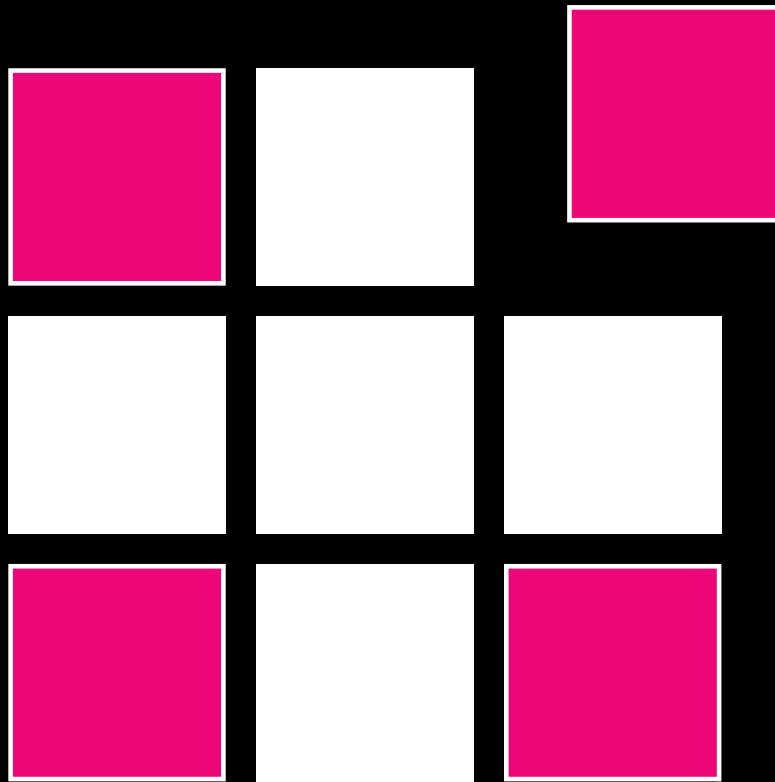


Rittal – The System.

Faster – better – everywhere.

Supplement to
Catalogue 2014/2015

► Innovations 2016



Our Expertise. Your Benefit.

ENCLOSURES

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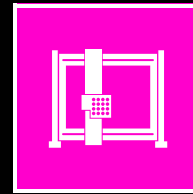
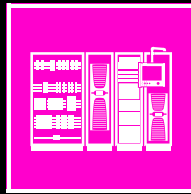
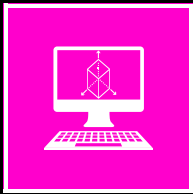
SOFTWARE & SERVICES



Our expertise.

Your benefit.

Today, end-to-end data is the key to saving time and money in any automated process. Make the most of the engineering expertise of Eplan, the System and automation know-how of Rittal. The virtual prototype is the heart of the digital workflow, linking together all process steps seamlessly and thus establishing the basis for efficiency and effectiveness – from engineering through to automated production and beyond.



Engineering

Having data in the right place, at the right time, and in the required level of detail – that's the challenge facing our customers. It is also our mission. Integrated engineering tools from Eplan and Rittal help you to achieve perfect planning.

System

By using Rittal system solutions, you benefit from our perfectly coordinated modular system comprising enclosure, climate control, power distribution and IT infrastructure systems. The benefits to you: Greater efficiency and productivity, plus the reliability of standardisation.

Automation

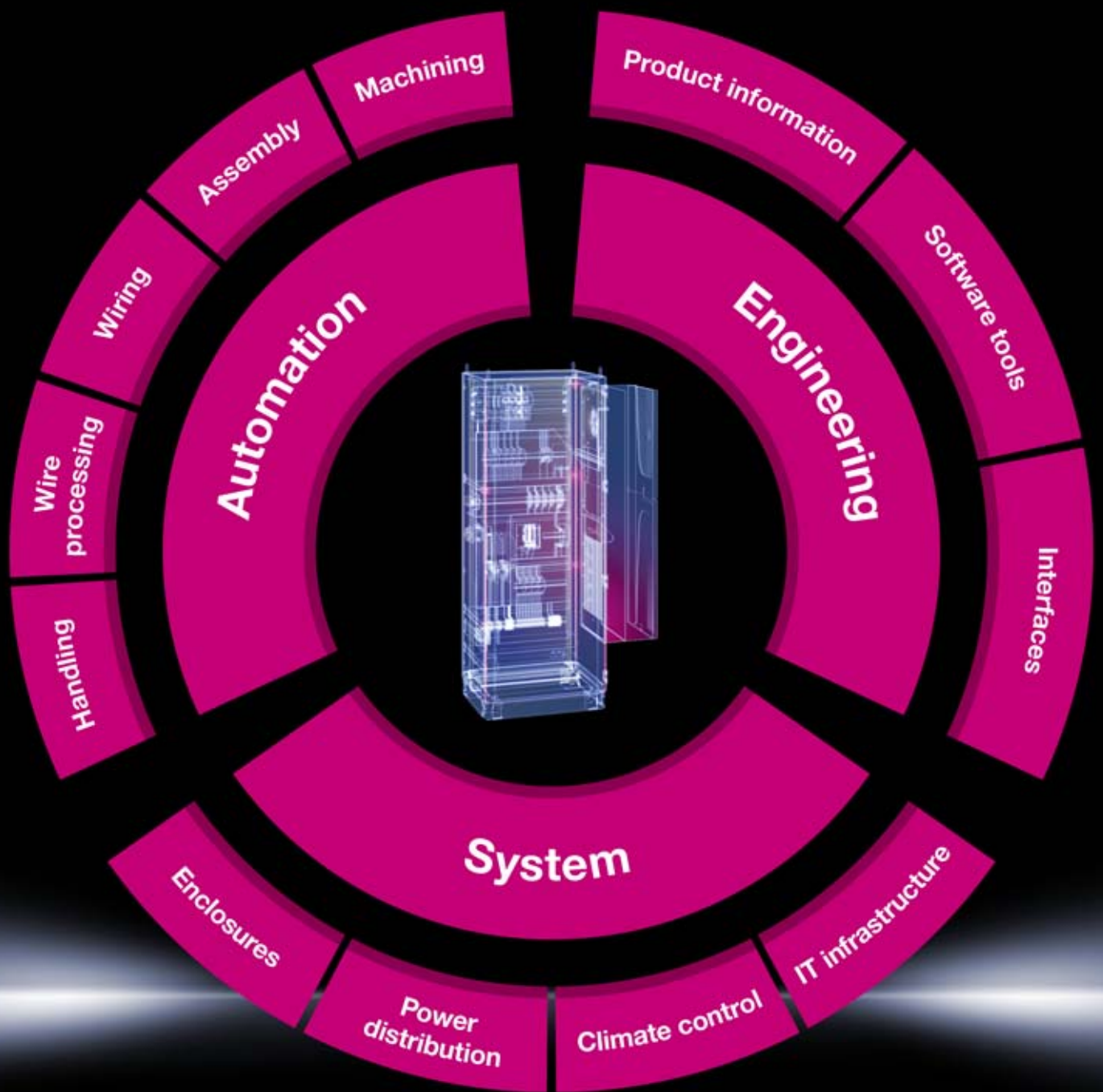
Rittal supports all process steps in manufacturing through its comprehensive portfolio of solutions that cover everything from manual tools to fully automated plant. These solutions help you to optimise your processes and workshop operations. A clear plus for more competitiveness.

..... page 9	Enclosures.....page 19 page 175
	Power distributionpage 80	
	Climate controlpage 130	
	IT infrastructurepage 153	

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Innovations 2016



ENCLOSURES

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FRIEDHELM LOH GROUP

This is because our innovations are clearly designed with user benefits in mind – we never compromise on this.

- Superior quality with TS 8 stainless steel
- Optimum accessibility from all sides with the TE 8000 network enclosure
- Outstanding functionality and luminous power with the LED system light
- Efficient monitoring with low-voltage switchgear



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SOFTWARE & SERVICES



Our expertise – your benefit.

Innovations 2016



ENCLOSURES

POWER DISTRIBUTION

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FRIEDHELM LOH GROUP

Measurable energy efficiency pays when you use our innovative climate control solutions. You and your customers can enjoy energy savings of up to 75%.

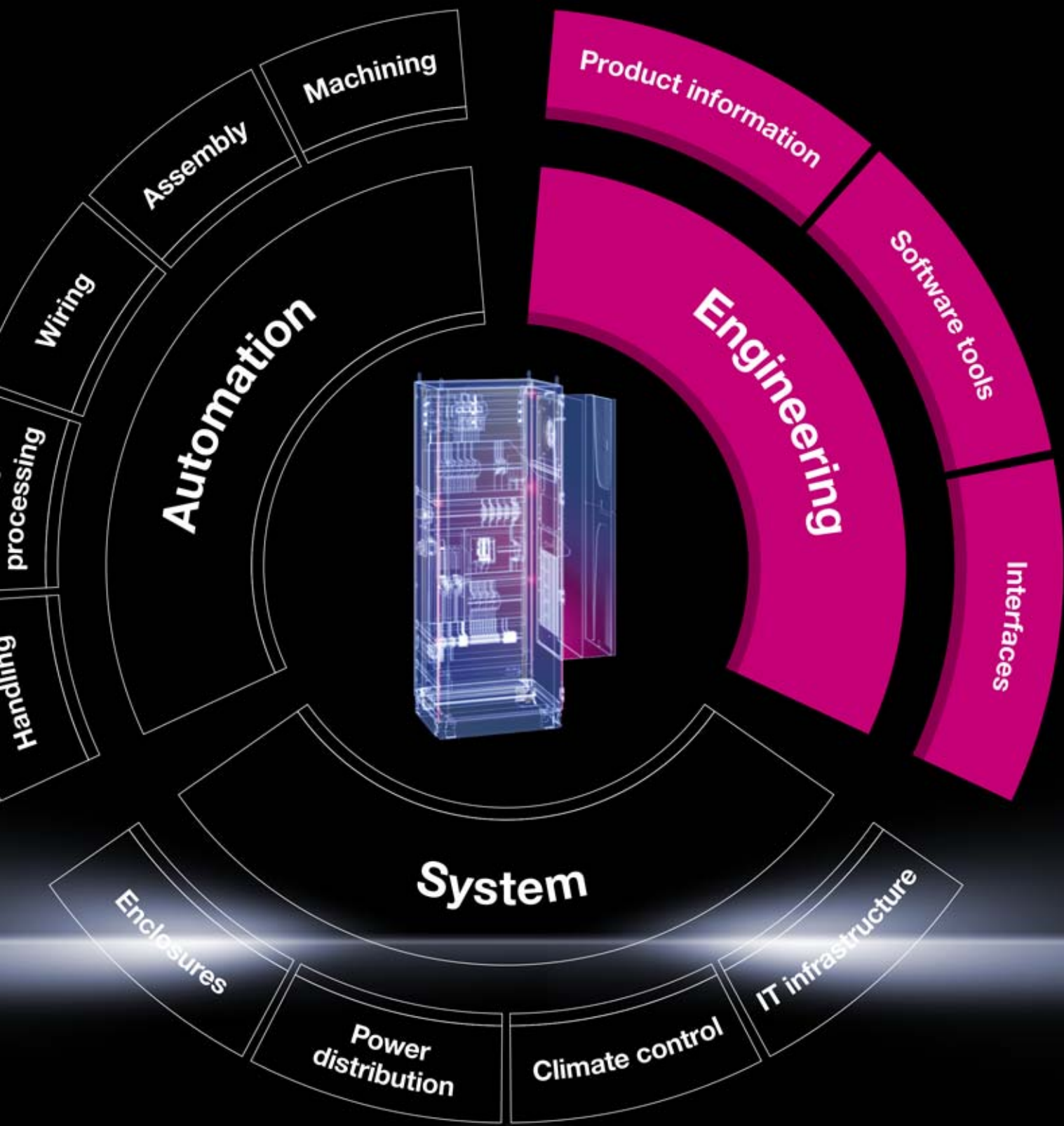
- Efficiency on top – Roof-mounted fans
- The world's most efficient range of cooling units – Blue e+
- Efficient cooling with no loss of space – Liquid Cooling Package DX
- Smart metering for your IT – Modular PDU



IT INFRASTRUCTURE

SOFTWARE & SERVICES







Engineering

The future is at work here.

Product information from page 10

Planning from page 12

Project planning from page 14

Configuration from page 16



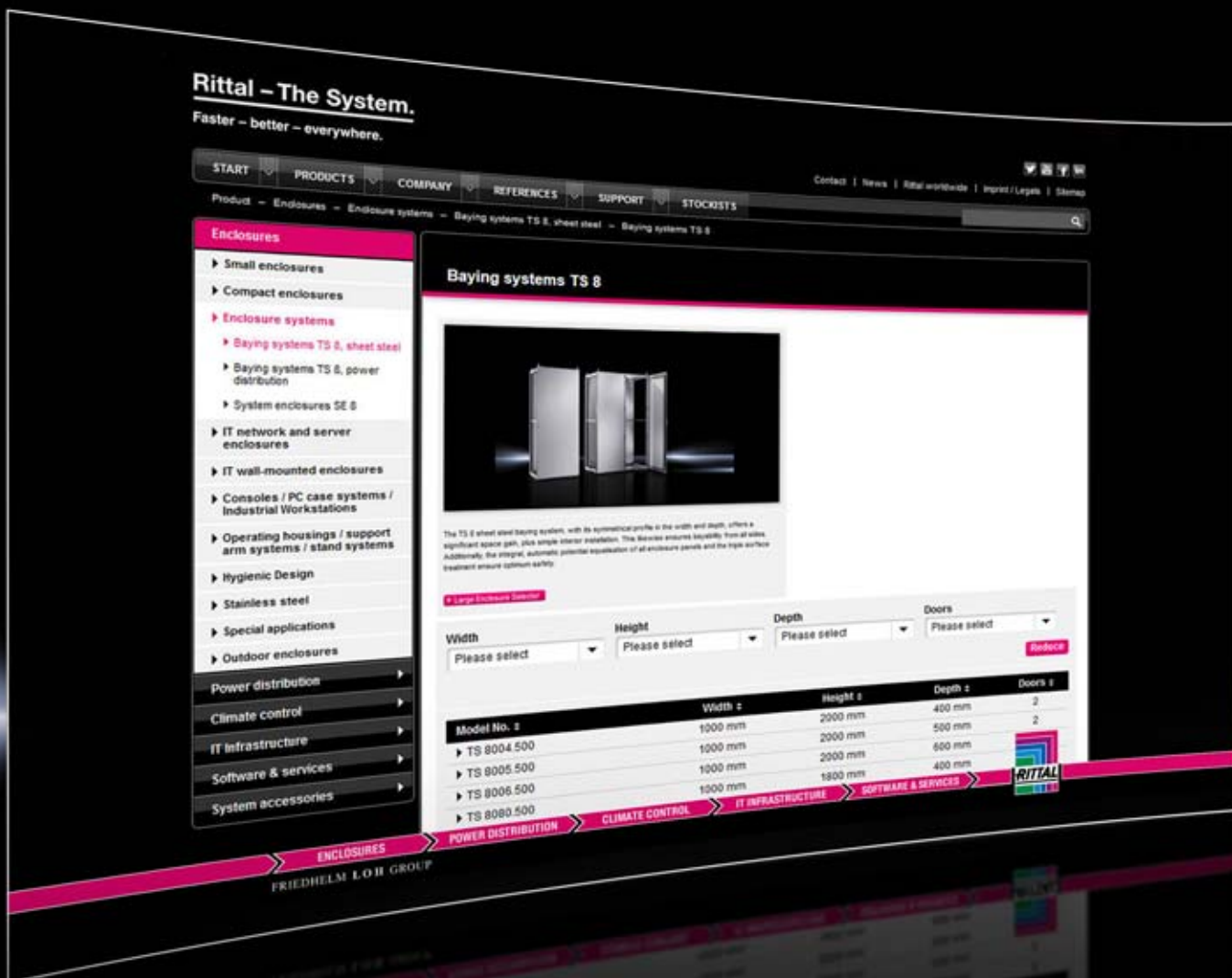
efficient engineering.

IT INFRASTRUCTURE

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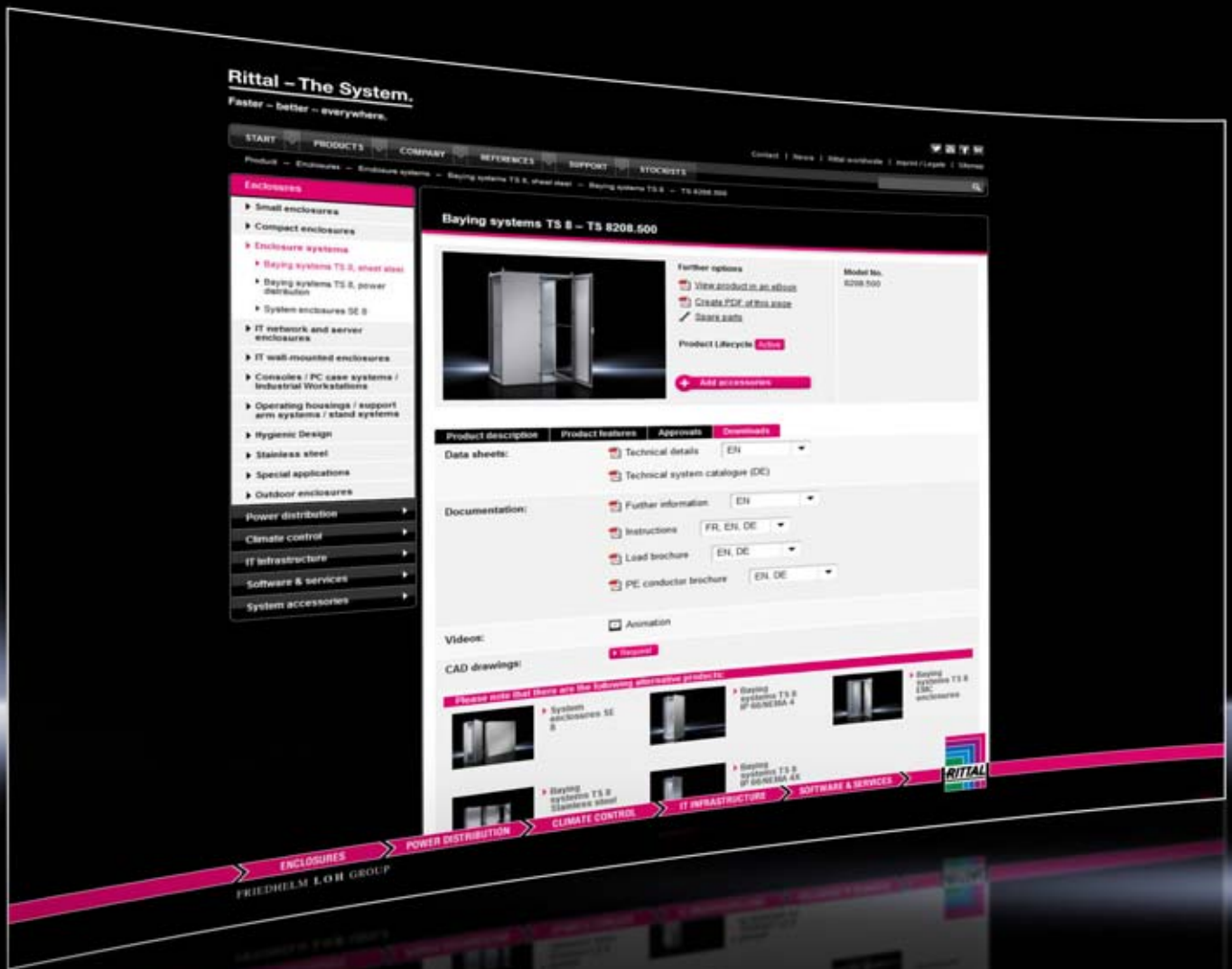
Reliable ordering



Ordering made easy – simple, fast and safe

Now it's even easier to find the right solution for enclosures, climate control, power distribution and IT infrastructure.

- Fast and easy orientation
- Simple selection of Rittal enclosures and matching accessories for your application



More information – with just a few clicks

Further technical information is available for every product.

- Additional information such as brochures, technical drawings, manuals, approvals, declarations and certificates are available for download

Easy planning

Rittal – The System.
Faster – better – everywhere.

START | PRODUCTS | COMPANY | REFERENCES | **SUPPORT** | STOCKISTS | Contact

support – Software – CAD data

- Service
- Consulting services
- Software**
 - CAD data**
 - RICAD-3D
 - EPLAN platform
 - Configurators
 - Planning software
 - IT management software
 - Technical Support / Hotline
 - Technical Knowledge
 - Downloads
 - Brochures
 - Catalogue 34
 - RiAssure3

CAD data

Mechanical construction made easy

RiCAD 3D
Professional PC-based design planning using CAD solutions from Rittal.

2016 © Rittal Ltd UK

ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE

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ENCLOSURES | POWER DISTRIBUTION | CLIMATE CONTROL | IT INFRASTRUCTURE



Eplan

All Eplan applications on one integrated platform technology. Optimise your engineering and reduce your workflow complexity.

- Planning aids for perfect dimensioning and space utilisation
- Activation of machine tools for machining and automated cable assembly

Rittal CAD data

Rittal offers professional design planning on your PC with a range of options for retrieving the CAD data.

- Online: Direct download from the "Partcommunity" Web platform
- Online: As an app
- Online: Request data on the relevant product pages
- Offline: RiCAD 3D as a database on your hard drive

TS 8 CAD configurator

The TS 8 CAD configurator allows you to generate a 3D model of a complete TS 8 enclosure in just a few clicks.

- Easy configuration of a bayed TS enclosure with base/plinth, side panels and handle system
- Punched rails and punched sections with mounting flanges may be preconfigured
- The 3D model/2D drawing may be transferred directly into the plant design

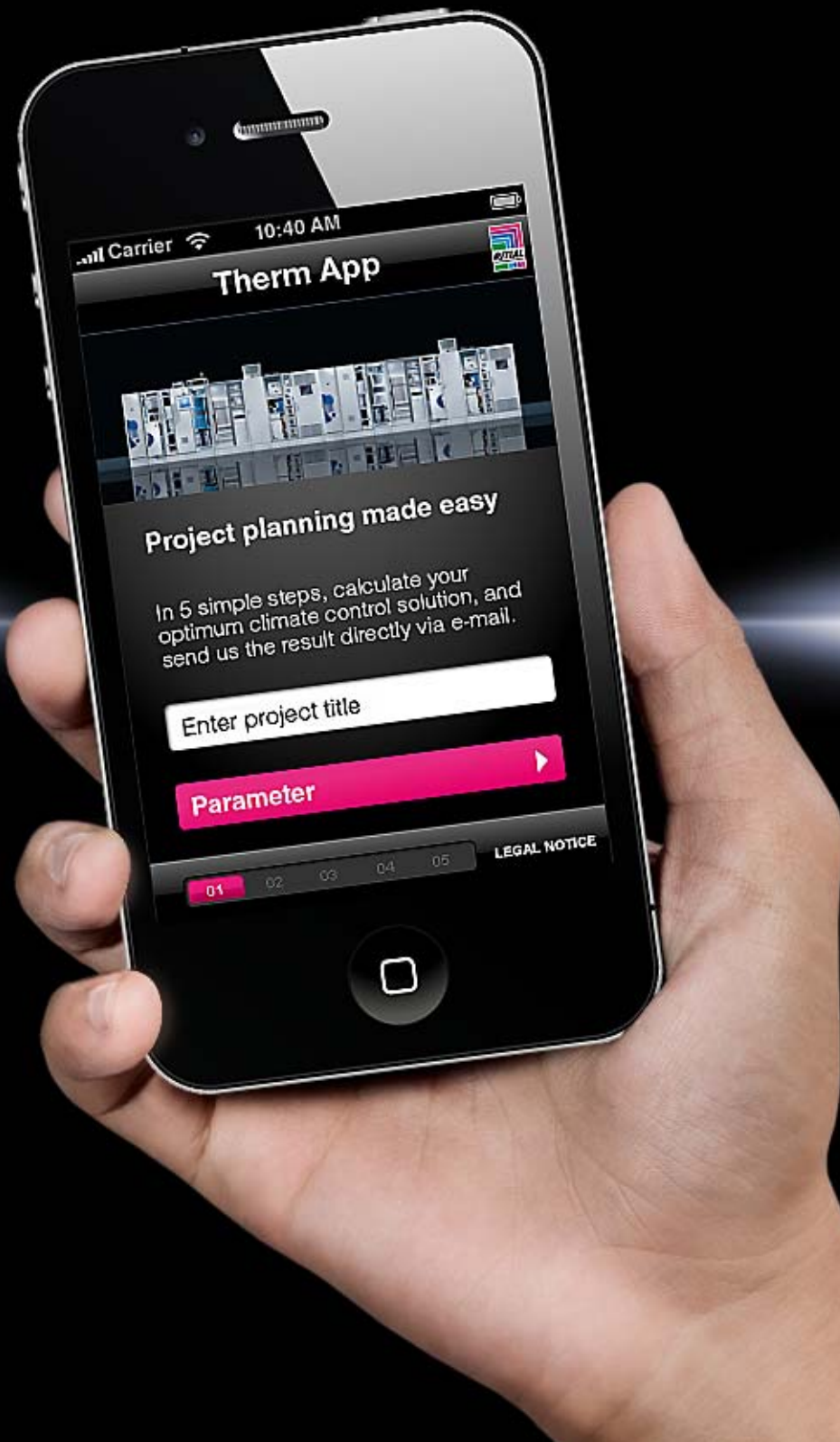
Flex-Block CAD configurator

Simple, menu-assisted selection aids allow you to generate a 3D model of your individually compiled Flex-Block in a flash.

- Selection aids for corner pieces, corner piece covers and the various trim panels for the four sides of a Flex-Block
- The 3D model/2D drawing may be transferred directly into the plant design

Engineering

User-friendly project planning



Power Engineering

Easy configuration of standard-compliant Ri4Power low-voltage switchgear and busbar systems.

- With integral design verification
- Simple selection and graphical positioning of assemblies
- Automatic generation of component parts lists
- Access to the entire range of Rittal products
- Multi-lingual program guidance

Therm software

Takes care of the complex calculation of your climate control requirements. A user-friendly interface guides users to the correctly dimensioned climate control component.

- Precise, fast calculation of climate control requirements and design
- Maximum reliability when calculating climate control components

Blue e+ app

A complete set of parameters for a given appliance can be transferred to a smartphone.

- Fast, on-site analysis
- Troubleshooting information
- Superior operational reliability



Android app

Therm app

Simplifies the time-consuming calculation of climate control requirements.

- You receive detailed documentation
- Maximum reliability when calculating climate control components



Android app



iPhone app

RiMatrix S app

Your configurator for standardised data centres.

- Easy-to-use interface
- A complete data centre in just five steps



Android app



iPhone app

Chiller app

Quickly and easily calculates the required cooling output.

- Automated calculation of heat loss and matching accessories
- Interactive performance diagrams



iPhone app

Faster configuration

Rittal – The System.

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IT Infrastructure selector

▶ Select now



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IT Infrastructure selector

Supports partners, system integrators, system engineers and end clients with an overview of Rittal's IT expertise.

- Supplies information on all product segments in the data centre
- Suggests matching accessories in every segment
- The result: An individual IT infrastructure for your data centre – ready to submit your enquiry
- Modular, extendible system components

Support arm configurator

Various different systems are used, depending on the system configuration, jib length and enclosure weight. This configurator determines the perfect support arm system for your application based on user-specific parameters.

- Integral plausibility check enables completely error-free system assembly
- Visualised representation of the configured system
- Automated generation of parts lists

Micro Data Center configurator

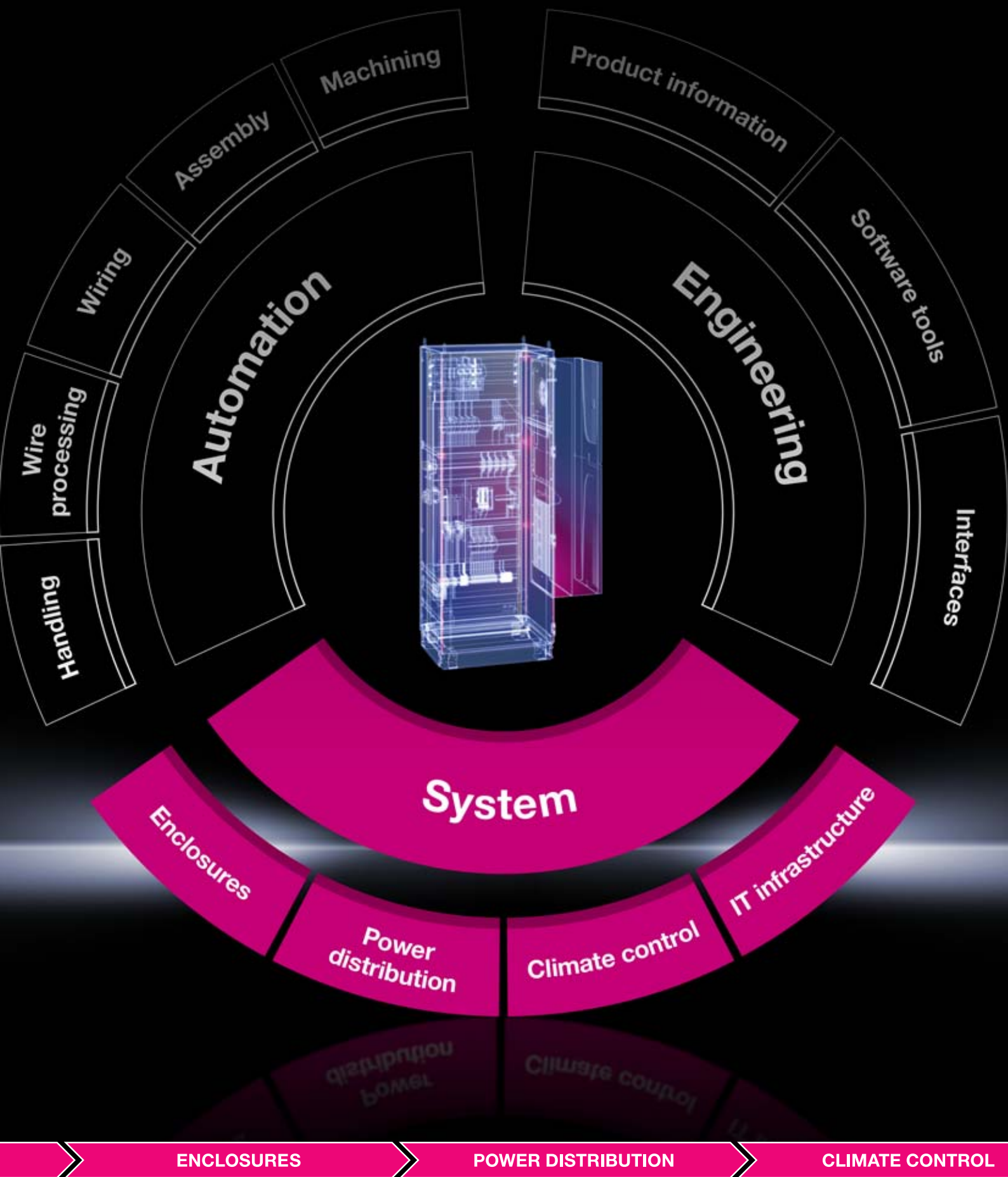
Find your individual security safe and the various configuration components needed to upgrade the safe into a Micro Data Center.

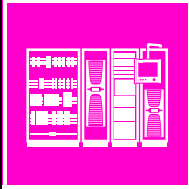
- Choose your configuration variant
- After submitting, you will receive detailed information and a non-binding quote for your chosen variant

Large enclosure selector

The large enclosure selector allows you to easily select Rittal enclosures and matching accessories for your application.

- Simple, menu-prompted configuration of a large enclosure with base/plinth, lights, earthing, mounting plate infill and side panel in just a few clicks





System

The innovations

- Enclosures from page 21
- Power distribution..... from page 80
- Climate control from page 130
- IT infrastructure..... from page 153



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ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

LED system light

Sensationally bright

The most innovative lighting technology, tailored to Rittal enclosures.

Do not settle for less! The new LED system light sets brand new standards in all areas.



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LED system light

Focus on what's important

- Innovative LED technology for even more light into the very last corner, from the roof to the base
- Intelligent lighting, tailored to the geometry of the enclosure, thanks to a special optical cover with Fresnel structure
- Optical cover with two different Fresnel structures
- The cover is easily rotated – to adapt the light distribution to the current installation situation
- Enormous luminous intensity from 900 to 1200 lumens, directed selectively into the enclosure



Conventional light

Rittal LED system light



Rittal – The System.

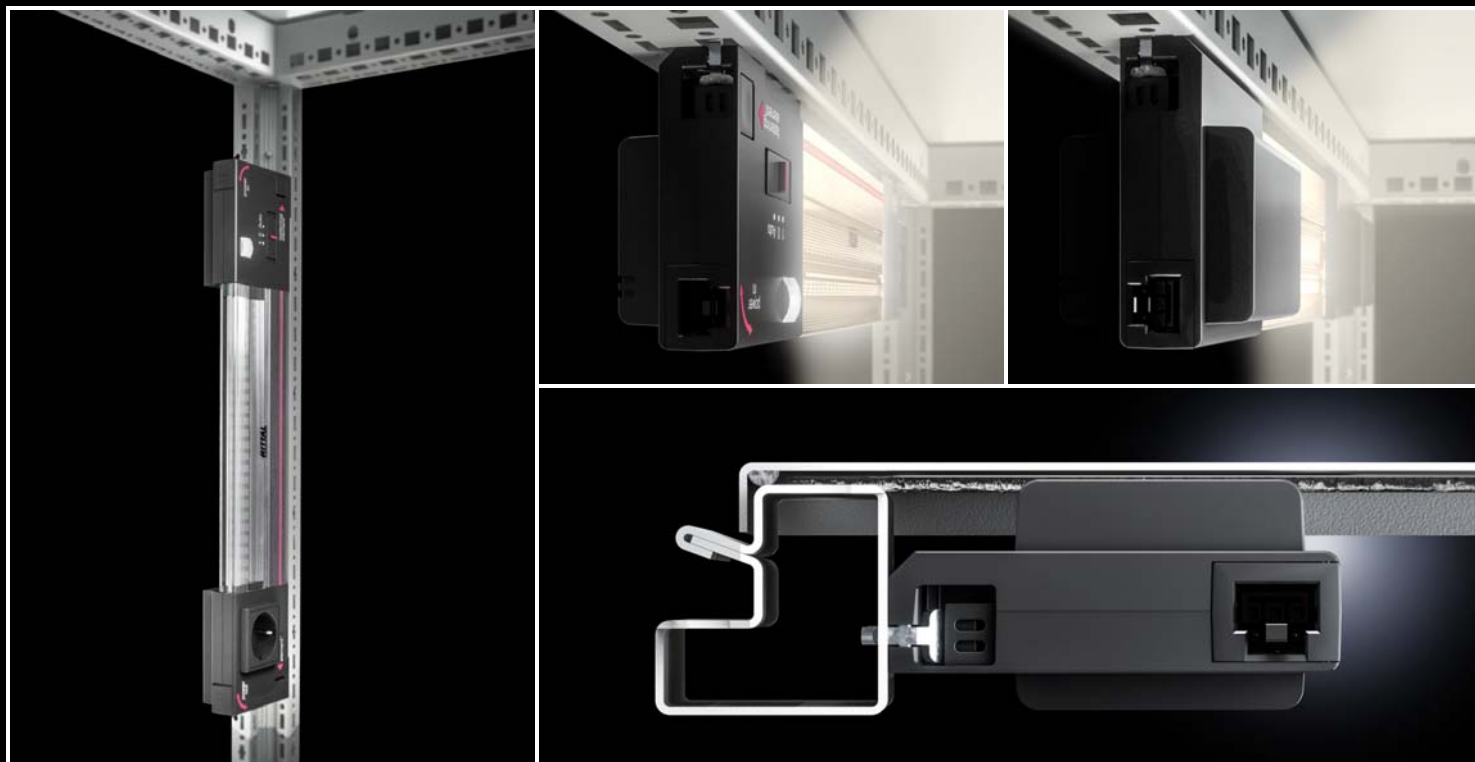
Faster – better – everywhere.



LED system light

Time savings under control

- Fast, tool-free assembly thanks to a latching hook system on a 25 mm pitch pattern of holes; simply latch and secure
- Optional screw-fastening also available, or opt for complete flexibility with a magnetic attachment freely positionable inside the enclosure
- May be fitted horizontally and vertically with no loss of space in the enclosure; existing rails and sections can simply be covered.
- Lights with motion detectors are equipped with a rotating LED board as standard, allowing the direction of light to be perfectly adapted to any installation situation



Rittal – The System.

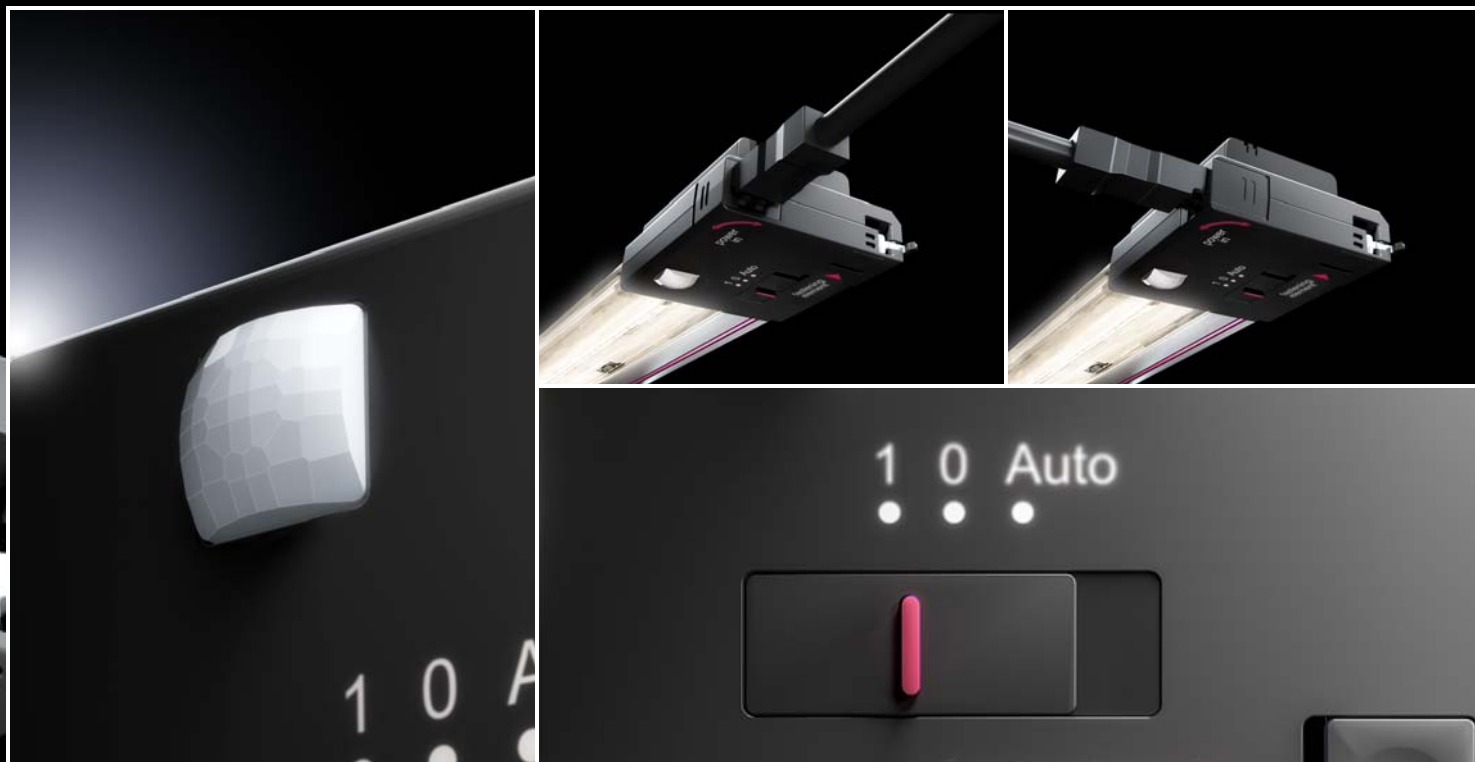
Faster – better – everywhere.



