Rittal – The System.

Faster – better – everywhere.

IT infrastructure – Efficiency-boosting solutions

nextlevel

for data centre

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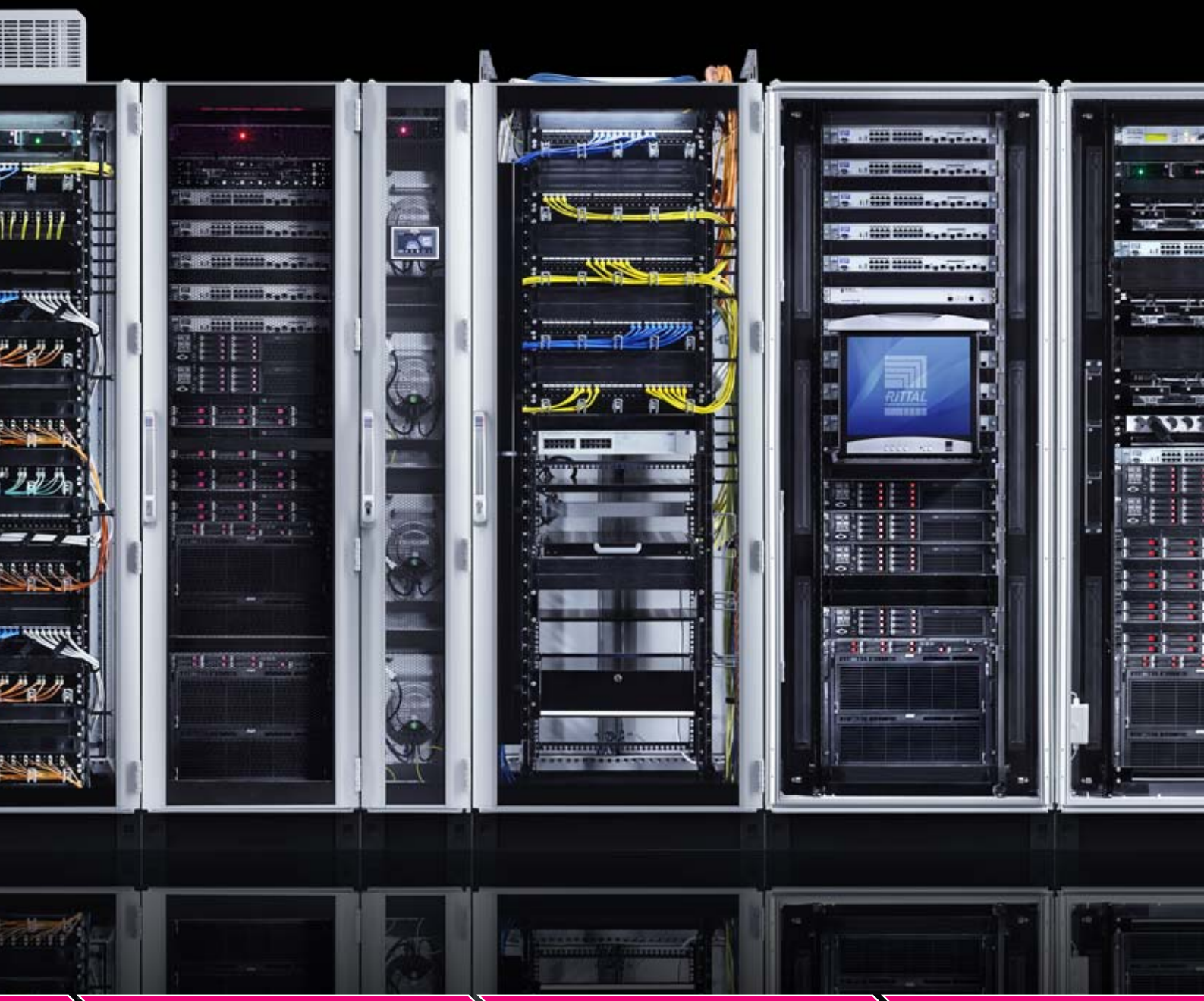

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The whole is more than the sum of its parts.

The same is true of “Rittal – The System.” With this in mind, we have bundled our innovative enclosure, power distribution, climate control and IT infrastructure products together into a single system platform. Complemented by our extensive range of software tools and global service, we create unique added value for all industrial applications: Production plant, test equipment, facility management and data centres. In accordance with our simple principle, “Faster – better – everywhere”, we are able to combine innovative products and efficient service to optimum effect.

Faster – with our “Rittal – The System.” range of modular solutions, which guarantees fast planning, assembly, conversion and commissioning with its system compatibility.

Better – by being quick to translate market trends into products. In this way, our innovative strength helps you to secure competitive advantages.

Everywhere – thanks to global networking across 150 locations. Rittal has over 60 subsidiaries, more than 150 service partners with over 1,000 service engineers worldwide. For more than 50 years, we have been on hand to offer advice, assistance and product solutions.

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IT infrastructure from the smallest to the largest

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Your benefits

The performance and security of any IT infrastructure is determined to a significant degree by the interaction between individual components. All system components in the Rittal system platform are perfectly coordinated with one another.

- Modular system solutions for small to large networks
- Comprehensive, complete solutions for power distribution and backup, consistently modular, and flexibly extendible at any time
- Optimum energy and cost efficiency with maximum availability of the entire system
- Energy-efficient climate control concepts for rack, suite and room cooling
- A better overview of your IT infrastructure
- System-tested protection from potential physical threats

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RiMatrix S

The first standardised data centre

Standardised, off-the-shelf modules
Fully pre-configured modules in the RiMatrix S series offer a pioneering alternative to building your own data centre. They already include all the necessary components such as:

- IT enclosure systems
- Power backup and distribution
- Climate control
- Monitoring and security solutions

A single Model Number is all you need to order a complete RiMatrix S module.
Complete RiMatrix S data centres can be assembled in next to no time, because all modules are available off the shelf.

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RiMatrix S –
The standardised data centre

IT infrastructure – Fully operational

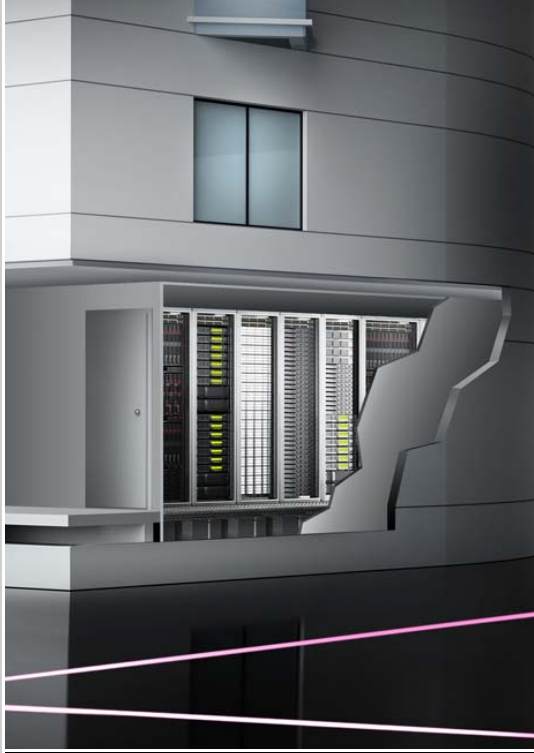
- Pre-configured modules – ready for immediate installation of the IT equipment
- Fully functional complete system including server and network enclosures, climate control, power distribution and backup, monitoring and optionally with RiZone, the DCIM (Data Center Infrastructure Management) system
- Peace of mind – due to documented system test of the entire module

Available within 6 weeks – Complete and off the shelf

- Order RiMatrix S with just one model number for the entire data centre
- Supplied off the shelf
- Lead time from ordering to commissioning: just 6 weeks

The right physical structure for every requirement

- The modules are supplied with the right physical structure to suit the application:
  – In a standard room
  – In a standard security room for installation in existing properties
  – In a standard container for outdoor siting



RiMatrix S

The standardised data centre is assembled at your premises within the context of hot aisle / cold aisle containment.

Benefits:
- Enhanced energy efficiency
- Superior output density, due to targeted cold air supply.
- Aisle containment is a combination of door and roof components – consistent separation of the hot and cold air

Protection category IP to IEC 60 529:
- IP 20 in the protected area above the raised floor

Supply includes:
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Commissioning and handover
- Documentation, training and instruction
- Hotline and service/service agreements
- Precise-fit aisle containment

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

Standard room

	Packs of	**Single 6**	**Double 6**	**Single 9**	**Double 9**	Page
External dimensions, width mm		2807	4839	2807	4839	
External dimensions, height mm		2750	2750	2750	2750	
External dimensions, depth mm		7067	7070	7067	7070	
Interior dimensions, width mm		2750	4774	2750	4774	
Interior dimensions, height mm		2722	2722	2722	2722	
Interior dimensions, depth mm		7000	7000	7000	7000	
Model No.	1 pc(s).	**7998.106**	**7998.107**	**7998.406**	**7998.407**	
Early fire detection		■	■	■	■	
Room extinguisher system		optional	optional	optional	optional	
Humidification and dehumidification system		7998.705	7998.705	7998.705	7998.705	
Server rack (600 x 2000 x 1200 mm)		6	12	8	16	
Combined network/server rack (800 x 2000 x 1200 mm)		1	2	1	2	
Uninterruptible power supply		n+1 redundant 60 kW + 20 kW	n+1 redundant 2 x (60 kW + 20 kW)	–	–	
Low-voltage main distributor		1	2	1	2	
PDU Basic		14	28	18	36	
Climate control (ZUCS)		60 kW + 10 kW n+1 redundant	120 kW + 20 kW n+2 redundant	90 kW + 10 kW n+1 redundant	180 kW + 20 kW n+2 redundant	

The standardised data centre at your premises is equipped with an additional security room (room-within-a-room) to provide additional protection from fire, water and smoke.

Protection standards:
- Fire resistance EI 90 to EN 1363/F 90 to DIN 4102
- Dust- and watertight to IP 56 to IEC 60 529
- Protection from unauthorised access – Resistance class II
- EMC basic protection
- Acrid gas-tightness, based on EN 1634-3 (DIN 18095)
- Shock test with 3,000 Nm energy after 30 minutes flame impingement over standard temperature curve

Material:
- Element core made of thermally effective insulation substance
- Robust, encapsulated sheet steel cassette panels
- Innovative connection technology using patented profile technology
- Use of temperature- and humidity-resistant seals
- Use of fire protection valves
- Dismantling and reassembly is possible at any time

Supply includes:
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Commissioning and handover
- Documentation, training and instruction
- Hotline and service/service agreements

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

Standard security room

	Packs of	**Single 6**	**Double 6**	**Single 9**	**Double 9**	Page
External dimensions, width mm		2950	4976	2950	4976	
External dimensions, height mm		2800	2800	2800	2800	
External dimensions, depth mm		7500	7500	7500	7500	
Interior dimensions, width mm		2750	4776	2750	4776	
Interior dimensions, height mm		2700	2700	2700	2700	
Interior dimensions, depth mm		7300	7300	7300	7300	
Model No.	1 pc(s).	**7998.306**	**7998.307**	**7998.606**	**7998.607**	
Fire protection		EI 90 to EN 1363/ F 90 to DIN 4102	EI 90 to EN 1363/ F 90 to DIN 4102	EI 90 to EN 1363/ F 90 to DIN 4102	EI 90 to EN 1363/ F 90 to DIN 4102	
Burglar resistance		WK II	WK II	WK II	WK II	
Early fire detection		■	■	■	■	
Room extinguisher system		optional	optional	optional	optional	
Humidification and dehumidification system		7998.705	7998.705	7998.705	7998.705	
Server rack (600 x 2000 x 1200 mm)		6	12	8	16	
Combined network/server rack (800 x 2000 x 1200 mm)		1	2	1	2	
Uninterruptible power supply		n+1 redundant 60 kW + 20 kW	n+1 redundant 2 x (60 kW + 20 kW)	–	–	
Low-voltage main distributor		1	2	1	2	
PDU Basic		14	28	18	36	
Climate control (ZUCS)		60 kW + 10 kW n+1 redundant	120 kW + 20 kW n+2 redundant	90 kW + 10 kW n+1 redundant	180 kW + 20 kW n+2 redundant	

RiMatrix S

The standardised data centre is implemented in a container solution and can therefore be sited outdoors if required.

Protection standards:
- Vandal-proof interior in accordance with Resistance Class II to DIN EN 1631
- Fire resistance EI 30 to EN 1363
- EMC basic protection
- Dust- and watertight to IP 55 to IEC 60 529

Supply includes:
- Robust sheet steel container with reinforced frame structure for optimum weight distribution
- Housed interior wall structure with thermal insulating materials
- Advice and ROI calculation
- Delivery and integration into the customer infrastructure
- Documentation, training and instruction
- Hotline and service/service agreements

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

Standard container

	Packs of	**Single 6**	**Single 9**	Page
External dimensions, width mm		3000	3000	
External dimensions, height mm		3000	3000	
External dimensions, depth mm		7250	7250	
Interior dimensions, width mm		2750	2750	
Interior dimensions, height mm		2700	2700	
Interior dimensions, depth mm		7000	7000	
Model No.	1 pc(s).	**7998.206**	**7998.506**	
Early fire detection		■	■	
Room extinguisher system		optional	optional	
Humidification and dehumidification system		7998.705	7998.705	
Server rack (600 x 2000 x 1200 mm)		6	8	
Combined network/server rack (800 x 2000 x 1200 mm)		1	1	
Uninterruptible power supply		n+1 redundant 60 kW + 20 kW	–	
Low-voltage main distributor		1	1	
PDU Basic		14	18	
Climate control (ZUCS)		60 kW + 10 kW n+1 redundant	90 kW + 10 kW n+1 redundant	

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RiMatrix S Selector – on the Web and as an app

Rittal – The System.

