	6	**7502.302**
500/600	400	6	**7502.304**

For enclosure width mm	Length mm	Packs of	**Model No. QB**
600	400	6	**7502.304**

Accessories:

– Cable clamps,
see page 719.
– Cable ties,
see page 720.

Cascade cable routing

for chassis mounting
for TS
Professional cable routing system for cascading of cables in several levels of the enclosure depth. The cables are attached to the C rail by means of clamps. Suitable for installation on the inner enclosure level.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 6 mounting brackets
– 3 C rails
– Assembly parts

For enclosure width mm	Packs of	Model No. DK
600	3	**7831.570**
800	3	**7831.571**

Accessories:

– TS punched section with mounting flange for the inner mounting level, see page 647.
– PS punched section without mounting flange for vertical mounting in the enclosure frame, see page 652.
– Cable clamps, see page 719.

Cable clamps

for C rails
For attaching the cables to the C rails.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Plastic insert.

Note:
C rails, see from page 653.

For cable diameter mm	Packs of	Model No. DK
6 – 14	25	**7077.000**
12 – 18	25	**7078.000**
18 – 22	25	**7097.000**
22 – 26	25	**7097.220**
26 – 30	25	**7097.260**
30 – 34	25	**7097.300**
34 – 38	25	**7097.340**
38 – 42	25	**7098.000**
42 – 56	25	**7098.100**
56 – 64	25	**7099.000**

Cable conduit and cable conduit holder

For secure cable routing e.g. from the enclosure or mounting plate to the door.
Attachment facility for standard commercially available cable ties is provided on the cable conduit holder, so that cables may be attached upon entry to/exit from the cable conduit.

Material:
– Cable conduit: Polythene
– Cable conduit holder: Polyamide

Cable conduit

Internal Ø mm	Packs of	Model No. SZ
16	25 m	**2595.000**
29	25 m	**2589.000**
36	25 m	**2596.000**
48	25 m	**2590.000**

Cable conduit holder

For cable conduit Ø mm	Packs of	Model No. SZ
16	20	**2593.000**[1)]
29	20	**2591.000**[1)]
36	20	**2594.000**
48	20	**2592.000**

[1)] Installation in compact enclosures AE with universal bracket SZ 2373.000, see page 664.

Cable attachment

For professional, secure fastening of cables and conduits.

For fastening:
- Slide into the punched rail 23 x 23 mm,
- Screw-fasten onto the round punchings of the enclosures, as well as all punched rails and punched sections.

As the fastening attachments are bayable, several fastening attachments, even those of different sizes, can be assembled by using just 2 screws.

Material:
Polyamide

Note:
Punched rail 23 x 23 mm,
see page 651.

For cable diameter from – to mm	Packs of	Model No. PS
6 – 9	50	**4319.090**
9 – 12	50	**4319.120**
12 – 16	50	**4319.160**
16 – 20	50	**4319.200**

Also required:

Posidrive raised countersunk screw M5 x 12 mm, SZ 2488.000, for screw-fastening to the round system punchings,
see page 666.

Cable ties

The super-fast solution for fastening cables to the enclosure profile or mounting system parts. Simply clip into the round system punchings.

Length mm	Packs of	Model No. SZ
150	100	**2597.000**

Nylon loop

With the nylon loop, secured cables are easily released, allowing individual cables to be added or removed. Ideal for sensitive data cables (fibre-optic/Cu), as it avoids indentations on the cable sheathing.
In addition, the nylon loop may be screw-fastened to the round system punchings or attached using a quick-release fastener.

Colour:
Black

Supply includes:
Quick-release fastener.

Width mm	Length mm	Max. cable diameter mm	Packs of	Model No. DK
20	130	30	10	**7072.220**
20	200	50	10	**7072.230**
20	300	90	10	**7072.240**

Also required:

Screw SZ 2486.500 for screw-fastening to the round system punchings,
see page 666.

Nylon loop

For tidy cable routing.
Supplied on a reel for cutting to the required length.

Unlike cable ties,
- protects the cable sheathing
- easily reopened
- reusable

Length mm	Width mm	Packs of	Model No. IN
5000	16	1	**2203.400**

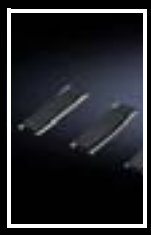
Nylon loop cable holder

self-adhesive
Suitable for universal use in all network enclosures and server racks, wall-mounted enclosures, mounting plates and gland plates.

Material:
Woven polyamide 6.6

Colour:
Black

Size length x width mm	Packs of	Model No. DK
70 x 16	10	**7111.350**



Cable tie fastener

for round system punchings and VIP 6000

For all commercially available cable ties up to a tie width of 4.8 mm.

Simply insert into the screw channel and secure by hammering down the split rivet.

Material:
Polyamide 6.6

Packs of	Model No. CP
100	**6059.000**

Cable tie fastener

for Comfort Panel, Optipanel and Compact Panel

For secure cable routing of all standard commercially available cable ties up to a tie width of 4.0 mm.

Simply insert into the T channel and secure by rotating through 45°.

Material:
Polyamide 6.6

Packs of	Model No. CP
100	**6059.500**

Snap-in cable routing

for clipping into the system punchings
Cable routing suitable for universal use, for toolless, fast assembly, in two variants:

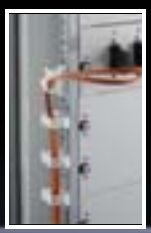
For locking:
- User-friendly opening for cable management via locating points
- For cable diameters 14 – 19 mm
- For system punchings 6.2 mm

For twisting:
- User-friendly opening for cable management
- For cable diameters 10.2 – 12.7 mm
- For system punchings 4.7 mm

Material:
Polyamide 6.6, self-extinguishing to UL 94 V-2

Colour:
Natural

Design	Packs of	Model No. DK
For locking for system punchings 6.2 mm	10	**7111.300**
For twisting for system punchings 4.7 mm	10	**7111.310**



Cable clamp rails

for TS and 482.6 mm (19˝) mounting frames
The cables may be attached to the cable clamp rails with cable ties or nylon tapes. The cable clamp rails are simply located onto the frame section and may additionally be secured with a screw.

Material:
Sheet steel

Supply includes:
Assembly parts.

For the inner mounting level

For enclosures		Packs of	Model No. DK
Width mm	Depth mm		
600	600	4	**7828.061**
800	800	4	**7828.081**
1000	1000	4	**7828.101**
1200	1200	4	**7828.121**

For the outer mounting level

For enclosures		Packs of	Model No. DK
Width mm	Depth mm		
600	600	4	**7828.062**
800	800	4	**7828.082**
1000	1000	4	**7828.102**
1200	1200	4	**7828.122**

Accessories:

– Cable ties,
see page 720.
– Nylon loop,
see page 720.

Cable clamp rail, depth-variable

for TS and 482.6 mm (19˝) mounting frames
For strain relief of the routed cables. The cables may be attached to the cable clamp rails with cable ties or nylon tapes.
The cable clamp rails may be located horizontally at the rear directly onto a 482.6 mm (19˝) mounting frame or in the enclosure depth between two mounting frames. An additional screw fastening secures the unit.
The depth variability of the rails facilitates flexible adaptation of their length to the existing attachment distance between the two 482.6 mm (19˝) mounting frames.

Material:
Sheet steel

Supply includes:
Assembly parts.

Mounting dimensions[1] mm	Packs of	Model No. DK
325 – 575	4	**7858.160**
500 – 895	4	**7858.162**

[1] Mounting dimensions + 120 mm = 482.6 mm (19˝) distance between levels

Accessories:

– Cable ties,
see page 720.
– Nylon loop,
see page 720.

Cable clamp, variable

for enclosure-independent mounting
Variable attachment from 450 to 800 mm for flexible cable clamping in two variants.

Supports attachment to punched sections with and without mounting flanges and direct screw-fastening onto mounting plates and other flat surfaces.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

1 C rail
2 T-head rail

Design	Packs of	Model No. DK
C rail	1	**7016.140**
T-head rail	1	**7016.150**

Cable manager

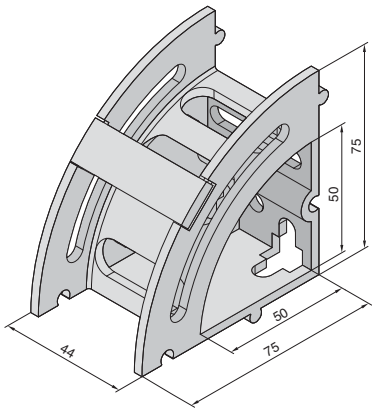
For system-compatible cable deflection while complying with minimal bending radii and to accommodate surplus cables and excess length. The elements may optionally be used individually or in combination for cable routing. They may be combined into semi-circular or circular elements. As the mounting distance between the elements grows larger, the deflection radius of the cables may optionally be enlarged, or the cable route designed individually. The option of securing elements on their straight-edge side supports the use of corners and edges, to allow protected cable routing around them.
Mounting clips for use above the arc hold the routed cables back within the elements. The elements are also bayable in an axial direction to allow U-based cable routing to the mounting level, or channelling of the cable sections.

Material:
Plastic, UL 94-V0

Colour:
RAL 7035

Supply includes:
Mounting clip and assembly parts.

	Packs of	Model No. DK
Basic kit	8	**7064.100**
Maxi kit	20	**7064.110**



Shunting ring, plastic

For flexible cable routing, in two materials and three size variants.
Option of mounting on the 482.6 mm (19″) enclosure and swing frame section of the data distributor, on all patch panels, on the Data Rack and all components on a 25 mm DIN pitch pattern.

Polyamide version:
Infinitely variable mounting thanks to a longitudinal slot. The shunting ring DK 7218.035 may also be used on 1 U patch panels.

Colour:
RAL 7035

Material	Dimensions mm	Packs of	Model No. DK
1 Polyamide	70 x 44	10	**7218.035**
1 Polyamide	105 x 70	10	**7219.035**
2 Polycarbonate	95 x 50	10	**7228.035**

Polycarbonate version:
Variable mounting. With 45° attachment, the cable shunting ring may be attached to a 1 U panel.

Colour:
RAL 7035

Possible alternative:

Cable management panel, 1 U,
see page 729.

Cable shunting ring

For flexible, system-compatible cable routing at the side of the 482.6 mm (19″) mounting frame or on 482.6 mm (19″) mounting angles.

Material:
Sheet steel, zinc-plated

Supply includes:
Mounting accessories.

Dimensions mm	Packs of	Model No. DK
125 x 85	10	**7111.900**
125 x 65	10	**7111.000**
85 x 43	10	**7112.000**

Anti-twist guard

for cable shunting rings
For individual attachment of cable shunting rings (DK 7111.000, DK 7111.900, DK 7112.000) to mounting angles, mounting frames or enclosure panels. May be mounted on a 25 mm pitch pattern of system punchings on mounting angles and on the 10.5 x 12.5 mm system punchings of the 482.6 mm (19″) mounting frame. It may be variably mounted and rotated on the system punchings in 90° increments.
Form-fit accommodation of the shunting ring into the integral channels allows large forces to be accommodated in all directions.

Material:
Plastic

Colour:
RAL 7035

Packs of	Model No. DK
10	**7111.100**

Shunting ring

To accommodate large quantities of cables. Shunting ring for side attachment to 482.6 mm (19″) sections and mounting frames in 800 mm wide network enclosures.
The ring is attached asymmetrically providing approx. 110 mm free space in front of the 482.6 mm (19″) level. This allows even large quantities of cables to be effectively managed.

Material:
Round steel, zinc-plated

Supply includes:
Assembly parts.

Dimensions mm	Packs of	Model No. DK
330 x 90/70	4	**7220.600**

Fibre-optic shunting rings

The inner body is grooved, and fibre-optic shunting or jumper cables can be inserted into these. A rubber ring holds different fibre-optic cables with diameters of up to 4.5 mm. Strain relief and bending radius are ensured.
Length: 120 mm.

Material:
Dual compound plastic

Colour:
– Outside: RAL 7035
– Interior: Black

Supply includes:
– 2 rubber rings
– Baying kit
– Mounting accessories

Assembly:
The supplied mounting brackets are suitable for universal use; the fibre-optic cables can be routed to the patch panel in all directions in various mounting positions:

1 At the side, directly on the patch panel

2 In front of the patch panel

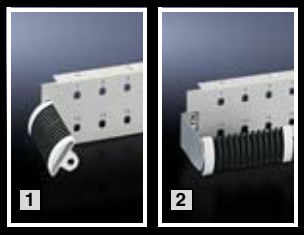
3 At the side next to the patch panel

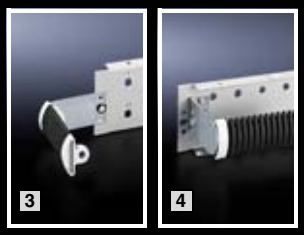
4 Behind the patch panel

Packs of	Model No. DK
2	**7116.500**

Possible alternative:

Fibre-optic cable management panel, 1 U, see page 731.





Cable clamp strap

for patch panels
To provide strain relief of incoming or outgoing data cables. Optionally available with spring brackets for accommodating and contacting the cable screen. Connection to the patch panel is by means of bolts on the panel itself.

Material:
Sheet steel, 2 mm, zinc-plated

Supply includes:
Assembly parts.

Design	Packs of	Model No. DK
Without cable screen contact	1	**7610.000**
With spring clips for contacting the cable screen	1	**7611.000**

System supports for cable routes

for TS
The depth-variable support system may be attached to all 800 – 1200 mm deep TS enclosures with external screw-fastening of the roof plate. The integral system punchings, for screws or captive nuts, support the attachment of most common cable route systems.

Material:
Sheet steel

Surface finish:
Powder-coated

Colour:
RAL 7035

Packs of	Model No. DK
2	**7831.472**

Accessories:

– Metal multi-tooth screws 5.5 x 13 mm, SZ 2486.500, see page 666.
– Cage nuts M6, TS 8800.340, see page 665.

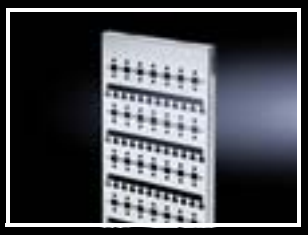
Cable route on the mounting frame

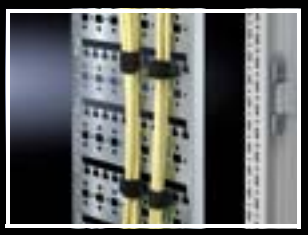
The mounting kit facilitates rear, side attachment of a cable tray to mounting frames inside enclosure systems TE 7000 and TS. This allows the integration of vertical cable management independently of the enclosure frame.

Material:
Sheet steel, zinc-plated

Packs of	Model No. DK
1	**7000.685**

Supply includes:
1 cable route 100 mm wide, 1700 mm high, including mounting kit.





Cable route, vertical

for TS
For direct attachment between the roof and base frame of a 2000 mm high frame structure. Installation position optionally on the inner or outer mounting level. Route width 200 mm.
With integral system punchings for the attachment of various cable routing aids and T-head attachment for nylon loops and cable ties.

Material:
Sheet steel, zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. DK
1	**7858.200**

Cable route

for TS
For cable routing between two 482.6 mm (19″) mounting angles in bayed enclosure suites (enclosure width 800 mm, mounting angles fitted centrally). Suitable for L-shaped and cranked mounting angles.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Packs of	Model No. DK
1	**7827.050**

Surplus cable holder

For fastening at the rear area of the enclosure, or at the side of network enclosures. The surplus cable holder can be attached to all depth stays or to punched sections and rails with a 25 mm pitch pattern – mounting dimension 150 mm. Units may also be fastened to each other.

Material:
Sheet steel

Colour:
RAL 7035

W x H x D mm	Packs of	Model No. DK
280 x 151 x 75	1	**7220.500**

Cable routing bars

For structured routing of entire cable bundles, the cable bars may be secured to a variety of different positions inside the enclosure.

Material:
– Support: Sheet steel
– Cable routing bars, connection combs: Plastic

Colour:
RAL 9005

Supply includes:
– Cable routing bars
– Connection combs

482.6 mm (19˝) attachment
For horizontal cable routing within the distributor level.
Thanks to their open mounting holes, they can also be retrospectively slotted onto the 482.6 mm (19˝) system punchings of the mounting level at any time and secured with the existing mounting screws of the installed components.

U	No. of connection combs	Packs of	Model No. DK
4	2	4	**7111.224**
1	5	10	**7111.214**

All-round attachment for universal use
For vertical and horizontal cable routing inside the enclosure or within the distributor level.

U	No. of connection combs	Packs of	Model No. DK
4	2	4	**7111.222**
1	5	10	**7111.212**

Cranked attachment
For mounting angles and mounting frames.
Horizontal, U-based cable routing to the distributor level.

U	No. of connection combs	Packs of	Model No. DK
4	2	4	**7111.220**
1	5	10	**7111.210**

Connection comb
For connecting individual cable routing bars into complete systems (included with the supply).

Cable routing 482.6 mm (19˝)

Cable duct

for TS/TE

For laying cable in particularly high packaging densities (high density network nodes), in the optical fibre or copper cabling sector.
Large capacity. A wide range of cable routing, cable clamping, channelling and cross-cabling options creates the requirements for maximum port density in the minimum possible space.
Individual U-based cable routing makes it possible to dispense with additional cable routing via patch panels within the distributor level, thereby equipping every U with connection points. This increases port density by up to 50%.
The removable duct cover, hinged on both sides, allows user-friendly access at any time. The cable sections are held back by removable cross-bars to protect them against falling out. Mounting is either on mounting rails at the sides, and on mounting angles and mounting frames in the 482.6 mm (19˝) distributor level. Two ducts may also be secured back-to-back.

Material:
– Cable duct: Sheet steel, spray-finished
– Cable routing components: Plastic
– Front trim panel: Aluminium, spray-finished

Colour:
RAL 7035

Supply includes:
Hinged front trim panel and assembly parts.

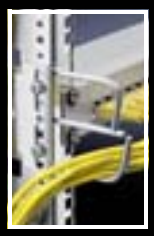
Size W x D mm	Qty. U	Packs of	Model No. DK
95 x 235	24	1	**7827.310**
	42	1	**7827.320**

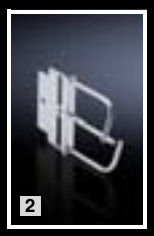
Note:
When using the duct in conjunction with 482.6 mm (19˝) mounting frames and TS 8, the inner mounting level in the vicinity of the cable duct is not available.
Within the duct, additional cable ties may be attached to accommodate spare cables and for system-compatible cable deflection.

Accessories:

Cable ties for spare cables:

	Packs of	Model No. DK
1	4	**7827.330**





Distributor clip

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

1 Distributor clip
For structured cable routing of entire cable bundles, the distributor clip may be secured to a variety of different positions inside the enclosure. It may be used for both horizontal and vertical distribution of the cables.

2 Distributor clip, horizontal
For mounting angles and mounting frames. Distribution of cables among the various height units of the patch level.

	Packs of	Model No. DK
1	4	**7111.252**
2	4	**7111.250**

Drawer 482.6 mm (19˝)

to accommodate surplus cables

The 1 U drawer offers a convenient opportunity for storing surplus cables in an organised, compact and secure way within the 482.6 mm (19˝) levels.

- With brush strip at the front for cable entry
- T-head rail in the rear section for cable clamping
- Ring-shaped kink-free routing of the conductors on adjustable elements in the interior
- May be fitted between two 482.6 mm (19˝) levels at a distance of 435 – 750 mm
- Independent from the enclosure system
- Both on L-shaped and cranked mounting angles and mounting frames.

Distance between levels mm	Packs of	Model No. DK
435 – 750	1	**7063.200**

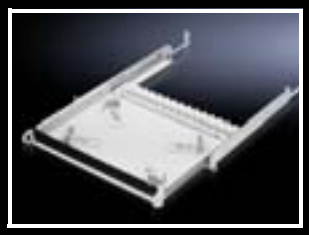
Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Drawer including telescopic slides and assembly parts.

Accessories:

Nylon loop DK 7072.220/DK 7072.230, see page 720.



Cable management panel

482.6 mm (19˝)

For horizontal management of the patch cables, with 5 cable shunting rings.

Material:
– Panel: Sheet steel
– Ring: Polyamide

Colour:
RAL 7035

U	Ring size mm	Packs of	Model No. DK
1	70 x 44	1	**7159.035**[1)]

[1)] Cable shunting rings supplied loose.

Material:
– Panel: Sheet steel
– Ring: Polycarbonate

Colour:
RAL 7035

U	Ring size mm	Packs of	Model No. DK
1	95 x 50	1	**7255.035**[1)]

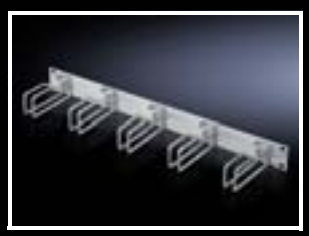
[1)] Cable shunting rings supplied loose.

Material:
– Panel: Sheet steel
– Ring: Steel

Surface finish:
Ring: Zinc-plated

Colour:
RAL 7035

U	Ring size mm	Packs of	Model No. DK
1	105 x 43	1	**7257.035**
2	125 x 85	1	**7257.100**
1	43 x 55	1	**7257.200**



Material:
– Panel: Sheet steel
– Ring: Steel

Surface finish:
Ring: Zinc-plated

Colour:
RAL 9005

U	Ring size mm	Packs of	Model No. DK
1	105 x 43	1	**7257.005**
2	125 x 85	1	**7257.105**[1)]

[1)] Extended delivery times.

Note:
The sizes given are external dimensions.

Cable routing 482.6 mm (19˝)

Cable management panel with cable routing bars

482.6 mm (19˝)
For horizontal management of the patch cables with cable routing bars. Opening the individual cable routing bars allows user-friendly modification and extension of the cabling.

Material:
– Panel: Sheet steel, spray-finished
– Cable routing bars: Plastic

Colour:
– Panel: RAL 7035
– Cable routing bars: Black

U	Bar depth mm	No. of bars/U	Packs of	Model No. DK
1	Approx. 80	5	1	**7257.050**
2	Approx. 80	4	1	**7257.150**

Cable management panel, 2 U

482.6 mm (19˝)
The cable routing chamber has cut-outs from above, into which the patch cables can be inserted. The cable management panel is equipped with a flap and quick-release fasteners at the front, for optimum access to the cables. From the rear, the cables can be inserted via a cut-out with brush strips. With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

Material:
Sheet steel

Colour:
RAL 7035

U	Depth mm	Packs of	Model No. DK
2	85	1	**7158.035**

Accessories:

Cable clamp strap,
see page 725.

Cable routing channel

482.6 mm (19˝)
To hold the patching cables.

Material:
Sheet steel

Colour:
RAL 7035

U	Depth mm	Packs of	Model No. DK
1	85	1	**7149.135**
3	100	1	**7149.035**

Cable management panel, 2 U

To accommodate fibre-optic and copper cables. Fibres from the patch panels are placed into the tray via openings and may be distributed at the sides. Rounded openings protect the cable sheathing.

Material:
Sheet steel

Colour:
RAL 7035

U	Packs of	Model No. DK
2	1	**7269.135**

Cable management duct, horizontal

482.6 mm (19˝)

The duct facilitates concealed, simple cable routing of large quantities of cables to equipment within the 482.6 mm (19˝) attachment level. Large cut-outs ensure convenient, kink-free cable routing to the components top and bottom. For simple handling, the entire front panel may be removed via quick-release fasteners. After attaching the cables, these are held in position via nylon ties, whilst the duct may be resealed.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
5 nylon loops.

U	Packs of	Model No. DK
2	1	**7158.100**
3	1	**7158.150**[1)]

[1)] Extended delivery times.

Cable tray, 2 U

For side routing and distribution of fibre-optic and copper cables. In this way, cables inserted into the roof area may be routed at the side of the mounting angles in the upper section of the rack. Depth 85 mm.

Material:
Sheet steel

Colour:
RAL 7035

U	Packs of	Model No. DK
2	1	**7269.235**

Fibre-optic cable management panel, 1 U

482.6 mm (19˝)

The four fibre-optic cable shunting rings integrated into the front permit optimum management of up to 48 fibres.

Material:
- Panel: Sheet steel
- Ring: Dual compound plastic

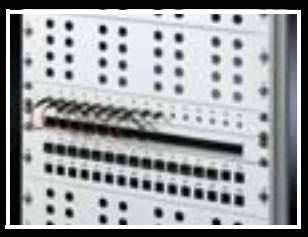
Colour:
- Panel: RAL 7035
- Cable shunting rings on the outside: RAL 7035, black interior

U	Packs of	Model No. DK
1	1	**7256.035**

Possible alternative:

Fibre-optic support guide DK 7116.500, see page 725.

Cable routing 482.6 mm (19˝)



Cable entry panel

482.6 mm (19˝)
Cut-out 390 x 40 mm (2 U) or 390 x 20 mm (1 U) with brush insert. With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

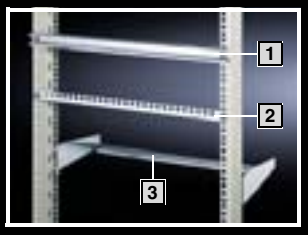
Material:
Sheet steel

Colour:
RAL 7035

U	Packs of	Model No. DK
1	1	**7140.535**
2	1	**7150.535**

Accessories:

Cable clamp strap,
see page 725.



Cable routing across the 482.6 mm (19˝) mounting level

There are various different cable clamping systems available for system-compatible cable routing in 482.6 mm (19˝) systems with one or two pairs of mounting angles:

Material:
Sheet steel

Surface finish:
Zinc-plated

1 C rail
for mounting between all pairs of 482.6 mm (19˝) mouting angles.

C rail	Depth in mm	Packs of	Model No. DK
482.6 mm (19˝) level	–	6	**7016.100**

2 Cable clamp rails
for mounting between all pairs of 482.6 mm (19˝) mounting angles, for cable ties.

Cable clamp rail	Depth in mm	Packs of	Model No. DK
482.6 mm (19˝) level	–	6	**7016.110**

3 Cable clamp straps for large swing frames, and Data Rack,
the cable clamp straps are mounted on the frame at the rear, whilst the cables are clamped 250 mm behind the 482.6 mm (19˝) mounting angles.

4 Cable clamp strap for DK-TS mounting angles,
with side lugs for suspending from the cranked 482.6 mm (19˝) mounting angles. Cable clamping is via cable ties.

Cable clamp strap for	Depth in mm	Packs of	Model No. DK
Data Rack and large swing frame	250	6	**7016.120**
DK-TS mounting angles	100	6	**7016.130**

Also required:

With L-shaped TS mounting angles, adaptor DK 7827.300 is additionally required,
see page 676.

Swing frame, small

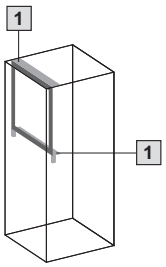
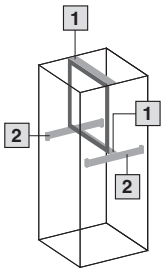
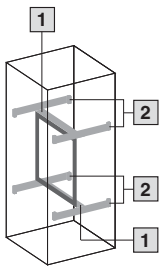
Installation for 600 mm and 800 mm wide enclosures
For mounting 482.6 mm (19˝) equipment.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Cam with double-bit lock insert and parts for attaching to the installation kit.

Technical information:
Available on the Internet.

Installation	Front, top/bottom	Set back, top/bottom	Set back/front, centre
			

U	Packs of	Model No. SR
3	1	**2377.030**
6	1	**2377.060**
9	1	**2377.090**
12	1	**2377.120**
15	1	**2377.150**
18	1	**2377.180**

Also required:

[1] Installation kit		1 set	For enclosure width	
			600	800
			2377.860	**2377.880**
[2] PS punched section without mounting flange, 2 or 4 required	For enclosure depth mm			Page
	400	4	4374.000	652
	500	4	4375.000	652
	600	4	4376.000	652
	800	4	4377.000	652
Support bracket, 2 required per PS punched section without mounting flange		6 sets	8800.330	661

Accessories

Lock inserts, type D	2484.000	609

Note:
The swing frame stay is required to lock the open swing frame, see page 738.

Installation kit

for swing frame, small in ES, TP universal console.

Enclosure width mm	Packs of	Model No. SR
600	1 set	**2377.460**

Accessories:

Depending on the installation position:
- Support bracket PS 4183.000, see page 661 and
- PS punched section without mounting flange in accordance with the enclosure depth, see page 652.

Swing frame

Vario swing frames

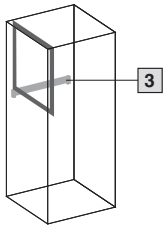
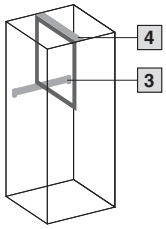
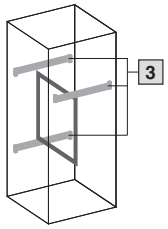
Installation for ES and CS modular enclosures, 800 mm wide enclosures
For the installation of 482.6 mm (19˝) equipment.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Double-bit lock insert and assembly parts.

Technical information:
Available on the Internet.

Installation	Front[1], top	Set back, top	Set back/front[1], centre
			

U	Packs of	Model No. SR
6	1	**2004.235**
12	1	**2008.235**
18	1	**2011.235**

Also required:

	For enclosure mm			Page
PS punched section with mounting flange	3 400 depth	4	8800.640	652
	3 500 depth	4	8800.650	652
	4 800 width	4	4365.000	652

Accessories

Lock inserts, type D		2484.000	609

[1] Max. installation depth for enclosure depth 400 mm: 305 mm
Max. installation depth for enclosure depth 500 mm: 405 mm

Swing frame, large

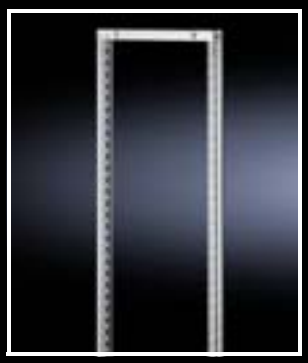
without trim panel, for 600 mm and 1200 mm wide enclosures
For mounting 482.6 mm (19˝) equipment.

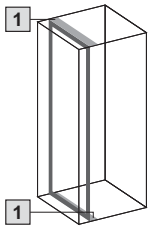
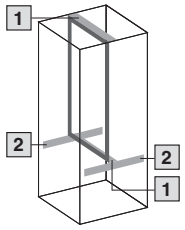
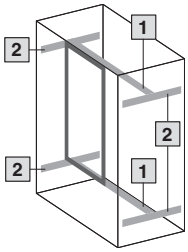
Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Cam with double-bit lock insert and parts for attaching to the installation kit.

Technical information:
Available on the Internet.



Installation	Full installation, front/set back	Partial installation top, front/set back	Partial installation centre, front/set back
			

For enclosure width mm			600	1200
U	For min. enclosure height mm	Packs of	**Model No. SR**	
22	1200	1	**2322.700**	
31	1600	1	**2331.700**	
36	1800	1	**2336.700**	
40	2000	1	**2340.700**	
45	2200	1	**2345.700**	

Accessories		Page
Lock inserts, type D	2484.000	609

Also required:

1 Divider kits

For enclosure			Hinge	Load capacity			Packs of
TS	ES	CM					
–	–	■	130°	< 800 N	**1985.500**	**–**	1 set
■	■	–		< 1500 N[2)]	**1994.835**	**–**	1 set
■	■	–		< 1500 N[2)]	**–**	**1996.835**	1 set
■	–	–		< 1500 N[1)]	**–**	**1996.535**	1 set

[1)] Installation only possible with the mounting plate slide rail dismantled.
[2)] Maximum load 800 N with the TS mounting plate slide rail dismantled.

2 For TS:
TS punched section with mounting flange 23 x 73 mm, 2 or 4 required

Installation in enclosure depth mm	Packs of	**Model No. TS**	Page
400	4	8612.140[1)]	647
500	4	8612.550	648
600	4	8612.560	648
800	4	8612.580	648
1000	4	8612.500	648
1200	4	8612.520	648

[1)] TS punched section with mounting flange, 17 x 73 mm

2 For ES:
PS punched section with mounting flange 23 x 73 mm, 2 or 4 required

Installation in enclosure depth mm	Packs of	**Model No. TS**	Page
400	4	4369.000	652
500	4	4370.000	652

Note:
The swing frame stay is required to lock the open swing frame,
see page 738.

Swing frame

Swing frame, large

with trim panel, for 800 mm wide enclosures
For mounting 482.6 mm (19˝) equipment.

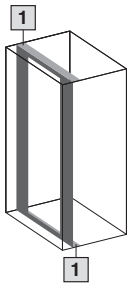
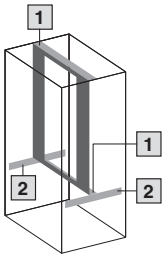
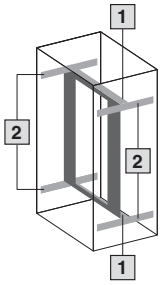
Material:
Sheet steel

Surface finish:
– Frame: Zinc-plated
– Trim panel: Spray-finished

Colour:
RAL 7035

Supply includes:
Locking rod system with double-bit lock insert and parts for attaching to the installation kit.

Technical information:
Available on the Internet.

Installation	Full installation, width 800 mm, front/set back	Partial installation top, width 800 mm, front/set back	Partial installation centre (in the height), width 800 mm, front/set back
			

Mounting position			side	central
With hinge			130°/180°	180°
For enclosure width mm			800	
U	For min. enclosure height mm	Packs of	**Model No. SR**	
22	1200	1	**2323.235**	**2324.235**
31	1600	1	**2332.235**	**–**
36	1800	1	**2337.235**	**2338.235**
40	2000	1	**2341.235**	**2342.235**
45	2200	1	**2346.235**	**2347.235**
Heavy-duty version[1]				
U	For enclosure height mm	Packs of	**Model No. SR**	
40	2000	1	**7858.100**	**–**

Accessories

Ergoform S lock systems	see page 607
Lock inserts, version A	see page 609

Also required:

1 Divider kits

For enclosure TS	ES	CM	Hinge	Load capacity		Packs of
–	–	■	130°	< 800 N	**1986.500**	1 set
■	■	–		< 1500 N[3]	**1995.235**	1 set
■	–	–		< 1500 N[2]	**1995.835**	1 set
–	–	■	180°	< 800 N	**1986.500 + 1978.200**	1 set
■	■	–		< 1200 N[3]	**1997.235**	1 set
■	–	–		< 1200 N[2]	**1997.835**	1 set

[1] Load capacity 350 kg, including installation kit, for enclosure height 2000 mm.
[2] Installation only possible with the mounting plate slide rail dismantled.
[3] Maximum load 800 N with the TS mounting plate slide rail dismantled.

2 For TS: TS punched section with mounting flange 23 x 73 mm, 2 or 4 required

Installation in enclosure width/depth mm	Packs of	**Model No. TS**	Page
400	4	8612.140[1]	647
500	4	8612.550	648
600	4	8612.560	648
800	4	8612.580	648
1000	4	8612.500	648
1200	4	8612.520	648

[1] TS punched section with mounting flange, 17 x 73 mm

2 For ES: PS punched section with mounting flange 23 x 73 mm, 2 or 4 required

Installation in enclosure width/depth mm	Packs of	**Model No. TS**	Page
400	4	4369.000	652
500	4	4370.000	652

Note:
The swing frame stay is required to lock the open swing frame,
see page 738.

Compact swing frames

for AE

For mounting slide-in electronic equipment, 482.6 mm (19˝), across the entire height.

Technical specifications:
Torsionally stiff frame, welded from rectangular tube and triple-folded support section.

Material:
Sheet steel

Colour:
RAL 7035

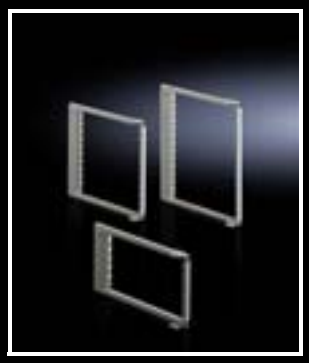
Supply includes:
Double-bit lock insert and assembly parts.

Width mm	600	600	600/760
Height mm	380	600	760
U	6	11	14
Packs of	1	1	1
Model No. SR	**2026.200**	**2027.200**	**2034.200**

Accessories:

41 mm lock insert, version C, see page 609.

Detailed drawings:
Available on the Internet.



Pull-out frame, 482.6 mm (19˝)

for TS

For the installation of a pull-out 482.6 mm (19˝) front. For 600 and 800 mm wide TS enclosures, from a depth of 800 mm.

- Overall depth: 525 mm
- Extension piece: 500 mm
- Distance: 300 mm

Load capacity:
50 kg

Colour:
RAL 7035

Supply includes:
Telescopic slides and assembly parts.

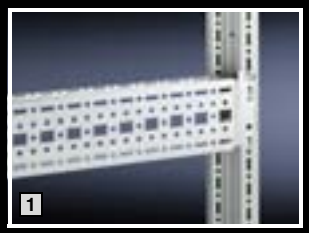
U	Packs of	Model No. DK
12	1	**7124.035**

Note:
The slide rail DK 7963.310 (see page 750) can be mounted directly in the pull-out frame to support heavy equipment.

Divider kits

for pull-out frame

	Enclosure depth mm	Packs of	For enclosure width	
			600 mm	800 mm
			Model No. TS	
1 TS punched section with mounting flange	800	4	**8612.080**	**–**
	1000	4	**8612.000**	**–**
2 Depth stays	800	4	**–**	**7827.800**
	1000	4	**–**	**7827.000**



Swing frame

Swing frame stay

Holds the swing frame in the open position.

For mounting on: Swing frame, large
- SR 1979.200, at the top of the enclosure
- SR 1980.200, at the bottom of the enclosure (with safety stop at 160°)

	Packs of	Model No. SR
with 130° hinge	5	**1979.200**
with 180° hinge	1	**1980.200**

For mounting on: Swing frame, small
- SR 1979.200, may be mounted at the top or bottom of the installation kit.

Slide rails

To support heavy slide-in electronic equipment, 482.6 mm (19˝) in the swing frame.

Material:
Sheet steel

Surface finish:
Zinc-plated

For slide-in equipment with max. installation depth	Packs of	Model No. SR
T max. < 190 mm	10	**1962.200**
T max. > 190 mm	10	**1963.200**

Mounting angles, 482.6 mm (19˝)

for TS, CS Toptec

Available in two versions:

Cranked
The integral U markings in the front facilitate systematic assembly within the 482.6 mm (19˝) attachment level.

L-shaped
The L-shaped mounting angles accommodate the installation kits of server systems. The integral U markings in the front facilitate systematic assembly within the 482.6 mm (19˝) attachment level.

Technical specifications:
- 2 mm sheet steel
- Integral 482.6 mm (19˝) punchings (EIA standard)
- Side round and square punchings
- Clear chromated for conductive connection of the 482.6 mm (19˝) installed equipment

Supply includes:
Assembly parts.

Explanation of the mounting dimensions in interior installations: See page 740.

Cranked

Full installation rack height mm	U	Packs of	Model No. DK
800	15	2	**7827.080**
1000	20	2	**7827.100**
1200	24	2	**7827.120**
1400	29	2	**7827.140**
1600	33	2	**7827.160**
1800	38	2	**7827.180**
2000	42	2	**7827.200**
2200	47	2	**7827.220**

L-shaped

Full installation rack height mm	U	Packs of	Model No. DK
600	11	2	**7827.061**
800	15	2	**7827.081**
1000	20	2	**7827.101**
1200	24	2	**7827.121**
1400	29	2	**7827.141**
1600	33	2	**7827.161**
1800	38	2	**7827.181**
2000	42	2	**7827.201**
2200	47	2	**7827.221**

Note:
The mounting angles can also be used to accommodate 21˝, 23˝ and 24˝ attachment dimensions.

! Also required:
- TS punched sections with mounting flanges or depth stays as installation kit for mounting angles, see page 745 – 746.
- For L-shaped mounting angle variant: for mounting slide rails or component shelves: Adaptor DK 7827.300, see page 676.

Mounting angles, metric

for TS
The L-shaped mounting angles accommodate metric assemblies and components. Depending on the installation kit, mounting dimensions 465 mm and 515 mm can be configured.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Explanation of the mounting dimensions in interior installations: See page 740.

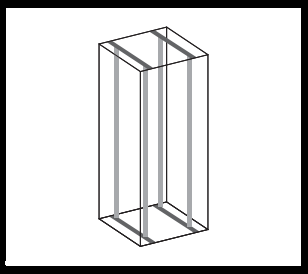
Full installation rack height mm	SU	Packs of	Model No. DK
–	17	2	**7831.611**[1)]
1000	37	2	**7831.621**[1)]
1200	43	2	**7794.420**[1)]
1600	59	2	**7794.740**[1)]
2000	76	2	**7831.631**
2200	84	2	**7831.641**[1)]

[1)] Extended delivery times.

! Also required:

TS punched sections with mounting flanges or depth stays as installation kit for mounting angles, see page 745 – 746.

Mounting angles



Mounting frame, 482.6 mm (19˝)

for TS, CS Basic and modular enclosures

The welded 482.6 mm (19˝) mounting frame may be attached with complete depth variability and is used to structure the front and rear 482.6 mm (19˝) level.
The mounting frame has the same system punchings as the TS 8 enclosure section at the sides and rear, and therefore supports the mounting of various TS 8 system accessories such as cable clamp rails, cable shunting rings etc.

Load capacity:
Up to 1000 kg static load, with even load distribution on two 482.6 mm (19˝) mounting frames, with full installation.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Note:
A combination of 482.6 mm (19˝) mounting frame plus fan mounting plate is not possible. For active ventilation, we recommend use with modular fan roof.

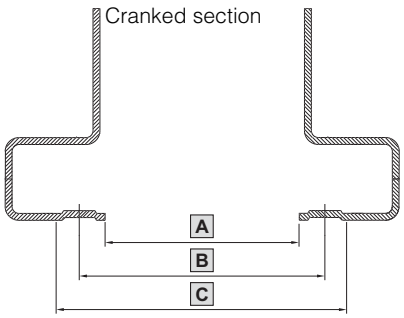
Explanation of the mounting dimensions in interior installations: See page 740.

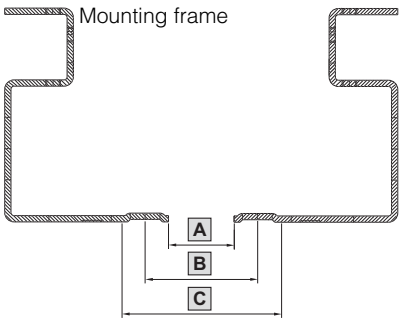
For enclosures		U	Packs of	Model No. DK
Width mm	Height mm			
600	600	11	1	**7856.710**
600	1200	24	1	**7856.713**
600	1800	38	1	**7856.716**
600	2000	42	1	**7856.719**
600	2200	47	1	**7856.722**
800	1200	24	1	**7856.725**
800	1800	38	1	**7856.728**
800	2000	42	1	**7856.731**
800	2200	47	1	**7856.734**

Accessories:

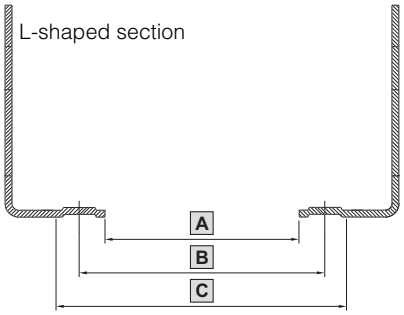
- Captive nuts, see page 757.
- Assembly screws, see page 666.
- Cable clamp rails TS, see page 722.
- C rails, see page 653.
- Component shelves, see from page 668.
- Fan roof, modular, see page 405.
- TS divider kit, heavy-duty, width/depth-variable, see page 745.

Explanation of the mounting dimensions in interior installations





A = Clearance width
B = Mounting dimension
C = External dimension of the rack-mounted equipment or of the front panels



Installation width	A mm	B mm	C mm
≥ 19˝	450	465	482.6
≥ 21˝	500	515	533.4
≥ 23˝	552	567	584.2
≥ 24˝	577	592	609.6
≥ 10˝/39 HP	221.4	236	254
≥ 1/2 19˝/42 HP	236.6	251.2	269.2
≥ 9.5˝	208.7	223.3	241.3
≥ 18 SU	450	465	485
≥ 20 SU	500	515	535

Adaptor section, 482.6 mm (19˝)

for TS
For the installation of subracks and other equipment.
Mounting angles are easily shortened for partial assemblies.

Supply includes:
Assembly parts.

Note:
The 482.6 mm (19˝) measurement is obtained when mounting on the TS frame for enclosures with width 600 mm.

Accessories:

- Infill panels, see page 742.
- Captive nuts, see page 665.
- Assembly screws, see page 666.
- Slide rails with one-sided mounting, see page 751.
- Slide rails with two-sided mounting, see page 751.
- Drawer installation kit, see page 753.
- Component shelf installation kit, see page 676.

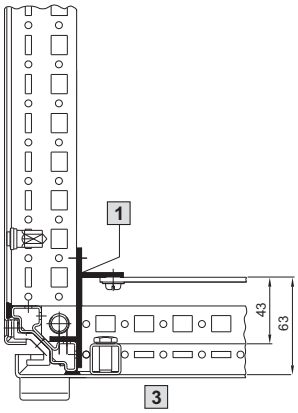
For enclosure system TS[1)]

For enclosure height mm	Material	U	Packs of	Model No. TS
1600	Extruded aluminium section	33	4	**8613.060**
1800		38	4	**8613.080**
2000		42	4	**8613.000**
2200		47	4	**8613.020**
For PC enclosure[2)]		17	4	**8613.070**

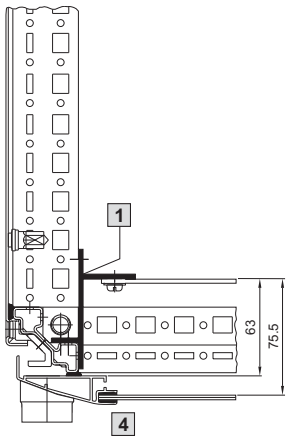
[1)] For the rear of electronic enclosures, see page 742.
[2)] Behind lower door.