LED system light

Uncompromising switching

- Rotating connectors support installation in the most confined spaces
- Simple through-wiring based on the plug & play system
- Variants with integral motion detectors eliminate the need for installing separate door-operated switches
- If additionally equipped with a socket, electricity will be available whenever it is needed for maintenance work
- Suitable for immediate, global use with wide-range voltage 100 – 240 V (AC) and 24 V (DC)



LED system light



Baying systems TS 8 Cat. 34, page 62 **System enclosures SE 8** Cat. 34, page 81

Benefits:

- Optimum illumination of the entire enclosure
- Optionally with clip, screw and magnetic attachment
- A configuration to suit every application

Length:

- 437 mm

Material:

- Plastic
- Aluminium

Colour:

- Enclosure: RAL 7016

Light colour:

- 4000 K (neutral white)

Supply includes:

- Assembly screws

Approvals:

- ENEC

Note:

- Connection accessories should be ordered separately

Available from June 2016

Model No.	2500.310	2500.300	2500.210	2500.200	2500.220	Page
Output (lumen)	1200	1200	900	900	900	
Motion sensor	■	■	-	-	-	
Voltage supply	100 – 240 V AC	■	■	■	-	
	24 V DC	-	-	-	■	
Equipment	Socket	■	-	■	-	
	90° rotating connector	■	■	■	■	
	Adjustable light direction	■	■	-	-	
	Adjustable light distribution	■	■	■	■	
Protection class II (all-insulated)	■	■	■	■	■	
Installation type	Screw-fastening	■	■	■	■	
	Clip attachment	■	■	■	■	
	Magnetic attachment to surfaces (accessory)	-	■	-	■	■
Connection options	Infeed	3-pole	3-pole	3-pole	3-pole	2-pole
	Through-wiring	3-pole	3-pole	3-pole	3-pole	2-pole
	Door-operated switch (accessories)	-	-	■	■	■
Mounting options	TS, SE	Screw fastening/clip	Directly on the profile	Directly on the profile	Directly on the profile	Directly on the profile
	AE	Screw-fastening	With universal bracket	With universal bracket	With universal bracket	With universal bracket

Accessories

Universal bracket	2373.000	2373.000	2373.000	2373.000	2373.000	Cat. 34, 623
Mounting kit magnet	-	2500.480	-	2500.480	2500.480	29
Rail for interior installation	see page	see page	see page	see page	see page	Cat. 34, 605

Connection accessories

Infeed, 2-pole	-	-	-	-	2500.410	29
Infeed, 3-pole (with socket)	2500.400	2500.400	2500.400	2500.400	-	29
Through-wiring, 2-pole	-	-	-	-	2500.440	29
Through-wiring, 3-pole (with connector and socket)	2500.430	2500.430	2500.430	2500.430	-	29
Door-operated switch	-	-	2500.460	2500.460	2500.460	29
Door-operated switch, UL	-	-	2500.470	2500.470	2500.470	29

LED system light

Accessories

Connection accessories

for LED system light

The following components can be used for time-saving and simple installation of the lights:



Accessories:

- Cable ties for quick assembly, see Catalogue 34, page 667

Connection cable for	ENEC	Length mm	Packs of	Model No.	
				Orange	Black
1 Infeed, 3-pole, 100 – 240 V AC	■	3000	5 pc(s).	2500.400	–
2 Infeed, 2-pole, 24 V DC	■	3000	5 pc(s).	–	2500.410
3 Through-wiring, 3-pole, 100 – 240 V AC	■	1000	5 pc(s).	2500.430	–
4 Through-wiring, 2-pole, 24 V DC	■	1000	5 pc(s).	–	2500.440

Available from June 2016

Door-operated switch With mounting accessories	ENEC	UL	Length mm	Technical specifications	Packs of	Model No.
						Black
5 Connection cable	■	–	600	230 V AC 1 A	1 pc(s).	2500.460
	–	■	600		1 pc(s).	2500.470

Model No. 2500.460 available from June 2016, Model No. 2500.470 available from August 2016

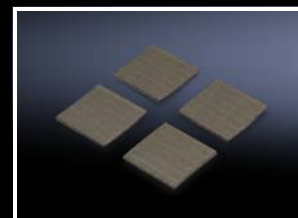
Mounting kit magnet

for LED system light

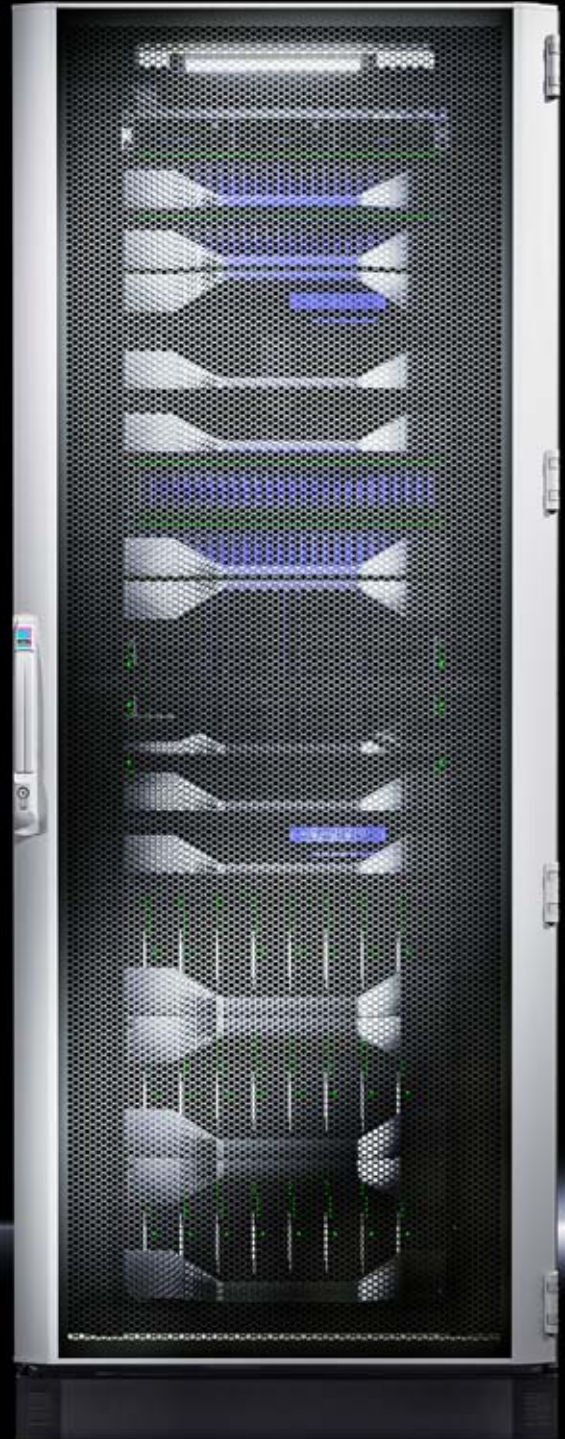
For sticking onto the rear of lights without a socket.

Packs of	Model No.
4 pc(s).	2500.480

Available from June 2016



Network/server enclosures TS IT



The benefits at a glance

■ Individual configuration

The ideal basis for virtually all network and server technology requirements

■ High load capacity

Load capacity up to 15,000 N within the 482.6 mm (19") mounting levels

■ Variable interior installation

Thanks to two 482.6 mm (19") systems

– 482.6 mm (19") mounting angles:

Tool-free attachment to support strips.

Asymmetrical interior installation and alternative installation dimensions

(21", 23", 24" supported) are easily achieved with a side offset.

– 482.6 mm (19") mounting frame:

Welded, torsionally stiff, and infinitely adjustable. Cross-cabing within an enclosure suite allows free access across

all height units.

■ Tool-free installation

System accessory mounting using new, time-saving snap-in technology (available for component shelves, cable conduits, etc.)

■ Intelligent cable management

Multi-functional roof for side cable entry, ensures maximum user-friendliness and free air flow for active components

■ Fast side panel assembly

Divided side panel with quick-release fasteners, integral lock and internal latch

■ Convincing door concept

Glazed door for high-performance server applications with LCP climate control or vented doors for room climate control

■ Divided rear doors

Divided rear doors from a height of 1,800 mm for space-optimised positioning

■ Intelligent accessories

Simple and quick selection of system accessories using the new TS IT concept

■ Simple positioning

Labelling of the height units and pitch pattern in the depth for simple adjustment of the distance between 482.6 mm (19") levels

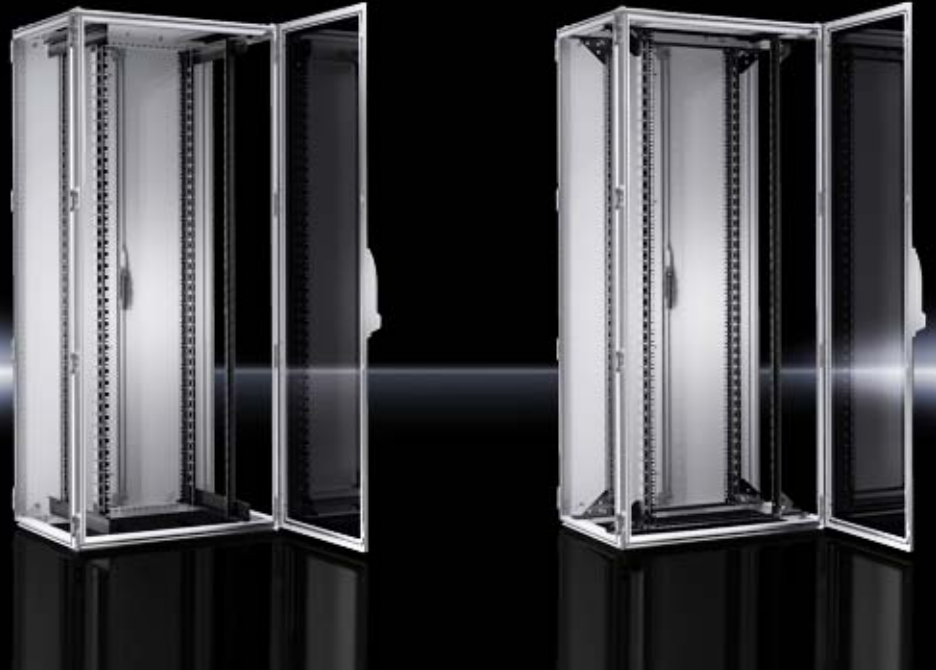
■ Enhanced safety



Variants with protection category IP 55, both with and without 482.6 mm (19") interior installation

■ Pre-configured complete packages

More than 100 different variants available for fast delivery across Europe





Network/server enclosures TS IT



Door variant, front		Glazed door	Vented door	Glazed door	Vented door
					
482.6 mm (19') installation		With 482.6 mm (19') mounting angles		With 482.6 mm (19') mounting frame	
Variants		55XX.120	55XX.110	55XX.141	55XX.181
Product-specific scope of supply					
Base	Open	■	■	■	■
	Solid	-	-	-	-
Rear door	One-piece, solid	■	-	■	-
	Two-piece from H ≥ 1800 mm, solid	■	-	■	-
	One-piece, vented	-	■	-	■
	Two-piece from H ≥ 1800 mm, vented	-	■	-	■
	Rear panel, screw-fastened	-	-	-	-
Roof	With cable entry	■	■	■	■
	Solid	-	-	-	-
Pre-configured					
Base/plinth	Flex-Block, vented	-	-	-	-
Base	Solid front, one base module	-	-	-	-
	One-piece, vented	-	-	-	-
Walls	One-piece, lockable	-	-	-	-
Page		34	40	37	43

Network/server enclosures TS IT



	Glazed door	Vented door	Glazed door	Glazed door	Glazed door
					
	With 482.6 mm (19') mounting frame, pre-configured		With 482.6 mm (19') swing frame, pre-configured	With 482.6 mm (19') mounting frame, protection category IP 55	Without interior installation, protection category IP 55
	55XX.151	55XX.161	55XX.170	55XX.131	55XX.790

	-	-	-	-	-
	-	-	-	■	■
	■	-	-	■	■
	■	-	-	-	-
	-	-	-	-	-
	-	■	-	-	-
	-	-	■	-	-
	■	■	■	-	-
	-	-	-	■	■
	-	-	-	-	-
	■	■	■	-	-
	■	-	-	-	-
	-	■	■	-	-
	■	■	■	-	-
	46	48	49	50	52

Network/server enclosures TS IT



IT power Cat. 34, page 407 IT cooling Cat. 34, page 427 IT monitoring Cat. 34, page 445 System accessories Cat. 34, page 507

Material:

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

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners

- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
 - Connection accessories for potential equalisation with earthing point (supplied loose)
 - 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
 - IPPC pallet
- Please observe the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with glazed door, with 482.6 mm (19") mounting angles

Units U	Packs of	15	24	24	24	38	Cat. 34, page
Width mm		600	600	800	800	600	
Height mm		800	1200	1200	1200	1800	
Depth mm		600	600	800	1000	600	
Distance between prefitted 482.6 mm (19") levels mm		345	345	545	745	345	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	84 / 168	147 / 105	87 / 165	84 / 168	
Model No.	1 pc(s).	5525.120	5526.120	5503.120	5504.120	5527.120	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	■	-	-	■	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	■	■	-	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	-	■	■	-	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	-	-	-	-	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.086	7824.126	7824.128	7824.120	7824.186	536
Side panels, divided		-	-	-	-	-	
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.600	8100.800	see page	8100.600	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.802	8100.802	8100.602	511
Base mount	2 pc(s).	5501.300	5501.300	5501.310	5501.320	5501.300	524
Gland plates	1 pc(s).	-	-	5502.530	5502.550	-	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles		-	-	-	-	-	
Cable route on the mounting frame		-	-	-	-	-	
C rails	4 pc(s).	7828.060	7828.060	7828.080	see page	7828.060	613
Cable clamp rails	4 pc(s).	7828.062	7828.062	7828.082	see page	7828.062	669

Network/server enclosures TS IT

with glazed door, with 482.6 mm (19") mounting angles

Units U	Packs of	38	38	42	42	Cat. 34, page
Width mm		600	800	600	600	
Height mm		1800	1800	2000	2000	
Depth mm		800	800	600	800	
Distance between prefitted 482.6 mm (19") levels mm		545	545	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	147 / 105	84 / 168	84 / 168	
Model No.	1 pc(s).	5528.120	5505.120	5529.120	5530.120	
Product-specific scope of supply						
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	–	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	–	■	–	
Accessories						
Side panel, lockable	2 pc(s).	7824.188	7824.188	7824.206	7824.208	536
Side panels, divided	1 pc(s).	5501.000	5501.000	5501.010	5501.020	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	8100.600	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	see page	8100.802	8100.602	see page	511
Base mount	2 pc(s).	5501.310	5501.310	5501.300	5501.310	524
Gland plates	1 pc(s).	–	5502.530	–	–	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	–	–	5501.805	5501.805	692
Cable route on the mounting frame	1 pc(s).	–	–	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	7828.060	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	7828.062	see page	669

with glazed door, with 482.6 mm (19") mounting angles

Units U	Packs of	42	42	42	42	Cat. 34, page
Width mm		600	600	800	800	
Height mm		2000	2000	2000	2000	
Depth mm		1000	1200	600	800	
Distance between prefitted 482.6 mm (19") levels mm		745	745	445	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	144 / 308	87 / 65	147 / 105	
Model No.	1 pc(s).	5508.120	5510.120	5506.120	5507.120	
Product-specific scope of supply						
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	–	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	–	■	–	
Accessories						
Side panel, lockable	2 pc(s).	7824.200	–	7824.206	7824.208	536
Side panels, divided	1 pc(s).	5501.030	5501.040	5501.010	5501.020	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.010	5502.020	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	see page	8100.800	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	see page	8100.802	511
Base mount	2 pc(s).	5501.320	5501.350	5501.300	5501.310	524
Gland plates	1 pc(s).	5502.540	5502.560	5502.510	5502.530	528
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	5501.805	5501.805	5501.815	5501.815	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	see page	7828.080	613
Cable clamp rails	4 pc(s).	see page	see page	see page	7828.082	669

Network/server enclosures TS IT

with glazed door, with 482.6 mm (19") mounting angles

Units U	Packs of	42	42	47	47	Cat. 34, page
Width mm		800	800	600	600	
Height mm		2000	2000	2200	2200	
Depth mm		1000	1200	800	1000	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 305	84 / 168	84 / 168	
Model No.	1 pc(s).	5509.120	5511.120	5531.120	5513.120	
Product-specific scope of supply						
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	
Accessories						
Side panel, lockable	2 pc(s).	7824.200	–	7824.228	7824.220	536
Side panels, divided	1 pc(s).	5501.030	5501.040	5501.050	5501.060	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid		see page	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.802	see page	8100.602	511
Base mount	2 pc(s).	5501.320	5501.350	5501.310	5501.320	524
Gland plates	1 pc(s).	5502.550	5502.570	–	5502.540	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	5501.815	5501.815	5501.825	5501.825	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
C rails		see page	see page	see page	see page	613
Cable clamp rails		see page	see page	see page	see page	669

with glazed door, with 482.6 mm (19") mounting angles

Units U	Packs of	47	47	47	47	Cat. 34, page
Width mm		600	800	800	800	
Height mm		2200	2200	2200	2200	
Depth mm		1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		144 / 308	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5515.120	5512.120	5514.120	5516.120	
Product-specific scope of supply						
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	
Accessories						
Side panel, lockable	2 pc(s).	–	7824.228	7824.220	–	536
Side panels, divided	1 pc(s).	5501.070	5501.050	5501.060	5501.070	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.802	8100.802	8100.802	511
Base mount	2 pc(s).	5501.350	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.560	5502.530	5502.550	5502.570	528
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	5501.825	5501.835	5501.835	5501.835	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	669



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

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

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 10000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Two 482.6 mm (19") mounting frames, front and rear, depth-variable
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)

- Connection accessories for potential equalisation with earthing point (supplied loose)
 - 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
 - IPPC pallet
- Please observe the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with glazed door, with 482.6 mm (19") mounting frame

Units U	Packs of	24	24	24	38	38	Cat. 34, page
Width mm		600	800	800	600	600	
Height mm		1200	1200	1200	1800	1800	
Depth mm		600	800	1000	600	800	
Distance between prefitted 482.6 mm (19") levels mm		345	545	745	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	147 / 105	87 / 165	84 / 168	84 / 168	
Model No.	1 pc(s).	5526.141	5503.141	5504.141	5527.141	5528.141	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	-	-	■	-	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	■	-	-	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	■	■	-	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	-	-	-	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.126	7824.128	7824.120	7824.186	7824.188	536
Side panels, divided	1 pc(s).	-	-	-	-	5501.000	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.800	see page	8100.600	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.802	8100.802	8100.602	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.300	5501.310	524
Gland plates	1 pc(s).	-	5502.530	5502.550	-	-	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.855	5501.865	5501.865	5501.875	5501.875	692
Cable route on the mounting frame		-	-	-	-	-	672
C rails	4 pc(s).	7828.060	7828.080	see page	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.082	see page	7828.062	see page	669

Network/server enclosures TS IT

with glazed door, with 482.6 mm (19") mounting frame

Units U	Packs of	38	42	42	42	42	Cat. 34, page
Width mm		800	600	600	600	600	
Height mm		1800	2000	2000	2000	2000	
Depth mm		800	600	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		545	345	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		147 / 105	84 / 168	84 / 168	84 / 168	–	
Model No.	1 pc(s).	5505.141	5529.141	5530.141	5508.141	5510.141	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	–	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	■	–	–	–	
Accessories							
Side panel, lockable	2 pc(s).	7824.188	7824.206	7824.208	7824.200	–	536
Side panels, divided	1 pc(s).	5501.000	5501.010	5501.020	5501.030	5501.040	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	8100.600	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.602	see page	8100.602	8100.602	511
Base mount	2 pc(s).	5501.310	5501.300	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.530	–	–	5502.540	5502.560	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.885	5501.905	5501.905	5501.905	5501.905	692
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	7828.080	7828.060	see page	see page	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.062	see page	see page	see page	669

with glazed door, with 482.6 mm (19") mounting frame

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	600	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between prefitted 482.6 mm (19") levels mm		445	545	745	745	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 65	147 / 105	87 / 165	147 / 305	84 / 168	
Model No.	1 pc(s).	5506.141	5507.141	5509.141	5511.141	5531.141	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	–	–	–	–	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	–	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.206	7824.208	7824.200	–	7824.228	536
Side panels, divided	1 pc(s).	5501.010	5501.020	5501.030	5501.040	5501.050	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	see page	8100.802	8100.802	8100.802	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.350	5501.310	524
Gland plates	1 pc(s).	5502.510	5502.530	5502.550	5502.570	–	528
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.915	5501.915	5501.915	5501.915	5501.925	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	see page	669

Network/server enclosures TS IT

with glazed door, with 482.6 mm (19") mounting frame

Units U	Packs of	47	47	47	47	47	Cat. 34, page
Width mm		600	600	800	800	800	
Height mm		2200	2200	2200	2200	2200	
Depth mm		1000	1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	–	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5513.141	5515.141	5512.141	5514.141	5516.141	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.220	–	7824.228	7824.220	–	536
Side panels, divided	1 pc(s).	5501.060	5501.070	5501.050	5501.060	5501.070	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.020	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	8100.800	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.802	8100.802	8100.802	511
Base mount	2 pc(s).	5501.320	5501.350	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.540	5502.560	5502.530	5502.550	5502.570	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.925	5501.925	5501.935	5501.935	5501.935	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	see page	7828.082	see page	see page	669

New



LCP – Liquid Cooling Package

see Cat. 34, page 429

Network/server enclosures TS IT



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation, vent grille at the front: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 15000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Aluminium sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E

- Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners
 - Spacers to raise the fan cover plate, for passive cooling (supplied loose)
 - Connection accessories for potential equalisation with earthing point (supplied loose)
 - 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
 - IPPC pallet
- Please observe the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with vented door, with 482.6 mm (19") mounting angles

Units U	Packs of	24	24	24	38	38	Cat. 34, page
Width mm		600	800	800	600	600	
Height mm		1200	1200	1200	1800	1800	
Depth mm		600	800	1000	600	800	
Distance between prefitted 482.6 mm (19") levels mm		345	545	745	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	147 / 105	87 / 165	84 / 168	84 / 168	
Model No.	1 pc(s).	5526.110	5503.110	5504.110	5527.110	5528.110	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	-	-	■	-	
Sheet steel door at the rear, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	-	-	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	■	■	-	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	-	-	-	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.126	7824.128	7824.120	7824.186	7824.188	536
Side panels, divided	1 pc(s).	-	-	-	-	5501.000	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.800	see page	8100.600	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.802	8100.802	8100.602	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.300	5501.310	524
Gland plates	1 pc(s).	-	5502.530	5502.550	-	-	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles		-	-	-	-	-	
Cable route on the mounting frame		-	-	-	-	-	
C rails	4 pc(s).	7828.060	7828.080	see page	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.082	see page	7828.062	see page	669

Network/server enclosures TS IT

with vented door, with 482.6 mm (19") mounting angles

Units U	Packs of	38	42	42	42	42	Cat. 34, page
Width mm		800	600	600	600	600	
Height mm		1800	2000	2000	2000	2000	
Depth mm		800	600	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		545	345	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		147 / 105	84 / 168	84 / 168	84 / 168	144 / 308	
Model No.	1 pc(s).	5505.110	5529.110	5530.110	5508.110	5510.110	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	–	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	■	–	–	–	
Accessories							
Side panel, lockable	2 pc(s).	7824.188	7824.206	7824.208	7824.200	–	536
Side panels, divided	1 pc(s).	5501.000	5501.010	5501.020	5501.030	5501.040	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	8100.600	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.602	see page	8100.602	8100.602	511
Base mount	2 pc(s).	5501.310	5501.300	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.530	–	–	5502.540	5502.560	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	–	5501.805	5501.805	5501.805	5501.805	692
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	7828.080	7828.060	see page	see page	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.062	see page	see page	see page	669

with vented door, with 482.6 mm (19") mounting angles

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	600	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between prefitted 482.6 mm (19") levels mm		445	545	745	745	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 65	147 / 105	87 / 165	147 / 305	84 / 168	
Model No.	1 pc(s).	5506.110	5507.110	5509.110	5511.110	5531.110	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	–	–	–	–	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	–	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.206	7824.208	7824.200	–	7824.228	536
Side panels, divided	1 pc(s).	5501.010	5501.020	5501.030	5501.040	5501.050	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	see page	8100.802	8100.802	8100.802	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.350	5501.310	524
Gland plates	1 pc(s).	5502.510	5502.530	5502.550	5502.570	–	528
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	5501.815	5501.815	5501.815	5501.815	5501.825	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	see page	669

Network/server enclosures TS IT

with vented door, with 482.6 mm (19") mounting angles

Units U	Packs of	47	47	47	47	47	Cat. 34, page
Width mm		600	600	800	800	800	
Height mm		2200	2200	2200	2200	2200	
Depth mm		1000	1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	144 / 308	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5513.110	5515.110	5512.110	5514.110	5516.110	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.220	–	7824.228	7824.220	–	536
Side panels, divided	1 pc(s).	5501.060	5501.070	5501.050	5501.060	5501.070	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.020	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	8100.800	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.802	8100.802	8100.802	511
Base mount	2 pc(s).	5501.320	5501.350	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.540	5502.560	5502.530	5502.550	5502.570	529
Air baffle plates for TS IT 482.6 mm (19") mounting angles	1 pc(s).	5501.825	5501.825	5501.835	5501.835	5501.835	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	see page	7828.082	see page	see page	669

New



PDU – Power Distribution Unit

see Cat. 34, page 416



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation, vent grille at the front: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 10000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Aluminium sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E

- Two 482.6 mm (19") mounting frames, front and rear, depth-variable
 - Spacers to raise the fan cover plate, for passive cooling (supplied loose)
 - Connection accessories for potential equalisation with earthing point (supplied loose)
 - 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
 - IPPC pallet
- Please observe the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with vented door, with 482.6 mm (19") mounting frame

Units U	Packs of	24	24	24	38	38	Cat. 34, page
Width mm		600	800	800	600	600	
Height mm		1200	1200	1200	1800	1800	
Depth mm		600	800	1000	600	800	
Distance between prefitted 482.6 mm (19") levels mm		345	545	745	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 105	87 / 165	87 / 165	147 / 105	
Model No.	1 pc(s).	5526.181	5503.181	5504.181	5527.181	5528.181	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	-	-	■	-	
Sheet steel door at the rear, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	-	-	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	■	■	-	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	-	-	-	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.126	7824.128	7824.120	7824.186	7824.188	536
Side panels, divided	1 pc(s).	-	-	-	-	5501.000	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.800	see page	8100.600	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.802	8100.802	8100.602	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.300	5501.310	524
Gland plates	1 pc(s).	-	5502.530	5502.550	-	-	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.855	5501.865	5501.865	5501.875	5501.875	692
Cable route on the mounting frame		-	-	-	-	-	672
C rails	4 pc(s).	7828.060	7828.080	see page	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.082	see page	7828.062	see page	669

Network/server enclosures TS IT

with vented door, with 482.6 mm (19") mounting frame

Units U	Packs of	38	42	42	42	42	Cat. 34, page
Width mm		800	600	600	600	600	
Height mm		1800	2000	2000	2000	2000	
Depth mm		800	600	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		545	345	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		147 / 105	87 / 165	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5505.181	5529.181	5530.181	5508.181	5510.181	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	–	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	■	–	–	–	
Accessories							
Side panel, lockable	2 pc(s).	7824.188	7824.206	7824.208	7824.200	–	536
Side panels, divided	1 pc(s).	5501.000	5501.010	5501.020	5501.030	5501.040	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.010	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	8100.600	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.602	see page	8100.602	8100.602	511
Base mount	2 pc(s).	5501.310	5501.300	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.530	–	–	5502.540	5502.560	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.885	5501.905	5501.905	5501.905	5501.905	692
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	7828.080	7828.060	see page	see page	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.062	see page	see page	see page	669

with vented door, with 482.6 mm (19") mounting frame

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	600	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between prefitted 482.6 mm (19") levels mm		445	545	745	745	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 65	147 / 105	87 / 165	87 / 165	147 / 105	
Model No.	1 pc(s).	5506.181	5507.181	5509.181	5511.181	5531.181	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	–	–	–	–	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	–	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.206	7824.208	7824.200	–	7824.228	536
Side panels, divided	1 pc(s).	5501.010	5501.020	5501.030	5501.040	5501.050	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.010	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	see page	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.802	8100.802	8100.802	see page	511
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.350	5501.310	524
Gland plates	1 pc(s).	5502.510	5502.530	5502.550	5502.570	–	528
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.915	5501.915	5501.915	5501.915	5501.925	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	see page	669

Network/server enclosures TS IT

with vented door, with 482.6 mm (19") mounting frame

Units U	Packs of	47	47	47	47	47	Cat. 34, page
Width mm		600	600	800	800	800	
Height mm		2200	2200	2200	2200	2200	
Depth mm		1000	1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 305	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5513.181	5515.181	5512.181	5514.181	5516.181	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Accessories							
Side panel, lockable	2 pc(s).	7824.220	–	7824.228	7824.220	–	536
Side panels, divided	1 pc(s).	5501.060	5501.070	5501.050	5501.060	5501.070	536
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.020	437
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	8100.800	see page	see page	511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.802	8100.802	8100.802	511
Base mount	2 pc(s).	5501.320	5501.350	5501.310	5501.320	5501.350	524
Gland plates	1 pc(s).	5502.540	5502.560	5502.530	5502.550	5502.570	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.925	5501.925	5501.935	5501.935	5501.935	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	see page	7828.082	see page	see page	669

New



PSM – MID measuring module

see Cat. 34, page 421

Network/server enclosures TS IT



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium
- Base/plinth: Fibreglass-reinforced plastic
- Glazed door: Single-pane safety glass, 3 mm

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors, roof and side panels: Dipcoat-primed and powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation, base/plinth: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 10000 N

Supply includes:

- Enclosure frame TS 8 with doors, roof plate, base/plinth and side panels
- Glazed aluminium door at the front, 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Two 482.6 mm (19") mounting frames, front and rear, depth-variable
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
- Connection accessories for potential equalisation incl. central earthing point, pre-configured
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)

- Base mount
 - Base module mounted at front as infill panel
 - Flex-Block base/plinth 100 mm, vented, fitted base/plinth corner pieces, base/plinth trim panels (supplied loose)
 - Side panels, one-piece, lockable
 - 4 levelling feet, M12, including base/plinth adaptor sleeve (supplied loose)
 - 4 cable clamp rails (T-head) for outer mounting level, to fit enclosure depth (supplied loose)
 - 10 cable shunting rings (metal version), 125 x 65 mm (supplied loose)
 - IPPC pallet
- Please observe the product-specific scope of supply.

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with glazed door, pre-configured, with 482.6 mm (19") mounting frame

Units U	Packs of	24	24	24	38	38	Cat. 34, page
Width mm		600	800	800	600	600	
Height mm		1200	1200	1200	1800	1800	
Height including base/plinth mm		1300	1300	1300	1900	1900	
Depth mm		600	800	1000	600	800	
Distance between prefitted 482.6 mm (19") levels mm		345	545	745	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	147 / 105	87 / 165	84 / 168	84 / 168	
Model No.	1 pc(s).	5526.151	5503.151	5504.151	5527.151	5528.151	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	-	-	■	-	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	■	-	-	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	-	■	■	-	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	-	-	-	■	■	
Accessories							
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.010	5502.010	437
Gland plates	1 pc(s).	-	5502.530	5502.550	-	-	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.855	5501.865	5501.865	5501.875	5501.875	692
Cable route on the mounting frame		-	-	-	-	-	
C rails	4 pc(s).	7828.060	7828.080	see page	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.082	see page	7828.062	see page	669

Network/server enclosures TS IT

with glazed door, pre-configured, with 482.6 mm (19") mounting frame

Units U	Packs of	38	42	42	42	42	Cat. 34, page
Width mm		800	600	600	600	600	
Height mm		1800	2000	2000	2000	2000	
Height including base/plinth mm		1900	2100	2100	2100	2100	
Depth mm		800	600	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		545	345	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		147 / 105	84 / 168	84 / 168	84 / 168	144 / 308	
Model No.	1 pc(s).	5505.151	5529.151	5530.151	5508.151	5510.151	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	–	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	–	■	–	–	–	
Accessories							
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.010	5502.010	437
Gland plates	1 pc(s).	5502.530	–	–	5502.540	5502.560	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.885	5501.905	5501.905	5501.905	5501.905	692
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	7828.080	7828.060	see page	see page	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.062	see page	see page	see page	669

with glazed door, pre-configured, with 482.6 mm (19") mounting frame

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	600	
Height mm		2000	2000	2000	2000	2200	
Height including base/plinth mm		2100	2100	2100	2100	2300	
Depth mm		600	800	1000	1200	800	
Distance between prefitted 482.6 mm (19") levels mm		445	545	745	745	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 105	87 / 165	147 / 105	84 / 168	
Model No.	1 pc(s).	5506.151	5507.151	5509.151	5511.151	5531.151	
Product-specific scope of supply							
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	–	–	–	–	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	–	■	■	■	■	
Accessories							
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.010	437
Gland plates	1 pc(s).	5502.510	5502.530	5502.550	5502.570	–	528
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.915	5501.915	5501.915	5501.915	5501.925	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	see page	669

with glazed door, pre-configured, with 482.6 mm (19") mounting frame

Units U	Packs of	47	47	47	47	47	Cat. 34, page
Width mm		600	600	800	800	800	
Height mm		2200	2200	2200	2200	2200	
Height including base/plinth mm		2300	2300	2300	2300	2300	
Depth mm		1000	1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		84 / 168	144 / 308	147 / 105	87 / 165	147 / 105	
Model No.	1 pc(s).	5513.151	5515.151	5512.151	5514.151	5516.151	
Product-specific scope of supply							
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Accessories							
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.020	437
Gland plates	1 pc(s).	5502.540	5502.560	5502.530	5502.550	5502.570	529
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.925	5501.925	5501.935	5501.935	5501.935	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	see page	7828.082	see page	see page	669

Network/server enclosures TS IT



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium
- Base/plinth: Fibreglass-reinforced plastic

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors, roof and side panels: Dipcoat-primed and powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation, vent grille at the front, base/plinth: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 10000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Aluminium sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges
- Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Two 482.6 mm (19") mounting frames, front and rear, depth-variable
- Side panels, one-piece, lockable
- Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate
- Base mount
- Gland plate, one-piece, vented, with cable entry at the rear
- Flex-Block base/plinth 100 mm, vented, fitted base/plinth corner pieces, base/plinth trim panels (supplied loose)
- 4 levelling feet, M12, including base/plinth adaptor sleeve (supplied loose)
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
- 4 cable clamp rails (T-head) for outer mounting level, to fit enclosure depth (supplied loose)
- Connection accessories for potential equalisation incl. central earthing point, pre-configured
- 10 cable shunting rings (metal version), 125 x 65 mm (supplied loose)
- IPPC pallet

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

with vented door, pre-configured, with 482.6 mm (19") mounting frame

Units U	Packs of		Cat. 34, page
		42	
Width mm		800	
Height mm		2000	
Height including base/plinth mm		2100	
Depth mm		1000	
Distance between prefitted 482.6 mm (19") levels mm		745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	
Model No.	1 pc(s).	5509.161	
Accessories			
Fan mounting plates	1 pc(s).	5502.020	437
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.915	692
Cable route on the mounting frame	1 pc(s).	5502.120	672
C rails		see page	613
Cable clamp rails		see page	669

Network/server enclosures TS IT



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium
- Glazed door: Single-pane safety glass, 3 mm
- Base/plinth: Fibreglass-reinforced plastic

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Door, rear panel and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame, panels and interior installation: RAL 7035
- Base/plinth: RAL 9005

Load capacity of the 482.6 mm (19") mounting angles:

- 1500 N

Supply includes:

- TS 8 enclosure frame with door and roof plate
- Glazed aluminium door at the front (180°), with comfort handle for semi-cylinder and security lock 3524 E
- Sheet steel rear panel
- Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate
- Base mount
- Gland plate, one-piece, vented, with cable entry at the rear
- Swing frame, large, with side trim panel for the installation of 482.6 mm (19") mounting components whilst utilising the full enclosure height, 130°
- Side panels, one-piece, lockable
- Flex-Block base/plinth 100 mm, vented, fitted base/plinth corner pieces, base/plinth trim panels (supplied loose)
- 4 levelling feet, M12, including base/plinth adaptor sleeve (supplied loose)
- Spacers to raise the fan cover plate, for passive cooling (supplied loose)
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
- 4 cable clamp rails (T-head) for outer mounting level, to fit enclosure depth (supplied loose)
- 10 cable shunting rings (metal version), 125 x 65 mm (supplied loose)
- Connection accessories for potential equalisation incl. central earthing point, pre-configured
- IPPC pallet

Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

Note:

- Depending on the siting type and location, the door opening may vary for selected applications

with glazed door, pre-configured, with 482.6 mm (19") swing frame

Units U	Packs of	40	Cat. 34, page
Width mm		800	
Height mm		2000	
Height including base/plinth mm		2100	
Depth mm		800	
Model No.	1 pc(s).	5507.170	
Accessories			
Fan mounting plates	1 pc(s).	5502.020	437
Cable route on the mounting frame	1 pc(s).	5502.120	672
C rails	4 pc(s).	7828.080	613
Cable clamp rails	4 pc(s).	7828.082	669
Slide rails	2 pc(s).	7063.000	
Swing frame stay	5 pc(s).	1979.200	681
Ergoform-S lock system	1 pc(s).	2435.000	568

Network/server enclosures TS IT



IT power Cat. 34, page 407 IT cooling Cat. 34, page 427 IT monitoring Cat. 34, page 445 System accessories Cat. 34, page 507

Material:

- Sheet steel
- Aluminium
- Glazed aluminium door with 3 mm single-pane safety glass

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035
- Interior installation: RAL 9005

Protection category IP to IEC 60 529:

- IP 55 only in conjunction with baying seal or screw-fastened side panels

Load capacity of the 482.6 mm (19") mounting angles:

- 10000 N

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Glazed aluminium door at the front, 180° hinges
- Sheet steel door at the rear, 180° hinges

- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Roof plate, one-piece, solid
- Base tray and gland plate, multi-piece, solid
- Two 482.6 mm (19") mounting frames, front and rear, depth-variable
- Baying seal and sealing kit for gland plates (supplied loose)
- Connection accessories for potential equalisation with earthing point (supplied loose)
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
- IPPC pallet

Note:

- Depending on the siting type and location, the door opening may vary for selected applications
- For enclosures with height and depth 2000 x 1200 mm / 2200 x 1000 mm / 2200 x 1200 mm, the matching side panels are optionally available and are supplied fitted to the enclosure

Approvals:

- UL
- cUL

Further technical information:

- Available on the Internet

with glazed door, IP 55, with 482.6 mm (19") mounting frame

Units U	Packs of	24	24	24	38	38	Cat. 34, page
Width mm		600	800	800	600	600	
Height mm		1200	1200	1200	1800	1800	
Depth mm		600	800	1000	600	800	
Distance between prefitted 482.6 mm (19") levels mm		345	545	745	345	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 105	87 / 165	87 / 165	147 / 105	
Model No.	1 pc(s).	5526.131	5503.131	5504.131	5527.131	5528.131	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8170.235	8175.235	8176.235	8186.235	8188.235	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.800	see page	8100.600	see page	511
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.855	5501.865	5501.865	5501.875	5501.875	692
Cable route on the mounting frame		-	-	-	-	-	
C rails	4 pc(s).	7828.060	7828.080	see page	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.082	see page	7828.062	see page	669

Network/server enclosures TS IT

with glazed door, IP 55, with 482.6 mm (19") mounting frame

Units U	Packs of	38	42	42	42	42	Cat. 34, page
Width mm		800	600	600	600	600	
Height mm		1800	2000	2000	2000	2000	
Depth mm		800	600	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		545	345	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		147 / 105	87 / 165	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5505.131	5529.131	5530.131	5508.131	5510.131	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8188.235	8106.235	8108.235	8100.235	–	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	8100.600	see page	see page	see page	511
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.885	5501.905	5501.905	5501.905	5501.905	692
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	7828.080	7828.060	see page	see page	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.062	see page	see page	see page	669

with glazed door, IP 55, with 482.6 mm (19") mounting frame

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	600	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between prefitted 482.6 mm (19") levels mm		445	545	745	745	545	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 65	147 / 105	87 / 165	87 / 365	147 / 105	
Model No.	1 pc(s).	5506.131	5507.131	5509.131	5511.131	5531.131	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8108.235	8100.235	–	8128.235	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	8100.800	see page	see page	see page	511
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.915	5501.915	5501.915	5501.915	5501.925	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	7828.080	see page	see page	see page	613
Cable clamp rails	4 pc(s).	see page	7828.082	see page	see page	see page	669

with glazed door, IP 55, with 482.6 mm (19") mounting frame

Units U	Packs of	47	47	47	47	47	Cat. 34, page
Width mm		600	600	800	800	800	
Height mm		2200	2200	2200	2200	2200	
Depth mm		1000	1200	800	1000	1200	
Distance between prefitted 482.6 mm (19") levels mm		745	745	545	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		87 / 165	147 / 305	147 / 105	87 / 165	147 / 305	
Model No.	1 pc(s).	5513.131	5515.131	5512.131	5514.131	5516.131	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	–	–	8128.235	–	–	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	8100.800	see page	see page	511
Air baffle plates for TS IT 482.6 mm (19") mounting frames	1 pc(s).	5501.925	5501.925	5501.935	5501.935	5501.935	692
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
C rails	4 pc(s).	see page	see page	7828.080	see page	see page	613
Cable clamp rails	4 pc(s).	see page	see page	7828.082	see page	see page	669

Network/server enclosures TS IT



IT power Cat. 34, page 407 **IT cooling** Cat. 34, page 427 **IT monitoring** Cat. 34, page 445 **System accessories** Cat. 34, page 507

Material:

- Sheet steel
- Aluminium

Surface finish:

- Enclosure frame: Dipcoat-primed
- Interior installation: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure frame and panels: RAL 7035

Protection category IP to IEC 60 529:

- IP 55 only in conjunction with baying seal or screw-fastened side panels

Supply includes:

- TS 8 enclosure frame with doors and roof plate
- Glazed aluminium door at the front (180°)
- Sheet steel door at the rear, 180° hinges
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- Roof plate, one-piece, solid
- Base tray and gland plate, multi-piece, solid
- Baying seal and sealing kit for gland plates (supplied loose)
- Connection accessories for potential equalisation with earthing point (supplied loose)
- IPPC pallet

Note:

- Depending on the siting type and location, the door opening may vary for selected applications
- For enclosures with height and depth 2000 x 1200 mm / 2200 x 1000 mm / 2200 x 1200 mm, the matching side panels are optionally available and are supplied fitted to the enclosure

Approvals:

- cUL

Further technical information:

Available on the Internet

with glazed door, IP 55, empty enclosure

Width mm	Packs of	600	600	600	600	600	Cat. 34, page
Height mm		800	1200	1800	2000	1800	
Depth mm		600	600	600	600	800	
Model No.	1 pc(s).	5525.790	5526.790	5527.790	5529.790	5528.790	
Accessories							
Side panels, screw-fastened, sheet steel	2 pc(s).	8173.235	8170.235	8186.235	8106.235	8188.235	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	8100.600	8100.600	8100.600	see page	511
Cable route on the mounting frame	1 pc(s).	-	-	-	5502.120	-	672
C rails	4 pc(s).	7828.060	7828.060	7828.060	7828.060	see page	613
Cable clamp rails	4 pc(s).	7828.062	7828.062	7828.062	7828.062	see page	669
Component shelf for frame attachment	1 pc(s).	7165.035	7165.035	7165.035	7165.035	7166.735	627

Network/server enclosures TS IT

with glazed door, IP 55, empty enclosure

Width mm	Packs of	600	600	600	600	Cat. 34, page
Height mm		2000	2200	2000	2200	
Depth mm		800	800	1000	1000	
Model No.	1 pc(s).	5530.790	5531.790	5508.790	5513.790	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	8108.235	8128.235	8100.235	–	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid		see page	see page	see page	see page	511
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
C rails		see page	see page	see page	see page	613
Cable clamp rails		see page	see page	see page	see page	669
Component shelf for frame attachment	1 pc(s).	7166.735	7166.735	7166.735	7166.735	627

with glazed door, IP 55, empty enclosure

Width mm	Packs of	600	600	800	800	Cat. 34, page
Height mm		2000	2200	2000	1200	
Depth mm		1200	1200	600	800	
Model No.	1 pc(s).	5510.790	5515.790	5506.790	5503.790	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	–	–	8106.235	8175.235	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	see page	see page	see page	8100.800	511
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	–	672
C rails	4 pc(s).	see page	see page	see page	7828.080	613
Cable clamp rails	4 pc(s).	see page	see page	see page	7828.082	669
Component shelf for frame attachment	1 pc(s).	7166.735	7166.735	7185.035	7186.735	627

with glazed door, IP 55, empty enclosure

Width mm	Packs of	800	800	800	800	Cat. 34, page
Height mm		1800	2000	2200	1200	
Depth mm		800	800	800	1000	
Model No.	1 pc(s).	5505.790	5507.790	5512.790	5504.790	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	8188.235	8108.235	8128.235	8176.235	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	8100.800	8100.800	see page	511
Cable route on the mounting frame	1 pc(s).	–	5502.120	5502.120	–	672
C rails	4 pc(s).	7828.080	7828.080	7828.080	see page	613
Cable clamp rails	4 pc(s).	7828.082	7828.082	7828.082	see page	669
Component shelf for frame attachment	1 pc(s).	7186.735	7186.735	7186.735	7186.735	627

with glazed door, IP 55, empty enclosure

Width mm	Packs of	800	800	800	800	Cat. 34, page
Height mm		2000	2200	2000	2200	
Depth mm		1000	1000	1200	1200	
Model No.	1 pc(s).	5509.790	5514.790	5511.790	5516.790	
Accessories						
Side panels, screw-fastened, sheet steel	2 pc(s).	8100.235	–	–	–	534
Baying connector, external	6 pc(s).	8800.490	8800.490	8800.490	8800.490	544
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	511
Flex-Block trim panels, 100 mm, solid		see page	see page	see page	see page	511
Cable route on the mounting frame	1 pc(s).	5502.120	5502.120	5502.120	5502.120	672
C rails		see page	see page	see page	see page	613
Cable clamp rails		see page	see page	see page	see page	669
Component shelf for frame attachment	1 pc(s).	7186.735	7186.735	7186.735	7186.735	627

Cable management enclosure – more space for flexibility



The cable management enclosure is the ideal solution when you need to manage large quantities of cables, especially surplus cables. Because it is fitted as standard with six punched sections with mounting flanges, the enclosure is perfectly equipped to accommodate a wide range of cable management systems. The cable management enclosure can also be used for the symmetrical balancing of cold/hot aisle containment.