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RiMatrix

The system for customer-specific IT solutions

IT components for modern infrastructures
If you want to assemble and expand a modular IT system, step by step, you've come to the right place. The RiMatrix system from Rittal offers a huge range of components for flexible configuration of forward-looking data centre infrastructures.

The broad range includes
- IT enclosure systems and housings
- IT power
- IT cooling
- IT monitoring
- IT security solutions

All components are available off the shelf with short delivery times.

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IT enclosure systems/cases

The Rittal TS IT sets global standards in network and server technology. The intelligent modular system comprising a range of racks and accessories, coupled with assembly-friendly snap-in technology, means that almost any requirement for modular network and server racks can be met with a single, standardised rack.

Your benefits

Network/server enclosures

- Individually usable for stand-alone siting and data centres
- Complete system solutions for small to large networks
- Maximum configuration diversity and protection for installed equipment
- Investment protection and flexibility, thanks to simple conversions and use of our extensive modular system

Wall-mounted enclosures

- Choose from an extensive range of products – the right enclosure to suit any application – up to protection category IP 66
- Wide choice of sizes available from 3 U to 21 U
- Wide choice of accessories with "Rittal – The System."
- Fast assembly, conversion and simple installation based on the modular principle

Sample applications

1 Wall-mounted enclosures EL, see page 31

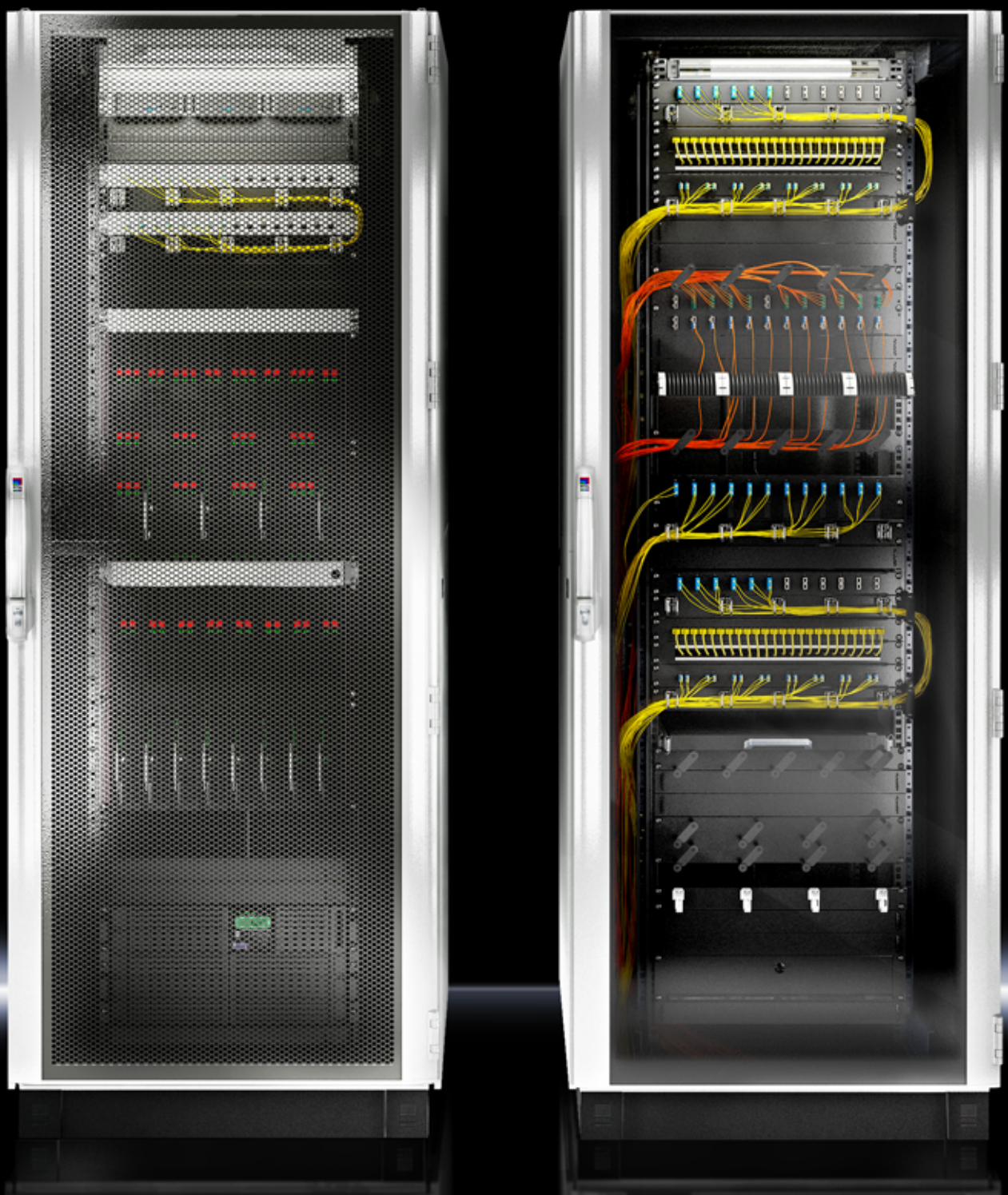
2 VerticalBox, see Cat. 34, page 97

3 Wall-mounted enclosures AE with 482.6 mm (19˝) mounting angles, see page 35

4 TS IT with glazed door for rack climate control, see page 24,
base/plinth and installation accessories,
see Cat. 34, page 507

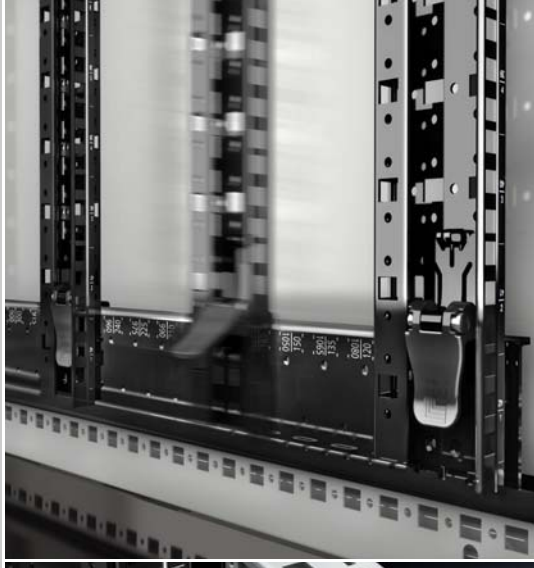
5 TS IT with vented door for room climate control, see page 22,
bayed with base/plinth and installation accessories,
Cat. 34, see page 507

Network/server enclosures TS IT



Fast and secure

- Fast: Loosen the 482.6 mm (19″) quick-release fastener, slide into the correct position with infinite adjustment, and latch
- Secure: Maximum load capacity up to 15,000 N



Convenience in perfection

- Interior installation – Side offset and alternative mounting dimensions are easily achieved
- Distance between levels – directly identified, thanks to integral pitch pattern
- U labelling – front and rear, legible on both sides from the front

Tool-free installation

- Tool-free installation of all slide rails, component shelves, telescopic slides and much more
- Simply locate into the rear mounting angle, extend to the required size, and secure at the front

Quick-assembly side panel

- Divided side panel for simple one-man assembly
- Locate side panel at the top, slot in at the bottom, snap shut – and it's done, no screw-fastening required
- Quick-release fasteners with integral lock, plus internal latch for enhanced security

Network/server enclosures TS IT

IT power Page 37 **IT monitoring** Page 67 **IT cooling** Page 51 **Component shelves** Cat. 34, from page 627

Material:
– Sheet steel

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

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

Technical details:
Available on the Internet

with vented door for room climate control

Units U	Packs of	24	42	42	42	42	Cat. 34, page
Width mm		800	600	600	800	800	
Height mm		1200	2000	2000	2000	2000	
Depth mm		1000	1000	1200	1000	1200	
Distance between pre-fitted 482.6 mm (19") levels mm		745	745	745	745	745	
Model No.	1 pc(s).	**5504.110**	**5508.110**	**5510.110**	**5509.110**	**5511.110**	
Product-specific scope of supply							
Sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	–	–	–	–	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Connection accessories for potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	–	■	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	–	5501.030	5501.040	5501.030	5501.040	536
Side panel, lockable	2 pc(s).	7824.120	7824.200	–	7824.200	–	536
Base mount	2 pc(s).	5501.320	5501.320	5501.350	5501.320	5501.350	524
Gland plates	1 set(s)	5502.550	5502.540	5502.560	5502.550	5502.570	530
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.020	5502.010	5502.010	5502.020	5502.020	437
Air baffle plates	1 set(s)	–	5501.805	5501.805	5501.815	5501.815	692
Cable route	1 pc(s).	–	5502.120	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	–	5502.105	5502.105	5502.105	5502.105	673
Slide rails		from page	from page	from page	from page	from page	687

with vented door for room climate control

Units U	Packs of	47	47	47	47	52	Cat. 34, page
Width mm		600	600	800	800	600	
Height mm		2200	2200	2200	2200	2450	
Depth mm		1000	1200	1000	1200	1200	
Distance between pre-fitted 482.6 mm (19") levels mm		745	745	745	745	745	
Model No.	1 pc(s).	**5513.110**	**5515.110**	**5514.110**	**5516.110**	**5532.110**	
Product-specific scope of supply							
Sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	■	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Connection accessories for potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	5501.060	5501.070	5501.060	5501.070	5501.080	536
Side panel, lockable	2 pc(s).	7824.220	–	7824.220	–	–	536
Base mount	2 pc(s).	5501.320	5501.350	5501.320	5501.350	5501.350	524
Gland plates	1 set(s)	5502.540	5502.560	5502.550	5502.570	5502.560	530
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.010	5502.010	5502.020	5502.020	5502.010	437
Air baffle plates	1 set(s)	5501.825	5501.825	5501.835	5501.835	5501.845	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.130	672
Cable duct	1 pc(s).	5502.145	5502.145	5502.145	5502.145	–	673
Slide rails		from page	from page	from page	from page	from page	687

Network/server enclosures TS IT

IT power Page 37 **IT monitoring** Page 67 **IT cooling** Page 51 **Component shelves** Cat. 34, from page 627

Material:
– Sheet steel
– 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

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

Technical details:
Available on the Internet

with glazed door for rack climate control

Units U	Packs of	24	24	38	42	42	Cat. 34, page
Width mm		800	800	800	600	600	
Height mm		1200	1200	1800	2000	2000	
Depth mm		800	1000	800	1000	1200	
Distance between pre-fitted 482.6 mm (19") levels mm		545	745	545	745	745	
Model No.	1 pc(s).	**5503.120**	**5504.120**	**5505.120**	**5508.120**	**5510.120**	
Product-specific scope of supply							
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	–	–	–	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	■	■	■	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Connection accessories for potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	–	–	■	■	■	
Accessories							
Side panels, divided	1 pc(s).	–	–	5501.000	5501.030	5501.040	536
Side panel, lockable	2 pc(s).	7824.128	7824.120	7824.188	7824.200	–	536
Base mount	2 pc(s).	5501.310	5501.320	5501.310	5501.320	5501.350	524
Gland plates	1 set(s)	5502.530	5502.550	5502.530	5502.540	5502.560	529
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.020	5502.010	5502.010	437
Air baffle plates	1 set(s)	–	–	–	5501.805	5501.805	692
Cable route	1 pc(s).	–	–	–	5502.120	5502.120	672
Cable duct	1 pc(s).	–	–	–	5502.105	5502.105	673
Slide rails		from page	from page	from page	from page	from page	687

with glazed door for rack climate control

Units U	Packs of	42	42	42	42	47	Cat. 34, page
Width mm		800	800	800	800	800	
Height mm		2000	2000	2000	2000	2200	
Depth mm		600	800	1000	1200	800	
Distance between pre-fitted 482.6 mm (19") levels mm		545	545	745	745	745	
Model No.	1 pc(s).	**5506.120**	**5507.120**	**5509.120**	**5511.120**	**5512.120**	
Product-specific scope of supply							
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	■	■	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	■	■	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	■	■	
Roof plate, multi-piece, removable, for horizontal cable entry at the rear and covered cut-out for fan mounting plate	1 pc(s).	■	–	–	–	–	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	■	■	
Connection accessories for potential equalisation with earthing point (supplied loose)	1 set(s)	■	■	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 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 panels, divided	1 pc(s).	5501.010	5501.020	5501.030	5501.040	5501.050	536
Side panel, lockable	2 pc(s).	7824.206	7824.208	7824.200	–	7824.228	536
Base mount	2 pc(s).	5501.300	5501.310	5501.320	5501.350	5501.310	524
Gland plates	1 set(s)	5502.510	5502.530	5502.550	5502.570	5502.530	529
Base/plinth		from page	from page	from page	from page	from page	510
Fan mounting plates	1 pc(s).	5502.010	5502.020	5502.020	5502.020	5502.020	437
Air baffle plates	1 set(s)	5501.815	5501.815	5501.815	5501.815	5501.835	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	5502.105	5502.105	5502.105	5502.105	5502.145	673
Slide rails		from page	from page	from page	from page	from page	687

Network/server enclosures TS IT

IT power Page 37 **IT monitoring** Page 67 **IT cooling** Page 51 **Gland plates** Cat. 34, from page 529

Material:
– Sheet steel
– 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

Please observe the product-specific scope of supply.