Assembly examples of TS:

Drawing 1

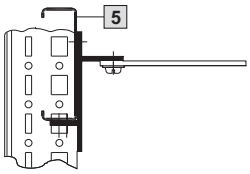


Drawing 2

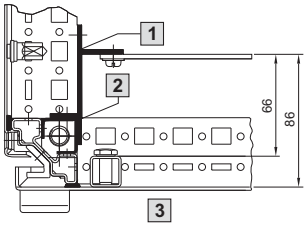


Drawing 1 and 2:
Mounting angle or adaptor piece fitted in the foremost installation position, directly on the vertical section.
When installing slide rails with two-sided mounting (see page 751), the same mounting angles or adaptor pieces must also be mounted on the vertical section at the rear.

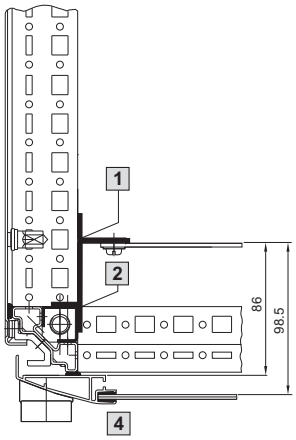
Drawing 3



Drawing 4



Drawing 5



Drawing 3:
Mounting on two vertically installed PS punched sections permits fully flexible use of the enclosure depths.

Drawing 4 and 5:
Greater distance from the door is achieved by mounting on adaptor rails for PS compatibility.
In this position, the slide rails can be fitted with one-sided mounting.

1 Adaptor section/piece
2 Adaptor rail
3 TS sheet steel door
4 TS glazed door
5 Punched sections without mounting flanges

Mounting angles

Adaptor pieces, 482.6 mm (19˝)

for TS, ES

The “1 U” sub-section of mounting angles.
For the installation of individual subracks and other equipment.

Supply includes:
Assembly parts.

Assembly examples:
May be found on page 741.

Note:
The 482.6 mm (19˝) measurement is obtained when mounting on the TS/ES frame for enclosures with width 600 mm.
Adaptor set (DK 7246.100) for 800 mm wide enclosures, see page 752.

For TS

U	Packs of	Model No. TS
1	4	**8613.010**

For ES

U	Packs of	Model No. PS
1	8	**4547.000**

Accessories:

- Captive nuts, see page 665.
- Assembly screws, see page 666.
- Slide rails with two-sided mounting, see page 751.
- Drawer installation kit, see page 753.
- Component shelf installation kit, see page 676.

Adaptor pieces, 482.6 mm (19˝)

for rear installation in TS electronic enclosures

For installing subracks at the front and back, and for attaching the slide rails TS 8613.150, TS 8613.160 and TS 8613.180 (see page 751).
For mounting on the inner mounting level.
The outer mounting level may, for example, still be used for cable routing on depth-mounted TS punched sections with mounting flange.

Material:
Extruded aluminium section

Supply includes:
Assembly parts.

Note:
Design similar to adaptor sections, 482.6 mm (19˝) (see page 741), but asymmetrical height, suitable for TS electronic enclosure.

For enclosure height mm	U	Packs of	Model No. TS
1600	33	2	**8613.360**
2000	42	2	**8613.300**

Accessories:

- Captive nuts, see page 665.
- Assembly screws, see page 666.
- Slide rails with two-sided mounting, see page 751.
- Drawer installation kit, see page 753.
- Component shelf installation kit, see page 676.

Possible alternative:

Adaptor pieces, 482.6 mm (19˝), see page 742.

Infill panels, 482.6 mm (19˝), horizontal

for adaptor pieces

To infill between installed 482.6 mm (19˝) equipment positioned in the full enclosure height and the enclosure clearance height.

Material:
Extruded aluminium section

Supply includes:
Assembly parts.

For enclosure height mm	Packs of	Model No. TS
1600/2000	2	**8613.040**
1800/2200	2	**8613.030**

Mounting angles, 482.6 mm (19˝)

for CS basic and modular enclosures
For mounting 482.6 mm (19˝) components in Outdoor enclosures. The mounting angles are depth-adjustable on a 25 mm pitch pattern. An installation bracket is required to attach the mounting angles.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Mounting accessories.

Explanation of the mounting dimensions in interior installations: See page 740.

Enclosure height mm	U	Packs of	Model No. DK
800	15	2	**7685.000**
1200	24	2	**7688.000**

Also required:

Installation bracket PS,
see page 743.

Depth stay for PS

for mounting angles 482.6 mm (19˝)

Material:
Sheet steel

Surface finish:
Zinc-plated

Enclosure width mm	Installation (centre)	Packs of	Model No. DK
600/1200	482.6 mm (19˝)	2	**7696.000**
800	482.6 mm (19˝)/ metric	2	**7698.000**

Mounting angles, 482.6 mm (19˝)

for DK-EL
This mounting angle kit allows you to integrate a second 482.6 mm (19˝) level into EL enclosures.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

Explanation of the mounting dimensions in interior installations: See page 740.

U	Packs of	Model No. DK
6	2	**7705.706**
9	2	**7705.709**
12	2	**7705.712**
15	2	**7705.715**
18	2	**7705.718**
21	2	**7705.721**

Extended delivery times.

Mounting angles

Mounting angles, 482.6 mm (19˝)

for QuickBox
For the installation of 482.6 mm (19˝) rack-mounted equipment.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts.

For enclosure U	Packs of	Model No. QB
12	2	**7502.203**
15	2	**7502.204**
18	2	**7502.205**
21	2	**7502.206**

Mounting angles, 482.6 mm (19˝)

for FlatBox
L-shaped bracket as 2nd attachment level.

Material:
Sheet steel

Supply includes:
Assembly parts for fast, toolless assembly.

U	Packs of	Model No. DK
6	2	**7507.706**
9	2	**7507.709**
12	2	**7507.712**
15	2	**7507.715**
18	2	**7507.718**
21	2	**7507.721**

Note:
The 2nd attachment level should always be ordered in the same height as the basic enclosure. Partial configuration is not possible.

Mounting angles, 482.6 mm (19˝)

for VerticalBox
For mounting at the side of the VerticalBox. With these mounting angles, instead of 5 U vertically at the side, up to 10 U may be used horizontally if only a minimal installation depth is required. Infinitely depth-variable positioning.

Material:
Sheet steel, spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

U	Packs of	Model No. QB
12	2	**7502.203**

Note:
10 usable U.

Adhesive measurement strip, 482.6 mm (19˝)

Made from robust aluminium foil, guarantees easy handling and durability. With numerical labelling on a 482.6 mm (19˝) pitch pattern for clear identification of the various height units. The double-sided labelling allows the counting direction to be freely selected, up to a maximum of 56 U. In this way, clear documentation of the various mounting parts is easily achieved.

Material:
Aluminium foil

Labelling range U	Packs of	Model No. DK
1 – 56	1	**7950.100**

Mounting angles/mounting kits for mounting angles

TS mounting kit, heavy-duty, width/depth-variable

for mounting frame 482.6 mm (19˝) in TS, CS basic and modular enclosures

Installation in enclosure width 800 mm
The mounting kit allows depth- and width-variable installation of a 600 mm wide mounting frame, 482.6 mm (19˝), in 800 mm wide enclosures.

Load capacity:
750/1500 kg static load per level/ per enclosure

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. DK
1 set	**7827.590**

Additional fastening attachment for mounting angles

for 800 mm wide TS network enclosures
The additional fastening attachment counteracts bending of the mounting angles mounted on installation brackets in case of unevenly distributed loads. It is attached directly to 482.6 mm (19˝) mounting angles and to the punched section with mounting flange fitted in the depth (inner mounting level).

Material:
Sheet steel

Supply includes:
Assembly parts.

Packs of	Model No. DK
2	**7284.135**

Also required:

TS punched section with mounting flange for the inner mounting level,
see page 647 – 648.

TS punched section with mounting flange as installation kit

for
- **Mounting angles, 482.6 mm (19˝)**
- **Mounting angles, metric, mounting dimension 465 mm**

Installation in enclosure width 600 mm

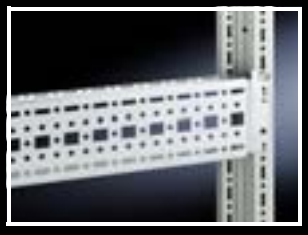
The installation kit consists of 4 TS punched sections with mounting flange 17 x 73 mm to accommodate mounting angles. One pack is sufficient for installing one or two 482.6 mm (19˝) mounting levels. For exceptionally heavy installed equipment, we recommend the installation of additional punched sections in the centre.

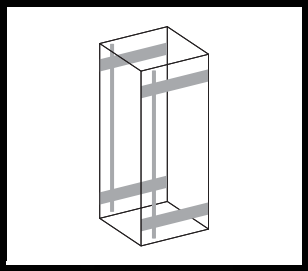
Material:
Sheet steel

Surface finish:
Zinc-plated

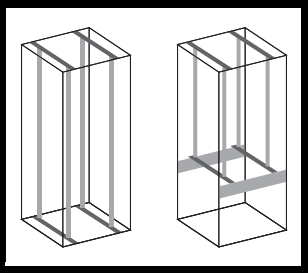
Supply includes:
Assembly parts.

For enclosures		Packs of	Model No. TS
Width mm	Depth mm		
600	600	4	**8612.060**
600	800	4	**8612.080**
600	1000	4	**8612.000**
600	1200	4	**8612.020**





Mounting kits for mounting angles



Installation bracket TS

for mounting angles into TS, 482.6 mm (19˝)

Installation in enclosure width 800 mm

Depth stays are screw-fastened to the enclosure frame in the enclosure width.
The mounting angle is attached to the depth stay at the top and bottom. The bracket ensures optimum clearance at the sides for cable routing. For partial enclosure configuration, the depth stays may be attached to the TS punched sections with mounting flanges 17 x 73 mm on the outer attachment level of the enclosure frame. Fully depth-variable attachment is facilitated by the attachment slots. Either cranked or L-shaped mounting angles may be used.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Installation position	Packs of	Model No. DK
central	2	**7827.480**
side	2	**7827.490**

Accessories:

For partial installation,
– TS punched section with mounting flange, 17 x 73 mm,
see page 647 – 648.
– Mounting angles, cranked or L-shaped,
see page 739.

TS installation kit, width-variable

482.6 mm (19˝)/metric in TS
Universal depth stays to which both L-shaped and cranked mounting angles may be variably mounted in the depth and width.

Installation kit for all width dimensions
- Imperial mounting dimensions 19˝/21˝/23˝/24˝
- Metric mounting dimensions 18/20 SU

Load capacity:
200 kg static load per level

Material:
Sheet steel

Surface finish:
Zinc-plated

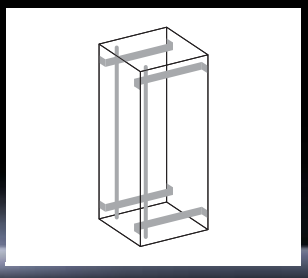
Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. DK
800	1 set	**7827.550**
1000	1 set	**7827.560**
1200	1 set	**7827.570**

1 set = 4 stays

Accessories:

Component shelves, 482.6 mm (19˝),
see page 739.



Depth stays as installation kit

for mounting angles, 482.6 mm (19˝)

Installation in enclosure width 800 mm

One installation kit consists of 4 depth stays to accommodate mounting angles. One pack is sufficient for installing one or two 482.6 mm (19˝) attachment levels. For exceptionally heavy installed equipment, we recommend the installation of an additional depth stay in the centre. The front cut-out makes cable routing easier with full configuration

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosures		Packs of	Model No. DK
Width mm	Depth mm		
800	600	4	**7827.600**
800	800	4	**7827.800**
800	1000	4	**7827.000**

Possible alternative:

Installation brackets TS for mounting angles,
see page 746.

Mounting kits for mounting angles

Depth stays as installation kit

for mounting angles, 482.6 mm (19˝), mounting dimensions 23˝ and 24˝

Installation in enclosure width 800 mm

When using depth stays in 800 mm wide enclosures, attachment spacings of 23˝ and 24˝ are achieved. Either cranked or L-shaped, 482.6 mm (19˝) mounting angles may be used.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Mounting dimension 23˝

For enclosures		Packs of	Model No. DK
Width mm	Depth mm		
800	800	4	**7827.823**
800	1000	4	**7827.023**

Extended delivery times.

Mounting dimension 24˝

For enclosures		Packs of	Model No. DK
Width mm	Depth mm		
800	800	4	**7827.824**
800	1000	4	**7827.024**

Extended delivery times.

Accessories:

Mounting angles, cranked or L-shaped,
see page 739.

Mounting frame 54 U

for TS

The mounting frame allows configuration of a side-offset 482.6 mm (19˝) level with 42 U useful installation space plus the additional integration of a further 12 U for vertical installation at the side. The additional side extension is divided into three installation levels arranged on top of one another, each with 4 U.
The mounting frame may be installed at either the front or rear.

Material:
Sheet steel

Surface finish:
– Installation bracket: Zinc-plated
– Side trim panel: Spray-finished

Colour:
RAL 7035

Supply includes:
12 U mounting trim at the side.

For enclosures		Additional vertical installation area	Packs of	Model No. DK
Width mm	Height mm			
800	2000	12 U	1 set	**7827.554**

Extended delivery times.

Also required:

Mounting angles, 482.6 mm (19˝),
see page 739.

Mounting kit, 2 U

for 482.6 mm (19˝) equipment

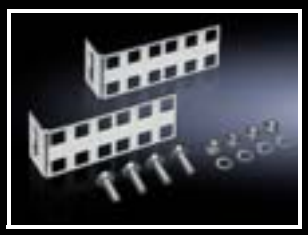
Facilitates fast, simple integration of additional 2 U mounting space within an enclosure by attaching to the enclosure frame or to the existing mounting angles at the sides. The flexible slot fastening of the brackets means that the distance between the two installation brackets may be freely selected, so that other 482.6 mm (19˝) attachment dimensions may be implemented. The second row of holes is used for the optional configuration of additional mounting surfaces.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Mounting accessories.

Packs of	Model No. DK
2	**7246.420**



Accessories for Data Rack

Second pair of mounting angles

To accommodate 482.6 mm (19˝) network components or for the attachment of component shelves and slide rails.
482.6 mm (19˝) punched profile at the front, hole centre distance 465 (470 mm at the rear), tailored to the attachment of patch panels and cable routing rails.
The mounting level may be positioned on a 50 mm pitch pattern.
Minimum distance between levels 150 mm, maximum distance between levels 350 mm.

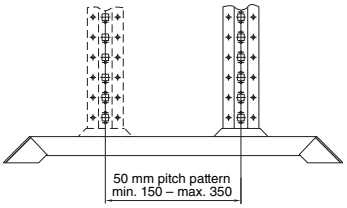
Material:
Sheet steel, 2 mm

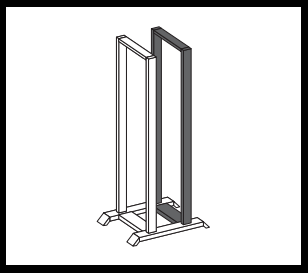
Colour:
RAL 7035

Supply includes:
– 1 torsionally stiff profile frame
– Mounting accessories

U	Packs of	Model No. DK
31	1	**7296.000**
36	1	**7297.000**
40	1	**7298.000**
45	1	**7299.000**

Detailed drawings:
Available on the Internet.





Baying clamp

For assembling rows of distributor frames, or for cable routing between data racks.

Technical specifications:
Length: 53 mm

Colour:
RAL 7035

Packs of	Model No. DK
3	**7494.000**

Roof plate with cable route

For optimised use of the Data Rack as a corridor distributor or cable management rack. The size of individual cable routes may be individually dimensioned by sliding the guide plates. On all Data Racks, the roof plate can be attached with two mounting levels and a distance between the levels of 350 mm.

Packs of	Model No. DK
1	**7411.000**

Material:
Sheet steel, spray-finished

Colour:
RAL 7035

Supply includes:
– Roof plate
– Mounting accessories.

Depth stays

For securing and stabilising two pairs of 482.6 mm (19˝) mounting angles in the Data Rack. The length of the depth stays is adjustable, and can accommodate the following spacings of mounting angles: 250, 300 and 350 mm.

Packs of	Model No. DK
2	**7401.000**

Material:
Sheet steel, spray-finished

Colour:
RAL 7035

Continuous slide rail

for two pairs of mounting angles, 482.6 mm (19˝)
To support heavy equipment in the Data Rack. The mounting dimensions of the slide rails were selected to enable them to be combined with 500 mm deep, 482.6 mm (19˝) component shelves. The mounting distance of the 482.6 mm (19˝) mounting angles is 350 mm.

Requirements:
Second pair of mounting angles

Packs of	Model No. DK
2	**7402.000**

Material:
Sheet steel, zinc-plated

Accessories:

Component shelves, 500 mm deep,
see page 670.

Slide rails, depth-variable, 1 U

for TE, 482.6 mm (19˝) mounting frame, flat mounting angles

The slide rail is pulled out to the required length and secured between the front and rear mounting level. Rear location lugs and front screw-fastening enable convenient one-man assembly. The mounting component to be integrated is inserted horizontally onto the slide rail and optionally secured to the mounting level via its attachment slots.

Load capacity:
80 kg/150 kg, static load

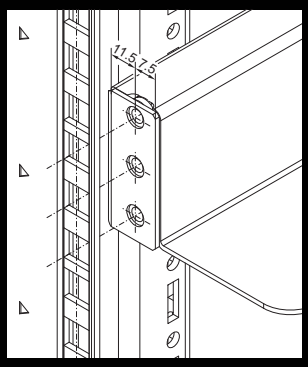
Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Length mm	Load capacity kg	Contact surface mm	Packs of	**Model No. DK**
390 – 600	80	50	2	**7063.882**
590 – 930	80	50	2	**7063.883**
590 – 930	150	25	2	**7063.884**

Note:
The super-slimline design of the slide rail allows it to be used in most integration cases for 482.6 mm (19˝) mounting components. Because it is secured to the standardised mounting level, it is manufacturer-independent.
The slide rail slightly reduces the installation space below the slide rail so that the U below it is only available for limited use.



Slide rails, depth-variable, 1 U

for server and network enclosures with two 482.6 mm (19˝) mounting levels, without additional loss of U

For mounting both on cranked and flat mounting angles, 482.6 mm (19˝) mounting frames and on TE. The slide rails are pulled out to the required length and secured between the front and rear mounting level on the 482.6 mm (19˝) pitch pattern.

Load capacity:
20 kg static load

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

482.6 mm (19˝) distance between levels mm	Contact surface mm	Packs of	**Model No. DK**
390 – 550	30	2	**7063.750**
550 – 750	30	2	**7063.752**

Note:
Thanks to the thin support surface of only around 0.8 mm thickness, exceeding the U pitch pattern is generally avoided, provided the components do not exceed a maximum height of 43.5 mm. In this way, several units may be easily arranged on top of one another without offset.

Slide rails

Slide rails, heavy-duty

for TS network enclosures with two mounting levels

To support heavy installed equipment. The slide rails are simply located into the cranked mounting angles and secured with screws. The combined use with additional depth stays or, in case of 80 mm wide enclosures, with the additional fastening attachment counteracts possible bending of the mounting angles in case of unevenly distributed loads.

Load capacity:
80 kg, static load

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Note:
Not suitable for use on the 482.6 mm (19˝) mounting frame.

482.6 mm (19˝) distance between levels mm	Contact surface		Packs of	Model No. DK
	Width mm	Depth mm		
–	55	152[1)]	2	**7063.000**
298	55	261	2	**7492.300**
398	55	361	2	**7492.400**
498	55	461	2	**7492.500**
598	55	561	2	**7492.060**
698	55	661	2	**7492.070**

[1)] Side leg height 72 mm.
Load capacity: 50 kg, static load.

Also required:

For fastening to L-shaped TS mounting angles: Adaptor DK 7827.300,
see page 676.

Slide rails

for TE, 482.6 mm (19˝) mounting frame

For mounting between a front and a rear pair of mounting angles. The slide rails can be used to support heavy 482.6 mm (19˝) components.

Load capacity:
80 kg, static load

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

482.6 mm (19˝) distance between levels mm	Contact surface		Packs of	Model No. DK
	Width mm	Depth mm		
395	85	324	2	**7963.310**
495	85	424	2	**7963.410**
595	85	524	2	**7963.510**
695	85	624	2	**7963.610**
795	85	724	2	**7963.710**

Possible alternative:

Slide rail, depth-variable,
see page 749.

Slide rails, heavy-duty

for TS, TE

With L-shaped mounting angles or 482.6 mm (19˝) mounting frame and a clearance between levels of 740 mm.
Easily and quickly installed thanks to locating brackets for the rear level.

Load capacity:
100 kg, static load

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

482.6 mm (19˝) distance between levels mm	Contact surface		Packs of	Model No. DK
	Width mm	Depth mm		
740	50	734	2	**7063.740**

Slide rails

for TS adaptor section
With two-sided mounting between the front and rear adaptor sections, 482.6 mm (19˝) or adaptor pieces, 482.6 mm (19˝).

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure depth mm	Packs of	Model No. TS
500	10	**8613.150**
600	10	**8613.160**
800	10	**8613.180**

Also required:

– Adaptor sections, 482.6 mm (19˝), see page 741, or
– Adaptor pieces, 482.6 mm (19˝), see page 742.

Slide rails

for TS adaptor section
With one-sided mounting on the 482.6 mm (19˝) adaptor sections.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Length mm	Packs of	Model No. PS
185	10	**4530.000**
270	10	**4531.000**

Also required:

Adaptor sections, 482.6 mm (19˝), see page 741.

Slide rails

for EL
For the installation of heavy slide-in equipment.

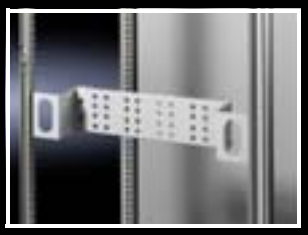
Material:
Sheet steel

Surface finish:
Zinc-plated

Note:
Slide rail designed for mounting level in the foremost position. If offset, a shorter version must be selected.

For centre part depth mm	Packs of	Model No. EL
316	10	**2250.000**
416	10	**2260.000**

482.6 mm (19˝) installation



Adaptor kit, 3 U

for 800 mm wide TS enclosures

For fastening individual 482.6 mm (19˝) components, or as an additional mounting facility at the rear of the enclosure. The mounting level in the adaptor angle can be adjusted in 25 mm increments by up to 100 mm in the depth, leaving sufficient space for baying where patch panels or splicing boxes are used. Attachment is on the inner mounting level of the frame section or a suitable chassis in the enclosure depth.

Material:
Sheet steel

Colour:
RAL 7035

Height	Mounting position	Packs of	**Model No. DK**
3 U	central	2	**7246.100**

Adaptor, 3 U

Depth offset 100 mm

This adaptor is used to recess 482.6 mm (19˝) mounting of equipment inside enclosures with 482.6 mm (19˝) installation in the foremost position, such as server or electronic enclosures. In this way, sufficient space can be gained in front of the mounting equipment to integrate patch panels or switches, whilst at the same time exploiting the maximum enclosure depth.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	**Model No. DK**
2	**7246.400**

Adaptor, metric to 21˝/19˝

With this adaptor, 482.6 mm (19˝) assemblies may be fastened to metric (535 mm) mounting angles, or combined systems may be configured.

Material:
Extruded aluminium section

Supply includes:
Assembly parts.

SU	U	Packs of	**Model No. DK**
2	1	2	**7246.010**
6	3	2	**7246.030**
11	6	2	**7246.060**

Drawer, 2 U, 3 U

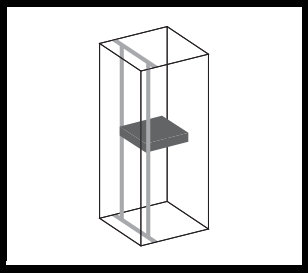
for a 482.6 mm (19˝) mounting level
For front attachment to mounting angles, 482.6 mm (19˝). With cover and telescopic slides to accommodate assignment lists, operating manuals and small parts. The small version of the 2 U variant is also suitable for mounting inside a swing frame.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Fully assembled, including assembly parts.

Height	Clearance openings		Installation depth mm	Packs of	Model No. DK
	Width mm	Depth mm			
2 U	411	244	250	1	**7282.135**
2 U	411	419	427	1	**7282.035**
3 U	411	419	427	1	**7283.035**



Drawer for 482.6 mm (19˝)

with shelf
For keyboards, operating manuals etc. The perforated plate in the base helps air to circulate in the enclosure. Load capacity 50 kg. The 1 U drawer can be installed rotated through 180° about its longitudinal axis, allowing it to be used as a utility table.

Material:
– Drawer: Aluminium
– Telescopic slides: Sheet steel

Surface finish:
– Drawer: Anodised
– Telescopic slides: Zinc-plated

Supply includes:
Telescopic slides.

U	Packs of	Model No. PS
1	1	**4541.000**
3	1	**4542.000**

Also required:

Installation kit for enclosure system TS or installation kit, depth variable,
see page 753.

Installation kit

for component shelves and drawers, with 482.6 mm (19˝) installation in TS
For installation between the front and rear adaptor sections or adaptor pieces, 482.6 mm (19˝) in 600 mm wide enclosures.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

For enclosure system TS

For enclosure depth mm	Packs of	Model No. TS
600	1 set	**8800.560**
800	1 set	**8800.580**

Also required:

– Adaptor sections, 482.6 mm (19˝), see page 741, or
– Adaptor pieces, 482.6 mm (19˝), see page 742.

Installation kit, depth-variable

for 482.6 mm (19˝) component shelves and drawers
Depending on the distance between the two 482.6 mm (19˝) mounting levels, the installation kit is screw-fastened in the depth between the cranked, L-shaped mounting angles or 482.6 mm (19˝) mounting frame. Also suitable for TE.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

482.6 mm (19˝) distance between levels mm	Packs of	Model No. DK
550 – 850	2	**7063.850**

482.6 mm (19˝) installation

Blanking plates, 482.6 mm (19˝)

For installation in electronic enclosures or housings.

Material:
Aluminium

Surface finish:
Natural-anodised

U	Packs of	Model No. VC
1	3	**1931.200**
2	3	**1932.200**
3	3	**1933.200**
4	3	**1934.200**
6	3	**1936.200**
7	3	**1935.200**
9	3	**1939.200**
12	3	**1937.200**

Blanking plate, horizontally hinged

For installation in electronic enclosures or housings.

Material:
– Blanking plate: 3 mm aluminium
– Hinge: Die-cast zinc

Surface finish:
– Blanking plate: Natural-anodised
– Hinge: Zinc-plated

Supply includes:
Assembly parts.

Width	U	Packs of	Model No. EL
482.6 mm (19˝)	6	1	**1945.000**

Blanking plate, vertically hinged

For installation in electronic enclosures or housings.

Material:
– Blanking plate: 3 mm aluminium
– Hinge: Die-cast zinc

Surface finish:
– Blanking plate: Natural-anodised
– Hinge: Zinc-plated

Supply includes:
Assembly parts.

Width	U	Packs of	Model No. EL
482.6 mm (19˝)	3	1	**1940.000**
482.6 mm (19˝)	6	1	**1941.000**

Hinge

for blanking plates

Material:
Die-cast zinc

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Packs of	Model No. EL
2	**1950.000**

Ventilated front panels

For venting enclosures and housings.

Material:
Aluminium

Surface finish:
Natural-anodised

Width	U	Packs of	Model No. EL
482.6 mm (19˝)	1	3	**2231.000**
482.6 mm (19˝)	2	3	**2232.000**
482.6 mm (19˝)	3	3	**2233.000**

Air baffle plates

for TS

Targeted air routing to the components. To prevent bridges between hot and cold air. Energy efficiency is boosted while retaining cooling output. Mounted all-round on the 482.6 mm (19˝) installation between the 482.6 mm (19˝) mounting frame and modular LCP, LCP Plus, side panel or partition.
The width-variable air baffle plates may be individually adapted to suit the requirements.
In the variant for 800 mm wide enclosures, vertical 482.6 mm (19˝) mounting holes of 3 x 1 U are additionally integrated, which may be used for configuration with additional components. Cable glands with stepped collars distributed across the height facilitate shielded cable routing between the front and rear chamber.
In the delivered state, these openings are each covered with a 1 U blanking panel with snap-in fastening.

For enclosures		Packs of	Model No. DK
Width mm	Height mm		
600	2000	2	**7151.206**
800	2000	2	**7151.208**

Material:
– Air baffle plates: Sheet steel, spray-finished
– Stepped collar: Plastic, to UL 94-V0
– Blanking panel: Plastic, to UL 94-V0

Colour:
RAL 7035

Supply includes:
– 2 air baffle plates, side, width-variable
– 1 air baffle plate, top, horizontal
– With 800 mm width including blanking panel and stepped collar

Note:
Mounting on the inner and outer mounting level in the enclosure depth is not possible.

Infill panel, hinged

for 800 mm wide TS network enclosures

To cover the side cable chamber. The infill panel is attached to the vertical enclosure frame at the front. The generous curved design will conceal even large quantities of cables, and facilitates combined use with large-scale shunting rings DK 7220.600, see page 724.
The infill panel has a hinged design and allows easy access to the cabling level by simply swinging it upwards. Locating points keep the panel in its open and closed state.
With an offset 482.6 mm (19˝) mounting level, the panel may likewise be offset in the enclosure depth and secured to TS punched sections with mounting flange on the inner mounting level.
For mounting the 482.6 mm (19˝) attachment level in the foremost mounting position, choose the version with straight trim panel.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
Assembly parts.

Trim panel curved

For installation height U	Packs of	Model No. TS
38	2	**7827.532**[1)]
42	2	**7827.534**
47	2	**7827.536**

[1)] Extended delivery times.

Trim panel straight

For installation height U	Packs of	Model No. TS
42	2	**7827.520**[1)]

[1)] Extended delivery times.

Accessories:

– TS punched section with mounting flange 17 x 73 mm for the inner mounting level, see from page 647.
– PS punched section without mounting flange, 23 x 73 mm, see page 652.

Note:
The installation of depth stays, e.g. DK 7827.600/.800 is not possible.

482.6 mm (19˝) installation

Brush strip, vertical

for TS, TE

Within the network distributor, this serves as a flexible infill panel which stylishly conceals the cable management area to the side of the 482.6 mm (19˝) mounting level. The brush strip facilitates convenient cable routing from the side and rear distributor area to the front connection level. The clearance required in front of the mounting level is at least 75 mm.
Within the TS, the brush strip is mounted at the side on the vertical frame section, on horizontal or vertical punched sections. There is an additional mounting option directly on the installation level of the TS or TE 7000. For direct attachment to the 482.6 mm (19˝) mounting frame of the TS or TE, the brush strip must be cut to length accordingly.

Material:
Aluminium section with brush strip:
Plastic, UL 94-V0

Supply includes:
1 set = 4 brush strips, length 950 mm each.

For enclosure height mm	Packs of	Model No. DK
2000	1 set	**7827.544**

Mounting panel 482.6 mm (19˝), 2 U

For fast integration of smaller mounting units within the 482.6 mm (19˝) level, such as potential equalisation rails, distributor boxes, small electrical components etc.
Simple screw-fastening of the components to the integral 25 mm system punchings.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Panel height U	Panel width mm	Packs of	Model No. DK
2	450	1	**7151.300**

Support

for small appliances

For secure attachment of small, non-482.6 mm (19˝)-conforming equipment such as modems, power packs, routers etc. Angle-shaped support for mounting in the empty space at the side between the 482.6 mm (19˝) level and the side panel on L-mounting angles, mounting frame or chassis.
Attachment of the components and connection cables can be achieved quickly and easily using nylon tape or cable ties. Also suitable for cable routing in the enclosure depth.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

W x H x D mm	Packs of	Model No. DK
350 x 150 x 97	1	**7246.500**

Accessories:

Nylon tape, cable ties,
see page 720.

482.6 mm (19˝) installation

Mounting kit

for VerticalBox
The vertically hinged support plate offers even more flexibility in interior installation for cable routing, attachment of small appliances, socket strips etc.
Depth-variable positioning on a 25 mm pitch pattern.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

W x H mm	Packs of	Model No. DK
350 x 485	1	**7501.100**

Captive nuts M5/M6

For the attachment of rack-mounted electronic equipment, 482.6 mm (19˝) installed equipment and blanking plates to mounting angles, 482.6 mm (19˝).
For use with metal thickness from 0.8 – 2.0 mm. In areas of narrow tolerance, captive nuts for metal thicknesses of 1.2 – 1.5 mm should be used. Optionally with or without contact of the installed equipment to the 482.6 mm (19˝) section/ enclosure.

Captive nut M5

Design	For metal thicknesses mm	Packs of	Model No. EL
With contact	0.8 – 2.0	50	**2094.500**
Without contact	0.8 – 2.0	50	**2092.500**

Captive nut M6

Design	For metal thicknesses mm	Packs of	Model No. EL
With contact	0.8 – 2.0	50	**2094.200**
Without contact	0.8 – 2.0	50	**2092.200**
With contact	1.2 – 1.5	50	**2094.300**
Without contact	1.2 – 1.5	50	**2092.300**

Multi-tooth screws

M5 x 16 mm/M6 x 16 mm
For optimum transmission of torques, an extended tool life and increased safety and reliability when tightening and loosening screw connections.

Supply includes:
Plastic washers.

	Bit size	Packs of	Model No. DK
M5	Multi-tooth 25	50	**7094.130**
M6	Multi-tooth 30	50	**7094.140**

482.6 mm (19˝) installation

Assembly screws

M5 x 16 mm/M6 x 16 mm
For electronic equipment, 482.6 mm (19˝) installed components and blanking plates.

Supply includes:
Plastic washers.

Design	Packs of	Model No. EL
Phillips-head screw M5	50	**7094.120**
Cheese-head screw M6	50	**7094.110**
Phillips-head screw M6	50	**7094.100**

Cage nut – front mounting, 482.6 mm (19˝)

The cage nut consists of an expanding nut which is simply inserted into the square attachment hole at the front and then secured with the assembly screw.
When tightening the screw, the cage expands and thus secures the required components. Clamping range from 1.2 – 4.5 mm. Multi-tooth screw head, bit size T 30.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 50 expanding nuts
– Assembly screws
– Plastic washers

Dimensions mm	Size of mounting hole mm	Packs of	Model No. DK
M6 x 16	9.5 x 9.5	50	**2094.400**

Spring nuts with screws

M6 x 10 mm for T-slot mounting angle
The spring nuts ensure flexible, secure mounting of accessory components on the T-slot mounting angles.

Supply includes:
50 spring nuts,
50 screws, 10 mm, self-locking.

Design	Packs of	Model No. DK
Phillips-head, M6	50	**7000.990**

Top-hat rail module

Top-hat rail module with mounting clip for top-hat rails to DIN 50 002, robust metal housing, with strain relief.
Cat. 6, 2 x RJ 45, System Corning Future Com S 250 (cables are attached without the use of tools).

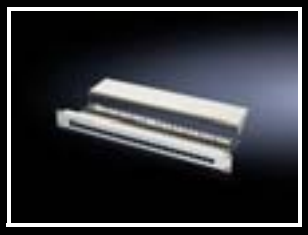
Design	Cat.	Packs of	Model No. DK
2 x Corning Future Com S 250	6	3	**7870.614**

Data distributors

LSA-plus system

24 x RJ 45 jacks, shielded, cover with quick-release fastener, with strain relief, earthing connection and 12 patch cables STP, 0.6 m, yellow.

U	Cat.	Packs of	Model No. DK
1	6	1	**7870.830**



For shielded RJ 45 modular jacks

To accommodate shielded RJ 45 jacks.
Cut-outs and rear of patch panels electrically conductive to contact the fitted jacks with the patch panel and the zinc-plated, passivated 482.6 mm (19˝) mounting angles.
With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

Material:
Sheet steel

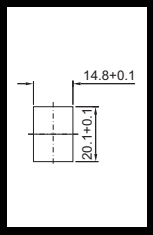
Surface finish:
Zinc-plated

Colour:
– Front: RAL 7035
– Rear: Clear-chromated

U	Number of locations	Packs of	Model No. DK
1	16	1	**7394.035**

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.



For 24 V interfaces

For the installation of 16 sub-D (trapezoid) jacks and connectors.
With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

L1 mm	L2 mm	L3 mm	Packs of
25	21	16.5	1
33.3	29.2	24.7	1
47	43	38.5	1

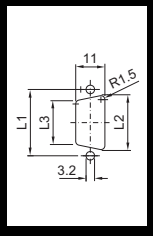
Material:
Sheet steel

Colour:
RAL 7035

U	For no. of poles	Number of locations	Model No. DK
2	9	16	**7087.535**
2	15	16	**7086.535**
2	25	16	**7089.535**

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.



To accommodate BNC jacks (version E)

With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

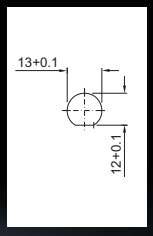
Material:
Sheet steel

Colour:
RAL 7035

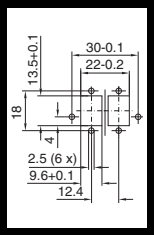
U	Number of locations	Packs of	Model No. DK
3	32	1	**7069.535**

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.



Patch panels



To accommodate E-2000, E-2000 duplex, SC or LC duplex fibre-optic couplings

For 1 U with accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

Material:
Sheet steel

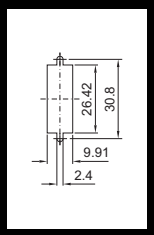
Colour:
RAL 7035

U	Number of locations single/ duplex	Packs of	**Model No. DK**
1	16/8	1	**7433.035**

Extended delivery times.

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.



To accommodate SC duplex and LC quad fibre-optic couplings

With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

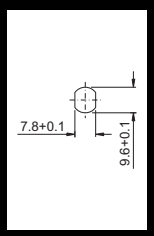
Material:
Sheet steel

Colour:
RAL 7035

U	Number of locations	Packs of	**Model No. DK**
1	12	1	**7154.035**

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.



To accommodate ST fibre-optic couplings

With accommodation facility for cable clamp straps DK 7610.000 or DK 7611.000.

Material:
Sheet steel

Colour:
RAL 7035

U	Number of locations	Packs of	**Model No. DK**
1	16	1	**7437.035**

Extended delivery times.

Accessories:

Cable clamp strap DK 7610.000 or DK 7611.000, see page 725.

Panel 1 U, 482.6 mm (19˝)

with solid tray
For the storage of fibre-optic coupling covers or assembly parts.
Depth: 100 mm

Material:
Sheet steel

Colour:
RAL 7035

U	Packs of	**Model No. DK**
1	1	**7300.335**

Blanking panel, 482.6 mm (19˝)

As an extension cover or for population as required.

Material:
Sheet steel

Colour: RAL 7035

U	Installation height mm	Packs of	Model No. DK
1	44	2	**7151.035**
1.5	66	2	**7157.035**
2	88	2	**7152.035**
3	132.5	2	**7153.035**
6	266	2	**7156.035**

Colour: RAL 9005

U	Installation height mm	Packs of	Model No. DK
1	44	2	**7151.005**
2	88	2	**7152.005**
3	132.5	2	**7153.005**[1)]
6	266	2	**7156.005**[1)]

[1)] Extended delivery times.

Blanking panel, 1 U

Toolless attachment, 482.6 mm (19˝)
The blanking panel is used to seal unused areas within the 482.6 mm (19˝) mounting level. Quick toolless attachment means that it is easily integrated anywhere, and can also be removed again if necessary. The consistent use of blanking panels ensures targeted air routing in partially configured racks.

Material:
Plastic, ABS

Fire protection:
Self-extinguishing to UL 94-V0, non-halogen-free.

Supply includes:
10 blanking panels with integral quick-fastening.

Colour	Packs of	Model No. DK
RAL 7035	10	**7151.110**
RAL 9005	10	**7151.105**

Identification strips

for patch panels
For individual labelling of different slots, self-adhesive.
Length: 210 mm, height: 10 mm.

Packs of	Model No. DK
32	**7167.000**

Splicing boxes

Splicing cassette holder

To accommodate differently sized splicing cassettes with variable cassette accommodation. Up to 8 splicing cassettes may be fitted in one holder. The splicing cassette holder can be flexibly secured to any mounting surface, and is particularly suitable for retro-fitting in small fibre-optic distributors without patch panels.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Holder with threaded bolts
– Variable bracket
– Cassette cover
– Knurled nut
– Assembly parts

Height		Packs of	Model No. DK
Overall height mm	Threaded bolts mm		
93	85	1	**7450.035**

Fibre-optic splicing box, depth-variable

The 482.6 mm (19˝) splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19˝) accommodation and used as a fibre-optic termination or distributor. The variable cassette fixture permits twist-proof installation of all standard splicing cassettes. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps.
The splicing box is infinitely depth-adjustable up to 100 mm within the 482.6 mm (19˝) flanges. In addition, the splicing box may be fully withdrawn from the 482.6 mm (19˝) flanges. Two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

U	Maximum no. of splicing cassettes	Packs of	Model No. DK
1	2	1	**7241.005**
2	4	1	**7242.005**

Installation depth:
302 mm

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Splicing box
– Cable routing clips
– Cassette cover
– Mounting accessories for patch panel

Note:
Supplied without patch panel and splicing cassettes.

Fibre-optic breakout box, 1 U

For splice-free cabling of fibre-optic breakout cables.
Cable bundles may be clamped onto the T-heads at the rear. 4 self-adhesive cable clips are supplied loose for cable clamping and for storing excess lengths inside the box.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Breakout box
– Cable routing clips
– Mounting accessories for patch panel

Installation depth	Packs of	Model No. DK
250 mm	1	**7241.500**

Patch panels

for
- **Fibre-optic splicing box, depth-variable**
- **Fibre-optic breakout box, 1 U**

With cut-outs for population with fibre-optic couplings.

Material:
Sheet steel

Colour:
RAL 7035

Note:
For drawings of the cut-outs, see page 759/760.

For coupling	Number of locations	U	Packs of	Model No. DK
ST	12	1	1	**7241.015**
	16	1	1	**7241.065**
	24	2	1	**7242.015**
E-2000, E-2000 duplex[1], SC or LC duplex	24	1	1	**7241.024**
SC duplex, LC quad	12	1	1	**7241.045**

[1] For E-2000 duplex only half of the locations are available.

Fibre-optic splicing box with telescopic pull-out

Lockable
The 482.6 mm (19″) splicing box is designed to accommodate splicing cassettes and can be installed in any network distributor with 482.6 mm (19″) accommodation and used as a fibre-optic termination or distributor. The telescopic pull-out provides optimum access to the splicing cassettes and cable clamp. The variable cassette fixture permits twist-proof installation of all standard splicing cassettes. The security lock fitted at the front protects against unauthorised access. The rear section of the splicing box is completely open for cable entry; a rubber cable clamp strip provides protection against dust. The fibre-optic cables can be secured with cable ties or cable clamps; two strain relief clips and cable routing clips for the fibre stock provide a solution to suit any fibre-optic wiring system.

U	Maximum no. of splicing cassettes	Packs of	Model No. DK
1	2	1	**7170.535**
2	4	1	**7470.535**
3	6	1	**7570.535**

Installation depth:
363 mm

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
– Splicing box
– Cable routing clips
– Security lock
– Cassette cover
– Mounting accessories for patch panel

Note:
Supplied without patch panel and splicing cassettes.

Patch panels

for fibre-optic splicing box, lockable
There is a choice of 20 panels with appropriate cutouts for the installation of various fibre-optic couplings, together with 3 blanking panels for individual population or as a cover.

Material:
Sheet steel

Colour:
RAL 7035

Note:
For drawings of the cut-outs, see page 759/760.

For coupling	Number of locations	U	Packs of	Model No. DK
ST	12	1	1	**7174.535[1]**
	24	2	1	**7474.535**
	48	3	1	**7574.535[1]**
E-2000, E-2000 duplex[2] or SC, LC duplex	20	1	1	**7178.535**
		2	1	**7478.535**
		3	1	**7578.535[1]**
SC duplex, LC quad	12	1	1	**7169.535**
	24	2	1	**7469.535**

[1] Extended delivery times.
[2] For E-2000 duplex only half of the locations are available.

Splicing boxes/LSA connection system

Blanking cover

for fibre-optic cut-outs
To cover unused cut-outs in patch panels.

Material:
Plastic PA 6.6

Colour:
Black

	Packs of	Model No. DK
SC, E-2000, LC duplex	20	**7300.230**
E-2000 Duplex	20	
SC duplex, LC quad	20	**7300.240**
ST	20	**7300.250**

Fixture with rods, 3 U

for LSA strips
To accommodate 15 LSA profile dividing strips 2/10 on 2 rods, Ø 12 mm.
The fixture unit may be integrated into all 482.6 mm (19˝) mounting levels. With cable clamp rail at the rear.

Dimensions:
W x H x D:
482.6 mm (19˝) x 132.5 mm (3 U) x 180 mm

U	Packs of	Model No. DK
3	1	**7050.200**

Material:
– Side panels: Aluminium plates
– 482.6 mm (19˝) flange/horizontal rail: Extruded aluminium section

Supply includes:
Fixture with rods as modular system.