The benefit to you:

- Optimum integration into TS IT rack suites, 2000 mm high and 1000 / 1200 mm deep
- Front and rear doors allow easy access
- Fast cable entry in the base and roof section, thanks to integral brush strips



Cable management enclosure



Cable management Cat. 34, page 650 **System accessories** Cat. 34, page 507 **IT monitoring** Cat. 34, page 446 **IT cooling** Cat. 34, page 428

For laying, securing and storing cables or as an empty enclosure with uneven LCP installations.

Applications:

- As a cable management enclosure between fully configured network and server racks
- As an empty enclosure for symmetrical balancing in cold/hot aisle containment with an uneven number of LCPs in two enclosure suites
- As a placeholder for easy retrofitting of LCP installations

Benefits:

- Optimum accommodation of surplus cables and structured cable management

Material:

- Sheet steel
- Aluminium

Surface finish:

- Enclosure frame: Dipcoat-primed
- Doors and roof: Dipcoat-primed, powder-coated

Colour:

- Enclosure: RAL 7035
- Front: RAL 9005

Supply includes:

- Enclosure frame with door(s)
- Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E
- 2 roof/base plates, with cut-outs for cable entry via brush strips
- 3 TS punched sections with mounting flanges mounted on the left and right
- Baying seal

Note:

- For positioning at the start/end of an enclosure suite, a side panel will be required

Further technical information:

Available on the Internet

for TS IT

Width mm	Packs of	300	300	Cat. 34, page
Height mm		2000	2000	
Depth mm		1000	1200	
Model No.		3313.100	3313.120	
Accessories				
Side panels, divided	1 pc(s).	5501.030	5501.040	536
Nylon tape supports	10 pc(s).	5502.155	5502.155	668
Cable manager	20 pc(s).	5502.405	5502.405	670
Cable shunting ring		see page	see page	670
Surplus cable holder	1 pc(s).	7220.500	7220.500	672
Support	1 pc(s).	7246.500	7246.500	694

Network enclosures TE 8000 – Efficient and cost-effective



Rack without disruptive enclosure frame

- Optimum accessibility from all sides
- Maximum utilisation of internal space
- Lightning-quick assembly



Simple assembly

- Quick removal and mounting of doors and side panels
- System roof for cable entry and active ventilation
- System accessories for quick and direct installation



Variable at all levels

- Universal interior installation with depth-variable attachment
- Direct installation on the 19" mounting frame
- Can be dismantled for transporting to confined locations



Network enclosures TE 8000



System accessories Cat. 34, page 507 **IT monitoring** Cat. 34, page 445 **IT cooling** Cat. 34, page 427 **IT power** Cat. 34, page 407

Benefits:

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

Material:

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

Surface finish:

- Mounting frame: Dipcoat-primed
- Enclosure panels: Powder-coated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Glazed door at the front, including 130° hinge, designer handle and security lock 3524 E
- Sheet steel door at the rear, including 130° hinge, security lock 3524 E

- Base frame with maximum cut-out (for optional population with module plates)
 - Roof plate including concealed cut-out for cable entry and optional fan
 - 4 levelling feet, M10 (supplied loose)
 - 4 spacers, 20 mm (supplied loose) to raise the roof plate
- Please observe the product-specific scope of supply.

Further technical information:

Available on the Internet

Width 600 mm

Units U	Packs of	11	11	24	24	42	42	Page
Width mm		600	600	600	600	600	600	
Height mm		600	600	1200	1200	2000	2000	
Depth mm		600	800	600	800	600	800	
Distance between prefitted 482.6 mm (19") levels mm		495	495	495	495	495	495	
Free mounting space to the 482.6 mm (19") level, front/rear mm		30 / 30	130 / 130	30 / 30	130 / 130	30 / 30	130 / 130	
Max. load capacity (static) per enclosure kg		400	400	400	400	400	400	
Model No.	1 pc(s).	7888.390	7888.410	7888.430	7888.440	7888.500	7888.510	
Product-specific scope of supply								
Side panels, lockable, including security lock 3524 E	2 pc(s).	■	■	■	■	■	■	
Accessories								
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	8100.000	8100.000	Cat. 34, 511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.602	8100.602	8100.602	8100.602	Cat. 34, 511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.600	see page	8100.600	see page	8100.600	see page	Cat. 34, 511
Side panels		-	-	-	-	-	-	
Baying kit	4 pc(s).	7000.640	7000.640	7000.640	7000.640	7000.640	7000.640	63
Brush kit	2 pc(s).	7888.610	7888.610	7888.610	7888.610	7888.610	7888.610	63
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.020	5502.020	5502.020	5502.020	Cat. 34, 437
Fan expansion kit	1 pc(s).	7980.000	7980.000	7980.000	7980.000	7980.000	7980.000	Cat. 34, 438
Complete earthing kit	1 pc(s).	7000.675	7000.675	7000.675	7000.675	7000.675	7000.675	64
Component shelf, static installation	1 pc(s).	7000.620	7000.620	7000.620	7000.620	7000.620	7000.620	65
Component shelf, pull-out	1 pc(s).	7000.625	7000.625	7000.625	7000.625	7000.625	7000.625	66
Slide rails	2 pc(s).	7963.410	7963.410	7963.410	7963.410	7963.410	7963.410	67

Network enclosures TE 8000

Width 800 mm

Units U	Packs of	24	42	42	42	Page
Width mm		800	800	800	800	
Height mm		1200	2000	2000	2000	
Depth mm		800	600	800	800	
Distance between prefitted 482.6 mm (19") levels mm		495	495	495	495	
Free mounting space to the 482.6 mm (19") level, front/rear mm		130 / 130	30 / 30	130 / 130	130 / 130	
Max. load capacity (static) per enclosure kg		400	400	400	400	
Model No.	1 pc(s).	7888.460	7888.520	7888.530	7888.532	
Product-specific scope of supply						
Side panels, lockable, including security lock 3524 E	2 pc(s).	■	■	■	–	
Baying kit	4 pc(s).	–	–	–	■	
Accessories						
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	8100.000	Cat. 34, 511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.802	8100.802	8100.802	8100.802	Cat. 34, 511
Flex-Block trim panels, 100 mm, solid	2 pc(s).	8100.800	see page	8100.800	8100.800	Cat. 34, 511
Side panels	2 pc(s).	–	–	–	7888.652	63
Baying kit	4 pc(s).	7000.640	7000.640	7000.640	–	63
Brush kit	2 pc(s).	7888.612	7888.612	7888.612	7888.612	63
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.020	5502.020	Cat. 34, 437
Fan expansion kit	1 pc(s).	7980.000	7980.000	7980.000	7980.000	Cat. 34, 438
Complete earthing kit	1 pc(s).	7000.675	7000.675	7000.675	7000.675	64
Component shelf, static installation	1 pc(s).	7000.620	7000.620	7000.620	7000.620	65
Component shelf, pull-out	1 pc(s).	7000.625	7000.625	7000.625	7000.625	66
Slide rails	2 pc(s).	7963.410	7963.410	7963.410	7963.410	67



Network enclosures TE 8000



System accessories Cat. 34, page 507 **IT monitoring** Cat. 34, page 445 **IT cooling** Cat. 34, page 427 **IT power** Cat. 34, page 407

Benefits:

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

Material:

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

Surface finish:

- Mounting frame: Dipcoat-primed
- Enclosure panels: Powder-coated

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Glazed door at the front, including 130° hinge, designer handle and security lock 3524 E
- Sheet steel door at the rear, including 130° hinge, security lock 3524 E

- Side panels, lockable, including security lock 3524 E
- Base frame with maximum cut-out (for optional population with module plates)
- Roof plate including concealed cut-out for cable entry and optional fan
- 4 levelling feet, M12, including base/plinth adaptor sleeve (supplied loose)
- 4 spacers, 20 mm (supplied loose) to raise the roof plate
- Flex-Block base/plinth 100 mm, vented
- Tested frame earthing to IEC 60 950, fitted

- 4 C rails, for cable clamping in the enclosure depth via cable clamps (supplied loose)
- 10 cable shunting rings (metal version), 125 x 65 mm (supplied loose)
- 50 multi-tooth screws M5, cage nuts M5, conductive (supplied loose)
- Brush kit for cable entry in the roof (supplied loose)

Further technical information:

Available on the Internet

Pre-configured

Units U	Packs of	24	42	Page
Width mm		800	800	
Height mm		1200	2000	
Height including base/plinth mm		1300	2100	
Depth mm		800	800	
Distance between prefitted 482.6 mm (19") levels mm		495	495	
Free mounting space to the 482.6 mm (19") level, front/rear mm		130 / 130	130 / 130	
Max. load capacity (static) per enclosure kg		400	400	
Model No.	1 pc(s).	7888.840	7888.850	
Accessories				
Baying kit	4 pc(s).	7000.640	7000.640	63
Fan mounting plates	1 pc(s).	5502.020	5502.020	Cat. 34, 437
Fan expansion kit	1 pc(s).	7980.000	7980.000	Cat. 34, 438
Component shelf, static installation	1 pc(s).	7000.620	7000.620	65
Component shelf, pull-out	1 pc(s).	7000.625	7000.625	66
Slide rails	2 pc(s).	7963.410	7963.410	67
Socket strip for TE	1 pc(s).	7000.630	7000.630	Cat. 34, 423
Transport castors	4 pc(s).	7000.672	7000.672	63

Network enclosures TE 8000



System accessories Cat. 34, page 507 **Power System Module** Cat. 34, page 409 **IT monitoring** Cat. 34, page 445 **Climate control** Cat. 34, page 307

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:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Self-supporting 482.6 mm (19") mounting frames, front and rear, depth-variable
- Sheet steel door vented (vented surface area > 67%), front with designer handle, 130° hinge, security lock 3524 E

- Sheet steel door vented (vented surface area > 67%), rear with 130° hinge, security lock 3524 E
 - Base frame with maximum cut-out (for optional population with module plates)
 - Roof plate including concealed cut-out for cable entry and optional fan
 - 4 levelling feet, M10 (supplied loose)
 - 4 spacers, 20 mm (supplied loose) to raise the roof plate
- Please observe the product-specific scope of supply.

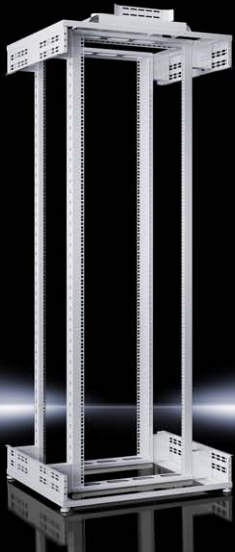
Further technical information:

Available on the Internet

Depth 1000 mm, vented

Units U	Packs of	24	42	42	Page
Width mm		600	600	800	
Height mm		1200	2000	2000	
Depth mm		1000	1000	1000	
Distance between prefitted 482.6 mm (19") levels mm		745	745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		80 / 130	80 / 130	80 / 130	
Max. load capacity (static) per enclosure kg		700	700	700	
Model No.	1 pc(s).	7888.875	7888.882	7888.892	
Product-specific scope of supply					
Side panels, lockable, including security lock 3524 E	2 pc(s).	■	-	-	
Accessories					
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	8100.000	8100.000	Cat. 34, 511
Flex-Block trim panels, 100 mm, vented	2 pc(s).	8100.602	8100.602	8100.802	Cat. 34, 511
Flex-Block trim panels, 100 mm, solid		see page	see page	see page	Cat. 34, 511
Baying kit	4 pc(s).	7000.640	7000.640	7000.640	63
Side panels	2 pc(s).	-	7888.653	7888.653	63
Brush kit	2 pc(s).	7888.610	7888.610	7888.612	63
Complete earthing kit	1 pc(s).	7000.675	7000.675	7000.675	64
Component shelf, static installation	1 pc(s).	5501.665	5501.665	5501.665	Cat. 34, 630
Component shelf, pull-out	1 pc(s).	5501.685	5501.685	5501.685	Cat. 34, 630
Slide rails, heavy-duty	2 pc(s).	7063.740	7063.740	7063.740	66
Slide rails, depth-variable	2 pc(s).	5501.480	5501.480	5501.480	Cat. 34, 687
Cable clamp rails, depth-variable	4 pc(s).	7858.162	7858.162	7858.162	Cat. 34, 669

Distributor racks



System accessories Cat. 34, page 507 **19" installation** Cat. 34, page 678 **TE 8000** Page 58

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

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Supply includes:

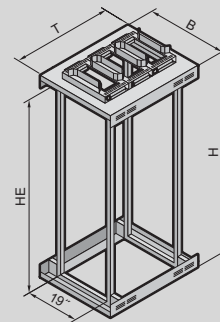
- Self-supporting mounting frame, with 482.6 mm (19") mounting level front and rear
- Open roof frame for cable entry
- 3 cable routing trays
- Open base frame with 2 punched sections with mounting flanges for individual configuration fitted in the width
- 4 levelling feet, M10 (supplied loose)

Note:

- The overall height is 2100 mm, including 100 mm cable routing trays

Further technical information:

Available on the Internet



TE 8000 open

Units U	Packs of	42	42	Page
Width (B) mm		600	800	
Height (H) mm		2000	2000	
Depth (T) mm		1000	1000	
Distance between prefitted 482.6 mm (19") levels mm		745	745	
Free mounting space to the 482.6 mm (19") level, front/rear mm		80 / 130	80 / 130	
Max. load capacity (static) per enclosure kg		700	700	
Model No.	1 pc(s).	7888.940	7888.944	
Accessories				
Component shelf, static installation	1 pc(s).	5501.665	5501.665	Cat. 34, 630
Component shelf, pull-out	1 pc(s).	5501.685	5501.685	Cat. 34, 630
Slide rails, heavy-duty	2 pc(s).	7063.740	7063.740	66
Slide rails, depth-variable	2 pc(s).	5501.480	5501.480	Cat. 34, 687
Cable clamp rails, depth-variable	4 pc(s).	7858.162	7858.162	Cat. 34, 669
Cable clamp rails	4 pc(s).	7828.062	7828.062	Cat. 34, 669
C rails	4 pc(s).	7828.060	7828.060	Cat. 34, 613
Cable route on the mounting frame	1 pc(s).	7000.685	7000.685	66
Cable duct	1 pc(s).	-	5502.105	Cat. 34, 673
Shunting ring	4 pc(s).	-	7220.600	Cat. 34, 670
Cable routing bars, 482.6 mm (19") attachment	4 pc(s).	7111.224	7111.224	Cat. 34, 673
Cable management panel		see page	see page	Cat. 34, 674

Network enclosures TE 8000

Accessories

Side panels

for TE 8000

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

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Side panels, lockable, including security lock 3524 E

For enclosure height mm	For enclosure depth mm	Packs of	Model No.
2000	800	2 pc(s).	7888.652
2000	1000	2 pc(s).	7888.653



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. Baying of TE 8000 to TE 7000 enclosures is supported.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 7035

Supply includes:

- Assembly parts

Packs of	Model No.
4 pc(s).	7000.640



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.

Supply includes:

- Assembly parts

Max. load capacity (static) per enclosure N	Packs of	Model No.
3000	4 pc(s).	7000.672



Brush kit

for TE 8000

For cable entry in the roof plate.

Benefits:

- For simple top-mounting on the cut-out edge

Material:

- Plastic support with brushes

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	7888.610
800	2 pc(s).	7888.612



Network enclosures TE 8000

Accessories



Security handle

with code

Flexible access option with individual 3-digit numerical code, without key, or via the master key function with additional installation of a 40 or 45 mm semi-cylinder to DIN 18 252, irrespective of the numerical code.

Colour	Design	Packs of	Model No.
RAL 7035	Ergoform-S handle	1 pc(s).	7200.810



Accessories:

- Semi-cylinders, see Catalogue 34, page 565
- Handle adaptor, see Catalogue 34, page 549
- Lock inserts, see Catalogue 34, page 570



Handles, electromagnetic

for CMC III

For control and monitoring via a central CMC III control unit.

Further technical information:

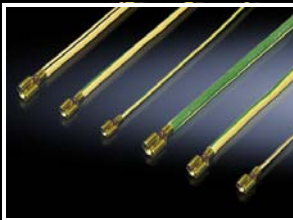
Available on the Internet

Design	Ergoform-S handle
To fit enclosure type	TE
Primary input voltage	24 V DC
Operating temperature range	+5°C...+40°C
Product-specific scope of supply	Connection cable (3 m) with RJ 12 connector
Packs of	1 pc(s).
Model No.	7320.700



Also required:

- CMC III Processing Units, see Catalogue 34, page 450
- CMC III CAN bus access, see Catalogue 34, page 452
- CMC III CAN bus connection cable, see Catalogue 34, page 457



Complete earthing kit

for TE

To DIN EN 60 950/VDE 0805, Ø 4 mm². 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.

Supply includes:

- 4 earth straps, 300 mm
- 4 earth straps, 350 mm
- Assembly parts

Packs of	Model No.
1 pc(s).	7000.675

Network enclosures TE 8000

Accessories

Module plates

for TE

The base area of the TE may be varied as required using the module plates.

Material:

- Sheet steel, zinc-plated

Supply includes:

- Assembly parts

Design Compensating panel

Width mm	Depth mm	For enclosure width mm	Model No.
450	50	600	7526.750
450	150	600	7526.755
650	50	800	7526.790
650	150	800	7526.795

Design Solid

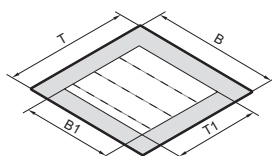
Width mm	Depth mm	For enclosure width mm	Model No.
450	200	600	7526.829
650	200	800	7526.834

Design Vented

Width mm	Depth mm	For enclosure width mm	Model No.
450	200	600	7526.760
450	550	600	7526.770
450	750	600	7526.780
650	200	800	7526.800
650	550	800	7526.785
650	750	800	7526.820

Design with brush strip

Width mm	Depth mm	For enclosure width mm	Model No.
450	200	600	7526.850
650	200	800	7526.860



Please note the following when selecting suitable module plates:

B1 = Enclosure width (B) - 150 mm

T1 = Enclosure depth (T) - 50 mm

Component shelf, static installation

for TE

The component shelf is attached directly at the side to the front and rear 482.6 mm (19") mounting frames for TE.

Material:

- Sheet steel

Colour:

- RAL 7035

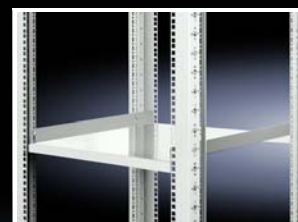
Supply includes:

- Assembly parts

Note:

- Not suitable for combination with telescopic slides.

Contact surface, width mm	505
Contact surface, depth mm	410
Distance between 482.6 mm (19") levels mm	495
Load capacity (static) N	300
Packs of	1 pc(s).
Model No.	7000.620



Network enclosures TE 8000

Accessories



Component shelf, pull-out

for TE

For mounting between two 482.6 mm (19") levels.

Benefits:

- Depth-variable to adjust to the 482.6 mm (19") distance between levels in a 25 mm pitch pattern
- Fully extendible

Material:

- Base: Sheet steel

Surface finish:

- Base: Spray-finished
- Mounting kit/telescopic slides: Zinc-plated

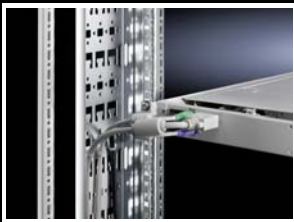
Colour:

- RAL 7035

Supply includes:

- Component shelf, vented
- Telescopic slides with mounting kit

Contact surface, width mm	409
Contact surface, depth mm	500
Distance between 482.6 mm (19") levels mm	395 - 645
Load capacity (static) N	500
Packs of	1 pc(s).
Model No.	7000.625



Cable route on the mounting frame

for TE

For vertical cable entry at the side of the 482.6 mm (19") mounting frame for TE, independently from the enclosure frame.

Material:

- Sheet steel

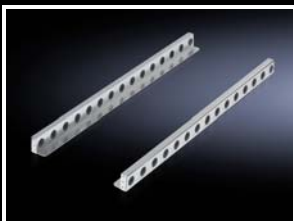
Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

Width mm	Height mm	Packs of	Model No.
100	1700	1 pc(s).	7000.685



Slide rails, heavy-duty

for TS IT, TE

With L-shaped mounting angles or TE mounting frame and a clearance between levels of 740 mm. Easily and quickly installed due to locating brackets for the rear level.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Load capacity (static):

- 1000 N

Supply includes:

- Assembly parts

Distance between 482.6 mm (19") levels mm	Contact surface, Width mm	Contact surface, Depth mm	Packs of	Model No.
745	50	734	2 pc(s).	7063.740



Network enclosures TE 8000

Accessories

Slide rails

for TE 8000

For mounting between the front and rear 482.6 mm (19") mounting levels. The slide rails can be used to support heavy 482.6 mm (19") components.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

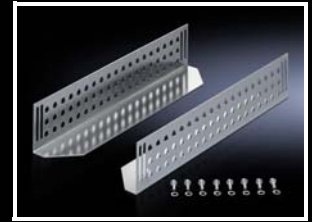
Load capacity (static):

– 800 N

Supply includes:

– Assembly parts

Distance between 482.6 mm (19") levels mm	Contact surface, Width mm	Contact surface, Depth mm	Packs of	Model No.
395	85	324	2 pc(s).	7963.310
495	85	424	2 pc(s).	7963.410
595	85	524	2 pc(s).	7963.510
695	85	624	2 pc(s).	7963.610
795	85	724	2 pc(s).	7963.710



Mounting kit for door-operated switch

for TE 8000

For attaching a door-operated switch to the roof frame of the TE 8000 network enclosure.

Supply includes:

– Assembly parts

Packs of	Model No.
1 pc(s).	7888.615



PDU mounting adaptor

for TE

For installing the power distribution unit PDU in the zero U space of the TE. The divider kit included with the supply of the PDU is required for mounting.

Material:

– Sheet steel, zinc-plated

Supply includes:

– Assembly parts

Packs of	Model No.
2 pc(s).	7000.688



Mounting kit

for modular PDU (PSM)

For mounting in TE racks.

Supply includes:

– Assembly parts

Packs of	Model No.
2 pc(s).	7000.684



PC enclosure systems



Monitors, keyboards Cat. 34, page 706 **Climate control** Cat. 34, page 307 **PC enclosure system, stainless steel** Cat. 34, page 187

For the use of monitors up to 24"

Secure accommodation of all PC components, from monitors, to PCs, to keyboards. For ultimate ease of operation in a modern design. Perfect protection from humidity and dirt, temperature fluctuations and unauthorised access.

Material:

- Enclosure, door, rear door
Sheet steel
- Handles, decorative trim panels: Plastic
- Door trim panels: Aluminium

Surface finish:

- Enclosure and door: Dipcoat-primed, powder-coated on the outside, textured paint

Colour:

- Enclosure, door, decorative trim panels: RAL 7035
- Handle: Similar to RAL 9006
- Central door section: RAL 7015

Protection category IP to IEC 60 529:

- IP 55

Protection category NEMA:

- NEMA 12

Supply includes:

- Enclosure, door, rear door
- Please observe the product-specific scope of supply.

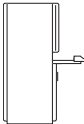
Approvals:

- UL
- cUL

Further technical information:

Available on the Internet

Width 800 mm

			
Width mm	Packs of	800	Cat. 34, page
Height mm		1600	
Depth mm		636	
Material		Mounting compartment, support: Sheet steel Viewing window: Single-pane safety glass	
Surface finish		Mounting compartment, support: powder-coated	
Product-specific scope of supply			
Glazed door, top		■	
Keyboard drawer		■	
Component shelf		■	
Model No.	1 pc(s).	5386.000	
Max. keyboard dimensions (WxHxD) mm		480 x 70 x 260	
Weight kg		117.6	
Accessories			
Base/plinth components, front and rear, 100 mm	2 pc(s).	8601.800	513
Base/plinth trim panels, side, 100 mm	2 pc(s).	8601.060	514
Base/plinth components, front and rear, 200 mm	2 pc(s).	8602.800	513
Base/plinth trim panels, side, 200 mm	2 pc(s).	8602.060	514
Flex-Block corner pieces, 100 mm	4 pc(s).	8100.000	511
Flex-Block trim panels, 100 mm, solid		see page	511
Flex-Block corner pieces, 200 mm	4 pc(s).	8200.000	511
Flex-Block trim panels, 200 mm, solid		see page	511
Partial mounting plates	1 pc(s).	8614.880	596
Paper removal flap	1 pc(s).	6903.200	713
Socket strips		see page	422
Comfort handle		see page	561

TS 8 and SE 8 stainless steel – now even better

Applications in harsh environments often need materials which can withstand even the most aggressive influences. To meet these requirements even more effectively and provide even greater protection, in future all external parts (such as lock plates, enclosure hinge, lock inserts etc.) will be made entirely from stainless steel. With the TS 8 and SE 8 stainless steel, you are therefore ideally prepared to meet even the toughest conditions.



System accessories



Support section CP 60

Open

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

Material:

- Support section: Extruded aluminium section
- Clamping elements: Steel
- Cover section: Plastic

Colour:

- Support section: RAL 7035
- Cover: RAL 7024

Supply includes:

- Support section
- Clamping elements for stability
- Clip-in lid

Further technical information:

Available on the Internet

Length mm	Weight kg	Packs of	Model No.
1000	5.6	1 pc(s).	6206.110



Clamping elements

for support sections CP 60/120, open

For additional protection against rotation and twisting of the open section.

Benefits:

- Two-piece element, may also be retro-fitted

Material:

- Steel

Further technical information:

Available on the Internet

Packs of	Model No.
4 pc(s).	6212.220



Intermediate hinge CP 120

without height offset

For vertically hinged connection of horizontal support sections within the support arm system.

Material:

- Intermediate hinge: Cast steel
- Concertina section: Plastic

Colour:

- Intermediate hinge: RAL 7035
- Concertina section: RAL 7024

Rotation range:

- approx. 180°
- Adjustable to a limited extent by means of 2 slotted steel discs

Supply includes:

- Concertina section
- Slotted discs and screws for restricting rotation range
- Adjusting screws
- Self-tapping screws for support section attachment
- Seals

Further technical information:

Available on the Internet

Rotating/tilting	Packs of	Model No.
■	1 pc(s).	6212.680



Wall-mounted hinge CP 120

Horizontal outlet, without height offset

For swivel mounting of the support arm on vertical surfaces.

Material:

- Wall-mounted hinge: Cast steel
- Concertina section: Plastic

Colour:

- Wall-mounted hinge: RAL 7035
- Concertina section: RAL 7024

Rotation range:

- approx. 180°
- Adjustable to a limited extent by means of 2 slotted steel discs

Supply includes:

- Concertina section
- Screws for restricting rotation range
- Adjusting screws
- Self-tapping screws for support section attachment
- Seals

Further technical information:

Available on the Internet

Rotating/tilting	Packs of	Model No.
■	1 pc(s).	6212.780



Coupling CP 180

for support arm connection Ø 130 mm

For swivel mounting the enclosure on the vertical section of the support arm system CP 180.

Material:

- Die-cast zinc
- Enclosure connection: Cast aluminium

Colour:

- RAL 7035

Rotation range:

- approx. 310°, lockable via clamping levers
- The range of rotation can be limited by inserting the pins provided

Supply includes:

- Pins to limit the rotation range
- Self-tapping screws for support section attachment
- Seals

Further technical information:

Available on the Internet

Weight kg	Rotating/tilting	Packs of	Model No.
5.3	■	1 pc(s).	6218.300



Pivot

with/without jib

For direct, vertically hinged integration into machines and systems.

Applications:

- Enclosure suspended or top-mounted

Benefits:

- With integral rotation range restricter

Installation options:

- To fit enclosures with support arm connection Ø 130 mm

Load capacity:

- 700 N

Rotation range:

- approx. 310°
- The range of rotation can be limited by inserting the grub screws provided

Further technical information:

Available on the Internet

Jib length mm	Colour	Packs of	Model No.
200	RAL 7024/7035	1 pc(s).	6206.850
–	RAL 7035	1 pc(s).	6206.870



System accessories



Adaptor for IP compartmental-isation

for support arm connection Ø 130 mm

For mounting commercially available cable entry components with an external diameter M63 x 1.5. For ensuring the protection category between the operating housing and stand/support arm system.

Applications:

- For connecting an operating housing to:
- Coupling CP 60/120/180 for support arm connection Ø 130 mm, 6206.300, 6212.300, 6218.300
- Attachment CP 60/120 for support arm connection Ø 130 mm, 6206.320, 6212.320
- Angle coupling 90°, CP 60/120, 6206.380, 6212.380

Material:

- Aluminium

Surface finish:

- Black anodised

Supply includes:

- Adaptor
- Seals
- Assembly screws

Further technical information:

Available on the Internet

Packs of	Model No.
1 pc(s).	6052.700



Adaptor CP 60 to CP 40

for stand and support arm systems

For the transition from CP 60 to 48 round tube.

Material:

- Steel

Colour:

- RAL 7035

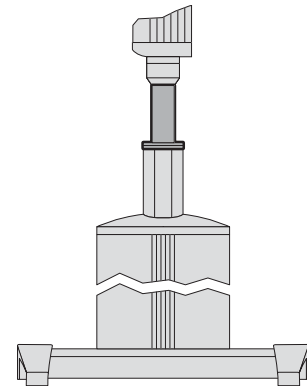
Supply includes:

- Adaptor
- Self-tapping screws for support section attachment
- Seal included

Further technical information:

Available on the Internet

Length mm	Weight kg	Rigid	Packs of	Model No.
300	1.81	■	1 pc(s).	6206.650



Keyboard support

for command panels or surfaces

Width mm	Weight kg	Packs of	Model No.
430	3.0	1 pc(s).	6321.010

Benefits:

- Adjustable to different keyboard depths via a simple slide function
- Connection to operating housings with support arm connection at the top or bottom
- Easily adjustable tilt angle
- Open support at the side prevents dirt from being deposited

Installation options:

- Operating housing with handle strips
- Operating housing for desktop TFT up to 24"
- External mounting on vertical surfaces and beneath horizontal surfaces

Technical specifications:

- Support surface fully depth adjustable from 128 - 228 mm

Material:

- Sheet steel
- Handrest: Extruded aluminium section

Surface finish:

- Textured paint
- Handrest: Natural anodised

Colour:

- RAL 7035

Supply includes:

- Support fully preassembled
- Nylon tape for attaching the keyboard
- Assembly parts

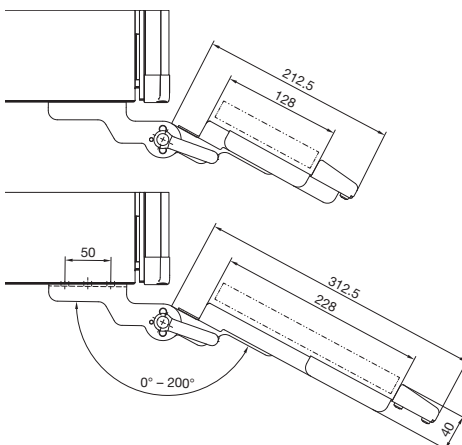
Further technical information:

Available on the Internet



Accessories:

- Support for mousepad, vertically hinged, see Catalogue 34, page 713



Interface flap

for RC circuit-breaker

Under the current Safety of Machinery Standard EN 60204-1, all externally accessible sockets on an enclosure must be fused with an RC circuit-breaker. Prepared for the installation of standard, 2-pole RCBO circuit-breakers.

Applications:

- As programming interface for controllers
- As maintenance access for networks
- For temporary connection of additional equipment
- For quick connection to existing network structures
- For programming and maintenance of integral components

Design:

- Spring-action terminals max. 2 x 2.5 mm, connection at rear

Benefits:

- Protection against short-circuit and overload
- Complies with EN 60 204
- The RC switch may be reset without opening the enclosure
- Spring mechanism raises the unlocked cover by 30°. This ensures that you do not forget to close the cover.

Functions:

- A snap fastener ensures reliable sealing. This may be locked if required.

Material:

- Mounting frame: Plastic PBT (black)
- Plastic flap: Polycarbonate (semi-transparent)

Protection category IP to IEC 60 529:

- IP 65

Supply includes:

- Interface flap, complete, consisting of plastic frame, socket (VDE), RJ 45 (jack/jack, Cat 5e) and cut-out for RC circuit-breaker
- Knockout provided for USB A (jack/jack)
- 3 mm double-bit with slot-in rotary knob

Note:

- Interface flap may only be used with fitted RC circuit-breaker

Further technical information:

Available on the Internet



Width mm	Height mm	Required mounting cut-out mm	Installation depth mm	Rated operating voltage V, ~, Hz	Rated current A	Packs of	Model No.
131	127	117 x 91	70	250, 1~, 50/60	10 - 16	1 pc(s).	2482.600

System accessories



Flex-Block trim panels, 100 mm, with brush strip

for Flex-Block corner pieces

For easy entry and exit of cables. For tool-free assembly. With symmetrical enclosure dimensions, trim panels are identical in the width and depth.

Material:

- Sheet steel

Colour:

- RAL 9005

Supply includes:

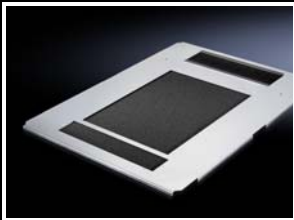
- 2 trim panels

Further technical information:

Available on the Internet

Height 100 mm

For enclosure width/ depth mm	Packs of	Model No.
600	2 pc(s).	8100.605
800	2 pc(s).	8100.805
1000	2 pc(s).	8100.105
1200	2 pc(s).	8100.125



Gland plate, one-piece, vented for TS IT

To completely cover the open base assembly in one piece. Perforated over the entire surface. This allows cold air to flow in from the base or base/plinth area. This ensures the inflow of cold air, particularly in enclosures with rack climate control. With a brush strip at the rear for user-friendly cable entry from below across the entire enclosure width. Integral guides permit simple accommodation of a filter mat, which is also readily replaced.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Gland plate, one-piece, vented, with cable entry at the rear
- Filter mat
- Assembly parts

For enclosure width mm	For enclosure depth mm	Packs of	Model No.
800	600	1 pc(s).	5502.310
800	800	1 pc(s).	5502.330
600	1000	1 pc(s).	5502.340
800	1000	1 pc(s).	5502.350
600	1200	1 pc(s).	5502.360
800	1200	1 pc(s).	5502.370



Also required:

- Base mount, see Catalogue 34, page 524



Accessories:

- Filter mat, see page 74



Filter mat for gland plate, one-piece, vented

The filter mat is easily cut to size according to the required cut-out.

Material:

- PPI 35-5/polyamide

To fit enclosure type	Packs of	Model No.
TS IT	1 pc(s).	5502.380

Rail

for EMC shielding bracket and strain relief

Combined rail for strain relief and EMC contacting of inserted cables.

Design:

- C rail to accommodate cable clamps
- T-head cut-outs on a 40 mm pitch pattern for cable clamping using cable ties

Benefits:

- Additional contacting on the left or right of the rail via existing holes (9 mm diameter)
- Prepared for tool-free mounting of EMC shielding brackets

Installation options:

- on the horizontal/vertical TS, SE, PC enclosure section
- may also be fitted without a retaining bracket on a mounting plate

Material:

- Extruded aluminium section

Surface finish:

- Chromium-free passivated

Supply includes:

- 1 rail
- 2 retaining brackets
- Assembly parts

Further technical information:

Available on the Internet

For enclosure width mm	Length mm	Packs of	Model No.
600	553	1 pc(s).	2388.650
800	753	1 pc(s).	2388.850
1000	953	1 pc(s).	2388.050
1200	1153	1 pc(s).	2388.125



Also required:

- EMC shielding bracket, see Catalogue 34, page 641
- Cable clamps, see Catalogue 34, page 666



Accessories:

- Bracket/spacer, see Catalogue 34, page 621
- Quick-assembly block, see Catalogue 34, page 621
- Angle piece, see Catalogue 34, page 621
- Earth straps, see Catalogue 34, page 644
- Earthing strap, see Catalogue 34, page 644



Possible alternative:

- C rails 30/15, see Catalogue 34, page 612



TS angle bracket, C-section

for attachment to the horizontal section

For fast attachment to the horizontal enclosure section or for cascaded cable routing between two horizontal punched sections with or without mounting flanges.

Installation options:

- On the horizontal TS enclosure section
- On the horizontal SE enclosure section, bottom
- On the horizontal SE enclosure section, top in the depth
- On enclosures and rails with rectangular system punching 12.5 x 10.5 mm.
- On the vertical TS, SE enclosure section via adaptor rails for PS compatibility

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- Angle bracket, left
- Angle bracket, right
- Assembly parts

Packs of	Model No.
8 pc(s).	7091.100



Also required:

- C rails, see Catalogue 34, page 613



Assembly instruction:

- Two angle brackets are needed to secure each C rail



Accessories:

- TS punched section with mounting flange, 17 x 73 mm, see Catalogue 34, page 606
- Adaptor rail, see Catalogue 34, page 610



System accessories



HD levelling feet

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
- Designed to EHEDG regulations, including certification

Material:

- Stainless steel 1.4301 (AISI 304)

Load capacity:

- Max. 7000 N static per levelling foot

Supply includes:

- Assembly parts and seals

Further technical information:

Available on the Internet

Design	Thread	Adjustment range mm	Packs of	Model No.
without base mount	M12	122 - 175	4 pc(s).	4000.240
with base attachment	M12	122 - 175	4 pc(s).	4000.250

Mounting angles additional fastening attachment

for TS IT

Prevents the mounting angles from twisting in case of unevenly distributed loads. Secured directly between the mounting angle and a mounting section on the outer mounting level of the TS frame structure.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Supply includes:

- Assembly parts

For enclosure width mm	Packs of	Model No.
600	2 pc(s).	5501.225
800	2 pc(s).	5501.235



Also required:

- TS punched section with mounting flange, 17 x 73 mm, see Catalogue 34, page 606



Assembly instruction:

- For the outer mounting level, the TS punched section with mounting flange 17 x 73 mm is additionally required

Partition

for TS IT

For rack mounting, suspended between two enclosures. With 3 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

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.

For enclosure height mm	For enclosure depth mm	Packs of	Model No.
2200	1000	1 pc(s).	7831.725



Accessories:

- Baying connector, external, see Catalogue 34, page 544

Mounting frame, 482.6 mm (19")

for TS, TS IT

Firmly linked 482.6mm (19") mounting frame for integration of a 482.6 mm (19") mounting level within a TS frame structure. Profiles analogous to TS IT for complete system compatibility, incl. tool-free assembly. Depth-variable mounting between the roof and base frames. Individual height units bi-directionally numbered. Mounting frame at the front, prepared for the integration of cable management and Dynamic Rack Control (RFID), mounting frame at the rear for space-saving integration of the PDU busbar, in the Zero-U space on both sides.

Material:

- Sheet steel

Surface finish:

- Primed

Colour:

- RAL 9005

Load capacity:

- Up to 10,000 N static load, with even load distribution on two 482.6 mm (19") mounting frames, with full installation.