Note:
– Depending on the siting type and location, the door opening may vary for selected applications

Technical details:
Available on the Internet

with glazed door for rack climate control, pre-configured

Units U	Packs of	40	42	42	Cat. 34, page
Width mm		800	800	800	
Height mm		2100	2100	2100	
Depth mm		800	800	1000	
Distance between pre-fitted 482.6 mm (19") levels mm		–	545	745	
Model No.	1 pc(s).	**5507.170**	**5507.150**	**5509.150**	
Product-specific scope of supply					
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	
Sheet steel rear panel	1 pc(s).	■	–	–	
Lock front: Comfort handle for semi-cylinders and security lock 3524 E	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).	■	–	–	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	■	■	
Connection accessories for potential equalisation incl. central earthing point, pre-configured	1 set(s)	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	
Base mount	2 pc(s).	■	■	■	
Gland plate, one-piece, vented, with cable entry rear	1 pc(s).	■	–	–	
Flex-Block base/plinth 100 mm, vented	1 set(s)	■	■	■	
Levelling feet incl. base/plinth adaptor sleeve (supplied loose)	4 pc(s).	■	■	■	
Cable clamp rail (T-head) for outer mounting level, to fit enclosure depth (supplied loose)	4 pc(s).	■	■	■	
Cable shunting rings (metal version), 125 x 65 mm (supplied loose)	10 pc(s).	■	■	■	
Swing frame, large, with side trim panel, 180°, 150 kg static load capacity	1 pc(s).	■	–	–	
Sheet steel door at the rear, vertically divided, 180° hinges	1 pc(s).	–	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	–	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		–	■	■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	–	■	■	
Base module mounted at front as infill panel	1 pc(s).	–	■	■	
Side panels, one-piece, lockable	2 pc(s).	–	■	■	
Accessories					
Fan mounting plates	1 pc(s).	5502.020	5502.020	5502.020	437
Air baffle plates	1 set(s)	5501.815	5501.815	5501.815	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	672
Cable duct	1 pc(s).	5502.105	5502.105	5502.105	673

IT power Page 37 **System accessories** Cat. 34, Page 507 **IT monitoring** Page 67 **IT cooling** Page 51

Material:
- Sheet steel
- 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

Load capacity of the 482.6 mm (19") mounting angles:
- 15000 N

Supply includes:
- TS 8 enclosure frame with doors and roof plate

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

Technical details:
Available on the Internet

with glazed door for rack climate control, IP 55

Units U	Packs of	42	42	47	Cat. 34, page
Width mm		800	800	800	
Height mm		2000	2000	2200	
Depth mm		800	1000	1000	
Distance between pre-fitted 482.6 mm (19") levels mm		545	745	745	
Model No.	1 pc(s).	**5507.130**	**5509.130**	**5514.130**	
Product-specific scope of supply					
Glazed aluminium door at the front, 180° hinges	1 pc(s).	■	■	■	
Sheet steel door at the rear, 180° hinges	1 pc(s).	■	■	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	■	■	
Base tray and gland plate, multi-piece, solid	1 pc(s).	■	■	■	
Roof plate, one-piece, solid	1 pc(s).	■	■	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	■	■	
Connection accessories for potential equalisation with earthing point (supplied loose)	1 pc(s).	■	■	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	■	■	
Baying seal and sealing kit for gland plates (supplied loose)	1 pc(s).	■	■	■	
Accessories					
Side panels, screw-fastened, sheet steel	2 pc(s).	8108.235	8100.235	–	534
Base/plinth		from page	from page	from page	510
Air baffle plates	1 set(s)	5501.815	5501.815	5501.835	692
Cable route	1 pc(s).	5502.120	5502.120	5502.120	672
Component shelf, static installation		see page	see page	see page	630
Component shelf, pull-out		see page	see page	see page	630
Cable duct	1 pc(s).	5502.105	5502.105	5502.145	673
Slide rails, static installation	2 pc(s).	5501.400	5501.400	5501.400	687
Slide rails, depth-variable	2 pc(s).	5501.460	5501.480	5501.480	687
Rail systems		from page	from page	from page	602
Cable management		from page	from page	from page	663
PDU international		from page	from page	from page	40[1)]

[1)] In this brochure

Network/server enclosures TS IT

IT power Page 37 **System accessories** Cat. 34, Page 507 **IT monitoring** Page 67 **IT cooling** Page 51

TS IT with vented door for a range of conventional network tasks and for climate control of rooms, including practical configuration and pre-assembly.

Material:
– Sheet steel

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

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

Technical details:
Available on the Internet

with vented door for room climate control, pre-configured

Units U	Packs of	42	Cat. 34, page
Width mm		800	
Height mm		2100	
Depth mm		1000	
Distance between pre-fitted 482.6 mm (19") levels mm		745	
Model No.	1 pc(s).	**5509.160**	
Product-specific scope of supply			
Sheet steel door at the front, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	
Sheet steel door at the rear, vertically divided, vented (vented surface area approx. 85% perforated), 180° hinges	1 pc(s).	■	
Lock front and rear: Comfort handle for semi-cylinders and security lock 3524 E	1 pc(s).	■	
Two 482.6 mm (19") mounting sections front and rear, variably mounted on support strips with quick-release fasteners		■	
Roof plate, multi-piece, removable, with side cable entry in the depth and covered cut-out for fan mounting plate	1 pc(s).	■	
Spacers to raise the fan cover plate, for passive cooling (supplied loose)	4 pc(s).	■	
Connection accessories for potential equalisation incl. central earthing point, pre-configured	1 set(s)	■	
Multi-tooth screws M5, cage nuts M5, conductive (supplied loose)	50 pc(s).	■	
Base mount	2 pc(s).	■	
Gland plate, one-piece, vented, with cable entry at the rear	1 pc(s).	■	
Flex-Block base/plinth 100 mm, vented	1 set(s)	■	
Side panels, one-piece, lockable	2 pc(s).	■	
Levelling feet incl. base/plinth adaptor sleeve (supplied loose)	4 pc(s).	■	
Cable clamp rails (T-head) for the outer mounting level, to fit the enclosure depth (supplied loose)	4 pc(s).	■	
Cable shunting ring (metal), 125 x 65 mm (supplied loose)	10 pc(s).	■	
Accessories			
Side panels, divided	1 pc(s).	5501.030	536
Gland plates		from page	530
Fan mounting plates	1 pc(s).	5502.020	437
Air baffle plates	1 set(s)	5501.815	692
Cable route	1 pc(s).	5502.120	672
Cable duct	1 pc(s).	5502.105	673

System accessories Cat. 34, Page 507

For flexible use as a wall-mounted or floor-standing enclosure.

Benefits:
– Tool-free quick assembly
– System assembly on the open 482.6 mm (19") frame

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

Surface finish:
– Powder-coated

Colour:
– RAL 7035

Supply includes:
– Flat-packed enclosure
– 1 wall section
– 2 basic supports
– 2 roof/base plates, with cut-outs for cable entry via brush strips
– 2 side panels, lockable
– 1 glazed door, lockable, security lock 3524 E, door hinge point selectable
– Connection components for tool-free, fast assembly
– Earthing kit for system-compatible earthing of all enclosure parts

Please observe the product-specific scope of supply.

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

Technical details:
Available on the Internet

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

Design with 482.6 mm (19") mounting angles

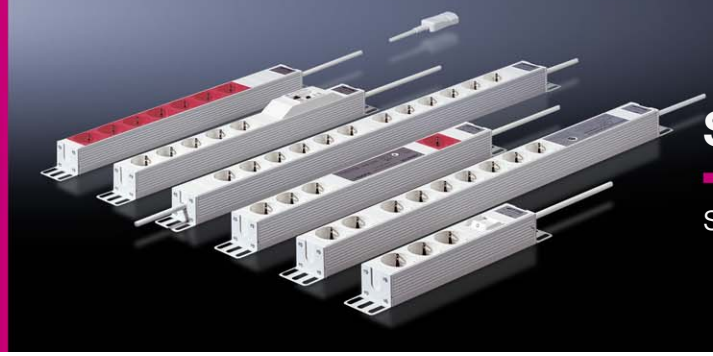
Units U	Packs of	6	6	9	9	Cat. 34, page
Width mm		600	600	600	600	
Height mm		358	358	492	492	
Depth mm		400	600	400	600	
Model No.	1 pc(s).	**7507.000**	**7507.100**	**7507.010**	**7507.110**	
Product-specific scope of supply						
482.6 mm (19") mounting angles	2 pc(s).	■	■	■	■	
Accessories						
Mounting angles, 482.6 mm (19")	2 pc(s).	7507.706	7507.706	7507.709	7507.709	686
Levelling feet	4 pc(s).	7507.740	7507.740	7507.740	7507.740	521
Cover plates for fan panels	6 pc(s).	7507.760	7507.760	7507.760	7507.760	440
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	646
Cable clamp, variable		see page	see page	see page	see page	669
Fan expansion kit		see page	see page	see page	see page	438
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	379
Cable management panel	1 pc(s).	5502.205	5502.205	5502.205	5502.205	674
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	631
Component shelf, pull-out	1 set(s)	–	5501.675	–	5501.675	630

FlatBox

Design with 482.6 mm (19") mounting frame

Units U	Packs of	12	12	15	15	18	21	Cat. 34, page
Width mm		600	600	600	700	700	700	
Height mm		625	625	758	758	892	1025	
Depth mm		400	600	400	700	700	700	
Model No.	1 pc(s).	**7507.020**	**7507.120**	**7507.030**	**7507.200**	**7507.210**	**7507.220**	
Product-specific scope of supply								
482.6 mm (19") mounting frame	1 pc(s).	■	■	■	■	■	■	
Levelling feet	4 pc(s).	■	■	■	■	■	■	
Accessories								
Mounting angles, 482.6 mm (19")	2 pc(s).	7507.712	7507.712	7507.715	7507.715	7507.718	7507.721	686
Levelling feet	4 pc(s).	7507.740	7507.740	7507.740	7507.740	7507.740	7507.740	521
Cover plates for fan panels	6 pc(s).	7507.760	7507.760	7507.760	7507.760	7507.760	7507.760	440
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	7113.000	7113.000	646
Cable clamp, variable		see page	see page	see page	see page	see page	see page	669
Fan expansion kit		see page	see page	see page	see page	see page	see page	438
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	3110.000	3110.000	3110.000	3110.000	379
Cable management panel	1 pc(s).	5502.205	5502.205	5502.205	5502.205	5502.205	5502.205	674
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	see page	see page	631
Component shelf, pull-out	1 set(s)	–	5501.675	–	5501.675	5501.675	5501.675	630

Accessories



Socket strips

see from page 48

Wall-mounted enclosures EL, 3-part

System accessories Cat. 34, Page 507 **Socket strips** Page 48 **Wall mounting bracket** Cat. 34, Page 587 **Cable clamps** Cat. 34, Page 666

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

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

Surface finish:
– Powder-coated

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

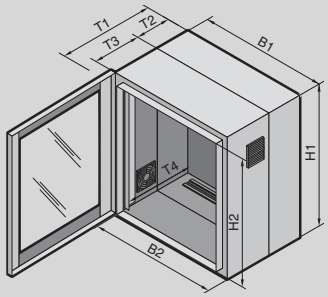
Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door

Please observe the product-specific scope of supply.

Note:
– Protection category IP 54 in conjunction with solid gland plate, top and bottom
– Enclosure 673 mm deep with reinforced wall mounting bracket

Approvals:
– UL
– cUL

Technical details:
Available on the Internet



pre-configured with mounting angles, depth-variable

Units U	Packs of	9	9	15	15	21	21	Cat. 34, page
Width (B1) mm		600	600	600	600	600	600	
Height (H1) mm		478	478	746	746	1012	1012	
Depth (T1) mm		573	673	573	673	573	673	
Clearance width (B2) mm		502	502	502	502	502	502	
Clearance height (H2) mm		415	415	683	683	949	949	
Depth of wall section (T2) mm		135	135	135	135	135	135	
Depth of hinged part (T3) mm		416	516	416	516	416	516	
Max. installation depth (T4) mm		520	620	520	620	520	620	
Load capacity of hinged part (static) kg		45	45	75	75	75	75	
Model No.	1 pc(s).	**7709.735**	**7709.535**	**7715.735**	**7715.535**	**7721.735**	**7721.535**	
Product-specific scope of supply								
Wall section: Gland plate, solid, top		■	■	■	■	■	■	
Wall section: Gland plate with brush strip, bottom		■	■	■	■	■	■	
Wall section: 2 vertical punched rails		■	■	■	■	■	■	
Wall section: C rail mounted horizontally for cable clamping		■	■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles, fully depth adjustable		■	■	■	■	■	■	
Hinged part: Side outlet filters left and right		■	■	■	■	■	■	
Earth rail with star earthing		■	■	■	■	■	■	
4 wall mounting brackets 10 mm		■	■	■	■	■	■	
Mini-comfort handle		■	■	■	■	–	–	
Security lock 3524 E		■	■	■	■	■	■	
Comfort handle and 2-point locking		–	–	–	–	■	■	
Accessories								
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	656
Fan expansion kit	1 set(s)	7980.100	7980.100	7980.100	7980.100	7980.100	7980.100	438
Spare filter mats	5 pc(s).	3322.700	3322.700	3322.700	3322.700	3322.700	3322.700	371
Wall mounting bracket		see page	–	see page	–	see page	–	587
Component shelf 2 U, static installation	1 pc(s).	7119.250	see page	7119.250	see page	7119.250	see page	631
Cable management panel	1 pc(s).	7257.200	7257.200	7257.200	7257.200	7257.200	7257.200	674

Wall-mounted enclosures EL, 3-part

System accessories Cat. 34, Page 507 **Socket strips** Page 48 **Wall mounting bracket** Cat. 34, Page 587 **Earthing** Cat. 34, Page 644

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

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

Surface finish:
– Powder-coated

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

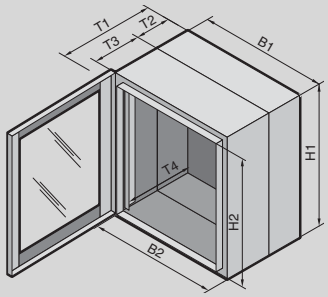
Protection category IP to IEC 60 529:
– IP 55

Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door

Please observe the product-specific scope of supply.