Support unit, 3 U

for LSA-Plus strips, max. 150 paired wires
To accommodate a maximum of 15 LSA-Plus strips (each with 10 paired wires). 3 x 5 LSA-Plus connection strips 2/10, series 2, may be installed horizontally. Strip length 124 mm, height pitch pattern 22.5 mm. The support unit may be integrated in all 482.6 mm (19˝) mounting levels. The mounting level is recessed 75 mm behind the 482.6 mm (19˝) flanges. Integral shunting rings enable tidy routing and distribution of the telecommunication cables.

U	Packs of	Model No. DK
3	1	**7050.100**

Material:
Stainless steel

Supply includes:
Support unit, 8 shunting rings.

Accommodation system, 2 U

for LSA installation kit
To accommodate LSA mounting troughs/cable retainers on the 482.6 mm (19˝) mounting angle.

Size:
– Overall depth: 98.5 mm
– Height: 2 U

Material:
Sheet steel

Colour:
RAL 7035

U	Packs of	Model No. DK
2	2	**7050.035**

Accessories:

FM universal mounting bracket,
see page 765.

FM universal mounting bracket

The universal mounting bracket for LSA-Plus strips (8 or 10 paired wires) and other connection systems are comprised of 2 brackets, which may be combined with different systems depending on their position in relation to one another. The brackets also slide flexibly against each other so that strips with different lengths can be used.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
– 2 mounting brackets
– Support strips
– Assembly parts

Length mm	Connection system	LSA Plus	Other connection systems	Packs of	Model No. DK
	Pitch pattern in mm	22.5	17.5		
275	No. of strips	12	15	1 set	**7031.100**

System accessories for monitoring

CMC III processing unit/Compact

CMC III system representation 768
CMC III system overview 770
CMC III processing unit/Compact 772

CMC III sensors/accessories

Control units for CMC III processing unit 773
CMC III sensors for direct connection 773
Interface for CMC II sensors 773
Access System 773
Interface for PSM, PCU, FCS, DRC 773

CMC III accessories

Power pack 774
Programming cable 774
CAN-bus connection cable 774
Connection cable/extension 775
Extension cable 775
CMC III mounting unit, 1 U 775
CMC III mounting unit 775
Mounting unit, 1 U 776
Display Unit II 776
ISDN unit 776
GSM unit, quad-band 777
Fan Control System FCS 777
Fan 24 V DC for FCS 777
Universal lock unit 777

Door Control System

Door Control System 778
Door control module 779
Door kit 779
Door comfort handle 779
Door switch 779

Monitor/keyboard unit

Monitor/keyboard unit 780

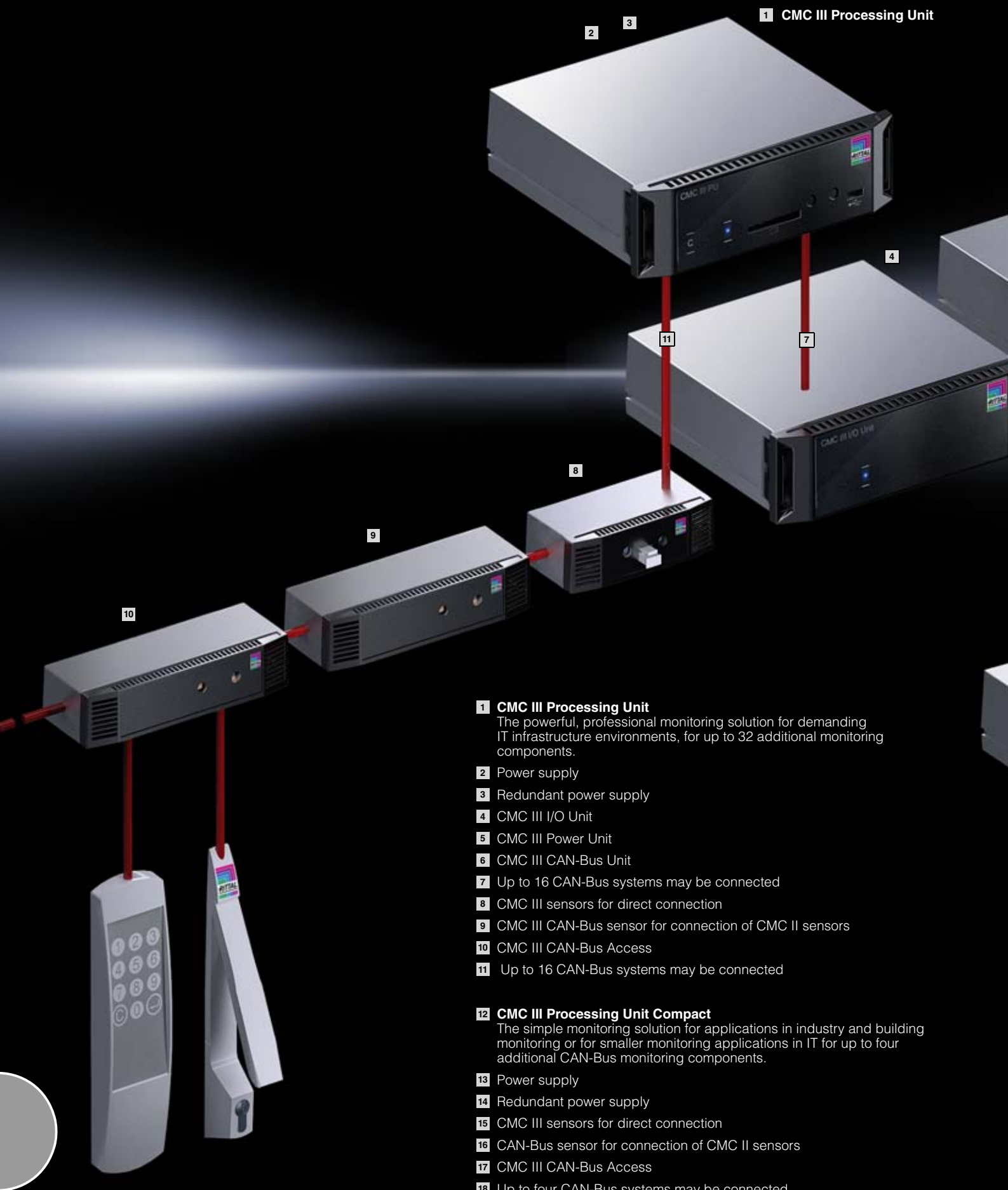
KVM switches

SSC view 8 USB 781
SSC view 32 Cat 781
SSC compact 32 Cat 781
SSC premium 2/16, 4/32, 8/32 782
SSC Duo 16 783
Console local 784
Console Cat 5 784
Console IP 785
SSC converter 785
SSC converter VT100 (RS232) 785
CPU cable 786
Cat 5 patch cable 786
SSC Power Control 786
SSC Power Pack 786

Dynamic Rack Control

RFID mounting frame 787
RFID tags 787
RFID controller 787

Monitoring system CMC III



1 **CMC III Processing Unit**
The powerful, professional monitoring solution for demanding IT infrastructure environments, for up to 32 additional monitoring components.

2 Power supply

3 Redundant power supply

4 CMC III I/O Unit

5 CMC III Power Unit

6 CMC III CAN-Bus Unit

7 Up to 16 CAN-Bus systems may be connected

8 CMC III sensors for direct connection

9 CMC III CAN-Bus sensor for connection of CMC II sensors

10 CMC III CAN-Bus Access

11 Up to 16 CAN-Bus systems may be connected

12 **CMC III Processing Unit Compact**
The simple monitoring solution for applications in industry and building monitoring or for smaller monitoring applications in IT for up to four additional CAN-Bus monitoring components.

13 Power supply

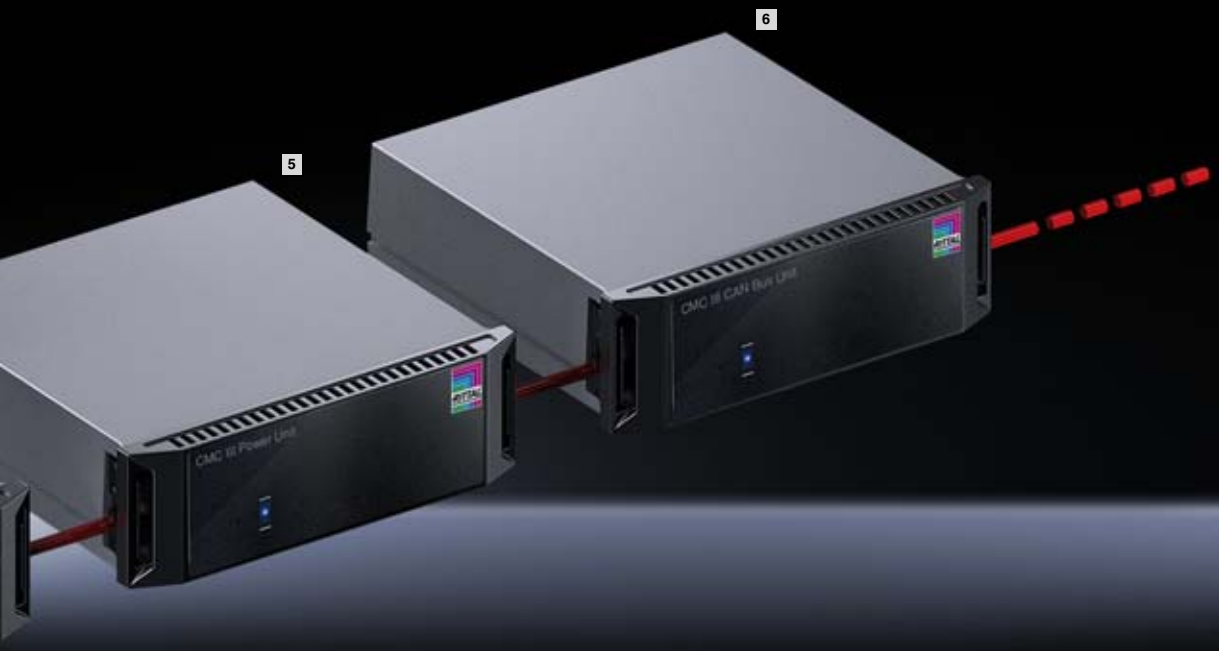
14 Redundant power supply

15 CMC III sensors for direct connection

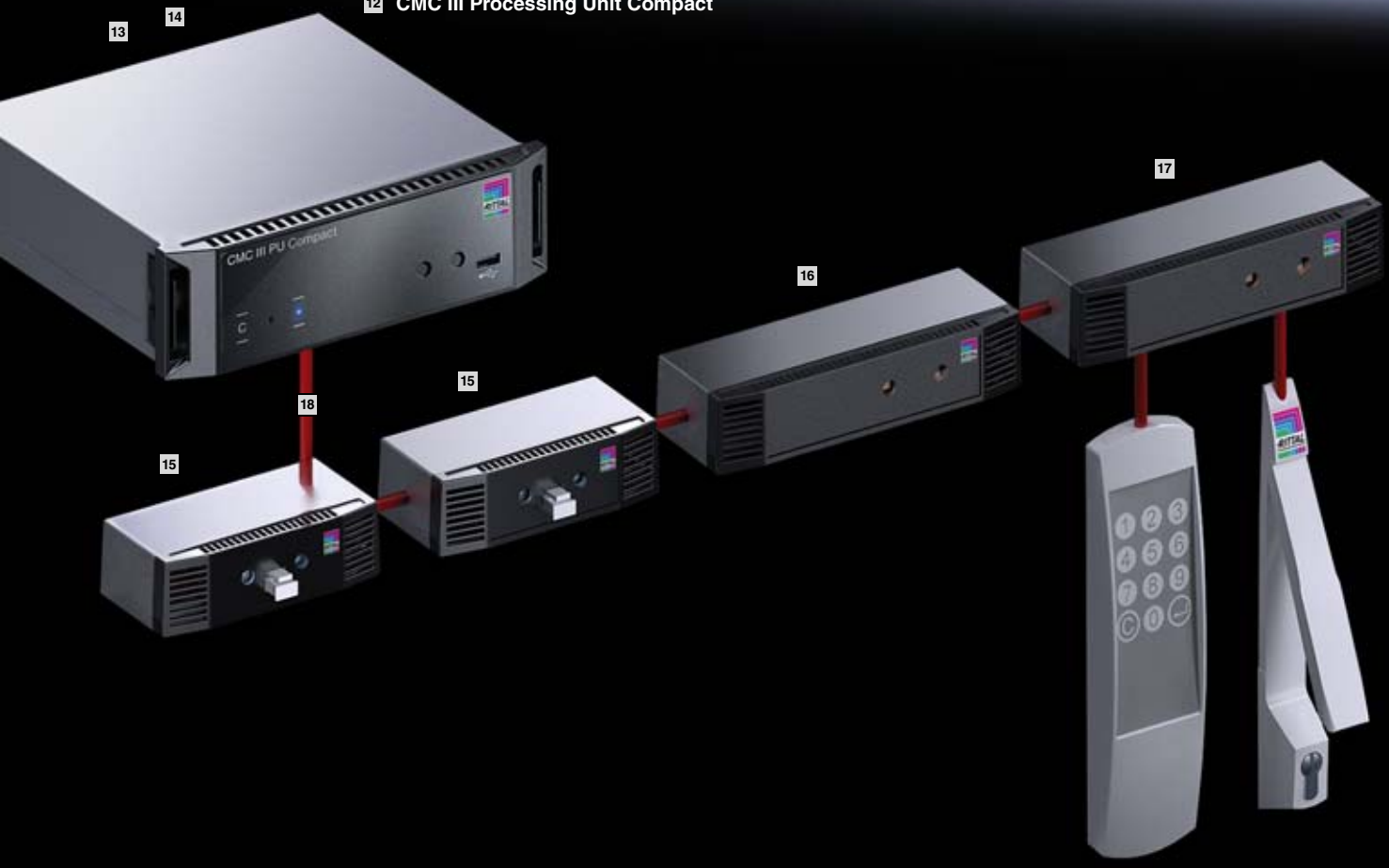
16 CAN-Bus sensor for connection of CMC II sensors

17 CMC III CAN-Bus Access

18 Up to four CAN-Bus systems may be connected



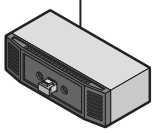
12 CMC III Processing Unit Compact



CMC III Processing Unit Compact

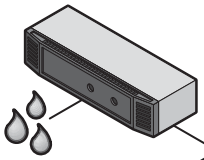
System overview

Up to 4 CAN-Bus components are supported.[1)]



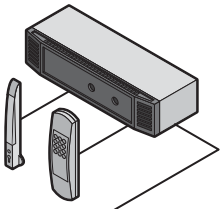
CMC III sensors
for direct connection

CMC III CAN-Bus sensor



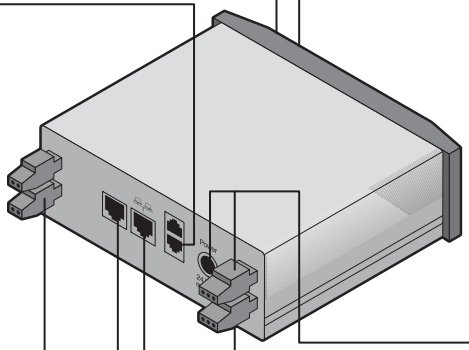
CMC II sensors

CMC III CAN-Bus access



Mini USB:
The programming cable DK 7030.080 is required for programming.

Integral sensors:
– Temperature sensor
– Infrared access sensor



CMC III Processing Unit Compact

Voltage supply 24 V DC and redundant voltage supply 24 V DC
Power packs/connection cables,
see page 774.

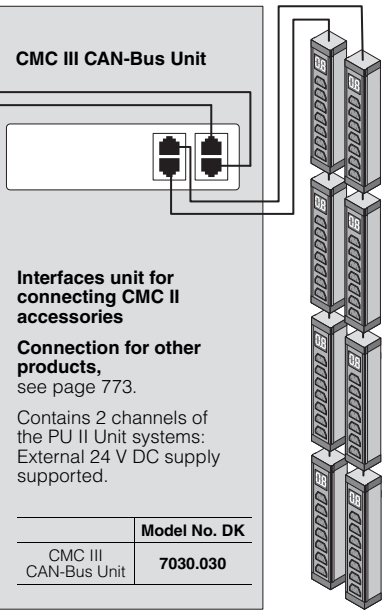
Alarm relay output:
Changeover contact for safety extra-low voltage

Ethernet 10/100 BaseT RJ 45 with PoE:
Ethernet interface to IEEE 802.3
Via 10/100 BaseT full-duplex 10/100 Mbit/s.

Accessory modules RJ 12/RS232:
Display Unit DK 7320.491
ISDN Unit DK 7320.830
GSM Unit DK 7320.820

Two integral digital inputs

CMC III CAN-Bus Unit



Interfaces unit for connecting CMC II accessories

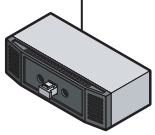
Connection for other products,
see page 773.

Contains 2 channels of the PU II Unit systems: External 24 V DC supply supported.

	Model No. DK
CMC III CAN-Bus Unit	7030.030

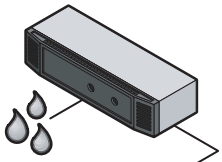
[1)] Depending on the power supply/connection combinations,
see page 773.

System overview



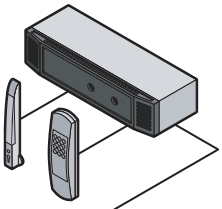
CMC III sensors:
for direct connection

CMC III CAN-Bus sensor



CMC II sensors

CMC III CAN-Bus access

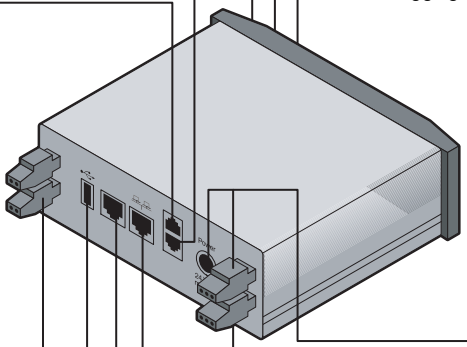


Up to 16 CAN-Bus systems are supported.[1)]

Mini USB:
The programming cable DK 7030.080 is required for programming.

Integral sensors:
– Temperature sensor
– Infrared access sensor

SD card insert:
for data logging



CMC III Processing Unit

Voltage supply 24 V DC and redundant voltage supply 24 V DC
Power packs/connection cables,
see page 774.

Alarm relay output:
Changeover contact for safety extra-low voltage

Ethernet 10/100 BaseT RJ45 with PoE:
Ethernet interface to IEEE 802.3
Via 10/100 BaseT full-duplex 10/100 Mbit/s.

Accessory modules RJ 12/RS232:
Display Unit DK 7320.490
ISDN Unit DK 7320.830
GSM Unit DK 7320.820

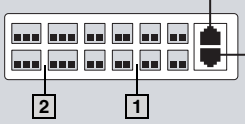
USB master for data logging and update

Two integral digital inputs

Up to 16 CAN-Bus systems are supported.[1)]

Control units

CMC III I/O Unit



2 1

Contains

1 8 digital inputs

2 and 4 relay outputs

	Model No. DK
CMC III I/O Unit	7030.040

CMC III Power Unit

Functions:
Switching and measurement of voltage, power, output and work.
With two outputs.
Also for the activation of AC fans.

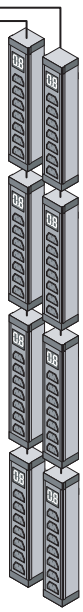
	Model No. DK
CMC III Power Unit	7030.050

CMC III CAN-Bus Unit

Interfaces unit for connecting CMC II accessories

Connection for other products,
see page 773.

	Model No. DK
CMC III CAN-Bus Unit	7030.030



[1)] Depending on the power supply/connection combinations, see page 773.

CMC III Processing Unit/Compact

System overview Page 770/771 **Basic modules and connection accessories** Page 773

Application areas:

CMC III Processing Unit Compact:
- Industrial and enclosure monitoring
- Building monitoring
- Small monitoring applications in IT

CMC III Processing Unit
- Larger monitoring applications in IT and industry

Material:
Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category:
IP 30 to IEC 60 529

Supply includes:
– Basic system
– Quick-start instructions
– 4 mounting feet

Photo shows a configuration example with equipment not included in the scope of supply.

		CMC III Processing Unit Compact	CMC III Processing Unit
W x H x D mm		138 x 40 (1 U) x 120 + 12 (front assembly)	138 x 40 (1 U) x 120 + 12 (front assembly)
Temperature range		0°C to +55°C	0°C to +55°C
Operating humidity range		5% to 95% relative humidity, non-condensing	5% to 95% relative humidity, non-condensing
Sensors/CAN-Bus connection units		max. 4	max. 32
Max. overall cable length for CAN-Bus		1 x 50 m	2 x 50 m
Model No. DK		**7030.010**	**7030.000**
Interfaces	Network interface (RJ 45)	Ethernet to IEEE 802.3 via 10/100BaseT with PoE	Ethernet to IEEE 802.3 via 10/100BaseT with PoE
	Front USB interface	Mini USB for system setting	Mini USB for system setting
	Rear USB interface	–	for USB stick for data recording and SW updates up to 32 GB
	Front SD-HC slot	–	1x up to 32 GB for data recording
	Rear serial RS232 (RJ 12)	1 x for connecting Display Unit DK 7320.491 or GSM Unit DK 7320.820 or ISDN Unit DK 7320.830	1 x for connecting Display Unit DK 7320.491 or GSM Unit DK 7320.820 or ISDN Unit DK 7320.830
Inputs and outputs	Digital inputs (terminal)	2	2
	Relay output (terminal)	Change-over contact max. 24 V DC, 1 A	Change-over contact max. 24 V DC, 1 A
	CAN-Bus (RJ 45)	1 x for max. 4 sensors (quantity restriction, see page 773)	2 x for max. 16 sensors each = 32 sensors in total (quantity restriction, see page 773)
Operation/ signals	Push-button	1 x acknowledgement button	1 x acknowledgement button
	Concealed reset button	1 x service button	1 x service button
	Piezo signal generator	1	1
	LED display	1 x multi-colour OK/warning/alarm	1 x multi-colour OK/warning/alarm
	Rear LED	1 x for the network status	1 x for the network status
Protocols	Ethernet	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS server, SMTP, XML, Syslog, LDAP	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS server, SMTP, XML, Syslog, LDAP
Redundant power supply	Input 24 V DC (jack)	1 x for connecting CMC III power pack	1 x for connecting CMC III power pack
	Input 24 V DC (terminals)	1 x for direct connection or for connecting CMC III power pack	1 x for direct connection or for connecting CMC III power pack
	Power over Ethernet	1 x	1 x
Functions	Time function	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP
	User administration	LDAP	LDAP
	User interface	Integral WEB server	Integral WEB server
	Control room connection	Integral OPC server	Integral OPC server
Integral sensors	Temperature sensor	NTC sensor in the enclosure front	NTC sensor in the enclosure front
	Access sensor	Infrared technology in the enclosure front	Infrared technology in the enclosure front

Control units for CMC III Processing Unit

	Model No. DK	PU Compact	PU	Page
		Maximum quantity		
CMC III I/O Unit, 8 digital inputs + 4 relay outputs	**7030.040**[3]	–	16	771
CMC III Power Unit, 1 input (C14) + 2 outputs (C13) 230 V, 50/60 Hz	**7030.050**[3]	–	16	771

CMC III sensors for direct connection

Temperature sensor	**7030.110**	4	32	–
Temperature/humidity sensor	**7030.111**	4	32	–
Infrared access sensor	**7030.120**	4	32	–
Vandalism sensor	**7030.130**	4	32	–
Analog airflow sensor	**7030.140**	4	10[1]	–
Analog differential pressure sensor	**7030.150**	4	32	–
Universal sensor (digital input or 4-20 mA or SoBus power meter or Wiegand interface)	**7030.190**	4	32	–

Interface for CMC II sensors

CMC III CAN-Bus Unit for sensor	**7030.100**	4	32	–
For connecting the following products:				
5 x access sensors (packs of 2), connect a max. of 5 in series	**7320.530**			–
1 x smoke detector	**7320.560**			–
1 x motion detector	**7320.570**			–
1 x voltage monitor 48 V DC	**7320.620**			–
1 x leakage sensor	**7320.630**			–
1 x leakage sensor, with sensor length 15 m	**7320.631**			–
1/3 x fire detector and extinguisher system DET-AC Plus with 3 messages	7338.120			510
1/3 x fire early detector system DET-AC Plus with 3 messages	7338.220			510
1/2 x Door Control System with 2 enclosure channels	7320.790			779

Access System

CMC III CAN-Bus Unit Access (with integral infrared access sensor and interface for one reader III)	**7030.200**	2	16[1]	–
For connecting the following products:				
1 x Ergoform-S handle (electro-magnetic)	**7320.700**			–
1 x Comfort handle TS 8 (electro-magnetic TS 8 handle with master key function, with and without CCP)	**7320.721**			–
1 x universal lock	7320.730			777
1 x universal handle	**7320.950**			–
1 x CMC III coded lock	**7030.220**	2	16[1]	–
1 x CMC III transponder reader	**7030.230**	2	16[1]	–

Interface for PSM, PCU, FCS, DRC

CMC III CAN-Bus Unit for 2 unit channels	**7030.030**[3]	1	4[2]	771
For connecting the following products (note: separate supply via power pack possible):				
2 x Fan Control System FCS (DK 7320.812 fan 24 V DC for FCS)	7320.810			777
2 x fan mounting plate DC (universal fan roof W x D 800 x 800 mm with FCS)	7858.488			406
2 x RFID controller DRC	7890.500			787
2 x 4 x Rittal Power Control Unit (PCU) 8-way	7200.001			700
2 x 4 x Rittal Power Control Unit (PCU) C13/earthing pin LED 6-way	7859.215			700
2 x 4 x Rittal Power Control Unit (PCU) C13 LED 8-way	7859.225			700
2 x 4 x Rittal Power Control Unit (PCU) C13/19 LED 6-way	7859.235			700
2 x 4 x PSM socket module active PSM C13 8-way	7856.201			385
2 x 4 x PSM socket module active PSM C13/earthing pin 6-way	7856.203			700
2 x 4 x PSM socket module active PSM C13/19 6-way	7856.204			700
2 x 4 x PSM socket module active PSM C13/earthing pin LED 6-way	7859.212			385
2 x 4 x PSM socket module active PSM C13 LED 8-way	7859.222			385
2 x 4 x PSM socket module active PSM C13/19 LED 6-way	7859.232			385
2 x PSM busbar with measurement 16 A	7856.016			384
2 x PSM busbar with measurement 32 A	7856.003			384
2 x PSM measurement module 16 A	7856.019			386

[1] Max. 5 p. and [2] max. 1 p. for power supply with PoE or 48 V power pack.
[3] Optional attachment see page 775.

Power pack

The CMC III power pack may be integrated into the CMC III assembly unit.

CMC III power pack	**Model No. DK**
CMC III power pack Input voltage 100 – 240 V 50/60 Hz, output voltage 24 V DC, 2 A	**7030.060[1)]**

[1)] Connection cable/extension required
D/F/B: 230 V, Model No. DK 7200.210
USA/CDN: 230/115 V, Model No. DK 7200.214
C13/C14: 230/115 V, Model No. DK 7200.215

Power pack

for PU II/Basic CMC/FCS

A 24 V DC power pack is required to supply the power. There are two variants available:

- The 100 – 240 V AC power pack requires an IEC connection cable to supply the voltage
- An alternative power pack is designed for the telecommunications sector (48 V battery voltages) and is connected at the input end via a terminal block.

Both power packs include an output cable, 1.65 m long.

Technical specifications DK 7320.425:
– Rated voltage: 100 – 240 V AC, 50/60 Hz
– Rated current: max. 1.5 A
– Secondary range: 24 V DC, 3 A

Technical specifications DK 7320.435:
– Rated voltage: 20 – 72 V DC
– Rated current: max. 2.5 A
– Secondary range: 24 V DC, 1.3 A

Primary input voltage	Output voltage	**Model No. DK**
48 V DC	24 V DC	**7320.435**

Connection cable for PU II/Basic CMC/FCS for direct connection, provided the 24 V DC supply is available.

Packs of	Length	**Model No. DK**
1	2 m	**7320.813**

Also required:

Connection cable for DK 7320.425 power pack, see page 775.

Programming cable

The programming cable is required for commissioning of the Processing Unit (PU) or PU Compact.

	Model No. DK
CMC III programming cable USB	**7030.080**

CAN-Bus connection cable

This can be used to connect the PU with the CAN-Bus sensors III, units III, control units III as a bus. Also for cabling together.

Cable	Length (m)	Packs of	**Model No. DK**
CMC III CAN-Bus connection cable RJ 45	0.5	1	**7030.090**
CMC III CAN-Bus connection cable RJ 45	1	1	**7030.091**
CMC III CAN-Bus connection cable RJ 45	1.5	1	**7030.092**
CMC III CAN-Bus connection cable RJ 45	2	1	**7030.093**
CMC III CAN-Bus connection cable RJ 45	5	1	**7030.094**
CMC III CAN-Bus connection cable RJ 45	10	1	**7030.095**

Connection cable/extension

The cable is used to connect to:
- CMC III power pack C13
- CMC III power unit C13
- PCU

Technical specifications:
PVC cable, 3-pole, with IEC connector (non-heating appliances) with contact protection CEE22.
Length: Minimum 1.8 m

Country version	Voltage Volt	**Model No. DK**
D/F/B/C13	230	**7200.210**
USA/CDN/C13	230/115	**7200.214**
IEC 320 device extension C13/C14	230/115	**7200.215**
Connection cable D/C19	230/115	**7200.216**
Connection cable C19/C20	230/115	**7200.217**

Extension cable

for sensor cable

Connector/jack	Length m	Packs of	**Model No. DK**
RJ 12	5	4	**7200.450**
RJ 12	1	2	**7320.814**

CMC III mounting unit, 1 U

To accommodate PU, PU Compact, control units, CMC III CAN-Bus unit and CMC III power pack. The mounting unit can accommodate up to 3 units and is secured in the 482.6 mm (19˝) frame.

	Packs of	**Model No. DK**
CMC III mounting unit, 1 U	1	**7030.070**

CMC III mounting unit

for enclosure frame
Can accommodate one unit and is mounted on the enclosure frame.

	Packs of	**Model No. DK**
CMC III mounting unit for enclosure frame	1	**7030.071**

Mounting unit, 1 U

For display, ISDN and GSM unit, fan control system, door control module, dynamic rack control
For accommodating between two 482.6 mm (19″) mounting angles. Cable clamp straps DK 7610.000 or DK 7611.000 can be used for cable clamping.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7035

Mounting unit, 1 U

Packs of	Model No. DK
1	**7320.440**

Single cover

Packs of	Model No. DK
2	**7320.441**

Accessories:

Cable clamp strap, see page 725.

Display Unit II

The Display Unit II may be linked directly to the CMC III. CMC alarms, status messages, temperatures, voltages, currents etc. may be displayed on the screen, depending on the monitoring application.

Packs of	Model No. DK
1	**7320.491**

Note:
The serial interface RS232 of the PU/PUC may only be assigned to one accessory module.

Also required:

– Processing unit, see page 772.
– Mounting unit, see page 776.

ISDN unit

For configuring a redundant transmission channel or, if there is no network infrastructure available, for alarm forwarding. The alarm signal is designed in SMS format. Power supply is via the processing unit.

Requirements for the ISDN connection:
– DSS1 (Euro-ISDN) must also be provided when connecting to the ISDN system
– Point-to-multi-point configuration

Supply includes:
Connection cable.

Components	Model No. DK
ISDN unit	**7320.830[1)]**

[1)] Extended delivery times.

Note:
The serial interface RS232 of the PU/PUC may only be assigned to one accessory module.

Also required:

– Processing unit, see page 772.
– Mounting unit, see page 776.

GSM Unit Quad-Band

For configuring a redundant transmission channel or, if there is no network infrastructure available, the unit may be used for alarm forwarding.
The alarm signal is designed in SMS format.
The GSM unit quad-band covers 4 GSM frequencies: 850 MHz, 900 MHz, 1800 MHz and 1900 MHz.
A standard, commercially available SIM card for GSM must be provided by the customer.

GSM Unit Quad-Band	**Model No. DK**
SMS function	**7320.820**

Note:
The serial interface RS232 of the PU may only be assigned to one accessory module.

Also required:

– Processing unit, see page 772.
– Mounting unit, see page 776.

Fan Control System FCS

Speed-controlled fan system

The Fan Control System regulates and controls the speed of up to 6 fans, 24 V DC. It may optionally be connected to the CMC III CAN-bus unit DK 7030.030.

FCS	**Model No. DK**
Without fan	**7320.810**

Functions:
– Speed-regulated speed control
– Fan speed monitoring
– Optional connection via Web/SNMP

Note:
FCS fitted in fan mounting plate, see page 406.

Also required:

– Power pack DK 7030.060, see page 774.
– Connection cable DK 7200.210, see page 775.
– Fan DK 7320.812, see page 777.
– Extension DK 7320.814, see page 775.
– 1 U mounting unit 7320.440, see page 776.

Fan 24 V DC for FCS

with speed monitoring

Fan with integral speed monitoring with RJ 12 connector/connection cable 0.6 m for connecting to FCS DK 7320.810.

Technical specifications:
– Rated voltage: 24 V DC
– Rated current: 0.28 A (max.)
– Rated output: 6.72 W (max.)
– Air throughput (unimpeded air flow): 175 m^3/h
– Speed: 2650 rpm
– Noise level: 45 dB (A)

Packs of	**Model No. DK**
2	**7320.812**

Also required:

RJ 12 extension, 1 m, DK 7320.814, see page 775.

Universal lock unit

The security lock consists of a base unit and a lock counterpart. The base unit is attached to the enclosure frame. The lock counterpart is attached to the door.

Technical specifications:
– Rated voltage: 24 V DC
– Rated current: 140 mA

Packs of	**Model No. DK**
1 set	**7320.730**

Note:
Supplied without mounting kit.

Also required:

CMC III CAN-Bus unit access DK 7030.200, see page 773.

Door Control System

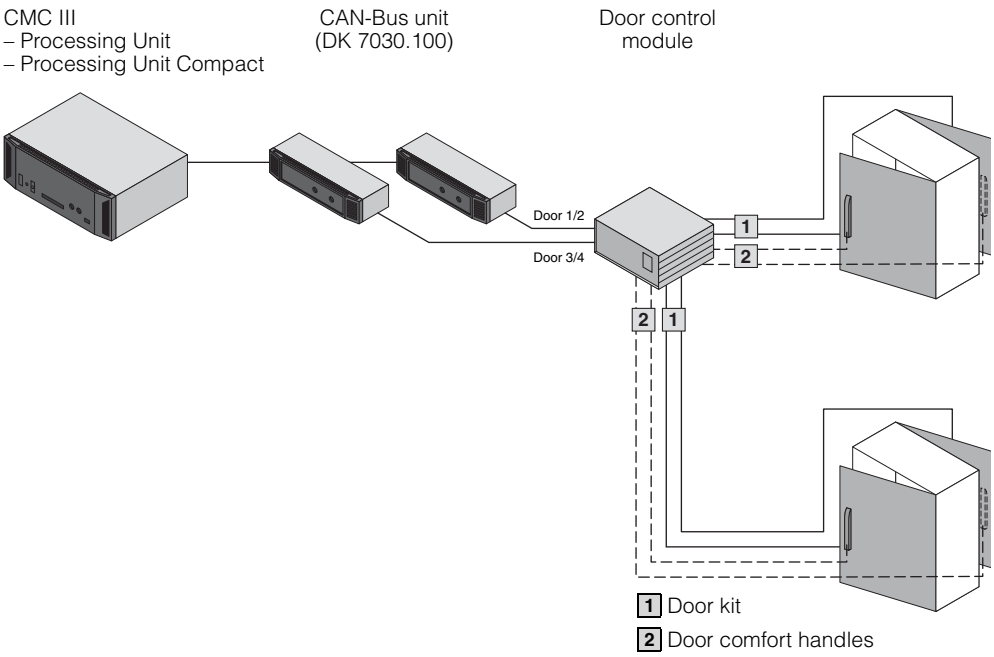
For automatic opening of closed rack systems:
- In the event of cooling system failures.
- For extinguishing a fire using a fire extinguisher system.

Note:
To be connected at rear:
- **Door Kit**
  Up to 16/2 door kits may be connected for automatic opening.
- **Door comfort handle** or **Door switch**
  Up to 16/2 door comfort handles/door switches may be connected for manual opening.
- Automatic opening is achieved by connecting to the PU/PU Compact. Independently of this, the doors may be opened using the door comfort handle/door switch.
- In the event of a power failure, the doors will open.
- The front and rear door must always be opened.

! Also required:

CMC III processing unit/Compact,
see page 772.

System representation
Door Control System:
- A maximum of 16 door control systems per processing unit
- A maximum of 2 door control systems per processing unit may be connected



Door control module

For activation of up to 4 door kits There is 1 control channel available per 2 door kits (e.g. front and rear door). There is optionally a normally-closed contact integrated for each door output, which is used to connect the automatic door switch, door comfort handle or a customer-specific system (e.g. room extinguisher system).

Model No. DK	7320.790
W x H x D mm	136 x 44 (1 U) x 129

Rated voltage	24 V DC
Door outputs	4 x 24 V DC, 400 mA
Ports for CMC III CAN-bus unit	2 x RJ 12
Normally closed contacts	Connection must be designed for 30 V DC, 1 A
Temperature application range	+5°C to +45°C
Humidity application range	5% to 95% relative humidity, non-condensing
IP protection category	IP 40 to IEC 60 529

Also required:

– Mounting unit DK 7320.440, see page 776.
– AC power pack 230 V, see page 774.
– Connection cable, see page 775.

Door kit

- Fitting a standard door for the Door Control System
- The door kit operates with a gas pressure damper system, allowing the door to be opened in any emergency situation. The doors are kept closed by a magnet system, which unlike mechanical lock systems will release the door in every instance.
- The door kit is connected and activated using the corresponding door control module DK 7320.790.

Version for	Packs of	Model No. DK
2-piece door	1	**7320.792**
1-piece glazed door	1	**7320.795**
1-piece sheet steel door	1	**7320.796**

Supply includes:

– Gas pressure damper
– Cable harness
– Magnetic lock
– Assembly parts.

Door comfort handle

with door opener function

By actuating the lock mechanism, the door is released via the automatic door opening system. Prepared for the installation of standard commercially avaialble semi-cylinders, 40 mm, and SZ lock and push-button inserts.
Length: 302 mm.

Technical specifications:

– Rated voltage: 24 V DC
– Rated current: max. 3 A
– Connection cable: Length 3 m
– Temperature application range: +5°C to +40°C

Design	Model No. DK
RAL 7035	**7320.794**

Also required:

Handle adaptor for mounting on glazed door TS 8611.080,
see page 584.

Door switch

Switch for connecting to the normally closed contacts of the door control module (DK 7320.790) for manual door opening.
It is mounted on the 25 mm pitch pattern of the TS 8 frame section.

Technical specifications:

– Installation Ø 16.2 mm
– 250 V/2 A

Packs of	Model No. DK
1	**7320.793**

Supply includes:

– 3 m connection cable
– Mounting bracket
– Assembly parts

Monitor/keyboard unit, 1 U

With 17˝ TFT display and VGA/DVI connection

Benefits:

- High-quality manufacturing
- Analog and digital video input
- Separate numerical keypad
- Optionally with integrated KVM switch for up to 32 server connections in just 1 U
- Low energy consumption
- Simple, one-man installation

Technical design

– 17˝ (432 mm) TFT display
– Native resolution 1280 x 1024
– Format 4 : 3
– 16.7 million colours
– Brightness approx. 350 cd/m^2 (typ.)
– Contrast ratio approx. 1000 : 1
– Mains voltage 100 – 240 V AC, 50 – 60 Hz
– Ambient temperature +5°C to +45°C (in operation)
– Max. power consumption in operation, without optional KVM switch: 32 W
– Max. power consumption when closed, without optional KVM switch: < 1 W
– Rear connections: Mains power, VGA, DVI-D, PS/2, USB, power supply for KVM
– Lockable at the front
– Cables are safely routed in the energy chain

Accessories:

For monitoring several servers:
KVM switches, see page 781.

Width mm	Height U	Depth mm	Installation depth mm	Packs of	Colour	Keyboard	**Model No. DK**
482.6 (19˝)	1	680	680 – 850	1	RAL 7035	German	**9055.310**
						English	**9055.312**
					RAL 9005	German	**9055.410**[1)]
						English	**9055.412**[1)]

Other country-specific versions available on request.
[1)] Extended delivery times.

KVM switches

With these ultra-compact KVM switches for 482.6 mm (19˝) mounting or for mounting behind a Rittal monitor/keyboard unit, space-saving server administration becomes possible in any IT rack. The Rittal SSC switching system grows flexibly with your requirements. With the SSC compact/view 32 Cat, the computers are connected via Cat cables and converters (SSC converter). The signals for video, keyboard and mouse are transmitted via a shared cable.

Processor-controlled keyboard and mouse emulation for each channel ensures fault-free booting and reliable switching between the connected computers. The SSC view optionally extends the Rittal monitor/keyboard unit to include the function of an 8- or 32-port KVM switch, without requiring an additional U in the server rack for mounting.

1

2

3

	1 SSC view 8 USB	1 SSC view 32 Cat	2 SSC compact 32 Cat
Installation type	For mounting behind the monitor/keyboard unit DK 9055.XXX		For mounting on 482.6 mm (19˝) levels
Model No. DK	**7552.002**	**7552.100**	**7552.110**
Equipment	**8 Port KVM**	**32 Port KVM**	**32 Port KVM**
Number of computers in stand-alone mode	8	32	32
Number of users (with password protection)	1	1	1
Cascading[2] as slave to SSC view/compact 32 Cat (with OSD transfer)	–	■	■
OSD menu with mouse operation (English)	■	■	■
OSD superimposed on computer screen (may be de-activated)	■	■	■
OSD display of channels used	■	■	■
Hotkeys for computer selection	■	■	■
Autoscan	■	■	■
Autoskip (skip over unused channels)	■	■	■
Type of cable to computer or to SSC Connect	VGA/HD15 and PS/2	Cat 5, 6	Cat 5, 6
Maximum cable length, SSC to computer (depending on cable quality)	4 m	15 m (30 m)	15 m (30 m)
Port and system support	PS/2 and SUN	PS/2, USB, SUN-USB	PS/2, USB, SUN-USB
Automatic cable alignment (manually readjustable)	–	■[1]	■[1]
LED displays (rear)	None	Power	Power
Maximum video resolution (depending on cable length)	1280 x 1024@85 Hz	1920 x 1440@75 Hz	1920 x 1440@75 Hz
Bandwidth	200 MHz	250 MHz	250 MHz
Computer	SUB-HD15 / PS/2 / USB-B	RJ 45	RJ 45
Console	SUB-HD15 / PS/2 / USB-B	SUB-HD15 / PS/2	SUB-HD15 / PS/2
Cascading port (connection for slave, SSC compact only)	–	RJ 45	RJ 45
Service (for firmware update)	–	Jack 2.5 mm	Jack 2.5 mm
12 V DC power supply (from monitor/keyboard unit)	■	■	–
Power supply 100 – 240 V, 50/60 Hz (internal power pack, IEC320)	–	–	■
Power consumption (approx.)	10 W	13 W	13 W
Operating temperature	+5 to +45°C	+5 to +45°C	+5 to +45°C
Protection category	IP 20	IP 20	IP 20
Enclosure – Material	Sheet steel	Sheet steel	Sheet steel
Enclosure – Surface finish	Powder-coated	Powder-coated	Powder-coated
Colour	RAL 9006	RAL 9006	RAL 7035
Dimensions (excl. protruding parts) approx. W x H x D mm	482.6 x 44 x 140	482.6 x 44 x 140	482.6 x 44 x 140
Certification	CE	CE	CE

[1] With a cable length of max. 15 metres, there is no need for any manual video readjustments. Above and beyond this, the maximum permissible cable length is approximately 30 metres (depending on the cable quality). Here, manual readjustment may be required.
[2] Up to 3 SSC compact/view 32 Cat may be cascaded to one master (max. 125 servers on 1 user).

Accessories				
Mains connection cable (for SSC compact only)		–	–	7200.210
3 CPU cable VGA/PS/2 (with lockable PS/2 connectors, at both ends)	2 m	7552.120	–	–
	4 m	7552.140	–	–
3 CPU cable VGA/USB, USB-A (computer) to USB-B (switch)	2 m	7552.122	–	–
	5 m	7552.142	–	–
SSC converter PS/2		–	7552.201	7552.201
SSC converter USB		–	7552.202	7552.202

1

2

3

4

SSC premium 2/16, 4/32, 8/32

Highly integrated KVM matrix based on Cat technology

KVM switching technology which adapts flexibly to your future requirements. Thanks to Cat technology (transmission of the signals for keyboard, video and mouse via a Cat cable), the amount of cabling work required can be significantly reduced. Super-compact 1 U systems with up to 32 server ports are supported. The full matrix switches offer each of the connected users unrestricted, simultaneous access to the chosen computer system. There are various console types available for administration.

By separating the hardware switch and operating console, the systems may be adapted to any required computer environment. On the computer side, conversion to standard PC interfaces is achieved via separate converters which optimise all signals (keyboard, video, mouse) for transmission via the Cat cable.

Material:
Sheet steel

Colour:
RAL 7035

Protection category:
IP 30

Also required:

- SSC converter (depending on the number of computers) and at least one operator console, see page 784/785.
- Mains connection cable (DK 7200.210), see page 775.