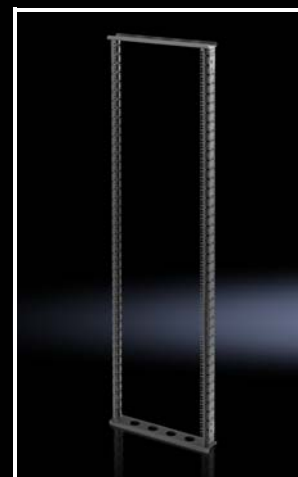
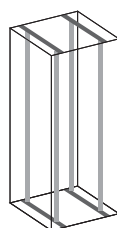
Supply includes:

- Assembly parts

Note:

- The outer mounting level of the enclosure frame is left free for other installed equipment; all-round compartmentalisation with air baffle plates is supported

For enclosure width mm	For enclosure height mm	Installation position	Packs of	Model No.
600	1800	Front	1 pc(s).	5501.242
600	1800	Rear	1 pc(s).	5501.245
800	1800	Front	1 pc(s).	5501.252
800	1800	Rear	1 pc(s).	5501.255
600	2000	Front	1 pc(s).	5501.262
600	2000	Rear	1 pc(s).	5501.265
800	2000	Front	1 pc(s).	5501.272
800	2000	Rear	1 pc(s).	5501.275
600	2200	Front	1 pc(s).	5501.282
600	2200	Rear	1 pc(s).	5501.285
800	2200	Front	1 pc(s).	5501.292
800	2200	Rear	1 pc(s).	5501.295



Air baffle plates for TS IT 482.6 mm (19") mounting frames

With all-round brush strip for collision-free shielding with installed bar systems on the outer mounting level.

Applications:

- To separate the hot/cold zones within an enclosure with aisle containment or when using an LCP system.

Material:

- Sheet steel
- Blanking panel: Plastic, to UL 94-V0
- Brush strip: Plastic, UL 94-V0

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Supply includes:

- Air baffle plate with all-round brush strip

For enclosure width mm	For enclosure height mm	Product-specific scope of supply	Packs of	Model No.
600	1200	-	1 pc(s).	5501.855
800	1200	1 blanking panel, 3 U	1 pc(s).	5501.865
600	1800	-	1 pc(s).	5501.875
800	1800	2 blanking panels, 3 U	1 pc(s).	5501.885
600	2000	-	1 pc(s).	5501.905
800	2000	2 blanking panels, 3 U	1 pc(s).	5501.915
600	2200	-	1 pc(s).	5501.925
800	2200	2 blanking panels, 3 U	1 pc(s).	5501.935



System accessories



Component shelf, pull-out, 2 U for one 482.6 mm (19") mounting level

For simple, front installation of wall-mounted or floor-standing enclosures with at least one 482.6 mm (19") mounting level. This complete set includes the pre-configured variant including telescopic slides, moulded handle, flange and locking pins.

Benefits:

- Simple, tool-free assembly
- Fully extendible
- Self-locking

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Supply includes:

- Assembly parts

Contact surface, width mm	Contact surface, depth mm	Load capacity (static) N	Packs of	Model No.
430	300	250	1 pc(s).	5501.635

Small equipment box, 4 U, shielded

For shielded accommodation of small equipment and other accessories within a partitioned 482.6 mm (19") installation level. The small equipment box contains an adjustable mounting base which can be used to further sub-divide the box.

Material:

- Sheet steel

Surface finish:

- Spray-finished

Colour:

- RAL 9005

Load capacity:

- 200 N surface load, static

Supply includes:

- Small equipment box with brush strip
- 1 shelf

Packs of	Model No.
1 pc(s).	5501.900

Blanking panel, 3 U

Tool-free attachment, 482.6 mm (19")

The blanking panel is used to seal unused areas within the 482.6 mm (19") mounting level. Quick tool-free 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 populated racks.

Benefits:

- Fire protection: Self-extinguishing to UL 94 HB
- May be adjusted individually to size by snapping off prepunched 1 U elements
- Each individual element is self-supporting and may therefore be combined into larger units in conjunction with other elements

Packs of	Model No.
3 pc(s).	7151.305

Material:

- Plastic

Colour:

- RAL 9005

Supply includes:

- Blanking panel, 3 U, with integral quick-fastening

482.6 mm (19") fastener, 1 U

with contact

For simple screw connection of installation components within the 482.6 mm (19") mounting level. Simply slide onto the mounting angle from the inside and lock home.

Benefits:

- Fast positioning and installation instead of using individual cage nuts
- Integral contacting for potential equalisation
- Preconfigured 1 U support with 3 cage nuts, including centre attachment to standard EIA 310
- Supports multiple dismantling and reuse

Material:

- Sheet steel
- Zinc-plated

Note:

- All enclosures in the Rittal range have already been tested within their tolerances for the use of 482.6 mm (19") fasteners. Suitability for use in enclosures from other manufacturers cannot be guaranteed.

Thread	Packs of	Model No.
M5	24 pc(s).	2090.000



Also required:

- Assembly screws, see Catalogue 34, page 695
- Multi-tooth screws 7094.130, see Catalogue 34, page 694



Mini-comfort handle

for AE with cam, including VW E1 lock

For retro-fitting to AE enclosures with cam locks.

Installation options:

- Vertical handle mounting from an enclosure height of 380 mm
- Horizontal handle mounting from an enclosure width of 300 mm
- From an enclosure height of 500 mm, the mini comfort handle may only be fitted horizontally on the lower lock point
- From an enclosure height of 600 mm, the mini-comfort handle may be fitted to the lower locking point, rotated through 180° in the vertical

For enclosure width mm	For enclosure height mm	Packs of	Model No.
≥ 300	≥ 380	1 pc(s).	2537.045

Material:

- Die-cast zinc

Surface finish:

- Powder-coated

Colour:

- RAL 7035

Note:

- Only for use with VW, Audi, SEAT, SkodaAuto
- Supplied without key

Further technical information:

Available on the Internet



Corrosion protection primer

Single-component primers are ideal to protect against corrosion in areas where the paint has been removed due to cut-outs or similar. This serves to re-create corrosion resistance in the paint-free area. The primer satisfies the requirements of standard IEC 61439 for low-voltage and switchgear assemblies.

Benefits:

- Exceptional bonding
- Active protection from corrosion
- Very high filling force

Colour:

- Dark grey

Further technical information:

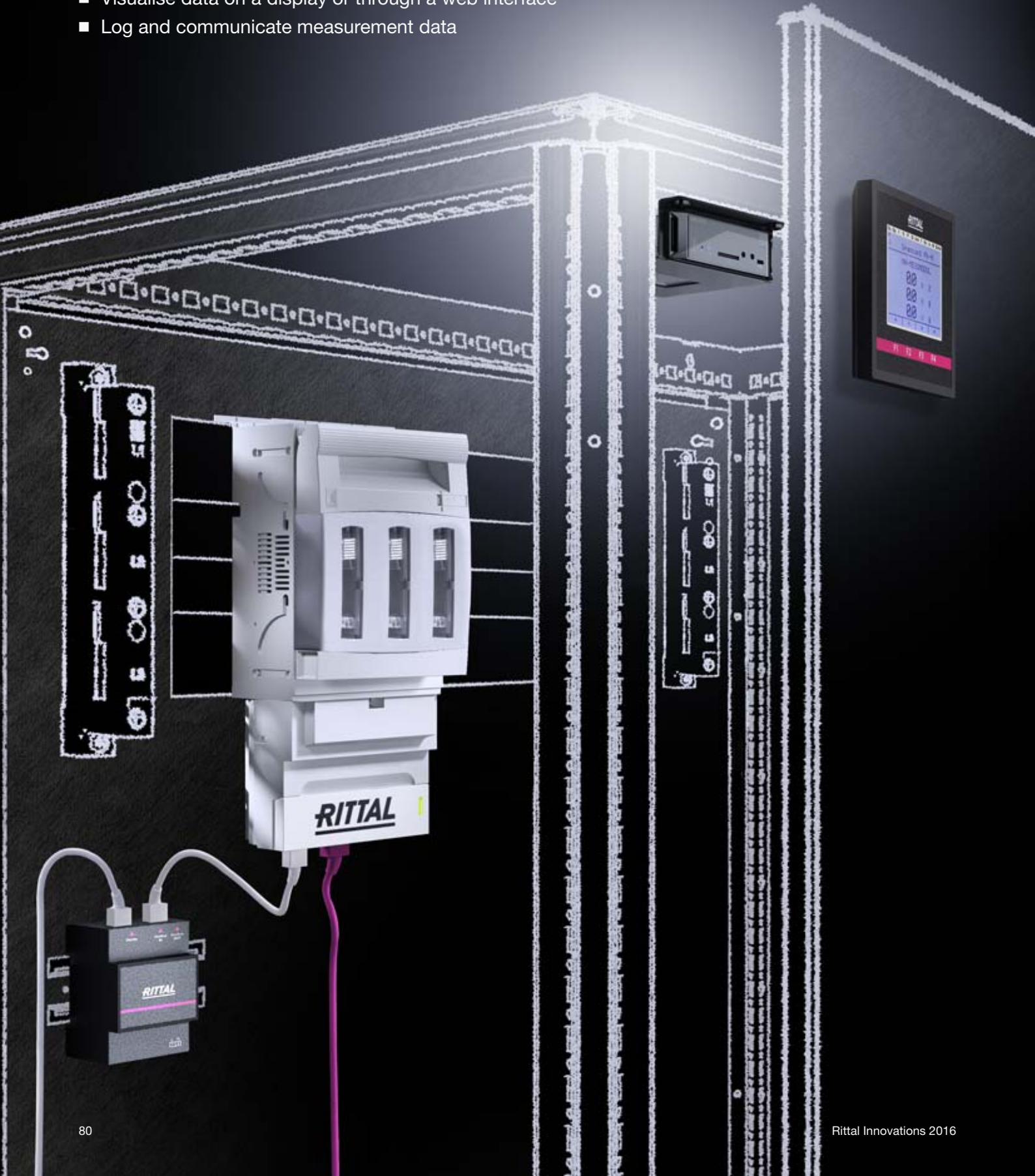
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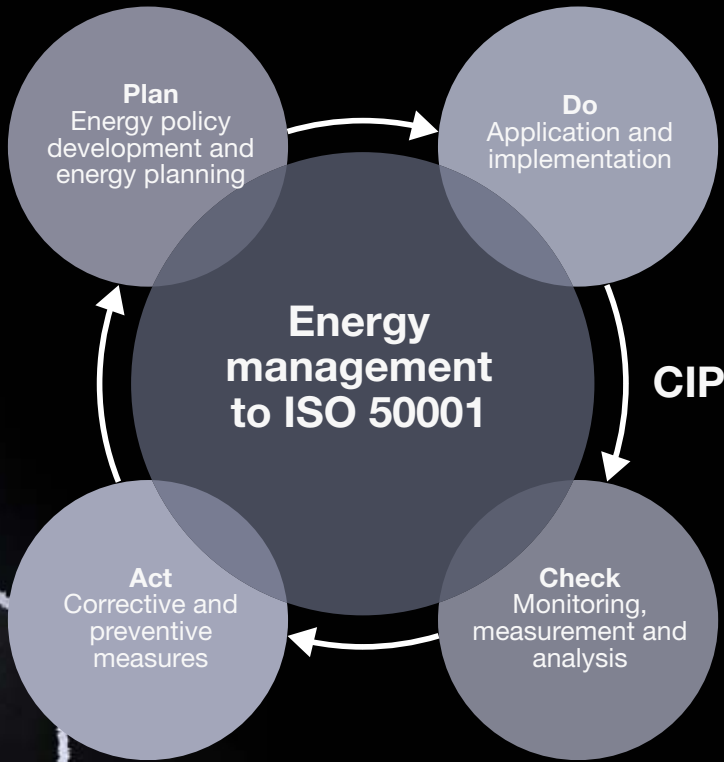
	Contents ml	Packs of	Model No.
Paint pen	12	1 pc(s).	2436.800
Paint tin	1000	1 pc(s).	2438.800



Smart Monitoring System – compact, secure, efficient

- Continuously record and monitor the energy consumption of plant and machinery
- Visualise data on a display or through a web interface
- Log and communicate measurement data





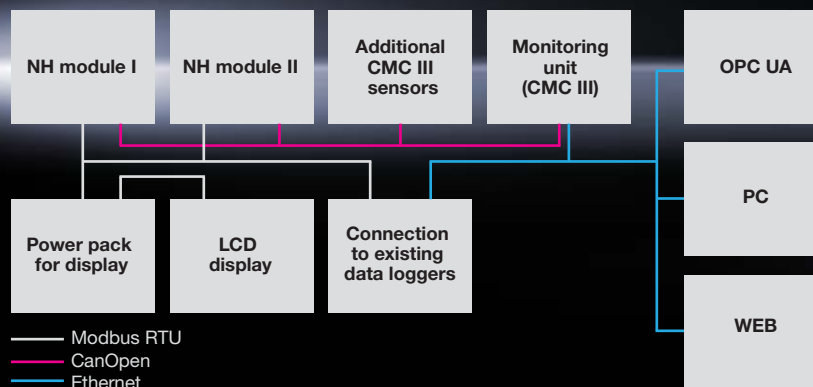
Utilise these benefits for your continuous improvement process (CIP):

- Identify potential savings
- Boost energy efficiency
- Increase competitiveness
- Reduce CO₂ emissions on a sustainable basis
- Benefit from tax relief

Further information about energy management to ISO 50001 can be found in the whitepaper available on the Internet under the respective Model No.

Transparency and end-to-end data management thanks to the Smart Monitoring System from Rittal

The Smart Monitoring System features several interfaces for communicating and transferring measurement data on variables such as electricity, voltage, power and efficiency. The NH measurement module can be connected to an overarching control system using a Modbus RTU. A CAN bus interface provides the connection to the Rittal monitoring unit (CMC III), which can also translate data into alternative protocols as a gateway. Meanwhile, the USB interface is ideal for carrying out configuration, importing updates and logging data.



NH measurement module for RiLine NH fuse-switch disconnectors

- Everything integrated into one compact module (measured value recording, analysis electronics, communication and memory module)
- Quick and easy assembly

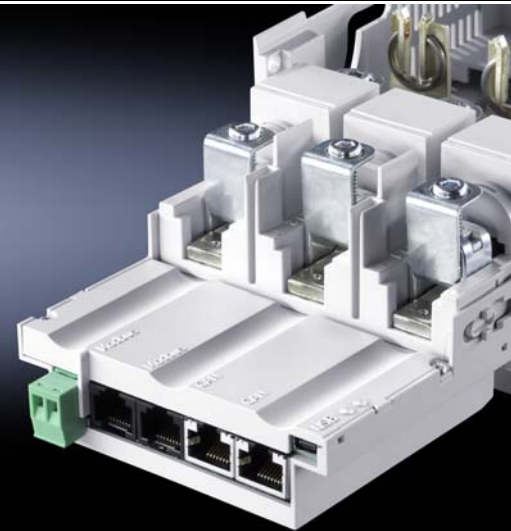


The components of the Rittal Smart Monitoring System



NH measurement module

- Continuous recording, evaluation and monitoring of energy consumption
- Compatible with RiLine NH fuse-switch disconnectors, size 00 – 3
- No need to wire individual components
- Data communication via Modbus RTU or CanOpen
- Configuration via USB interface or fieldbus
- Data logging on internal Flash memory



Display and power pack

- Display over 50 measurement parameters on the backlit LCD display
- 20 NH measurement modules can be depicted on one display
- Intuitive configuration of alarm and limit values
- Power supply for display via plug-in RJ12 patch cable



CMC III monitoring unit

- Compact monitoring solution for industrial and IT applications
- Monitors temperature, access and energy data
- Configuration and visualisation via built-in web interface
- Supports Ethernet protocols TCP/IP, SNMP, SSH, FTP, DNS and many more
- Connection to control desk via OPC UA server
- Low wiring and maintenance outlay thanks to plug & play design



NH measurement module



NH fuse-switch disconnectors Cat. 34, page 240 – 247

Compact measurement unit consisting of measurement data acquisition unit, evaluation electronics, communication module, measurement power supply and flash data memory. Output measurement with accuracy class 2 and integral current converters with accuracy class 0.5.

Functions:

- Continuous measurement of energy-related data
- Data logging in CSV format (Excel)
- Individual limit monitoring and alarm function
- May be integrated into the CMC III monitoring system
- Automatic address allocation via CAN bus

Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

- NH measurement module
- Connector 2 x 2.5 mm² with preassembled bridge
- USB cable (mini-B connector on micro-B jack)

Further technical information:

Available on the Internet

for NH fuse-switch disconnectors

For NH fuse-switch disconnectors (size)	Packs of	00	1	2	3	Page
To fit Model No.		9343.000/9343.020/ 9343.040	9343.100/9343.120/ 9343.140	9343.200	9343.300	
Rated operating current max. A		150	250	400	600	
Rated operating voltage V, ~		400, 3~	400, 3~	400, 3~	400, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Bottom	Bottom	Bottom	Bottom	
Type of connection		Box terminal	Box terminal	Box terminal	Box terminal	
Connection of round conductors mm ²		4 - 95	35 - 150	95 - 300	95 - 300	
Connection of sector-shaped conductors mm ²		-	50 - 150	120 - 300	120 - 300	
Clamping area for laminated copper bars, W x H mm		13 x 13	20 x 3 - 14	32 x 10 - 20	32 x 10 - 20	
Width mm		102	170	185	214	
Height mm		108	123	123	123	
Depth mm		68	92	107	107	
Accuracy class		0.5	0.5	0.5	0.5	
Interfaces		2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB	2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB	2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB	2 x CAN bus (RJ45) 2 x Modbus RTU (RJ45) 1 x USB	
Model No.	1 pc(s).	9343.070	9343.170	9343.270	9343.370	

LCD display for monitoring

Functions:

- Illuminated display with more than 50 measurement parameters
- Intuitive configuration of alarm and limit values
- Voltage supply for display via pluggable RJ12 patch cable

Material:

- Polyphenylene ether (PPE)

Colour:

- RAL 9005

Protection category IP to IEC 60 529:

- IP 51 (front)
- IP 41 (enclosure)

Supply includes:

- LCD display
- Modbus RTU cable (RJ12), length: 2 m

Further technical information:

Available on the Internet

Interfaces	1 x Modbus RTU (RJ12)
Operating temperature range	-5°C...+55°C
Storage temperature range	-25°C...+70°C
Operating humidity range %	5 - 95
Width mm	96
Height mm	96
Depth mm	46
Packs of	1 pc(s).
Model No.	9343.410



Also required:

- Power pack, see page 85



Power pack

for LCD display

For mounting on support rails to EN 60 715, 7.5 mm high.

Material:

- Polycarbonate
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 9005

Protection category IP to IEC 60 529:

- IP 20

Supply includes:

- Power pack
- Connector 2 x 2.5 mm²

Further technical information:

Available on the Internet

Interfaces	1 x Modbus RTU (RJ12) 2 x Modbus RTU (RJ45)
Operating temperature range	-5°C...+55°C
Storage temperature range	-25°C...+70°C
Operating humidity range %	5 - 95
Width mm	71
Height mm	91
Depth mm	61
Rated operating voltage V, Hz	85 - 265 (AC/DC), 50/60
Output current (max.) A	0.42
Output voltage V (DC)	24
Packs of	1 pc(s).
Model No.	9343.400



Rittal – The System.

Faster – better – everywhere.



ENCLOSURES

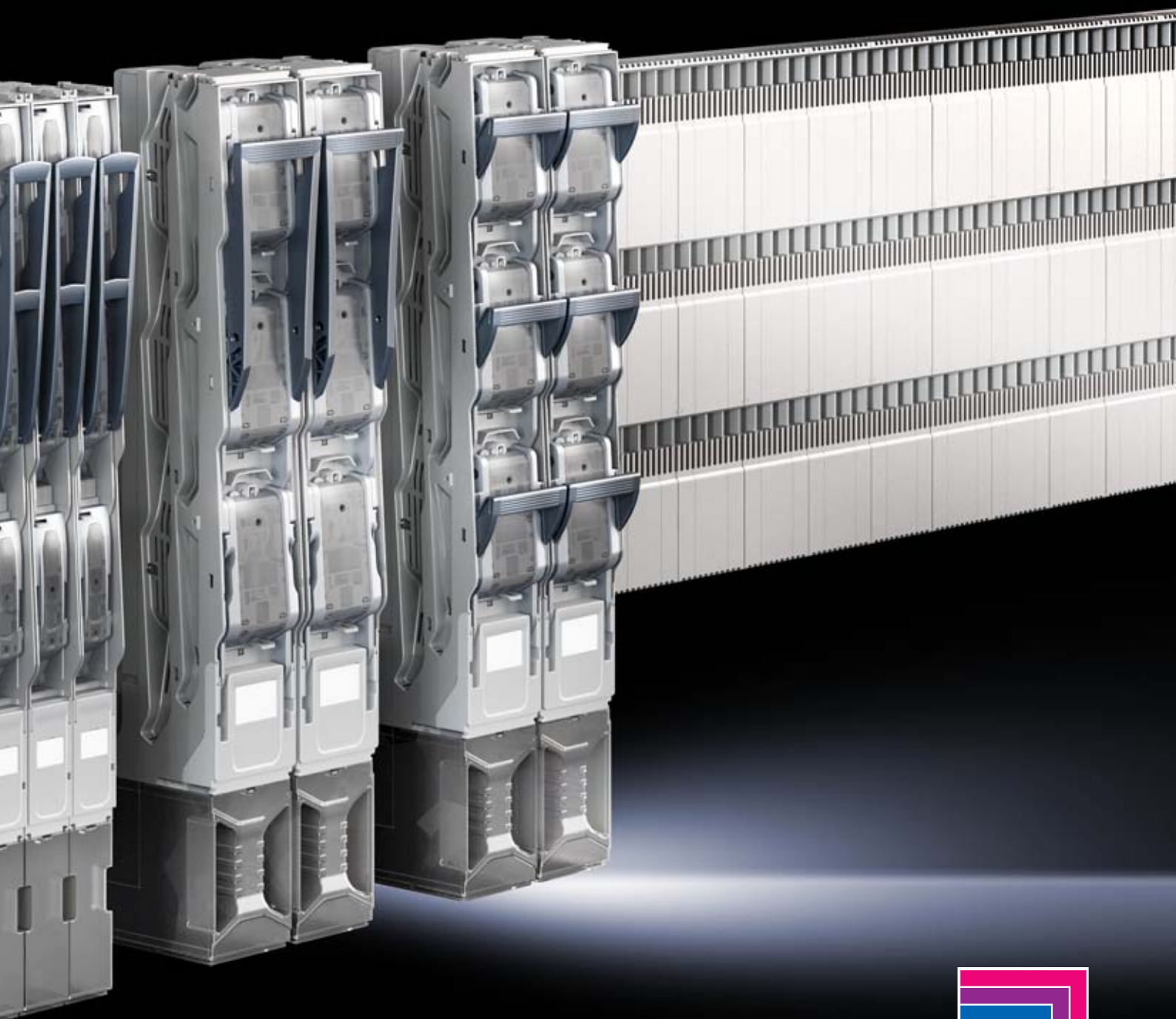
POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP

The system – Simply secure

With due regard for financial aspects and the requirements of the current standard IEC 61439-1, the new Ri4Power busbar system with 185 mm bar centre distance is ideal for configuring a compact, secure power distributor system.



IT INFRASTRUCTURE

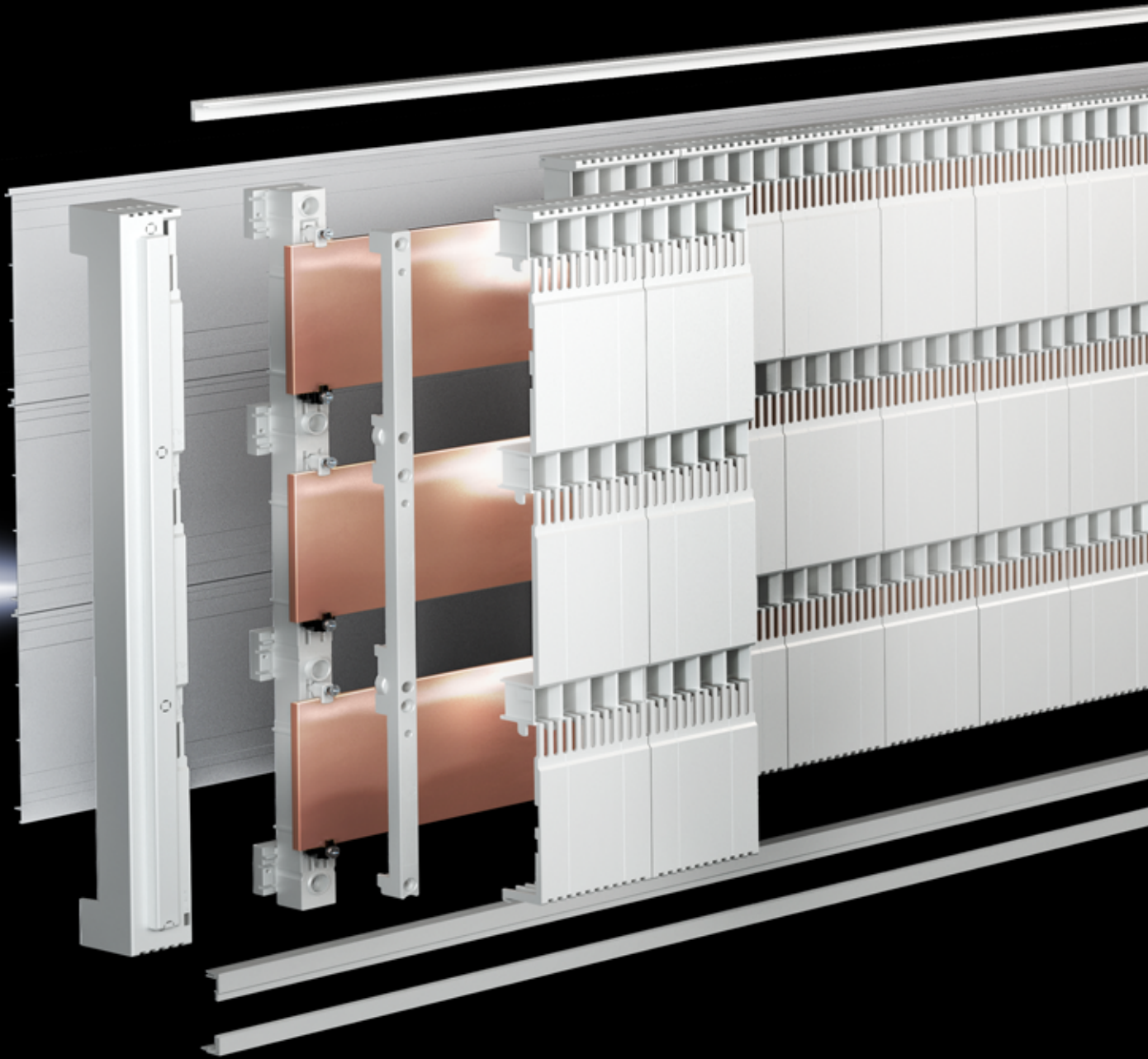
SOFTWARE & SERVICES



The system assembly – No drilling required

The busbar system may be quickly and conveniently installed in the enclosure in just three steps:

- Position the TS punched section with mounting flange and system attachment in the enclosure
- Secure the busbar assembly
- Clip the cover system into place



Busbar support

- For busbar dimensions ranging from 40 x 10 to 120 x 10 mm
- The support may be top-mounted with components using the pitch pattern of the cover system
- Rated short-time withstand current I_{cw} up to 50 kA
- Rated currents of the busbars up to 1600 A
- Mounting via system attachment in the TS/SE enclosure, no drilling required



Cover section

- Contact hazard protection up to IP 2XB (safe from finger-contact)
- Integral busbar shielding to prevent accidental arcing
- Secure positioning of the top-mounting components, thanks to centring device
- New contact system allows components to be top-mounted on the cover section
- Components are easily retrofitted without removing the cover section



Base tray

- For rear contact hazard protection of the busbar assembly
- For optimum all-round contact hazard protection in conjunction with the cover section
- Prepared ready to install, fits TS enclosure widths from 600 mm to 1200 mm width



The perfect-fit adaptor system

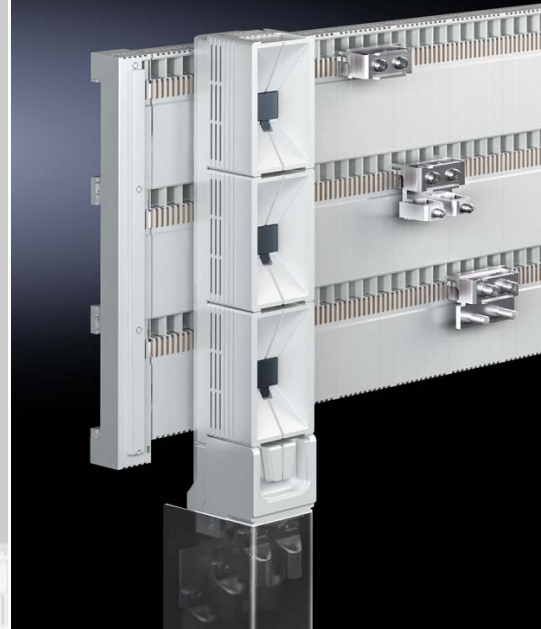
Connection and component adaptors for tested, safe connection at high currents

- For air circuit-breakers up to 630 A and 1600 A
- Direction connection of various conductor types
- No-drill connection system to the busbar



Connection adaptors and connection blocks

- Compact, fast connection of cables and lines
- Suitable for various types of conductor
- With standardised contact hazard protection cover plates



Component adaptors for compact circuit-breakers

- Two sizes up to 630 A and 1600 A
- Variants for clamping or screw attachment
- Make contact without drilling
- Ideal for incoming and outgoing circuits



Connector kit and transformer

- Form-fit, prepared for switch brands ABB, Eaton, Schneider Electric, Siemens
- Preassembled connector kits from the adaptor to the circuit-breaker
- Optional integration of a current transformer
- Complete contact hazard protection in the inlet and outlet zones



Fuse elements to suit all situations

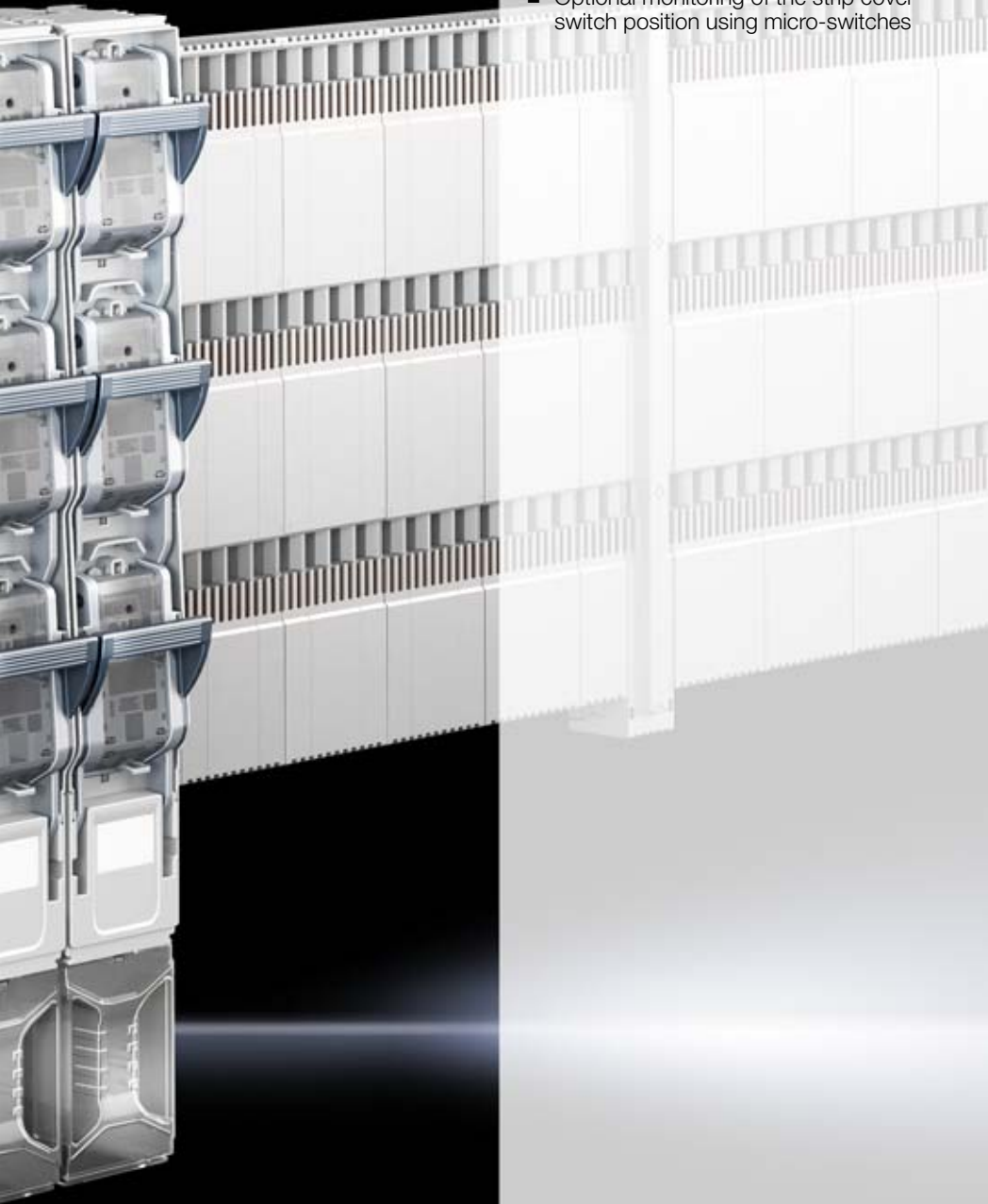
The new system of NH slimline fuse-switch disconnectors is based on separate air routing for heat dissipation, and targeted removal of switching gases.

- Simple device assembly
- Single-pole or 3-pole, switchable
- Optimum contact hazard protection



NH slimline fuse-switch disconnectors, sizes 00 to 3

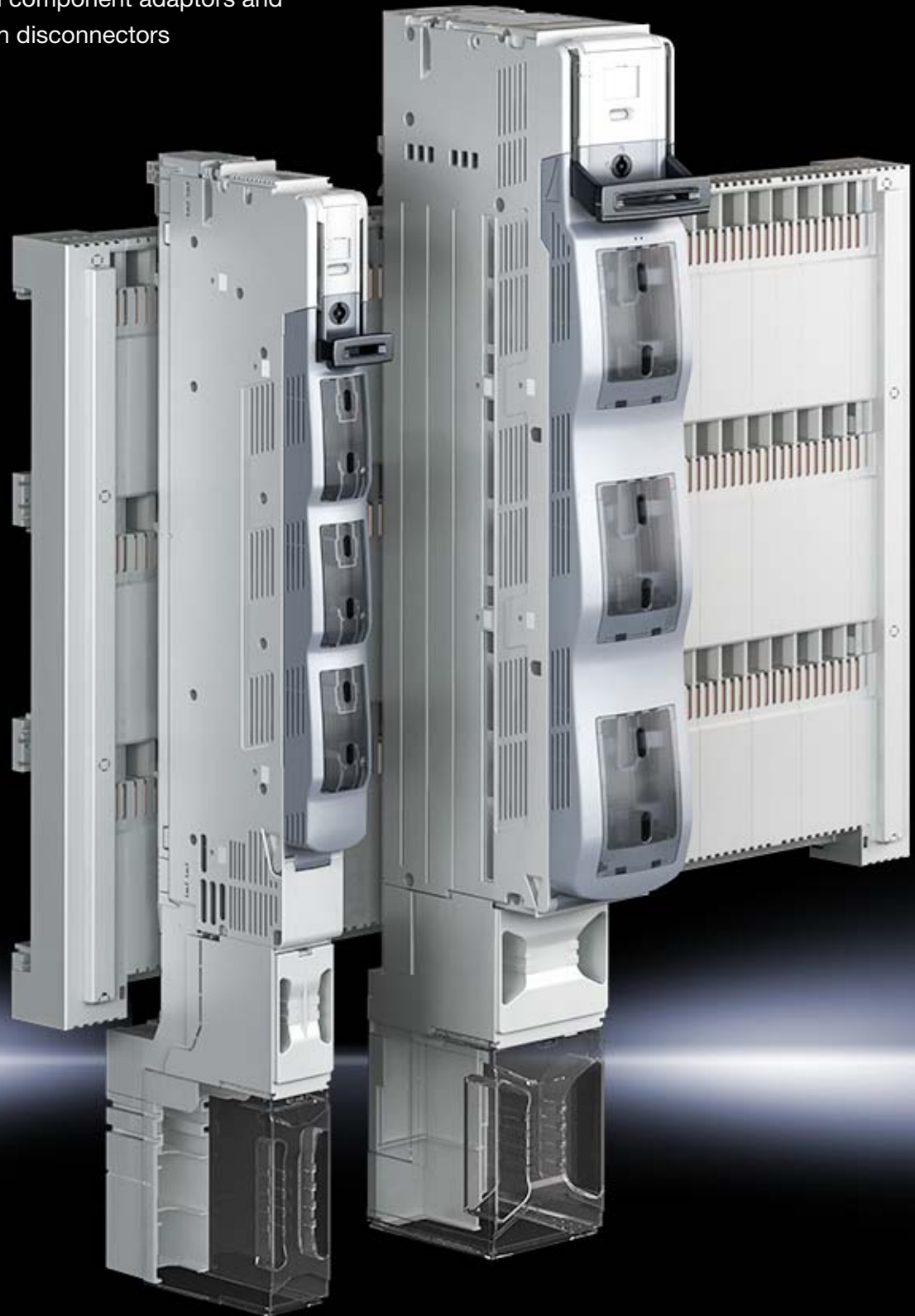
- Single-pole and 3-pole switchable variants
- Symmetrical layout for cable outlet at the top and bottom
- Optional integration of current transformers
- Versions with and without fuse monitoring
- Self-closing voltage testing holes
- Multiple sealing options
- Hinged terminal cover
- Cascadable connection space extension
- Simple conversion of the bolt or screw connections
- Contact hazard-proof fuse contacts with the top section dismantled
- Optional monitoring of the strip cover switch position using micro-switches



NEW – Disconnect and switch with one device

The new NH slimline switch-disconnectors with fuse for operator-independent disconnection and switching

- Integral quick-break contact with double-break ensures safe operation
- User-friendly cable connection from above or below
- May be combined with component adaptors and NH slimline fuse-switch disconnectors



NH slimline switch-disconnectors with fuse

- Suitable for fuse sizes 00 to 3
- No-drill contacting with clamping screw attachment
- Optionally with electronic fuse monitoring



Operator-independent switch element

- Fast switching operation with quick-break contact
- De-energised fuse changes, thanks to double-break
- Lid lock can only be released with a tool
- Integral switching position display

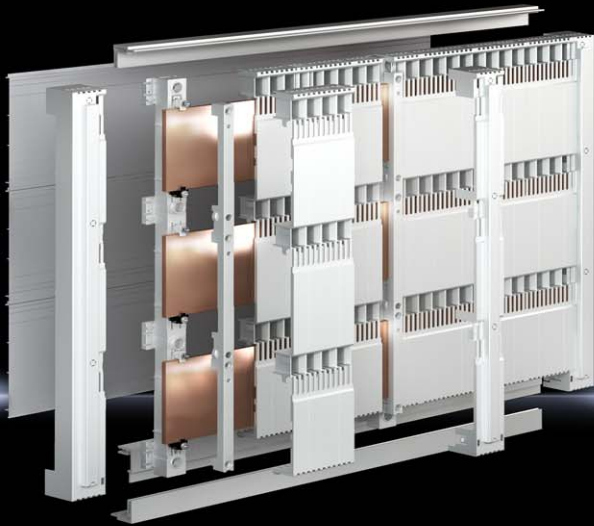


Cable connection space

- User-friendly cable connection optionally from above or below
- Connection of various conductor types
- Extended contact hazard protection for the connection space



Busbar support (185 mm)



Component adaptor Page 100 **Connection adaptors** Page 98 **Connection block** Page 99 **NH slimline switch-disconnectors** Page 102

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:


- RAL 7035

Supply includes:


- Including assembly components for contact hazard protection cover (base tray)

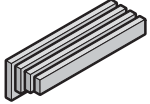
Further technical information:

Available on the Internet


			
Bar centre distance mm	Packs of	185	Page
Number of poles		3-pole	
To fit busbars mm		40 x 10 60 x 10 80 x 10 100 x 10 120 x 10	
Model No.	2 pc(s).	9677.500	
Accessories			
Busbars E-Cu		see page	97
Contact hazard protection cover plate		see page	109
End covers	2 pc(s).	9677.600	108

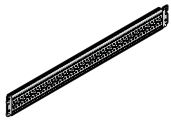
Busbar system (185 mm)

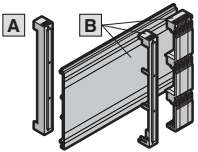
Busbar support			
Note: Required quantity for use in enclosure width – 600/800 mm: 2 pc(s). – 1000/1200 mm: 3 pc(s).			
Number of poles	Packs of	3-pole	Page
Bar centre distance mm		185	
Model No.	2	9677.500	96

Busbars E-Cu, length: 2400 mm/bar				
	Dimensions mm	Packs of	Model No.	Cat. 34, page
	40 x 10	3	3587.000	252
	60 x 10	2	3589.005	252
	80 x 10	1	3590.005	252
	100 x 10	1	3590.015	252
	120 x 10	1	3590.020	

Accessories			
Busbar connector		see page	108

System attachment				
	For enclosure width mm	Packs of	Model No.	Page
	600	1	9677.510	108
	800	1	9677.520	108
	1000	1	9677.530	108
	1200	1	9677.540	108

Accessories				
TS punched section w. mounting flange, 17 x 73 mm				
	For enclosure depth mm	Packs of	Model No.	Cat. 34, page
	500	4	8612.150	606
	600	4	8612.160	606
	800	4	8612.180	606

Contact hazard protection					
	Components	For enclosure width mm	Packs of	Model No.	Page
	A End covers l/r	–	2	9677.600	108
	B Cover plate, contact hazard protection (cover section, base tray, trim section)	600	1	9677.550	109
		800	1	9677.560	109
		1000	1	9677.570	109
1200		1	9677.580	109	

Connection adaptors



Busbar system Page 96 **Connection block** Page 99 **Component adaptor** Page 100 **NH slimline switch-disconnectors** Page 102

Material:

- Chassis: Fibreglass-reinforced polyester
- Fire protection corresponding to UL 94-V0

Further technical information:

Available on the Internet

Colour:

- RAL 7035

Rated current max. A	Packs of	800	1400	Page
Rated operating voltage V, ~		690, 3~	690, 3~	
Number of poles		3-pole	3-pole	
Cable outlet		Bottom	Bottom	
Type of connection		Screw M12	Screw M12	
Connection of round conductors mm ²		6 - 240	6 - 300	
Width mm		100	100	
Height mm		665	960	
For bar systems with centre-to-centre spacing mm		185	185	
For bar thickness mm		10	10	
Model No.	1 pc(s).	9677.900	9677.905	
Product-specific scope of supply		-	Contact hazard protection cover plate	

Connection block



Busbar system Page 96 **Connection block** Page 99 **Component adaptor** Page 100 **NH slimline switch-disconnectors** Page 102

For connecting cables and laminated copper bars.