Approvals:
– UL
– cUL

Technical details:
Available on the Internet



with punched rails and mounting angles, depth-variable

Units U	Packs of	6	9	12	15	21	Cat. 34, page
Width (B1) mm		600	600	600	600	600	
Height (H1) mm		345	478	612	746	1012	
Depth (T1) mm		473	473	473	473	473	
Clearance width (B2) mm		502	502	502	502	502	
Clearance height (H2) mm		282	415	549	683	949	
Depth of wall section (T2) mm		135	135	135	135	135	
Depth of hinged part (T3) mm		316	316	316	316	316	
Max. installation depth (T4) mm		420	420	420	420	420	
Load capacity of hinged part (static) kg		30	45	60	75	75	
Model No.	1 pc(s).	**7706.135**	**7709.135**	**7712.135**	**7715.135**	**7721.135**	
Product-specific scope of supply							
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	
Wall section: 2 vertical punched rails		■	■	■	■	■	
Wall section: C rail mounted horizontally for cable clamping		■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles, fully depth adjustable		■	■	■	■	■	
4 wall mounting brackets 10 mm		■	■	■	■	■	
Mini-comfort handle		■	■	■	■	–	
Security lock 3524 E		■	■	■	■	■	
Comfort handle and 2-point locking		–	–	–	–	■	
Accessories							
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	587
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	7113.000	7113.000	646
Component shelf 2 U, static installation	1 pc(s).	7119.250	7119.250	7119.250	7119.250	7119.250	631
Cable management panel	1 pc(s).	7257.200	7257.200	7257.200	7257.200	7257.200	674
Lock systems		from page	from page	from page	from page	from page	560

Wall-mounted enclosures EL, 3-part

System accessories Cat. 34, Page 507 **Socket strips** Page 48 **Wall mounting bracket** Cat. 34, Page 587 **Cable clamps** Cat. 34, Page 666

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

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

Surface finish:
– Powder-coated

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

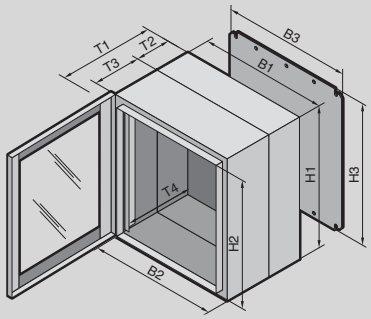
Protection category IP to IEC 60 529:
– IP 55

Supply includes:
– Wall section
– Hinged part with 25 mm pitch pattern of holes in the front and rear frame
– Designer glazed door

Please observe the product-specific scope of supply.

Approvals:
– UL
– cUL

Technical details:
Available on the Internet



with mounting plate and mounting angles, static installation

Units U	Packs of	3	3	6	6	9	9	Cat. 34, page
Width (B1) mm		600	600	600	600	600	600	
Height (H1) mm		212	212	345	345	478	478	
Depth (T1) mm		373	473	373	473	373	473	
Clearance width (B2) mm		502	502	502	502	502	502	
Clearance height (H2) mm		149	149	282	282	415	415	
Depth of wall section (T2) mm		135	135	135	135	135	135	
Depth of hinged part (T3) mm		216	316	216	316	216	316	
Max. installation depth (T4) mm		320	420	320	420	320	420	
Mounting plate width (B3) mm		485	485	485	485	485	485	
Mounting plate height (H3) mm		165	165	299	299	432	432	
Load capacity of hinged part (static) kg		15	15	30	30	45	45	
Model No.	1 pc(s).	**2243.605**	**2253.605**	**2246.605**	**2256.605**	**2249.605**	**2259.605**	
Product-specific scope of supply								
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	■	
Wall section: Mounting plate supplied loose		■	■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles		■	■	■	■	■	■	
Mini-comfort handle		■	■	■	■	■	■	
Security lock 3524 E		■	■	■	■	■	■	
Accessories								
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	see page	587
Cable gland, brass		see page	see page	see page	see page	see page	see page	658
Component shelf 2 U, static installation	1 pc(s).	–	7119.250	–	7119.250	–	7119.250	631
Blanking plates, 482.6 mm (19")		–	–	see page	see page	see page	see page	692
Lock systems		from page	from page	from page	from page	from page	from page	560

Wall-mounted enclosures EL, 3-part

with mounting plate and mounting angles, static installation

Units U	Packs of	12	12	15	15	21	21	Cat. 34, page
Width (B1) mm		600	600	600	600	600	600	
Height (H1) mm		612	612	746	746	1012	1012	
Depth (T1) mm		373	473	373	473	373	473	
Clearance width (B2) mm		502	502	502	502	502	502	
Clearance height (H2) mm		549	549	683	683	949	949	
Depth of wall section (T2) mm		135	135	135	135	135	135	
Depth of hinged part (T3) mm		216	316	216	316	216	316	
Max. installation depth (T4) mm		320	420	320	420	320	420	
Mounting plate width (B3) mm		485	485	485	485	485	485	
Mounting plate height (H3) mm		565	565	699	699	965	965	
Load capacity of hinged part (static) kg		60	60	75	75	75	75	
Model No.	1 pc(s).	**2252.605**	**2262.605**	**2255.605**	**2265.605**	**2261.605**	**2271.605**	
Product-specific scope of supply								
Wall section: Gland plate, solid, top and bottom		■	■	■	■	■	■	
Wall section: Mounting plate supplied loose		■	■	■	■	■	■	
Hinged part with two 482.6 mm (19") mounting angles		■	■	■	■	■	■	
Mini-comfort handle		■	■	■	■	–	–	
Security lock 3524 E		■	■	■	■	■	■	
Comfort handle and 2-point locking		–	–	–	–	■	■	
Accessories								
Gland plate with brush insert	1 pc(s).	7705.035	7705.035	7705.035	7705.035	7705.035	7705.035	657
Gland plate for metric cable glands	1 pc(s).	7705.235	7705.235	7705.235	7705.235	7705.235	7705.235	656
Wall mounting bracket		see page	see page	see page	see page	see page	see page	587
Cable gland, brass		see page	see page	see page	see page	see page	see page	658
Component shelf 2 U, static installation	1 pc(s).	–	7119.250	–	7119.250	–	7119.250	631
Blanking plates, 482.6 mm (19")		see page	see page	see page	see page	see page	see page	692
Lock systems		from page	from page	from page	from page	from page	from page	560

System accessories Cat. 34, Page 507 **Socket strips** Page 48 **Captive nuts** Cat. 34, Page 624 **Glazed doors** Cat. 34, Page 556

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

Material:
– Enclosure: Sheet steel

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

Colour:
– RAL 7035

Protection category IP to IEC 60 529:
– Up to IP 66 (depending on the selected gland pate)

Supply includes:
– Enclosure with hinged door
– Door hinged on the right, may be swapped to the left
– Cam lock with 3 mm double-bit insert
– Gland plate with brush strip for cable entry in the enclosure base
– Mounting angles, 482.6 mm (19"), fully depth adjustable
– C rail, for cable clamping on the rear panel
– Metal bracket for optional accommodation of an earth rail or 482.6 mm (19") socket strip

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

Technical details:
Available on the Internet

with 482.6 mm (19") mounting angles, depth-variable

Units U	Packs of	8	13	16	Cat. 34, page
Width mm		600	600	600	
Height mm		380	600	760	
Depth mm		350	350	350	
Max. installation depth mm		310	310	310	
Cam locks		1	2	2	
Model No.	1 pc(s).	**7641.000**	**7643.000**	**7645.000**	
Gland plate, size		5	5	5	
Gland plates, qty.		1	1	1	
Accessories					
Wall mounting bracket		see page	see page	see page	587
Viewing window		see page	see page	see page	557
Component shelf 2 U, static installation	1 pc(s).	7119.250	7119.250	7119.250	631
Earth rail, horizontal	1 pc(s).	7113.000	7113.000	7113.000	646
Lock systems		from page	from page	from page	560

Rittal – The System.

Faster – better – everywhere.

IT power

This ensures a constant, uninterrupted power supply from the low-voltage distributor through to each individual piece of equipment. The supply of power with the Power Distribution Unit (PDU) and its extensive management and monitoring functions is particularly cost-effective and reliable. The PDU is easily integrated into RiZone or other DCIM systems via the IP interface, and can be controlled and monitored from there.

Your benefits

- Holistic, systematic energy management concepts
- Comprehensive, complete solutions for power distribution and backup, consistently modular, and flexibly extendible at any time
- Optimum energy and cost efficiency with maximum availability of the entire system
- Reduced installation, administration and manpower costs
- High level of investment security
- All from a single partner

Sample applications

1 Power Distribution Rack PDR, see Cat. 34, page 40

2 Power Distribution Module PDM, see Cat. 34, page 408

3 Power Distribution Unit PDU, see page 39

4 Power distribution, see Cat. 34, page 197

5 UPS (partner product)

Power Distribution Unit

Simple assembly

- Compact design
- Tool-free clip attachment in the TS IT
- Flexible mounting at the required height in the zero-U space
- Also suitable for individual installation on the enclosure frame
- Reliable protection against unauthorised access by covering any outputs that are not required
- Securely fitted connectors, thanks to connector lock

Versatile function

- Measurement of power, current, active and apparent power and power factor
- Measurement of energy consumption and zero conductor current (with 3-phase PDUs)
- Measurement for any output is supported, depending on the PDU version
- Bistable relays ensure minimum inherent power consumption by the PDU
- Connection options for CMC III sensors (temperature, humidity, access)

Professional monitoring

- Powerful CPU and Linux Web server
- TCP/IP v4 and v6 plus SNMP
- Configuration of limits
- User administration, e-mail sent in case of alarm
- Easily connected to DCIM software (e.g. RiZone)

Power Distribution Unit

Configuration Page 43

Benefits:
- With the compact PDU, any IT rack may be easily equipped with a professional power distribution system
- With the TS IT rack, assembly is even tool-free
- Compact design
- Easy to assemble
- Power-saving design, minimal inherent consumption by the PDU itself, thanks to the use of bistable relays and OLED display with power-saving function
- Integral Web server for direct network connection with extensive user administration (not PDU basic/slave PDU)
- Redundant power supply from all 3 phases and additionally via an existing PoE (Power over Ethernet) network
- Extensive range of management and monitoring functions
- High-MTBF and measurement accuracy of 1%
- CAN bus for connecting slave PDUs (not PDU basic)
- Ambient monitoring with up to 4 CMC III sensors (temperature, humidity, access, vandalism)

PDU design variants:
PDU basic
Robust, compact basic power distributor for the IT environment

PDU metered
Energy measurement per phase, i.e. output requirement of an entire IT rack

PDU switched
Measurement function per phase and individually switchable output slots

PDU managed
High-end IT rack, power distribution with energy measurement and monitoring functions for each individual output slot

Material:
– Extruded aluminium section, anodised

Protection category IP to IEC 60 529:
– IP 20

Standards:
– EN 60 950
– EN 61 000-4
– EN 61 000-6
– EN 55 022

Safety directive:
– 2006/95/EC

EMC directive:
– 2004/108/EC

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

PDU international, basic version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	CEE	24	4	970	1200	**7955.110**
1	32	CEE	24	4	1115	1400	**7955.111**
3	16	CEE	18	3	845	1200	**7955.131**
3	16	CEE	24	6	1145	1400	**7955.132**
3	32	CEE	24	6	1365	1800	**7955.133**
3	32	CEE	36	6	1710	2000	**7955.134**
3	16	CEE	42	–	1405	1800	**7955.135**

PDU international, metered version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	**7955.201**
1	16	CEE	24	4	1225	1400	**7955.210**
1	32	CEE	24	4	1370	1800	**7955.211**
3	16	CEE	18	3	1100	1400	**7955.231**
3	16	CEE	24	6	1395	1800	**7955.232**
3	32	CEE	24	6	1620	2000	**7955.233**
3	32	CEE	36	6	1960	2200	**7955.234**
3	16	CEE	42	–	1665	2000	**7955.235**
3	32	CEE	48	–	2050	2200	**7955.236**

PDU international, switched version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	**7955.301**
1	16	CEE	24	4	1225	1400	**7955.310**
1	32	CEE	24	4	1370	1800	**7955.311**
3	16	CEE	18	3	1100	1400	**7955.331**
3	16	CEE	24	6	1395	1800	**7955.332**
3	32	CEE	24	6	1620	2000	**7955.333**
3	32	CEE	36	6	1960	2200	**7955.334**
3	16	CEE	42	–	1665	2000	**7955.335**
3	32	CEE	48	–	2050	2200	**7955.336**