Connection example:
Available on the Internet.

Rittal SSC premium	1 2/.16	2 4/.32	3 8/.32
Model No. DK	**7552.020**[1)]	**7552.030**[1)]	**7552.040**[1)]
Equipment			
Number of computers in stand-alone mode	16	32	32
4 Number of computers with cascading as full matrix (max. 3 levels, type-identical SSC premium)	1024	2048	512
Number of users (local, remote, IP), mixed and simultaneous	2	4	8
Number of users that may be administered (with allocation of rights)	128	128	128
Integral user/computer administration	■	■	■
Support of central directory services and authentication systems	–	–	■
OSD menu with mouse operation (English)	■	■	■
Display of system structure in the OSD per computer (path)	■	■	■
OSD superimposed on computer screen (may be de-activated)	■	■	■
OSD display of channels used	■	■	■
Hotkeys for computer selection	■	■	■
Type of cable to SSC converter and SSC console	Cat 5, 6	Cat 5, 6	Cat 5, 6
Maximum cable length console – computer (depending on cable quality)	300 m	300 m	300 m
Port and system support (SSC converter)	PS/2, USB, SUN-USB/VT100	PS/2, USB, SUN-USB/VT100	PS/2, USB, SUN-USB/VT100
Automatic video/cable alignment (manually readjustable)	■	■	■
LED displays, front			
Power/Power Redundant	■	■	■
System Ready (illuminates as soon as the system booting process has been completed without error)	■	■	■
Status Switch (illuminates when the SSC is operational)	■	■	■
LED displays, rear			
Computer port busy/connected	yellow/green	yellow/green	yellow/green
Console port busy/connected	yellow/green	yellow/green	yellow/green
Network port full duplex/half duplex	–	–	yellow/flashing
Network port connection status/activity	–	–	green/flashing
Maximum video resolution (depending on cable length)	1920 x 1440 @ 75 Hz	1920 x 1440 @ 75 Hz	1920 x 1440 @ 75 Hz
Bandwidth	250 MHz	250 MHz	250 MHz
Activation of switchable socket strip (on/off)	■	■	■
Connections			
Computers/consoles	RJ 45	RJ 45	RJ 45
Service (front) for firmware update	Jack 2.5 mm	Jack 2.5 mm	Jack 2.5 mm
RS232 (front)	RJ 11	RJ 11	RJ 11
Network	–	–	2 x RJ 45
Power supply via IEC 320 connection (IEC 320 C13)	■	■	■
Redundant power supply (with SSC power pack)	4-pole mini-DIN	4-pole mini-DIN	4-pole mini-DIN
Power supply (internal power pack)	90 – 264 V/ 47 – 63 Hz	90 – 264 V/ 47 – 63 Hz	90 – 264 V/ 47 – 63 Hz
External power supply, redundant	12 V/approx. 1 A	12 V/approx. 1 A	12 V/approx. 1 A
Power consumption (approx.)	12 W	13 W	16 W
Dimensions (excluding protruding parts) approx. W x H x D mm	482.6 x 44 x 286	482.6 x 44 x 286	482.6 x 44 x 286
Conformity	CE	CE	CE

[1)] Extended delivery times.

SSC Duo 16

Ultra-compact KVM switch with both a local access and an IP access These two users are able to access the connected servers in parallel/ simultaneously.
Up to 16 servers may be connected using Cat cables and SSC converter adaptors (available in a PS/2 and USB variant). Processor-controlled keyboard and mouse emulation for each channel ensures fault-free booting and reliable switching between the connected computers. The integral IP console supports location-independent access to the servers down to BIOS level.
Access may be made both via the integral Web interface (via Java client) and via client software for Windows and selected Linux distributions, available free of charge. The switch includes rights administration for up to 16 user profiles.

Material:
Sheet steel, powder-coated

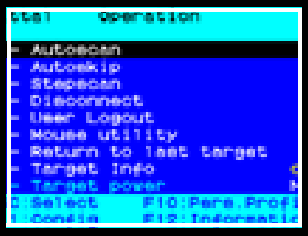
Colour:
RAL 7035

Protection category:
IP 40

Also required:

One SSC converter adaptor DK 7552.201 (PS/2) or DK 7552.202 (USB) is required for each connected computer, see page 785.

Note:
Software updates are available at www.rittal.com



	SSC Duo 16
Model No. DK	**7552.510**
Equipment	
No. of computers that may be connected	16
Number of users (local, IP), mixed and simultaneous	2
Number of users that may be administered (with allocation of rights)	16
Integral user/rights administration (also via directory services)	■
OSD menu with mouse operation (English)	■
OSD superimposed on computer screen (may be de-activated)	■
OSD display of channels used	■
Hotkeys for computer selection	■
Type of cable to SSC converter and SSC console	Cat 5, Cat 6
Maximum cable length console – computer (depending on cable quality)	30 m
Port and system support (SSC converter)	PS/2, USB
Automatic video and cable alignment (manually readjustable)	■
LED displays	
Power	■
System Ready (illuminates as soon as the system booting process has been completed without error)	■
Status Switch (illuminates when the SSC is operational)	■
Network port (activity, connection status)	■
Maximum video resolution (depending on cable length)	1920 x 1440 @ 75 Hz
Bandwidth	250 MHz
Connections	
Computers/consoles	RJ 45
Service for firmware update	Jack 2.5 mm
Network	RJ 45
Power supply via IEC 320 connection (EN 60 320 C14)	■
Power supply (internal power pack)	90 – 264 V/47 – 63 Hz
Power consumption (approx.)	20 W
Dimensions approximately W x H x D mm	482.6 mm x 1 U x 290 mm
Certifications	CE
Accessories	
SSC converter PS/2	7552.201
SSC converter USB	7552.202
Cat 5 cable 2 m	7320.472
Cat 5 cable 5 m	7320.475
Cat 5 cable 10 m	7320.481
Cat 5 cable 15 m	7320.485
Mains connection cable (earthing-pin)	7200.210

Console local

for SSC premium
For installation in
- 482.6 mm (19˝)
- at the rear of 15˝/17˝ monitor unit (9055.XXX)

As the link between the keyboard, monitor, mouse (or the Rittal monitor/keyboard unit) and the SSC premium. Via the console, the computer systems connected to the switch may be conveniently selected and administered using the OSD. Power supply is optionally via the Rittal monitor/keyboard unit or, in the case of stand-alone 482.6 mm (19˝) installation, via the SSC Power Pack (DK 7552.220).

Material:
Sheet steel

Colour:
RAL 9006 (white aluminium)

Supply includes:
Assembly parts.

Technical specifications:
– Video resolution: Max. 1920 x 1440 @ 75 Hz (depending on the cable length)
– Video bandwidth: 250 MHz
– Voltage supply: 12 V DC (from monitor/keyboard unit) or via SSC Power Pack DK 7552.220
– Dimensions:
W x H x D mm: 325 x 44 x 85 (stand-alone)
W x H x D mm: 482.6 x 44 x 140 (built into 482.6 mm/19˝)

Type	Packs of	Model No. DK
Console local	1	**7552.200**

Extended delivery times.

Connections (jack):
– PS/2 (keyboard/mouse)
– USB-A (keyboard/mouse)
D15 (VGA-Video RGB & Sync.)
– RJ 45 (KVM matrix connection)
– Mini-DIN 4 (12 V power supply).

Also required:
– Only for 482.6 mm (19˝) installation without monitor/keyboard unit:
SSC Power Pack DK 7552.220,
see page 786,
– Cat 5 patch cable,
see page 786.

Console Cat 5

for SSC premium
This remote console forms the link between the keyboard, monitor, mouse and the SSC premium. Via the console, the computer systems connected to the switch may be conveniently selected and administered using the OSD. The signals are forwarded via Cat cable, depending on the cable quality up to 300 m, via the KVM matrix to the connected computers. Additionally, 2 local PCs may be connected if required.
The console is designed as a compact desktop enclosure with integral wide-range power pack (482.6 mm (19˝) versions on request).

Material:
Sheet steel

Colour:
RAL 7035

Technical specifications:
– Video resolution: Max. 1920 x 1440 @ 75 Hz (depending on the cable length)
– Video bandwidth: 250 MHz
– Power supply (internal power pack):
100 – 280 V, 50 – 60 Hz/0.2 A
– Dimensions:
W x H x D mm: 270 x 44 x 220

Type	Packs of	Model No. DK
Console Cat 5	1	**7552.212**

Extended delivery times.

Connections (jack):
– PS/2 (keyboard/mouse) USB-A (keyboard/mouse)
– SUB-HD15 (VGA video RGB & Sync.)
– 2 x Cat (RJ 45) to connect 2 local PCs via SSC converters (VGA, PS/2 or USB)
– RJ 45 (KVM matrix connection) IEC 320 C14 (power supply)
– Mini-DIN 4 (redundant power supply)

Also required:
– Cat 5 patch cable,
see page 786.
– SSC converter for local PCs,
see page 785.
– Mains connection cable (e.g. DK 7200.210),
see page 775.

Console IP

for SSC premium (KVM-over-IP)

With the IP remote console, computers connected to the KVM matrix may be accessed via any given TCP/IP network. The SSC Console IP is a hardware solution, and guarantees remote monitoring of the computers even during the booting phase, down to BIOS level. With the system operational, the target computers may be accessed at any time via web browsers and Java applets (irrespective of the operating system), or if Java is not supported, via optimised client software for common operating systems. This client has extended functions (e.g. a setup mode) and can be used throughout the company without restriction. In addition to remote access via IP, the SSC Console IP also has an integral local console port (competing with IP access) for connecting the keyboard, mouse and monitor locally in the rack.
Access to the console is additionally password-protected. KVM access to the web interface may be encrypted via HTTPS (SSL 128-bit). In order to further increase protection from failure, the SSC console IP may also be extended with a redundant power pack via the SSC Power Pack (DK 7552.220).

Material:
Sheet steel

Colour:
RAL 7035

Type	Packs of	Model No. DK
Console IP	1	**7552.214**

Extended delivery times.

Technical specifications:
- Video resolution: max. 1280 x 1024 @ 75 Hz
- Network: 10/100 MBit/s
- Power pack: 100 – 240 V AC, 50/60 Hz
- Dimensions:
  W x H x D: approx. 440 x 44 x 220 mm

Connections (jack):
- PS/2 (keyboard/mouse)
- SUB-HD15 (VGA video, RGB and Sync.)
- RJ 45 (KVM matrix connection)
- RJ 45 (Ethernet)
- Sub-D (RS232)
- IEC320 C14 (power supply)
- Mini-DIN 4 (redundant power supply)

Supply includes:
Includes client software for the latest Windows operating systems (MS Windows XP Professional, Server 2003, Server 2008, Windows 7) and Linux Distribution (RedHat, Suse) in German and English.

Also required:
- Mains connection cable (DK 7200.210), see page 775.
- Cat 5 patch cable, see page 786.

SSC converter

for SSC premium/Duo 16/view 32 cat

The SSC converters convert the signals for keyboard, video and mouse from the connected computer to the Cat cable.
There is a choice of three different variants for connecting PCs with PS/2 or USB ports, and a separate version for use with SUN computers with a USB port. One converter is required for each computer. Every SSC converter has a unique identification number (Unique ID).

SSC converter	Packs of	Model No. DK
PS/2	1	**7552.201**
USB	1	**7552.202**
SUN-USB (German)	1	**7552.203**
SUN-USB (US English)	1	**7552.204**

Technical specifications:
- Video resolution: 1600 x 1200 @ 85 Hz
- Power supply: 5 V DC/approx. 150 mA (from the computer)
- Certification: CE
- Dimensions: approx. 65 x 45 x 20 mm

SSC converter VT100 (RS232)

for SSC premium/Duo 16

With this SSC adaptor, active network components (such as an Ethernet switch) with a serial management port which support the VT100 terminal mode may be integrated into the SSC premium KVM system.

Connections:
- Sub-D 9-pole (RS232)
- RJ 45 (connection to KVM matrix)
- Mini-DIN 4 (power supply)

Supply includes:
- Power pack
  (100 – 240 V, 50/60 Hz secondary, 12 V/0.7 A)
- Mains connection cable DK 7200.210

	Packs of	Model No. DK
SSC converter VT100	1	**7552.205**

Extended delivery times.

Also required:

Cat 5 patch cable, see page 786.

CPU cable

for SSC view 8/USB, PS/2 and USB
Combination connection cable between SSC view 8 and the individual servers, each with 2 HD 15 connectors for video, plus lockable PS/2 connectors at both ends for the keyboard and mouse, colour-coded.
USB cable with USB-A and USB-B connector (connection switch) and VGA cable.

Connection	Cable length	Model No. DK
PS/2	2 m	**7552.120**
PS/2	4 m	**7552.140**
USB	2 m	**7552.122**
USB	5 m	**7552.142**

Cat 5 patch cable

Flexible, pre-configured Cat 5 STP patch cable with shielded RJ45 connectors for connecting the SSC converter and SSC console to the SSC premium switch. The cables are wired 1 : 1 to AT&T 258A/T568B and comply with ISO/IEC 11801, UL E151955.

Colour:
Grey

Length m	Packs of	Model No. DK
2	4	**7320.472**
5	4	**7320.475**
10	1	**7320.481**
15	1	**7320.485**[1)]

[1)] Extended delivery times.

SSC Power Control

for SSC premium
With this adaptor, the Power Control Unit socket strips (DK 7200.001) and the active PSM module (DK 7856.201) may be switched individually or in pairs (for servers with redundant power supply). Control is via the OSD integrated into the SSC premium.
Up to 8 PSM and PCU modules may be switched (max. 64 EN 60 320 C13 slots).

Note:
- The connection cable between the SSC premium and the SSC Power Control with a length of 2.5 m is included with the supply.
- Only suitable for use with SSC premium switches and modules 7856.201 and 7200.001.

	Packs of	Model No. DK
SSC Power Control	1	**7552.420**

Also required:
- Power pack (DK 7201.210).
- Mains cable (DK 7200.210), see page 775.
- At least 1 active PSM/PCU module, DK 7856.201 only, see page 385 and DK 7200.001, see page 700.
- Cat 5 patch cable, see page 786.

SSC Power Pack

In order to increase fail-safeness, we recommend configuring a redundant power supply to the SSC premium and the connected user consoles. This compact wide-range power pack (AC: 100 – 240 V, 50/60 Hz, DC: 12 V/5 A) with IEC 320 socket (EN 60 320) and Mini-DIN 4 connectors to maintain correct functioning of the KVM switch in the event of a failure in the first power supply to the internal power pack.

Supply includes:
Mounting accessories.

SSC	Packs of	Model No. DK
SSC Power Pack	1	**7552.220**

Also required:
Connection cable for power pack, see page 775.

RFID mounting frame

for TS 8

With integral RFID reader (aerial) to accommodate the 482.6 mm (19˝) built-in components. The mounting frame may be depth-variably secured in the TS 8 and is used to structure the front 482.6 mm (19˝) mounting level.

Position detection of the components is accurate to within 1/3 U, therefore there are 3 aerial elements and signalling LEDs integrated into each U. The installation position of the components is correctly recognised even if they are not located precisely in the height pitch pattern. Reading and writing of the RFID tags is likewise signalled by one LED in each case.

Load capacity:
Max. 1000 kg static load with even distribution across two 482.6 mm (19˝) mounting levels.

Material:
Sheet steel, zinc-plated, passivated

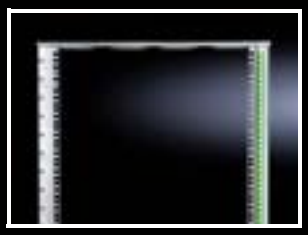
Supply includes:
Assembly parts.

For TS 8		U	RFID mounting frame, front	Mounting frame, rear
Width mm	Height mm		**Model No. DK**	**Model No. DK**
600	2000	42	**7890.206**	**7856.719**
800	2000	42	**7890.208**	**7856.731**
600	2200	47	**7890.226**	**7856.722**
800	2200	47	**7890.228**	**7856.734**

Other sizes available on request.

Also required:

A matching mounting frame without RFID reader (see ordering table) to emulate the rear mounting level.
The mounting frame must be connected to the RFID controller DK 7890.500, see page 787.



RFID tags

1 RFID tag is required for each component. Each tag has a “Unique ID” (UID, not sequential), which cannot be altered; all other data are stored on the tag in conformity with ISO 15693. The tags are unwritten in their delivered state. The tag is stuck to the inside/right of the 482.6 mm (19˝) mounting bracket. For this purpose, the tag has got an an adhesive surface. The component is later screw-fastened to the 482.6 mm (19˝) level.

Passive, writable RFID tag (13.56 MHz)	
Packs of	**Model No. DK**
20	**7890.020**

RFID controller

This controller connects the RFID reader (aerial) of the 482.6 mm (19˝) mounting frame to the CMC. In this way, the CMC is able to notify automatic changes, graphically depict the enclosure with the built-in components, and list capacity management.

One RFID controller is required per rack.

Enclosure dimensions W x H x D:
136 x 44 (1 U) x 129 mm

Material:
Plastic

Rated voltage:
24 V DC

Connections:
– RJ 45 jack (connection to CMC)
– 2 x Mini-DIN (connection of RFID frame & floor-reader)

Packs of	**Model No. DK**
1	**7890.500**

Also required:

Cat 5 patch cable,
see page 786.

System accessories for the human/machine interface

Handles/external mounting accessories

Handle set 790
Handles 792
Clipboard....793
Display board with wall bracket 793
Enclosure surface connector 793

Front assembly

Front panels....794
Mounting kit 795

Monitors

TFT monitor....796
Power pack....796
Connection cable 796
TFT holder 797

Keyboards, supports and drawers

Keyboards 798
Supports 800
Drawers 802

Interfaces

Interface box 806
Interface extension 806
Interface flaps....807

Signal pillars

Signal pillars, LED compact 808
Signal pillars, modular....809

Handle set

for Comfort Panel
For external mounting on corner pieces, also suitable for retro-fitting.

Material:
– Handle tube: Aluminium
– Handle holder: Die-cast zinc
– Covers: Polyamide

Surface finish:
– Handle tube: Natural-anodised
– Handle holder: Powder-coated

Colour:
– Handle holder: RAL 7024
– Covers: Similar to RAL 7024

Note:
Shorter heights and widths can be achieved by cutting the handle tube to length.
For enclosures with 74 mm depth, cannot be mounted on the same side as the support arm connection.

Accessories:
– Clipboard, see page 793.
– Display board, see page 793.

For horizontal mounting

With front panel width	Packs of	Model No. CP
482.6 mm (19″)	1 set	**6375.010**
520 mm	1 set	**6375.000**

Supply includes:
– Handle tube, Ø 20 mm
– 2 handle holders
– 2 covers
– Assembly parts

For vertical mounting

With front panel height	Packs of	Model No. CP
400 mm	1 set	**6375.040**
500 mm	1 set	**6375.050**
600 mm	1 set	**6375.060**

Supply includes:
– 2 handle tubes, Ø 20 mm
– 4 handle holders
– 4 covers
– Assembly parts

Handle set

for Optipanel
For external mounting on corner pieces, also suitable for retro-fitting.

Material:
– Handle tube: Aluminium
– Handle holder: Die-cast zinc
– Covers: Polyamide

Surface finish:
– Handle tube: Natural-anodised
– Handle holder: Powder-coated

Colour:
– Handle holder: RAL 7035
– Covers: RAL 7024

Note:
Shorter heights and widths can be achieved by cutting the handle tube to length.
For enclosures with 100 mm depth, cannot be mounted on the same side as the support arm connection.

Accessories:
– Clipboard, see page 793.
– Display board, see page 793.

For horizontal mounting

With front panel width	Packs of	Model No. CP
482.6 mm (19″)	1 set	**6385.010**
520 mm	1 set	**6385.000**

Supply includes:
– Handle tube, Ø 25 mm
– 2 handle holders
– 2 covers

For vertical mounting

With front panel height	Packs of	Model No. CP
400 mm	1 set	**6385.040**
500 mm	1 set	**6385.050**
600 mm	1 set	**6385.060**

Supply includes:
– 2 handle tubes, Ø 25 mm
– 4 handle holders
– 4 covers

Handle set

For vertical and horizontal mounting on all surfaces.
Overall length: 420 mm.

Material:
– Handle tube: Aluminium
– Tube holder: Die-cast zinc

Surface finish:
Handle tube: Natural-anodised

Colour:
Tube holder: RAL 7035

Supply includes:
– 4 conduit holders
– 2 handle tubes

Packs of	Model No. SZ
1 set	**2389.000**

Accessories:

– Clipboard,
see page 793.
– Display board,
see page 793.

Handle frame

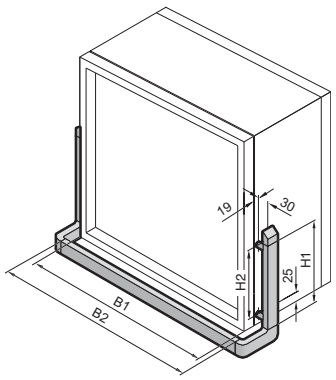
for operating housing with display panel front

Colour:
RAL 8019

Supply includes:
– Square aluminium tube
– Plastic corner bracket
– End caps
– Assembly parts

Note:
Command panel with display panel front
CP 6662.500,
see page 145.

Model No. CP	6190.000
Operating housing width (B1) mm	600
Width of the horizontal rectangular tube (B2 = B1 + 48) mm	648
Height of the vertical rectangular tube (H1) mm	299
Hole distance between the assembly holes (H2) mm	249



Aluminium strip

For
- One-piece console
- Surfaces

Prevents wiring plans etc. from slipping.

For console	Length mm	Packs of	Model No. AP
AP	1183	3	**2682.000**

May be cut to length for other dimensions.

Handles

For horizontal or vertical attachment to the enclosure panel of:
- Comfort Panel,
- Optipanel,
- Other enclosures or
- Surfaces

Mounting holes and surfaces without fins are required for assembly purposes.
For the Comfort Panel version with fins, selectable via configurators at www.rittal.com, corresponding milling work may be carried out. To this end, please specify “Prepared for handle set CP 6107.XXX” for the command panel.

Material:
– Handle holder: Die-cast zinc
– Cover bungs: Plastic
– Handle tube: Aluminium

Surface finish:
Handle holder: Powder-coated

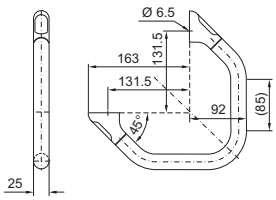
Colour:
– Handle holder: RAL 7035
– Cover bungs: Similar to RAL 7035
– Handle tube: Similar to RAL 9006

Corner handle

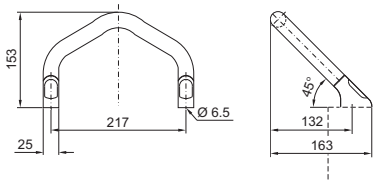
Supply includes:
– 4 handle holders
– 2 handle tubes
– Assembly parts

Packs of	**Model No. CP**
1 set	**6107.000**

Mounting on enclosure corner



For external mounting on straight surfaces
(90° rotation of handle holder)



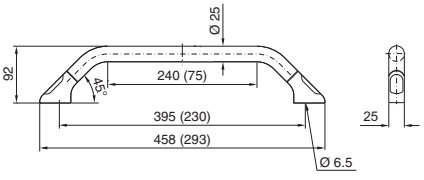
U handle

Supply includes:
– 2 handle holders
– 1 handle tube
– Assembly parts

For front panel size	Packs of	**Model No. CP**
≥ 7 U	1 set	**6107.100**
482.6 mm (19″)	1 set	**6107.200**

Accessories:

For CP 6107.200:
– Clipboard,
see page 793.
– Display board,
see page 793.



Note:
Dimensions in brackets for front size 7 U.

Clipboard

For securing operating instructions or plans (A4 size) at eye level.
Prepared for mounting on the right-hand side; mounting on the left is also possible by unscrewing and moving the clip part.
For mounting purposes, a straight tube length of ≥ 200 mm, Ø 20 mm or Ø 25 mm, is required.

Material:
– Clipboard: Sheet steel
– Clip part: Aluminium

Surface finish:
Clip part: Natural-anodised

Colour:
RAL 7035

Width mm	Height mm	Packs of	**Model No. CP**
225	315	1	**6013.000**

Also required:
– Handle set SZ 2389.000, see page 791
or
– Handle set for Comfort Panel, see page 790
or
– Handle set for Optipanel, see page 790
or
– U handle CP 6107.200, see page 792.

Display board with bracket

To accommodate test plans, documents etc. in A4 format.

Assembly:
- On surfaces,
- On a 25 mm pitch pattern of the TS frame or rail system,
- On handle set Ø 20 mm or Ø 25 mm.

Supply includes:
– Display boards
– Wall bracket
– Assembly parts

Packs of	**Model No. CP**
1 set	**6013.100**

Accessories:
– Handle set SZ 2389.000, see page 791
or
– Handle set for Comfort Panel, see page 790
or
– Handle set for Optipanel, see page 790
or
– U handle CP 6107.200, see page 792.

Enclosure surface connector

To accommodate keyboard support (SM 2383.000, see page 800).

Material:
– Surface connector: Extruded aluminium section
– Side cover: Sheet steel

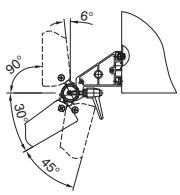
Surface finish:
Surface connector: Natural-anodised.

Colour:
RAL 7024

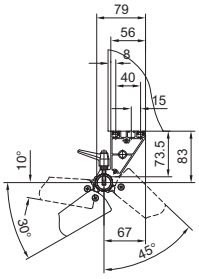
Supply includes:
Assembly parts.

Packs of	**Model No. SM**
1 set	**2383.010**

Mounting on surfaces



Mounting underneath surfaces



Front panels

for Comfort Panel and Optipanel

Material:
Aluminium, 3 mm

Surface finish:
Natural-anodised

Note:
Mounting kits included with the supply of 520 mm wide standard enclosures.

With mounting hole

Width mm	Height mm	Model No. CP
482.6 (19″)	155.0 (3.5 U)	**6027.000**
482.6 (19″)	310.3 (7 U)	**6028.000**

With threaded bolts M5

Width mm	Height mm	Model No. CP
482.6 (19″)	155.0 (3.5 U)	**6027.010**
482.6 (19″)	310.3 (7 U)	**6028.010**
520	400	**6028.014**
520	500	**6028.015**
520	600	**6028.016**

Also required:

Mounting kit
– for Comfort Panel CP 6053.800, see page 795,
– for Optipanel CP 6053.000/.500, see page 795.

Front panels

for Compact Panel

Material:
Aluminium, 3 mm

Surface finish:
Natural-anodised

Size W x H mm	To fit Compact Panel	Model No. CP
178 x 200	CP 6340.000	**6028.500**
178 x 350	CP 6340.100	**6028.510**
252 x 200	CP 6340.300	**6028.530**
252 x 350	CP 6340.400	**6028.540**

Cover plate

for support arm connection
For secure sealing of an unrequired support arm connection in the enclosure.

Material:
Sheet steel

Supply includes:
Seal and assembly parts.

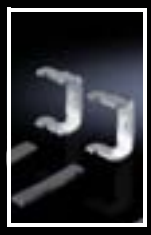
Note:
If with
- Comfort Panel
- Optipanel
- Compact Panel

command panels, there are already 2 support arm cut-outs provided, a cover plate is included with the supply of the enclosure.

Support arm connection	Surface finish	Model No. CP
CP-S	Spray-finished in RAL 7024	**6505.200**
CP-L, Ø 130 mm	Zinc-plated, passivated	**6505.500**
CP-L, ▭ 120 x 65 mm	Zinc-plated, passivated	**6505.100**

Mounting kit

for Optipanel
For installing
- Aluminium front panels
- Command panels
- Keyboards



For holes

Supply includes:
Packs of
30 retaining claws, captive nuts, screws and sealing washers.

For front panels	Thread	Model No. CP
Others	M4	**6058.000**
Rittal and others	M5	**6053.000**

For threaded bolts

Supply includes:
Packs of
10 retaining claws and cap screws.

For front panels	Thread	Model No. CP
Others	M4	**6058.500**
Rittal and others	M5	**6053.500**[1)]

[1)] For the installation of TFT monitors 15″, 17″ and 19″.

For screw clamp

Supply includes:
Packs of
4 pressure plates,
4 attachment strips.

Note:
Command panels
TP 277 6″, OP 277 6″, MP 277 10″ Touch,
MP 377 12″ Touch, MP 377 15″ Touch
are installed using an adaptor plate (included with the supply subject if selected accordingly, or available on request).

For direct installation of	Model No. CP
Siemens Sinumerik: OP 010, OP 010C, OP 012, OP 015, MCP 483, PP 012, Querty 19″, KB 483C, TP 015A	**6053.210**
Siemens Simatic: Panel PC 477, 577, 677, 677B: 12.1″ Touch, 15.1″ Touch, 12.1″ keys, 15.1″ keys, 19″ Touch[1)] Panel PC 877: 15.1″ Touch, 12.1″ keys, 15.1″ keys, 19″ Touch[1)], Flat Panel[1)] 12″, 15″, 17″, 19″	
Pro Face Industrial PC: ALP 3600, ALP 3700, ALP 3900	

The mounting set can only be installed vertically.
[1)] 2 packs are required.

Mounting kit

for Comfort Panel
For the installation of aluminium front panels, command panels and keyboards.

Supply includes:
CP 6058.800, CP 6053.800:
20 each of retaining claws, captive nuts, screws, nuts and sealing washers.

CP 6053.300:
8 medium retaining claws, 8 short retaining claws, 4 long retaining claws

1 6058.800, 6053.800

2 6053.300

For drilled holes/bolts/front panel mounting from behind

Thread	Model No. CP
M4	**6058.800**
M5	**6053.800**

For screw clamp

For installing:	Model No. CP
Siemens Sinumerik: OP 010, OP 010 C, OP 012, TP 012, OP 015, OP 015 A, MCP 483 C, MCP 483, PP 012, PP 012 Erweiterung, MCP, KB 483 C, Querty 19″	**6053.300**
Siemens Simatic: Panel PC 477, 577, 677, 677B: 12,1″-Tasten, 12,1″-Touch, 15,1″-Tasten, 15,1″-Touch, 19″-Touch	
Panel PC 877: 12,1″-Tasten, 15,1″-Tasten, 15,1″-Touch, 19″-Touch, TP 277 6″ MP 377 15″-Touch, MP 377 12″-Touch, MP 377 19″-Touch	
B & R: Automation Panel Panel PC	

TFT monitor

Installation variant for surfaces and command panels.

Benefits:
- High-quality industrial design
- Reduced installation work thanks to integral front frame
- No additional ventilation required
- Very small installation depth (45 mm)

Resistive touchscreen for operation with a pen, finger or glove.

Material:
Front frame: Aluminium

Surface finish:
Powder-coated

Colour:
RAL 7035

Protection category:
IP 65 to IEC 60 529 (front)

Supply includes:
Seal, hex nuts (for installation in surfaces), VGA cables, rear threaded bolts M5 (14). Touch variants additionally with integral connection cable and driver CD-ROM.

Size	Width mm	Height mm	Model No. SM	
			Touch	
			Without[1]	Resistive, USB
15″	430	343	**6450.010**	**6450.070[2]**
17″	482.6	354.8	**6450.020**	**–**
19″	482.6	399.3	**6450.170**	**–**

[1] With anti-reflection coated safety glass screen.
[2] With VGA + DVI-D

Also required:

Mounting kit CP 6053.800 (when installing in Comfort Panel), see page 795.
Mounting kit CP 6053.500 (when installing in VIP 6000 and Optipanel), see page 795.
Power pack SM 6450.050, see page 796 and connection cable SM 6450.060, see page 796, if an operating voltage of only 100 – 240 V AC is available instead of 12 V DC.

Detailed drawings:
Available on the Internet.

Technical specifications	15″	17″	19″
Resolution of display (max. pixels)	1024 x 768	1280 x 1024	1280 x 1024
Resolution of controller/colours	VGA-SXGA/16.2 million		
Brightness (cd/m²)	400	300	250
Contrast ratio	500 : 1		
Reading angle horizontal (right/left)	65°/65°	75°/75°	88°/88°
Reading angle vertical (top/bottom)	45°/65°	65°/65°	88°/88°
Lamp life[1] (h)	min. 35,000	typ. 50,000	min. 40,000
On-screen display (OSD)	At rear		
VGA input	D-Sub HD 15-pole		
Operating temperature (°C)/storage temperature (°C)	0 to +50/–20 to +60		
Voltage input	12 V DC		
Power consumption (W)	30	35	40
H-Sync. (kHz)/V-sync. (Hz)	31.5 to 80/60 to 75		
Humidity in operation (%)	20 to 80 (non-condensing)		
Humidity in storage (%)	5 to 95 (non-condensing)		

[1] Until half the original brightness is reached.

Power pack

For TFT monitor
- With IEC 320 socket,
- With connection cable (1.5 m) and connector for connecting to the TFT monitor.

Dimensions, W x H x D: 107 x 30 x 59 mm.

Technical specifications:
– Input voltage: 100 – 240 V AC
– Output voltage: 12 V DC
– Operating temperature: 10°C – 40°C

Packs of	Model No. SM
1	**6450.050**

Material:
Enclosure: Plastic

Connection cable

for power pack
With IEC connector at one end.
Length: 1.5 m.

Packs of	Model No. SM
1	**6450.060**

TFT holder

Suitable for mounting TFTs with VESA 75/100 adaptation up to 21˝ on
- Housing coupling CP-S, CP 6501.050, see page 151
- CP-L enclosure attachment ▭ 120 x 65 mm, CP 6525.610, see page 155
- Vertical support arm via enclosure attachment, tilting CP 6902.670, see page 151

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7024

Dimensions mm	Packs of	Model No. SM
477 x 372 x 110.5	1	**2383.030**

Detailed drawings:
Available on the Internet.

TFT holder

Vertically hinged

Suitable for mounting TFTs with VESA 75/100 adaptation up to 20.1˝ in
- PC enclosures
- Other enclosures based on TS

The TFT support is attached to the upper horizontal enclosure section using appropriately fitted rails and/or chassis.
The integral swivel mechanism allows the TFT to be swung forwards out of the enclosure with the system operational in order to access the equipment behind it. The display on the TFT remains visible even after it has been swung forwards.
The length of the actuator handle is adjustable to adapt to the size of the TFT.

Material:
Sheet steel

Supply includes:
Assembly parts.

Packs of	Model No. SM
1	**2383.040**

! Also required:

For enclosure depth mm	Punched rail TS 18 x 38 mm	Page
400	8612.240	650
500	8612.250	650
600	8612.260	650
800	8612.280	650

Detailed drawings:
Available on the Internet.

Keyboard, pull-out

with integral trackball
Super-slimline keyboard with cursor keys and trackball. The handle also serves as a hand rest. The 10° angled pullout ensures ergonomic working.

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- Front panels
- Directly in Comfort-Panel and Optipanel of a suitable size, selectable via configurators – see www.rittal.com

Material:
Sheet steel

Surface finish:
Front panel: Powder-coated

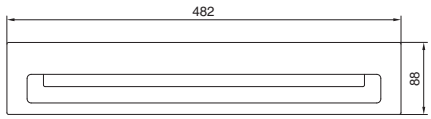
Colour:
RAL 7035

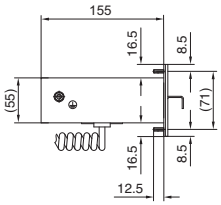
Technical specifications:
Keyboard:
– 84 short-stroke keys, IBM-AT compatible (MF2), incl. cursor keys
– With integral 16 mm trackball
– Interface: 2 x 6-pole PS/2 DIN connector
– Operating temperature: +5°C to +50°C
– Storage temperature: -10°C to +60°C
– Humidity: max. 95% (non-condensing)

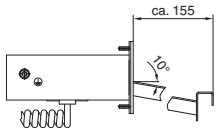
Keyboard layout	Packs of	**Model No. SM**
German	1	**6002.100**

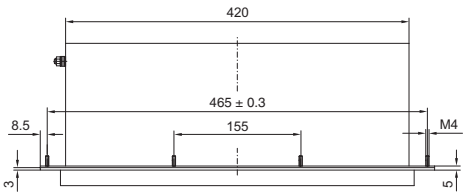
Protection category:
IP 65 (front, solid) to IEC 60 529

SM 6002.100

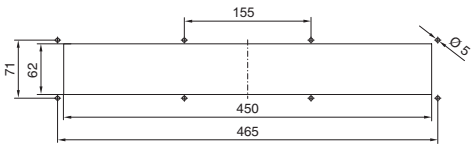








Mounting cut-out



Built-in keyboard 19″/4 U

with integral touchpad

The integral touchpad means that the installation of an additional, correct protection category mouse is no longer required, and cabling is also reduced. The short stroke keys are easily identified by edge embossing, less force is required to operate them and they have good positive key actuation.

Benefits:
- The separate number pad enables the parameters to be entered quickly
- Sealed, wipeable surface finish
- High level of mechanical and chemical resistance as per DIN 42 115.

Technical specifications:
– Number of keys: 105
– Front panel dimensions: 482.6 x 177.0 mm (482.6 mm/19″ x 4 U)
– Installation depth: 23 mm
– 12 M5 x 20 threaded bolts at back
– Actuation travel/force: 0.3 mm/2.6 N
– Service life: 3 million switching cycles
– Operating temperature: –40°C to +90°C
– Touchpad resolution, capacitive: 40 pixels/mm
– Interfaces: 2 x PS/2 (1 USB adaptor supplied loose)

Material:
Front panel: Aluminium

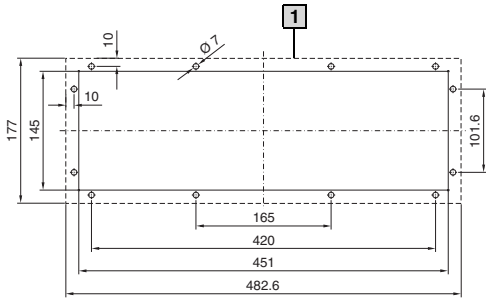
Protection category:
IP 65 to IEC 60 529 (front)

Supply includes:
– Y connection cable, length 1.8 m
– PS/2 connector
– USB adaptor
– Seal
– Drilling template
– Assembly parts for surfaces

Keyboard layout	Packs of	**Model No. SM**
German	1	**6446.020**

Also required:

Mounting kit CP 6053.800 (when installing in Comfort Panel), see page 795.
Mounting kit CP 6053.500 (when installing in VIP 6000 and Optipanel), see page 795.



1 Contact surface

Fold-out tray

for keyboard and mouse

For installation in
- 600 and 800 mm wide doors
- 482.6 mm (19″) swing frames and enclosures

Standard double-bit lock insert which may be exchanged for lock inserts 27 mm, version A, see page 609 and for lock cylinder SZ 2571.000, see page 610.

Material:
– Flap: Sheet steel
– Side parts: Cast aluminium
– Tray: Extruded aluminium section

Surface finish:
– Cover, side parts: Textured paint
– Tray: Natural-anodised

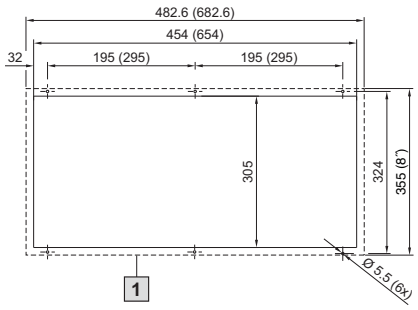
Colour:
Cover, side parts: RAL 7035

Protection category:
IP 55 to IEC 60 529

Accessories:

Mousepad support, pull-out, see page 800.

Mounting cut-out



1 Contact surface

For door width mm	Dimensions W x H x D mm	Installation depth mm	Max. keyboard dimensions W x H x D mm	**Model No. SZ**
600	482.6 (19″) x 355 (8 U) x 126	93	405 x 50 x 250 405 x 50 x 195[1)]	**2379.600**
800	682.6 x 355 (8 U) x 126	93	605 x 50 x 250 605 x 50 x 195[1)] 475[1)] x 50 x 250	**2379.800**

[1)] Maximum keyboard size with holder for mouse.

Support for mousepad, pull-out

with mouse holder
For screw-fastening into the fold-out tray SZ 2379.600/SZ 2379.800, see page 799.
To fit all standard mousepads up to 250 x 205 mm.

Supply includes:
Assembly parts.

Packs of	Model No. SZ
1 set	**2379.900**

Support

for keyboards
for max. 473 x 210 mm.
Prepared for:
- Cable gland
- Support for mousepad, vertically hinged (SM 2383.020)

Material:
– Side parts: Sheet steel
– Front and rear: Extruded aluminium section

Surface finish:
– Side parts: Textured paint
– Front and rear: Natural-anodised

Colour:
Side parts: RAL 7024

Supply includes:
2 clamping screws, end stoppers, cover plate, cable entry grommet and nylon loop tape.

Packs of	Model No. SM
1 set	**2383.000**

Also required:

For external mounting on surfaces using enclosure surface connectors, see page 793.

Accessories:

Mousepad support, swivelling, see page 805.

Utility bars, vertically hinged

To support standard keyboards during programming and servicing work.
Mounting distance of utility bars for problem-free insertion at least 300 mm.
Depth adequate for keyboards up to max. 210 mm.

For mounting beneath:
- Comfort Panel[1)]
- Optipanel[2)]
- Any sufficiently large surface, such as:
  – Worktops IW
  – Command panels
  – Command panel housing with door

on:
- Vertical services (doors/side panels)

Min. front panel width
[1)] 385 mm
[2)] 405 mm

After use, the utility bars fit securely and neatly under the mounting surface, thus giving the operator more space to move around.

Packs of	Model No. CP
1 set	**6514.200**

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Keyboard rack, 482.6 mm (19˝)

- 482.6 mm (19˝) rack-mounted chassis 1 U, 430 mm deep
- Prepared for the installation of 482.6 mm (19˝) keyboards with touchpad or trackball and mouse with the following dimensions: Max. height: 39 mm, max. width: 417 mm, max. depth: 210 mm
- Solid, lockable front
- Telescopic slides with integral clamp
- Prepared for installation of a mousepad

Material:
Sheet steel

Design	Packs of	Model No. RP
PS/2	1	**3659.520**
USB	1	**3659.680**

Colour:
RAL 7035

Supply includes:
– 482.6 mm (19˝) chassis **excluding keyboard,**
– Connection cable,
– Mounting bracket for 800 and 900 mm enclosure depth,
– Assembly parts.

Mousepad

for keyboard rack

- For optional mounting on the left, right or front of the keyboard rack (fold-away design)
- Maybe folded into the keyboard drawer after use
- Only suitable for use in conjunction with 482.6 mm (19˝) keyboards with a total height of max. 39 mm (Model No. RP 9911.396)

Material:
Sheet steel

Assembly	Packs of	Model No. RP
right/left	1	**3659.620**

Colour:
RAL 7035

Supply includes:
Assembly parts.

Keyboard, 482.6 mm (19˝)

with PS/2 connections

- 482.6 mm (19˝) keyboard for installation in the 482.6 mm (19˝) keyboard rack in conjunction with the mousepad
- German keyboard layout
- Only 36/38.9 mm high keys allow installation in 1 U keyboard racks
- PS/2 connector
- 105 keys (including WIN 95 keys)
- Operating temperature: 0°C to +50°C

W x H x D mm	Design	Packs of	Model No. RP
403 x 36 x 171	German	1	**9911.396**

Protection category:
IP 20

Supply includes:
Connection cable.

TFT display, 15˝

- 482.6 mm (19˝) front panel, 7 U
- TFT LCD 15.1˝
- Anti-reflection coated safety glass screen
- Brightness: 250 cd/m^2
- On-screen display
- Colours: 16.7 million
- Power pack: Input voltage: 100 – 240 V AC, output: 12 V DC/3.75 A
- OSD membrane keyboard
- VGA + SVGA, non-interlaced
- Maximum resolution 1024 x 768 pixels
- Contrast ratio: 300 : 1
- Viewing angle: 160° (H+V)
- Video input 15-pin D-SUB (analog RGB)
- RS232 monitor interface

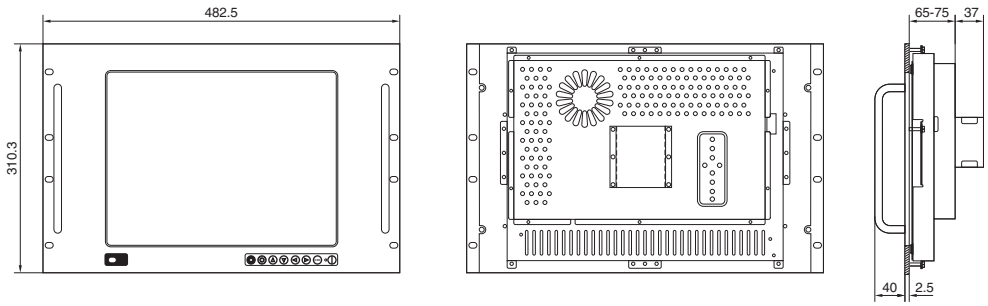
Packs of	Model No. RP
1	**3659.440**

Material:
Front panel: Aluminium, powder-coated

Colour:
RAL 7035

Protection category:
Tested to EN 60 950 and EMC directive 89/336/EEC.

Note:
Depth varies according to the display design (protective glass, touchscreen etc.).



Drawer 482.6 mm (19˝)/2 U

for keyboard and mouse

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- 482.6 mm (19˝) system punchings
- Front panels
- Directly in Comfort-Panel and Optipanel of a suitable size, selectable via configurators – see www. rittal.com

Suitable for
- Accommodation of keyboards up to max. 390 x 32 x 139 mm.
- Support of standard commercially available mouse or trackball.