Further technical information:
Available on the Internet

Material:

- Sheet steel, zinc-plated
- E-Cu, tin-plated

Rated current max. A	Packs of	1000	1600	1600	Page
Rated operating voltage V, ~		690, 1~	690, 1~	690, 1~	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	
Type of connection		Box terminal	-	Ring terminal M12	
Number of connection cables max.		2	-	4	
Connection of round conductors mm ²		185 - 300	-	240	
Clamping area for laminated copper bars, W x H (for 10 mm bar thickness) mm		-	80 x 20	-	
Width mm		98	98	98	
For bar thickness mm		10	10	10	
Model No.	1 pc(s).	9677.915	9677.910	9677.920	
Also required					
Contact hazard protection cover plate	1 pc(s).	9677.925	9677.925	9677.925	110

Component adaptor



Busbar system Page 96 **Connection block** Page 99 **Component adaptor** Page 100 **NH slimline switch-disconnectors** Page 102

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Note:

- For mounting on busbar systems with or without cover section
- Suitable for the use of switchgear with front screw terminal
- Cable outlet: Switch outlet or as outgoing cable from the switchgear

Further technical information:

Available on the Internet

Rated current max. 630 – 1600 A, clamping attachment

Rated current max. A	Packs of	630	1000	1600	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Installation type		Clamping attachment	Clamping attachment	Clamping attachment	
Cable outlet		Bottom	Bottom	Bottom	
For switchgear make (model)		ABB (Tmax T5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA2, 3VL4)	ABB (Tmax T7 - 800 A/1000 A) Eaton (NZM4 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	ABB (Tmax T7 - 1250 A/1600 A) Eaton (NZM4 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/3VL8 - 1600 A)	
Width mm		150	300	300	
Height mm		585	652	652	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Model No.	1 pc(s).	9677.770	9677.700	9677.710	
Product-specific scope of supply		Connection straps	-	-	
Also required					
Connector kit		-	see page	see page	110
Contact hazard protection cover plate		-	see page	see page	111

Component adaptor



Busbar system Page 96 **Connection block** Page 99 **Component adaptor** Page 100 **NH slimline switch-disconnectors** Page 102

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Note:

- For attaching to busbars with holes. Please ensure that there is no cover section installed in the vicinity of the device.
- Suitable for the use of switchgear with front screw terminal
- Cable outlet: Switch outlet or as outgoing cable from the switchgear

Further technical information:

Available on the Internet

Rated current max. 630 – 1600 A, screw attachment

Rated current max. A	Packs of	630	1000	1600	Page
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Bottom	Bottom	
For switchgear make (model)		ABB (Tmax T5) Eaton (NZM3) Schneider Electric (NSX630) Siemens (3VA2, 3VL4)	ABB (Tmax T7 - 800 A/1000 A) Eaton (NZM4 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	ABB (Tmax T7 - 1250 A/1600 A) Eaton (NZM4 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/3VL8 - 1600 A)	
Width mm		150	300	300	
Height mm		585	652	652	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Model No.	1 pc(s).	9677.780	9677.705	9677.715	
Product-specific scope of supply		Connection straps	-	-	

Also required

Connector kit		-	see page	see page	110
Contact hazard protection cover plate		-	see page	see page	111

NH slimline fuse-switch disconnectors, sizes 00 to 3



Busbar system Page 96 **Connection adaptors** Page 98 **Connection block** Page 99 **Component adaptor** Page 100

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially 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)

Note:

- When using NH slimline fuse-switch disconnectors on busbars with contact hazard protection cover, the contact terminal must be used

Further technical information:

Available on the Internet

Size 00 – 3, design single-pole, switchable

Size	Packs of	00	1	2	3	Page
Twin track		–	–	–	–	
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		670	670	670	670	
For converter installation		■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
Note on Model No.		–	–	–	–	
Model No.	1 pc(s).	9677.010	9677.110	9677.210	9677.310	
Accessories						
Connection space cover	1 pc(s).	see page	9677.410	9677.410	9677.410	111
Contact terminal	3 pc(s).	9677.450	9677.460	9677.460	9677.460	112
Busbar terminal	3 pc(s).	9677.470	9677.480	9677.480	9677.480	112
Prism terminal	3 pc(s).	9677.420	–	–	–	112
V connection terminal	3 pc(s).	–	9677.430	9677.430	9677.440	113
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	3071.000	Cat. 34, 263
Current converter	1 pc(s).	9677.810	see page	see page	see page	113
Cover	5 pc(s).	–	9677.415	9677.415	9677.415	114

NH slimline fuse-switch disconnectors, sizes 00 to 3

Size 00 – 1, design 3-pole, switchable

Size	Packs of	00	00	1	Page
Twin track		–	–	–	
Rated operating current max. A		160	160	250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/Bottom	Top/Bottom	Top/Bottom	
Type of connection		Screw M8	Box terminal	Bolt M12	
Connection of round conductors mm ²		1.5 - 95	1.5 - 95	6 - 240	
Width mm		50	50	100	
Height mm		670	670	670	
For converter installation		■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Note on Model No.		–	–	–	
Model No.	1 pc(s).	9677.000	9677.025	9677.100	
Accessories					
Connection space cover	1 pc(s).	see page	see page	9677.410	111
Contact terminal	3 pc(s).	9677.450	9677.450	9677.460	112
Busbar terminal	3 pc(s).	9677.470	9677.470	9677.480	112
Prism terminal	3 pc(s).	9677.420	–	–	112
V connection terminal	3 pc(s).	–	–	9677.430	113
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	Cat. 34, 263
Current converter	1 pc(s).	9677.810	9677.810	see page	113
Cover	5 pc(s).	–	–	9677.415	114

Size 2 – 3, design 3-pole, switchable

Size	Packs of	2	3	3	Page
Twin track		–	–	■	
Rated operating current max. A		400	630	1250	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Cable outlet		Top/Bottom	Top/Bottom	Top/Bottom	
Type of connection		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		6 - 240	6 - 240	6 - 240	
Width mm		100	100	200	
Height mm		670	670	670	
For converter installation		■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Note on Model No.		–	–	Special design	
Model No.	1 pc(s).	9677.200	9677.300	9677.340	
Accessories					
Connection space cover	1 pc(s).	9677.410	9677.410	9677.410	111
Contact terminal	3 pc(s).	9677.460	9677.460	9677.460	112
Busbar terminal	3 pc(s).	9677.480	9677.480	9677.480	112
Prism terminal		–	–	–	112
V connection terminal	3 pc(s).	9677.430	9677.440	9677.440	113
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	Cat. 34, 263
Current converter		see page	see page	see page	113
Cover	5 pc(s).	9677.415	9677.415	9677.415	114

NH slimline fuse-switch disconnectors, sizes 00 to 3



Busbar system Page 96 **Connection adaptors** Page 98 **Connection block** Page 99 **Component adaptor** Page 100

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially 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)

Note:

- When using NH slimline fuse-switch disconnectors on busbars with contact hazard protection cover, the contact terminal must be used

Further technical information:

Available on the Internet

Size 00 – 3, with electronic fuse monitoring

Size	Packs of	00	1	2	3	Page
Design		3-pole, switchable	3-pole, switchable	3-pole, switchable	3-pole, switchable	
Rated operating current max. A		160	250	400	630	
Rated operating voltage V, ~		400, 3~	400, 3~	400, 3~	400, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Cable outlet		Top/bottom	Top/bottom	Top/bottom	Top/bottom	
Type of connection		Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	100	100	100	
Height mm		830	830	830	830	
For converter installation		■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
Model No.	1 pc(s).	9677.015	9677.115	9677.215	9677.315	
Accessories						
Connection space cover	1 pc(s).	see page	9677.410	9677.410	9677.410	111
Contact terminal	3 pc(s).	9677.450	9677.460	9677.460	9677.460	112
Busbar terminal	3 pc(s).	9677.470	9677.480	9677.480	9677.480	112
Prism terminal	3 pc(s).	9677.420	-	-	-	112
V connection terminal	3 pc(s).	-	9677.430	9677.430	9677.440	113
Micro-switch	5 pc(s).	3071.000	3071.000	3071.000	3071.000	Cat. 34, 263
Current converter	1 pc(s).	9677.810	see page	see page	see page	113
Cover	5 pc(s).	-	9677.415	9677.415	9677.415	114

NH slimline switch-disconnectors



Busbar system Page 96 **Connection adaptors** Page 98 **Connection block** Page 99 **Component adaptor** Page 100

Functions:

- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Further technical information:

Available on the Internet

Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

Size 00, design 3-pole, switchable

Size	Packs of	00	00	00	00	Page
Rated operating current max. A		160	160	160	160	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	
Installation type		Clamping attachment	Clamping attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Top	Bottom	Top	
Type of connection		Screw M8	Screw M8	Screw M8	Screw M8	
Connection of round conductors mm ²		1.5 - 95	1.5 - 95	1.5 - 95	1.5 - 95	
Width mm		50	50	50	50	
Height mm		676	676	676	676	
For converter installation		■	■	■	■	
For bar systems with centre-to-centre spacing mm		185	185	185	185	
For bar thickness mm		10	10	10	10	
Model No.	1 pc(s).	9677.060	9677.070	9677.065	9677.075	
Accessories						
Connection space cover	1 pc(s).	9677.400	9677.400	9677.400	9677.400	115
Connection space cover, rear	1 pc(s).	9677.402	9677.402	9677.402	9677.402	115
Clamp-type terminal	3 pc(s).	9677.425	9677.425	9677.425	9677.425	115
Box terminal		-	-	-	-	115
Contact terminal		-	-	-	-	116
Micro-switch	1 pc(s).	9677.418	9677.418	9677.418	9677.418	116
Current converter	1 pc(s).	9677.835	9677.835	9677.835	9677.835	116

NH slimline switch-disconnectors

Size 1 – 2, design 3-pole, switchable

Size	Packs of	1	1	2	Page
Rated operating current max. A		250	250	400	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Top	Bottom	
Type of connection		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		6 - 240	6 - 240	6 - 240	
Width mm		100	100	100	
Height mm		772	772	772	
For converter installation		–	–	–	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Model No.	1 pc(s).	9677.160	9677.165	9677.260	
Accessories					
Connection space cover	1 pc(s).	9677.410	9677.410	9677.410	115
Connection space cover, rear	1 pc(s).	9677.412	9677.412	9677.412	115
Clamp-type terminal		–	–	–	115
Box terminal		see page	see page	see page	115
Contact terminal	3 pc(s).	9677.485	9677.485	9677.485	116
Micro-switch	1 pc(s).	9677.418	9677.418	9677.418	116
Current converter		–	–	–	116

Size 2 – 3, design 3-pole, switchable

Size	Packs of	2	3	3	Page
Rated operating current max. A		400	630	630	
Rated operating voltage V, ~		690, 3~	690, 3~	690, 3~	
Number of poles		3-pole	3-pole	3-pole	
Installation type		Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Top	Bottom	Top	
Type of connection		Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		6 - 240	6 - 240	6 - 240	
Width mm		100	100	100	
Height mm		772	772	772	
For converter installation		–	–	–	
For bar systems with centre-to-centre spacing mm		185	185	185	
For bar thickness mm		10	10	10	
Model No.	1 pc(s).	9677.265	9677.360	9677.365	
Accessories					
Connection space cover	1 pc(s).	9677.410	9677.410	9677.410	115
Connection space cover, rear	1 pc(s).	9677.412	9677.412	9677.412	115
Clamp-type terminal		–	–	–	115
Box terminal		see page	see page	see page	115
Contact terminal	3 pc(s).	9677.485	9677.485	9677.485	116
Micro-switch	1 pc(s).	9677.418	9677.418	9677.418	116
Current converter		–	–	–	116

NH slimline switch-disconnectors



Busbar system Page 96 **Connection adaptors** Page 98 **Connection block** Page 99 **Component adaptor** Page 100

Functions:

- Automatic quick-break contact allows operator-independent switching
- Double-break for reliable disconnection of the contacts

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0
- Contact tracks: Partially silver-plated hard copper

Basis of test:

- IEC/DIN EN 60 947-3
- DIN EN 60 269-2 (fuse inserts)

Further technical information:

Available on the Internet

Colour:

- Chassis: RAL 7035
- Cover: RAL 7001
- Handle: RAL 7016

Size 00 – 3, with electronic fuse monitoring

Size	Packs of	00	00	1	2	3	Page
Design		3-pole, switchable	3-pole, switchable	3-pole, switchable	3-pole, switchable	3-pole, switchable	
Rated operating current max. A		160	160	250	400	630	
Rated operating voltage V, ~		400, 3~	400, 3~	400, 3~	400, 3~	400, 3~	
Number of poles		3-pole	3-pole	3-pole	3-pole	3-pole	
Installation type		Clamping attachment	Screw attachment	Screw attachment	Screw attachment	Screw attachment	
Cable outlet		Bottom	Bottom	Bottom	Bottom	Bottom	
Type of connection		Screw M8	Screw M8	Bolt M12	Bolt M12	Bolt M12	
Connection of round conductors mm ²		1.5 - 95	1.5 - 95	6 - 240	6 - 240	6 - 240	
Width mm		50	50	100	100	100	
Height mm		860	860	941	941	941	
For converter installation		■	■	-	-	-	
For bar systems with centre-to-centre spacing mm		185	185	185	185	185	
For bar thickness mm		10	10	10	10	10	
Model No.	1 pc(s).	9677.080	9677.085	9677.180	9677.280	9677.380	
Accessories							
Connection space cover	1 pc(s).	9677.400	9677.400	9677.410	9677.410	9677.410	115
Connection space cover, rear	1 pc(s).	9677.402	9677.402	9677.412	9677.412	9677.412	115
Clamp-type terminal	3 pc(s).	9677.425	9677.425	-	-	-	115
Box terminal		-	-	see page	see page	see page	115
Contact terminal	3 pc(s).	-	-	9677.485	9677.485	9677.485	116
Micro-switch	1 pc(s).	9677.418	9677.418	9677.418	9677.418	9677.418	116
Current converter	1 pc(s).	9677.835	9677.835	-	-	-	116

Busbar system 185 mm

Accessories



System attachment

for TS, SE

For attaching busbar systems with 185 mm centre-to-centre spacing in TS/SE enclosures.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Supply includes:

- 2 system attachments (left/right)
- 2 punched sections without mounting flanges
- Assembly parts

Further technical information:

Available on the Internet

For enclosure width mm	Product-specific scope of supply	Packs of	Model No.
600	–	1 pc(s).	9677.510
800	–	1 pc(s).	9677.520
1000	System attachment (centre)	1 pc(s).	9677.530
1200	System attachment (centre)	1 pc(s).	9677.540

Assembly instruction:

- For variable depth adjustment of the busbar system in the enclosure, the TS punched section with mounting flange 17 x 73 mm (for the outer mounting level) is additionally required. Select according to the enclosure depth.



Busbar connectors

For connecting square busbars, no drilling required.

Material:

- E-Cu

Surface finish:

- Tin-plated

Note:

- If using a 100 x 10 mm busbar, one 9677.610 and one 9677.620 are required

Further technical information:

Available on the Internet

To fit busbars mm	Quantity required per bar	Length mm	Packs of	Model No.
40 x 10	1	40	1 pc(s).	9677.610
80 x 10	2			
100 x 10	1			
60 x 10	1	60	1 pc(s).	9677.620
100 x 10	1			
120 x 10	2			



End covers

for busbar supports

For contact hazard protection of the busbar system on the left and right. Attachment is on the busbar support.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Supply includes:

- 1 end cover, left
- 1 end cover, right

Further technical information:

Available on the Internet

To fit Model No.	Packs of	Model No.
9677.500	2 pc(s).	9677.600

Contact hazard protection cover plate

for busbar system

For contact hazard protection of the busbar assembly at the rear and front. To fit enclosures TS/SE.

Material:

- Base tray: Polyphenylene ether (PPE)
- End section: Polyphenylene ether (PPE)
- Cover section: Polyamide (PA 6,6)
- Centre cover: Polyamide (PA 6,6)

Colour:

- RAL 7035

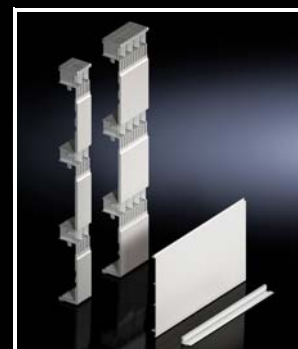
Supply includes:

- Cover section, slotted, 50 mm wide
- Cover sections, slotted, 100 mm wide
- Base trays
- Trim sections

Further technical information:

Available on the Internet

For enclosure width mm	Product-specific scope of supply	Packs of	Model No.
600	-	1 pc(s).	9677.550
800	-	1 pc(s).	9677.560
1000	Centre cover for busbar support	1 pc(s).	9677.570
1200	Centre cover for busbar support	1 pc(s).	9677.580



Cover strips

for contact hazard protection cover

For covering the front exposed contact slots in the cover section.

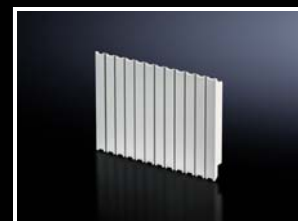
Material:

- Polyamide (PA 6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Width mm	Height mm	To fit Model No.	Packs of	Model No.
100	67	9677.550/ 9677.560/ 9677.570/ 9677.580	3 pc(s).	9677.650



Contact hazard protection cover plate

for enclosure connection

For rear and front contact hazard protection of the connection points from enclosure to enclosure, with and without busbar connectors.

Material:

- Base tray: Polyphenylene ether (PPE)
- Cover section: Polyamide (PA 6,6)
- Centre cover: Polyamide (PA 6,6)

Colour:

- RAL 7035

Supply includes:

- 3 base trays
- 1 cover (front)
- 2 centre covers for busbar support

Further technical information:

Available on the Internet

To fit Model No.	Packs of	Model No.
9677.610/9677.620	1 pc(s).	9677.640



Busbar system 185 mm

Accessories



Contact hazard protection cover plate

for connection block

To cover the connector block at the front.

Material:

- Polyamide
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Width mm	Height mm	To fit Model No.	Packs of	Model No.
130	255	9677.910/ 9677.915/ 9677.920	1 pc(s).	9677.925



Connector kit

for component adaptors

Preassembled connector kit for common brands of moulded-case circuit-breaker (MCCB). For electrical connection between the switch and the component adaptor (3-pole).

Material:

- E-Cu

Supply includes:

- Assembly parts

Further technical information:

Available on the Internet

For switchgear make (model)	To fit Model No.	Packs of	Model No.
ABB (Tmax T7 - 800 A/1000 A) Schneider Electric (NS - 800 A/1000 A)	9677.700/9677.705	1 pc(s).	9677.730
Eaton (NZM4 - 800 A/1000 A) Siemens (VL1250/3VL7 - 1000 A)	9677.700/9677.705	1 pc(s).	9677.740
ABB (Tmax T7 - 1250 A/1600 A) Schneider Electric (NS - 1250 A/1600 A)	9677.710/9677.715	1 pc(s).	9677.750
Eaton (NZM4 - 1250 A/1600 A) Siemens (VL1250/3VL7 - 1250 A, VL1600/VL8 - 1600 A)	9677.710/9677.715	1 pc(s).	9677.760

Contact hazard protection cover plate

for component adaptors

To cover the connector kit at the front. The cover may also optionally be used for the switchgear cable connection. Open cable accesses in the contact hazard protection cover may be sealed using the side panels.

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Supply includes:

- Side panels

Further technical information:

Available on the Internet

For switchgear make (model)	To fit Model No.	Packs of	Model No.
-	9677.700-.715	1 pc(s).	9677.790
ABB (Tmax T7)	9677.700-.715	1 pc(s).	9677.792
Eaton (NZM 4)	9677.700-.715	1 pc(s).	9677.794
Siemens (3VL7/3VL8)	9677.700-.715	1 pc(s).	9677.796
Schneider Electric (NS1600)	9677.700-.715	1 pc(s).	9677.798



Connection space cover

for NH slimline fuse-switch-disconnectors/ NH slimline switch-disconnectors

Cascadable connection space cover to guarantee contact hazard protection in the cable connection zone when using ring terminals with a long collar.

Material:

- Polycarbonate
- Fire protection corresponding to UL 94-V0

Note:

- When using NH slimline fuse-switch disconnectors with top cable outlet, use of the connection space cover is mandatory

Further technical information:

Available on the Internet

For size	To fit Model No.	Cable outlet	Note on Model No.	Packs of	Model No.
00	9677.0X0/ 9677.0X5	Bottom	Also suitable for use with NH slimline switch-disconnectors with top cable outlet	1 pc(s).	9677.400
00	9677.000/ 9677.010/ 9677.015/ 9677.025	Top	-	1 pc(s).	9677.405
1 - 3	9677.1X0/ 9677.1X5/ 9677.2X0/ 9677.2X5/ 9677.3X0/ 9677.3X5	Top/bottom	-	1 pc(s).	9677.410



Busbar system 185 mm

Accessories



Contact terminal

for NH slimline fuse-switch disconnectors

For mounting NH slimline fuse-switch disconnectors on busbar systems with 185 mm centre-to-centre spacing, no drilling required.

Material:

- Sheet steel, zinc-plated
- E-Cu, tin-plated

Note:

- Only suitable for use on busbar system with contact hazard protection cover (cover section, slotted)

Further technical information:

Available on the Internet

For size	To fit Model No.	Packs of	Model No.
00	9677.000/ 9677.010/ 9677.015/ 9677.025	3 pc(s).	9677.450
1 - 3	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	3 pc(s).	9677.460



Busbar terminal

for NH slimline fuse-switch disconnectors

For mounting NH slimline fuse-switch disconnectors on busbar systems with 185 mm centre-to-centre spacing, no drilling required.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

Note:

- Can only be used on busbar system without contact hazard protection cover (cover section, slotted)

Further technical information:

Available on the Internet

For size	To fit Model No.	Packs of	Model No.
00	9677.000/ 9677.010/ 9677.015/ 9677.025	3 pc(s).	9677.470
1 - 3	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	3 pc(s).	9677.480



Prism terminal

for NH slimline fuse-switch disconnectors

For the direct connection of round conductors.

Material:

- Brass

Surface finish:

- Tin-plated

Further technical information:

Available on the Internet

For size	To fit Model No.	Connection of round conductors mm ²	Packs of	Model No.
00	9677.000/ 9677.010/ 9677.015	10 - 95	3 pc(s).	9677.420

V connection terminal

for NH slimline fuse-switch disconnectors

For the direct connection of round conductors.

Material:

– Brass

Surface finish:

– Tin-plated

Further technical information:

Available on the Internet

For size	To fit Model No.	Connection of round conductors mm ²	Packs of	Model No.
1/2	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215	70 - 240	3 pc(s).	9677.430
3	9677.300/ 9677.310/ 9677.315/ 9677.340	120 - 300	3 pc(s).	9677.440



Current converter

for NH slimline fuse-switch disconnectors

Compact design without altering the installation depth via mechanical integration into the NH slimline fuse-switch disconnector (185 mm centre-to-centre spacing); this allows space-saving assembly.

Material:

– Polyamide (PA 6.6)

Basis of test:

– IEC 60 044-1
– EN 60 715
– DIN VDE 0414
– DIN 42 600-2

Further technical information:

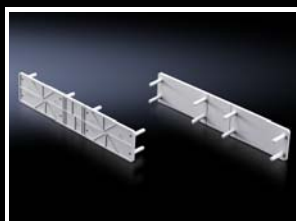
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For size	00	1 - 3	1 - 3	1 - 3	1 - 3
To fit Model No.	9677.000/ 9677.010/ 9677.015/ 9677.025	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340
Primary current A	150	200	250	400	600
Secondary current A	5	5	5	5	5
Accuracy class	1	1	1	1	1
Rated frequency Hz	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60
Insulation voltage kV	3	3	3	3	3
Insulating material category	E	B	B	B	B
Connection of round conductors mm ²	2.5 - 4	–	–	–	–
Type of connection	Screw terminals	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)	Round conductor 2.5 mm ² (length 1.5 m)
Rated output VA	5	1.5	2.5	2.5	2.5
Packs of	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).
Model No.	9677.810	9677.840	9677.860	9677.870	9677.880

Busbar system 185 mm

Accessories



Cover

for NH slimline fuse-switch disconnectors

To increase rear contact hazard protection of the NH slimline fuse-switch-disconnector in the top section when mounting on a 185 mm bar system with contact hazard protection.

Material:

– Polyamide

Colour:

– RAL 7035

For size	To fit Model No.	Packs of	Model No.
1 - 3	9677.100/ 9677.110/ 9677.115/ 9677.200/ 9677.210/ 9677.215/ 9677.300/ 9677.310/ 9677.315/ 9677.340	5 pc(s).	9677.415



Trim strip

for NH slimline fuse-switch-disconnectors/ NH slimline switch-disconnectors

To create a contact surface for individual use of a front contact hazard protection cover plate. Mounted on the side of the NH strip enclosure.

For size	To fit Model No.	Packs of	Model No.
00 - 3	9677.XXX	2 pc(s).	9677.407

Busbar system 185 mm

Accessories

Connection space cover, rear

for NH slimline switch-disconnectors

To guarantee contact hazard protection in the rear cable connection zone when using ring terminals with long press sleeves. In conjunction with the front connection space cover (9677.400/.410), this achieves all-round contact hazard protection of the connection space.

Material:

– Polyamide

Colour:

– RAL 7035

Further technical information:

Available on the Internet

For size	To fit Model No.	Packs of	Model No.
00	9677.060/ 9677.065/ 9677.070/ 9677.075/ 9677.080/ 9677.085	1 pc(s).	9677.402
1 - 3	9677.160/ 9677.165/ 9677.180/ 9677.260/ 9677.265/ 9677.280/ 9677.360/ 9677.365/ 9677.380	1 pc(s).	9677.412



Clamp-type terminal

for NH slimline switch-disconnectors

For the connection of round conductors.

Material:

– Sheet steel

Surface finish:

– Zinc-plated

Further technical information:

Available on the Internet

For size	To fit Model No.	Connection of round conductors mm ²	Packs of	Model No.
00	9677.060/ 9677.065/ 9677.070/ 9677.075/ 9677.080/ 9677.085	16 - 70	3 pc(s).	9677.425



Box terminal

for NH slimline switch-disconnectors

For converting NH slimline switch-disconnectors to box terminal connection for round conductors.

Material:

– Aluminium
– E-Cu, silver-plated

Supply includes:

– Connection space cover, rear

Further technical information:

Available on the Internet

For size	To fit Model No.	Connection of round conductors mm ²	Packs of	Model No.
1 - 3	9677.160/ 9677.165/ 9677.180/ 9677.260/ 9677.265/ 9677.280/ 9677.360/ 9677.365/ 9677.380	70 - 240	3 pc(s).	9677.435
1 - 3	9677.160/ 9677.165/ 9677.180/ 9677.260/ 9677.265/ 9677.280/ 9677.360/ 9677.365/ 9677.380	185 - 300	3 pc(s).	9677.445



Busbar system 185 mm

Accessories



Contact terminal

for NH slimline switch-disconnectors

For mounting NH slimline switch-disconnectors on bar systems with 185 mm centre-to-centre spacing, no drilling required.

Material:

- Sheet steel, zinc-plated
- E-Cu, tin-plated
- Polyamide

Note:

- Only suitable for use on busbar system with contact hazard protection cover (cover section, slotted)

Further technical information:

Available on the Internet

For size	To fit Model No.	Packs of	Model No.
1 - 3	9677.160/ 9677.165/ 9677.180/ 9677.260/ 9677.265/ 9677.280/ 9677.360/ 9677.365/ 9677.380	3 pc(s).	9677.485



Micro-switch

for NH slimline switch-disconnectors

To indicate the switch position of the NH unit (cover).

Supply includes:

- Bracket

For size	To fit Model No.	Packs of	Model No.
00 - 3	9677.060/ 9677.065/ 9677.070/ 9677.075/ 9677.080/ 9677.085/ 9677.160/ 9677.165/ 9677.180/ 9677.260/ 9677.265/ 9677.280/ 9677.360/ 9677.365/ 9677.380	1 pc(s).	9677.418



Current converter

for NH slimline switch-disconnectors

Compact design without altering the installation depth via mechanical integration into the NH slimline switch-disconnector (185 mm centre-to-centre spacing), for space-saving assembly.

Material:

- Polyamide (PA 6.6)

Further technical information:

Available on the Internet

For size	00
To fit Model No.	9677.060/9677.065/ 9677.070/9677.075/ 9677.080/9677.085
Primary current A	150
Secondary current A	5
Accuracy class	1
Rated frequency Hz	50 - 60
Insulation voltage kV	3
Insulating material category	E
Connection of round conductors mm ²	2.5 - 4
Type of connection	Screw terminals
Rated output VA	5
Packs of	1 pc(s).
Model No.	9677.835



Busbar system Cat. 34, page 212

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- Chassis: RAL 7035

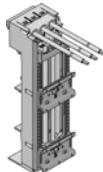
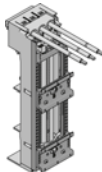
Note:

- The technical data may vary for UL applications

Further technical information:

Available on the Internet

Rated current max. 16 – 32 A, with connection cables

				
Rated current max. A	Packs of	16	32	Cat. 34, page
Rated operating voltage V, ~		690, 3~	690, 3~	
Number of poles		3-pole	3-pole	
Connection cables, design		AWG 12	AWG 10	
Connection cables, length mm		165	165	
With support frame mm		45 x 170	45 x 170	
Support rails Qty/height mm		2 / 10	2 / 10	
Support rail version		TS 45D TS 45D-V	TS 45D TS 45D-V	
Width mm		45	45	
Height mm		208	208	
For bar systems with centre-to-centre spacing mm		60	60	
For bar thickness mm		5 10	5 10	
Model No.	1 pc(s).	9340.780	9340.790	
Accessories				
Connection pin	20 pc(s).	9340.280	9340.280	260
Insert strip	2 pc(s).	9340.290	9340.290	259
Support rails 35 x 10 mm		see page	see page	259
OM supports		see page	see page	225
PinBlock	5 pc(s).	9342.800	9342.800	260

Fuse holders



Busbar system Cat. 34, page 212

Material:

- Polyamide (PA 6.6)
- Fire protection corresponding to UL 94-V0

Colour:

- RAL 7035

Basis of test:

- UL 4248-4

Further technical information:

Available on the Internet

Rated operating current max. 30 A

Fuse type (class)	Packs of	CC	Page
Rated operating current max. A		30	
Rated operating voltage V, ~		600, 3~	
Number of poles		3-pole	
Fuse standard		UL 248-4	
Fuse size mm		10 x 38	
Connection of round conductors mm ²		1.5 - 6	
Connection of round conductors		AWG 10 - 16	
Width mm		27	
Height mm		200	
For bar systems with centre-to-centre spacing mm		60	
For bar thickness mm		5 10	
Model No.	4 pc(s).	9345.040	



Busbar system Cat. 34, page 212 **OM adaptors** Cat. 34, page 219

Material:

- Polyamide
- Fire protection corresponding to UL 94

Colour:

- RAL 7035

Note:

- For snap-on mounting on 35 mm (7.5 mm/15 mm high) support rails to DIN EN 60 715 or RiLine component adaptor combinations (OM adaptors/ supports)

Approvals:

- UL 4248-1
- UL 4248-4
- UL 4248-8

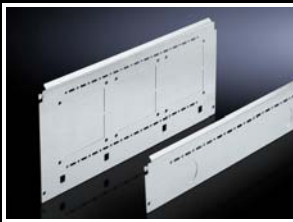
Further technical information:

Available on the Internet

Rated operating current max. 30 – 60 A

Fuse type (class)		CC	J	J	Page
Rated operating current max. A		30	30	60	
Rated operating voltage V, ~		600, 3~	600, 3~	600, 3~	
Number of poles		3-pole	3-pole	3-pole	
Fuse standard		UL 248-4	UL 248-8	UL 248-8	
Fuse size mm		10 x 38	21 x 57	27 x 60	
Voltage, indicator light V		110 - 600	110 - 600	110 - 600	
Connection of round conductors mm ²		0.75 - 25	1.5 - 50	2.5 - 50	
Connection of round conductors		AWG 8 - 18	AWG 1 - 18	AWG 1 - 14	
Width mm		54	108	120	
Height mm		81	115	118	
Model No.		9345.005	9345.015	9345.035	
	Packs of	4 pc(s).	2 pc(s).	2 pc(s).	

Accessories



Functional space side panel module

for internal compartmentalisation

Side divider panel for compartments, for locating into the TS pitch pattern. Prepared for the location of mounting brackets for horizontal functional space dividers or mounting plates. Two TS system punchings allow the use of additional TS accessories. The side panel modules for reduced functional space 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, 1.5 mm

Surface finish:

– Zinc-plated

Supply includes:

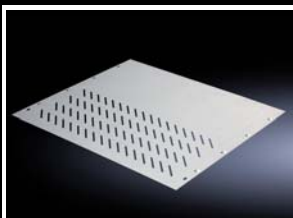
– Assembly parts



Accessories:

– Gland plates, see Catalogue 34, page 284

For functional space depth mm	Height mm	With prepunched knockouts for M40 cable entries	With prepunched knockouts for gland plate, for cable entries	Packs of	Model No.
400	100	2	–	6 pc(s).	9673.041
400	150	–	2	6 pc(s).	9673.045
400	200	–	2	6 pc(s).	9673.042
400	300	–	1	2 pc(s).	9673.043
400	400	–	1	2 pc(s).	9673.044
400	600	–	3	2 pc(s).	9673.046



Functional space divider

For the horizontal separation of compartments. In combination with the side panel modules, this creates form separation in accordance with Form 3 or 4.

Material:

– Sheet steel, 1.25 mm

Surface finish:

– Zinc-plated



Also required:

– Mounting bracket, see page 121



Assembly instruction:

– 2 mounting brackets are required to install each compartment divider

Design with louvres

For enclosure width mm	For functional space depth mm	Width mm	Depth mm	Packs of	Model No.
400	400	306	370	4 pc(s).	9673.443
600	400	506	370	4 pc(s).	9673.463
800	400	706	370	4 pc(s).	9673.483

Mounting bracket

for functional space divider

The mounting bracket may be attached to a TS frame, to a 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, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Assembly parts

For functional space depth mm	Length mm	Packs of	Model No.
400	352	8 pc(s).	9673.404



Contact hazard protection cover plate

for TS enclosures with NH slimline fuse-switch disconnectors

To cover outgoing sections with NH slimline fuse-switch disconnectors and Maxi-PLS/Flat-PLS bus-bar system in the rear enclosure section so that they are safe from finger contact (IP 2X).

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- Cover set, two-piece (top)
- Cover set, two-piece (bottom)
- Assembly parts

Note:

- The specified installation width when using Maxi-PLS only applies in conjunction with top-mountable busbar supports 9349.160/9359.160.

Further technical information:

Available on the Internet

For enclosure width mm	Free installation width when using Flat-PLS mm	Free installation width when using Maxi-PLS mm	Packs of	Model No.
600	300	500	1 pc(s).	9674.960
800	500	700	1 pc(s).	9674.980
1000	700	900	1 pc(s).	9674.900
1200	900	1100	1 pc(s).	9674.920



Accessories:

- Blanking cover, see page 121

Blanking cover

To cover free NH slimline fuse-switch disconnector slots.

Material:

- Sheet steel, 1.5 mm

Surface finish:

- Zinc-plated

Supply includes:

- 2 cover brackets
- Assembly parts

Further technical information:

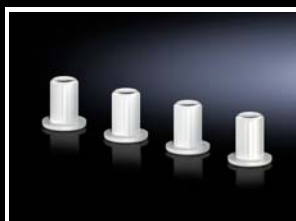
Available on the Internet

Width mm	Packs of	Model No.
50	2 pc(s).	9674.905



Ri4Power

Accessories



Pressure stoppers

for roof plates, for pressure relief

For converting the IP 55 roof plate for TS enclosures into a roof plate with pressure relief function. The pressure relief function is essential for compliance with health and safety regulations for arc-proofing to IEC/TR 61641.

Material:

- Polyamide (PA 6.6)

Supply includes:

- 2 warning stickers

Note:

- 2 pressure stoppers and 1 warning sticker are required for one roof plate
- The arc-proofing compliance limits are dependent on the busbar system used

Further technical information:

Available on the Internet

Packs of	Model No.
4 pc(s).	9674.790



Support set (stabiliser)

for connection kit

To support the connector kits top/bottom for air circuit-breakers (ACB).

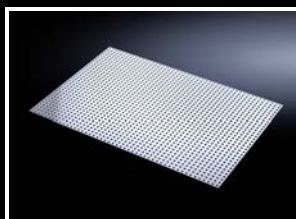
Material:

- Angle bracket: Sheet steel

Supply includes:

- 4 stabilisers
- 2 angle brackets
- Assembly parts

Packs of	Model No.
1 pc(s).	9660.205



Cover plate

Slotted

To cover live parts and comply with the internal protection category IP 2X and IP XXB within low-voltage switchgear and controlgear. Integral vent holes allow convection inside a system.

Material:

- Insulating material

Width mm	Height mm	Packs of	Model No.
1200	800	1 pc(s).	9674.990

ISV distribution enclosures

Accessories

Installation kit

for TS

For mounting ISV installation modules in TS enclosures.

Supply includes:

- Mounting aid support
- Contact hazard protection
- Assembly parts

Further technical information:

Available on the Internet



Accessories:

- Cross rail, see Catalogue 34, page 305
- Mounting angle, see Catalogue 34, page 305
- Depth stay, see page 124
- Equipment support connectors, see Catalogue 34, page 305

For enclosure width mm	600	600	850	1100
For enclosure height mm	1800	2000	2000	2000
For enclosure depth mm	400 500 600	400 600	400 600	400 600
To fit Model No.	8457.600/8684.500/ 8685.500/8686.500	8452.600/8604.500/ 8606.500	9666.915/9666.955	9666.925/9666.965
Width units (WU) @ 250 mm	2	2	3	4
Height units (U) @ 150 mm	11	12	12	12
Note on Model No.	Mounting angle 9666.711 additionally required	Mounting angle 9666.712 additionally required	Mounting angle 9666.712 additionally required	Mounting angle 9666.712 and depth stay 9666.731 additionally required
Packs of	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).
Model No.	9666.931	9666.901	9666.911	9666.921



ISV distribution enclosures

Accessories



Installation kit

for AE

For mounting ISV installation modules in AE enclosures.

Supply includes:

- Assembly kit
- Support rails
- Contact hazard protection
- Assembly parts

Further technical information:

Available on the Internet



Accessories:

- Mounting angle, see Catalogue 34, page 305

For enclosure width mm	380	500	600	600	600	1000
For enclosure height mm	600	700	760	1000	1200	1200
For enclosure depth mm	210	250	210	250	300	300
To fit Model No.	1008.600/ 1038.500	1057.500	1012.600/ 1076.500	1090.500	1260.500	1019.500/ 1019.600/ 1213.500
Width units (WU) @ 250 mm	1	1	2	2	2	3
Height units (U) @ 150 mm	3	4	4	6	7	7
Packs of	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).	1 pc(s).
Model No.	9666.801	9666.811	9666.821	9666.831	9666.841	9666.851



Depth stay

For attaching the installation kit in the TS enclosure.

Material:

- Sheet steel

Surface finish:

- Zinc-plated

For enclosure depth mm	To fit Model No.	Packs of	Model No.
400 500 600	9666.901/ 9666.911/ 9666.921/ 9666.931	2 pc(s).	9666.731

Heavy current busbar systems for use on board ships



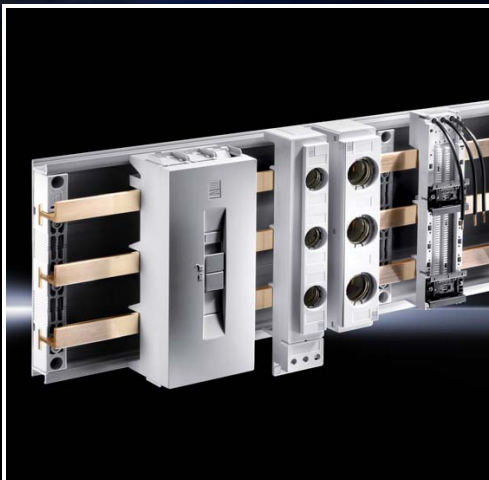
The busbar systems RiLine, Maxi-PLS and Flat-PLS have successfully passed the environmental test on "Vibration", satisfying the requirement of 0.7 g in the frequency range 5 – 100 Hz.

As such, these busbar systems and related components now have the required documentation for:

- Short-circuit resistance
- Temperature rise
- Dielectric strength
- Thermal resistance
- Use under vibration conditions and may be used on board ships in designated sealed areas, such as engine rooms, subject to observance of the required technical characteristics and the valid technical regulations.

Approvals for the following:

- Lloyds Register (LR)
 - Germanischer Lloyd (GL)
 - Det Norske Veritas (DNV)
 - American Bureau of Shipping (ABS)
- have been applied for. Design type approvals for these will make use of the busbar components in maritime applications much easier.