PDU international, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	**7955.401**
1	16	CEE	24	4	1225	1400	**7955.410**
1	32	CEE	24	4	1370	1800	**7955.411**
3	16	CEE	18	3	1100	1400	**7955.431**
3	16	CEE	24	6	1395	1800	**7955.432**
3	32	CEE	24	6	1620	2000	**7955.433**
3	32	CEE	36	6	1960	2200	**7955.434**
3	16	CEE	42	–	1665	2000	**7955.435**
3	32	CEE	48	–	2050	2200	**7955.436**

Slave PDU international, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs C13	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	16	C20	12	–	710	800	**7955.901**
1	16	CEE	24	4	1225	1400	**7955.910**
1	32	CEE	24	4	1370	1800	**7955.911**
3	16	CEE	18	3	1100	1400	**7955.931**
3	16	CEE	24	6	1395	1800	**7955.932**
3	32	CEE	24	6	1620	2000	**7955.933**

Power Distribution Unit

PDU UK, basic version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	6	–	440	600	**7955.510**
1	13	UK	8	–	535	800	**7955.511**
1	13	UK	10	–	640	800	**7955.512**
1	13	UK	12	–	745	1000	**7955.513**

PDU UK, metered version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	**7955.520**
1	16	CEE	20	4	1695	2000	**7955.521**
1	32	CEE	20	4	1955	2200	**7955.522**

PDU UK, switched version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	**7955.530**
1	16	CEE	16	4	1380	1800	**7955.531**
1	32	CEE	16	4	1520	1800	**7955.532**

PDU UK, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	**7955.540**
1	16	CEE	16	4	1380	1800	**7955.541**
1	32	CEE	16	4	1525	1800	**7955.542**

Slave PDU UK, managed version

Power		Pin patterns			Dimensions		Model No.
No. of phases	Phase current A	Input	Outputs UK connector	Outputs C19	PDU length mm	Minimum enclosure height mm	
1	13	UK	16	–	1210	1400	**7955.940**
1	16	CEE	16	4	1380	1800	**7955.941**
1	32	CEE	16	4	1525	1800	**7955.942**

PDU accessories

	Packs of	Model No.	Page
Covers for C13 slot, lockable	10 pc(s).	**7955.010**	
Covers for C19 slot, lockable	10 pc(s).	**7955.015**	
Connector, universal lock for C14/C20 connector	20 pc(s).	**7955.020**	
Connection cable D/C19, 1.8 m	1 pc(s).	7200.216	79
Connection cable C19/C20, 1.8 m	1 pc(s).	7200.217	79

CMC III sensors (max. 4 sensors per PDU)

CMC III/PDU sensor type	Packs of	Model No.	Page
Temperature sensor	1 pc(s).	7030.110	74
Temperature/humidity sensor (combi-sensor)	1 pc(s).	7030.111	74
Infrared access sensor	1 pc(s).	7030.120	74
Vandalism sensor	1 pc(s).	7030.130	74
CMC III CAN bus connection cable RJ 45, length 0.5 – 10 m	1 pc(s).	see page 79	

Configuration

PDU version	managed/ managed slave[1)]	switched	metered	basic
Mechanical				
May be fitted in the zero-U space in the 600 mm wide TS IT, tool-free	■	■	■	■
Colour coding of phases and fuse circuits (depending on PDU version)	■	■	■	■
Connection cable, static, 3 m, with CEE connector (IEC 60 309) or C20	■	■	■	■
Connector lock for C13 and C19 pin patterns (optional)	■	■	■	■
Lockable cover for slots that are not needed (for C13/C19)	■	■	■	■
PDU slave version without display and Ethernet connection for use with PDU master and CMC III	■	–	–	–
Electrical				
Power supply 110 V – 230 V/400 V, inherent power consumption approx. 15 W	■	■	■	–
Rated current 16/32 A, single-phase/3-phase	■	■	■	■
Version additionally 63 A/3-phase (blade PDU, no Zero-U)	–	–	■	–
Electromagnetic circuit-breaker, 16 A, type C (only with 32/63 A PDU versions)	■	■	■	■
PDU self-supplied, no external power supply required	■	■	■	–
PDU power supply redundant across all phases (with 3-phase PDUs)	■	■	■	–
Emergency power supply to PDU web server via PoE (Power over Ethernet), remains accessible even in the event of a mains failure	■	■	–	–
Switching function per output slot	■	■	–	–
Sequential activation of the outputs once the power is resumed (avoids overload peaks)	■	■	–	–
Switching states are saved even in the event of a power failure	■	■	–	–
Bistable relays/minimal power consumption	■	■	–	–
Grouping (joint switching of several outputs)	■	■	–	–
Measurement functions				
Voltage (V), current (A), frequency (Hz)	■	■	■	–
Active power (kW), active energy (kWh), apparent power (kVA), apparent energy (kVAh)	■	■	■	–
Power factor (cos phi)	■	■	■	–
Zero conductor measurement/load imbalance detection	■	■	■	–
Fuse monitoring (with 32/63 A versions)	■	■	■	–
Measurement per phase or infeed	–	■	■	–
Measurement per output slot	■	–	–	–
Measurement accuracy +/-1% (kWh) to IEC 50 430-1	■	■	■	–
Connectivity/management functions				
Powerful 400 MHz CPU and Linux operating system (not with slave versions)	■	■	■	–
Graphic OLED display 128 x 128 pixels (RGB) with back-lighting and energy-saving mode (display of output data and basic IP configuration)	■	■	■	–
Position sensor for display rotation (and correct visualisation in the DCIM software RiZone)	■	■	■	–
Multi-colour LEDs (green/red) to indicate switching states per individual output slot	–	■	–	–
Multi-colour LEDs (green/red) to indicate switching states and limits per individual output slot	■	–	–	–
Settable limits (warning/alarm)	■	■	■	–
Operating hours meter, total and cyclical (resettable)	■	■	■	–
Ethernet connection (RJ 45)	■	■	■	–
USB A-port for firmware update and data logging functions	■	■	■	–
CAN bus interface (RJ 45)	■	■	■	–
Web server (HTTP, HTTPS, SSL, SSH) NTP, Telnet	■	■	■	–
TCP/IP v4 and v6, DHCP	■	■	■	–
SNMP v1, v2c and v3	■	■	■	–
FTP/SFTP (update/file transfer)	■	■	■	–
E-mail forwarding in case of alarm (SMTP)	■	■	■	–
User administration including rights management	■	■	■	–
LDAP(S)/Radius/Active Directory connection	■	■	■	–
Syslog server connection (max. 4 servers)	■	■	■	–
Plug & play drivers in the Rittal RiZone DCIM software	■	■	■	–
MIB for linking into 3rd party software	■	■	■	–
Suitable for connection to Rittal CMC III system (Slave PDU)	■	–	–	–
CMC III CAN bus sensors may be connected for ambient monitoring (max. 4 sensors)	■	■	■	–
CMC III sensors that may be used: Temperature sensor, temperature/humidity sensor, infrared access sensor, vandalism sensor	■	■	■	–
Ambient conditions				
Operating temperature	0°C...+45°C	0°C...+45°C	0°C...+45°C	0°C...+45°C
Storage temperature	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C	-25°C...+70°C
Ambient humidity % (non-condensing)	10 – 95	10 – 95	10 – 95	10 – 95
Protection category IP to IEC 60 529	IP 20	IP 20	IP 20	IP 20

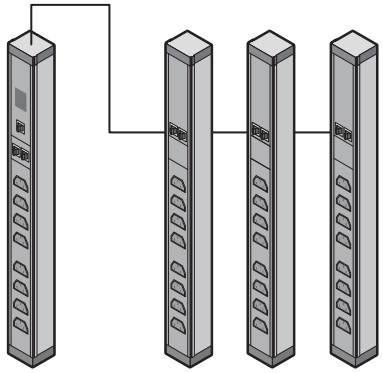
[1)] Managed slave without display/network

Power Distribution Unit

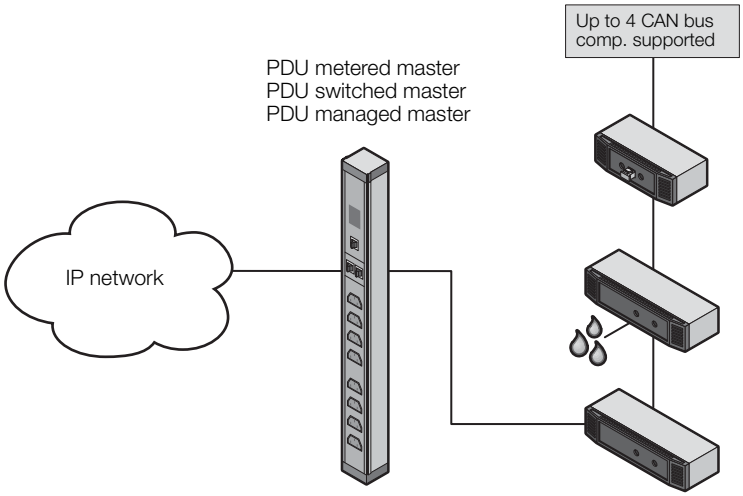
Power Distribution Unit, sample applications

Master/slave principle
Up to 3 slave PDUs may be connected to one PDU.

PDU metered master
PDU switched master
PDU managed master
managed slave
(without display)



Connection of CAN bus sensors
Up to 4 additional CMC III CAN bus sensors may be connected to the PDU master for ambient monitoring (temperature, humidity, access).



Power Distribution Unit, allocation of fuses, phases, slots

Model No. DK	Infeed PDU	Fuse (type C16 A)	Phase 1		Phase 2		Phase 3	
			String 1 (F1)	String 1 (F2)	String 2 (F1)	String 2 (F2)	String 3 (F1)	String 3 (F2)
7955.X01	230 V/1~/16 A	–	12 x C13	–	–	–	–	–
7955.X10	230 V/1~/16 A	–	24 x C13 + 4 x C19	–	–	–	–	–
7955.X11	230 V/1~/32 A	2 x	12 x C13 + 2 x C19	12 x C13 + 2 x C19	–	–	–	–
7955.X31	400 V/3~/16 A	–	6 x C13 + 1 x C19	–	6 x C13 + 1 x C19	–	6 x C13 + 1 x C19	–
7955.X32	400 V/3~/16 A	–	8 x C13 + 2 x C19	–	8 x C13 + 2 x C19	–	8 x C13 + 2 x C19	–
7955.X33	400 V/3~/32 A	6 x	8x C13	2 x C19	8 x C13	2 x C19	8 x C13	2 x C19
7955.X34	400 V/3~/32 A	6 x	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19
7955.X35	400 V/3~/16 A	–	14 x C13	–	14 x C13	–	14 x C13	–
7955.X36	400 V/3~/32 A	6 x	8 x C13	8 x C13	8 x C13	8 x C13	8 x C13	8 x C13

Power Distribution Unit international

Technical specifications		
Standards	Security	EN 60 950-1
	EMC	EN 55 022/B, EN 61 000-4-2, EN 61 000-4-3, EN 61 000-6-2, EN 61 000-6-3
Safety directive		2006/95/EC
EMC directive		2004/108/EC
MTBF (at 40°C)		200,000 hours
Protection category		IP 20 (IEC 60 529)
Protection class		3
Contamination level		2
Overvoltage category		II
Environmental properties		RoHS
Storage temperature		-25°C to +70°C
Ambient temperatures		0°C to +45°C
Ambient humidity		10 – 95% rel. humidity (non-condensing)
Connector latch C13 and C19		1 x (further optional DK 7955.020)
C13 covers included with supply		8 x (further optional DK 7955.010)
C19 covers included with supply		2 x (further optional DK 7955.015)
Warranty		24 months (from the date of manufacture)

Power Distribution Unit international

Compact power distributor for use in IT servers and network enclosures. Please observe the relevant product dimensions and check whether the PDU may be installed in your preferred rack. The PDU dimensions and the minimum rack height required may be found in the ordering table in the Rittal Catalogue. The technical specifications listed below apply wholly or partially to the following PDU products:

- PDU metered (power measurement at the infeed or per phase. Without switching function)
- PDU switched (power measurement at the infeed or per phase. With switching function)
- PDU managed (power measurement per individual outgoing slot. With switching function)
- Slave PDU managed (like PDU managed, but without display and network interface, with CAN bus for connecting to CMC III or PDU metered/switched/managed)

Technical specifications apply to the following product variants:
PDU metered DK 7955.2XX, PDU switched DK 7955.3XX, PDU managed DK 7955.4XX