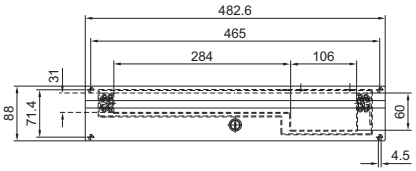
Design:
– Drawer: With stay
– Front panel: With security lock (lock no. 12321) and handle strip

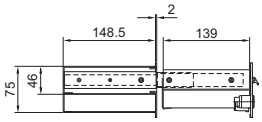
Width mm	U	Depth mm	**Model No. CP**
482.6 (19˝)	2	150	**6002.000**

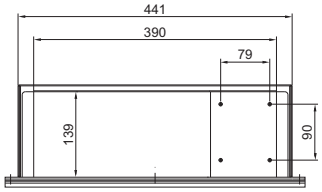
Material:
– Drawer housing: Sheet steel
– Drawer and front panel: Aluminium

Surface finish:
– Drawer housing: Zinc-plated
– Drawer and front panel: Natural-anodised

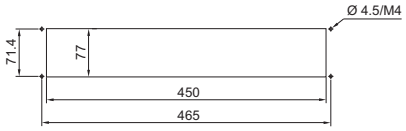
Supply includes:
Assembly parts for installation in Comfort Panel/ Optipanel command panel.







Mounting cut-out
(for installation in surfaces)



Drawer for keyboard and mouse

with mousepad support

For installation in:
- Any sufficiently large surface (e.g. door, side panel)
- 482.6 mm (19˝) system punchings
- Front panels.

Suitable for accommodating
- Keyboards up to a maximum of 460 x 42 x 170 mm.
- Standard mouse and mousepad

Design:
– Drawer and housing: With side pull-out mousepad support and tray
– Front panel: With 3 mm double-bit lock insert, folds out as handrest

Width mm	U	Depth mm	Model No. CP
482.6 (19˝)	3.5	261	**6003.000**

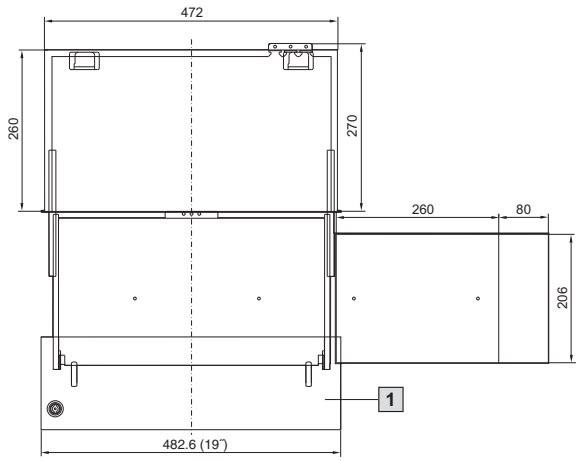
Material:
– Drawer and enclosure: Sheet steel
– Front panel: Aluminium

Surface finish:
– Drawer and enclosure: Textured paint
– Front panel: Natural-anodised

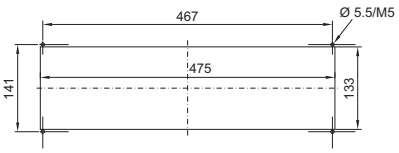
Supply includes:
Assembly parts.

Accessories:

Standard double-bit lock insert may be exchanged for 27 mm lock inserts, version A, see page 609.



Mounting cut-out
for installation in surfaces



1 Front trim panel

Keyboard drawer 1 U

for 482.6 mm (19˝) attachment level

This space-saving keyboard drawer is screw-fastened to the front and rear 482.6 mm (19˝) attachment level.
The installation spacing is infinitely adjustable from 460 – 800 mm. It is fully extendible and lockable, with strain relief and hinged cable support.
The drawer is suitable to accommodate 482.6 mm (19˝) keyboards.

Interior dimensions:
W x H x D approx. 420 x 40 x 220 mm

Material:
Sheet steel

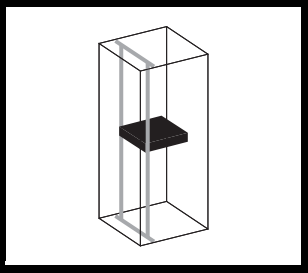
Colour:
RAL 7035

Supply includes:
Assembly parts, excluding keyboard.

Note:
Monitor/keyboard unit, 1 U, see page 780.

Distance between levels mm	Model No. DK
460 – 800	**7281.200**[1)]

[1)] Delivered without keyboard.



Keyboard drawer 2 U

for a 482.6 mm (19˝) attachment level
For keyboards up to 430 mm wide and 250 mm deep with the front panel folded over.

Material:
Sheet steel with aluminium front

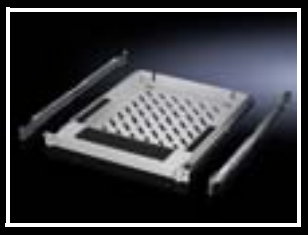
Surface finish:
Spray-finished

Colour:
RAL 7035

Supply includes:
– Lockable drawer with handles,
– Folding front,
– Pull-out mousepad,
– Mouse support,
– Practical cable entry
– and strain relief.

Height	Packs of	Model No. DK
2 U	1	**7281.035**

Installation depth: 390 mm.



Drawer 482.6 mm (19˝)

for keyboard
For attaching to the 482.6 mm (19˝) mounting angles front and rear. Suitable for standard keyboards > 482.6 mm (19˝). Keyboard support with non-slip base, plus wrist support.
Depth-variable installation from 610 – 950 mm.
Clearance opening W x H x D: 408 x 40 x 550 mm.

Material:
Sheet steel

Colour:
RAL 7035

Supply includes:
Assembly parts, excluding keyboard.

Packs of	Model No. DK
1	**7063.888**

Note:
Installation only possible on L-shaped and cranked 482.6 mm (19˝) mounting angles and/or 482.6 mm (19˝) mounting frames.

Support for mousepad

for command panels and surfaces
The angle of the mousepad support is individually adjustable.
Two holes are needed on the enclosure for attachment purposes.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Weight kg	Packs of	Model No. SM
1.0	1	**2381.000**

Accessories:

Holder for mouse,
see page 805.

Support for mousepad, vertically hinged

For mounting on the left/right, beneath support for keyboards. Latches home automatically, both when retracted and extended. With mounting holes for mouse holder (SM 2382.000).
With cutouts for cable routing and holes for attachment via cable ties, for fast assembly (SZ 2597.000).

Material:
Sheet steel

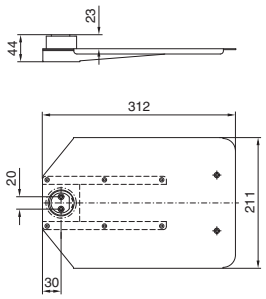
Surface finish:
Zinc-plated

Supply includes:
Assembly parts and mousepad, stuck on with adhesive.

Packs of	**Model No. SM**
1	**2383.020**

Accessories:

Holder for mouse, see page 805.
Cable ties, see page 720.



Holder for mouse

To fit mousepad support and for secure accommodation of a standard mouse.

Material:
Sheet steel

Surface finish:
Zinc-plated

Supply includes:
Assembly parts.

Weight kg	Packs of	**Model No. SM**
0.3	1	**2382.000**

Also required:

Support for mousepad, see page 804.

Paper removal flap

For installation in surfaces
Facilitates easy removal of pages from the printer without opening the enclosure door. Plexiglass flap with magnetic lock.

Paper removal flap	Colour RAL	Packs of	**Model No. IW**
DIN A4	7015	1	**6903.200**

Base

for tubular door frame
The space-saving alternative instead of component shelves to accommodate tower PCs (maximum 20 kg).
For screw-fastening to the tubular door frame of 600 mm wide enclosures based on TS.

Load capacity: 20 kg.

Material:
Sheet steel

Surface finish:
Spray-finished

Colour:
RAL 7015

Supply includes:
Retaining strap and assembly parts.

Width x height x depth mm	Packs of	Model No. IW
495 x 159 x 230	1	**6902.950**

Also required:

TS support strips for direct screw-fastening to the tubular door frame, see page 650.

Interface box

For secure accommodation for all common computer ports, 3 ½″ disk drives and sockets. The lockable metal cover provides a high mechanical load-bearing capacity, protects against unauthorised access and ensures an increased shielding effect for the installed equipment.

Material:
– Front panel: Extruded aluminium section
– Mounting tray: Aluminium, 1.5 mm
– Flap: Aluminium, 3.0 mm

Surface finish:
– Frame: Powder-coated
– Mounting tray: Powder-coated
– Flap: Natural-anodised

Weight kg	Packs of	Model No. SZ
0.8	1	**2482.000**

Colour:
RAL 7035

Supply includes:
– Frame with hinged flap
– Cam with security lock (No. 12321).
– Mounting tray including seal and assembly parts.

Interface extension with wall connection and built-in RJ 45 module

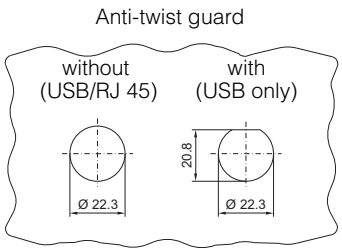
For extending the internal enclosure interfaces – e.g. from industrial PCs and switches – up to the outside of the enclosure. The wall connection only needs the same space as a switch.

Benefits:
- Rapid access for maintenance work
- The protection category of the enclosure is preserved
- The lock nut cuts automatically into the spray-finish or eloxal layer, thereby creating a conductive connection
- Captive protective cap

Material:
– Enclosure: Brass
– Cover: Aluminium
– Seal: Polyamide

Surface finish:
– Enclosure: Nickel-plated
– Cover: Natural-anodised

Protection category:
IP 66/67 to IEC 60 529
(with the protective cap closed)



Material thickness: 1 – 6 mm

Design	Wall connection	Inside	Length m	Packs of	Model No. SZ
USB	Type A jack	Type A connector	0.5	1	**2482.210**
			1.0	1	**2482.220**
			2.0	1	**2482.230**
RJ 45	Jack	Connector	0.5	1	**2482.700**
			1.0	1	**2482.710**
			2.0	1	**2482.720**
RJ 45	Jack	Jack	–	1	**2482.730**

Interface flaps, modular

For universal use in all situations where rapid access to interfaces and sockets is needed. The affected enclosure remains closed and is therefore protected from ambient influences and unauthorised access.
Space-saving installation e.g.

- in **small enclosures and compact enclosures** as a programming interface for controllers
- in **IT and industrial distributors** as maintenance access for networks
- in **PC enclosures and console systems** for the temporary connection of additional equipment
- in mobile **industrial workstations** for rapid connection to existing network structures
- in **command panel systems** for programming and maintenance of integral components.

The mounting frame has a flap which snaps into position in various stages at opening angles of 90 to 180°. A snap fastener ensures a reliable seal. This may be locked if required.

Material:
– Mounting frame and metal flap: Fine die-cast zinc
– Plastic flap: Polycarbonate (semi-transparent)
– Lock: Polycarbonate, RAL 7024

Surface finish:
Mounting frame and metal flap: Matt nickel-plated

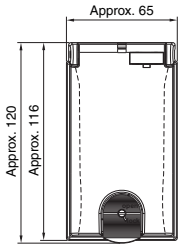
Colour:
Lock: RAL 7024

Protection category:
IP 65 to IEC 60 529 with sealed flap and proper assembly.

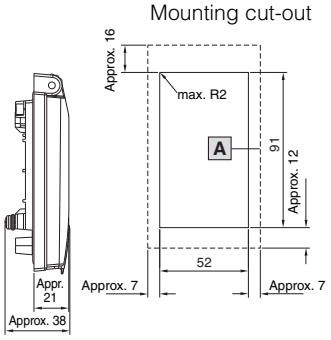
Description	cUL	UL	Packs of	Model No. SZ
Mounting frame[1)]				
1 Single, with plastic flap (semi-transparent)			1	**2482.300**
Double, with plastic flap (semi-transparent)			1	**2482.310**
2 Single, with metal flap	■	■	1	**2482.320**
3 Double, with metal flap	■	■	1	**2482.330**
Socket modules				
4 Germany (VDE), spring-action terminals max. 2 x 2.5 mm², connection at rear			1	**2482.400[3)]**
5 Germany (VDE), screw terminals max. 6 mm², connection at rear, colour: yellow (RAL 1016), for installation in front of master switch			1	**2482.410[3)]**
Interface inserts				
6 2 x SUB-D9 (jack/pin)	■	■	1	**2482.500**
7 SUB-D9 (jack/jack)	■	■	1	**2482.510**
8 2 x USB A (jack/jack)	■	■	1	**2482.540[2)]**
9 RJ 45 (jack/jack, Cat. 5e), SUB-D9 (jack/jack), SUB-D9 (pin/pin)	■	■	1	**2482.550**
10 2 x RJ 45 (jack/jack, Cat. 5e)	■	■	1	**2482.560[2)]**
11 USB A (jack/jack), RJ 45 (jack/jack, Cat. 5e), SUB-D9 (jack/pin)	■	■	1	**2482.570[2)]**
12 Blanking plate (slimline), for individual population, usable area: 45 x 75 mm	■	■	1	**2482.590**

[1)] Electrically conductive.
[2)] Conductively linked to mounting frame.
[3)] Rated voltage: 250 V AC, rated current: 10 – 16 A
All SUB-D interfaces may be rotated while in use.
Other socket modules and interface inserts available on request.

Interface flap, single



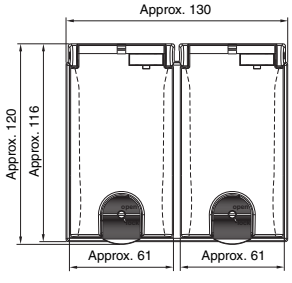
Mounting cut-out



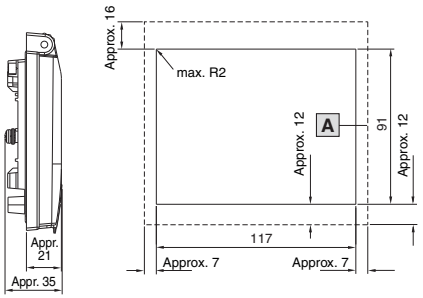
Permissible material thickness:
1 – 5 mm

A Contact surface

Interface flap, double



Mounting cut-out



Signal pillars, LED compact

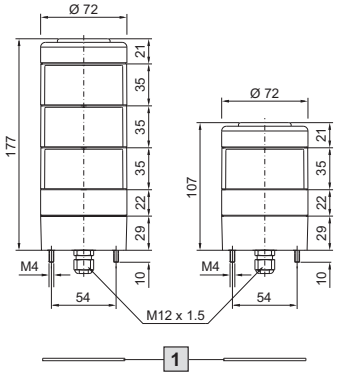
Benefits:
- Complete, ready-to-connect solution
- Minimal build height
- Extremely long service life of the LEDs (at least 70,000 h), therefore maintenance-free
- Minimal assembly work and warehousing costs

Technical specifications:
– Operating voltage: 24 V AC/DC
– Electrical connection: Screw terminals
– Light: LED
– Transmission angle: 3 x 120°
– Operating temperature: –20 to +70°C
– Flashing function: Controllable via PLC
– Cable entry: Metric screwed cable gland M12 x 1.5 for cable diameter 3.0 – 6.5 mm

Protection category:
IP 65 to IEC 60 529

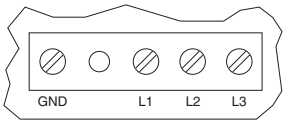
Design	Packs of	H mm	Model No. SG
3-stage, red, yellow, green	1	177	**2372.100**
1-stage, red	1	107	**2372.130**

Also required:
– For wall mounting: Bracket for wall mounting, see page 812.
– For conduit mounting/support arm systems: Connection adaptor, see page 808.
– Other mounting components, see page 813/814.



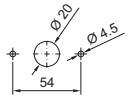
1 Seal

Connection picture SG 2372.100/.130/.140



GND – 0 V (Ground)
L1 – L3 – +24 V DC (LED light stages, from bottom to top, unneeded contacts are left free)

Mounting cut-out



Connection adaptor

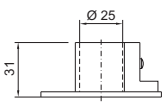
for signal pillar, LED compact
For conduit mounting and mounting on support arm systems.

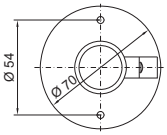
Material:
Plastic

Colour:
Black

Packs of	Model No. SG
1	**2372.120**

Accessories:
– Mounting components for conduit mounting, see page 814.
– Mounting components for support arm system, see page 813.





Signal pillars, modular

Benefits:
- Simple assembly and contact via bayonet fastener.
- Configuration of up to five components with the same voltage.
- Flashing and stroboscopic light element incl. lamp, suitable for direct use.
- Components are available in a range of colours and voltages.

For modular configuration of
- Connection components
- AS interface element
- Optical components
- Incandescent lamps/LED lamps
- Acoustic components
- Label panel

Connection component

for signal pillars, modular
Optionally for conduit or wall/base mounting. Screw terminals in the connection component. With cover for optical components. Contact hazard protection to VDE.

Material:
Enclosure of polyamide

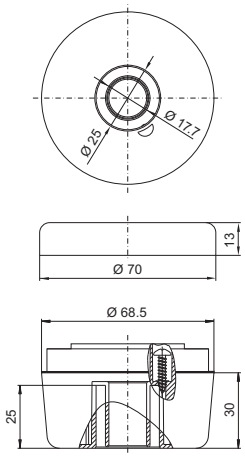
Colour:
Black

Protection category:
IP 54

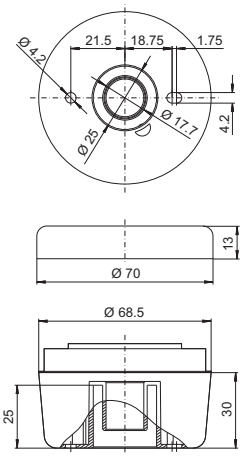
Connection component	**Model No. SG**
For conduit mounting	**2368.000**
For wall/base mounting	**2368.010**

Accessories:
- Mounting components for wall/base mounting, see page 812.
- Mounting components for conduit mounting, see page 814.
- Mounting components for support arm system, see page 813.

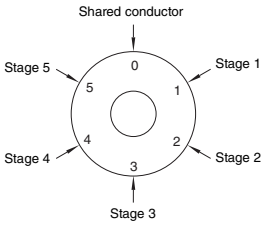
Connection component for conduit mounting
SG 2368.000



Connection component for wall/base mounting
SG 2368.010



Connection diagram



1 Seal

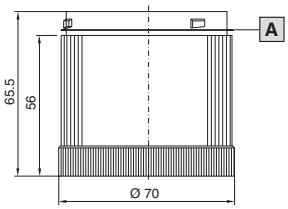
Optical components

for signal pillars, modular
With 360° signal transmission thanks to optimised prism system.
No. of potential stages = 5 components, with identical voltage.

Material:
– Enclosure: Polyamide
  Cap: Transparent polycarbonate

Protection category:
IP 54 if a cover or acoustic component is fitted at the top.

Also required:
Incandescent lamps for steady light component, see page 810.



A Pre-configured seal

1 Steady light component 12 – 240 V AC/DC[1)]

Model No. SG				
Red	Green	Yellow	Clear	Blue
2369.000	**2369.010**	**2369.020**	**2369.030**	**2369.040**

[1)] Incandescent lamps not included with the supply.

2 LED steady light component 24 V AC/DC, 25 mA

Model No. SG				
Red	Green	Yellow	Clear	Blue
2372.000	**2372.010**	**2372.020**	**2372.030**	**2372.040**

3 LED steady light component 230 V AC/DC

Model No. SG				
Red	Green	Yellow	Clear	Blue
2370.150	**2370.160**	**2370.170**	**2370.180**	**2370.190**

4 LED flashing light component 24 V AC/DC

Model No. SG				
Red	Green	Yellow	Clear	Blue
2370.500	**2370.510**	**2370.520**	**2370.530**	**2370.540**

5 LED flashing light component 230 V AC/DC

Model No. SG				
Red	Green	Yellow	Clear	Blue
2370.550	**2370.560**	**2370.570**	**2370.580**	**2370.590**

6 Flashing light component 24 V DC, 125 mA

Model No. SG				
Red	Green	Yellow	Clear	Blue
2371.000	**2371.010**	**2371.020**	**2371.030**	**2371.040**

7 Flashing light component 230 V DC, 15 mA

Model No. SG				
Red	Green	Yellow	Clear	Blue
2371.050	**2371.060**	**2371.070**	**2371.080**	**2371.090**

Incandescent lamps

for steady light components
With BA 15d base/plinth.

Incandescent lamp	Packs of	Model No. SG
24 V, 5 W	3	**2374.060**
230 V, 5 W	3	**2374.070**

AS interface element

for signal pillars, modular

User-friendly activation of the signal pillar levels via AS interface.

Benefits:
- Standard slave.
- Max. 31 addresses.
- Up to 4 signal levels may be activated.
- Power supply may be switched from internal bus supply to external auxiliary voltage.
- With programming interface.
- Wiring and commissioning work is significantly reduced.
- For mounting directly on the connection component of the signal pillar.

Design	Packs of	Model No. SM
24 V DC	1	**2376.100**

Extended delivery times.

Material:
Polycarbonate

Colour:
Black, transparent

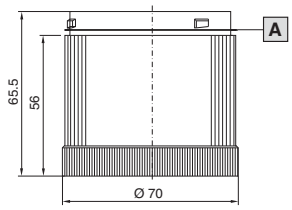
Protection category:
IP 54 to IEC 60 529

Also required:

Connection element,
see page 809.

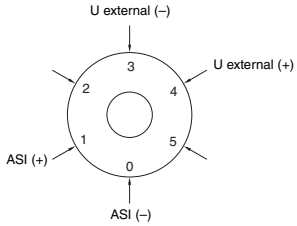
Technical specifications:

Voltage supply		
AS interface element	Via bus cable	
Operating voltage	18.5 V DC to 31.6 V DC (to AS interface specification)	
Polarity reversal protection	Built-in	
Watchdog	Built-in	
External auxiliary voltage	24 V DC +/– 10%	
Auxiliary voltage	**internal**	**external**
Current carrying capacity max.	200 mA	200 mA per element
Current rating max.	250 mA	75 mA
Voltage on signal element	18 – 31 V DC	24 V DC +/– 10%
Short-circuit/overload protection	Built-in	Pre-fuse M 1.6 A
Temperature range	–20°C to +50°C	



A Pre-configured seal

Connection diagram



Acoustic components

for signal pillars, modular
To indicate warnings or malfunctions.

Material:
Enclosure: Polyamide

Colour:
Black

Note:
Mounting only on the upper end of the optical components or directly on the connection component.

24 V AC/DC

Acoustic components	Packs of	Model No. SG
85 dB[1] max. 25 mA	1	**2376.000**
100 dB[2] max. 25 mA	1	**2376.010**

[1] Continuous tone or pulsating
[2] Volume and 8 tones may be set

230 V AC

Acoustic components	Packs of	Model No. SG
85 dB[1] max. 25 mA	1	**2376.020**
100 dB[2] max. 25 mA	1	**2376.030**

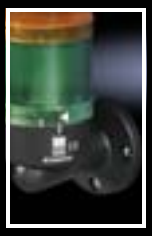
[1] Continuous tone or pulsating
[2] Volume and 8 tones may be set

Label panel

for signal pillars, modular
For text additions for up to 5 optical components, with break point for any fields that are not required (50 x 150 mm), including clamping section for base or tube with a diameter of 25 mm.

Material:
Acrylic, transparent

Label panel	**Model No. SG**
For 5 optical components	**2374.150**



Mounting components

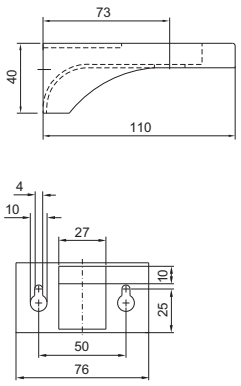
For wall/base mounting

Fig.	Mounting component	Colour	Suitable for signal pillar		**Model No. SG**
			LED compact	modular	
1	Bracket for wall mounting, including rubber gland for concealed cable routing	Black	■		**2372.110**
2	Bracket for connection component	Black		■[1)]	**2374.040**
3	For side cable outlet	Black		■[1)]	**2374.080**

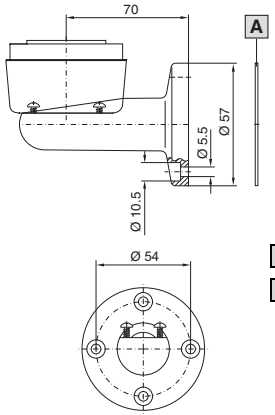
Also required:

[1)] Connection component SG 2368.010, see page 809.

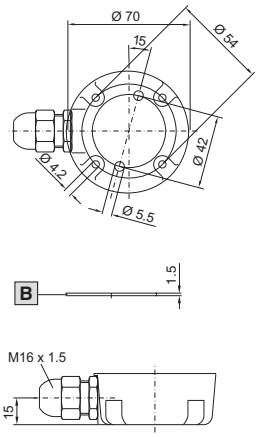
Bracket for wall mounting



Bracket for connection component



For side cable outlet

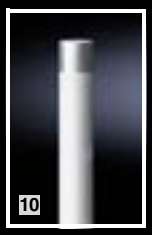


Mounting components
for support arm systems

Fig.	Mounting component	Colour	Suitable for signal pillar		Model No. SG
			LED compact	modular	
4	For support arm system CP-L – Angle piece CP 6524.0X0 – Angle coupling CP 6526.0X0	RAL 9017 (traffic black)	■[1)]	■[2)]	**2375.000**
5	For support arm system CP-L – Intermediate hinge CP 6523.0X0 – Wall-mounted hinge CP 6521.0X0 – Top-mounted joint CP 6522.0X0	RAL 9017 (traffic black)	■[1)]	■[2)]	**2375.020**
6	For support arm system CP-S – Angle piece 90° CP 6501.140	RAL 7024 (graphite grey)	■[1)]	■[2)]	**2375.030**
7	For support arm system CP-C – Angle coupling 90° CP 6071.200 – Angle piece 90° CP 6071.400 – Intermediate hinge CP 6071.800 – Wall-mounted hinge CP 6072.500 – Top-mounted joint CP 6072.600	RAL 7024 (graphite grey)	■[1)]	■[2)]	**6073.000**

Also required:

[1)] Connection adaptor SG 2372.120,
see page 808.
[2)] Connection component SG 2368.000,
see page 809.



Mounting components

For conduit mounting

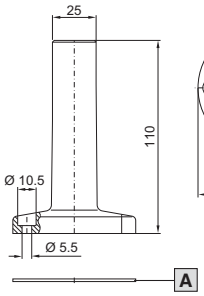
Fig.	Mounting component	Colour	Suitable for signal pillar		Model No. SG
			LED compact	modular	
8	Base with integral conduit, Ø 25 mm, 110 mm long	Black	■[1)]	■[2)]	**2374.000**
9	Individual base	Black	■	■	**2374.010**
10	Single conduit, 250 mm long	Aluminium	■[1)]	■[2)]	**2374.020**
	Single conduit, 400 mm long	Aluminium	■[1)]	■[2)]	**2374.030**
11	Angle bracket for conduit mounting	Black	■	■	**2374.050**
12	Base, tiltable from 0° – 90° in 7.5° increments. Simple cable entry up to a cable diameter of 14 mm.	Black	■[1)]	■[2)]	**2374.090[3)]**

[3)] Extended delivery times.

Also required:

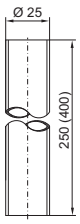
[1)] Connection adaptor SG 2372.120, see page 808.
[2)] Connection component SG 2368.000, see page 809.

Base with integral conduit

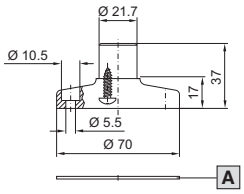


A Seal

Single conduit

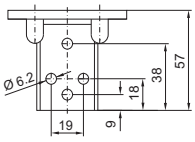


Individual base, plastic

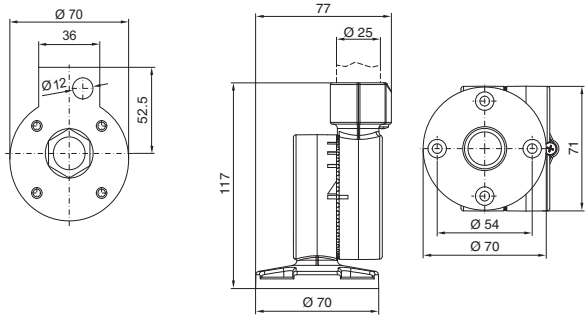


A Seal

Angle bracket for conduit mounting



Base, tiltable



1001.600 to 2370.570

Model No.	Page
1001.600	184
1002.500	184
1002.600	184
1003.600	184
1004.600	184
1005.500	185
1005.600	185
1006.500	185
1006.600	185
1007.600	185
1008.600	185
1009.600	185
1010.500	185
1010.600	185
1011.600	184
1012.600	185
1013.600	185
1014.600	186
1015.600	185
1016.600	186
1017.600	186
1018.600	186
1019.500	186
1019.600	186
1030.500	44
1031.500	44
1032.500	44
1033.500	44
1034.500	44
1035.500	44
1036.500	44
1037.500	45
1038.500	45
1039.500	45
1045.500	45
1050.500	45
1054.500	45
1055.500	46
1057.500	45
1058.500	45
1060.500	45
1073.500	46
1076.500	45
1077.500	46
1090.500	45
1100.500	46
1101.010	48
1101.020	48
1101.030	48
1101.040	48
1101.110	187
1101.120	187
1101.130	187
1101.140	187
1101.800	617
1101.910	588
1101.920	588
1101.930	588
1101.940	588
1110.500	46
1114.500	46
1130.500	46
1158.500	707
1180.500	46
1199.100	582
1213.500	46
1228.010	550
1228.110	550
1228.310	550
1260.500	46
1280.500	46
1302.600	177
1306.600	177
1307.600	177
1308.600	177
1310.600	177
1316.600	177
1317.600	177
1320.600	177
1338.500	45
1339.500	45
1350.500	45
1360.500	45
1376.500	45
1380.500	44
1400.500	53
1423.500	52
1432.500	52
1434.500	52
1444.500	52
1446.500	52
1448.500	52
1449.500	52
1453.500	52
1454.500	53
1466.500	53
1467.500	53
1468.500	53
1469.500	53
1479.500	53
1480.500	53
1481.000	634
1482.000	666
1483.010	628
1484.000	608
1484.001	608
1485.000	609
1486.000	609
1487.000	609
1488.000	609
1489.000	609
1490.010	607
1491.000	634
1492.000	609
1500.510	35
1501.510	35
1502.510	35
1503.510	35
1504.510	35
1505.510	36
1506.510	36
1507.510	35
1508.510	35
1509.510	36
1510.510	36
1511.510	35
1512.510	36
1513.510	36
1514.510	34
1515.510	34
1516.510	34
1517.510	34
1518.510	34
1519.510	34
1521.010	183
1522.010	183
1523.010	183
1524.010	183
1525.010	183
1526.010	183
1527.010	183
1527.510	36
1528.010	183
1528.510	34
1529.010	183
1529.510	35
1530.010	183
1530.510	35
1531.510	35
1532.510	35
1533.510	36
1534.510	36
1535.510	35
1536.510	35
1537.510	36
1538.510	36
1539.510	35
1540.510	36
1541.510	36
1542.510	36
1545.500	37
1546.500	37
1547.500	37
1548.500	38
1549.500	38
1550.500	38
1551.500	37
1552.500	37
1553.500	38
1554.500	38
1555.500	38
1556.500	38
1557.500	38
1558.010	183
1558.510	40
1559.010	183
1559.510	40
1560.700	631
1561.700	631
1562.700	631
1563.700	631
1564.700	631
1565.700	631
1566.700	631
1567.700	631
1568.700	631
1569.700	631
1570.700	631
1571.700	631
1572.700	631
1573.700	631
1574.700	631
1575.700	631
1576.700	631
1577.450	40
1577.500	38
1577.520	40
1577.530	40
1577.550	40
1577.560	40
1578.450	41
1578.500	38
1578.520	41
1578.530	41
1578.550	41
1578.560	41
1579.450	41
1579.500	38
1579.520	41
1579.530	41
1579.550	41
1579.560	41
1580.000	627
1581.000	704
1581.100	706
1582.000	704
1583.010	183
1583.520	39
1584.010	183
1584.520	39
1585.010	183
1585.520	39
1586.520	39
1589.510	35
1590.000	627
1591.000	613
1592.000	613
1592.010	613
1594.000	627
1605.520	40
1606.520	40
1609.510	41
1611.510	41
1670.600	176
1671.600	176
1672.600	176
1674.600	176
1675.600	176
1676.600	176
1782.135	387
1919.500	66
1920.500	66
1926.500	66
1931.200	754
1932.200	754
1933.200	754
1934.200	754
1935.200	754
1936.200	754
1937.200	754
1939.200	754
1940.000	754
1941.000	754
1945.000	754
1950.000	754
1962.200	738
1963.200	738
1978.200	736
1979.200	738
1980.200	738
1985.500	735
1986.500	736
1994.835	735
1995.235	736
1995.835	736
1996.535	735
1996.835	735
1997.235	736
1997.835	736
2004.235	734
2008.235	734
2011.235	734
2026.200	737
2027.200	737
2034.200	737
2092.200	757
2092.300	757
2092.500	757
2094.200	757
2094.300	757
2094.400	758
2094.500	757
2102.180	405
2102.190	405
2102.320	405
2102.400	405
2102.410	405
2102.490	405
2203.400	720
2231.000	754
2232.000	754
2233.000	754
2235.135	708
2237.000	655
2238.000	655
2239.000	655
2243.605	64
2246.605	64
2249.605	64
2250.000	751
2252.605	64
2253.605	65
2255.605	64
2256.605	65
2258.605	64
2259.605	65
2260.000	751
2261.605	64
2262.605	65
2265.605	65
2268.605	65
2271.605	65
2304.000	609
2304.010	178
2305.000	597
2307.000	609
2308.000	612
2309.000	655
2310.038	615
2310.076	615
2310.100	615
2310.120	615
2311.225	614
2311.250	614
2313.150	655
2313.750	655
2314.000	655
2315.000	655
2316.000	655
2317.000	655
2318.000	655
2319.000	655
2322.700	735
2323.235	736
2324.235	736
2325.000	614
2326.000	614
2327.000	614
2328.000	614
2331.700	735
2332.235	736
2334.000	689
2335.000	689
2336.700	735
2337.235	736
2338.235	736
2340.700	735
2341.235	736
2342.235	736
2343.000	689
2345.700	735
2346.235	736
2347.235	736
2350.000	717
2351.000	717
2352.000	717
2353.000	717
2354.000	717
2355.000	717
2356.000	717
2357.000	717
2358.000	717
2359.000	717
2360.000	717
2361.000	619
2362.000	619
2363.000	619
2364.000	691
2365.000	664
2366.000	664
2367.040	688
2367.060	688
2367.080	688
2367.120	688
2367.160	688
2367.200	688
2368.000	809
2368.010	809
2369.000	810
2369.010	810
2369.020	810
2369.030	810
2369.040	810
2370.150	810
2370.160	810
2370.170	810
2370.180	810
2370.190	810
2370.500	810
2370.510	810
2370.520	810
2370.530	810
2370.540	810
2370.550	810
2370.560	810
2370.570	810

List of model numbers

2370.580 to 2780.000

Model No.	Page
2370.580	810
2370.590	810
2371.000	810
2371.010	810
2371.020	810
2371.030	810
2371.040	810
2371.050	810
2371.060	810
2371.070	810
2371.080	810
2371.090	810
2372.000	810
2372.010	810
2372.020	810
2372.030	810
2372.040	810
2372.100	808
2372.110	812
2372.120	808
2372.130	808
2373.000	664
2373.210	647
2373.250	647
2373.300	647
2373.350	647
2374.000	814
2374.010	814
2374.020	814
2374.030	814
2374.040	812
2374.050	814
2374.060	810
2374.070	810
2374.080	812
2374.090	814
2374.150	812
2375.000	813
2375.020	813
2375.030	813
2376.000	811
2376.010	811
2376.020	811
2376.030	811
2376.100	811
2377.030	733
2377.060	733
2377.090	733
2377.120	733
2377.150	733
2377.180	733
2377.460	733
2377.860	733
2377.880	733
2379.600	799
2379.800	799
2379.900	800
2381.000	804
2382.000	805
2383.000	800
2383.010	793
2383.020	805
2383.030	797
2383.040	797
2384.010	182
2384.020	182
2384.030	182
2384.040	182
2388.000	686
2388.100	686
2388.120	686
2388.150	686
2388.200	686
2388.280	686
2388.600	686
2388.800	686
2389.000	791
2400.000	712
2400.300	714
2400.500	714
2400.900	713
2400.910	713
2400.920	713
2400.930	713
2400.940	713
2400.950	713
2400.960	713
2400.970	713
2401.000	574
2402.000	574
2403.000	597
2404.000	597
2410.000	711
2410.010	711
2410.020	711
2410.030	711
2410.110	711
2410.120	711
2410.130	711
2410.200	711
2410.210	711
2410.220	711
2410.230	711
2410.290	711
2411.090	687
2411.110	687
2411.140	687
2411.160	687
2411.210	687
2411.290	687
2411.504	710
2411.505	710
2411.506	710
2411.507	710
2411.532	710
2411.550	710
2411.551	710
2411.552	710
2411.553	710
2411.554	710
2411.555	710
2411.556	710
2411.557	710
2411.558	710
2411.559	710
2411.560	710
2411.561	710
2411.562	710
2411.600	709
2411.610	709
2411.620	709
2411.630	709
2411.640	709
2411.650	709
2411.660	709
2411.670	709
2411.800	709
2411.810	709
2411.820	709
2411.830	709
2411.840	709
2411.850	709
2411.860	709
2411.870	709
2412.210	689
2412.216	689
2412.225	689
2412.310	689
2412.316	689
2412.325	689
2413.375	687
2413.550	687
2414.000	688
2414.500	688
2415.000	688
2415.100	618
2415.500	635
2416.000	611
2418.000	611
2419.000	611
2420.000	609
2422.000	626
2423.000	626
2424.100	620
2425.100	620
2426.100	620
2426.500	620
2427.100	620
2430.000	609
2432.000	613
2433.000	627
2433.500	627
2435.000	607
2436.732	570
2436.735	570
2437.000	570
2438.735	570
2439.000	608
2440.735	570
2446.000	615
2449.000	613
2450.000	607
2450.010	607
2451.000	607
2452.000	607
2453.000	607
2454.000	607
2455.000	607
2455.010	607
2456.500	607
2459.000	566
2459.500	566
2460.000	609
2460.650	609
2461.000	609
2462.000	609
2463.000	609
2464.000	609
2465.000	609
2466.000	609
2467.000	604
2468.000	604
2469.000	604
2470.000	619
2471.000	619
2472.000	619
2473.000	619
2474.000	619
2475.000	619
2476.000	611
2477.000	574
2478.000	574
2479.000	574
2480.000	574
2481.000	574
2482.000	806
2482.210	806
2482.220	806
2482.230	806
2482.300	807
2482.310	807
2482.320	807
2482.330	807
2482.400	807
2482.410	807
2482.500	807
2482.510	807
2482.540	807
2482.550	807
2482.560	807
2482.570	807
2482.590	807
2482.700	806
2482.710	806
2482.720	806
2482.730	806
2483.000	609
2484.000	609
2485.000	608
2485.100	608
2486.300	666
2486.500	666
2487.000	666
2488.000	666
2489.000	666
2489.500	666
2493.000	610
2493.500	611
2501.500	619
2502.500	619
2503.010	627
2504.000	666
2504.500	666
2504.800	666
2505.510	628
2506.100	698
2507.100	684
2507.200	684
2507.300	684
2507.400	684
2507.500	684
2508.010	627
2508.100	627
2509.000	626
2509.500	626
2510.000	616
2511.500	619
2512.000	616
2513.000	616
2514.000	616
2514.500	616
2514.600	616
2514.800	616
2515.000	616
2518.000	617
2519.000	617
2519.200	617
2520.000	609
2521.000	612
2522.000	609
2523.000	609
2525.000	610
2526.000	609
2527.000	609
2528.000	609
2530.000	609
2531.000	612
2532.000	612
2533.000	608
2534.100	610
2534.500	610
2535.000	608
2536.000	608
2537.000	606
2537.010	606
2540.500	609
2541.235	480
2542.235	480
2543.235	480
2545.000	612
2546.000	612
2547.000	612
2548.000	612
2549.000	612
2549.500	612
2549.510	178
2549.600	178
2559.000	689
2560.010	704
2560.400	707
2561.010	704
2561.100	706
2561.400	707
2561.500	705
2562.010	704
2562.100	706
2562.400	707
2562.500	705
2563.010	704
2563.100	706
2563.150	707
2563.500	705
2564.000	689
2565.000	689
2565.100	689
2565.110	689
2565.120	689
2566.000	689
2567.000	689
2568.000	689
2569.000	689
2570.000	689
2570.100	691
2570.200	689
2570.500	690
2571.000	610
2572.000	608
2573.000	703
2574.000	664
2575.000	608
2576.000	608
2581.000	570
2583.010	628
2584.000	629
2589.000	719
2590.000	719
2591.000	719
2592.000	719
2593.000	719
2594.000	719
2595.000	719
2596.000	719
2597.000	720
2599.000	608
2682.000	791
2683.600	192
2684.600	192
2685.600	192
2686.600	192
2694.500	129
2695.500	129
2696.500	129
2730.000	596
2731.000	596
2732.000	596
2733.000	596
2734.000	596
2735.250	595
2735.500	595
2735.510	595
2735.520	595
2735.530	595
2735.540	595
2735.560	595
2735.570	595
2735.580	595
2735.590	595
2736.500	595
2736.510	595
2736.520	595
2736.530	595
2736.540	595
2740.000	598
2741.000	598
2742.000	598
2743.000	598
2744.000	598
2745.000	598
2746.000	598
2749.000	598
2760.000	596
2761.000	596
2762.000	596
2763.000	596
2772.000	596
2780.000	596

2781.000 to 3301.600

Model No.	Page
2781.000	596
2782.000	596
2784.000	596
2785.000	596
2786.000	596
2787.000	596
2788.000	596
2789.000	596
2791.000	598
2792.000	598
2793.560	597
2796.000	596
2801.200	551
2802.200	551
2804.200	551
2805.200	551
2807.200	551
2808.200	551
2816.200	551
2817.000	546
2818.200	551
2819.000	546
2819.200	546
2823.200	551
2824.200	551
2826.200	551
2828.200	551
2829.200	551
2830.200	551
2836.200	551
2837.200	551
2839.200	551
2840.200	551
2843.160	687
2843.200	687
2843.250	687
2843.320	687
2843.400	687
2843.500	687
2843.630	687
2855.000	552
2856.000	552
2859.000	556
2860.000	552
2865.000	552
2866.000	552
2867.000	552
2868.000	552
2869.000	552
2870.000	552
2875.000	552
2876.000	552
2878.000	552
2879.000	552
2880.000	552
2885.000	552
2886.000	552
2887.000	552
2889.000	553
2890.000	553
2891.000	546
2892.000	546
2899.200	714
2899.250	714
2899.320	714
2899.400	714

Model No.	Page
2903.200	551
2904.200	551
2905.200	551
2906.200	551
2907.000	549
2908.000	549
2909.200	551
2910.200	551
2913.000	549
3020.500	523
3031.000	310
3032.000	310
3052.000	340
3055.000	340
3056.000	340
3057.000	340
3058.000	341
3059.000	341
3060.000	341
3061.000	341
3071.000	324
3073.000	340
3074.000	340
3075.000	340
3076.000	340
3079.000	314
3079.010	314
3083.000	341
3085.000	311
3086.000	316
3087.000	316
3088.000	316
3090.000	316
3091.000	316
3092.000	311
3093.000	294
3105.310	471
3105.320	471
3105.330	471
3105.340	471
3105.350	471
3105.360	471
3105.370	471
3105.380	471
3105.390	471
3105.400	471
3105.410	471
3105.420	471
3105.430	471
3108.024	403
3108.100	403
3108.115	403
3110.000	476
3110.200	476
3114.200	475
3118.000	476
3120.200	477
3121.000	523
3124.100	477
3124.200	477
3125.800	408
3126.100	409
3126.115	409
3126.230	507
3126.240	507
3126.270	508

Model No.	Page
3126.410	410
3126.424	410
3127.100	409
3127.115	409
3128.100	409
3128.115	409
3128.410	410
3128.424	410
3129.100	409
3129.115	409
3129.410	410
3129.424	410
3129.800	408
3130.100	409
3130.115	409
3130.410	410
3130.424	410
3144.000	400
3145.000	400
3148.007	402
3149.007	402
3149.410	401
3149.420	401
3149.440	401
3149.810	401
3149.820	401
3149.840	401
3159.100	529
3164.115	402
3164.230	402
3164.610	402
3164.620	402
3165.024	407
3165.048	407
3165.115	407
3165.230	407
3165.615	407
3165.624	407
3165.630	407
3165.648	407
3165.815	407
3165.824	407
3165.830	407
3165.848	407
3169.007	402
3171.100	483
3172.100	483
3173.100	483
3174.000	483
3175.000	486
3176.000	486
3177.000	481
3181.100	484
3182.100	484
3183.100	484
3201.040	484
3201.050	483
3201.070	477
3201.200	414
3201.300	414
3201.900	486
3201.910	486
3209.100	434
3209.104	435
3209.500	434
3209.504	435