RiLine

U_e = up to 690 V AC, up to 1500 V DC
 U_i = up to 1000 V
 U_{imp} = up to 8 kV
 I_n = up to 1600 A
 I_{cw} = up to 50 kA, 1 sec.
 I_{pk} = up to 110 kA



Maxi-PLS

U_e = up to 690 V AC, up to 1000 V DC
 U_i = up to 1000 V
 U_{imp} = up to 8 kV
 I_n = up to 4000 A
 I_{cw} = up to 70 kA, 1 sec.
 I_{pk} = up to 154 kA

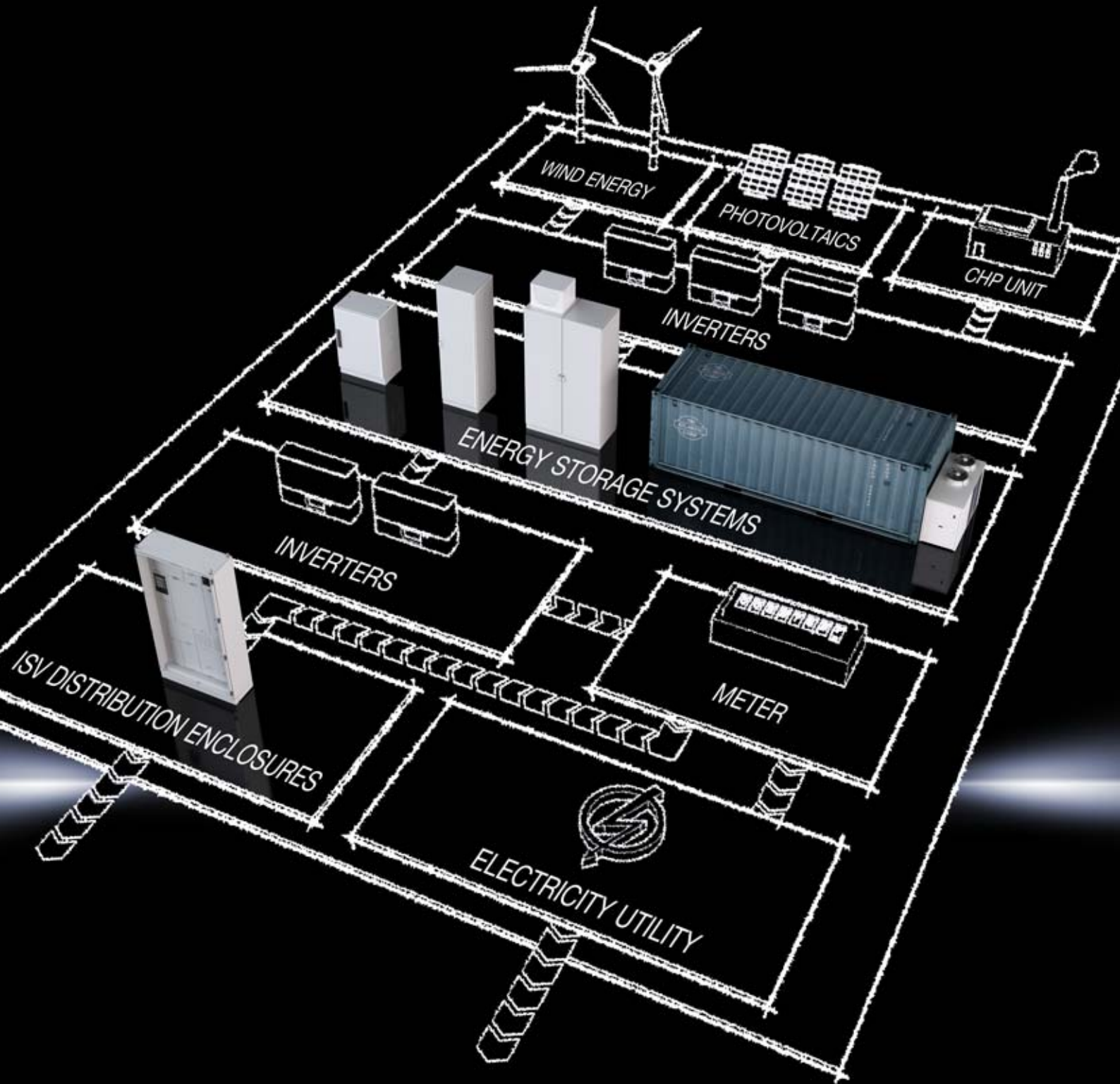


Flat-PLS

U_e = up to 690 V AC, up to 1000 V DC
 U_i = up to 1000 V
 U_{imp} = up to 8 kV
 I_n = up to 5500 A
 I_{cw} = up to 100 kA, 1 sec.
 I_{pk} = up to 220 kA

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ENCLOSURES

POWER DISTRIBUTION

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Our expertise for your energy

The efficiency of any system powered by renewable energy depends to a large extent on whether the energy can be stored.

Only then will it still be possible to use the power generated even if the wind is not blowing, the sun is not shining or there is no biogas available. Rittal has the right system solutions to meet these storage tasks, be it for a photovoltaic system in a private residence, or an industrial-scale solar farm.

Compact and effective:

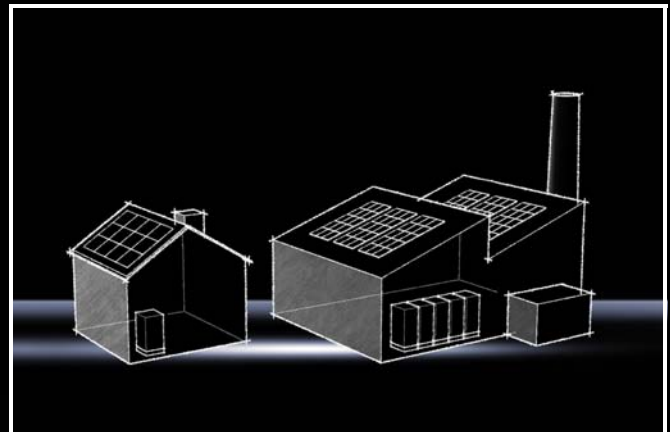
- Wall-mounted enclosures and floor-standing enclosures with high protection categories and international approvals
- Configured with heavy-duty shelves and 482.6 mm (19") system technology
- Perfect, efficient climate control – with climate control components precisely tailored to your required output. From simple fan-and-filter units, to cooling units, to chillers with a cooling output of up to 450 kW.

Modular and flexible:

- Bayed enclosure systems support flexible, infinite baying
- High protection category and international approvals
- UL-tested busbar systems
- Optimum climate control even at high heat losses
- Perfect integration into a standard container if required

Reliable distribution:

- ISV distribution enclosures for reliable power distribution at all building levels
- Design verification to IEC 61 439
- Choice of devices from many different manufacturers, including: ABB, Eaton, General Electric, Mitsubishi, Schneider Electric, Siemens and Terasaki



Rittal – The System.

Faster – better – everywhere.

Housings/enclosures/containers



ENCLOSURES

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Optimum configuration

Secure, robust enclosure solutions are crucial when it comes to “Home4Energy”. To ensure that everything is perfectly tailored to your specific requirements, we have a range of configuration solutions to suit everyone. Our extensive modular system allows us to meet almost any challenge in a short space of time. Please contact us for advice.

Configuration with heavy-duty shelves



Configuration with 482.6 mm (19") system engineering



Configuration with heavy-duty shelves and 482.6 mm (19") system engineering combined



IT INFRASTRUCTURE

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Rittal – The System.

Faster – better – everywhere.

Roof-mounted fans

One system for all sizes

Simply top

- Just one mounting cut-out for all output categories (258 x 258 mm)
- Optimum efficiency, thanks to sophisticated air routing with minimal pressure losses
- Innovative clamping attachment ensures a high protection category



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Roof-mounted fans

Easy locking with innovative clamping attachment

Simple to fit and maintain

- Innovative clamping attachment supports flexible locking optionally from the outside or inside
- Easy electrical connection via plug terminal
- Good accessibility permits fast filter mat changes

High protection category

- IP 55 as standard, thanks to a sophisticated labyrinth system and high-quality foamed-in seal
- International approvals and permits

Large output range with high efficiency

- Passive variant without fan for natural convection
- Air throughput range from 500 – 1,000 m³/h
- At an air throughput of 1,000 m³/h, EC fans ensure maximum energy efficiency



Roof-mounted fan, roof vent



Accessories for climate control Page 150

Colour:

– RAL 7035

Protection category IP to IEC 60 529:

– IP 22 without filter mat
– IP 55 including filter mat

Supply includes:

– Complete unit ready to install, including filter mat

Note:

– For energy-efficient operation of the fans, we recommend the use of thermostats or temperature displays

Approvals:

– UR
– cUR
– CSA

Further technical information:

Available on the Internet

Air throughput, unimpeded air flow 500 – 873 m³/h

Model No.	Packs of	3138.000	3139.100	3139.110	3140.140	3140.100	3140.110	Page
Rated operating voltage V, ~, Hz		–	230, 1~, 50/60	115, 1~, 50/60	400, 3~, 50/60 460, 3~, 60	230, 1~, 50/60	115, 1~, 50/60	
Air throughput, unimpeded air flow (without filter mats) m³/h		–	500 / 525	500 / 525	863 / 942	873 / 965	873 / 965	
Air throughput, unimpeded air flow (with filter mats) m³/h		–	417 / 446	417 / 446	700 / 749	725 / 759	725 / 759	
Rated current A		–	0.22 / 0.27	0.43 / 0.55	0.17 / 0.19	0.43 / 0.56	0.88 / 1.17	
Pre-fuse A		–	6	6	–	6	6	
Motor circuit-breaker A		–	–	–	6.3...10	–	–	
Power consumption W		–	50 / 62	49 / 62	90 / 122	98 / 130	101 / 135	
Width mm		400	400	400	400	400	400	
Height mm		133	133	133	133	133	133	
Depth mm		400	400	400	400	400	400	
Max. installation depth mm		27.5	34.6	34.6	34.6	34.6	34.6	
Required mounting cut-out mm		258 x 258	258 x 258	258 x 258	258 x 258	258 x 258	258 x 258	
Fan		without fan motor	Radial, capacitor motor	Radial, capacitor motor	Radial, rotary current motor	Radial, capacitor motor	Radial, capacitor motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	

Accessories

Outlet filter	1 pc(s).	3243.200	3243.200	3243.200	3243.200	3243.200	3243.200	Cat. 34, 372
Spare filter mats	12 pc(s).	3174.100	3174.100	3174.100	3174.100	3174.100	3174.100	150
Enclosure internal thermostat	1 pc(s).	–	3110.000	3110.000	3110.000	3110.000	3110.000	Cat. 34, 379
Digital enclosure internal temperature display and thermostat	1 pc(s).	–	3114.200	3114.200	3114.200	3114.200	3114.200	Cat. 34, 379
Hygrostat	1 pc(s).	–	3118.000	3118.000	3118.000	3118.000	3118.000	Cat. 34, 380



Accessories for climate control Page 150

Energy-efficient and powerful design of the roof-mounted fans. The fan may be activated via the control interface with tachometer signal output integrated as standard, and monitoring of the fan speed and function is supported.

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 22 without filter mat
- IP 55 including filter mat

Supply includes:

- Complete unit ready to install, including filter mat

Note:

- For even more efficient operation or for monitoring the fans, we recommend the use of the EC speed controls

Approvals:

- UR
- cUR
- CSA

Further technical information:

Available on the Internet

Air throughput, unimpeded air flow 1069 m³/h, with EC technology

Model No.	Packs of	3140.500	3140.510	Page
Control interface		■	■	
Rated operating voltage V, ~, Hz		230, 1~, 50/60 240, 1~, 60	115, 1~, 50/60 130, 1~, 60	
Air throughput, unimpeded air flow (without filter mats) m³/h		1069 / 1069	1069 / 1069	
Air throughput, unimpeded air flow (with filter mats) m³/h		841 / 841	841 / 841	
Rated current A		0.99 / 0.99	1.45 / 1.45	
Pre-fuse A		6	6	
Power consumption W		129 / 129	106 / 106	
Width mm		400	400	
Height mm		133	133	
Depth mm		400	400	
Max. installation depth mm		34.6	34.6	
Required mounting cut-out mm		258 x 258	258 x 258	
Fan		Radial, EC motor	Radial, EC motor	
Operating temperature range		-30°C...+55°C	-30°C...+55°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	

Accessories

Accessories	Packs of	3140.500	3140.510	Page
Outlet filter	1 pc(s).	3243.200	3243.200	Cat. 34, 372
Spare filter mats	12 pc(s).	3174.100	3174.100	150
EC speed control	1 pc(s).	3235.440	3235.440	151
	1 pc(s).	3235.450	3235.450	Cat. 34, 381
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	Cat. 34, 379
Digital enclosure internal temperature display and thermostat	1 pc(s).	3114.200	3114.200	Cat. 34, 379
Hygrostat	1 pc(s).	3118.000	3118.000	Cat. 34, 380

Rittal – The System.

Faster – better – everywhere.

World's first

The Blue e+ cooling unit series – the ultimate in efficiency.
Worldwide.

The principle:

- **Efficiency** – 75% energy saved due to speed-regulated components and heat pipe technology
- **Versatility** – Suitable for international use due to unique multi-voltage capability
- **Safety** – Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- **User-friendliness** – Intuitive operation due to touch display and intelligent interfaces

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The **e+** principle

A revolution in energy efficiency through innovative hybrid technology

Unbelievably efficient

- Let hybrid technology take your cooling units' energy efficiency to a whole new level
- Active cooling circuit with speed-regulated components for demand-based cooling
- Integral heat pipe for passive cooling. Dissipates heat from the enclosure as soon as the ambient temperature falls below the setpoint.

Transparent efficiency comparisons

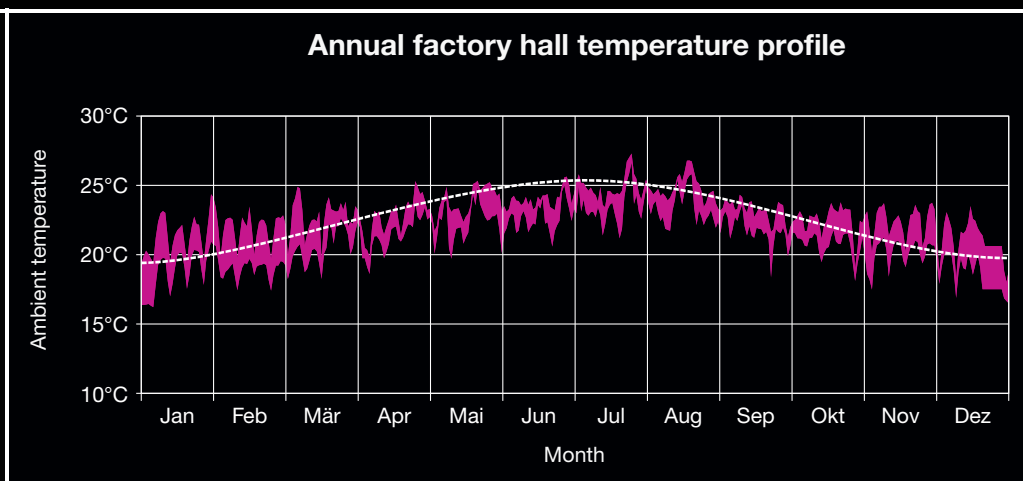
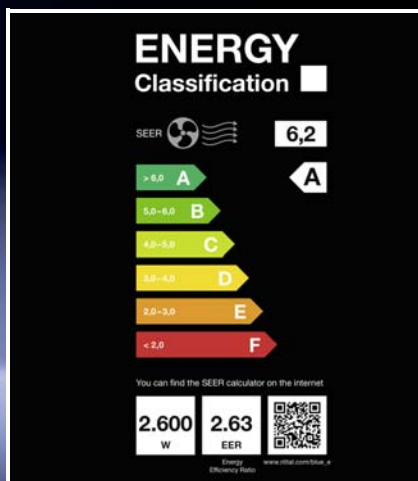
- Energy Efficiency Ratio: The standardised efficiency ratio
- Seasonal Energy Efficiency Ratio: The seasonal efficiency ratio for actual energy consumption

Amazingly economical

- Energy savings of up to 75%
- Component-friendly cooling for a longer service life
- A constant temperature inside the enclosure is ensured – with three control modes
- High operational reliability

Easier to calculate

- Determine your energy savings with the efficiency calculator
- TCO calculation includes all costs arising in the product's lifecycle
- Precise amortisation calculation



Rittal specifies the SEER to indicate the actual efficiency of a cooling unit, since a precise calculation must also consider the seasonal temperature variation. The standard point for determining the EER does not make allowance for actual fluctuations in hall temperatures.



The **e+** principle

Simple operation with touch display and intelligent interfaces

Get information faster

- Fast device analysis with RiDiag software via the USB interface
- Remote monitoring via Ethernet

Blue e+ app

- Contactless information exchange and rapid, direct on-site analysis via an NFC interface
- Simple repair, maintenance and spare parts enquiries may be sent directly via your smart-phone
- Save device data directly on the device

Easier to operate

- Fast parameterisation, data reading and plain-text system messages on the intelligent, multi-lingual, industrial-grade display





The **e+** principle

Versatility through standard assembly

Easy assembly

- One version for external mounting, partial internal mounting and full internal mounting
- One mounting cut-out for external mounting, partial internal mounting and full internal mounting in multiple output categories
- Maintenance-friendly filter mat replacement, tool-free

Rapid assembly

- Handle for convenient transport and positioning
- Mounting clip as securing aid
- Eyebolts for easy mounting

Maximum flexibility with unique multi-voltage capability

- One device for all voltages and networks, suitable for worldwide use thanks to inverter technology:
 - 110 – 240 V, 1~, 50 – 60 Hz
 - 380 – 480 V, 3~, 50 – 60 Hz
- International approvals and certifications:
 - cULus Listed
 - EAC
 - Tüv Nord GS
 - TÜV Nord-tested output measurement



Wall-mounted cooling units Blue e+



Accessories for climate control Cat. 34, page 369 Therm software Cat. 34, page 385

Benefits:

- 75% energy saved due to speed-regulated components and heat pipe technology
- Suitable for international use due to a unique multi-voltage capability
- Longer service life of the components inside the enclosure and the cooling unit due to component-friendly cooling
- Intuitive operation due to touch display and intelligent interfaces

Temperature control:

- e+ controller (factory setting +35°C)

Material:

- Sheet steel

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- Internal circuit IP 55

Supply includes:

- Assembly parts

Approvals:

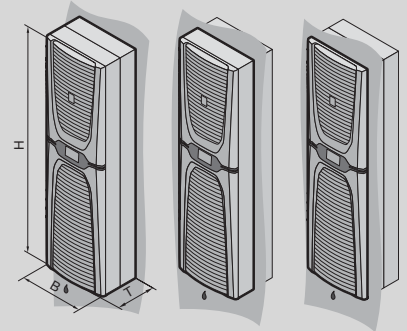
- UL
- cUL
- Tested safety GS

Performance diagrams:

Available on the Internet

Further technical information:

Available on the Internet



Output class 2000 – 6000 W

Model No.	Packs of	3186.930	3187.930	3188.940	3189.940	Page
Total cooling output 50 Hz L35 L35 to DIN EN 14511 kW		2	2.6	4.2	5.8	
Total cooling output 50/60 Hz L35 L35 kW		2 / 2	2.6 / 2.6	4.2 / 4.2	5.8 / 5.8	
Total cooling output 50/60 Hz L35 L50 kW		1.29 / 1.29	1.82 / 1.82	3.02 / 3.02	4.2 / 4.2	
Rated operating voltage V, ~, Hz		110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	110 - 240, 1~, 50/60 380 - 480, 3~, 50/60	380 - 480, 3~, 50/60	380 - 480, 3~, 50/60	
Width (B) mm		450	450	450	450	
Height (H) mm		1600	1600	1600	1600	
Depth (T) mm		294	294	393	393	
Rated output kW		0.73	1.05	1.3	2.2	
Power consumption P _{el} 50/60 Hz L35 L35 kW		0.57 / 0.57	0.99 / 0.99	1.21 / 1.21	2.2 / 2.2	
Power consumption P _{el} 50/60 Hz L35 L50 kW		0.6 / 0.6	0.94 / 0.94	1.28 / 1.28	2.2 / 2.2	
Operating temperature range		-20°C...+60°C	-20°C...+60°C	-20°C...+60°C	-20°C...+60°C	
Setting range		+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	+20°C...+50°C	
Storage temperature range		-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	-40°C...+70°C	
Energy efficiency ratio (EER) 50 Hz L35 L35 to DIN EN 14511		3.5	2.63	3.46	2.64	
Seasonal energy efficiency ratio (SEER) 50/60 Hz L35 L35		8.1	6.2	8.1	6.2	
Refrigerant g		R134a, 1150	R134a, 1150	R134a, 1750	R134a, 1750	
Air throughput of fans (unimpeded air flow), internal circuit/external circuit m ³ /h		1250 / 1250	1250 / 1250	2300 / 2300	2300 / 2300	
Weight kg		55.2	55.2	72.4	72.4	
Note on Model No.		-	-	Full installation not possible	Full installation not possible	
Accessories						
Filter mats	3 pc(s).	3285.900	3285.900	3285.900	3285.900	150
Metal filters	1 pc(s).	3285.910	3285.910	3285.910	3285.910	150
Temperature sensor	1 pc(s).	3124.400	3124.400	3124.400	3124.400	151
Door-operated switch	1 pc(s).	4127.010	4127.010	4127.010	4127.010	Cat. 34, 639

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Therm software – Project planning made easy



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Air/water heat exchangers

Hygienic Design



An easy-to-clean enclosure climate control solution is now available for hygiene-critical production zones in the food and consumables industry.

- Hygienic design for simple cleaning and to reduce the use of detergents and disinfectants
- Protection category IP 69K – silicone seal (compliant with FDA Guideline 21 CFR 177.2600) suitable for pressure washing
- Enclosure made from 1.403 stainless steel with the roof tilted forwards by 30°
- Water connections made from stainless steel 1.403



Air/water heat exchangers



Therm software Cat. 34, page 395 **Chillers** Cat. 34, page 441 **Accessories for climate control** Cat. 34, page 359

Air/water heat exchanger for hygienically sensitive production zones in the food and consumables industry – the optimum addition to the Rittal Hygienic Design range. The cleaning-friendly design reduces the risk of contamination and ensures food safety.

Benefits:

- Easy-to-clean, hygienic design
- A roof tilt of 30° prevents objects from being deposited on it, and allows liquids to run off quickly.
- All-round external, replaceable silicone seal prevents the accumulation of dirt between the enclosure and the air/water heat exchanger.

Material:

- Enclosure: Stainless steel 1.4301 (AISI 304)

Surface finish:

- Enclosure: Brushed, grain 400, peak-to-valley height < 0.8 µm

Protection category IP to IEC 60 529:

- IP 55

Protection category IP to DIN 40 050-9:

- IP 69K

Protection category NEMA:

- NEMA 4X

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Drilling template
- Sealing and assembly parts

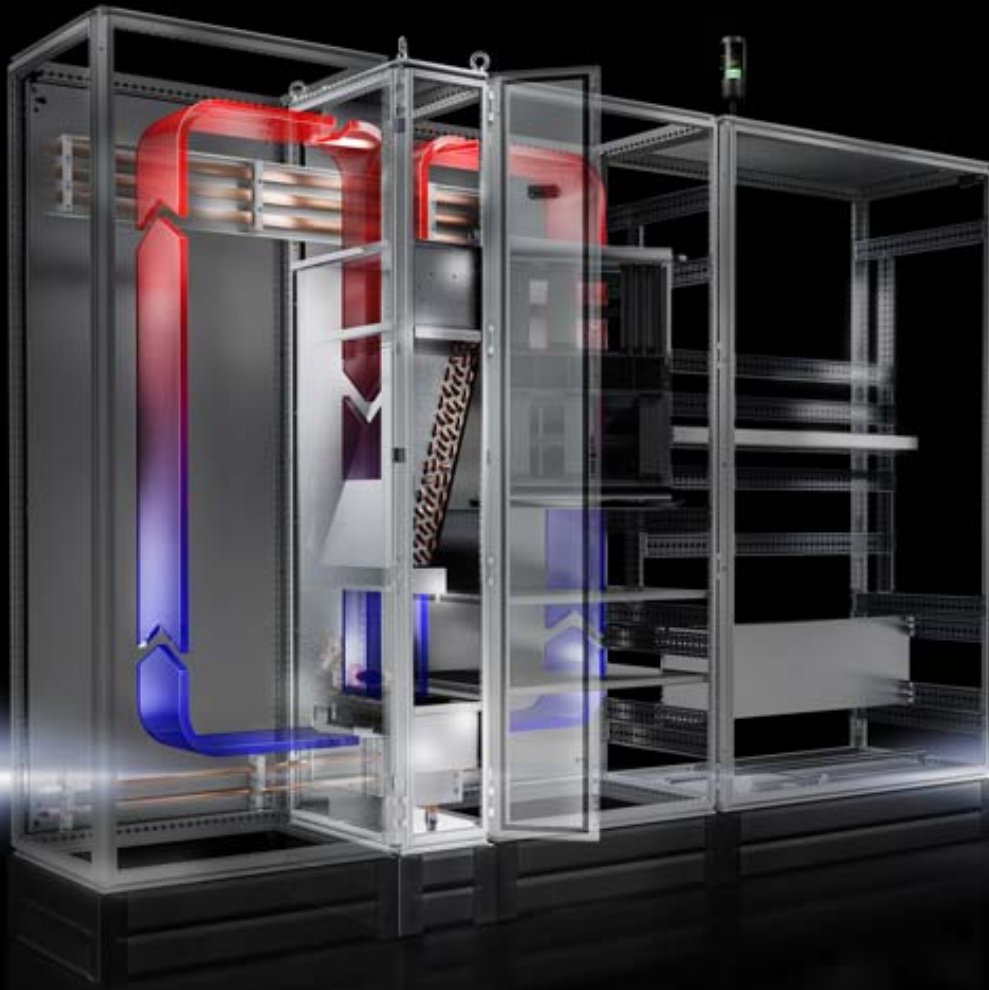
Further technical information:

Available on the Internet

Output class 600 – 1300 W, wall-mounted HD

Model No.	Packs of	3214.700	3215.700	Cat. 34, Page
Temperature control	Thermostat-controlled magnetic valve	■	■	
Total cooling output L35 W10, 200 l/h kW		0.6	1.25	
Total cooling output L35 W10, 400 l/h kW		0.7	1.3	
Power consumption P _{el} 50/60 Hz W		36 / 37	83 / 85	
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	
Width cm		220	215	
Height cm		526	982	
Depth cm		100	100	
Rated current max. A		0.17 / 0.18	0.38 / 0.4	
Pre-fuse A		2	4	
Operating temperature range		+1°C...+70°C	+1°C...+70°C	
Setting range		+20°C...+55°C	+20°C...+55°C	
Water inlet temperature		+1°C...+30°C	+1°C...+30°C	
Water connection	G 3/8" external thread	■	■	
Permissible operating pressure (p. max.) bar		1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow), internal circuit 50/60 Hz m³/h		280 / 310	680 / 735	
Cooling medium		Water (see instructions for specifications)	Water (see instructions for specifications)	
Weight kg		7.5	14.0	
Accessories				
Toroidal transformer		see page	see page	382

LCP – Liquid Cooling Package for industry



New features:

- Busbars and cables can easily be outed through the unit at the top and bottom so that now, even bayed enclosure suites can be integrated and supplied with a high cooling output
- EC fans and Comfort controllers for even greater efficiency

As before:

- **Fits perfectly into the system**
Bayable to all 600 or 800 mm deep, 2000 mm high TS 8 enclosures
- **Maximum performance in a minimal space**
Air outlet with either 5 kW on each side or 10 kW on one side only
- **Flexible water connection**
At either the top or bottom of the unit



Liquid Cooling Package



Accessories for climate control Cat. 34, page 369 **Chillers** Cat. 34, page 441 **Therm software** Cat. 34, page 385

Air/water heat exchangers in TS 8 baying system, to fit 600 or 800 mm deep and 2000 mm high TS 8 enclosures. Air outlet either with 5 kW on each side or 10 kW on one side only. Flexible water connection options on the top or bottom of the unit.

Colour:

- RAL 7035

Protection category IP to IEC 60 529:

- IP 55

Cooling medium:

- Water (see Internet for specifications)

Supply includes:

- Fully wired ready for connection (plug-in terminal strip)
- Front door

Note:

- Bayable by screw-fastening at the sides

Performance diagrams:

Available on the Internet

Further technical information:

Available on the Internet

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

Output class 10 kW, LCP rack industry

Model No.		Packs of	3378.200	3378.280	Cat. 34, page
Design	Water-carrying parts, copper/brass (Cu/CuZn)		■	■	
Total cooling output L35 W10, 2000 l/h kW			9.5	9.5	
Power consumption P _{el} 50/60 Hz W			350 / 406	350 / 406	
Rated operating voltage V, ~, Hz			230, 1~, 50/60	230, 1~, 50/60	
Width mm			300	300	
Height mm			2000	2000	
Depth mm			600	800	
Rated current max. A			3 / 3.5	3 / 3.5	
Pre-fuse A			4	4	
Operating temperature range			+5°C...+70°C	+5°C...+70°C	
Setting range			+20°C...+55°C	+20°C...+55°C	
Water inlet temperature			+7°C...+30°C	+7°C...+30°C	
Water connection	¾" connector sleeve		■	■	
	¾" internal thread		■	■	
Permissible operating pressure (p. max.) bar			1 - 10	1 - 10	
Air throughput of fans (unimpeded air flow), internal circuit 50/60 Hz m³/h			1950 / 1950	1950 / 1950	
Cooling medium			Water (see Internet for specifications)	Water (see Internet for specifications)	
Weight kg			121.0	130.0	

Accessories

Base/plinth components, front and rear, 100 mm	2 pc(s).	8601.915	8601.915	513
Base/plinth trim panels, side, 100 mm	2 pc(s).	8601.060	8601.080	514
Base/plinth components, front and rear, 200 mm	2 pc(s).	8602.915	8602.915	513
Base/plinth trim panels, side, 200 mm	2 pc(s).	8602.060	8602.080	514
Side panels, screw-fastened, sheet steel	2 pc(s).	8106.235	8108.235	534
Condensate hose	1 pc(s).	3301.612	3301.612	377

Accessories for climate control



Filter mats

Rittal cooling units are low-maintenance and are supplied without filter mats. Filter mats may be used for extreme conditions.

Benefits:

- Temperature-resistant from -40°C...+80°C

Material:

- Open-celled polyurethane foamed plastic
- Thickness: 10 mm

For cooling units Blue e+

To fit Model No.	Packs of	Model No.
3186.930/3187.930/ 3188.940/3189.940	3 pc(s).	3285.900



Metal filters

Particularly when cooling units are used in dusty and oily 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 detergents.

Material:

- Aluminium
- Thickness: 10 mm

For cooling units Blue e+

To fit Model No.	Packs of	Model No.
3186.930/3187.930/ 3188.940/3189.940	1 pc(s).	3285.910



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 roof-mounted fans

To fit Model No.	Material	Width mm	Height mm	Depth mm	Filter class to DIN EN 779	Packs of	Model No.
3138.../3139.../ 3140....	Chemical fibres	264	95	17	G3	12 pc(s).	3174.100



Connection set

for air/water heat exchangers

For professional laying of water connections and regulation of volumetric flow. The pressure hoses may be cut to length individually, depending on the application.

Material:

- Water-carrying parts EPDM/brass

Supply includes:

- Hose for water return
- Hose for water inlet including regulator valve for regulating the volumetric flow (setting range 3 to 12 l/min)
- Assembly parts

To fit Model No.	Length mm	Water connections	Permissible operating pressure (p. max.) bar	Packs of	Model No.
3209.XX0/3210.XX0/ 3363.XX0/3364.XX0/ 3373.XX0/3374.XX0/ 3375.XX0	3600	G 3/8" internal thread	1 - 10	1 pc(s).	3201.990

Accessories for climate control

EC speed control

Control unit for EC fan

Temperature-dependent speed control for EC fans to reduce noise and save energy. The function of the fan can also be monitored.

Functions:

- Activation and monitoring of up to 4 EC fan-and-filter units
- For mounting on a 35 mm support rail EN 50 022
- External temperature sensor to record the actual temperature
- Status LED to display the operating status
- Alarm relay for reporting overtemperature, fan defect, cable break and sensor failure

Supply includes:

- NTC sensor, length 1.80 m



To fit Model No.	Rated operating voltage V	Setting range	Packs of	Model No.
3240.500/3241.500/ 3243.500/3244.500/ 3245.XXX/3140.500/ 3140.510	100 - 250	+5°C...+55°C	1 pc(s).	3235.440

Temperature sensor

for Blue e+ cooling units

NTC sensor to regulate Blue e+ cooling units according to an individual measurement point within the enclosure (control based on an external sensor).

Supply includes:

- External sensor with connection cable (length 2.5 m)

Packs of	Model No.
1 pc(s).	3124.400



Blue e+ Updater

The free software package for updating the firmware ensures that Blue e+ cooling units are always up-to-date, for operational reliability of your climate control. Additionally, by updating the language packs, the Blue e+ updater allows the cooling units to be used in 21 individual languages.

Supply includes:

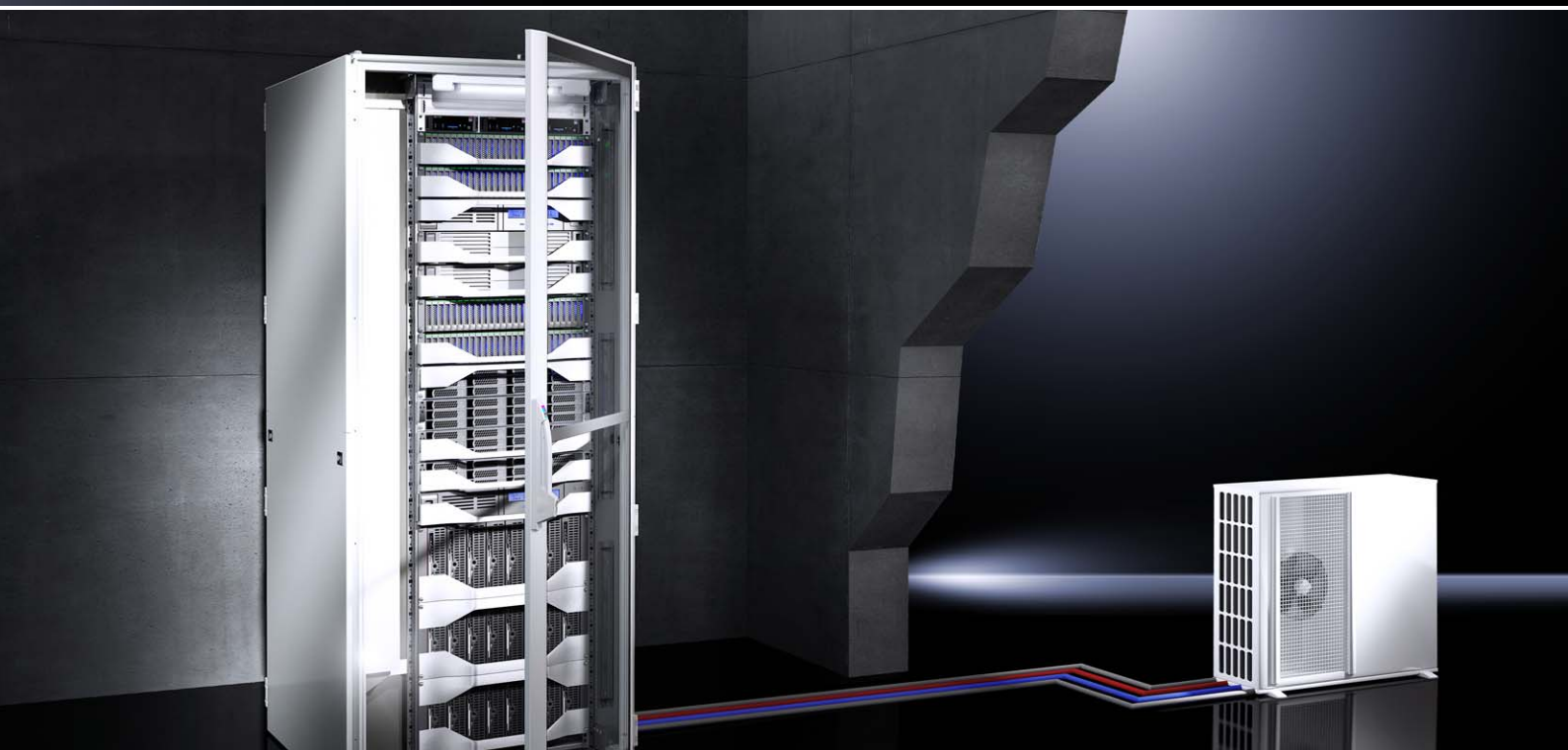
- Download free of charge

Packs of	Model No.
1 pc(s).	3121.910





LCU DX – Efficient cooling with no loss of space



- Space-saving installation of the internal unit between the 482.6 mm (19") level and side panel
- Optimum support of IT-compatible, "front-to-back" air routing
- High level of fail-safeness guaranteed by availability of single and redundant variant
- Cooling of TS IT racks and Micro Data Center
- Refrigerant-based split cooling unit comprised of an internal unit (evaporator coil) and an external unit with integral compressor (inverter-controlled)
- External unit is sited outside the building



Benefits at a glance



- Maximum energy efficiency by cooling the individual rack, rather than the whole room
- Efficient operation thanks to EC fan technology
- Optimum adaptation of the compressor output to the current heat load of the IT rack with inverter control
- Ultimate security with optional alarm forwarding via CMC III
- High availability designed for continuous, 24/7 operation
- Absorbed thermal energy is emitted via the external unit directly to the ambient air
- The internal and external unit are connected with refrigerant, data and supply lines
- Control of the server inlet temperature

Liquid Cooling Unit



Network/server enclosures TS IT Page 32 Micro Data Center Cat. 34, page 466

Applications:

- Cooling unit for TS IT server enclosures and for Micro Data Center

Benefits:

- Space-saving solution by installing the internal unit in the TS IT server enclosure or the Micro Data Center
- Maximum energy efficiency due to EC fan technology and IT-based control
- Control of the server inlet temperature
- The inverter-controlled compressor adapts the cooling output to the current heat loss inside the enclosure
- Absorbed thermal energy is emitted directly to the ambient air at the (inverter-controlled) external unit's location, without heating up the installation room

Functions:

- The device supports "front-to-back" air routing typical of IT applications, and regulates the server inlet temperature to the set value

Colour:

- Internal unit: RAL 7035
- External unit: white

Protection category IP to IEC 60 529:

- Internal unit IP 20
- External unit IP X4

Supply includes:

- Internal unit (evaporator coil)
- External unit (inverter-controlled)
- 482.6 mm (19") mounting trim panel with display and control components
- Condensate hose

Note:

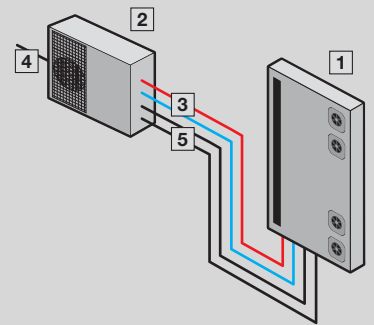
- Below the operating limit, fluctuations in the air inlet temperature are possible
- The electrical connection is made on the external unit; the internal unit is supplied by the external unit

Installation in TS IT:

- 482.6 mm (19") levels must be designed as mounting angles and offset in the width by 50 mm off-centre
- The front distance between the 482.6 mm (19") mounting angles and the front edge of the TS frame must be at least 100 mm
- Not suitable for combination with 482.6 mm (19") mounting frame
- Two punched sections with mounting flanges are required for attachment on the inner mounting level
- To separate the hot/cold zones within an enclosure, an air baffle plate for TS IT is required
- A Flex-Block base/plinth is required to route the cable downwards

Further technical information:

Available on the Internet



- 1 Internal unit
- 2 External unit
- 3 Refrigerant lines
- 4 Power supply
- 5 Data cable

LCU DX, single

Design	Packs of	LCU DX 3 kW	LCU DX 6.5 kW	Page
Model No.	1 pc(s).	3311.490	3311.492	
For enclosure width mm		800	800	
For enclosure height mm		≥ 1800	≥ 1800	
For enclosure depth mm		≥ 1000	≥ 1000	
External unit, W x H x D mm		810 x 558 x 310	845 x 700 x 320	
Internal unit, W x H x D mm		105 x 1550 x 820	105 x 1550 x 820	
Type of electrical connection		Connection clamp	Connection clamp	
Rated operating voltage V, ~, Hz		230, 1~, 50	230, 1~, 50	
Rated current (max.) A		7	15.9	
Pre-fuse A		16	20	
Duty cycle %		100	100	
Useful cooling output L22 L35 kW		3	6.5	
Cooling medium		R410a	R410a	
Sound pressure level at a distance of 10 m (external unit) dB(A)		40	40	
Operating temperature range (external unit)		-20°C...+45°C	-20°C...+45°C	
Weight as delivered kg		116.0	126.0	
Accessories				
Refrigerant lines	1 pc(s).	3311.495	3311.496	160

Any questions about our services or maintenance agreements?

Do you need an individual, personal consultation or a service quote?

Our service specialists will be happy to assist you.