Technical specifications		
Input voltage range (L – N)		90 V – 260 (400) V AC, 50 – 60 Hz
Input current		16 A/32 A/63 A (depending on variant)
No. of phases		1 or 3 depending on PDU variant
PDU inherent supply		Integral long-range SMPS, error-tolerant from all phases
PDU power consumption		approx. 15 W
Redundant power supply via PoE		Yes (with PDU switched, PDU managed)
Marking of phases (3-phase PDUs only: L1, L2, L3)		Brown, black, grey
Slots type EN 60 320/C13		Quantity depends on version, see Catalogue
Slots type EN 60 320/C19		Quantity depends on version, see Catalogue
No. of circuit-breakers		2 (single-phase) or 6 (3-phase) with 32 A version, 12 (3-phase) with 63 A version
Electromagnetic circuit-breaker		16 A type C
Slots individually switchable		Yes, only for PDU switched, PDU managed (bistable relay, minimal inherent consumption)
Connector, PDU input		EN 60 309/CEE (depending on PDU version), EN 60 320-C20 for DK 7955.201/.301/.401
Length of connection cable		3 m (except for DK 7955.201/.301/401)
Connection cable type		H05-VV
No. of wires		3/5 (single-phase/3-phase PDU)
Cable cross-section		2.5 mm^2/4.0 mm^2 (for 16 A/32 A versions)
PDU enclosure width		44 mm (1 U) not for DK 7955.238
PDU enclosure depth		62 mm
PDU enclosure height (depth)		Depends on product variant
PDU material		Aluminium, anodised in RAL 9005 (black)
PDU mounting adaptor		Plastic, black
Measurement functions (input/phase or output slot)	Values recorded	Voltage (V), current (A), frequency (Hz), active power (kW), active energy (kWh), apparent power (VA), power factor, neutral-conductor measurement/load imbalance detection, fuse monitoring (with 32 A/63 A versions)
	Voltage measurement range	90 V – 260 V
	Voltage resolution	0.1 V
	Voltage accuracy	2%
	Current measurement range	0 – 16/32/63 A (depending on PDU variant)
	Current resolution	0.1 A
	Current accuracy	2%
	Frequency accuracy	2%
	Active power (kW) accuracy	2%
	Apparent power (VA) accuracy	2%
	Active energy (kWh) accuracy	1%
	Power factor accuracy	2%
	Freely settable limit values for warning/alarm	Yes
Operating hours meter		Yes
Display		OLED, RGB 128 x 128 pixels, LED per slot (with PDU switched, PDU managed)
Network interface		RJ 45, integral Web server
Supported protocols		HTTP, HTTPS, SSL, SSH, NTP, Telnet, TCP/IP v4 and v6, DHCP, DNS, NTP, Syslog, SNMP v1, v2c and v3, XML, FTP/SFTP (update/file transfer), e-mail sending (SMTP)
User administration including rights management		Yes
LDAP(S)/Radius/Active Directory connection		Yes
USB port for firmware update and data logging functions		Yes
CAN bus interface		RJ 45, for connecting sensors
CAN sensor types		Temperature, temperature/humidity (combined), infrared access sensor, vandalism sensor
Max. number of sensors per PDU		4, sensor configuration freely selectable, including 4 of the same type
Plug & play drivers in the Rittal RiZone DCIM software		Yes
Conformity		CE

We reserve the right to make technical modifications

MID measurement module – Inline meter

CMC III monitoring system page 68

The PSM 1 U MID measurement modules may be used for upgrading existing installations or for measuring individual 16 A/32 A equipment. These are readily integrated into the 482.6 mm (19″) level or into the zero-U space of the rack, and connected using suitable connection cables. These measurement modules have an MID-compliant active energy meter and are therefore suitable for energy billing purposes. MID stands for “Measurement Instruments Directive” and regulates 10 types of measurement equipment based on EU Directive 2004/22/EC. MID-approved equipment is authorised for use throughout the EU.

Benefits:
- For 16 A and 32 A phase current
- Easy to assemble
- Billable MID measurement units
- CAN bus for connection to CMC III system
- Extensive management and monitoring functions (via CMC III)
- High-MTBF and measurement accuracy of ±1%
- Energy-efficient electric design – minimal inherent power consumption
- 1 U, 482.6 mm (19″) sheet steel enclosure, for flexible mounting

Measurement functions:
- Voltage (V), current (A), frequency (Hz)
- Active power (kW), active energy (kWh), apparent power (kVA), apparent energy (kVAh)
- Power factor (cos phi)
- Zero conductor measurement/ load imbalance detection
- Measurement per phase or infeed
- Measurement accuracy ±1% (kWh) to IEC 50 430-1
- MID certification of the active energy meter, suitable for energy billing purposes

Material:
- Enclosure: Sheet steel

Colour:
- RAL 9005

Protection category IP to IEC 60 529:
- IP 51

Standards:
- EN 60 950
- EN 61 000-6-1
- EN 61 000-6-2
- EN 55 022

Safety directive:
- 2006/95/EC

EMC directive:
- 2004/108/EC

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

for CMC III

Model No.	**7859.312**	**7859.332**
Rated current A (per phase)	16	32
Sheet steel enclosure 1 U for 482.6 mm (19″) mounting, approx. 200 mm deep	■	■
Assembly parts	■	■
Input voltage 230 V/400 V (50/60 Hz)	■	■
No. of infeeds (each 3-phase)	2	2
Power supply across all 3 phases (internal power pack)	■	■
Maximum no. of systems that may be connected to one CMC-PU III	8	8
Ambient conditions		
Operating temperature	-25°C…+55°C	-25°C…+55°C
Storage temperature	-25°C…+70°C	-25°C…+70°C
Ambient humidity % (non-condensing)	20 – 90	20 – 90
Also required		
Connection cables, set: 1 x input 2 m/1 x output 2 m CEE (IEC 60 309 jack) (2 x required when using both infeeds)	**7859.315**	**7859.335**
Connection cables for PSM busbars: Input cable 3 m/output cable 1.2 m (with Wago X-COM connector) (2 x required when using both infeeds)	**7859.316**	**–**

for CMC III

MID approval for energy billing purposes is valid for 8 years and can be extended for a further 8 years by recalibrating the MID measurement module. This measurement device is connected into the connection cable (infeed) of the equipment or the power distributor.

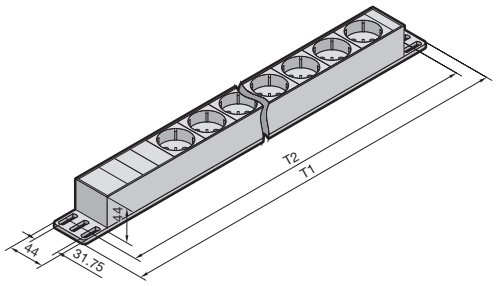
For connecting to PSM busbars with Wago X-COM connectors, a special preassembled connection cable set with CEE connector and/or coupling is required.
The Rittal CMC III is required for network functionality and data communication via SNMP.

Technical specifications		7859.312	7859.332
Input current		16 A	32 A
Number of phases per circuit		3	3
Number of circuits		2	2
Connection type		Industry plug connector	
Connectors, inputs / outputs		HARTING HAN Q4/2/IIme CQ 08V EN 60 309 – CEE 3L+N+PE 6h, IP 44	
Connection cable type		H07 RN-F (optional cable kits)	
No. of wires		5	
Cable cross-section		4 mm^2	
MID module, enclosure width		450 mm (19')	
MID module, enclosure depth		200 mm	
MID module, enclosure height		44.45 mm (1 U)	
PDU material		Sheet steel, spray finished in RAL 9005 (black)	
Measurement functions (input/phase or output slot)	Voltage measurement range	180 – 260 V	
	Voltage resolution	0.1 V	
	Voltage accuracy	2%	
	Current measurement range	0 – 35 A	
	Current resolution	0.1 A	
	Current accuracy	2%	
	Frequency accuracy	2%	
	Active power (kW) accuracy	2%	
	Apparent power (VA) accuracy	2%	
	Active energy (kWh) accuracy	1%	
	Apparent energy (kVAh) accuracy	2%	
	Power factor accuracy	2%	
	Freely settable limit values for warning/alarm	Yes	
	Zero conductor measurement/ load imbalance detection	Yes	
Display		OLED monochrome / 2 lines	
Interface		RJ 45, CAN bus (CAN open)	
Protocols supported via optional CMC III		HTTP, HTTPS, SSL, SSH, NTP, Telnet, TCP/IP v4 and v6, DHCP, DNS, NTP, Syslog, SNMP v1, v2c and v3, XML, FTP/SFTP (update/file transfer), e-mail sending (SMTP)	
Max. number of MID modules per CMC III PU Compact		4	
Max. number of MID modules per CMC III PU		8	
Installation position		Horizontally screw fastened in the 482.6 mm (19') level	
Assembly parts included with the supply		Cage nuts M5 (4x), screws M5x14 (4x)	
Conformity		CE	
MTBF (at 40°C)		200,000 hours	
Standards		EN 50 470-1, EN 50 470-3, MID Directive 2004/22/EG	
Safety		EN 60 950-1	
EMC		EN 61 000-6-2, EN 61 000-6-3, EN 55 022/B	
Protection category		3	
Contamination level		2	
Protection category		IP 51 (IEC 60 529)	
Storage temperature		-25°C…+70°C	
Ambient temperatures (operation)		-25°C…+55°C	
Ambient humidity		20% – 90%, non-condensing	

Socket strips

in an aluminium duct

The socket strips in the aluminium duct are available in various lengths with different functional elements. Special attention has been devoted to practical, universal fastening:
Variable attachment facilities have been created with an angle bracket which may be inserted in four positions. Hence, for example, the 482 mm long socket strip may optionally be mounted on 482.6 mm (19″) mounting angles, the 482.6 mm (19″) mounting frame, the enclosure frame, or in the rear section of the wall-mounted distributor. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern. This makes selection much easier, as well as providing additional flexibility and saving on warehousing. Provision has also been made for cable routing of the infeed, and when mounting in the 482.6 mm (19″) section there is adequate space to route the infeed between the socket strip and the mounting angle without kinks.
The arrangement of the IEC 320 sockets at a 45° angle allows unrestricted use of angular connectors.



Technical specifications:
Earthing-pin socket strips:
– Connector type F (CEE 7/4)
– Rated operating voltage: 250 V
– Connection cable: 2 m long H05VV-F3G1.5 without connector, 5 with connector

Belgium/France (B/F) socket strips:
– Connector type E (CEE 7/5)
– Rated operating voltage: 250 V
– Connection cable: 2 m long H05VV-F3G1.5 with wire end ferrules

Equipment connector strips (IEC 60 320-1/C13)
Socket strips:
– Rated operating voltage: 250 V
– Connector input: C14 or cable H05VV-F3G1.0, depending on the version

Material:
– Aluminium section: Natural anodised
– Socket inserts: Polycarbonate

Supply includes:
– Socket strip
– Two mounting brackets
– Assembly parts

Standards:
– Earthing-pin socket: DIN 49 440
– IEC 320 socket: EN 60 320-2-2
– Overvoltage protection: DIN EN 61 643-11 (VDE 0675 Part 6-11)

Approvals:
– CE
– RoHS

Note:
– Depending on the application, we recommend use of a charging current reserve to prevent incorrect activation due to starting-current spikes

Technical details:
Available on the Internet

Connector type earthing-pin

Version	Rated current A	Connection	No. of sockets	Attachment: Frame	Attachment: Wall-mounted distributor, horizontal	Attachment: 482.6 mm (19″) level	Length (T1) mm	Mounting dimension (T2) mm[1]	Model No.
1 Without rocker switch	16	Cable	3	■	–	–	262.6	232.5	**7240.110**
			7	■	■	■	482.6	452.5	**7240.210**
			12	■	–	–	658.6	628.5	**7240.310**
2 With rocker switch	16	Cable	3	■	■	–	306.6	276.5	**7240.120**
			7	■	■	■	482.6	452.5	**7240.220**
3 Overvoltage protection, type 3 and interference suppressor filter	16	Cable	5	■	■	■	482.6	452.5	**7240.230**
			9	■	–	–	658.6	628.5	**7240.330**
4 Circuit-breaker, type B, 16 A, 2-pole	16	Cable	5	■	■	■	482.6	452.5	**7240.240**
5 UPS strip, connection cable with 10 A IEC 320 connector type E, with 10 A G-fuse	10	C14	7	■	■	■	482.6	452.5	**7240.260**
6 FI switch, 0.03 A, 2-pole, type A	16	Cable	5	■	■	■	482.6	452.5	**7240.280**
B/F sockets, type E with earthing pin (Belgium/France)	16	Cable	7	■	■	■	482.6	452.5	**7240.510**

[1] Variable attachment distance within a range of 25 mm, the dimension given is hole centre – hole centre of the mounting bracket

Connector type C13

Version	Rated current A	Connection	No. of sockets	Attachment: Frame	Attachment: Wall-mounted distributor, horizontal	Attachment: 482.6 mm (19″) level	Length (T1) mm	Mounting dimension (T2) mm[1]	Model No.
For IEC 320 connectors	10	Cable	12	■	■	■	482.6	452.5	**7240.200**
For IEC 320 connectors with IEC 320 input	10	C14	9	■	■	■	482.6	452.5	**7240.201**

[1] Variable attachment distance within a range of 25 mm, the dimension given is hole centre – hole centre of the mounting bracket

Socket strip

Earthing-pin, with plastic housing

Robust 8-way earthing-pin socket strip in a plastic housing. The strip may be mounted vertically on the enclosure frame or in the 482.6 mm (19″) section. 2.5 U are required for 482.6 mm (19″) installation. The earthing-pin inserts are arranged at an angle of 45° so that angular connectors are also easily used. The connection cable is attached to a terminal connection (behind a removable cover) in the socket strip. The socket strip has a terminal for an external earthing connection.