Model No.	Page
3210.100	435
3210.104	436
3210.140	435
3210.500	435
3210.504	436
3210.540	435
3212.024	437
3212.115	437
3212.230	437
3213.310	475
3213.320	475
3213.330	475
3214.100	437
3215.100	437
3216.480	440
3232.700	454
3232.710	454
3232.720	454
3232.730	454
3232.740	454
3232.750	454
3232.760	454
3232.770	454
3232.780	454
3232.790	454
3232.800	455
3232.810	455
3232.820	455
3232.830	455
3232.840	455
3232.850	455
3232.860	455
3232.870	455
3232.880	455
3232.890	455
3235.440	476
3236.124	404
3237.020	485
3237.060	485
3237.066	483
3237.080	485
3237.100	394
3237.110	394
3237.124	394
3237.200	485
3237.600	394
3238.020	485
3238.055	484
3238.060	485
3238.066	483
3238.080	485
3238.100	394
3238.110	394
3238.124	394
3238.200	485
3238.600	394
3239.020	485
3239.060	485
3239.066	483
3239.080	485
3239.100	395
3239.110	395
3239.124	395
3239.200	485
3239.600	395
3240.020	485

Model No.	Page
3240.060	485
3240.066	483
3240.080	485
3240.100	396
3240.110	396
3240.124	396
3240.200	485
3240.600	396
3241.100	396
3241.110	396
3241.124	396
3241.600	396
3243.020	485
3243.060	485
3243.066	483
3243.080	485
3243.100	397
3243.110	397
3243.200	485
3243.600	397
3244.100	397
3244.110	397
3244.140	397
3244.600	397
3245.080	485
3245.500	398
3245.510	398
3245.600	398
3248.000	411
3253.000	481
3253.010	481
3253.200	482
3253.220	482
3254.000	481
3254.200	482
3267.100	481
3267.200	482
3273.500	428
3273.515	428
3284.200	482
3284.210	482
3285.000	481
3285.200	482
3286.000	481
3286.100	481
3286.110	481
3286.120	482
3286.200	482
3286.210	482
3286.230	482
3286.240	482
3286.250	482
3286.260	479
3286.270	479
3286.280	479
3286.300	481
3286.310	482
3286.400	481
3286.410	482
3286.500	481
3286.510	482
3286.520	482
3286.530	482
3286.540	482
3286.550	482
3286.600	481

Model No.	Page
3286.610	482
3286.700	479
3286.780	474
3286.800	479
3286.850	474
3286.860	474
3286.870	473
3286.880	474
3286.900	479
3286.970	473
3286.980	474
3286.990	473
3288.200	482
3289.200	482
3294.100	481
3294.200	482
3300.040	431
3300.050	431
3300.060	431
3300.070	431
3300.080	431
3300.090	431
3300.110	431
3300.120	431
3300.160	460
3300.170	460
3300.180	460
3300.260	487
3300.261	487
3300.262	487
3300.263	487
3300.270	460
3300.280	460
3300.290	487
3300.291	487
3300.292	487
3300.293	487
3300.294	487
3300.295	487
3300.296	487
3300.297	487
3300.310	456
3300.320	456
3300.330	456
3300.340	456
3300.353	458
3300.354	458
3300.355	458
3300.356	458
3300.360	458
3300.370	458
3300.510	458
3300.560	458
3300.710	458
3300.760	458
3301.221	465
3301.320	465
3301.370	465
3301.380	465
3301.390	465
3301.421	465
3301.560	484
3301.570	484
3301.580	484
3301.590	484
3301.600	484

List of model numbers

3301.606 to 3634.770

Model No.	Page
3301.606	485
3301.608	485
3301.610	485
3301.612	485
3301.620	456
3301.660	456
3301.800	428
3301.830	456
3301.870	456
3301.900	486
3301.910	486
3301.920	486
3301.930	486
3301.940	486
3301.950	487
3301.955	487
3301.957	487
3301.960	487
3301.965	487
3301.967	487
3302.100	416
3302.110	416
3302.200	416
3302.210	416
3302.300	415
3302.310	415
3303.500	417
3303.504	424
3303.510	417
3303.514	424
3303.530	425
3303.600	417
3303.610	417
3304.500	419
3304.504	424
3304.510	419
3304.514	424
3304.530	425
3304.540	419
3304.544	424
3304.560	425
3304.600	419
3304.610	419
3304.640	419
3305.500	420
3305.504	424
3305.510	420
3305.514	424
3305.530	425
3305.540	420
3305.544	424
3305.560	425
3305.600	420
3305.610	420
3305.640	420
3307.700	430
3307.710	430
3307.740	430
3310.700	430
3310.710	430
3310.740	430
3311.010	461
3311.020	462
3311.030	465
3311.040	465
3311.050	465
3311.060	465
3311.110	461
3311.130	461
3311.210	462
3311.230	461
3311.260	461
3311.310	465
3311.400	463
3311.530	462
3311.560	462
3311.600	464
3318.600	446
3318.610	446
3319.600	446
3319.610	446
3320.600	447
3321.700	483
3322.700	483
3327.700	483
3328.500	421
3328.504	425
3328.510	421
3328.514	425
3328.540	421
3328.544	425
3328.600	421
3328.610	421
3328.640	421
3329.500	422
3329.504	425
3329.510	422
3329.514	425
3329.540	422
3329.544	425
3329.600	422
3329.610	422
3329.640	422
3329.903	483
3329.904	483
3332.540	422
3332.640	422
3334.600	447
3334.660	447
3335.590	449
3335.600	449
3335.610	449
3335.620	449
3335.630	449
3335.640	449
3335.650	449
3335.660	449
3336.100	450
3336.200	450
3336.300	450
3336.500	450
3336.600	450
3336.650	450
3336.700	451
3336.710	451
3336.720	451
3336.730	451
3336.740	451
3336.750	451
3339.100	451
3339.200	451
3339.250	451
3339.280	451
3340.024	399
3340.115	399
3340.230	399
3341.024	399
3341.115	399
3341.230	399
3342.024	399
3342.115	399
3342.230	399
3342.500	399
3350.024	400
3350.115	400
3350.230	400
3351.024	400
3351.115	400
3351.230	400
3352.024	400
3352.115	400
3352.230	400
3352.500	400
3355.100	400
3356.100	400
3357.100	400
3359.500	427
3359.510	427
3359.540	427
3359.600	427
3359.610	427
3359.640	427
3360.100	448
3360.250	448
3360.470	448
3361.500	418
3361.510	418
3361.540	418
3361.600	418
3361.610	418
3361.640	418
3363.100	438
3363.104	441
3363.500	438
3363.504	441
3364.100	438
3364.104	441
3364.500	438
3364.504	441
3366.500	423
3366.510	423
3366.540	423
3366.600	423
3366.610	423
3366.640	423
3373.100	439
3373.104	442
3373.500	439
3373.504	442
3374.100	439
3374.104	442
3374.500	439
3374.504	442
3375.100	440
3375.104	443
3375.500	440
3375.504	443
3377.000	479
3382.500	426
3382.510	426
3382.600	426
3382.610	426
3383.500	427
3383.510	427
3383.540	427
3383.600	427
3383.610	427
3383.640	427
3384.500	428
3384.510	428
3384.540	428
3384.600	428
3384.610	428
3384.640	428
3385.500	429
3385.510	429
3385.540	429
3385.600	429
3385.610	429
3385.640	429
3386.540	429
3386.640	429
3387.540	429
3387.640	429
3418.000	294
3419.000	294
3420.000	294
3420.010	294
3421.000	294
3422.000	294
3423.000	294
3424.000	294
3425.000	294
3425.010	294
3427.000	294
3428.000	294
3429.000	294
3429.010	294
3430.000	294
3431.000	296
3431.020	297
3431.030	297
3433.000	294
3434.000	294
3435.000	294
3435.010	294
3436.000	294
3439.010	282
3450.500	316
3451.500	316
3452.500	316
3453.500	316
3454.500	316
3455.500	316
3456.500	316
3457.500	316
3458.500	316
3459.500	316
3460.500	316
3504.000	313
3505.000	313
3509.000	312
3509.200	312
3514.000	313
3515.000	313
3516.000	312
3516.200	312
3520.000	294
3521.000	294
3524.000	312
3524.200	312
3525.000	312
3525.010	312
3525.200	312
3525.210	312
3526.000	312
3526.200	312
3527.000	312
3527.200	312
3528.000	312
3528.010	312
3528.200	312
3528.210	312
3529.000	312
3529.200	312
3530.000	294
3531.000	294
3548.000	318
3549.000	318
3550.000	316
3554.000	316
3555.000	316
3559.000	316
3560.000	316
3561.000	316
3562.000	316
3563.000	316
3565.005	314
3565.015	314
3567.005	314
3568.005	314
3569.005	314
3570.005	314
3571.005	314
3572.005	314
3573.005	314
3574.005	314
3575.005	314
3576.005	314
3577.005	314
3578.005	314
3579.005	314
3580.000	311
3580.100	311
3581.000	311
3581.100	311
3582.000	311
3583.000	311
3584.000	311
3584.200	311
3585.000	311
3586.000	311
3586.200	311
3587.000	311
3588.000	311
3589.000	311
3590.000	311
3590.010	311
3591.060	311
3592.010	325
3592.020	324
3606.010	238
3606.140	237
3606.200	237
3606.321	246
3606.330	244
3634.045	214
3634.070	233
3634.085	214
3634.100	212
3634.101	212
3634.110	212
3634.111	212
3634.120	212
3634.130	212
3634.140	212
3634.150	213
3634.160	213
3634.170	213
3634.180	213
3634.181	213
3634.190	213
3634.191	213
3634.200	213
3634.210	213
3634.220	213
3634.230	213
3634.233	250
3634.240	213
3634.250	213
3634.420	250
3634.430	250
3634.450	250
3634.515	214
3634.600	214
3634.615	214
3634.620	214
3634.625	228
3634.630	228
3634.635	228
3634.640	228
3634.645	228
3634.650	228
3634.655	228
3634.660	228
3634.665	228
3634.670	228
3634.675	228
3634.680	228
3634.685	228
3634.690	228
3634.695	214
3634.700	214
3634.705	214
3634.710	214
3634.715	214
3634.720	214
3634.725	214
3634.730	214
3634.735	214
3634.740	214
3634.745	214
3634.746	214
3634.750	214
3634.751	214
3634.770	215

3634.775 to 3688.052

Model No.	Page
3634.775	214
3634.780	215
3636.010	678
3650.310	220
3652.510	239
3652.530	239
3652.610	239
3652.630	239
3653.000	246
3653.010	246
3653.020	246
3653.030	246
3653.040	246
3653.050	246
3653.060	246
3653.200	246
3653.210	246
3653.220	246
3653.230	246
3653.240	246
3654.300	250
3654.320	250
3654.340	250
3654.350	250
3654.360	250
3654.370	250
3659.180	233
3659.190	233
3659.440	801
3659.520	801
3659.620	801
3659.680	801
3666.010	233
3684.020	216
3684.021	216
3684.022	216
3684.024	216
3684.025	216
3684.034	217
3684.035	217
3684.036	217
3684.043	216
3684.045	216
3684.046	216
3684.047	216
3684.056	217
3684.058	217
3684.128	217
3684.129	217
3684.130	217
3684.131	217
3684.143	217
3684.170	217
3684.204	237
3684.205	237
3684.206	232
3684.210	232
3684.220	231
3684.221	231
3684.222	231
3684.224	231
3684.233	250
3684.234	231
3684.291	239
3684.293	239
3684.325	238

Model No.	Page
3684.326	238
3684.410	242
3684.411	242
3684.435	250
3684.511	218
3684.512	218
3684.513	218
3684.514	218
3684.515	220
3684.516	220
3684.517	220
3684.518	220
3684.520	220
3684.521	220
3684.522	220
3684.523	222
3684.524	222
3684.525	222
3684.529	218
3684.530	218
3684.531	218
3684.532	218
3684.533	220
3684.534	220
3684.535	220
3684.536	220
3684.538	220
3684.539	220
3684.540	220
3684.541	222
3684.560	218
3684.562	220
3684.565	218
3684.567	220
3684.570	218
3684.572	220
3684.580	218
3684.582	214
3684.590	234
3684.591	234
3684.599	234
3684.600	234
3684.608	233
3684.615	218
3684.616	222
3684.617	218
3684.618	222
3684.622	218
3684.623	222
3684.624	218
3684.625	222
3684.626	218
3684.627	222
3684.628	218
3684.629	222
3684.635	223
3684.637	223
3684.643	230
3684.644	230
3684.680	229
3684.681	229
3684.683	229
3684.684	229
3684.685	229
3684.686	229
3684.687	229

Model No.	Page
3684.688	229
3684.689	229
3684.691	229
3684.692	229
3684.693	229
3684.694	229
3684.695	229
3684.696	229
3684.698	229
3684.700	229
3684.701	229
3684.702	229
3684.703	229
3684.744	239
3684.746	239
3684.755	239
3684.756	239
3684.757	239
3684.758	239
3684.759	239
3684.760	239
3684.761	239
3684.762	239
3684.763	239
3684.781	239
3684.782	239
3684.783	239
3684.784	239
3684.786	239
3684.787	239
3684.788	239
3684.789	239
3684.807	231
3684.808	230
3684.812	239
3684.814	239
3684.886	239
3684.889	239
3684.890	239
3684.891	239
3684.892	239
3684.893	239
3684.894	239
3684.895	239
3684.896	239
3684.897	239
3684.898	239
3684.899	239
3684.900	239
3684.902	239
3684.903	239
3684.904	239
3684.907	239
3684.908	239
3684.910	239
3684.911	239
3684.912	239
3684.913	239
3684.914	239
3684.917	239
3684.918	239
3684.919	239
3684.920	239
3684.924	239
3684.925	239
3684.927	239

Model No.	Page
3684.930	239
3684.957	229
3684.958	229
3684.974	230
3684.975	219
3684.976	239
3685.097	250
3685.198	245
3685.231	216
3685.232	216
3685.233	217
3685.234	217
3685.235	216
3685.239	216
3685.241	217
3685.257	236
3685.258	236
3685.259	236
3685.271	234
3685.273	221
3685.274	219
3685.276	218
3685.277	218
3685.282	250
3685.289	250
3685.491	243
3685.492	243
3685.493	243
3685.496	243
3685.497	243
3685.498	243
3685.500	241
3685.501	241
3685.503	241
3685.508	241
3685.512	241
3685.524	241
3685.525	241
3685.526	241
3685.527	241
3685.530	241
3685.532	241
3685.536	241
3685.538	241
3685.570	243
3685.571	243
3685.572	243
3685.573	243
3685.574	243
3685.575	243
3685.576	243
3685.577	243
3685.579	243
3685.581	243
3685.583	243
3685.584	243
3685.586	243
3685.587	241
3685.588	241
3685.589	241
3685.590	241
3685.596	243
3685.597	243
3685.598	243
3685.599	243
3685.600	243

Model No.	Page
3685.601	243
3685.602	243
3685.603	243
3685.606	243
3685.607	243
3685.608	243
3685.609	243
3685.610	243
3685.611	243
3685.612	243
3685.613	243
3685.626	245
3685.627	245
3685.642	229
3685.683	246
3685.684	246
3685.685	246
3685.686	246
3685.687	246
3685.695	246
3685.696	246
3685.697	246
3685.698	246
3685.699	246
3685.743	222
3685.744	222
3685.747	244
3685.748	244
3685.749	244
3685.750	244
3685.751	244
3685.752	244
3685.753	244
3685.754	244
3685.783	232
3685.787	232
3685.789	230
3685.793	222
3685.794	222
3685.795	222
3685.796	222
3685.805	245
3685.813	229
3685.814	229
3685.824	245
3685.850	222
3685.851	229
3685.852	229
3685.853	229
3685.855	229
3685.896	222
3685.897	222
3686.159	220
3686.191	218
3686.536	242
3686.573	245
3686.574	245
3686.900	241
3686.901	241
3686.902	241
3686.903	241
3686.973	230
3686.975	230
3686.976	230
3686.977	230
3686.978	230

Model No.	Page
3687.014	238
3687.015	250
3687.021	250
3687.050	250
3687.051	250
3687.146	251
3687.519	251
3687.556	246
3687.557	246
3687.558	246
3687.559	246
3687.560	246
3687.565	246
3687.566	246
3687.567	246
3687.574	234
3687.575	234
3687.576	234
3687.577	234
3687.585	246
3687.600	218
3687.602	220
3687.623	229
3687.724	226
3687.726	235
3687.756	243
3687.758	243
3687.760	243
3687.924	237
3687.932	245
3687.933	245
3687.934	245
3687.955	245
3687.989	239
3688.006	239
3688.007	239
3688.008	239
3688.009	239
3688.010	239
3688.011	239
3688.012	239
3688.013	239
3688.014	239
3688.015	239
3688.016	239
3688.017	239
3688.018	239
3688.019	239
3688.022	239
3688.025	239
3688.026	239
3688.027	232
3688.028	236
3688.029	239
3688.030	239
3688.031	239
3688.032	239
3688.038	239
3688.039	239
3688.041	232
3688.045	235
3688.046	235
3688.047	235
3688.048	235
3688.049	235
3688.052	235

List of model numbers

3688.053 to 5845.500

Model No.	Page
3688.053	235
3688.054	235
3688.056	235
3688.057	236
3688.058	236
3688.059	236
3688.060	237
3688.062	237
3688.064	236
3688.065	236
3688.066	236
3688.611	230
3688.612	230
3688.614	230
3688.615	230
3688.704	226
3688.770	241
3688.771	241
3688.772	241
3688.773	241
3688.780	241
3688.781	241
3688.784	241
3688.785	241
3688.790	241
3688.791	241
3750.000	259
3750.030	259
3750.200	258
3750.210	258
3750.310	259
3750.320	259
3750.330	259
3750.340	259
3750.400	258
3750.420	259
3750.440	259
3750.600	259
3750.610	259
3750.620	259
3750.640	259
3750.650	259
3750.710	259
3750.720	259
3750.730	259
3750.930	259
3751.250	263
3751.260	263
3751.270	263
3751.330	260
3751.370	261
3751.420	262
3751.460	262
3751.520	263
3751.640	261
3751.680	261
3751.730	262
3751.750	262
3751.800	261
3751.850	263
3751.910	260
3798.000	263
3861.580	673
3901.000	256
3919.000	256
3981.200	257

Model No.	Page
3981.210	257
3981.260	257
3981.270	257
3981.310	257
3981.320	257
3981.330	257
3981.360	257
3981.390	257
3981.710	256
3981.750	256
3981.760	256
3981.910	256
3981.950	256
3981.960	256
3982.040	252
3982.050	253
3982.060	253
3982.070	252
3982.080	253
3982.090	253
3982.100	253
3982.110	254
3982.120	254
3982.130	254
3982.140	254
3982.150	254
3982.160	254
3982.170	255
3982.190	255
3982.710	256
3982.730	256
3982.750	256
3982.760	256
3982.770	256
3982.910	256
3982.930	256
3982.941	256
3982.942	256
3982.950	256
3982.951	256
3982.952	256
3982.960	256
3982.970	256
3983.030	253
3983.040	252
3983.050	253
3983.070	252
3983.080	253
3983.090	253
3983.100	253
3983.120	254
3983.130	254
3983.140	254
3983.150	254
3983.160	254
4000.100	178
4000.200	178
4000.210	178
4114.000	617
4115.000	617
4115.500	617
4116.000	617
4116.500	617
4118.000	617
4118.500	617
4119.000	665

Model No.	Page
4120.000	615
4123.000	617
4124.000	617
4127.010	684
4127.210	684
4131.700	637
4132.700	637
4133.000	662
4134.000	662
4137.700	637
4138.140	680
4138.150	680
4138.180	680
4138.190	680
4138.240	680
4138.250	680
4138.280	680
4138.290	680
4138.300	680
4138.350	680
4138.400	680
4138.450	680
4139.140	680
4139.150	680
4139.180	680
4139.190	680
4139.300	680
4139.350	680
4140.000	681
4140.010	681
4140.020	681
4140.110	681
4140.120	681
4140.210	681
4140.220	681
4140.810	682
4140.820	682
4140.830	682
4140.840	682
4155.000	680
4155.100	680
4155.500	680
4156.000	613
4157.000	665
4162.000	665
4163.000	665
4164.000	665
4165.000	665
4166.000	665
4169.000	651
4170.000	651
4171.000	651
4172.000	651
4173.000	651
4174.000	651
4175.000	651
4176.000	651
4177.000	651
4178.000	651
4179.000	665
4180.000	665
4181.000	661
4182.000	660
4183.000	661
4189.000	613
4190.000	613

Model No.	Page
4191.000	717
4192.000	717
4193.000	717
4196.000	717
4198.000	626
4199.000	662
4309.000	650
4311.000	702
4315.100	684
4315.150	684
4315.200	684
4315.320	684
4315.350	684
4315.400	684
4315.450	684
4315.520	684
4315.550	684
4315.600	684
4315.710	684
4315.720	684
4315.800	683
4315.810	683
4315.820	683
4315.830	683
4315.840	683
4315.850	683
4315.860	683
4316.000	702
4317.000	702
4318.000	702
4319.090	720
4319.120	720
4319.160	720
4319.200	720
4320.700	701
4321.700	701
4323.700	701
4333.120	635
4333.160	635
4333.180	635
4336.000	717
4338.000	717
4339.000	717
4347.000	654
4348.000	688
4361.000	654
4362.000	654
4363.000	654
4364.000	652
4365.000	652
4367.000	652
4369.000	652
4370.000	652
4371.000	652
4372.000	652
4373.000	652
4374.000	652
4375.000	652
4376.000	652
4377.000	652
4378.000	652
4379.000	652
4380.000	652
4381.000	652
4382.000	652
4393.000	651

Model No.	Page
4394.000	654
4395.000	654
4396.000	654
4396.500	654
4398.000	654
4398.500	654
4530.000	751
4531.000	751
4532.000	658
4538.000	618
4540.000	580
4541.000	753
4542.000	753
4547.000	742
4568.000	626
4570.000	552
4576.000	633
4579.000	650
4582.000	580
4582.500	580
4583.000	617
4583.500	617
4590.700	631
4591.700	631
4592.700	631
4593.000	633
4594.000	650
4595.000	628
4596.000	650
4597.000	658
4598.000	650
4599.000	650
4611.000	556
4612.000	555
4638.600	615
4638.800	615
4650.000	193
4694.000	650
4695.000	650
4696.000	650
4697.000	650
4757.500	129
4911.000	575
4911.100	575
4912.000	575
4916.000	575
4918.000	575
4920.000	575
4933.000	655
4934.000	655
4935.000	655
4937.000	655
4943.000	653
4944.000	653
4945.000	653
4946.000	653
4947.000	653
5001.000	613
5001.050	647
5001.051	647
5001.052	647
5001.053	647
5001.054	647
5001.060	604
5001.061	604
5001.062	604

Model No.	Page
5001.070	634
5001.075	635
5001.080	717
5001.081	717
5001.082	717
5001.083	717
5001.130	563
5001.140	563
5001.150	563
5001.160	563
5001.210	560
5001.211	560
5001.212	560
5001.213	560
5001.214	560
5001.215	560
5001.216	560
5001.217	560
5001.218	560
5001.219	560
5001.220	560
5001.221	560
5001.222	561
5001.223	561
5001.224	561
5001.225	561
5001.226	701
5001.227	701
5001.228	701
5001.229	560
5001.233	560
5001.234	560
5001.235	560
5001.236	561
5001.237	701
5001.310	619
5001.330	619
5001.350	619
5001.360	619
5001.370	649
5001.371	649
5110.500	50
5111.500	50
5112.500	50
5113.500	50
5114.500	50
5115.500	50
5116.500	50
5117.500	50
5118.500	51
5119.500	51
5120.500	51
5121.500	51
5122.500	51
5123.500	51
5830.500	98
5831.500	98
5832.500	98
5833.500	98
5834.500	98
5840.500	99
5841.500	99
5842.500	99
5843.500	99
5844.500	99
5845.500	99

5846.500 to 7063.725

Model No.	Page
5846.500	99
5850.500	195
5851.500	195
5852.500	195
5853.500	195
5854.500	195
5855.500	195
6002.000	802
6002.100	798
6003.000	803
6005.500	630
6013.000	793
6013.100	793
6016.200	629
6016.600	167
6016.700	167
6023.010	163
6027.000	794
6027.010	794
6028.000	794
6028.010	794
6028.014	794
6028.015	794
6028.016	794
6028.500	794
6028.510	794
6028.530	794
6028.540	794
6040.010	163
6050.000	163
6050.500	163
6052.000	718
6052.500	714
6053.000	795
6053.210	795
6053.300	795
6053.500	795
6053.800	795
6058.000	795
6058.500	795
6058.800	795
6059.000	721
6059.500	721
6070.000	159
6070.200	159
6071.000	164
6071.200	159
6071.400	159
6071.600	165
6071.800	159
6072.000	159
6072.200	159
6072.400	159
6072.500	159
6072.600	159
6072.800	159
6073.000	813
6074.000	159
6074.100	159
6074.300	159
6074.500	159
6075.100	159
6075.300	159
6075.500	159
6100.000	163
6100.500	163
6107.000	792
6107.100	792
6107.200	792
6108.000	666
6110.010	163
6110.100	163
6120.010	163
6130.010	163
6130.510	163
6130.610	163
6135.000	170
6136.000	170
6136.500	170
6137.035	169
6137.535	169
6140.010	163
6141.100	170
6141.200	170
6143.200	169
6143.210	173
6143.310	173
6144.100	173
6146.100	169
6146.200	169
6146.300	169
6146.400	169
6147.000	173
6148.000	556
6160.010	163
6170.010	163
6180.010	163
6190.000	791
6200.000	163
6200.500	163
6205.000	165
6205.100	658
6214.000	172
6214.500	171
6215.000	171
6220.000	172
6340.000	142
6340.100	142
6340.300	142
6340.400	142
6341.000	630
6372.541	138
6372.542	138
6372.543	138
6372.551	138
6372.552	138
6372.553	138
6372.561	138
6372.562	138
6372.563	138
6375.000	790
6375.010	790
6375.020	790
6375.029	790
6375.040	790
6375.050	790
6375.060	790
6380.000	140
6380.020	140
6380.040	140
6380.050	140
6380.400	140
6380.410	140
6380.500	140
6380.510	140
6380.600	140
6380.610	140
6385.000	790
6385.010	790
6385.040	790
6385.050	790
6385.060	790
6442.500	145
6446.020	799
6450.010	796
6450.020	796
6450.050	796
6450.060	796
6450.070	796
6450.170	796
6462.500	145
6501.000	151
6501.020	151
6501.050	151
6501.070	151
6501.090	168
6501.110	151
6501.120	151
6501.130	151
6501.140	151
6501.150	151
6501.160	151
6503.000	173
6505.100	794
6505.200	794
6505.500	794
6508.010	155
6508.020	164
6509.000	155
6510.210	166
6510.330	166
6510.340	166
6511.000	155
6513.000	155
6513.050	155
6514.200	800
6515.000	155
6519.000	167
6520.010	155
6520.510	155
6521.010	155
6522.010	155
6523.010	155
6524.010	155
6524.210	155
6525.010	155
6525.110	155
6525.210	155
6525.510	155
6525.610	155
6526.010	155
6527.010	155
6527.110	155
6528.010	164
6528.110	168
6528.210	165
6528.410	166
6528.450	164
6528.510	164
6529.010	155
6530.200	144
6531.200	144
6532.200	144
6533.200	144
6534.000	143
6535.000	143
6535.010	189
6536.000	143
6536.010	189
6537.000	143
6538.000	143
6538.010	189
6539.010	189
6540.200	144
6544.000	143
6552.500	145
6660.010	191
6660.050	191
6662.500	145
6663.000	191
6663.400	191
6663.500	191
6664.000	191
6664.100	191
6664.300	191
6664.500	191
6665.000	191
6665.500	191
6680.000	188
6681.000	188
6700.500	123
6701.500	124
6702.500	125
6703.500	126
6704.500	123
6705.500	124
6706.500	125
6707.500	126
6710.500	123
6711.500	124
6712.500	125
6713.500	126
6714.500	123
6715.500	124
6716.500	125
6717.500	126
6720.100	123
6720.200	123
6720.500	123
6721.100	124
6721.200	124
6721.500	124
6722.100	125
6722.200	125
6722.500	125
6723.100	126
6723.200	126
6723.500	126
6730.030	127
6730.100	127
6730.110	127
6730.120	127
6730.130	127
6730.310	638
6730.330	638
6730.340	638
6730.400	127
6730.410	127
6730.600	480
6740.500	128
6742.500	128
6746.500	128
6748.500	128
6900.000	133
6900.100	133
6900.300	131
6900.400	133
6900.410	133
6901.100	133
6902.310	170
6902.640	165
6902.670	167
6902.700	669
6902.770	712
6902.920	553
6902.950	806
6902.960	668
6902.980	668
6903.200	805
7000.390	108
7000.410	108
7000.430	108
7000.440	108
7000.450	109
7000.460	109
7000.500	108
7000.510	108
7000.520	109
7000.530	109
7000.532	109
7000.560	108
7000.570	108
7000.580	109
7000.590	109
7000.592	109
7000.620	671
7000.625	674
7000.630	696
7000.640	582
7000.652	570
7000.653	570
7000.663	570
7000.670	406
7000.672	557
7000.675	691
7000.676	648
7000.678	648
7000.680	406
7000.684	386
7000.685	726
7000.840	107
7000.850	107
7000.852	107
7000.875	117
7000.882	117
7000.885	117
7000.892	117
7000.895	117
7000.940	110
7000.944	110
7000.990	758
7016.100	732
7016.110	732
7016.120	732
7016.130	732
7016.140	722
7016.150	722
7030.000	772
7030.010	772
7030.030	770
7030.040	771
7030.050	771
7030.060	774
7030.070	775
7030.071	775
7030.080	774
7030.090	774
7030.091	774
7030.092	774
7030.093	774
7030.094	774
7030.095	774
7030.100	773
7030.110	773
7030.111	773
7030.120	773
7030.130	773
7030.140	773
7030.150	773
7030.190	773
7030.200	773
7030.220	773
7030.230	773
7031.100	765
7040.010	373
7040.020	373
7040.030	373
7040.040	373
7040.060	374
7040.065	374
7040.070	375
7040.075	375
7040.110	373
7040.120	373
7040.201	373
7040.202	373
7040.204	373
7040.211	373
7040.212	373
7040.214	373
7040.301	374
7040.305	374
7040.311	374
7040.315	374
7040.361	375
7040.500	380
7050.035	764
7050.100	764
7050.200	764
7051.000	677
7061.000	677
7063.000	750
7063.200	729
7063.710	673
7063.720	673
7063.725	673

List of model numbers

7063.740 to 7552.002

Model No.	Page
7063.740	750
7063.750	749
7063.752	749
7063.835	672
7063.837	672
7063.850	753
7063.858	676
7063.860	676
7063.882	749
7063.883	749
7063.884	749
7063.888	804
7063.890	676
7063.892	676
7063.895	672
7063.897	672
7064.000	677
7064.100	723
7064.110	723
7065.000	677
7066.000	677
7066.700	677
7067.100	582
7067.200	582
7069.535	759
7072.100	712
7072.200	708
7072.220	720
7072.230	720
7072.240	720
7077.000	719
7078.000	719
7081.000	677
7086.535	759
7087.535	759
7089.535	759
7091.000	653
7094.100	758
7094.110	758
7094.120	758
7094.130	757
7094.140	757
7095.000	653
7096.000	653
7097.000	719
7097.220	719
7097.260	719
7097.300	719
7097.340	719
7098.000	719
7098.100	719
7099.000	719
7100.000	653
7102.000	653
7109.035	475
7109.200	685
7111.000	724
7111.100	724
7111.210	727
7111.212	727
7111.214	727
7111.220	727
7111.222	727
7111.224	727
7111.250	728
7111.252	728
7111.300	721
7111.310	721
7111.350	721
7111.900	724
7112.000	724
7113.000	692
7115.000	678
7116.500	725
7119.140	674
7119.155	674
7119.250	675
7119.255	675
7119.400	675
7119.455	675
7124.035	737
7140.535	732
7143.035	670
7144.035	670
7145.005	670
7145.035	670
7145.535	671
7145.605	670
7145.635	670
7145.705	670
7145.735	670
7147.035	677
7148.035	673
7149.035	730
7149.135	730
7150.535	732
7151.005	761
7151.035	761
7151.105	761
7151.110	761
7151.206	755
7151.208	755
7151.300	756
7152.005	761
7152.035	761
7153.005	761
7153.035	761
7154.035	760
7156.005	761
7156.035	761
7157.035	761
7158.035	730
7158.100	731
7158.150	731
7159.035	729
7161.000	677
7161.700	677
7163.500	678
7163.550	678
7163.560	678
7163.565	678
7164.035	668
7165.035	668
7166.035	668
7166.735	668
7167.000	761
7169.535	763
7170.535	763
7174.535	763
7178.535	763
7183.100	675
7184.035	668
7185.035	668
7186.035	668
7186.735	668
7200.001	700
7200.210	775
7200.214	775
7200.215	775
7200.216	775
7200.217	775
7200.450	775
7200.630	698
7200.800	605
7200.810	605
7218.035	723
7219.035	723
7220.500	726
7220.600	724
7228.035	723
7240.110	695
7240.120	695
7240.130	696
7240.150	696
7240.160	696
7240.170	696
7240.190	696
7240.200	695
7240.201	695
7240.205	695
7240.210	695
7240.220	695
7240.230	695
7240.240	695
7240.250	695
7240.260	695
7240.280	695
7240.290	695
7240.300	697
7240.305	697
7240.310	695
7240.330	695
7240.370	695
7240.510	695
7240.512	695
7240.600	697
7241.005	762
7241.015	763
7241.024	763
7241.045	763
7241.065	763
7241.500	762
7242.005	762
7242.015	763
7246.010	752
7246.030	752
7246.060	752
7246.100	752
7246.400	752
7246.420	747
7246.500	756
7255.035	729
7256.035	731
7257.005	729
7257.035	729
7257.050	730
7257.100	729
7257.105	729
7257.150	730
7257.200	729
7264.035	668
7265.035	668
7266.035	668
7269.135	730
7269.235	731
7280.035	698
7280.100	699
7281.035	804
7281.200	803
7282.035	753
7282.135	753
7283.035	753
7284.135	745
7296.000	748
7297.000	748
7298.000	748
7299.000	748
7300.230	764
7300.240	764
7300.250	764
7300.335	760
7320.435	774
7320.440	776
7320.441	776
7320.472	786
7320.475	786
7320.481	786
7320.485	786
7320.491	776
7320.530	773
7320.560	773
7320.570	773
7320.620	773
7320.630	773
7320.631	773
7320.700	773
7320.721	773
7320.730	777
7320.790	779
7320.792	779
7320.793	779
7320.794	779
7320.795	779
7320.796	779
7320.810	777
7320.812	777
7320.813	774
7320.814	775
7320.820	777
7320.830	776
7320.950	773
7338.120	510
7338.130	510
7338.160	511
7338.161	511
7338.162	511
7338.163	511
7338.164	511
7338.165	511
7338.166	511
7338.167	511
7338.168	511
7338.170	511
7338.171	511
7338.220	510
7338.320	510
7391.000	111
7394.035	759
7396.000	111
7400.000	111
7401.000	748
7402.000	748
7404.000	696
7408.510	696
7411.000	748
7412.510	696
7433.035	760
7437.035	760
7445.000	111
7450.035	762
7451.000	69
7455.030	712
7462.000	69
7463.100	69
7463.200	69
7464.035	668
7465.035	668
7466.035	668
7466.735	668
7469.535	763
7470.535	763
7474.535	763
7478.535	763
7480.035	699
7480.300	699
7484.035	668
7485.035	668
7486.035	668
7486.735	668
7492.060	750
7492.070	750
7492.300	750
7492.400	750
7492.500	750
7493.000	555
7493.100	555
7493.230	555
7494.000	748
7495.000	556
7501.000	56
7501.100	757
7502.013	59
7502.014	59
7502.016	59
7502.024	59
7502.026	59
7502.034	59
7502.035	59
7502.036	59
7502.044	60
7502.045	60
7502.046	60
7502.054	60
7502.056	60
7502.064	60
7502.066	60
7502.114	60
7502.124	60
7502.126	60
7502.136	60
7502.144	60
7502.146	60
7502.166	60
7502.203	744
7502.204	744
7502.205	744
7502.206	744
7502.220	612
7502.240	691
7502.260	691
7502.302	718
7502.304	718
7502.310	707
7502.436	59
7502.446	60
7502.630	61
7502.660	61
7507.000	57
7507.010	57
7507.020	58
7507.030	58
7507.100	57
7507.110	57
7507.120	58
7507.200	58
7507.210	58
7507.220	58
7507.706	744
7507.709	744
7507.712	744
7507.715	744
7507.718	744
7507.721	744
7507.740	556
7507.750	553
7507.755	553
7507.760	404
7526.050	612
7526.750	565
7526.755	565
7526.760	565
7526.770	565
7526.780	565
7526.785	565
7526.790	565
7526.795	565
7526.800	565
7526.807	624
7526.820	565
7526.827	624
7526.829	565
7526.834	565
7526.850	565
7526.860	565
7526.964	658
7541.000	692
7542.000	692
7543.000	692
7544.000	692
7545.000	692
7546.000	692
7547.000	692
7548.000	692
7548.210	690
7549.000	692
7552.002	781

7552.020 to 7856.323

Model No.	Page
7552.020	782
7552.030	782
7552.040	782
7552.100	781
7552.110	781
7552.120	786
7552.122	786
7552.140	786
7552.142	786
7552.200	784
7552.201	785
7552.202	785
7552.203	785
7552.204	785
7552.205	785
7552.212	784
7552.214	785
7552.220	786
7552.420	786
7552.510	783
7561.500	548
7570.535	763
7574.535	763
7578.535	763
7581.500	548
7582.500	548
7604.000	696
7608.510	696
7610.000	725
7611.000	725
7641.000	67
7643.000	67
7644.000	68
7644.400	675
7645.000	67
7685.000	743
7688.000	743
7696.000	743
7698.000	743
7705.035	708
7705.110	606
7705.120	606
7705.235	707
7705.706	743
7705.709	743
7705.712	743
7705.715	743
7705.718	743
7705.721	743
7706.135	63
7709.135	63
7709.535	62
7709.735	62
7712.135	63
7715.135	63
7715.535	62
7715.735	62
7718.135	63
7721.135	63
7721.535	62
7721.735	62
7752.950	692
7794.420	739
7794.740	739
7816.120	569
7816.200	569

Model No.	Page
7816.360	586
7816.362	586
7816.380	586
7816.382	586
7820.100	105
7820.200	105
7820.300	105
7820.340	105
7820.350	105
7820.410	105
7820.500	105
7820.510	105
7820.600	106
7820.610	106
7820.650	106
7820.700	106
7820.710	106
7820.730	106
7820.740	106
7820.750	106
7820.770	106
7820.800	106
7820.810	106
7820.850	106
7821.100	105
7821.200	105
7821.300	105
7821.340	105
7821.410	105
7821.500	105
7821.510	105
7821.600	106
7821.610	106
7821.650	106
7821.700	106
7821.710	106
7821.730	106
7821.740	106
7821.750	106
7821.770	106
7821.800	106
7821.810	106
7821.850	106
7824.086	569
7824.106	569
7824.120	569
7824.126	569
7824.127	585
7824.128	569
7824.130	588
7824.132	588
7824.146	569
7824.148	569
7824.166	569
7824.168	569
7824.180	569
7824.183	585
7824.186	569
7824.188	569
7824.200	569
7824.201	585
7824.202	585
7824.203	585
7824.204	585
7824.205	585
7824.206	569

Model No.	Page
7824.207	585
7824.208	569
7824.220	569
7824.222	585
7824.223	585
7824.224	585
7824.225	585
7824.226	569
7824.227	585
7824.228	569
7824.280	586
7824.282	586
7824.310	570
7824.312	570
7824.360	586
7824.362	586
7824.380	586
7824.382	586
7824.490	586
7824.510	570
7824.520	613
7824.522	613
7824.525	613
7824.540	582
7824.560	571
7824.580	571
7824.650	574
7825.150	554
7825.250	554
7825.260	554
7825.342	559
7825.350	564
7825.360	564
7825.361	564
7825.364	563
7825.365	563
7825.366	564
7825.367	565
7825.375	708
7825.380	564
7825.381	564
7825.382	563
7825.384	563
7825.385	563
7825.386	564
7825.387	565
7825.388	564
7825.601	543
7825.603	543
7825.605	543
7825.607	547
7825.608	547
7825.610	563
7825.612	563
7825.620	564
7825.622	565
7825.660	563
7825.680	563
7825.801	543
7825.803	543
7825.805	543
7825.807	547
7825.808	547
7825.810	563
7825.812	563
7825.860	563

Model No.	Page
7825.880	563
7825.900	557
7826.245	624
7826.360	405
7826.366	405
7826.368	405
7826.480	405
7826.486	405
7826.488	405
7826.588	625
7826.605	624
7826.625	624
7826.645	624
7826.665	624
7826.669	625
7826.685	624
7826.689	625
7826.750	478
7826.760	625
7826.766	625
7826.768	625
7826.780	625
7826.786	625
7826.788	625
7826.805	624
7826.806	625
7826.809	625
7826.825	624
7826.845	624
7826.865	624
7826.866	625
7826.869	625
7826.885	624
7826.886	625
7826.889	625
7827.000	746
7827.023	747
7827.024	747
7827.050	726
7827.061	739
7827.080	739
7827.081	739
7827.100	739
7827.101	739
7827.120	739
7827.121	739
7827.140	739
7827.141	739
7827.160	739
7827.161	739
7827.180	739
7827.181	739
7827.200	739
7827.201	739
7827.220	739
7827.221	739
7827.300	676
7827.310	728
7827.320	728
7827.330	728
7827.480	746
7827.490	746
7827.520	755
7827.532	755
7827.534	755
7827.536	755

Model No.	Page
7827.544	756
7827.550	746
7827.554	747
7827.560	746
7827.570	746
7827.590	745
7827.600	746
7827.800	746
7827.823	747
7827.824	747
7828.040	653
7828.050	653
7828.060	653
7828.061	722
7828.062	722
7828.080	653
7828.081	722
7828.082	722
7828.100	653
7828.101	722
7828.102	722
7828.120	653
7828.121	722
7828.122	722
7828.600	669
7828.660	669
7828.680	669
7828.800	669
7828.880	669
7828.950	671
7828.951	672
7828.960	671
7828.961	672
7828.970	671
7828.971	672
7829.100	692
7829.110	692
7829.150	690
7829.152	690
7829.200	690
7829.300	605
7829.400	667
7830.100	102
7830.110	102
7830.130	103
7830.200	102
7830.202	103
7830.230	103
7830.240	103
7830.250	103
7830.260	104
7830.270	103
7830.330	103
7830.335	103
7830.380	103
7830.550	104
7830.670	104
7830.850	102
7831.429	505
7831.433	114
7831.438	114
7831.442	114
7831.446	114
7831.453	115
7831.463	115
7831.472	725

Model No.	Page
7831.481	114
7831.485	114
7831.570	719
7831.571	719
7831.611	739
7831.621	739
7831.631	739
7831.641	739
7831.723	572
7831.724	572
7831.726	572
7831.800	116
7831.802	116
7831.803	116
7831.810	116
7831.812	116
7831.813	116
7855.340	554
7855.342	554
7856.003	384
7856.005	384
7856.006	384
7856.008	384
7856.010	384
7856.011	386
7856.013	386
7856.014	386
7856.015	383
7856.016	384
7856.017	383
7856.018	383
7856.019	386
7856.020	384
7856.022	386
7856.023	386
7856.025	386
7856.026	386
7856.027	386
7856.030	386
7856.043	384
7856.070	385
7856.080	385
7856.081	383
7856.082	385
7856.090	385
7856.095	385
7856.100	385
7856.101	383
7856.110	385
7856.120	385
7856.130	385
7856.140	385
7856.150	385
7856.160	385
7856.170	386
7856.180	385
7856.190	385
7856.201	385
7856.203	700
7856.204	700
7856.220	385
7856.230	385
7856.231	383
7856.240	385
7856.321	384
7856.323	384