- Manufacturers' warranty
- Configuration and assembly
- Inspection
- Climate control pipework
- Commissioning
- Leak test
- Modernisation
- Maintenance
- Service agreements (SLA)
- Spare parts
- Response time
- Wearing parts

Please direct enquiries to the local Rittal Service organisation, either by e-mail or phone.

www.rittal.com/contact

Rittal Service

CMC III Processing Unit/Compact



www.rittal.com/r?lcu-cmc3-en

CMC III

Liquid Cooling Unit



Network/server enclosures TS IT Page 32 Micro Data Center Cat. 34, page 466

Applications:

- Cooling unit for TS IT server enclosures and for Micro Data Center in a redundant design

Benefits:

- Space-saving solution by installing the redundantly designed internal unit in the TS IT server enclosure or the Micro Data Center
- Maximum energy efficiency due to EC fan technology and IT-based control
- Control of the server inlet temperature
- The inverter-controlled compressor adapts the cooling output to the current heat loss inside the enclosure
- Absorbed thermal energy is emitted directly to the ambient air at the (inverter-controlled) external unit's location, without heating up the installation room

Functions:

- The redundant variants have two cooling circuits and controllers inside the internal unit, plus two inverter-regulated external units. The fault and operating hours changeover allows regular switching between the two external units, and ensures automatic changeover in the event of a malfunction or failure.
- The device supports "front-to-back" air routing typical of IT applications, and regulates the server inlet temperature to the set value

Protection category IP to IEC 60 529:

- Internal unit IP 20
- External unit IP X4

Supply includes:

- Internal unit (evaporator coil)
- 2 external units (inverter-controlled)
- 482.6 mm (19") mounting trim panel with display and control components
- Condensate hose

Note:

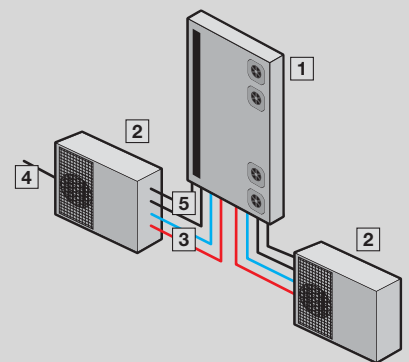
- Below the operating limit, fluctuations in the air inlet temperature are possible
- The electrical connection is made on the external unit; the internal unit is supplied by the external unit
- A separate power supply may be needed, depending on the external unit

Installation in TS IT:

- 482.6 mm (19") levels must be designed as mounting angles and offset in the width by 50 mm off-centre
- The front distance between the 482.6 mm (19") mounting angles and the front edge of the TS frame must be at least 100 mm
- Not suitable for combination with 482.6 mm (19") mounting frame
- Two punched sections with mounting flanges are required for attachment on the inner mounting level
- To separate the hot/cold zones within an enclosure, an air baffle plate for TS IT is required
- A Flex-Block base/plinth is required to route the cable downwards

Further technical information:

Available on the Internet



- 1 Internal unit
- 2 External unit
- 3 Refrigerant lines
- 4 Power supply
- 5 Data cable

LCU DX, redundant

Design	Packs of	LCU DX 3 kW redundant	LCU DX 6.5 kW redundant	Page
Model No.	1 pc(s).	3311.491	3311.493	
For enclosure width mm		800	800	
For enclosure height mm		≥ 1800	≥ 1800	
For enclosure depth mm		≥ 1000	≥ 1000	
External unit, W x H x D mm		810 x 558 x 310	845 x 700 x 320	
Internal unit, W x H x D mm		105 x 1550 x 820	105 x 1550 x 820	
Type of electrical connection		Connection clamp	Connection clamp	
Rated operating voltage V, ~, Hz		230, 1~, 50	230, 1~, 50	
Rated current (max.) A		7	15.9	
Pre-fuse A		16	20	
Duty cycle %		100	100	
Useful cooling output L22 L35 kW		3	6.5	
Cooling medium		R410a	R410a	
Sound pressure level at a distance of 10 m (external unit) dB(A)		40	40	
Operating temperature range (external unit)		-20°C...+45°C	-20°C...+45°C	
Weight as delivered kg		154.0	174.0	
Accessories				
Refrigerant lines	1 pc(s).	3311.495	3311.496	160

Rittal data centre health check – know what's going on!

On request, as part of a maintenance order or service agreement, we will carry out the following health check on your data centre, free of charge:

- Perform an evaluation
- Assess the risk
- Highlight potential savings
- Offer solutions

Please direct enquiries to the local Rittal Service organisation, either by e-mail or phone.
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Rittal Service



PDU – Power Distribution Unit



www.rittal.com/r?lcu-pdu-en

Accessories

for IT cooling

Refrigerant lines

for LCU DX

For connecting the internal and external unit of the LCU DX. Comprised of an intake gas line and a liquid line. The refrigerant lines are insulated.

Length m	Design	Product-specific scope of supply	Packs of	Model No.
20	LCU DX 3 kW	Intake gas line ½" Liquid line ¼"	1 pc(s).	3311.495
20	LCU DX 6.5 kW	Intake gas line ¾" Liquid line ¾"	1 pc(s).	3311.496



482.6 mm (19") air duct

for horizontal air routing

Air duct, passive, for cold air intake to 482.6 mm (19") IT equipment installed at the rear of server racks which draws in air from the front.

Benefits:

- For superior air infeed to the rear 482.6 mm (19") components
- Integral brush strip for cable entry of 482.6 mm (19") IT equipment
- Supports front-to-back air routing
- Depth-variable

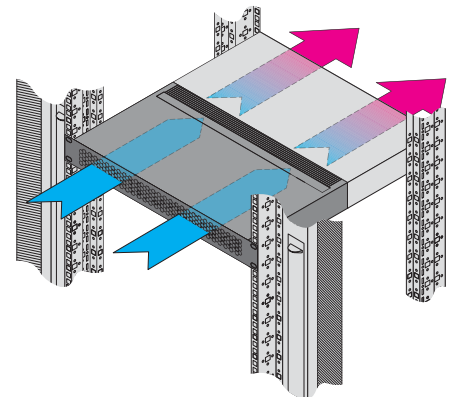
Material:

- Sheet steel, spray-finished

Colour:

- RAL 9005

Width mm	Height U	Depth mm	Packs of	Model No.
482.6	1	223 - 356	1 pc(s).	3301.391



Air duct

for side air routing

Air duct, passive, for cold air intake to 482.6 mm (19") equipment with side air inlet.

Benefits:

- For superior air infeed to the rear 482.6 mm (19") equipment with side air routing
- Integral membrane cover allows cable entry to the rear
- Depth-variable

Installation options:

- for TS IT 482.6 mm (19") mounting angles
- for TS IT 482.6 mm (19") mounting frames

Material:

- Sheet steel, spray-finished

Colour:

- RAL 9005

Supply includes:

- Adaptor for attaching to 482.6 mm (19") mounting angles
- Magnetic strip to cover the remaining vertical openings in the air baffle plate



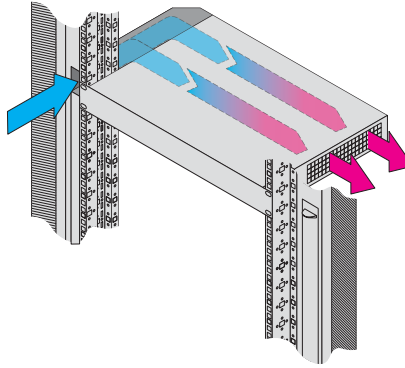
Also required:

- Air baffle plates for TS IT 482.6 mm (19") mounting frames, see page 77
- Air baffle plates for TS IT 482.6 mm (19") mounting angles, see Catalogue 34, page 692



Assembly instruction:

- Only suitable for fitting on the front 482.6 mm (19") installation level



Height U	Depth mm	For enclosures	For enclosure width mm	Packs of	Model No.
2	275 - 418	TS IT	800	1 pc(s).	3301.392

Aisle containment



Liquid Cooling Package Cat. 34, page 428 **Network/server enclosures TS IT** Page 34

Slimline door element with viewing window and sliding door. Stable roof elements in a composite material with a high level of light permeability. Where required, safety glass may also be used. The aisle width is 1,200 mm.

Applications:

- Depending on the application, aisle containment may be used with CRAC systems or LCP Inline as hot or cold aisle containment.

Benefits:

- Increased energy efficiency and performance capability of climate control.
- Easily installed and retrofitted, as it is fully compatible with the TS IT enclosure system.
- An inexpensive way to boost the performance of your existing plant, lengthening the investment cycle until a replacement needs to be purchased.

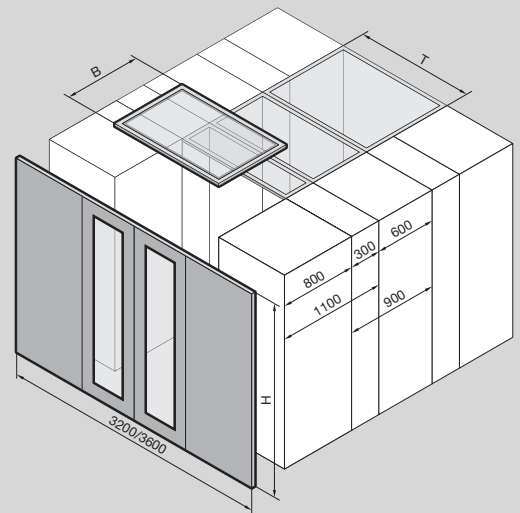
Functions:

- 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.

Further technical information:

Available on the Internet

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



Design	Packs of	Door element	Door element	Roof element centre	Roof element centre	Roof element centre	Roof element centre	Roof element centre	Roof element start/end	Roof element start/end	Page
Model No.	1 pc(s).	3311.161	3311.163	3311.170	3311.180	3311.190	3311.200	3311.210	3311.270	3311.280	
For enclosure depth mm		1000	1200	–	–	–	–	–	–	–	
Width (B) mm		3200	3600	600	800	300	900	1100	600	800	
Depth (T) mm		–	–	1200	1200	1200	1200	1200	1200	1200	
Height (H) mm		2000	2000	–	–	–	–	–	–	–	
Weight as delivered kg		120.0	135.0	25.0	28.0	20.0	30.0	33.0	25.0	28.0	

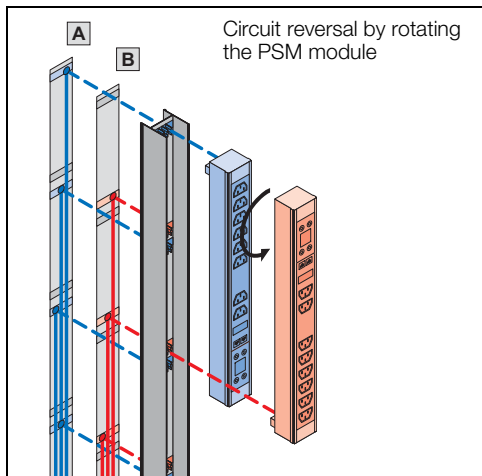
Power System Module

PSM measurement modules with CAN bus

for PSM busbars

A power meter and switching functions for the output slots can be added to any PSM busbar with these PSM plug-in modules. The modules are also suitable for upgrading existing PSM installations if it becomes necessary to record the power data or add a switching option for the connected equipment.

There are three variants available with different socket types. In the PSM busbar, the PSM modules occupy two module slots each. Measurements are displayed locally on a backlit LC display. For quick checks, the colour of the display backlight changes to red if current and power limits are exceeded.



Functions:

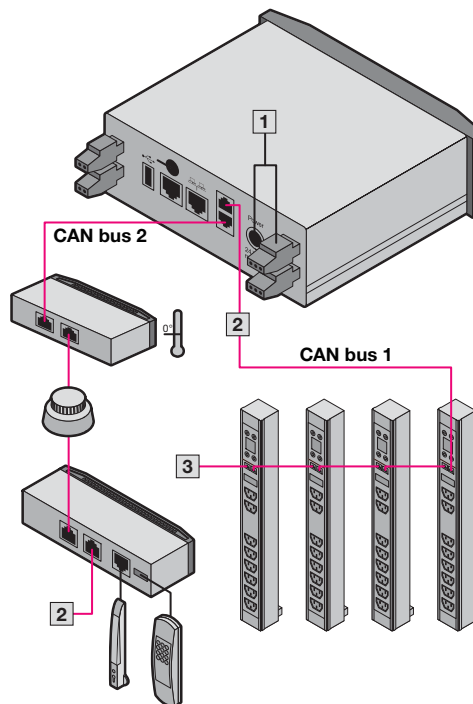
- Simple, shock-hazard-protected, plug & play installation with the system operational
- Measurement of power consumption per module
- Output slots may be switched individually and in groups via CMC III
- Blue LEDs per slot to visually indicate the switching status
- Status LEDs for CAN bus communication per module
- LC matrix display with multi-coloured backlight for local display
- Location sensor for correct display and Web view in 90° increments
- Adjustable limits for voltage, current and active power
- Configurable overload detection per module
- High level of measurement accuracy
- Alarm signalling via the display
- Facilitates the implementation of requirements to ISO 50001 and EN 50600-2-2
- Stable aluminium section with plastic socket inserts
- Supports universal connector locking of the IEC 60320, C13 and C19 slots
- Supports the closure of unneeded IEC 60320, C13 and C19 slots
- PSM module is easily fitted into and removed from the PSM busbar, allowing it to be used at changing locations
- Compatible with the European PSM busbar range
- Depending on the PSM busbar, up to four modules per bar may be fitted
- In redundant systems, the circuit may be switched over by rotating the module
- Suitable for use at ambient temperatures of up to +60°C

Integration into the CMC III monitoring system

Multiple modules may be interconnected and linked directly to the CMC III enclosure monitoring system via the integral CAN bus interface. The PSM measurement module supports the configuration of an energy data management (EMS) system to ISO 50001. This may be combined with the CMC III. Using the CMC III, the individual output slots of the PSM modules may be switched individually or in groups via the network. Similarly, data logging, including diagrammatic representation, is also available via the CMC III website. Data is forwarded from the CMC III via an Ethernet interface with common protocols such as SNMPv3, Modbus/TCP and OPC-UA. The switch function is easily linked to other sensors connected to the CMC III monitoring system (e.g. CMC III temperature sensor, smoke alarm or DET-AC III extinguisher system). In larger installations, we recommend incorporating the CMC III PU with PSM modules into a DCIM software package (e.g. RiZone).

Additional functions:

- Alarm management via CMC III (e.g. e-mail or text message)
- Visualisation of the switching status on the CMC III website and RiZone
- Up to 16 PSM modules on one CMC III PU (for each IP address)
- Rights management via CMC III (e.g. restriction of the switching function)



1 Voltage supply 24 V (DC) and redundant voltage supply 24 V (DC)

2 Supports up to 16 sensors per CAN bus (depending on the power supply/connection combinations)

3 Supports up to 8 PSM modules per CAN bus



Power System Module



PSM measurement modules with CAN bus

for PSM busbars

Supply includes:

- PSM measurement module, depending on type
- CAN bus connection cable, 1 m long



Also required:

- PSM busbar and accessories, see Catalogue 34, from page 409
- CMC III and accessories, see Catalogue 34, from page 450



Accessories:

- Slot cover, see page 165
- Connector lock, see page 165
- Power pack, see page 165

Model No.	7859.410	7859.420	7859.430
Packs of	1 pc(s).	1 pc(s).	1 pc(s).
No. of IEC 60320 C13 slots	8	2	2
No. of IEC 60320 C19 slots	-	4	-
No. of earthing-pin slots (CEE 7/3 or type F)	-	-	4
Total no. of switchable outputs	8	6	6
No. of slots required in the PSM busbar	2	2	2
Module dimensions (W x L x D) mm	53 x 500 x 45		
Section	Aluminium, anodised		
Plastic	PA6 GF 30 V1		
Electrical			
No. of infeeds per module	1 pc(s).		
Input voltage	230 V AC		
Input voltage, tolerance	207 – 250 V AC		
Rated current	16 A		
Distribution power per module (at 230 V)	3680 W		
Power supply (via CMC III system, alternatively with power pack 7201.210)	18 – 24 V DC		
Relay type	Dual coil/bistable		
Relay switching load	4000 VA		
Measurement functions			
Voltage V, current A, frequency Hz	■		
Active power kW, active energy kWh	■		
Reactive power kVar, reactive energy kVarh	■		
Apparent power kVA, apparent energy kVAh	■		
Power factor cosPhi, crest factor	■		
Operating hours meter d, h, min	■		
Measurement accuracy	±1%		
Resettable measurement functions / reset via software / interval measurement			
Active energy kWh	■		
Operating hours meter h	■		
Threshold values (warning/alarm) freely configurable	Voltage, current, power		
Connectivity / management functions (in conjunction with CMC III)			
Maximum number of usable modules per CMC III Processing Unit	16 (2 x 8)		
Maximum number of usable modules per CMC III Processing Unit Compact	4		
CAN bus for direct connection to CMC III system	2 (RJ 45)		
Network functionality (only in conjunction with CMC III system)	IPv4, IPv6, SNMPv3, Modbus/TCP, OPC-UA		
Ambient conditions			
Operating temperature	+5...+60°C		
Storage temperature	-20...+70°C		
Ambient humidity (non-condensing)	rel. humidity 10 – 90%		
Maximum operating altitude	2000 m		
Pollution degree	2		
Protection class (IEC 60529)	IP 20		
Approvals and standards			
Approval	CE		
Standard (excerpt)	Low Voltage Directive 2014/35/EU, EMC Directive, 2014/30/EU, EN 50600-2-2 EN 60950		

Power System Module

Slot cover

for C13 and C19 slots

The slot cover is used to close open, unused IEC 60 320 C13 and C19 slots. This prevents accidental overloading of individual phases. The cover can be removed at any time using the enclosed release tool (or a slotted screwdriver).

Material:

- Plastic (PA 66)

Colour:

- RAL 9005

For slots	Packs of	Model No.
C13	10 pc(s).	7955.010
C19	10 pc(s).	7955.015



Connector lock

for C14 and C20 connectors

The universal lock can be used to latch IEC 60 320 C14 or C20 connectors in place to prevent accidental removal.

Latching is adjustable and adapts to standard connector forms. This creates a reliable manufacturer-independent connection for most connection cables commonly available on the market.

Material:

- Plastic (PA 12)

Colour:

- RAL 9005

Packs of	Model No.
20 pc(s).	7955.020



Power pack

for PSM

For operating the PSM measurement modules (with switch and measurement function) or PSM measurement bars if no CMC III is used.

The power pack has a connection cable with RJ45 connector, suitable for use with the PSM measurement modules and measurement bars.

Technical specifications:

- Dimensions W x H x D: 60 x 30 x 135 mm
- Rated operating voltage:
100 V – 240 V, 1~, 50/60 Hz
- Ambient conditions:
Operating temperature: +5°C...+45°C
Operating humidity, non-condensing
10% – 90%
- Output voltage: 24 V DC
- Connections:
Input: IEC/EN 60 320 C14
Output: RJ45
Output cable: 1 m long

Packs of	Model No.
1 pc(s).	7201.210



CMC III

Sensors for direct connection



CMC III smoke alarm

Optical component monitors the room air for smoke particles.

Temperature range:
– +5°C...+45°C

Connection:
– 2 x RJ 45: CAN bus

Material:
– Plastic

Colour:
– White

Supply includes:
– Mounting bracket
– Assembly parts

Packs of	PU Compact	PU	Model No.
	Max. no. of		
1 pc(s).	4	32	7030.400



Also required:

- CMC III Processing Unit/Compact 7030.000/7030.010, see Catalogue 34, page 450



CMC III leakage sensor

Monitors a given point on the floor of the data centre or enclosure for liquids. The external sensor probe allows free selection of the point to be monitored.

Temperature range:
– +5°C...+45°C

Connection:
– 2 x RJ 45: CAN bus
– Terminal

Material:
– Plastic

Colour:
– Front and sensor head: RAL 9005
– Enclosure: RAL 7035

Supply includes:
– Sensor with connection cable, 3 m
– Mounting bracket
– Assembly parts
– Mounting clips for support rails

Packs of	PU Compact	PU	Model No.
	Max. no. of		
1 pc(s).	4	32	7030.430



Also required:

- CMC III Processing Unit/Compact 7030.000/7030.010, see Catalogue 34, page 450



Assembly instruction:

- Optional: Mounting bracket 4597.000 for sensor, see Catalogue 34, page 617



CMC III leakage sensor, 15 m

Monitors a larger floor area for liquids using the 15 metre long detection cable. The sensor additionally indicates the section of cable where a leak has been detected.

Temperature range:
– +5°C...+45°C

Connection:
– 2 x RJ 45: CAN bus
– Terminal

Material:
– Plastic

Colour:
– Front and detector cable: RAL 9005
– Enclosure: RAL 7035

Supply includes:
– Detector cable, 15 m
– Mounting bracket
– Assembly parts
– Mounting clips for support rails

Packs of	PU Compact	PU	Model No.
	Max. no. of		
1 pc(s).	4	32	7030.440



Also required:

- CMC III Processing Unit/Compact 7030.000/7030.010, see Catalogue 34, page 450

CMC III GSM unit

For configuring a redundant transmission channel or, if there is no network infrastructure available, for alarm forwarding. The alarm signal is designed in text message format. Covering 4 GSM frequencies (quad-band): 850 MHz, 900 MHz, 1800 MHz and 1900 MHz. A standard, commercially available SIM card must be provided by the customer.

Packs of	Model No.
1 pc(s).	7030.570

Material:

- Plastic

Colour:

- Front: RAL 9005
- Enclosure: RAL 7035

Supply includes:

- RJ 12 cable
- GSM aerial
- Assembly parts



Also required:

- CMC III Processing Unit/Compact 7030.000/7030.010, see Catalogue 34, page 450
- Mounting bracket, see Catalogue 34, page 617



CMC III 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 text message format.

Requirement for the ISDN connection:

- DSS1 (Euro-ISDN) must also be available when connecting to the ISDN system
- Point-to-multi-point configuration

Packs of	Model No.
1 pc(s).	7030.580

Material:

- Plastic

Colour:

- Front: RAL 9005
- Enclosure: RAL 7035

Supply includes:

- RJ 12 cable
- Assembly parts



Also required:

- CMC III Processing Unit/Compact 7030.000/7030.010, see Catalogue 34, page 450
- Mounting bracket, see Catalogue 34, page 617



Interference suppressor for fans

for CMC III

For connecting fans via the CMC III Power Unit 7030.050. The interference suppressor prevents excessive startup currents. One interference suppressor is required for each fan.

Packs of	Model No.
1 pc(s).	7030.051

Material:

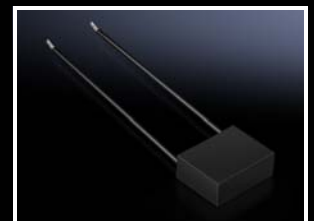
- Plastic

Colour:

- RAL 9005

Supply includes:

- Assembly parts



Door control system

Door control module

Control unit for automatic opening of TS IT rack doors. Designed for a rack with front and rear door. To fit CMC III system with CAN bus.

Material:

- Plastic

Colour:

- Front: RAL 9005
- Enclosure: RAL 7035

Supply includes:

- Basic system
- 4 mounting feet
- Quick-start instructions



Also required:

- Door kits, see page 169
- Power supply units, see Catalogue 34, page 457
- Connection cables, see Catalogue 34, page 457
- Mounting unit 1 U, see Catalogue 34, page 458



Accessories:

- CAN bus cable, see Catalogue 34, page 457
- Door switch/comfort handle, see Catalogue 34, page 460
- Coded lock/transponder reader, see Catalogue 34, page 452

Model No.	7030.500
Packs of	1 pc(s).
1st rated voltage	24 V (DC) door control module via CMC-III CAN bus, redundant to 2nd rated voltage
2nd rated voltage	24 V (DC) 7030.060 for door control module and magnet systems
3rd rated voltage	24 V (DC) 7030.060 for spindle motors only (protected by a UPS)
1 x temperature sensor input	NTC sensor (included with the supply)
3 x digital inputs	Alarm/front door/rear door
1 x input for reader units	Coded lock/transponder reader
2 x outputs for door kits	Magnetic system with damper
2 x outputs for door kits extension	Spindle motors
2 x CAN bus CMC III	RJ 45 for CAN bus cable

Door kit

for TS IT (magnetic system with damper)

To open the door in an emergency situation. Connection and activation via door control module, for standard TS IT doors. The doors are kept closed by a magnetic system. If the power supply to the magnets is interrupted, the gas pressure damper system pushes the door open.

Technical specifications:

- Rated voltage: 24 V DC
- Rated current 7030.240/241: 390 mA
- Rated current 7030.250: 520 mA

Material:

- Sheet steel

Surface finish:

- Zinc-plated

TS IT design	Packs of	Model No.
1-piece aluminium glazed door	1 pc(s).	7030.240
1-piece sheet steel door	1 pc(s).	7030.241
2-piece door	1 pc(s).	7030.250

Supply includes:

- Gas pressure damper
- Cable harness
- Magnetic system with damper
- Instructions
- Assembly parts



Also required:

- Door control module DCM, see page 169
- For 7030.250: Tubular door frame, see Catalogue 34, page 549

Door kit extension

for TS IT, LCP (spindle motor)

To open the door in an emergency situation. For applications with underpressure in the rack, e.g. LCP, powerful server fan motors etc., this kit is required in addition to the magnetic lock. The motor pushes the door open until the underpressure is released. It is mounted on the roof.

Technical specifications:

- Rated current: 900 mA
- Push force: 1000 N
- Stroke length: max. 200 mm

Material:

- Sheet steel
- Aluminium
- Plastic

Packs of	Model No.
2 pc(s).	7030.261

Supply includes:

- 2 spindle motors
- 2 push frames
- Instructions
- Assembly parts



Also required:

- Door control module DCM, see page 169
- Door kits, see page 169
- Power pack (with UPS protection), see Catalogue 34, page 457



IT management software



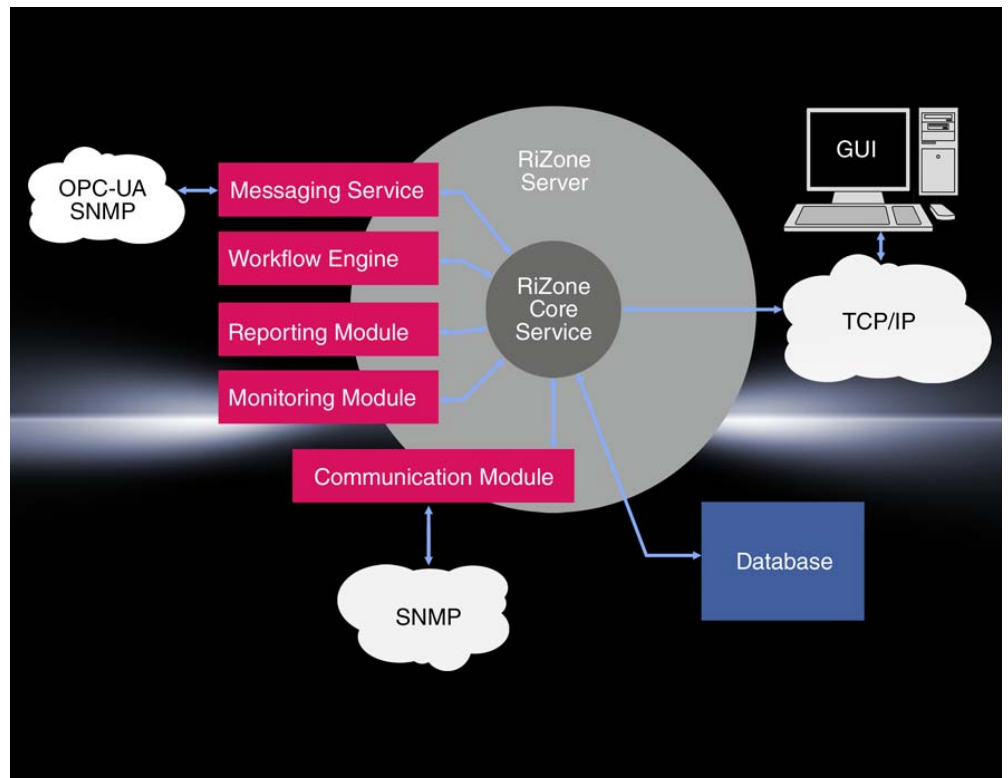
DCIM – Data Center Infrastructure Management

RiZone – Perfect support of IT infrastructure components

Now with new functions:

- User administration via active directory
- CMC III access
 - Central administration of the CMC III access control
 - Access administration does not require any switching between web pages or FTP uploads of access files
- Capacity management
 - Monitoring of capacities in the data centre
 - Graphical representation of the servers in the server enclosure
 - Redundancy monitoring of the climate control and power supply
 - Determination of optimum server installation positions
 - In conjunction with DRC, online reconciliation with the server enclosure and built-in components
 - Photorealistic visualisation of the components in the rack representation (using templates)

The full range of functions and further information may be found in Catalogue 34, from page 498, or on the Internet.



RiMatrix S efficiency package

The efficiency package allows the electrical parameters in the RiMatrix S module to be logged, saved and visualised. The DCIM solution RiZone included with the package provides real-time calculation of the data centre's PUE (Power Usage Effectiveness).

Supply includes:

- Janitza UMG 604 power analyser
- Hardware appliance RiZone software
- PDU international, metered version

Version	Packs of	Model No.
Single 6	1 pc(s).	7998.905
Double 6	1 pc(s).	7998.906
Single 9	1 pc(s).	7998.907
Double 9	1 pc(s).	7998.908



Also required:

- RiMatrix S, see Catalogue 34, from page 398



Fire alarm and extinguisher system



System accessories Cat. 34, page 507 Network/server enclosures TS IT Page 34

The active extinguisher system includes the smoke extraction system and the extinguisher unit. The smoke extraction system is identical to the smoke extraction system in the EFD III. The extinguishing process begins automatically when a main alarm is activated. For the extinguishing process, the tank is pressurised via a propellant cartridge. The extinguisher gas Novec™ 1230 evaporates at the extinguisher nozzle and is distributed in the server enclosure.

Benefits:

- Early fire detection
- Automatic extinguishing
- Innovative extinguisher Novec™ 1230: eco-friendly, non-critical for IT components, non-conductive
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- Floating relay outputs (pre-alarm/main alarm/collective fault)

Material:

- Sheet steel

Colour:

- Enclosure: RAL 7035
- Front: RAL 9005

Protection category IP to IEC 60 529:

- IP 30

Note:

- This system is designed solely for use in closed, non-accessible enclosure systems with a maximum volume of 2.8 m³.

Further technical information:

- Available on the Internet

DET-AC III master

Width mm	Packs of	482.6	Cat. 34, page
Height mm		44	
Depth mm		660	
Weight kg		22.1	
Model No.	1 pc(s).	7338.121	
Operating temperature range		+10°C...+40°C	
Storage temperature range without batteries		-20°C...+65°C	
Storage temperature range of batteries		-15°C...+40°C	
Ambient humidity (non-condensing) %		96	
Rated operating voltage V, ~, Hz		100 - 240, 1~, 50/60	
Emergency power supply		approx. 4 h	
Airflow monitoring		approx. ±10% of total airflow	
Interfaces		4x/3x relay outputs for alarms and faults (terminals/RJ12 jacks) 1x/1x input for door contact switch (terminal/RJ12 jack) 2 x CAN connections for master-slave networking 2x connection (external alarm/manual triggering device) 1 x voltage output for DET-AC slave III (24 V DC max. 500 mA) 1 x USB 2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact)	
Sensors		Optical smoke detector (sensitivity: approx. 3.5 %/m light obscuration) Optical smoke detector HS (sensitivity: approx. 0.25 %/m light obscuration)	
Display		Plain-language display with 6 LEDs	
Technical specifications		Extinguisher is emitted via a propellant cartridge, with integral electrical activation unit Integral extinguisher monitoring (indication of >15% loss)	
Tank: Material/volume l		Aluminium / 2	
Extinguisher: Type/fill volume l		Novec™ 1230 / 1.8	

Also required

CMC III sensors	2 pc(s).	7320.530	455
CMC III CAN bus connection cable	1 pc(s).	7030.091	457
Pipe kit	1 pc(s).	7338.130	
Slide rails, depth-variable	2 pc(s).	5501.480	687

Early fire detection system



System accessories Cat. 34, page 507 **Network/server enclosures TS IT** Page 34

The EFD III early fire detection system includes the smoke extraction system in a 482.6 mm (19") subrack with just 1 U. An integral fan continuously extracts air from the area being protected via a system of pipes. The air drawn in passes two fire detectors. If smoke is detected, the highly sensitive detector will emit a pre-alarm, while the second detector will activate the main alarm. The fire detectors are permanently monitored for correct functioning by the evaluation and control electronics on the control card.

Benefits:

- Early fire detection
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- Floating relay outputs (pre-alarm/main alarm/collective fault)

Material:

- Sheet steel

Colour:

- Enclosure: RAL 7035
- Front: RAL 9005

Protection category IP to IEC 60 529:

- IP 30

Note:

- This system is designed solely for use in closed, non-accessible enclosure systems.

Further technical information:

Available on the Internet

EFD III

Width mm	Packs of	482.6	Cat. 34, page
Height mm		44	
Depth mm		490	
Weight kg		15.0	
Model No.	1 pc(s).	7338.221	
Operating temperature range		+10°C...+40°C	
Storage temperature range without batteries		-20°C...+65°C	
Storage temperature range of batteries		-15°C...+40°C	
Ambient humidity (non-condensing) %		96	
Rated operating voltage V, -, Hz		100 - 240, 1~, 50/60	
Emergency power supply		approx. 4 h	
Airflow monitoring		approx. ±10% of total airflow	
Interfaces		4x/3x relay outputs for alarms and faults (terminals/RJ12 jacks) 1x/1x input for door contact switch (terminal/RJ12 jack) 2 x CAN connections for master-slave networking 3 x connection (external alarm/manual call point/tank and fill level) 1 x voltage output for DET-AC slave III (24 V DC max. 500 mA) 1 x USB 2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact)	
Sensors		Optical smoke detector (sensitivity: approx. 3.5 %/m light obscuration) Optical smoke detector HS (sensitivity: approx. 0.25 %/m light obscuration)	
Display		Plain-language display with 6 LEDs	
Also required			
CMC III CAN bus connection cable	1 pc(s).	7030.091	457
Pipe kit	1 pc(s).	7338.130	
Slide rails, depth-variable	2 pc(s).	5501.480	687



System accessories Cat. 34, page 507 **Network/server enclosures TS IT** Page 34

This add-on unit to the DET AC III Master includes an additional extinguisher unit. In addition to the DET-AC III unit, a DET-AC III slave unit is used for each additional bayed enclosure and supplies the extinguishing agent for that enclosure. Detection occurs via the DET-AC III master system, even when multiple enclosures are bayed together. If a main alarm is reported, the DET-AC III Master will activate extinguishing in all systems simultaneously.

Benefits:

- Innovative extinguisher Novec™ 1230: eco-friendly, non-critical for IT components, non-conductive
- 482.6 mm (19") rack mount with just 1 U
- Tested by VdS Schadenverhütung GmbH
- CAN bus interface to the CMC III monitoring system
- In conjunction with the DET-AC III Master, extinguishes up to five racks in an enclosure suite
- May be used in combination with EFD III
- Floating relay outputs (pre-alarm/main alarm/collective fault)

Material:

- Sheet steel

Colour:

- Enclosure: RAL 7035
- Front: RAL 9005

Protection category IP to IEC 60 529:

- IP 30

Note:

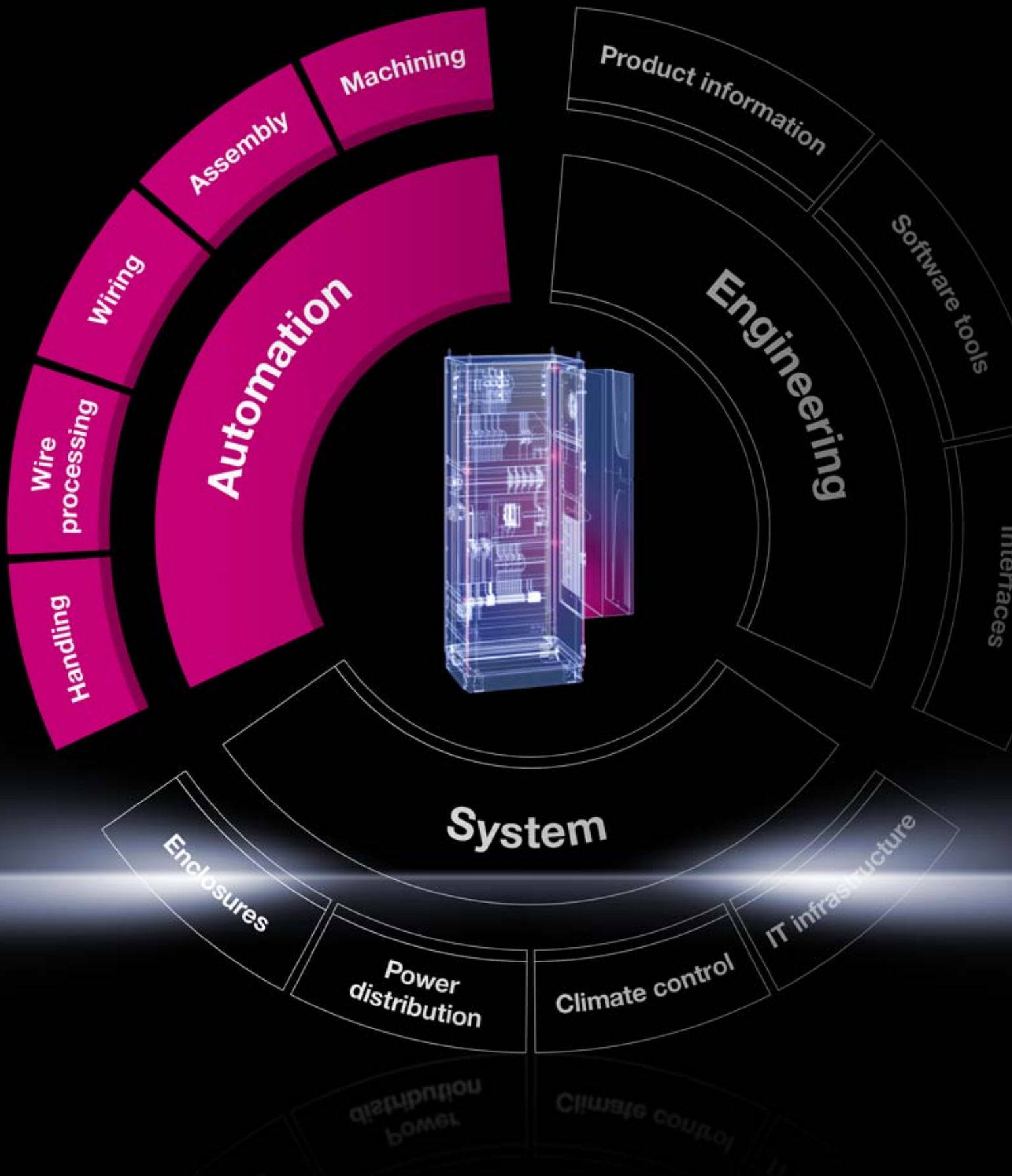
- This system is designed solely for use in closed, non-accessible enclosure systems with a maximum volume of 2.8 m³.

Further technical information:

Available on the Internet

DET-AC III slave

Width mm	Packs of	482.6	Cat. 34, page
Height mm		44	
Depth mm		660	
Weight kg		19.1	
Model No.	1 pc(s).	7338.321	
Operating temperature range		+10°C...+40°C	
Storage temperature range without batteries		-20°C...+65°C	
Storage temperature range of batteries		-15°C...+40°C	
Ambient humidity (non-condensing) %		96	
Rated operating voltage V		24 (DC)	
Emergency power supply		approx. 4 h	
Interfaces		4x/3x relay outputs for alarms and faults (terminals/RJ12 jacks) 1x/1x input for door contact switch (terminal/RJ12 jack) 2 x CAN connections for master-slave networking 2x connection (external alarm/manual triggering device) 1 x voltage output for DET-AC slave III (24 V DC max. 500 mA) 1 x USB 2 x CAN bus interfaces to CMC III (max. 16 on PU/4 on PU Compact)	
Technical specifications		Extinguisher is emitted via a propellant cartridge, with integral electrical activation unit Integral extinguisher monitoring (indication of >15% loss)	
Tank: Material/volume l		Aluminium / 2	
Extinguisher: Type/fill volume l		Novec™ 1230 / 1.8	
Also required			
CMC III sensors	2 pc(s).	7320.530	455
Pipe kit	1 pc(s).	7338.130	
Slide rails, depth-variable	2 pc(s).	5501.480	687



ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



Automation

For enclosure machining

Machining	from page 180
Assembly	from page 186
Wire processing	from page 188
Wiring	from page 192
Handling	from page 194



IT INFRASTRUCTURE

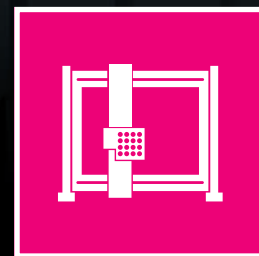
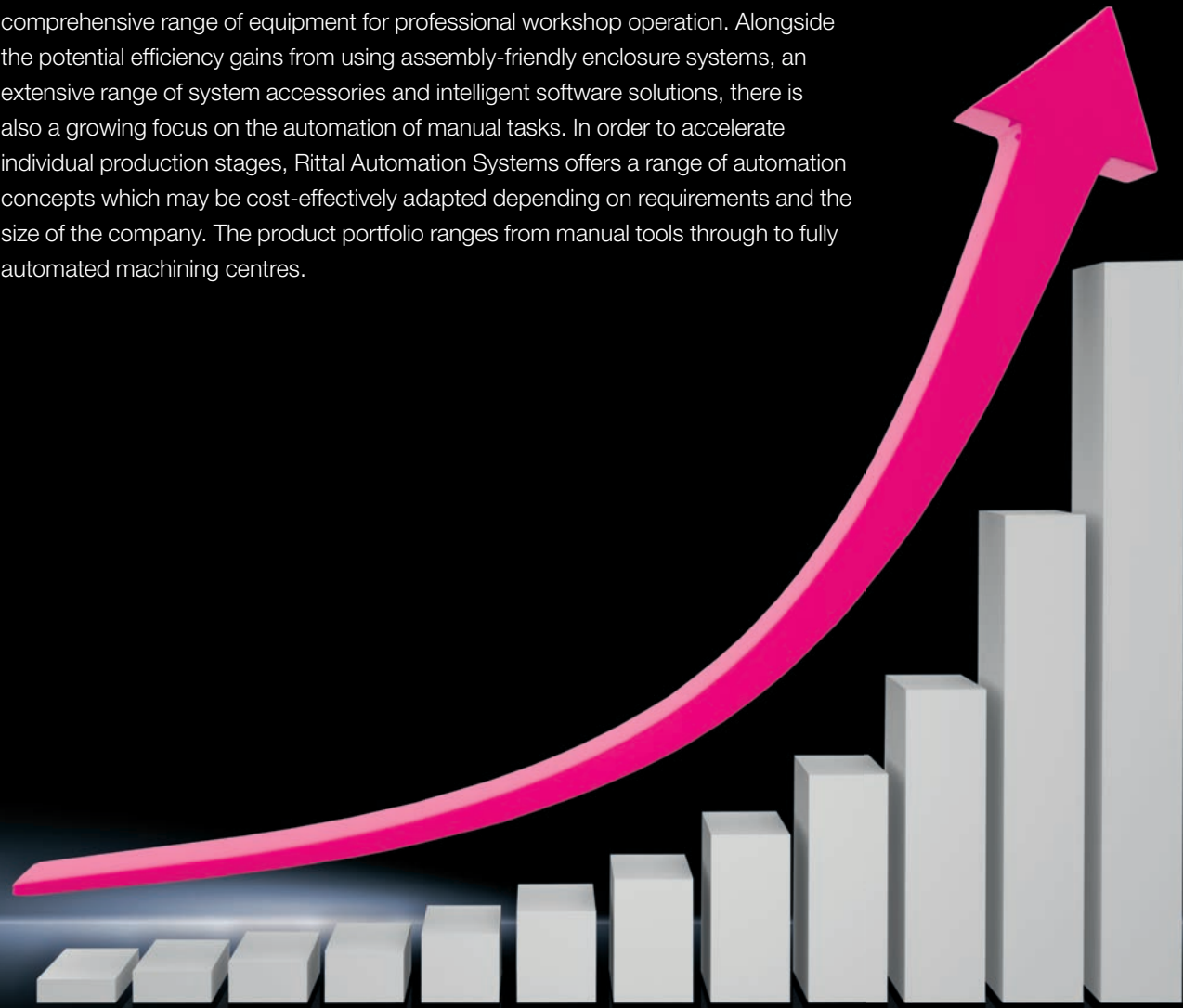
SOFTWARE & SERVICES



New business unit “Rittal Automation Systems”

Rittal automates enclosure manufacturing

The new Rittal Automation Systems business unit extends Rittal’s comprehensive range of solutions for panel building and switchgear engineering. By taking over the entire product range of its sister company Kiesling, Rittal is continuing to expand “The System”, offering a comprehensive range of equipment for professional workshop operation. Alongside the potential efficiency gains from using assembly-friendly enclosure systems, an extensive range of system accessories and intelligent software solutions, there is also a growing focus on the automation of manual tasks. In order to accelerate individual production stages, Rittal Automation Systems offers a range of automation concepts which may be cost-effectively adapted depending on requirements and the size of the company. The product portfolio ranges from manual tools through to fully automated machining centres.