Technical specifications:
- Connector type F (CEE 7/4)
- Rated operating voltage: 230 V
- Rated current: 16 A
- Connection cable: Type H05VV-F3G1.5 (black) with wire end ferrules
- Length: 2 m
- Dimensions: W x H x D: 483 x 74 x 45 mm

Socket strip	**Model No.**
8-way, earthing-pin	**7000.630**

Supply includes:
- 1 socket strip
- Assembly parts

Material:
- Plastic (grey/black)

Approvals:
- CE
- RoHS

Socket strip

Earthing-pin, with ammeter

The socket strip with ammeter measures the active power of the connected equipment. The 482.6 mm (19″) long socket strip may optionally be mounted on the 482.6 mm (19″) mounting angles, on the 482.6 mm (19″) mounting frame, on the enclosure frame or in the rear section of wall-mounted distributors. The installation bracket may be mounted in four different positions for variable mounting. Without additional mounting accessories, the socket strip may be inserted into all sections with a 25 mm pitch pattern.

Technical specifications:
- Rated operating voltage: 250 V
- Rated current: 16 A
- Connection cable: Type H05VV-F3G1.5 (black) with wire end ferrules
- Length: 3 m
- Dimensions: W x H x D: 480 x 45 x 50 mm

Material:
- Aluminium section: Natural anodised
- Socket inserts: Polycarbonate

Display colour:
- Blue, luminescent

Supply includes:
- 1 socket strip
- 2 installation brackets
- Assembly parts
- 3 m connection cable with wire end ferrules

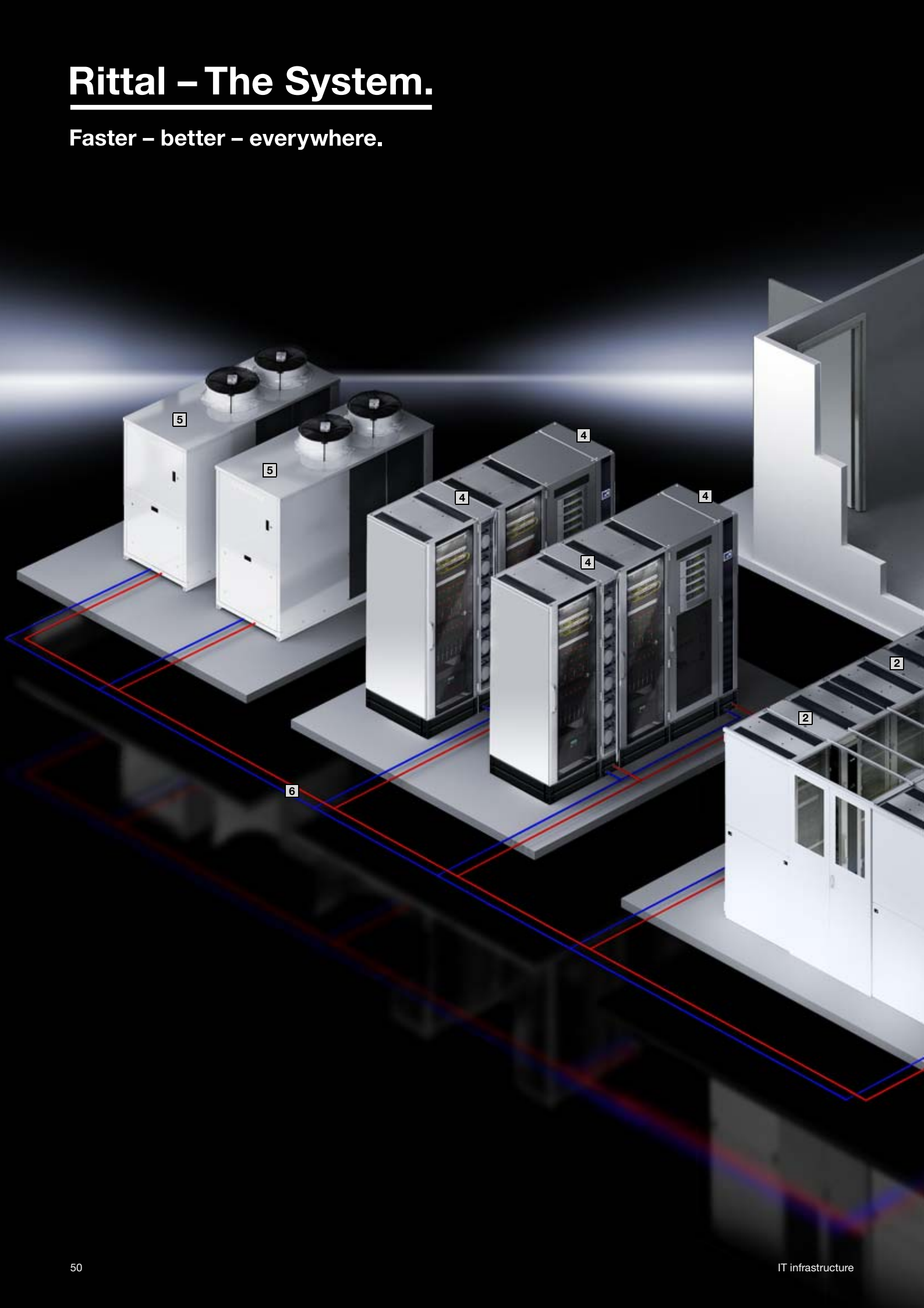
Approvals:
- CE
- RoHS

Version	No. of sockets	Attachment			Length mm	Mounting dimensions mm[1)]	**Model No.**
		Frame	Wall-mounted distributor, horizontal	482.6 mm (19″) level			
IEC 320/CEE 7/4	7	■	■	■	482.6	464.1	**7240.300**

[1)] Variable attachment distance within a range of 25 mm, the dimension given is hole centre – hole centre of the mounting bracket

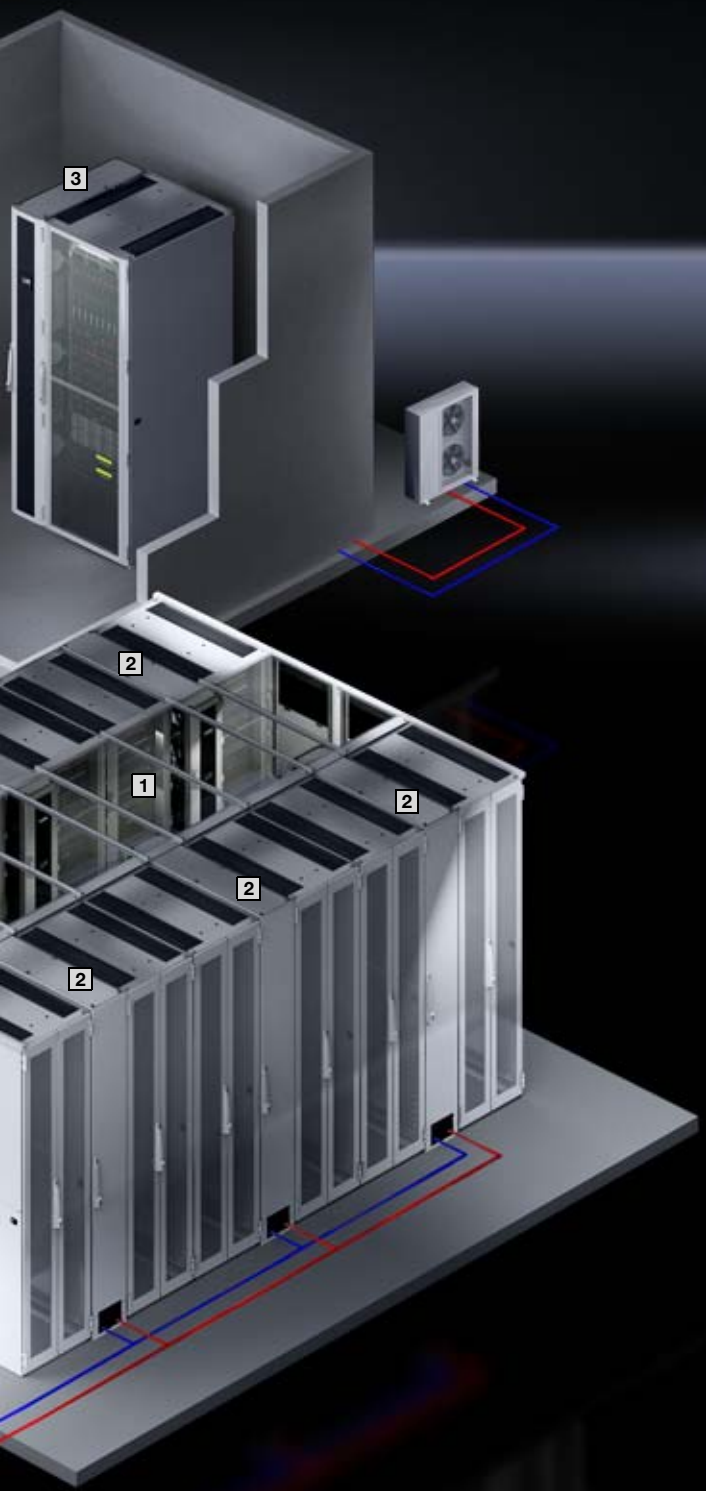
Rittal – The System.

Faster – better – everywhere.



IT cooling

Climate control concepts from Rittal cover the full spectrum of applications, from cooling a single rack through to entire data centres. Security plus optimum energy and cost efficiency are paramount.
An extensive range of technical solutions supports individual climate control concepts for racks, suites and rooms.



Your benefits

- State-of-the-art climate control technology, from cooling a single rack through to entire data centres
- Individual climate control concepts for rack, suite and room cooling
- Enhanced security plus superior energy and cost efficiency
- Optimisation with aisle containment and cross-system control concepts
- Energy-efficient cooling with IT chillers
- Free cooling helps to minimise operating costs
- Environmentally friendly, thanks to resource savings and reduced CO_2 emissions
- Planning, assembly, commissioning and servicing – all from a single supplier!

Sample applications

1 Aisle containment, see Cat. 34, page 435

2 Liquid Cooling Package LCP Inline CW, see page 55

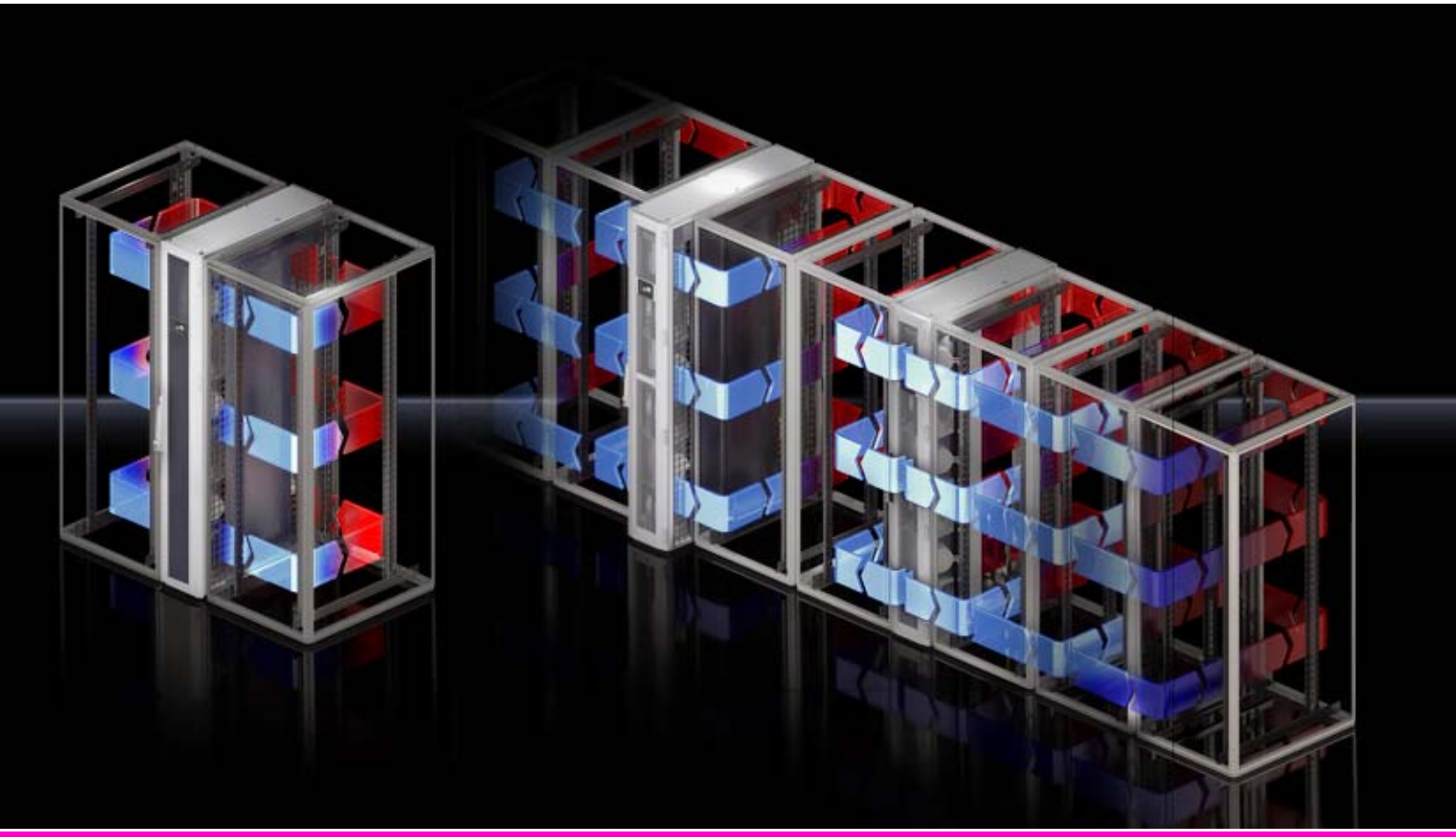
3 Liquid Cooling Package LCP DX, see page 56

4 Liquid Cooling Package LCP CW, see page 54

5 IT chiller with integral free cooling, see Cat. 34, page 441

6 Pipework

Liquid Cooling Package



Rack cooling
Water-based

Data centres support corporate processes at ever-higher outputs. The packing density in computer systems is increasing, and processor capacity is growing. This leads to a continuous rise in heat development.
Keep temperatures at a constant level with the highly efficient Rittal Liquid Cooling Packages (LCP). With optimised operating costs, our LCPs precisely and effortlessly dissipate heat losses of up to 55 kW per enclosure.