List of model numbers

7856.710 to 8611.260

Model No.	Page
7856.710	740
7856.713	740
7856.716	740
7856.719	740
7856.722	740
7856.725	740
7856.728	740
7856.731	740
7856.734	740
7857.130	382
7857.150	382
7857.180	382
7857.190	382
7857.300	382
7857.310	382
7857.320	382
7857.321	382
7857.350	382
7857.364	375
7857.366	380
7857.372	380
7857.410	378
7857.420	380
7857.421	529
7857.423	529
7857.424	529
7857.430	372
7857.431	372
7857.432	372
7857.433	372
7857.434	372
7857.435	378
7857.437	378
7857.440	378
7857.441	378
7857.442	378
7857.443	379
7857.444	379
7857.445	379
7857.448	379
7857.482	372
7857.483	372
7857.488	378
7857.800	381
7857.801	381
7857.802	381
7857.803	381
7858.100	736
7858.160	722
7858.162	722
7858.200	726
7858.488	406
7859.120	385
7859.130	385
7859.212	385
7859.215	700
7859.222	385
7859.225	700
7859.232	385
7859.235	700
7870.614	759
7870.830	759
7885.000	405
7885.100	405
7885.200	405
7886.000	405
7886.100	405
7886.200	405
7890.020	787
7890.206	787
7890.208	787
7890.226	787
7890.228	787
7890.500	787
7950.100	744
7950.150	618
7950.200	618
7952.100	684
7963.310	750
7963.410	750
7963.510	750
7963.610	750
7963.710	750
7966.035	403
7967.000	626
7968.035	403
7980.000	404
7980.100	404
7980.148	404
7986.035	403
7988.035	403
7990.012	528
7990.014	528
7990.101	527
7990.102	527
7990.103	527
7990.104	527
7990.201	527
7990.202	527
7990.203	527
7990.204	527
7990.205	527
7990.206	527
7990.207	527
7990.208	527
7990.209	527
7990.210	527
7990.211	527
7990.213	528
7990.301	527
7990.302	527
7990.303	527
7990.304	527
7990.305	527
7990.306	527
7990.307	527
7990.308	527
7990.309	527
7990.310	527
7990.311	527
7990.313	528
7995.969	505
7995.992	504
7999.892	505
7999.893	505
7999.896	506
7999.897	506
7999.898	504
7999.961	508
7999.962	508
7999.963	508
7999.964	508
7999.965	508
7999.966	508
7999.970	505
7999.977	506
7999.978	506
7999.979	506
7999.980	506
7999.981	506
7999.982	506
7999.983	506
7999.984	506
7999.985	506
7999.986	506
7999.987	506
7999.988	506
7999.989	506
7999.990	506
7999.991	508
7999.992	508
7999.999	504
8000.100	541
8000.500	541
8001.040	540
8001.050	540
8001.060	540
8001.240	540
8001.250	540
8001.260	540
8001.280	540
8001.450	540
8001.460	540
8001.601	540
8001.605	540
8001.621	540
8001.625	540
8001.650	540
8001.660	540
8001.661	540
8001.665	540
8001.680	540
8001.681	540
8001.685	540
8001.800	540
8001.801	540
8001.805	540
8001.821	540
8001.825	540
8001.840	540
8001.850	540
8001.861	540
8001.880	540
8001.881	540
8001.885	540
8001.940	540
8001.950	540
8004.500	75
8005.500	75
8006.500	76
8080.500	73
8084.500	73
8100.235	567
8104.235	567
8104.500	568
8105.235	567
8105.500	568
8106.235	567
8106.500	568
8106.512	591
8106.580	80
8106.750	200
8108.235	567
8108.500	568
8108.750	200
8115.235	567
8126.235	567
8126.500	568
8128.235	567
8145.235	567
8146.235	567
8148.235	567
8165.235	567
8166.235	567
8168.235	567
8170.235	567
8173.235	567
8174.235	567
8175.235	567
8176.235	567
8180.235	567
8184.235	567
8184.500	568
8185.235	567
8185.500	568
8186.235	567
8186.500	568
8188.235	567
8204.500	75
8205.500	75
8206.500	76
8208.500	76
8215.500	72
8226.500	77
8245.500	72
8265.500	73
8284.500	73
8285.500	74
8286.500	74
8360.920	548
8366.000	130
8366.100	130
8366.200	130
8366.300	130
8366.400	130
8368.000	130
8368.100	130
8404.300	583
8405.510	75
8406.510	76
8410.510	78
8418.510	78
8430.510	78
8438.510	78
8450.600	194
8450.680	80
8451.600	194
8452.600	194
8453.600	194
8454.600	194
8455.600	194
8456.600	194
8457.600	194
8484.300	583
8485.510	74
8486.510	74
8504.300	583
8505.300	583
8584.300	583
8585.300	583
8600.255	545
8600.265	545
8600.455	545
8600.465	545
8600.510	545
8600.520	545
8600.655	545
8600.665	545
8600.855	545
8600.865	545
8601.000	543
8601.010	544
8601.015	544
8601.025	544
8601.026	544
8601.030	544
8601.040	544
8601.050	544
8601.060	544
8601.065	544
8601.080	544
8601.085	544
8601.086	544
8601.100	544
8601.110	547
8601.130	547
8601.140	547
8601.200	543
8601.300	543
8601.400	543
8601.450	552
8601.500	543
8601.600	543
8601.602	543
8601.605	543
8601.640	81
8601.660	81
8601.680	552
8601.800	543
8601.802	543
8601.805	543
8601.850	543
8601.860	81
8601.905	543
8601.915	543
8601.920	543
8602.000	543
8602.015	544
8602.025	544
8602.030	544
8602.040	544
8602.050	544
8602.060	544
8602.065	544
8602.080	544
8602.085	544
8602.100	543
8602.200	543
8602.400	543
8602.500	543
8602.600	543
8602.605	543
8602.800	543
8602.805	543
8602.850	543
8602.905	543
8602.915	543
8602.920	543
8604.300	583
8604.500	75
8605.300	583
8605.500	75
8606.300	583
8606.500	76
8606.512	79
8608.500	76
8609.020	574
8609.030	574
8609.040	571
8609.050	571
8609.060	571
8609.080	571
8609.100	572
8609.110	572
8609.120	572
8609.130	572
8609.140	573
8609.150	573
8609.160	573
8609.170	573
8609.190	573
8609.260	571
8609.390	573
8609.840	571
8609.850	571
8609.860	571
8610.600	584
8610.620	584
8610.680	584
8610.800	584
8610.820	584
8610.880	584
8611.010	603
8611.020	603
8611.030	603
8611.040	603
8611.045	603
8611.050	603
8611.060	603
8611.070	603
8611.080	584
8611.100	609
8611.110	609
8611.120	609
8611.130	609
8611.140	609
8611.150	609
8611.160	609
8611.170	609
8611.180	604
8611.190	604
8611.200	604
8611.210	606
8611.220	609
8611.250	603
8611.260	603

8611.270 to 9340.850

Model No.	Page
8611.270	603
8611.280	603
8611.290	603
8611.300	584
8611.330	603
8611.340	603
8611.350	603
8611.360	603
8611.370	605
8612.000	647
8612.010	648
8612.020	647
8612.030	647
8612.040	647
8612.050	647
8612.060	647
8612.080	647
8612.100	647
8612.120	647
8612.130	647
8612.140	647
8612.150	647
8612.160	647
8612.180	647
8612.200	638
8612.240	650
8612.250	650
8612.260	650
8612.280	650
8612.400	657
8612.410	657
8612.500	648
8612.520	648
8612.550	648
8612.560	648
8612.580	648
8612.600	638
8612.650	649
8612.660	649
8612.680	649
8612.750	649
8612.760	649
8612.780	649
8612.960	654
8612.980	654
8613.000	741
8613.010	742
8613.020	741
8613.030	742
8613.040	742
8613.060	741
8613.070	741
8613.080	741
8613.150	751
8613.160	751
8613.180	751
8613.300	742
8613.360	742
8613.640	81
8613.660	81
8613.860	81
8614.040	636
8614.050	636
8614.060	636
8614.100	637
8614.180	639
8614.200	639
8614.240	636
8614.250	636
8614.260	636
8614.640	636
8614.650	636
8614.660	636
8614.675	636
8614.680	636
8614.840	636
8614.850	636
8614.880	636
8615.500	72
8616.602	444
8616.622	444
8616.700	445
8616.710	445
8616.720	445
8616.750	445
8616.760	445
8616.761	445
8616.762	445
8616.772	445
8616.773	445
8616.802	444
8616.822	444
8626.300	583
8626.500	77
8645.500	72
8665.500	73
8684.300	583
8684.500	73
8685.300	583
8685.500	74
8686.300	583
8686.500	74
8700.000	578
8700.010	80
8700.060	567
8700.120	701
8700.140	581
8700.150	581
8700.160	581
8700.600	701
8700.680	80
8700.800	701
8700.840	567
8700.850	567
8701.040	549
8701.050	549
8701.060	549
8701.180	613
8701.200	549
8701.600	549
8701.800	549
8702.040	549
8702.050	549
8702.060	549
8702.200	549
8702.600	549
8702.800	549
8800.020	613
8800.030	613
8800.040	584
8800.050	632
8800.060	701
8800.070	606
8800.071	568
8800.075	559
8800.080	701
8800.090	632
8800.100	701
8800.110	569
8800.120	701
8800.130	650
8800.150	667
8800.160	667
8800.170	581
8800.180	667
8800.190	613
8800.200	558
8800.210	558
8800.220	557
8800.230	613
8800.240	667
8800.280	633
8800.290	557
8800.300	651
8800.310	651
8800.320	651
8800.330	661
8800.340	665
8800.350	665
8800.360	659
8800.370	660
8800.380	651
8800.390	545
8800.400	577
8800.410	577
8800.420	578
8800.430	579
8800.470	580
8800.490	578
8800.500	577
8800.510	715
8800.520	715
8800.531	716
8800.540	715
8800.560	676
8800.570	715
8800.580	676
8800.590	577
8800.600	687
8800.610	632
8800.620	687
8800.630	632
8800.640	652
8800.650	652
8800.660	687
8800.670	581
8800.680	687
8800.690	688
8800.710	613
8800.750	716
8800.751	716
8800.752	716
8800.753	716
8800.754	716
8800.806	659
8800.808	659
8800.830	559
8800.840	581
8800.850	581
8800.860	581
8800.880	581
8800.892	581
8800.900	669
8800.910	669
8800.920	548
8800.950	613
8801.000	587
8801.010	587
8801.100	590
8801.110	590
8801.120	590
8801.140	590
8801.160	590
8801.170	590
8801.180	590
8801.230	589
8801.240	589
8801.250	589
8801.260	591
8801.310	478
8801.320	478
8801.330	478
8801.340	478
8801.350	478
8801.380	478
8801.450	587
8801.500	590
8801.510	590
8801.520	590
8801.540	590
8801.560	590
8801.570	590
8801.580	590
8801.590	590
8801.630	590
8801.715	591
8801.735	621
8801.745	621
8801.755	621
8801.765	621
8801.775	621
8801.830	590
8801.915	591
8802.060	702
8802.065	703
8802.080	702
8802.085	703
8802.100	702
8802.105	703
8802.120	702
8802.125	703
8802.160	702
8802.165	703
8802.220	634
8802.260	634
8802.280	634
8804.300	583
8804.500	75
8805.300	583
8805.500	75
8806.300	583
8806.500	76
8806.512	79
8806.580	80
8806.750	200
8808.500	76
8808.750	200
8815.500	72
8826.500	77
8845.500	72
8865.500	73
8880.500	74
8881.500	74
8884.500	73
8885.500	74
8886.500	74
8900.050	575
8900.060	575
8900.840	575
8900.850	575
9055.310	780
9055.312	780
9055.410	780
9055.412	780
9100.210	32
9101.210	32
9102.210	32
9103.210	32
9104.210	32
9105.210	32
9105.700	33
9106.210	32
9107.210	32
9108.210	32
9108.700	33
9110.210	32
9110.700	33
9111.210	32
9112.210	32
9112.700	33
9113.210	32
9113.700	33
9114.210	32
9114.700	33
9116.210	32
9116.700	33
9117.210	32
9117.700	33
9118.210	32
9118.700	33
9119.210	32
9121.122	33
9121.160	33
9121.230	33
9123.000	33
9201.600	199
9202.600	199
9203.600	199
9204.600	199
9205.600	199
9206.600	199
9207.600	199
9208.600	199
9209.600	199
9214.000	691
9266.000	628
9301.000	198
9302.000	198
9303.000	198
9304.000	198
9305.000	198
9306.000	198
9320.020	313
9320.030	313
9320.040	296
9320.050	296
9320.060	313
9320.070	313
9320.080	294
9320.120	322
9320.150	318
9340.000	276
9340.004	276
9340.010	276
9340.030	310
9340.040	310
9340.050	276
9340.070	277
9340.074	277
9340.090	310
9340.100	315
9340.110	315
9340.120	315
9340.130	315
9340.134	315
9340.140	315
9340.170	315
9340.200	315
9340.210	315
9340.214	315
9340.220	315
9340.224	315
9340.230	315
9340.250	286
9340.260	286
9340.270	286
9340.280	320
9340.290	319
9340.310	283
9340.340	283
9340.350	283
9340.370	283
9340.380	283
9340.390	283
9340.410	284
9340.430	284
9340.450	284
9340.460	283
9340.470	283
9340.510	285
9340.520	285
9340.530	285
9340.550	285
9340.560	285
9340.610	286
9340.620	286
9340.630	286
9340.650	286
9340.660	285
9340.700	284
9340.710	284
9340.720	284
9340.730	284
9340.800	320
9340.820	321
9340.850	321

List of model numbers

9340.860 to 9650.910

Model No.	Page
9340.860	321
9340.870	321
9340.880	321
9340.890	321
9340.900	285
9340.910	285
9340.930	285
9340.950	295
9341.000	278
9341.050	278
9341.070	279
9341.100	315
9341.110	315
9341.120	315
9341.130	315
9341.140	315
9341.170	315
9341.800	320
9341.820	320
9341.830	320
9341.850	320
9341.980	321
9341.990	321
9342.000	278
9342.004	278
9342.014	276
9342.030	310
9342.050	278
9342.070	279
9342.074	279
9342.100	315
9342.110	315
9342.120	315
9342.130	315
9342.134	315
9342.140	315
9342.170	315
9342.200	281
9342.210	281
9342.220	280
9342.224	280
9342.230	281
9342.240	281
9342.244	281
9342.250	280
9342.254	280
9342.260	281
9342.270	281
9342.274	281
9342.280	280
9342.290	281
9342.300	281
9342.310	282
9342.311	317
9342.314	282
9342.320	282
9342.321	317
9342.324	282
9342.400	287
9342.410	287
9342.500	287
9342.504	289
9342.510	287
9342.514	289
9342.540	287
9342.550	287

Model No.	Page
9342.560	322
9342.570	322
9342.600	288
9342.604	289
9342.610	288
9342.614	289
9342.640	322
9342.660	322
9342.670	322
9342.680	322
9342.690	322
9342.700	288
9342.710	288
9342.720	322
9342.770	322
9342.780	322
9342.790	322
9342.800	320
9342.810	320
9342.820	321
9342.850	319
9342.860	319
9342.870	319
9342.880	319
9342.920	319
9342.930	319
9342.940	319
9342.950	319
9342.960	319
9342.980	319
9343.000	298
9343.010	298
9343.020	299
9343.030	299
9343.040	299
9343.050	299
9343.100	300
9343.110	300
9343.120	300
9343.130	300
9343.140	301
9343.150	301
9343.200	302
9343.210	302
9343.220	302
9343.230	302
9343.240	303
9343.250	303
9343.300	304
9343.310	304
9343.320	304
9343.330	304
9343.340	305
9343.350	305
9344.000	298
9344.010	298
9344.020	299
9344.030	299
9344.040	299
9344.050	299
9344.100	300
9344.110	300
9344.130	300
9344.150	301
9344.200	302
9344.210	302

Model No.	Page
9344.230	302
9344.250	303
9344.300	304
9344.310	304
9344.330	304
9344.350	305
9344.510	324
9344.520	323
9344.530	323
9344.540	323
9344.550	323
9344.600	323
9344.610	323
9344.620	323
9344.680	323
9344.810	324
9344.820	324
9344.830	324
9345.000	308
9345.010	308
9345.030	308
9345.100	309
9345.110	309
9345.200	309
9345.210	309
9345.400	309
9345.410	309
9346.000	306
9346.010	306
9346.020	306
9346.030	306
9346.040	306
9346.050	306
9346.110	307
9346.210	307
9346.310	307
9346.400	324
9346.410	325
9346.420	325
9346.430	325
9346.440	325
9346.450	325
9346.460	324
9346.470	306
9350.010	311
9350.060	311
9350.075	313
9401.600	198
9402.600	198
9403.600	198
9404.600	198
9405.600	198
9406.600	198
9407.600	198
9408.600	198
9409.600	198
9500.000	28
9500.050	30
9502.000	28
9504.000	28
9505.000	28
9506.000	28
9507.000	28
9508.000	28
9508.050	30
9508.100	28

Model No.	Page
9509.000	28
9509.100	28
9510.000	28
9510.100	28
9511.000	29
9511.100	29
9512.000	29
9512.100	29
9513.000	29
9513.100	29
9514.000	29
9514.050	30
9514.100	29
9515.000	29
9515.100	29
9516.000	29
9516.100	29
9517.000	29
9517.100	29
9518.000	29
9518.100	29
9519.000	29
9519.100	29
9520.000	29
9520.100	29
9521.000	29
9521.050	30
9521.100	29
9522.000	29
9522.100	29
9523.000	29
9523.100	29
9524.000	29
9524.100	29
9530.000	30
9531.000	30
9545.000	31
9547.000	31
9548.000	31
9549.000	31
9550.000	31
9564.000	31
9565.000	31
9566.000	31
9567.000	31
9568.000	31
9580.000	31
9581.000	31
9582.000	31
9583.000	31
9600.000	270
9601.000	270
9602.000	270
9603.000	270
9605.000	270
9606.000	270
9607.000	270
9608.000	270
9609.000	270
9610.000	270
9611.000	270
9612.000	270
9613.000	270
9614.000	272
9614.100	272
9614.110	272

Model No.	Page
9615.000	272
9615.100	272
9616.000	273
9617.000	273
9623.000	318
9624.000	270
9625.000	272
9626.000	272
9627.000	273
9628.000	273
9629.000	273
9629.010	272
9629.030	272
9629.100	271
9630.000	271
9640.021	329
9640.050	328
9640.080	328
9640.088	328
9640.098	328
9640.150	328
9640.171	329
9640.181	329
9640.191	328
9640.201	328
9640.206	328
9640.211	328
9640.216	328
9640.221	328
9640.226	328
9640.231	328
9640.236	328
9640.241	328
9640.246	328
9640.251	328
9640.256	328
9640.261	328
9640.266	328
9640.271	328
9640.276	328
9640.281	328
9640.286	328
9640.291	328
9640.296	328
9640.301	328
9640.306	328
9640.311	328
9640.316	328
9640.325	329
9640.330	329
9640.340	329
9640.350	329
9640.360	328
9640.365	328
9640.370	329
9640.380	329
9640.433	329
9640.434	329
9640.443	329
9640.444	329
9640.453	329
9640.454	329
9640.473	329
9640.474	329
9640.483	329
9640.484	329

Model No.	Page
9640.600	331
9640.610	331
9640.621	331
9640.628	331
9640.641	331
9640.700	330
9640.705	330
9640.900	329
9640.910	329
9640.920	329
9640.930	329
9640.940	329
9640.970	329
9640.980	329
9649.000	328
9649.010	328
9649.060	328
9649.076	328
9649.078	328
9649.160	328
9649.360	328
9650.021	329
9650.031	329
9650.050	328
9650.076	328
9650.080	328
9650.098	328
9650.100	328
9650.140	328
9650.150	328
9650.171	329
9650.181	329
9650.191	328
9650.201	328
9650.211	328
9650.221	328
9650.231	328
9650.241	328
9650.251	328
9650.261	328
9650.271	328
9650.281	328
9650.291	328
9650.301	328
9650.311	328
9650.325	329
9650.330	329
9650.340	329
9650.350	329
9650.360	328
9650.370	329
9650.380	329
9650.400	329
9650.410	329
9650.420	329
9650.470	329
9650.480	329
9650.487	329
9650.600	331
9650.610	331
9650.621	331
9650.641	331
9650.700	330
9650.900	329
9650.905	329
9650.910	329

9650.920 to 9673.465

Model No.	Page
9650.920	329
9650.980	329
9650.990	329
9659.000	328
9659.010	328
9659.060	328
9659.078	328
9659.160	328
9659.360	328
9659.403	329
9659.404	329
9659.413	329
9659.414	329
9659.423	329
9659.424	329
9659.473	329
9659.474	329
9659.483	329
9659.484	329
9659.493	329
9659.494	329
9659.525	622
9659.535	622
9659.545	622
9659.555	622
9659.580	331
9659.590	331
9659.601	331
9660.090	344
9660.180	344
9660.190	344
9660.200	337
9660.210	657
9660.220	657
9660.235	622
9660.245	622
9660.255	622
9660.265	622
9660.280	342
9660.290	342
9660.313	330
9660.314	330
9660.318	330
9660.319	330
9660.363	330
9660.368	330
9660.369	330
9660.380	342
9660.390	342
9660.460	343
9660.470	343
9660.480	343
9660.490	343
9660.605	84
9660.610	331
9660.620	331
9660.635	84
9660.655	84
9660.695	84
9660.700	342
9660.710	342
9660.760	342
9660.770	342
9660.780	342
9660.790	342
9660.805	85
9660.835	85
9660.855	85
9660.880	342
9660.890	342
9660.935	622
9660.945	622
9660.955	622
9660.965	622
9660.970	347
9660.980	330
9661.000	693
9661.020	693
9661.030	693
9661.040	693
9661.050	694
9661.060	693
9661.080	693
9661.100	693
9661.120	693
9661.130	693
9661.140	693
9661.150	694
9661.160	693
9661.180	693
9661.200	694
9661.230	694
9661.235	694
9661.240	694
9661.300	693
9661.305	693
9661.320	693
9661.325	693
9661.330	693
9661.335	693
9661.340	693
9661.345	693
9661.350	694
9661.355	694
9661.360	693
9661.365	693
9661.380	693
9661.385	693
9665.000	362
9665.010	362
9665.020	362
9665.030	362
9665.040	362
9665.050	362
9665.060	362
9665.070	362
9665.080	362
9665.090	362
9665.100	362
9665.110	362
9665.120	362
9665.130	362
9665.140	362
9665.150	362
9665.160	362
9665.170	362
9665.180	362
9665.190	362
9665.200	362
9665.210	362
9665.220	362
9665.230	362
9665.240	363
9665.250	363
9665.260	363
9665.270	363
9665.280	363
9665.290	363
9665.310	363
9665.330	363
9665.350	363
9665.360	363
9665.370	363
9665.385	364
9665.395	364
9665.405	364
9665.415	364
9665.425	364
9665.430	364
9665.440	364
9665.450	364
9665.460	364
9665.470	364
9665.480	364
9665.495	365
9665.500	363
9665.510	362
9665.525	366
9665.530	366
9665.545	366
9665.555	366
9665.565	366
9665.570	367
9665.580	367
9665.590	368
9665.600	368
9665.610	367
9665.625	367
9665.635	367
9665.650	369
9665.660	369
9665.670	369
9665.680	369
9665.690	369
9665.750	623
9665.760	623
9665.770	623
9665.780	623
9665.785	623
9665.790	368
9665.805	47
9665.815	47
9665.825	47
9665.835	47
9665.845	47
9665.855	47
9665.903	622
9665.905	82
9665.913	622
9665.915	82
9665.923	622
9665.925	82
9665.943	622
9665.945	82
9665.953	622
9665.955	82
9665.963	622
9665.965	82
9665.971	83
9665.975	83
9665.985	83
9670.006	91
9670.008	91
9670.026	92
9670.028	92
9670.106	91
9670.108	91
9670.126	92
9670.128	92
9670.206	93
9670.208	93
9670.226	93
9670.228	93
9670.316	90
9670.318	90
9670.336	90
9670.338	90
9670.396	89
9670.406	87
9670.408	87
9670.416	90
9670.418	90
9670.426	88
9670.428	88
9670.436	90
9670.438	90
9670.486	86
9670.496	89
9670.606	87
9670.608	87
9670.616	90
9670.618	90
9670.626	88
9670.628	88
9670.636	90
9670.638	90
9670.686	86
9670.696	89
9670.806	87
9670.808	87
9670.826	88
9670.828	88
9670.886	86
9671.004	594
9671.006	594
9671.008	594
9671.014	594
9671.016	594
9671.018	594
9671.034	594
9671.036	594
9671.038	594
9671.044	594
9671.046	594
9671.048	594
9671.130	592
9671.132	592
9671.134	592
9671.135	592
9671.138	592
9671.140	592
9671.141	592
9671.142	592
9671.143	592
9671.144	592
9671.146	592
9671.147	592
9671.148	592
9671.150	592
9671.156	592
9671.158	592
9671.160	592
9671.161	592
9671.162	592
9671.163	592
9671.164	592
9671.166	592
9671.167	592
9671.168	592
9671.170	592
9671.176	592
9671.178	592
9671.180	592
9671.181	592
9671.182	592
9671.183	592
9671.184	592
9671.186	592
9671.187	592
9671.188	592
9671.190	592
9671.196	592
9671.198	592
9671.204	593
9671.206	593
9671.208	593
9671.446	622
9671.448	622
9671.468	622
9671.488	622
9671.536	622
9671.538	622
9671.546	622
9671.548	622
9671.568	622
9671.586	622
9671.588	622
9671.636	622
9671.638	622
9671.646	622
9671.648	622
9671.666	622
9671.668	622
9671.686	622
9671.688	622
9671.736	622
9671.738	622
9671.746	622
9671.748	622
9671.766	622
9671.768	622
9671.786	622
9671.788	622
9671.846	622
9671.848	622
9672.000	594
9672.002	594
9672.004	594
9672.006	594
9672.008	594
9672.010	593
9672.012	593
9672.014	593
9672.016	593
9672.018	593
9672.020	593
9672.022	593
9672.024	593
9672.026	593
9672.028	593
9672.030	593
9672.032	593
9672.034	593
9672.036	593
9672.038	593
9672.040	593
9672.042	593
9672.044	593
9672.046	593
9672.048	593
9672.050	593
9672.052	593
9672.054	593
9672.056	593
9672.058	593
9673.004	347
9673.006	347
9673.008	347
9673.051	345
9673.052	345
9673.055	345
9673.061	345
9673.062	345
9673.065	345
9673.066	345
9673.069	345
9673.081	345
9673.082	345
9673.085	345
9673.086	345
9673.089	345
9673.152	345
9673.155	345
9673.162	345
9673.165	345
9673.166	345
9673.182	345
9673.185	345
9673.186	345
9673.192	346
9673.195	346
9673.405	347
9673.406	347
9673.408	347
9673.426	347
9673.428	347
9673.436	349
9673.438	349
9673.444	348
9673.445	348
9673.448	348
9673.454	348
9673.456	349
9673.458	349
9673.464	348
9673.465	348

List of model numbers

9673.468 to 9676.810

Model No.	Page
9673.468	348
9673.474	348
9673.475	348
9673.476	349
9673.478	349
9673.484	348
9673.485	348
9673.488	348
9673.504	349
9673.506	349
9673.508	349
9673.530	346
9673.532	346
9673.540	346
9673.542	346
9673.560	346
9673.562	346
9673.640	350
9673.641	350
9673.642	350
9673.643	350
9673.644	350
9673.646	350
9673.647	350
9673.648	350
9673.660	350
9673.661	350
9673.662	350
9673.663	350
9673.664	350
9673.666	350
9673.667	350
9673.668	350
9673.671	350
9673.672	350
9673.673	350
9673.674	350
9673.677	350
9673.680	350
9673.681	350
9673.682	350
9673.683	350
9673.684	350
9673.686	350
9673.687	350
9673.688	350
9673.691	350
9673.692	350
9673.693	350
9673.694	350
9673.697	350
9673.901	663
9673.902	663
9673.903	663
9673.915	656
9673.920	656
9673.940	656
9673.941	656
9673.950	656
9673.951	656
9673.953	656
9673.960	656
9673.961	656
9673.981	656
9673.983	656
9673.995	656

Model No.	Page
9674.003	352
9674.004	352
9674.006	352
9674.008	352
9674.036	351
9674.038	351
9674.046	351
9674.048	351
9674.056	657
9674.058	657
9674.102	332
9674.104	332
9674.122	332
9674.124	332
9674.152	332
9674.154	332
9674.162	332
9674.164	332
9674.172	332
9674.174	332
9674.182	332
9674.184	332
9674.192	332
9674.194	332
9674.196	351
9674.198	351
9674.305	355
9674.306	355
9674.307	355
9674.308	355
9674.325	355
9674.326	355
9674.327	355
9674.328	355
9674.340	354
9674.342	354
9674.346	355
9674.348	355
9674.350	354
9674.352	354
9674.356	354
9674.358	354
9674.362	355
9674.364	355
9674.366	355
9674.368	355
9674.372	355
9674.376	355
9674.380	356
9674.381	356
9674.400	357
9674.405	357
9674.406	357
9674.408	357
9674.410	357
9674.415	357
9674.416	357
9674.418	357
9674.420	357
9674.425	357
9674.426	357
9674.428	357
9674.430	357
9674.435	357
9674.436	357
9674.438	357

Model No.	Page
9674.441	358
9674.442	358
9674.443	358
9674.444	358
9674.445	358
9674.447	358
9674.448	358
9674.451	358
9674.452	358
9674.453	358
9674.454	358
9674.455	358
9674.457	358
9674.458	358
9674.461	358
9674.462	358
9674.463	358
9674.464	358
9674.467	358
9674.468	358
9674.473	358
9674.474	358
9674.477	358
9674.478	358
9674.485	358
9674.488	358
9674.701	346
9674.702	346
9674.703	346
9674.704	346
9674.706	346
9674.707	346
9674.761	351
9674.762	351
9674.764	351
9674.782	351
9674.784	351
9675.130	353
9675.133	353
9675.136	353
9675.140	353
9675.143	353
9675.146	353
9675.153	353
9675.156	353
9675.163	353
9675.166	353
9675.210	352
9675.212	352
9675.218	352
9675.220	352
9675.230	352
9675.232	352
9675.238	352
9675.240	352
9675.242	352
9675.303	330
9675.304	330
9675.306	330
9675.307	330
9675.311	330
9675.313	330
9675.314	330
9675.315	330
9675.316	330
9675.317	330

Model No.	Page
9675.321	330
9675.322	330
9675.323	330
9675.324	330
9675.325	330
9675.326	330
9675.327	330
9675.328	330
9675.331	330
9675.333	330
9675.334	330
9675.335	330
9675.336	330
9675.337	330
9675.343	330
9675.344	330
9675.346	330
9675.347	330
9675.353	330
9675.354	330
9675.356	330
9675.357	330
9675.361	330
9675.362	330
9675.363	330
9675.364	330
9675.365	330
9675.366	330
9675.367	330
9675.368	330
9675.373	330
9675.374	330
9675.376	330
9675.377	330
9675.501	336
9675.502	336
9675.503	336
9675.504	336
9675.505	336
9675.506	336
9675.507	336
9675.508	336
9675.511	336
9675.513	336
9675.514	336
9675.515	336
9675.516	336
9675.517	336
9675.521	336
9675.522	336
9675.523	336
9675.524	336
9675.525	336
9675.526	336
9675.527	336
9675.528	336
9675.531	336
9675.533	336
9675.534	336
9675.535	336
9675.536	336
9675.537	336
9675.543	336
9675.544	336
9675.546	336
9675.547	336

Model No.	Page
9675.553	336
9675.554	336
9675.556	336
9675.557	336
9675.563	336
9675.564	336
9675.566	336
9675.567	336
9675.573	336
9675.574	336
9675.576	336
9675.577	336
9675.842	336
9675.843	336
9675.846	336
9675.847	336
9675.848	336
9675.849	336
9675.876	336
9675.877	336
9675.878	336
9675.882	336
9675.883	336
9675.886	336
9675.887	336
9675.888	336
9675.889	336
9675.892	336
9675.893	336
9675.896	336
9675.897	336
9675.898	336
9676.000	359
9676.001	359
9676.002	332
9676.004	332
9676.006	333
9676.007	333
9676.008	333
9676.017	333
9676.018	333
9676.019	333
9676.020	332
9676.021	332
9676.022	332
9676.023	332
9676.024	332
9676.025	332
9676.026	332
9676.027	332
9676.041	333
9676.042	333
9676.043	333
9676.046	333
9676.047	333
9676.048	333
9676.052	333
9676.053	333
9676.054	333
9676.056	333
9676.058	333
9676.059	333
9676.186	337
9676.188	337
9676.196	337
9676.198	337

Model No.	Page
9676.201	334
9676.202	334
9676.203	334
9676.204	334
9676.205	334
9676.206	334
9676.213	334
9676.214	334
9676.215	334
9676.216	334
9676.217	334
9676.218	334
9676.221	334
9676.222	334
9676.223	334
9676.224	334
9676.225	334
9676.226	334
9676.233	334
9676.234	334
9676.235	334
9676.236	334
9676.237	334
9676.238	334
9676.301	334
9676.303	334
9676.305	334
9676.313	334
9676.315	334
9676.317	334
9676.321	334
9676.322	334
9676.323	334
9676.324	334
9676.325	334
9676.326	334
9676.333	334
9676.334	334
9676.335	334
9676.336	334
9676.337	334
9676.338	334
9676.503	353
9676.504	353
9676.505	353
9676.520	334
9676.526	334
9676.528	334
9676.540	334
9676.546	334
9676.548	334
9676.621	333
9676.641	333
9676.700	335
9676.704	335
9676.710	335
9676.714	335
9676.730	335
9676.747	335
9676.748	335
9676.749	335
9676.806	335
9676.807	335
9676.808	335
9676.809	335
9676.810	335

9676.811 to 9911.396

Model No.	Page
9676.811	335
9676.812	335
9676.813	335
9676.814	335
9676.815	335
9676.816	335
9676.817	335
9676.819	335
9676.832	335
9676.910	338
9676.912	338
9676.961	337
9676.962	337
9676.963	337
9676.966	337
9676.967	337
9676.968	337
9676.971	329
9676.972	329
9676.973	329
9676.976	329
9676.977	329
9676.981	329
9676.982	329
9676.983	329
9676.986	329
9676.987	329

Model No.	Page
9751.015	208
9751.025	208
9751.035	208
9751.045	209
9751.055	209
9751.065	209
9751.075	208
9751.085	209
9752.015	209
9752.025	209
9753.015	208
9753.025	209
9753.035	208
9753.045	208
9753.055	208
9753.065	209
9753.075	208
9753.085	208
9753.095	208
9753.105	209
9753.115	208
9753.125	208
9753.135	208
9753.145	209
9753.155	208
9753.165	208
9753.175	208

Model No.	Page
9753.185	208
9753.195	208
9753.205	208
9754.015	208
9754.025	208
9754.035	209
9754.045	209
9755.015	208
9755.025	209
9755.035	209
9755.045	209
9755.055	209
9755.065	208
9756.015	208
9756.025	209
9756.035	209
9756.045	209
9756.055	209
9756.065	208
9757.015	208
9757.025	209
9757.035	209
9757.045	209
9757.055	209
9757.065	208
9758.015	208
9758.025	209

Model No.	Page
9758.035	209
9758.045	209
9758.055	209
9761.212	469
9762.212	469
9764.040	469
9765.051	469
9765.082	550
9765.083	550
9765.084	550
9765.085	550
9765.086	550
9765.087	550
9765.088	550
9765.089	550
9765.090	639
9765.092	639
9765.095	639
9765.096	639
9765.097	639
9765.120	629
9765.150	685
9765.166	550
9765.182	550
9765.186	550
9765.191	639
9768.152	469

Model No.	Page
9774.105	207
9774.205	207
9774.305	207
9774.405	207
9776.102	468
9776.152	468
9776.500	468
9776.550	468
9783.510	205
9783.520	205
9783.530	205
9783.540	205
9783.550	205
9783.610	205
9784.520	206
9784.540	206
9784.620	206
9784.640	206
9785.040	604
9785.042	604
9785.511	566
9785.512	566
9785.513	566
9785.514	566
9791.015	204
9791.025	204
9791.035	204

Model No.	Page
9791.045	204
9901.417	251
9901.816	233
9904.745	226
9908.721	226
9908.722	226
9908.723	226
9911.396	801

Index

A

Access sensor 773
Accessories 537 – 814
– Climate control 473 – 487
– for cast aluminium enclosures GA 33
– for Data Rack 748
– for front panels 245
– for Maxi-PLS/Flat-PLS 337
– for polycarbonate enclosures PK 31
– for Power System Module 386
– for RiCase 260 – 263
– for Ripac Vario-Module 256, 257
– for subracks 231 – 244
– for UPS 378 – 381
– Hygienic Design 178, 179
– ISV 369
– Ri4Power 352
– Support arm systems 164 – 168
– TopConsole 127
Accommodation system, 2 U
– for LSA installation kit 764
Acoustic components
– for signal pillars, modular 811
Acrylic glazed cover 596
Active kit for TE 406
Adaptor
– 3 U 752
– for connector cut-outs 574
– for levelling feet 557
– for L-shaped mounting angles 676
– for NH slimline fuse-switch disconnectors, size 00 325
– for Siemens Pro-Panel 164
– for twin castors 557
– Metric to 482.6 mm (19″) 752
– OM 283 – 286
Adaptor bracket
– for TS 659
Adaptor frame
– for wall-mounted cooling units 480
Adaptor kit 3 U 752
Adaptor pieces, 482.6 mm (19″)
– for TS 8, ES 742
– for TS electronic enclosures 742
Adaptor power pack 683
Adaptor rail
– for PS compatibility 651
– rear, centre (E) 234
Adaptor sections, 482.6 mm (19″)
– for TS 741
Adaptor sleeve, Flex-Block 541
Add-on cover 465
Add-on unit
– GSM Unit Quad-Band 777
Adhesive measurement strip 744
Adjacent door latch for TS 605
Adjustable frame
– for air/air heat exchangers 479
Adjustment set for support section 165
AE
– Compact enclosures 44 – 48
– Wall-mounted distributor 67, 68
AE Laser Express 519
Air baffle plates for TS 755
Air block panel for slots 237
Air circuit-breaker support bar 347
Air diverter 475
Air duct system
– for roof-mounted cooling units and air/water heat exchangers 473
Air/air heat exchangers 408 – 411
– Wall-mounted, railway-compatible version 410
Air/water heat exchangers 434 – 443
Aisle containment 460
All-glass door for DK-TS 586
Alternate frame, magnetic 618
Aluminium front door
– Vertically hinged for RiCase 261
Aluminium rivet 716
Aluminium strip 791
Analog airflow sensor 773
Analog differential pressure sensor 773
Angle adaptor 90° 168
Angle bracket PS 661
Angle piece 662
Angular baying brackets 579, 580
Angular connector for Flat-PLS 336
Anti-twist guard 724
AP universal consoles 129
Arc chambers NH disconnectors 323
AS interface element
– for signal pillars, modular 811
Assembly block for TS 651
Assembly bolts for base/plinth 546
Assembly kit
– for switch-disconnector-fuse section 354
Assembly parts
– for electronic packaging 250
– for system punchings 689
Assembly screws 758
Assembly tool
– for HD cable gland 711
Attachment
– for wall mounting HD 178
– Pole clamp 629
– for punched section with mounting flange TS 648
Auto Range power pack 484

B

Back panels
– Screw-fastened for RiCase 260
Base
– for tubular door frame 806
Base assembly plate
– for base/plinth 546
Base configuration rail for CM 649
Base frame, divided 559
Base isolators 310
Base module for cable entry 565
Base mount
– for cast feet 173
Base mounting bracket 558
Base trays
– for Mini-PLS 270
– for RiLine60 315
– Infill 315
Base/plinth
– Complete, sheet steel 551
– Complete, stainless steel 552
– for areas at risk from earthquakes 81
– for FlatBox 553
– Static 548
Base/plinth adaptor
– for levelling feet 557
– for twin castors 557
Base/plinth baying brackets 544
Base/plinth cap 547
Base/plinth components
– Front and rear, sheet steel 543
– Front and rear, stainless steel 549
Base/plinth trim panels
– Side, stainless steel 549
– with brush strip 547
– with designer trim panels 548
Base/plinth trim, modular 549
Base/plinth trims
– side, sheet steel 544
Basic enclosures CS 205, 206
Basic modules
– CMC III Processing Unit 770
– CMC III Processing Unit Compact 770
Basic Safe 504
Battery Manager RiBat 381
Battery packs
– for PMC 12 378
Baying attachment 581
Baying brackets
– E-Cu for busbars 694
– for TS base/plinth 544
– for TS/TS and TS/PS 580
Baying clamp 577, 578
– for back-to-back mounting 581
Baying clip, Flex-Block 541
Baying connector
– for Data Rack 748
– for TS 578 – 582
Baying cover, top 581
Baying kit
– for KL, AE 582
– for TE/TE 582
Baying seal, EMC 688
Baying system 576
Baying systems TS 8 72 – 93
– IP 66/NEMA 4X 80
– ISV 82, 83
– Modular front design 79
– Stainless steel 194
Bit HD 178
Blanking cover
– for fan-and-filter units/outlet filters 485
– for fibre-optic cut-outs 764
– for NH slimline fuse-switch disconnectors 344
– ISV 369
Blanking panel 761
Blanking plates, 482.6 mm (19″) 754
Bottom covers
– for Ripac Vario-Module 256
Bottom-mounted adaptor
– for enclosure internal thermostat and hygrostat 476
Box terminal 323 – 325
Box-type plug-in units type I
– for Ripac 246
Bracket
– Wall bracket KS 628
– Wall bracket TS/ES 628
Bracket/spacer 662
Brush strip 708
– vertical 756
Built-in keyboard 19″/4 U 799
Bus enclosures BG 39 – 41
– Stainless steel 183
BUS system SK 477
Busbar adaptor
– for NH disconnectors, size 1 – 3 324
– for NH slimline fuse-switch disconnectors, size 00 325
Busbar claw
– for Flat-PLS 333
Busbar connection adaptor
– RiLine60 280
Busbar connectors 313
– PLS 313
Busbar enclosures 93
Busbar modules, 2-pole, ISV 368
Busbar stabilser bar Flat-PLS 332
Busbar supports
– 1-/2-pole 310
– Flat busbars 276, 332 – 340
– Flat-PLS 332
– for 100/150/185 mm bar systems 340
– for 40 mm bar systems 270
– for 60 mm bar systems 276 – 279
– for stabiliser bar 332
– for switch-disconnector-fuse section 357
– ISV 365
– Maxi-PLS 328
– Mini-PLS 270
– PLS 278, 279
– RiLine60 276 – 279
Busbar systems
– 40 mm 270
– Flat-PLS 332
– Mini-PLS 270
– Ri4Power 338

Busbar terminal
– for NH slimline fuse-switch disconnectors, size 1 – 3 325
Busbars
– Cover sections 311
– E-Cu 311, 312
– for Mini-PLS 271
– for switch-disconnector-fuse section 357
– for T-connector sets 352
– Gland 331
– Maxi-PLS 328
– Mini-PLS 270
– PLS 312
Bus-mounting fuse bases
– for 60 mm bar systems 294, 295
– Mini-PLS 271
Bus-mounting fuse-switch disconnectors
– Size 00 298, 299
– Size 1 300, 301
– Size 2 302, 303
– Size 3 304, 305

C

C rails 653 – 655
– for cable chamber enclosures 657
Cable attachment 720
Cable chamber enclosures SV-TS 8 89, 90
Cable chamber for TS 545
Cable clamp rails
– 482.6 mm (19˝) mounting frames 722
– C rail 717
– Depth-variable 722
– for TS 722
– Right angle section 717
Cable clamp strap
– for patch panels 725
Cable clamp, variable 722
Cable clamping bracket 718
Cable clamps
– for C rails 719
– for cable clamp rails 717
Cable conduit/cable conduit holder 719
Cable duct
– for mounting plate 716
– for TS/TE 728
– for vertical TS section 715
Cable entry
– on gland plate for TS, CM, TP 702
– on gland plate for TS, CM, TP, FR(i) 703
Cable entry glands 623
Cable entry grommets 702
Cable entry module CP-L, round 714
Cable entry plates 701
Cable gland panel
– 482.6 mm (19˝) 732
Cable gland plates
– Metal 706, 707
– Plastic 704, 705
Cable glands
– Brass 709
– EMC 687
– for fibre-optic technology 712
– for IW worktops 712
– Polyamide 709
– Stainless steel, HD 711
Cable lock PSM 386
Cable management 715 – 726
Cable management duct
– Horizontal, 482.6 mm (19˝) 731
Cable management panel 729, 731
– for DK-TS 571
Cable manager 723
Cable retainer 664
Cable route
– for TS 726
– Vertical, for TS 726
Cable routing
– 482.6 mm (19˝) mounting level 727 – 732
– Snap-in 721
Cable routing bars 727
Cable routing channel
– 482.6 mm (19˝) 730
Cable routing panel, 2 U 730
Cable set for equipment 321
Cable shunting ring 724
Cable support, hinged 678
Cable tie fastener 721
Cable ties 720
Cable tray
– on the mounting frame 726
Cable tray, 2 U 731
Cables AWG 10 321
Cam lock HD 178
Cam locks 609
– for operating panel 598
Captive nuts M5/M6 757
Captive nuts/threaded blocks 665
Carrying handles
– for RiCase 263
– for Ripac Vario-Module 257
Cast aluminium enclosures GA 32, 33
Cast feet 553
Castors 556
Cat 5 patch cable 786
CD/disk box 615
Central earthing point 690
Centrifugal fans 482.6 mm (19˝) 399 – 400
Chillers for IT cooling 454
Chillers for water
– in floor-standing enclosure 450, 451
– TopTherm 446 – 449
Circuit-breaker
– Components 684
Circuit-breaker component adaptor 287 – 289
Clamp rails for cables 717
Clamp strip, foam rubber 703
Clamps
– for 60 mm bar systems 316
– Maxi-PLS 329
Clamp-type terminal connection
– for NH slimline fuse-switch disconnectors, size 00 325
Claw with threaded insert 335
Client Access licence 528
Climate control
– Modular Safe/Extend 507, 508
Climate control doors 431
Climate control system CW 456
Climate control system DX 458
Climate control units
– for CS Toptec 468
Clipboard 793
Clips for gland plate 559
CM base configuration rail 649
CM compact system enclosures 50, 51
CM configurator 525
CMC III
– CAN-Bus connection cable 774
– CAN-Bus Unit 770
– I/O Unit 771
– Monitoring system 768
– Mounting unit 775
– Power Unit 771
– Processing Unit 772
– Processing Unit Compact 772
Cold Plate
– for frequency converters 444
Combination angle 580
– E-Cu 694
Combination rails 718
Comfort handle 603, 779
Comfort Panel 138, 139
Command panel
– Stainless steel 188, 189
– With display panel front 145
Command panel configurator 525
Command panel housing with door 143
Compact climate control Modular Safe 507
Compact enclosures
– AE 44 – 48
– AE-ISV 47
– EMC 201
– HD 177
Compact infeed for Maxi-PLS 330
Compact light 681
Compact Panel 142
– Wall mounting bracket 630
Compact swing frame
– for AE 737
Compact system enclosures CM 50, 51
Compensating panel for TS 582
Complete earthing kit 691
– Extension kit 690
Component adaptor
– Circuit-breaker 287 – 289
– Mini-PLS 272
– RiLine60 283 – 293
Component shelf
– 482.6 mm (19˝) configuration 670
– 482.6 mm (19˝) punchings 673, 675
– for frame attachment 668, 669
– Heavy duty 671, 672
– Installation kits 676
– Static installation 671
Concrete base/plinth 550
Condensate collecting bottle 484
Condensate discharge 566
Condensate hose 485
Condenser unit 465
Conductor connection clamps 316
Connecting plinth trim 547
Connection
– Mini-PLS 270
– RiLine60 280 – 282
Connection accessories
– CMC III 773
– for LED system light 683
– for lights 684
Connection adaptor
– CP-L to CP-L 164
– CP-L to CP-XL 164
– for signal pillar, LED compact 808
Connection block 317
Connection brackets
– for circuit-breaker component adaptors 322
– for Flat-PLS 334
– for Maxi-PLS 329
– for switch-disconnector-fuse section 358
Connection cable/extension 775
Connection cables 786
– CAN-Bus 774
– for LED system lights 683
– for lights 684
– for power pack, TFT monitor 796
– for PSM busbar 386
Connection cables (AWG) 321
Connection clamps 316
– for Flat-PLS 335
– for Maxi-PLS 329
Connection component
– for signal pillars, modular 809
Connection console CP-L
– for Beckhoff Control-Panels 164
Connection cover 794
Connection element
– with air circuit-breaker 684
Connection hose, bottom and top 465
Connection kit 487
Connection modules ISV 363
Connection parts
– for NH slimline fuse-switch disconnectors, size 00 324
Connection pin 320
Connection plates
– CP-L 165
– for 150 mm busbar systems 341
– for Flat-PLS 335
– for Maxi-PLS 329
Connection space cover
– for NH disconnectors 323
– for NH slime fuse-switch disconnectors, size 00 324