Automation

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

FRIEDHELM LOH GROUP

Processes

Optimisation of the complete workflow in enclosure manufacturing

The Rittal Automation Systems business unit with its portfolio of services supports all process stages in panel building and switchgear engineering. From manual tools through to fully automated systems, find your customised solutions for process-optimised workshop operations.

- ~ Machining of enclosures and components
- ~ Assembly of terminal blocks on DIN rails
- ~ Wire processing
- ~ Fully automated wiring of mounting plates
- ~ Handling systems and tools



Machining



Tools



Handling

Machining:

Discover our solutions for the fully automated, fast, precise and reliable milling or laser machining of enclosures and cases, plus cut-optimised machining of cable ducts and DIN rails.

- ~ **Perforex BC** – Milling, thread tapping, drilling
- ~ **Perforex LC** – Laser cutting of stainless steel and powder-coated sheet steel enclosures
- ~ **Secarex** – For cutting cable ducts and DIN rails to length

..... from page 180

IT INFRASTRUCTURE

SOFTWARE & SERVICES



Optimisation of the complete workflow in enclosure manufacturing



Assembly



Wire processing



Tools



Handling

Assembly:

Our products in the field of assembly support the automatic production of terminal strips in panel building and switch-gear engineering.

- **Athex** – Terminal configuration and labelling

..... from page 186

Wire processing:

Take advantage of our professional, rational solutions in wire processing.

- **Cutting machine**
- **Stripping machine**
- **and crimping machines**

..... from page 188

Tools:

The right tool for every application.

- **Screwdrivers**
- **Pliers**
- **Insulation stripping and crimping tools**
- **Hole punching tools**

..... from page 198

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL



Wiring



Tools



Handling

Wiring:

Benefit from our fully automated mounting plate wiring solutions.

~ **Averex** – Fully automated wiring

..... from page 192

Handling:

We support you with ergonomic, efficient handling systems for a wide range of transport and lifting operations in the workshop.

- ~ **LT 1000** – Warehousing and order picking
- ~ **MH 500** – Transporting and lifting
- ~ **Assembly frames** – Ergonomic component fitting and transportation of mounting plates

..... from page 194

IT INFRASTRUCTURE

SOFTWARE & SERVICES



Automation in enclosure manufacturing

Perforex machining centres

Perforex machining centres were designed specifically for panel building and switchgear manufacturing to optimise the machining of enclosure panels and cases in the workshop and boost efficiency. Perforex machining centres can automatically create holes, threads and milled surfaces in the workpiece. All standard materials used in enclosure manufacturing, such as steel, stainless steel, aluminium and copper, as well as various plastics and other machinable materials, mounting plates, chamfered and spray-finished doors, covers, console panels, housings etc. may be machined.

Software

The user interface of a Perforex machining centre is an intuitive workshop programming system which supports remote maintenance. The software is networkable, uses a central database, and may be used on an unlimited number of different PCs within the company. This means that all programmed jobs are immediately available on the machine and can be reused. Alternatively, almost any standard CAD and E-planning system can be used for programming. Ask about our interfaces.

- User-friendly workshop programming with interfaces to all standard CAD systems, plus direct transfer of the drilling data from EPLAN Pro Panel

Hardware

Depending on the model, enclosure panels up to (W x H) 3400 x 1700 mm and enclosures up to (W x H x D) 2200 x 2300 x 2300 mm may be clamped and pneumatically secured. As standard, the tool magazine can simultaneously accommodate 18 or 20 tools. Up to 40 tools are optionally available. With the motorised depth adjustment for enclosures and a wide range of options, Perforex machines are equipped for the optimum handling of all parts.



Item name	Perforex BC 1001 HS	Perforex BC 1007 HS	Perforex BC 1008 HS	Perforex BC 2007 HS	Perforex BC 2014 HS
Clampable enclosure panels (W x H) mm	2500 x 1500	2450 x 1700	2300 x 1550	3600 x 1700	3600 x 2300
Maximum machinable area for enclosure panels (W x H) mm	2230 x 1500	2200 x 1700	2300 x 1700	3400 x 1700	3400 x 2300
Clampable cubic parts (W x H x D) mm	1200 x 1400 x 1200	1400 x 1600 x 1600	2300 x 1600 x 1600	1600 x 1600 x 1600	1400 x 2300 x 2200
Option of extended carriage (W x H x D) mm	–	1400 x 1600 x 2000	2300 x 1600 x 2200	1600 x 1600 x 2000	–
Maximum machinable area for cubic parts (W x H) mm	720 x 1400	1200 x 1600	2300 x 1600	1200 x 1600	1400 x 2300
Two-door option	–	–	–	–	2800 x 2300
Model No.	4050.101	4050.107	4050.108	4050.207	4050.230

~ Performance Package for fast, low-vibration, noise-optimised milling, comprised of brush strips and special milling cutters

~ Patented plate with integral extraction of the milling swarf
 ~ High-performance spindle including minimal quantity lubrication for drilling, milling, thread tapping and thread forming



~ Automated tool testing and changing
 ~ DIN tools
 ~ Pneumatic clamping device

Item name	Options	BC 1001 HS	BC 1007 HS	BC 1008 HS	BC 2007 HS	BC 2014 HS
Performance package		4050.041	4050.042	4050.044	4050.046	4050.045
Enclosure machining	For machining fully welded enclosures (door)	4050.010	Standard	Standard	Standard	Standard
Motorized depth adjuster 1600 mm	Electric depth adjustment of the end stop in enclosure machining	-	4050.020	Standard	Standard	Standard
Depth adjuster extension 2000 mm	Motorized depth adjuster extension for enclosures	-	4050.022	-	4050.022	-
Circular thread milling tool		4050.050	4050.050	4050.050	4050.050	4050.050
Aluminium and plastic machining		4050.051	4050.051	4050.051	4050.051	4050.051
Mounting aid for tools		4050.030	4050.030	4050.030	4050.030	4050.030
Magnetic swarf wand		4050.067	4050.067	4050.067	4050.067	4050.067
Swivel stops for multiple machining		4050.066	4050.066	4050.066	4050.066	4050.066
Clamping height extension 1700 mm		-	-	4050.035	-	-

Automation in enclosure manufacturing

Perforex LC 3015 machining centre

The 3D laser technology in the Perforex LC 3015 is ideally suited to the machining of stainless steel and sheet steel, as well as powder-coated metals such as enclosure doors, side panels etc. Spray-finished metal parts are cut without any visible paint damage or discolouration, even with delicate contours. What is more, there is no tarnishing of the cut edges when machining stainless steel. The Perforex LC 3015 is cost-effective from machining volumes of around 150 stainless steel enclosures or 300 sheet steel enclosures per annum.

Technical specifications

- Machining of material thicknesses up to 3 mm
- Machining range (W x H x D) 2300 mm x 1280 mm x 850 mm for product ranges from AE to TS 8
- Machining of cubes on all sides
- Very narrow cutting width of just 0.3 mm (approx.)
- No need to clamp the workpieces

Item name	Model No.
Perforex LC 3015 machining centre	4050.315

Options	LC 3015
Thread tapping function	4050.318
Encapsulation	4050.316
Roof-mounted	4050.317

- 
- User-friendly workshop programming similar to Perforex BC with central database
 - Machine operation with 3D visualisation
 - Interfaces to EPLAN Pro Panel and processing of the neutral format "DXF"

- ~ Simple attachment of enclosures
- ~ Contactless, low-vibration manufacturing process
- ~ Simultaneous machining of 5 surfaces

- ~ Clean, non-wearing cutting without coolant/lubricant
- ~ Machining speed in stainless steel 10x faster than with conventional milling process



- ~ Ergonomic design, thanks to the extendible support surface for enclosure machining

Automation in enclosure manufacturing

Secarex AC 15 cutting centre

No lengthy times spent on measuring and cutting, and no complicated handling – the Secarex cutting centre is convenient to use and cuts wiring ducts, cable duct covers and support rails to length quickly, precisely and reliably. The cutting centre contributes to improved quality, an optimisation of cutting waste, lower costs and an accelerated overall process.

Function

After cutting, the machine stop retracts automatically to release the cut parts for simple removal. Pneumatic cutting to size of cable ducts and DIN rails. Operated via foot switch (optional).

Options

- Label printer
- Operation by way of a foot switch

Benefits

- Touchscreen terminal with user-friendly interface
- Very low costs for cutting waste thanks to optimisation of the cutting process
- Significant time savings compared to manual cutting
- Clean cuts with high-performance tools
- Support rail cutter with 5 standard templates for all popular support rails without changing the template
- Optical and acoustic display for material changes

Item name	Model No.
Secarex AC 15 cutting centre	4050.400



- ~ Data transfer from CAD systems (EPLAN Pro Panel) or Perforex workshop programming
- ~ Operation via tablet PC

- ~ Cut optimisation across multiple projects
- ~ Automatic length stop
- ~ Visualisation of the cut via laser pointer

- ~ Support rail cutter with 5 standard templates for all common support rails and DIN rails

- ~ Safe, two-handed operation for cutting cable ducts



Automation in enclosure manufacturing

Athex TC 80 CS terminal block assembly machine

Focus:

The Athex terminal block assembly machine is the flexible, universal solution for automated production of terminal blocks in panel building. The integral cutting centre is designed for the automatic cutting of support rails, including labelling.

Machining operations:

The Athex prints and configures terminals according to a CAD template or manual configuration on the support rail. The terminal magazines may be exchanged and refilled with the system operational, and can accommodate different terminal types from all well-known manufacturers. During assembly, they may optionally be labelled with an inkjet printer. The integral cutting centre transports support rails out of a magazine into the infeed unit, cuts them to the correct length, and labels them with an engraved needle matrix for a solvent-resistant finish.

Flexibility:

The use of different terminal types and magazines, coupled with automated support rail machining, leads to enhanced productivity. Idle time and waiting time are minimised, and throughput times are reduced.

Equipment

- Assembly arm for manufacturer-independent machining of terminals in the following sizes:
 - Terminal width 40 – 110 mm
 - Terminal height 5 – 80 mm
 - Terminal thickness 3.5 – 18 mm
- Up to a max. of 80 terminal magazines on 5 levels
- Machining of support rails from a length of 100 mm
- Horizontal storage module with 20 storage spaces for support rails
- Standard module for a rail length of 2 m (optionally extendible up to 3 m)
- Electric cutting module for the use of standard market cutting plates
- Needle marking system for labelling the rail undersides
- Management of o/cuts from a minimum length of 230 mm

Technical specifications

- Machine dimensions (W x H x D):
1600 x 2200 x 2300 mm
- Weight (excluding terminal magazines):
1400 kg
- Connected load: 3 x 400 VAC + N + PE; 8 kW
- Air pressure: 6 – 10 bar, dry and unoled
- Air consumption: approx. 40 l/min
- Network connection: Ethernet RJ45



Item name	Model No.
Athex TC 80 CS terminal block assembly machine	4050.505

Benefits

- ~ Process automation for quantities of 1 or more
- ~ Consistent quality, due to fully automated process
- ~ Flexible process management, due to universal applications and manufacturer-independent terminal processing
- ~ Uncomplicated connection to third-party systems/software for importing existing terminal block data
- ~ Optimum accessibility across the entire workspace
- ~ Simple installation options for extensions in the terminal magazine
- ~ Saves manpower thanks to process automation
- ~ Impressive time savings, e.g. no need to adjust the end stop to the correct length
- ~ Consistent quality and avoidance of measurement errors due to controlled axes
- ~ Direct printing of user-defined information onto the support rails for subsequent reuse
- ~ Fully automated measurement of rail o₂ cuts for excellent cut optimisation

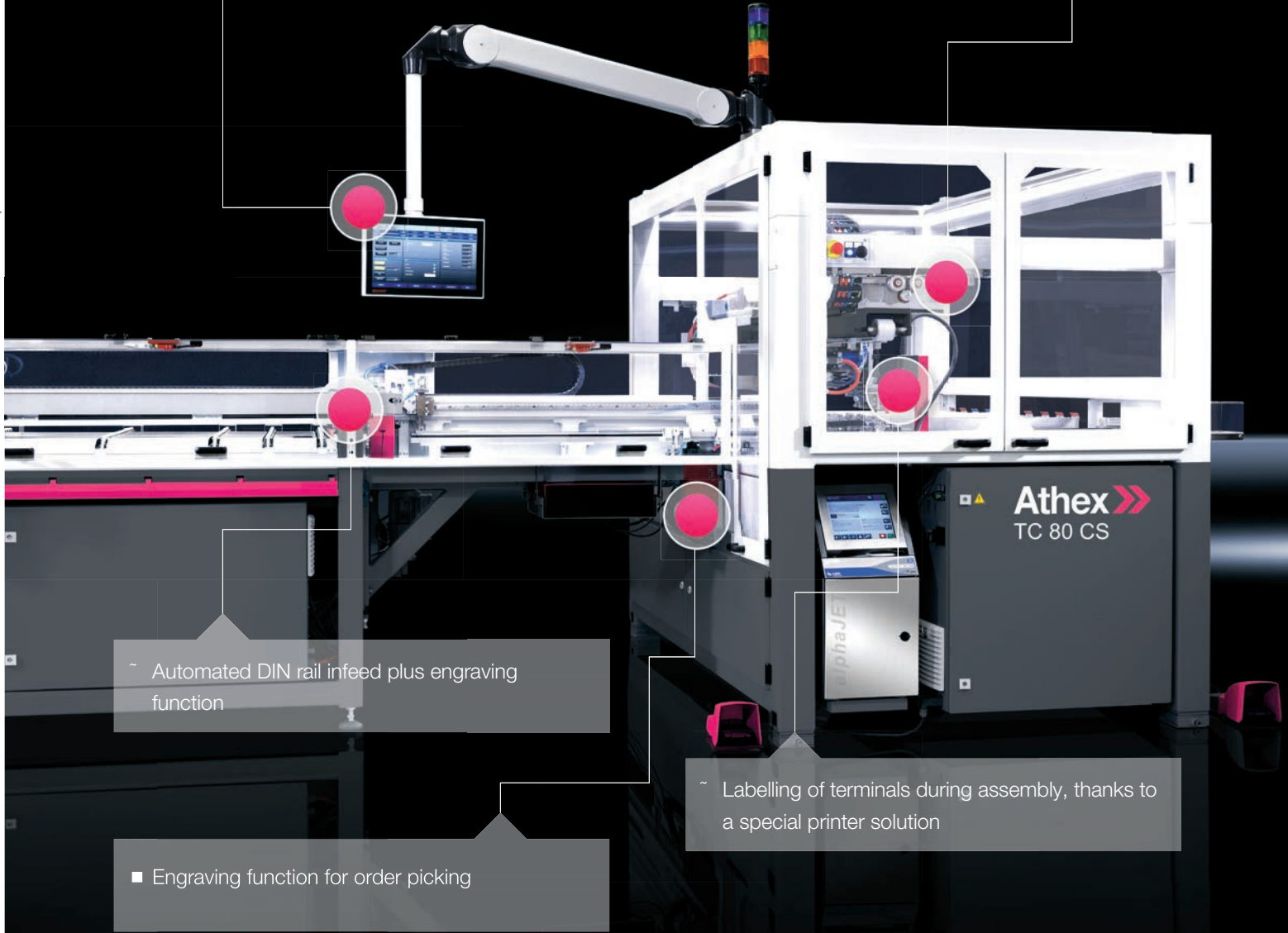
~ System-independent data imports from EPLAN Pro Panel and of XML formats

~ Upgradable with up to 80 magazine slots
~ Hourly processing rate of up to 800 terminals from all well-known manufacturers

~ Automated DIN rail infeed plus engraving function

■ Engraving function for order picking

~ Labelling of terminals during assembly, thanks to a special printer solution



Wire processing in enclosure manufacturing

Cutting machine C 8

The cutting machine C 8 is sure to impress with its simple, reliable handling. Wires with up to 8 mm diameter may be cut to an individually set length, ensuring more efficient operating processes for medium to large batch sizes. Additionally, excellent repetition accuracy is guaranteed thanks to the precise servo DC drive. Cutting jobs from the cutting machine can also be managed, documented and transmitted with a PC via a USB interface.

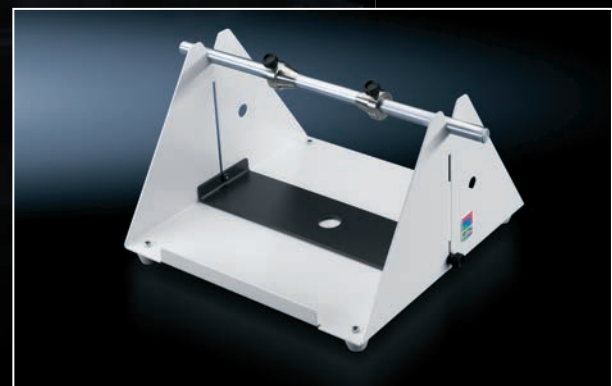
- Jobs are easily programmed and executed with an integrated operating terminal
- EPLAN Pro Panel interface

- Jobs are easily programmed and executed with an add-on operating terminal

- Controllable pressing force of the feed rollers



- Simple insertion of the wires



- Optional accessories for convenient removal and dispensing of cables and wires

Item name	Model No.
Cutting machine C 8	4050.450
Wire dispenser	4050.463
Accessories	
Spare blade	4050.465

Wire processing in enclosure manufacturing

Stripping machine S 22

The stripping machine S 22 is electrically driven. It ensures accurate, careful stripping of the insulation from your wires. The draw-off and stripping length is set with linear control. The stripping machine also features a pre-integrated spare blade inside the enclosure. You benefit from the running total counter and daily counter, which are easily read from the touch display.

~ Device connection and cross-section adjustment at the side

~ Pull-off length adjustable from 3 – 20 mm via the rotary knob



~ Rotary knob allows the stripping length to be set from 3 – 20 mm

~ Central insertion of all wire cross-sections

Item name	Model No.
Stripping machine S 22	4050.451
Accessories	
Titanium insulation stripping blade	4050.464

Wire processing in enclosure manufacturing

Crimping machine L 8 and R 8

Electropneumatically driven crimping machine for safe, fast processing of insulated wire end ferrules. The application range of machinable cross-sections is from 0.5 to 2.5 mm² (AWG 20 – 14) with a crimping length of 8 mm. The stripping unit is readily adjustable. Stripping and crimping machines offer particular value-added by eliminating set-up time, thanks to automatic tool changes. By additionally fitting a resettable daily counter, you can check and follow up the status of your work at any time.

- Simple filling and processing of the loose wire end ferrules

- User-friendly operation via touch display
- Simple menu prompting



- Easy wire insertion

Item name	Model No.
Crimping machine L 8	4050.452
Accessories	
Vibration feeder top 0.5-1.6 mm ²	4050.467
Vibration feeder top 1.5-2.5 mm ²	4050.468
Insulation stripping blade kit	4050.466



Accessories – wire end ferrules

Loose

Size	Length	Colour	Packs of	Model No.
0.50 mm ²	8 mm	white	500	4050.730
0.75 mm ²	8 mm	grey	500	4050.731
1.00 mm ²	8 mm	red	500	4050.732
1.50 mm ²	8 mm	black	500	4050.733
2.50 mm ²	8 mm	brown	500	4050.734

Taped

Size	Length	Colour	Packs of	Model No.
0.50 mm ²	8 mm	weiß	5,000	4050.746
0.75 mm ²	8 mm	grau	5,000	4050.747
1.00 mm ²	8 mm	rot	5,000	4050.748
1.50 mm ²	8 mm	schwarz	3,000	4050.749
2.50 mm ²	8 mm	braun	3,000	4050.750

~ Taped wire end ferrules on a reel



Item name	Model No.
Crimping machine R 8	4050.453
Accessories	
Insulation stripping blade	4050.466

Automation in enclosure manufacturing

Averex WM 3016 wiring centre

Focus:

The Averex WM 3016 wiring centre was developed specifically for the fully automated wiring of mounting plates in panel building.

Machining operations:

The Averex WM 3016 wiring centre cuts the wire to the correct length, strips the insulation, crimps it with wire end ferrules, runs the wire through the cable ducts, and connects it to the components.

Flexibility:

The wiring centre supports most standard mounting plates, components and wires used in panel building. A laser scanning function records and automatically corrects assembly tolerances.

Profitability:

With an automated capacity of 300 wires on a mounting plate, the Averex can reduce the amount of manpower required per enclosure by up to 15 hours (compared with purely manual activity). With work speeds of up to 4 times faster, the entire throughput time is also reduced by up to 11 hours.

Hardware

- Possible plate sizes 2100 x 1200 mm
- Patented 360° rotating machine head with cable routing, cutting, stripping and crimping unit plus torque-regulated screw fastening and a tool changer with space for six tools, log report on all connections and attachments, securing to screw connections and push-in connections
- Laser scanning of components
- Wires from 0.5 to 2.5 mm²
- Automatic wire change with space for up to 16 different wires
- Automatic wire labelling

Software

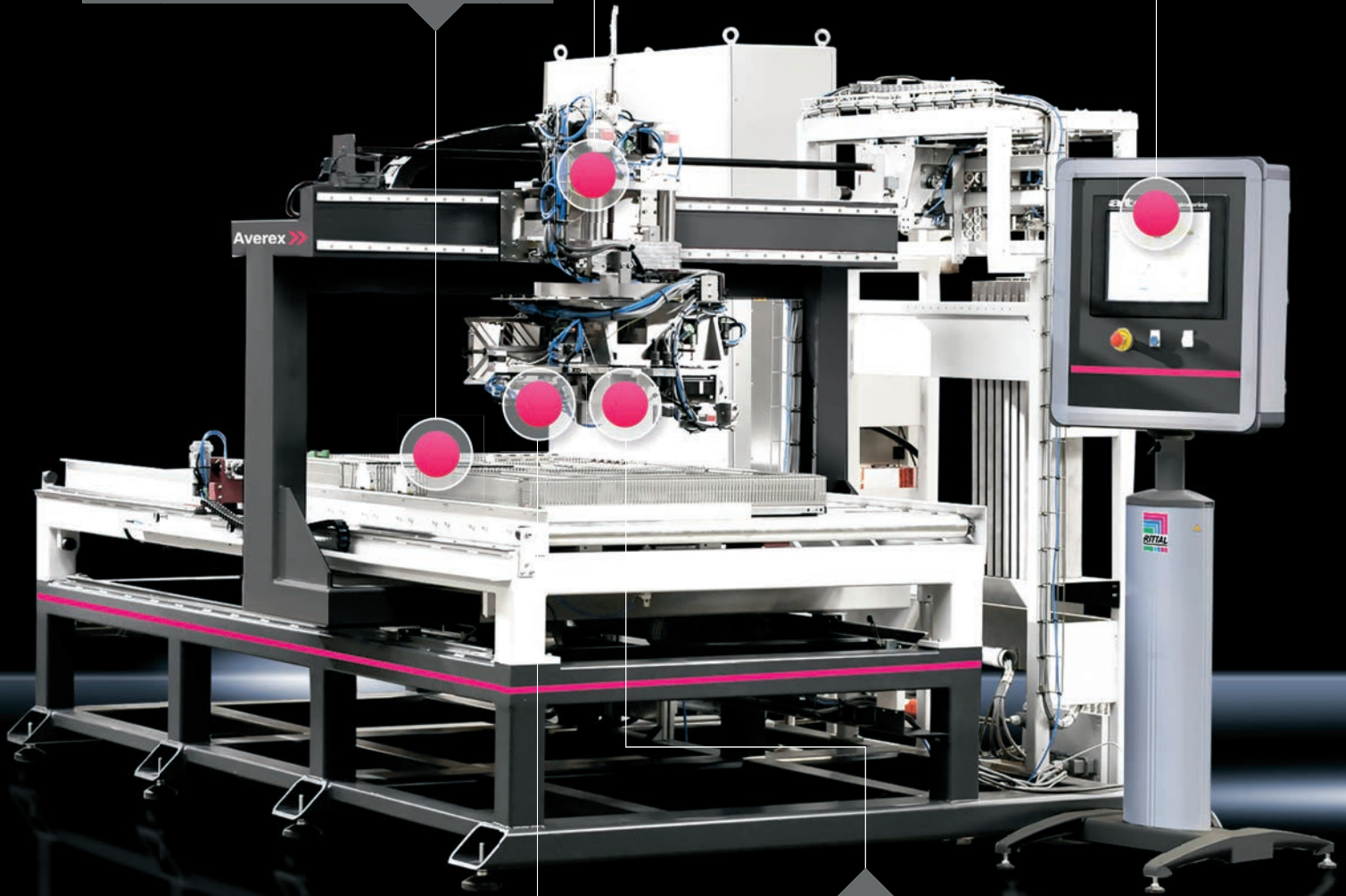
- Intuitive, graphics-based control software with its own routing module
- Software interface to EPLAN Pro Panel, allowing the planned layout and pre-routed data to be read directly. This reduces the amount of work involved in operating the machine.

Item name	Model No.
Averex WM 3016 wiring centre	4050.600

~ Automated wire changes and wire labelling

~ Laser scanning of components

~ Control software with a dedicated routing module and software interface to EPLAN Pro Panel



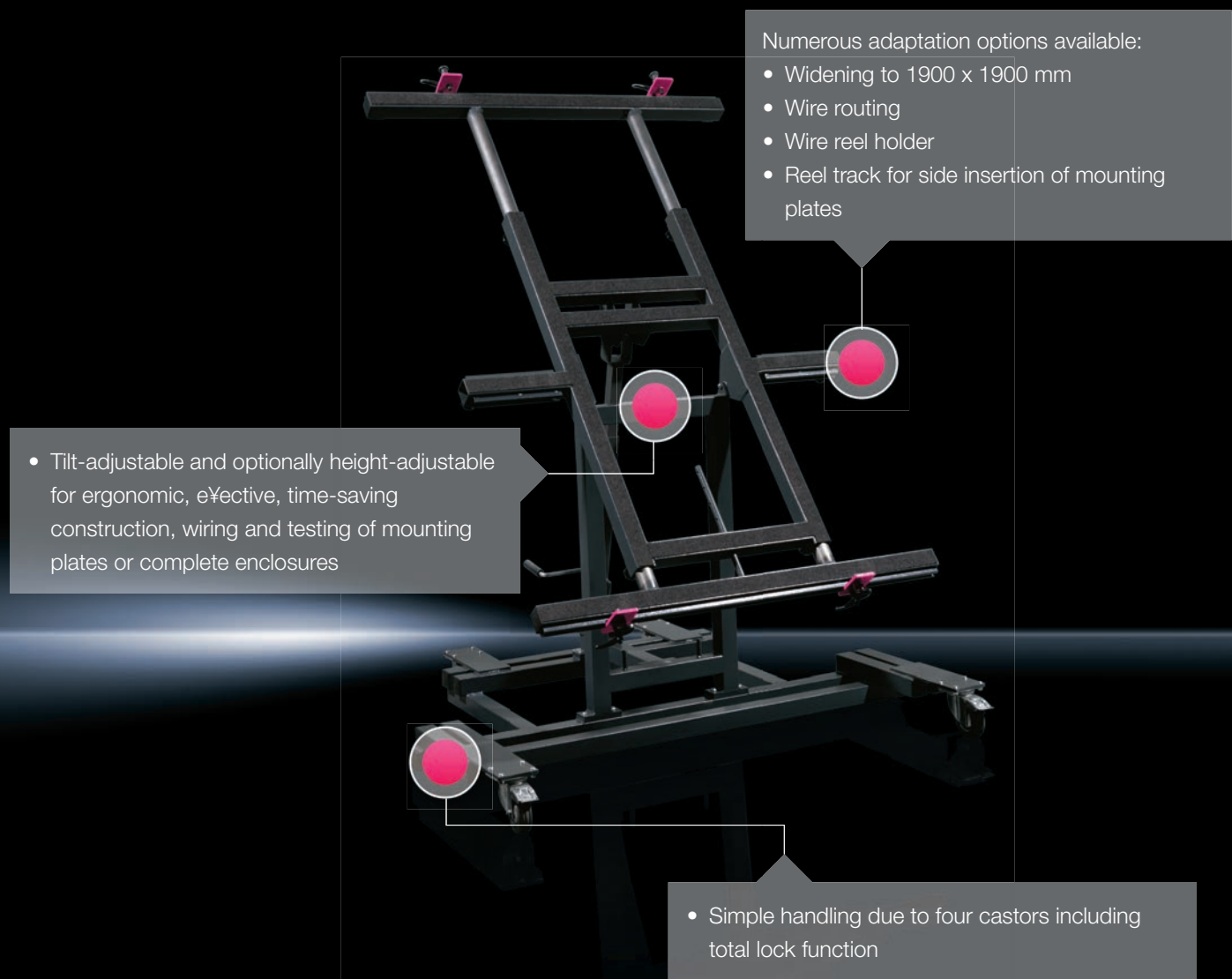
~ Tool changer with space for six tools

~ Patented 360° rotating machine head with cable routing, cutting, stripping and crimping unit, plus torque monitoring

Ergonomics in enclosure manufacturing

Assembly frames and LT 1000 storage and transport trolley

When it comes to the automation and rationalisation of processes throughout every stage of machining, assembly, wiring and testing of enclosures, we have the right ergonomic solution for you. Our assembly frames are mobile, tiltable and (depending on the version) height-adjustable frames for mounting plates (optionally 1900 x 1900 mm) and enclosures. All types offer simple, variable fixing of mounting plates using quick-release fasteners, are independent from the mains power (no risk of “running over the wire”), and take up minimal space when not in use. For easier handling of enclosure panels, we additionally offer the storage and transport trolley LT 1000.



Item name	Assembly frame 150 MN	Assembly frame 200 EN	Assembly frame 300 ENH
Adjustment range	Infinitely adjustable from the vertical to the horizontal using a crank handle	Infinitely adjustable tilt angle via battery-powered electric motor	Infinitely adjustable height and tilt angle via battery-powered electric motor
Working height	1 m	0.90 m	0.80 – 1.10 m
Tilt adjustment	approx. 0 – 80°	approx. 0 – 80°	approx. 0 – 80°
Max. support load	150 kg	200 kg	300 kg

~ Individually adjustable thanks to height-adjustable supports



~ User-friendly transportation through the workshop on industrial castors

~ Eight wide storage slots for effortless storage and transportation of enclosure panels

Item name	Model No.
LT 1000 storage and transport trolley	4050.000

Multifunctional lifting tool

MH 500 multifunctional lifting tool

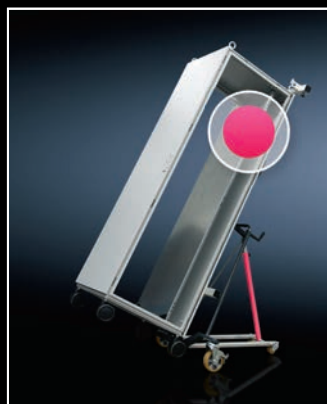
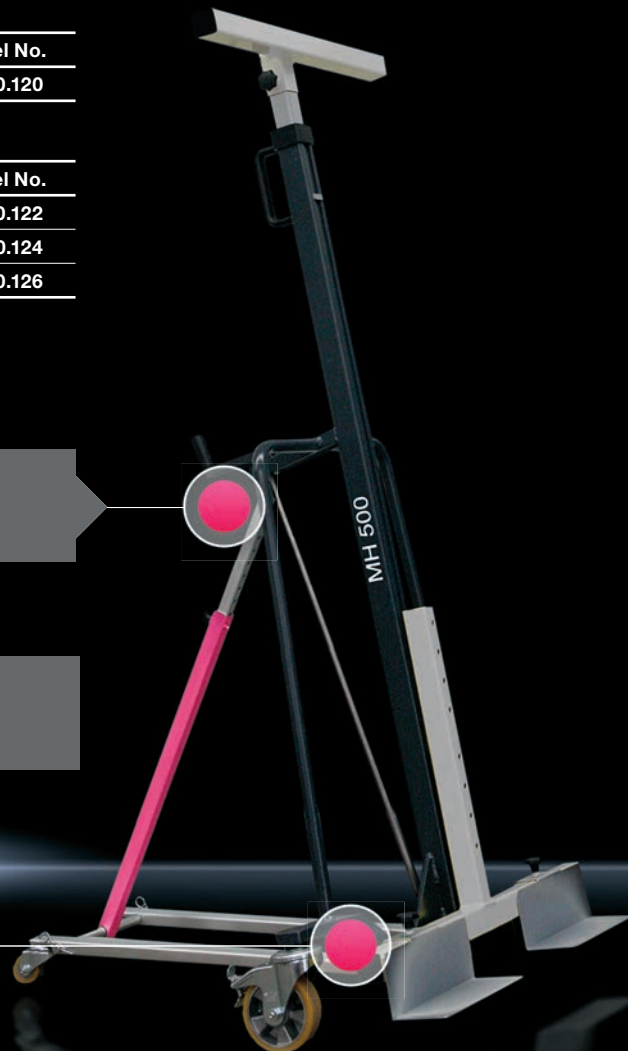
The MH 500 is a multifunctional lifting tool, designed to make various transportation and lifting operations in the workshop much easier. It allows ergonomic handling with one-man assembly e.g. when installing heavy mounting plates or equipment in the enclosure. The extensive range of accessories means that the MH 500 can be used for a variety of applications. Adaptors are available for transporting bayed enclosures and for lifting the base/plinth, the mounting frame, or the eyebolts on the roof.

Item name	Model No.
MH 500 multifunctional lifting tool	4050.120

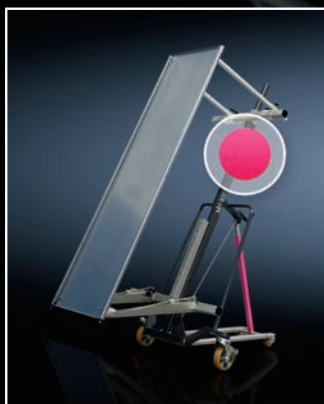
Accessories	Model No.
Mounting plate adaptor	4050.122
Enclosure adaptor	4050.124
Adaptor for installing climate control equipment	4050.126

- Optional operation via crank handle or with cordless screwdriver

- Equipped with floor-friendly heavy-duty castors



- Adaptor for base/plinth, frame and lifting eye



- Adaptor for mounting plate with up to 250 kg load capacity per MH 500



- Adaptor for installing climate control equipment

Practical and mobile

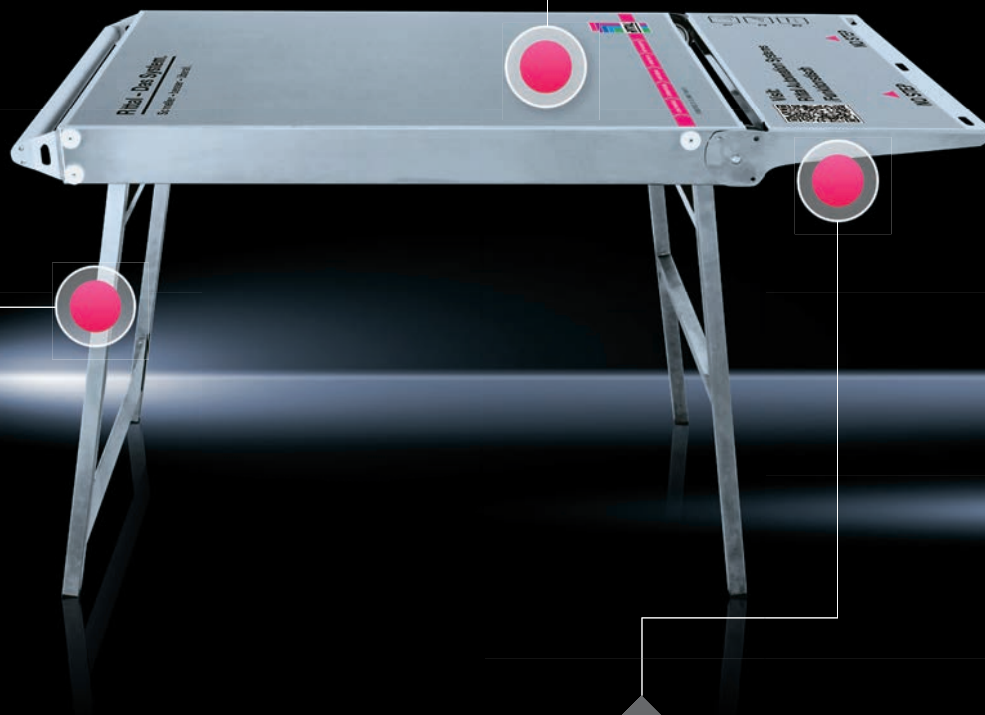
Functional trolley

The functional trolley is a veritable multi-talent. Whether for transporting materials and tools to the installation site or for commissioning, the functional trolley is perfectly suited for assembly technicians and service personnel. The refined system with its fold-out concept is the ideal solution when you are on the road, and its compact dimensions mean it can be transported by car.



Item name	Model No.
Functional trolley	4050.130

~ Surface suitable for computer mouse



~ Made from V2A stainless steel for robustness and durability

~ Converts from a transport function to a practical desk by simply unfolding

All from a single source

The right tool for every application!

Rittal offers a comprehensive range of hand-held tools for professional support with your work operations. All the machining and handling technology you need for time-saving and cost-cutting manufacturing processes, all from a single source.

- Grippers
- Cutting tools



- Bits
- Bit holder



- ~ Crimping tools
- ~ Insulation stripping tools

Order information can be found in the brochure "Rittal Automation Systems – We automate panel building" or on the Internet.

- ~ Screwdrivers, insulated
- ~ Screwdrivers, uninsulated



- ~ Manual hydraulic punches

- ~ Hole punches



List of model numbers

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2388.125	75	4050.022	181	5501.855	77	5509.790	53
2388.650	75	4050.030	181	5501.865	77	5510.110	41
2388.850	75	4050.035	181	5501.875	77	5510.120	35
2436.800	79	4050.041	181	5501.885	77	5510.131	51
2438.800	79	4050.042	181	5501.900	78	5510.141	38
2482.600	73	4050.044	181	5501.905	77	5510.151	47
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2500.220	28	4050.050	181	5501.935	77	5511.110	41
2500.300	28	4050.051	181	5502.310	74	5511.120	36
2500.310	28	4050.067	181	5502.330	74	5511.131	51
2500.400	29	4050.101	180	5502.340	74	5511.141	38
2500.410	29	4050.107	180	5502.350	74	5511.151	47
2500.430	29	4050.108	180	5502.360	74	5511.181	44
2500.440	29	4050.120	196	5502.370	74	5511.790	53
2500.460	29	4050.122	196	5502.380	74	5512.110	42
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3140.140	134	4050.317	182	5504.141	37	5513.151	47
3140.500	135	4050.318	182	5504.151	46	5513.181	45
3140.510	135	4050.400	184	5504.181	43	5513.790	53
3174.100	150	4050.430	191	5504.790	53	5514.110	42
3186.930	144	4050.431	191	5505.110	41	5514.120	36
3187.930	144	4050.432	191	5505.120	35	5514.131	51
3188.940	144	4050.433	191	5505.131	51	5514.141	39
3189.940	144	4050.434	191	5505.141	38	5514.151	47
3201.990	150	4050.446	191	5505.151	47	5514.181	45
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3215.700	147	4050.448	191	5505.790	53	5515.110	42
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3311.200	162	4050.468	190	5507.141	38	5516.151	47
3311.210	162	4050.505	186	5507.151	47	5516.181	45
3311.270	162	4050.600	192	5507.170	49	5516.790	53
3311.280	162	5386.000	68	5507.181	44	5525.120	34
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3311.491	159	5501.235	76	5508.110	41	5526.110	40
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3311.493	159	5501.245	77	5508.131	51	5526.131	50
3311.495	160	5501.252	77	5508.141	38	5526.141	37
3311.496	160	5501.255	77	5508.151	47	5526.151	46
3313.100	55	5501.262	77	5508.181	44	5526.181	43
3313.120	55	5501.265	77	5508.790	53	5526.790	52
3378.200	149	5501.272	77	5509.110	41	5527.110	40
3378.280	149	5501.275	77	5509.120	36	5527.120	34
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7030.430	166	7998.908	170	9677.265	106	9677.915	99
7030.440	166	8100.105	74	9677.280	107	9677.920	99
7030.500	169	8100.125	74	9677.300	103	9677.925	110
7030.570	167	8100.605	74	9677.310	102		
7030.580	167	8100.805	74	9677.315	104		
7063.740	66	9340.780	117	9677.340	103		
7091.100	75	9340.790	117	9677.360	106		
7151.305	78	9343.070	84	9677.365	106		
7200.810	64	9343.170	84	9677.380	107		
7201.210	165	9343.270	84	9677.400	111		
7320.700	64	9343.370	84	9677.402	115		
7338.121	171	9343.400	85	9677.405	111		

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