Connection space Form 4b 346
Connector gland 712 – 714
– Sealing frame 713
– Sealing modules 713
Connector grommets 702
Connector kits
– for Flat-PLS 336 – 338
– for Maxi-PLS 330 – 338
– for Maxi-PLS/Flat-PLS 338, 339
– RiLine60 353
Connector pieces
– for TS punched rail 17 x 17 mm 663
Connectors
– Enclosure surface connector 793
– for busbars 313
– for enclosures 629
– for frame 630
– for TS punched rail 17 x 17 mm 663
Console for SSC 784, 785
Consoles
– One-piece consoles AP 192
– One-piece consoles TP 128
– TopConsole 120 – 127
– Universal consoles TP 129
Contact cutter 688
Contact hazard protection cover
– for bus-mounting fuse bases 294
– for SV-TS 8 342, 343
– for switch-disconnector-fuse section 355
– ISV 366, 367
Contact hazard protection modules ISV 362
Contact makers
– for Maxi-PLS 329
Contact makers E-Cu
– for Flat-PLS 334
Contact paint 688
Contact springs 235
Contact strip, EMC 230
Contact washers 689
Control unit for EC fan-and-filter units 476
Converter for SSC 785
Cooling medium for recooling systems 487
Cooling module 430
Cooling units
– for CS modular enclosures 469
– for CS Toptec 468
– Roof-mounted 426 – 429
– Wall-mounted 415 – 425
Copper bars
– E-Cu 311
– Laminated 314
– Maxi-PLS 328
– Mini-PLS 270
– PLS special busbars 312
Corner bracket E-Cu for Maxi-PLS 330
Corner connectors
– for TS punched rail 17 x 17 mm 663
Corner enclosures TS 8 583
Corner handle 792
Coupling set mounting kit 351
Courtesy light 680
Cover cap
– for TS base/plinth components 547
Cover hinge
– for KL 613
Cover plates
– for cable chamber 346
– for connector cut-outs 574
– for fan panels FlatBox 404
– for support arm connection 794
Cover retainer
– for KL 613
Cover section
– for Base tray 315
– for busbars 311
– for Flat-PLS 333
– for Maxi-PLS 328
– for Mini-PLS 270
Cover strips
– ISV 369
Cover with door for TS 574
Covers
– Acrylic glazed 596
– for box type plug-in units, type I 246
– for busbar claws 333
– for bus-mounting fuse bases 294
– for connection clamps 316
– for Ripac EASY 228
– for Ripac Vario 229
– Front panels 245
– ISV 366
– Maxi-PLS 344
CP housing couplings
for desktop mounting 166
CP-C support arm system 156 – 159
CP-L support arm system 152 – 155
CP-L to CP-L 164
CP-L to CP-XL 164
CP-S, steel, support arm system 148 – 151
CPU cable for SSC 786
CP-XL support arm system 160 – 163
CRAC system CW 456, 457
CRAC system DX 458, 459
Crane bracket 580
Cross member
– adjustable 552
– for SV-TS 594
– for TS 590
– RiLine60 bar systems 315
Cross-brace
– for mounting plates, for TS, ES 635
CS
– Modular enclosures 208, 209
– New Basic enclosures 205, 206
– Toptec 207
– Wall-mounted enclosures 204

D

Data Centre Container DCC 509
Data distributors 759
Data Rack 111
DC fan mounting plate
– for TS 406
Deflector 90° for air duct system 473
Depth stay for mounting angles
– PS 743
Depth stays
– for Data Rack 748
Depth stays as installation kit
– for mounting angles 746, 747
Device modules
– Form 1 342
Devices
– Mini-PLS 273
Digital enclosure internal temperature display and thermostat 475
Direct connection terminals
for Flat-PLS 335
Disconnectors
– Size 00 298, 299
– Size 000 271, 296, 297
– Size 1 300, 301
– Size 2 302, 303
– Size 3 304, 305
Display board with wall bracket 793
Display Unit II 776
Distribution busbar
– for switch-disconnector-fuse section 357
Distribution busbar cover
– for switch-disconnector-fuse section 356
Distribution enclosures ISV-TS 8 82, 83
Distributor busbars 352
Distributor clip 728
Distributor frame
– Data Rack 111, 748
– TE 7000 open 110
Divider kit
– for pull-out frame 737
Divider panel
– for Maxi-PLS 331
– for module plates TS 572
– for switch-disconnector-fuse section 355
– for TS 571
Divider panel seal, EMC 688
Dividing plate
– for switch-disconnector-fuse section 355
Document clip, magnetic 618
Door comfort handle 779
Door control module 779
Door Control System 778
Door cut-out trim
– for subracks 233
Door kit 779
Door latch mechanism
– for bayed suites 575
Door stay for escape routes for TS 617
Door switch 779
Door-mounted fan
– for server enclosures TS, TE 407
Door-operated switch 683, 684
Door variants 584 – 588
Drawer
– 482.6 mm (19˝) 729, 753, 799
– 482.6 mm (19˝), for keyboard and mouse 802, 803
– 482.6 mm (19˝), for keyboards 804
– for TS 591
– Installation kits 753
– Tray 669
D-Switch bus-mounting fuse base 295
Dust guard trim
– for AE, CM, EB, KL, BG, TS, ES 620

E

E box EB 37, 38
Earth clamps, EMC 688
Earth rails 692
Earth straps 689
Earthing inserts for front panels 238
Earthing kit
– for KL 691
– for QuickBox 691
– KE, for KL, AE, TS 691
– Pre-assembled, for DK-TS 692
Earthing kit, complete
– for DK-TS 690
– for TE 691
Earthing plate 690
Earthing point, central 690
Earthing set
– for RiCase 263
Earthing strap 689
Earthquake base/plinth 81
Earthquake kit, TS 8 81
E-Box EB
– EMC 201
Edge cover section 333
Edge protector 712
EL wall-mounted distributor 62 – 66
Electric condensate evaporator 484
Electronic enclosure 78
Electronic Packaging 211
EMC
– Baying systems TS 8 200
– Compact enclosures AE 201
– Contact strip 230
– Earth clamps 688
– E-Box EB 201
– Gaskets for subracks 230, 231
– Gland plates 687
– Shield bus 686, 687
– Shielding bracket 686
– Subrack Ripac Vario 200, 216
EMC cable glands 687
EMC seals
– Baying seal 688
– Divider panel seal 688

Enclosure attachment
– Tilting, base mounting CP-L, rectangular 165
– Tilting, top mounting 167
Enclosure connector, adjustable 629
Enclosure flange 173
Enclosure for tower PC 131
Enclosure heaters 471
Enclosure internal fan
– for TS 403
Enclosure internal thermostat 476
Enclosure keys 612
– Hygienic Design 178
Enclosure light 685
Enclosure panel fasteners, internal
– for TS 568
Enclosure reinforcement 173
Enclosure surface connector 793
Enclosure systems
– PC 130, 131
– Stainless steel 193 – 195
– SV-TS 8 84 – 93
– TS 71 – 93
Enclosures
– Busbar enclosures 93
– Cable chamber enclosures 89, 90
– for Rittal Ri4Power applications 84, 85
– ISV 82, 83
– Modular enclosures 86 – 88
– SV-TS 8 86 – 88
– Switch-disconnector-fuse enclosures 91, 92
End caps
– for bus-mounting fuse bases 294
End cover
– Flat-PLS 333
– for 100 mm busbar system 341
– Maxi-PLS 328
– Mini-PLS 270
– PLS 278, 279
– RiLine60 276 – 279
End pieces
– for guide rails, aluminium 236
End support
– for switch-disconnector-fuse section 357
End support Maxi-PLS 328
Energy-Box 699
Energy-saving extractor plenum 487
Entry grommets
– for cables 702
– for connectors 702
EPLAN platform 520, 521
Ergoform-S lock system 607
ESD connection point 692
ESD contact 237
Ex enclosures 196 – 199
– Plastic 199
– Stainless steel 198
Expansion connector PLS 313
Explosion-proof cooling units 425
Extension cable 775
Extension cover
– for bus-mounting fuse bases 294
Extension kit
– for complete earthing kit 690
– for earth rail, vertical 692
Eyebolts 626

F

Fan
– 24 V DC with speed monitoring 777
Fan Control System FCS 777
Fan expansion kit 404
– for door-mounted fan TS 407
Fan mounting plate
– for TS 403, 406
Fan roof, modular, two-piece
– for TS 405
Fan systems
– for TS 401
Fan unit, active
– for TE 406
Fan-and-filter units
– Accessories for filters 481 – 484
– TopTherm 394 – 398
Fastener for support arm connection 794
Fastening bolts for component shelves 678
Feet 553, 555, 556
– for RiCase 263
– for Ripac Vario-Module 256
Fibre-optics
– Blanking cover 764
– Breakout box, 1 U 762
– Cable management panel 731
– Panel 760
– Patch panels 760, 763
– Shunting ring 725
– Small distributor, polycarbonate 69
– Splicing boxes and accessories 762, 763
– Splicing cassette holder 762
Filler pieces for busbar support 333
Filter holder for roof ventilation 486
Filter mats
– for base/plinth component, vented 548
– for climate control door/section door 482
– for cooling units 481, 482
– for discontinued cooling units 481
– for heat exchangers 482
– for one-piece gland plate 564
– for tangential fans/front outlet grilles 481
Fine filter mats
– for discontinued fan-and-filter units 484
– for fan-and-filter units 484
– for outlet filters 484
Fire alarm and extinguisher system DET-AC 510 – 511
Fixture with rods, 3 U
– for LSA strips 764
Flat copper bar system 277
Flat screen 796
FlatBox 57, 58
FlatBox base/plinth 553
Flat-PLS busbar systems 332 – 336
Flex-Block 540
Flex-Block base/plinth system 540
Flexible hose 445
Flow regulator valve 486
Fluid distribution manifold 445
FM
– Universal mounting bracket 765
Foam rubber cable clamp strip 703
Folding keyboard 799
Folding lever handle
– for CM 604
Fold-out tray
– for keyboard and mouse 799
Frame connector
– for Comfort Panel 630
Frame connector piece
– for TS punched rail 17 x 17 mm 663
Free-standing enclosure SE 8 98, 99
– Stainless steel 195
Front corner trims
– for Ripac Vario-Module 257
Front cover 465
Front doors
– for RiCase 260, 261
Front flanges
– for Ripac Vario-Module 257
Front handles
– for subracks 233
Front outlet grille 2 U
– for tangential fans 486
Front panels
– Earthing inserts 238
– for Comfort Panel and Optipanel 794
– for Compact Panel 794
– for subracks 239 – 244
– Subrack accessories 245
Front panels and handles 241 – 244
Front panels as filler panels 239
Front trim panels
– for SV-TS 593, 594
– for switch-disconnector-fuse section 354
Fuel cell system 387
Functional space divider
– for TS 348, 349
– Mounting bracket 347
Functional space side panel modules
– for cable connection space 345
– for TS 345
Fuse elements
– RiLine Class 308, 309
– RiLine NH 296, 307
– RiLine60 294, 295, 309
Fuse holder RiLine Class 308, 309
Fuse-switch disconnectors
– Size 00 298, 299
– Size 000 271, 296, 297
– Size 1 300, 301
– Size 2 302, 303
– Size 3 304, 305
Fusible elements
– for 60 mm busbar systems 294, 295
– Mini-PLS 271

G

Gas pressurised spring
– for viewing window 596
Gland plate modules for DK-TS 564
Gland plate modules, vented 564
Gland plates 704 – 708
– EMC 687
– for cable entry 623
– for CM, TP 560 – 562
– for CS New Basic enclosures 566
– for DK-TS, multi-piece 563
– for side panel modules 346
– for TS, one-piece 563
– Metal 706 – 708
– Plastic 704, 705
– to conceal cable entry opening 349
– with membranes, plastic 705
Glazed door
– for DK-TS 585
– for TS 584
Grommets
– for Cable entry 702
– for Connector entry 702
GSM Unit Quad-Band 777
Guide
– for mounting plate 634
Guide rails
– Aluminium 236
– for box-type plug-in units 237
– Keyable 236, 237
– Plastic 235

H

Handle adaptor 584
Handle frame
– for operating housings 791
Handle set 791
– for Comfort Panel 790
– for Optipanel 790
Handles
– Corner handle 792
– Folding lever handle 604
– for component shelves 678
– for mounting plates 635
– for subracks 233
– Plastic handles 608
– RiCase 263
– Security handle with code 605
– Swivel handle 605
– T handles 608
– U handle 792
Heat exchangers 408
– Air/air 408 – 411
– Air/water 434 – 443
– for CS modular enclosures 469
– LCP Inline CW and DX 462
– LCP Passive CW 464
– LCP rack CW and DX 461
– LCP T3+ CW 463
High density cable duct 728
Hinge attachment
– for partial mounting plate TS 637
Hinge pin remover 613
Hinged blanking plate 754
Hinged cable support 678
Hinged lid for interfaces 807
Hinges
– 130°/180° 613
– exterior, for GA 33
– for blanking plates 754
– for PK 31
– for TS side panel 569
Holder
– for cable conduit 719
– for mouse 805
– for protective bar 587
– for TFT 797
Horizontal mounting kit
– for subracks 232
Horizontal rails subracks 247 – 249
Horizontally hinged FT stay 596
Hose-proof hood 485
Housing coupling
– CP-XL for desktop mounting 166
HPC racks
– for High Performance Cooling 116
Hygienic Design HD
– Accessories 178, 179
– Bit 178
– Cable gland 711
– Cam lock 178
– Compact enclosures 177
– Enclosure key 178
– Levelling feet 178
– Rails for interior installation 179
– Terminal boxes 176
– Wall spacer bracket 178
Hygrostat 476

I

Identification labels
– for bus-mounting fuse bases 294
Identification strips 597, 620
– for patch panels 761
Identification strip (J) 234
Incandescent lamps
– for steady and flashing light components 810
Industrial Workstations 132, 133
– Base for tubular door frame 806
– Cast feet 553
Infill panels
– for adaptor pieces 742
– for TS network enclosures 755
Infrared acess sensor 773
Insert strip
– for circuit-breaker component adaptors 322
– for Mini-PLS component adaptors 318
– for OM adaptor/support 319
Inserted screw nuts M12 311, 694
Inserts for busbar supports 340
Installation bracket
– for mounting angles 746
– for TS 746
Installation examples, rail systems 644 – 646
Installation kit
– depth-variable 753
– for back-to-back mounting plates TS 633
– for component shelves 753
– for drawers 753
– for heavy-duty component shelves 676
– for mounting angles 745 – 747
– for swing frame, small 733
– for TS 746
Instrument cases
– RiCase 258 – 263
Integrated louvres 480
Interconnecting cables
– for lights 683
Interface board 477
Interface box 806
Interface extension with wall connection and built-in RJ 45 module 806
Interface flaps
– modular 807
Interior door for AE IP 69K 588
Interior installation
– Rails for AE 647
– Rails for CM, TP 647
Internal latch
– for side panel, lockable 570
IP 66 baying systems TS 80
IP console
– for SSC premium 785
ISDN unit 776
Isolator chassis Maxi-PLS 329
Isolator door cover 575
ISV
– Busbar supports 365
– Contact hazard protection cover 366, 367
– Distribution enclosures 360 – 369
– TS 8 enclosures 82, 83
– Wall-mounted distributor 47
IT configurator 525

J

Junction box
– with multi-functional bracket 698

K

Key 612
Keyable guide rails
– Plastic 236
– with 1/2 HP offset 237
Keyboard
– Built-in keyboard with touchpad 799
– pull-out 798
Keyboard drawer 802 – 804
Keyboard lid
– for RiCase 261
Keyboard rack, 482.6 mm (19˝) 801
Keyboard support 800
Keyboard, 482.6 mm (19˝) 801
Keys 238
Kit for separate frame TS 667
KVM switches 781 – 786

L

Label panel
– for signal pillars, modular 812
Laminated copper bars 314
Latch for adjacent door TS 605
LCP Inline CW and DX 462
LCP Passive CW 464
LCP rack CW and DX 461
LCP T3+ CW 463
Leakage sensor 773
Levelling component for TS base/plinth 546
Levelling feet 553, 555, 556
– Hygienic Design 178
Lid for interfaces 807
Lights
– 1 U 685
– Compact light 681
– Courtesy light 680
– Enclosure light 685
– LED 682
– Standard light 680
– System lights 679
– Universal light 680
Lint screen 483
Liquid Cooling Package 461 – 465
Locating adaptor 165
Lock components for frame TS 584
Lock cover 610, 611
Lock cylinder inserts 610
Lock inserts 604, 609
Lock nut, stainless steel 711
Lock systems
– for compact enclosures, sheet steel 599
– for console systems and industrial workstation, sheet steel 601
– for enclosures and cases, stainless steel 602
– for large enclosures, sheet steel 600
Lockable and adjacent door for TS 587
Locking bar latch 606
Locks, twist locks 592
Longitudinal connector
– Flat-PLS 333
– Maxi-PLS 328
Louvred grille
– for lint screen 483
Lug terminal connection parts
– for NH slimline fuse-switch disconnectors, size 00 324

M

Master/slave adaptor for Thermoelectric Cooler 477
Maxi-PLS busbar systems 328 – 331
Measurement module PSM 386
Mechanical maintenance bypass 378
Membrane gland plate 705
Metal filter for climate control units 482
Metal gland plates 706
Meter mounting board module, ISV 368
Microsoft Operations Manager 528
Micro-switch
– for NH disconnectors/NH slimline fuse-switch disconnectors 324
Mini comfort handle 606
Mini-chillers 446, 447
Mini-fan 404
Mini-PLS busbar systems 270

Modular climate control concept 430, 431
Modular enclosures CS 208, 209
Modular enclosures SV-TS 8 86 – 88
Modular front design 589
Modular Safe 505
Modular Safe Extend 506
Module plates 573
– for TE 565
Modules ISV 362 – 364, 367, 368
Monitor frame 597
Monitor switches 781, 782
Monitor, flat 796
Monitor/keyboard unit, 1 U 780
Monitoring 767
Monitoring system CMC III 768
Motion detector 773
Mounting
– Wall mounting bracket 629
Mounting angles
– Additional fastening attachment 745
– C rails 653, 655, 657
– for CS Basic 743
– for CS modular 743
– for CS Toptec 739
– for DK-EL 743
– for FlatBox 744
– for QuickBox 744
– for RiCase 261
– for TS 739
– for VerticalBox 744
– Installation kits 743, 745 – 747
– Metric 739
Mounting block for AE 664
Mounting blocks 231
Mounting bracket 658, 660
– FM universal mounting bracket 765
– for CP 658
– for functional space divider 347
– for Ri4Power 344
Mounting clip
– for plastic covers 245
– for support rails 655
Mounting components
– for signal pillar 812 – 814
Mounting frame
– 482.6 mm (19˝) 740
– for TS 747
Mounting kit
– for air circuit-breaker installation 347
– for cable trays 726
– for Comfort Panel 795
– for Optipanel 795
– for VerticalBox 757
– Magnet 681
– TS, width-/depth-variable 745
Mounting kit for subracks
– Horizontal 232
– Vertical 231
Mounting kit PSM
– for busbar 386
Mounting kit, 2 U 747
Mounting kit, coupling set 351
Mounting panel 482.6 mm (19˝) 756
Mounting plates 631, 657, 658
– Adjustment bracket for KS 634
– Attachment 632, 633
– Attachment for CM 635
– Cross-brace for TS, ES 635
– for cast aluminium enclosures GA 33
– for CS Basic 639
– for CS modular 639
– for CS Toptec 639
– for KL and KL-HD 631
– for polycarbonate enclosures 31
– for Ri4Power Form 1-4 350
– for TS 639
– Infill for TS 631
– Modules ISV 362
– Slide block for CM 634
– Slide rail for TS 634
– Small 638
– Transport handles for TS, ES 635
Mounting rails
– for RiCase 262
Mounting unit
– 1 U 776
– for enclosure frame 775
Mouse holder 805
Mousepad
– for keyboard rack 801
– Support 800, 804, 805
Multiple lock 611
Multi-seal inserts 710
Multi-tooth screws 666, 757

N

NEMA 4X, NEMA 4
– Enclosures TS 80
– Wall-mounted cooling units 424
Network cable 786
Network distribution enclosures 100 – 111
Network enclosures
– Based on Rittal TE 7000 107 – 109
– Based on Rittal TS 8 102 – 106
New Basic enclosures CS 205, 206
NH bus-mounting fuse-switch disconnectors 298 – 305
NH disconnectors
– Size 1 – 3 324
NH fuse-switch disconnectors
– Modules ISV 364
– Size 00 298, 299
– Size 000 271, 296, 297
– Size 1 300, 301
– Size 2 302, 303
– Size 3 304, 305
NH slimline fuse-switch disconnectors
– Modules ISV 367
– Size 00 306
– Size 1 – 3 307
Noise protection kit for TS 574
Nuts 665
– for TS section 659
Nylon loop 720
Nylon loop cable holder 721

O

OM adaptors 283 – 286
OM support 286
One-piece consoles
– AP, stainless steel 192
– TP, sheet steel 128
Operating housing
– With handle strips 144
Operating panel 598
Optical components
– for signal pillars, modular 810
Optipanel 140, 141
Outdoor climate control 508
Outdoor enclosures 203 – 209
Outlet filter 485
Overflow valve 486
Overvoltage protection PSM 386

P

Pair of mounting angles, second 748
Panel 730
– with solid tray 760
Paper removal flap 805
Parallel hot swap chassis UPS 379
Partial doors
– for SV-TS 592
– for TS 590
Partial mounting plates
– for CS Basic 637
– for CS modular 637
– for CS Toptec 636
– for ES 637
– for TS 636
– for TS-SV 350
– Locatable 638
Partition 572
Patch cable, Cat 5 786
Patch panels 69, 759 – 761, 763
PC enclosure systems 130, 131
– Stainless steel 193
PCB ejector/retainer 238
PCB holder
– for box type plug-in units 246
PCB holder kit 245
PE busbar 691
PE/PEN combination angle 694
Pedestal, complete 170
Pedestal, modular 169
Perforated mounting strip
– for AE stainless steel 615
– for AP universal console 615
– for partial doors 593
Perforated plate
– Base/plinth trim, modular 549
Pillar 172
– Small 171
PinBlock 320
PinBlock Plus 321
Pivot CP-L 167
Plastic
– Base/plinth 540, 541
– Cable gland plates 704
– Enclosures KS 52, 53
– Ex enclosures 199
– Gland plates 705
– Handles 608
Plastic covers for PCBs 245
Plate
– for base mounting 546
Plate clamps 316
PLS busbar systems 278, 279
PLS busbars
– for T-connector sets 352
Plug-in PSM modules for busbar 383
PMC 12 relay card 378
PMC UPS accessories 378 – 381
Pole clamp 629
Polyamide reducers
– for cable glands 710
Polycarbonate enclosures PK 28 – 31
Potential equalisation rail 692
Potential equalisation star 690
Power circuit-breaker modules ISV 364
Power Control for SSC 786
Power Control Unit 700
Power Distribution Rack/Module 382
Power engineering software 523
Power pack
– 24 V (DC) 484
– CMC III 774
– for PU II/Basic CMC/FCS 774
– for SSC 786
– for TFT monitor 796
Power System Module 383 – 386
Premium Panel 188
Pressure relief stoppers 566
Primer/paint 570
– Contact paint 688
Prism terminal 323
Processing Unit Compact, CMC III 772
Processing Unit, CMC III 772
Programming cable 774
Protective bar
– for TS 587
PSM busbar 383, 384
PSM socket modules 383 – 385
Pull-out frame, 482.6 mm (19˝) 737
Punched rails
– 17 x 17 mm, TS 656
– 18 x 38 mm, TS 650

– 23 x 23 mm, PS 651
– 23 x 73 mm, PS 652
– 25 x 38 mm, TS 649
– Cover, distribution busbar 356
Punched section with mounting flange
– 17 x 73 mm, TS 647, 648, 676
– 23 x 73 mm, PS 652
– 23 x 73 mm, TS 648
– for coupling section 657
Punched section without mounting flange
– 23 x 73 mm, PS 652
– 45 x 88 mm, TS 649

Q

Quality management 535
Quick-action vent valve 445
Quick-assembly block 662
QuickBox 59 – 61
Quick-change frame
– for roof-mounted cooling units 479
Quick-fit baying clamps 577
Quick-release fastener 486
– for QuickBox 612

R

Rack-mounted fans 399 – 400
Rail systems 644, 658
Rails
– Base configuration rail for CM 649
– for EMC shielding bracket and strain relief 686
– for interior installation 179
– for interior installation AE 647
– for interior installation CM, TP 647
– for RiCase 262
– for subracks 247 – 249
– Support rails for TS, CM, PC, TP 638
Rain canopies
– for AE, CM 619
RCCMD software 529
Rear feet
– for Ripac Vario-Module 256
Rear trim
– for RiCase 260
Reinforcement
– for enclosure 173
Reinforcement bracket
– for TS, SE, TP universal console 559
Relay card PMC 12 378
RFID
– Controller 787
– Mounting frame 787
– Tags 787
Ri4Power assembly instructions 359
Ri4Power documentation 359
Ri4Power Form 1-4 326, 327
RiBat, Battery Manager 381
RiCAD 3D 519
RiCase 258 – 263
RiCell Flex fuel cell system 387
Ride-up roller
– for TS, ES, PC 618
RiDiag II 529
RiLine Class fuse elements 308, 309
RiLine NH fuse elements 296, 306, 307
RiLine60 busbar systems 276 – 279
– Accessories 310 – 325
– Component adaptors 287 – 289
– Connection system 280, 341
– PLS busbars 278
RiLine60 fuse elements 294, 295, 309
Ripac
– Box type plug-in units 246
– EASY 212 – 215
– Section system 247 – 249
– Vario 216 – 227
– Vario, heavy-duty 224 – 227
– Vario-Module 252 – 255
RiZone software 527, 528
RJ 45
– Installation module and extension 806
Roof 619, 622, 624, 625
Roof frame bars
– for SV-TS 594
Roof mounting screw 626
Roof plate
– for Data Rack 748
– for DK-TS 624, 625
– for SV-TS 622
– Multi-piece 624
– TS for cooling units 478
Roof vent 402
Roof-mounted
– Cooling units 426 – 429
– Heat exchangers air/water 434 – 443
Roof-mounted fan 401, 402
RTT roof-mounted fans 401

S

Screen, flat 796
Screw connections
– for connection brackets 337
– for Flat-PLS 335
Screws 666, 757, 758
SE 8, system enclosure 98, 99
Sealing bungs
– for cable glands 710
Second pair of mounting angles 748
Section doors for cooling modules 431
Section for cable entry
– for TS, CM, TP 702, 703
Security handle with code 605
Security lock 611
Security rooms 513
Self-tapping screws 666
Semi-cylinder lock 610
Serial installation device modules ISV 363
Server enclosures
– Based on Rittal TS 7000 117
– Based on Rittal TS 8 115
– Based on TS 8 114
– for High Performance Cooling 116
Server Switch Control 781
Service socket 699
Shallow air duct system 474
Shallow duct extension 474
Sheet steel door for DK-TS 585
– vented 585
– vertically divided 586
– for TS 586
Shelves
– for AE with pull-out frame 675
– See component shelves 668 – 678
Shield bus, EMC 687
Shielding
– Vertical 465
Shunting ring 723, 724
Shunting ring fibre-optic 725
Side cover
– for bus-mounting fuse bases 294
Side cover section 333
Side panel modules
– for cable connection space 345
– for TS 345
Side panels
– Asymmetrical, for TS 568
– for cable chamber 545
– for modular front design 591
– for TE 570
– for top-mounting module 621
– Lockable, for TS 569
– Plug-type, divided 570
– Screw-fastened, for TS 567
Side parts for static installation of component shelves 677
Signal pillars 808, 809
– Optical components 810
Single-phase connection cable 386
SK BUS system 477
Slide rails 748 – 751
– for mounting plate TS 634
– for RiCase 263
– for swing frames 738
Sliding blocks
– for circuit-breaker component adaptor 322
– for Maxi-PLS 329
Sliding nuts Maxi-PLS 329
Slimline fuse-switch disconnectors
– Size 00 306
– Size 1 – 3 307
Slimline fuse-switch-disconnector module ISV 367
Slot-in cable gland, 482.6 mm (19″) 758
Small distributor
– Fibre optic, polycarbonate 69
Smoke detector 773
Snap-in cable routing 721
Snap-on nut TS 659
Socket strips 695, 696, 697, 700
– CMC 698
Sockets 698, 699
Software 519 – 529
Spacer rolls 353
Spacers 614
– for Flat-PLS 333
– for ISV 369
– for RiCase 262
– for RiLine60 busbar supports 310
– for roof plate TS 626
Spacing element for busbar supports 340
Spare filter mat
– for base/plinth component 548
– for EMC fan-and-filter unit 483
– for fan-and-filter units/outlet filters 483
– for filter holder 483
– for gland plate modules 564, 565
– for thermoelectric cooler 483
Spare key 612
Special busbars
– Maxi-PLS 328
– Mini-PLS 270
– PLS 312
Speed control 477
Spring nuts
– M5 666
– M6 758
Spring washer 606
SSC
– compact 781
– Console Cat 5 784
– Console IP 785
– Console local 784
– Converter 785
– Converter VT100 785
– Power Control for SSC premium 786
– Power Pack 786
– premium 782
– view 781
SSC Duo 16 783
Stabiliser
– for connection kit 337
– for Maxi-PLS 328
Stabiliser bars Flat-PLS 332
Stabiliser bracket for base/plinth TS 554
Stabiliser for TS server enclosures 554
Stacking insulator 337
Stainless steel 180 – 195, 198
– AE protection category IP 69K 187
– Base/plinth 552
– Baying systems TS 8 194
– Bus enclosures BG 183
– Cable entry plates 701
– Cable gland 711
– Command panel housing with door 189

– Compact enclosures AE 184 – 186
– Cooling units – roof-mounted 426 – 429
– Cooling units – wall-mounted 416 – 425
– Ex enclosures 198
– One-piece consoles AP 192
– PC enclosure systems 193
– Premium Panel 188
– Support arm system CP-S 190, 191
– Switch housing 182
– System enclosure SE 8 195
– Terminal boxes KL 183
– Viewing window 597
Stand systems 169 – 173
Standard light 680
Stationary base/plinth 548
Stay
– Door stay for escape routes 617
– for door 617
– for trim panel 591
– for viewing window 596
ST-Combi connector
– for OM Premium adaptor 321
Stepped collar 714
Stoppers
– for roof-mounted cooling units 474
Straps, earth straps 689
Strengthener
– for desk unit 127
Subracks
– Accessories 231 – 244
– Assembly parts 250, 251
– Configurator 525
– Covers 228, 229
– Horizontal rails 247 – 249
– Ripac EASY 212
– Ripac Vario 216
Supplementary unit
– ISDN unit 776
Support arm bracket 90° CP-L 167
Support arm configurator 525
Support arm system
– Accessories 164 – 168
– CP-C 156 – 159
– CP-L 152 – 155
– CP-S 148 – 151
– CP-XL 160 – 163
Support arm, height adjustable 166
Support bars
– for air circuit-breakers 347
Support bracket 661
– for NH slimline fuse-switch disconnectors, size 00 – 3 325
Support frame
– for DIN rail-mounted devices 351
– for OM adaptor/support 320
Support frame support
– for OM adaptors 320
Support panel
– for cover section 315
Support rail modules ISV 362, 363
Support rail, locatable 638
Support rails 655
– 65 x 42 mm for TS, ES 654
– for component adaptors 318 – 322
– for OM adaptor/support 319
– for polycarbonate enclosures 31
– for stacking insulators 337
– for TS, ES, CM 654
Support stand/carrying handle
– for Ripac Vario-Module 257
Support strips
– for AE 614
– for TS, CM, ES, TP 614, 650
Support unit, 3 U 764
Supports
– 1-/2-pole 310
– for flat copper busbars 276, 277, 340
– for Flat-PLS 332
– for keyboards 800
– for laminated copper bars 314
– for Maxi-PLS 328
– for mousepad 800, 804, 805
– for PLS 278, 279
– for small appliances 756
– ISV 365
Surface connector for enclosures 793
Surplus cable holder 726
SV-TS 8 enclosures 82 – 93
Swing frame
– Installation kit 733
– Large, with trim panel 736
– Large, without trim panel 735
– Small, for TS 733
– Stay 738
– Vario, for ES 734
Switch-disconnector-fuse enclosures 91, 92
Switches 781 – 786
Swivel handle for sheet steel door DK-TS 605
System accessories 537 – 814
System attachment
– for Flat-PLS 332
– for frequency converters 445
– for Maxi-PLS 328
– for RiLine60 352
System components
– Flat-PLS 332 – 336
– Maxi-PLS 328 – 331
System covers 316
System enclosure SE 8 98, 99
– Stainless steel 195
System enclosures
– Ripac Vario-Module 252 – 255
System lights 679 – 682
System support rails 654
System supports
– for cable routes 725
System window 595

T

T handles 608
T-connector kits for busbar systems
– Flat-PLS 336
– Maxi-PLS 330
– RiLine60 353
T-connector piece 663
TE 7000
– Network enclosures 107 – 109
– Open, distributor frame 110
– Server enclosures 117
Telescopic slides
– for component shelves 677
– for subracks 233
Temperature display and thermostat 475, 476
Temperature sensor 773
Temperature/humidity sensor 773
Terminal block SV 369
Terminal block, distribution busbar
– for switch-disconnector-fuse section 358
Terminal boxes KL 34, 36
– Cover hinge 613
– Cover retainer 613
– Hygienic Design 176
Terminal connection
– for NH slimline fuse-switch disconnectors, size 00 325
Terminal studs
– for Maxi-PLS 329
Terminals
– Flat-PLS 335
– for NH disconnectors 323
TFT
– Monitor 796
TFT display, 15″ 801
TFT holder 797
TFT holder, vertically hinged 797
Therm software 523
Thermoelectric cooler 414
Threaded bolts Maxi-PLS 329
Threaded inserts
– for RiCase 262
Threaded inserts (I)
– for subracks 233
Threaded inserts M6 for KS 666
Three-phase connection cable for PSM busbar 386
Tightening torques brochure
– Flat-PLS busbar systems 359
Top covers
– for Ripac Vario-Module 256
Top module for TS 621
TopConsole system TP 120 – 127
– Accessories 127
Top-hat rail module 759
Top-hat rails 655
TopTherm
– Chillers 446 – 449
– Fan-and-filter units 394 – 398
– LCP 461 – 464
– Roof-mounted cooling units 426 – 429
– Roof-mounted fans 401
– Wall-mounted cooling units 417 – 425
Touchscreen 796
Touchscreen display
– for LCP rack, inline, T3+ 465
Tower feet for RiCase 263
TP
– One-piece consoles 128
– Universal consoles 129
Transport and mounting handle
– for TS/ES doors 618
Transport bracket 580
Transport castors
– for base/plinth, complete, sheet steel 552
– for TE 557
– for TS base/plinth 545
Transport handles for mounting plates
– for TS, ES 635
Transport kit for DK-TS 557
Transport plinth 550
Tray, drawer tray 669
Trim
– for subracks 233
Trim frame
– for horizontal mounting kit 232
– for slimline cooling units 479
– for TS 8 588
– vented 232
Trim panels
– for base/plinth 548
– for cast feet 173
– for CM 563
– for pedestal 173
– for SV-TS 593, 594
– for TP 127
– for TS 590
Trim piece
– Hinged at the top, for TS 589
TS
– Adaptor rail for wiring systems 667
– Assembly block 651
– Punched rail 649, 650
– Punched section with mounting flange 647, 648
– Punched section without mounting flange 649
– Support strips 650
TS 8 baying systems
– SV busbar enclosure 93
– SV cable chamber enclosures 89, 90
– SV enclosures, Ri4Power 84, 85
– SV modular enclosures 86, 88
– SV switch-disconnector-fuse enclosure 91, 92
TS 8 configurator 525
TS 8 enclosures 70 – 93
– Corner enclosures 583
– Door latch 575
– Electronic enclosures 78
– for modular front design 79
– for power distribution 82 – 93

– for Ri4Power applications 84, 85
– IP 66/NEMA 4X and NEMA 4 80
– Isolator door cover 575
– Network enclosures 102 – 106
– Server enclosures 112 – 116
– Stainless steel 194
Turn-lock fastener
– for PK 31
Twin castors 556
Twin cords
– for OM adaptors 321
Twist locks 592

U

U handle 792
U nuts 665
Underfloor frame
– for DK-TS 554
Universal bracket 664
Universal consoles TP 129
Universal light 680
Universal lock 773
Universal lock unit 777
Universal mounting bracket FM 765
Universal sensor 773
Universal support
– for laminated copper bars 314
Upgrade kit
– for front trim panels 593, 594
UPS
– Monitoring card (SNMP card) 380
– PMC 12 372
– PMC 40 (type 1-4) 373
– PMC 40 (type 5) 374
– PMC 120 375
– PMC 200 376
– PMC 800 377
UPS sub-distribution 379, 380
USB extension 806
Utility bars, vertically hinged 800
Utility lectern 615
Utility table for 482.6 mm (19″) 675

V

Vandalism sensor 773
Variable modular climate control concept 587
Vario swing frame
– for ES 734
Vario, Ripac 216 – 227
Vario-Module, Ripac 252 – 255
Vent attachment 401
– TS 478
Vent cover 478
Ventilated front panels 754
Vertical mounting kit
– for subracks 231
VerticalBox 56
Viewing window 596
– for operating panel 598
– Stainless steel 597
Voltage monitor 773
Voltage supply 695

W

Wall angle 628
Wall bracket for TS, ES 628
Wall mounting 627
Wall mounting brackets 627, 628
– for AE 627
– for cast aluminium enclosures 33
– for Compact Panel 630
– for CS wall-mounted enclosures 629
– for polycarbonate enclosures 31
– Vertically hinged 630
Wall spacer bracket HD 178
Wall-mounted cooling units 415 – 425
Wall-mounted distributor ISV 47
Wall-mounted enclosures
– AE 67, 68
– CS 204
– EL 62 – 66
– QuickBox 59 – 61
– Small fibre-optic distributors 69
Wall-mounted heat exchangers
– Air/air 408 – 411
– Air/water 437 – 443
Wall-mounted network distributors 55 – 69
Washers, contact washers 689
Width divider 558
Window
– Viewing window 596, 597
– Viewing window for operating panel 598
Windows
– System window 595
Wiring brackets ISV 369
Wiring plan lectern 615
Wiring plan pockets 616, 617

Z

Z rail for connector 234

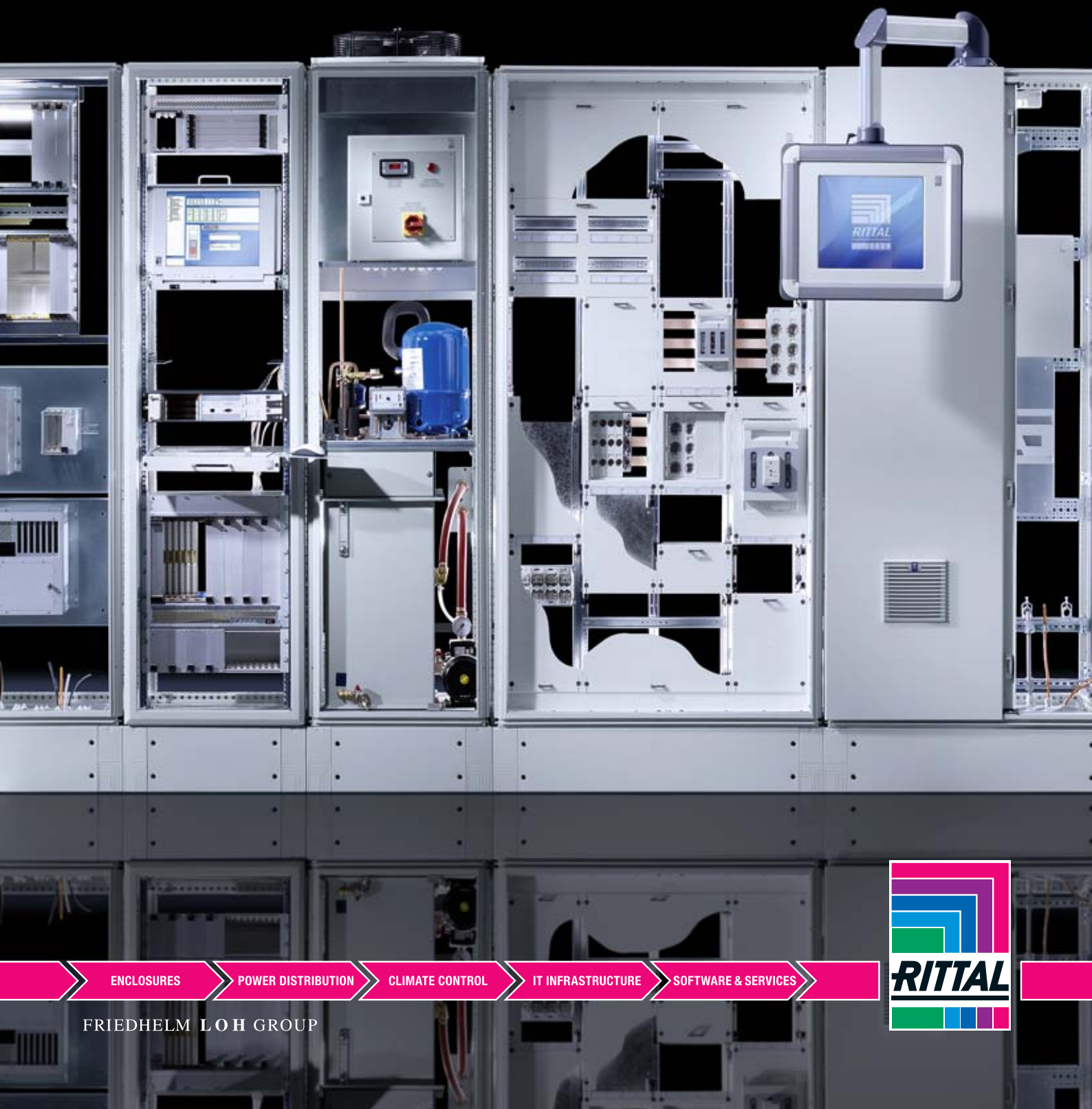
RAL colours

	Colour RAL	Designation
	5002	ultramarine blue
	5018	turquoise blue
	7015	slate grey
	7022	umbra grey
	7024	graphite grey
	7030	stone grey
	7032	pebble grey
	7033	cement grey
	7035	pale grey
	8019	grey brown
	9005	jet black
	9006	white aluminium
	9011	graphite black
	9017	traffic black

We reserve the right to further developments and technical modifications of our products. Such modifications, along with errors and printing errata, shall not constitute grounds for compensation.
We refer customers to our Terms of Sale and Delivery.

Rittal – The System.

Faster – better – worldwide.



ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE | SOFTWARE & SERVICES

RITTAL

FRIEDHELM LOH GROUP

Rittal – The System.

Faster – better – worldwide.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

RITTAL GmbH & Co. KG
Postfach 1662 · D-35726 Herborn
Phone +49(0)2772 505-0 · Fax +49(0)2772 505-2319
E-Mail: info@rittal.de · www.rittal.de