LCP Rack CW

- Cooling output from 10 kW to 55 kW
- Energy saving with high water inlet temperatures (more free cooling)
- Minimised operating costs with efficient EC fan technology
- Spatial separation of cooling and server rack
- Integral condensate and leak management
- Sophisticated control concept including online connection
- Optional cooling of one or two server racks
- Simple representation of redundancies
- Assembly- and service-friendly
- Integration into RiZone (data centre management software)

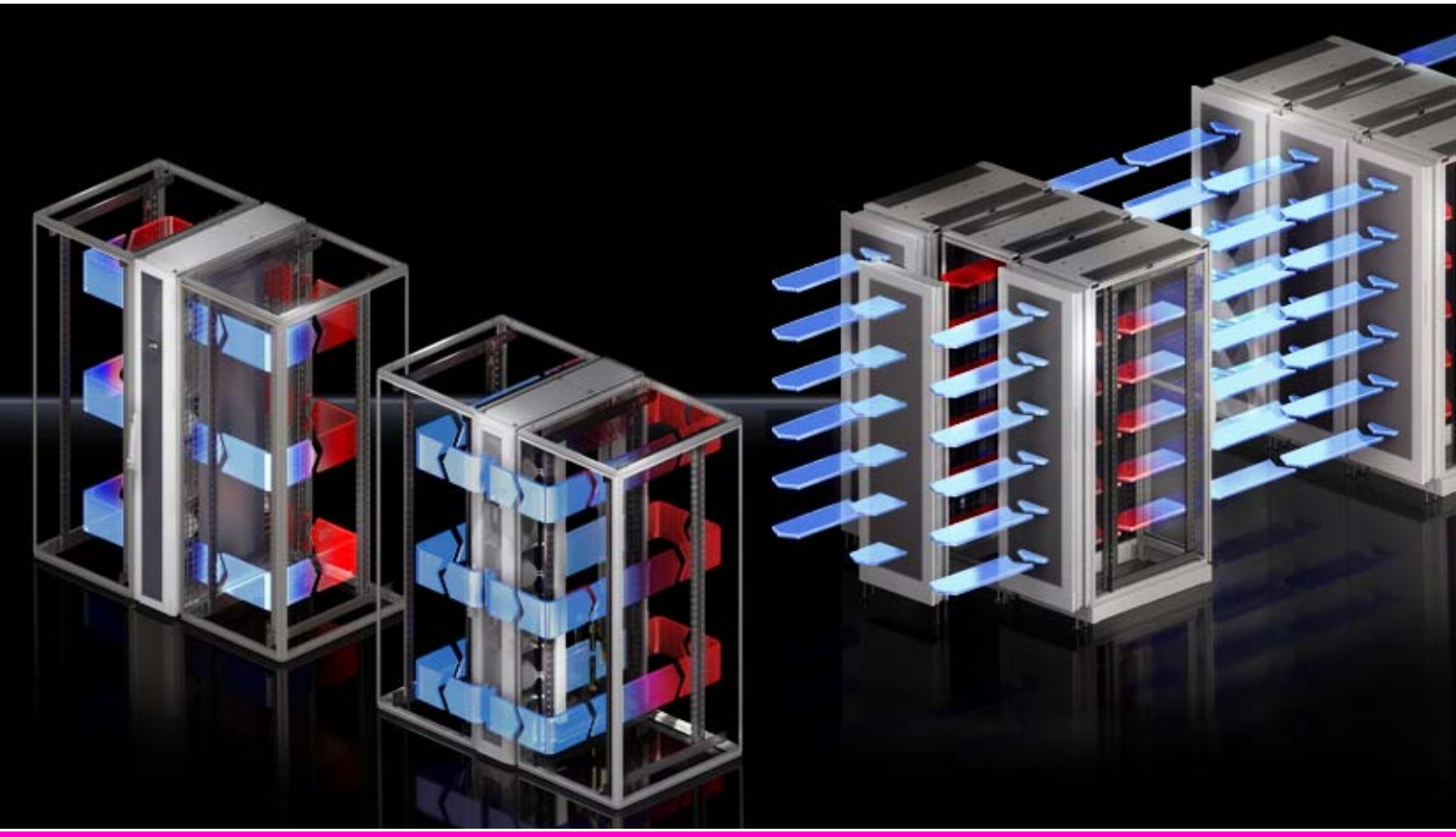
Suite cooling
Water-based

Bayed suite cooling with the Rittal LCP Inline is extremely powerful, and the ideal climate control solution for exceptionally high cooling demands, particularly when server racks cannot be cooled via the room climate control.
Alternatively, bayed suite cooling can be used to support the existing climate control system in the room or for transforming existing structures into server rooms. A raised floor is not necessary for the operation of suite cooling.

LCP Inline CW

- Cooling output from 10 kW to 55 kW
- Cooling of several server racks
- Energy saving with high water inlet temperatures (more free cooling)
- Minimised operating costs with efficient EC fan technology
- Spatial separation of cooling and server rack
- Integral condensate and leak management
- Sophisticated control concept including online connection
- Assembly- and service-friendly
- Increased performance and efficiency in conjunction with Rittal aisle containment
- Integration into RiZone (data centre management software)
- Set-forward variant for ideal air distribution (cold air curtain)
- Flush variant for confined spaces (narrow cold aisle)

Liquid Cooling Package



	Rack cooling **Refrigerant-based**	Suite cooling **Refrigerant-based**	Room cooling **Water-based**
	Whether rack-based cooling of one or two server racks, or suite cooling with aisle containment, LCP Rack DX and LCP Inline DX are the ideal cooling solution for small to medium-sized IT installations. Whereas in the past, cooling of stand-alone IT applications led to difficulties with conventional ceilings or air-conditioning units, the LCP DX devices allow IT-compatible cooling. For retrofitting or exchanges, the existing coolant pipework can often be reused.		The fans in the IT equipment independently guide the warm air over the high-capacity heat exchanger rear door. The heatpipe integrated into the heat exchanger surface ensures even heat distribution over the entire surface of the heat exchanger. The entire data centre functions as a cold aisle, and there is homogeneous temperature distribution. The LCP Passive creates a very large, effective heat exchanger surface area in the data centre which supports high water inlet temperatures and a high proportion of free cooling.
	LCP Rack DX ■ Cooling output 12 kW ■ Refrigerant R410a ■ Minimised operating costs with efficient EC fan technology ■ Spatial separation of cooling and server rack ■ Integral condensate and leak management ■ Sophisticated control concept including online connection ■ Optional cooling of one or two server racks ■ Simple representation of redundancies ■ Assembly- and service-friendly ■ Integration into RiZone (data centre management software) ■ Cost-effective installation by laying small-diameter coolant lines	**LCP Inline DX** ■ Cooling output 12 kW ■ Cooling of several server racks ■ Refrigerant R410a ■ Minimised operating costs with efficient EC fan technology ■ Spatial separation of cooling and server rack ■ Integral condensate and leak management ■ Sophisticated control concept including online connection ■ Assembly- and service-friendly ■ Increased performance and efficiency in conjunction with Rittal aisle containment ■ Integration into RiZone (data centre management software)	**LCP Hybrid CW** ■ High cooling output of 20 kW in a minimal space ■ Easily exchanged for the standard rear door of the server enclosure ■ Retrofitting is not a problem ■ A door opening angle of 135° allows rear access to the server enclosure and makes assembly and configuration inside the enclosure easier ■ Maximum energy efficiency, as there is no electrical power consumption whatsoever

Liquid Cooling Package

Accessories for LCP Page 60 **Chillers for IT cooling** Cat. 34, Page 441 **Network/server enclosures TS IT** Page 22

Benefits:
- Maximum energy efficiency thanks to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- With redundant temperature sensor integrated at the air end as standard
- Optimum adaptability due to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Targeted cooling output due to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- The separation of cooling and rack prevents water from penetrating the server enclosure
- Up to 55 kW cooling output on a footprint of just 0.36 m^2
- Minimal area load due to low weight

Functions:
- The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

Monitoring:
- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet

Temperature control:
- Linear fan control
- Two-way control valve

Colour:
- RAL 7035

Protection category IP to IEC 60 529:
- IP 20

Cooling medium:
- Water

Optional:
- Fully integrated fire detection and extinguisher system
- Automatic server enclosure door opening
- Various sensors
- Racks 2200 mm high

Technical details:
Available on the Internet

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

LCP Rack CW

Model No.	Packs of	**3311.130**	**3311.230**	**3311.260**	Page
Total cooling output/Number of fan modules required kW		**10 / 1 20 / 2 30 / 3**	**10 / 1 20 / 2 30 / 3**	**40 / 4 45 / 5 55 / 6**	
Number of fan modules in supplied state		1	1	4	
Width mm		300	300	300	
Height mm		2000	2000	2000	
Depth mm		1000	1200	1200	
Installation in bayed enclosure suite		Flush	Flush	Flush	
Rated operating voltage V, ~, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Type of electrical connection		Connector	Connector	Connector	
Air throughput at max. cooling output m^3/h		4800	4800	8000	
Fans may be exchanged with the system operational		■	■	■	
EC fan		■	■	■	
Water inlet temperature °C		+ 15	+ 15	+ 15	
Permissible operating pressure (p. max.) bar		6	6	6	
Duty cycle %		100	100	100	
Water connection		DN 40 (G 1½")	DN 40 (G 1½")	DN 40 (G 1½")	
Weight as delivered kg		194.0	210.0	235.0	
Accessories					
Fan module	1 pc(s).	3311.011	3311.011	3311.011	61
Touchscreen display, colour	1 pc(s).	3311.030	3311.030	3311.030	60
Connection hose, bottom and top	2 pc(s).	3311.040	3311.040	3311.040	60

Liquid Cooling Package

Accessories for LCP Page 60 **Chillers for IT cooling** Cat. 34, Page 441 **Network/server enclosures TS IT** Page 22

Benefits:
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Optimum adaptability due to dynamic, continuous control of the cold water volume flow
- By using high water inlet temperatures, the proportion of indirect free cooling is increased, which in turn reduces operating costs
- Targeted cooling output due to modular fan units
- Fan modules configurable as n+1 redundancy
- Standard 3-phase connection for electrical redundancy
- With redundant temperature sensor integrated at the air end as standard
- The separation of cooling and rack prevents the ingress of water into the server enclosure
- Up to 55 kW cooling output on a footprint of just 0.36 m^2
- Minimal area load due to low weight

Functions:
- The hot air is drawn in from the room or hot aisle at the rear of the device and expelled at the front into the cold aisle after cooling. The LCP achieves maximum performance and efficiency in conjunction with Rittal cold aisle containment. With this product, a raised floor is not necessary

Monitoring:
- Monitoring of all system-relevant parameters such as server air intake temperature, server waste air temperature, water inlet/return temperature, water flow, cooling output, fan speed, leakage
- Direct connection of the unit via SNMP over Ethernet
- Integration into RiZone

Temperature control:
- Linear fan control
- Two-way control valve

Colour:
- RAL 7035

Protection category IP to IEC 60 529:
- IP 20

Cooling medium:
- Water

Optional:
- Various sensors
- Racks 2200 mm high

Technical details:
Available on the Internet

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

LCP Inline CW

Model No.	Packs of	**3311.530**	**3311.540**	**3311.560**	Page
Total cooling output/Number of fan modules required kW		**10 / 1 20 / 2 30 / 3**	**18 / 2 27 / 3 30 / 4**	**40 / 4 45 / 5 55 / 6**	
Number of fan modules in supplied state		1	2	4	
Width mm		300	300	300	
Height mm		2000	2000	2000	
Depth mm		1200	1200	1200	
Installation in bayed enclosure suite		Set forward	Flush	Set forward	
Rated operating voltage V, ~, Hz		230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	230, 1~, 50/60 400, 3~, 50/60	
Type of electrical connection		Connector	Connector	Connector	
Air throughput at max. cooling output m^3/h		4800	4800	8000	
Fans may be exchanged with the system operational		■	■	■	
EC fan		■	■	■	
Permissible operating pressure (p. max.) bar		6	6	6	
Duty cycle %		100	100	100	
Water connection		DN 40 (G 1½")	DN 40 (G 1½")	DN 40 (G 1½")	
Water inlet temperature °C		+ 15	+ 15	+ 15	
Weight as delivered kg		216.0	235.0	236.0	
Accessories					
Fan module	1 pc(s).	3311.011	3311.011	3311.011	61
Touchscreen display, colour	1 pc(s).	3311.030	3311.030	3311.030	60
Connection hose, bottom and top	2 pc(s).	3311.040	3311.040	3311.040	60
Rear adaptor	1 pc(s).	3311.080	–	3311.080	60

Liquid Cooling Package

Accessories for LCP Page 60 **Chillers for IT cooling** Cat. 34, Page 441 **Network/server enclosures TS IT** Page 22

Benefits:
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Control of the server inlet temperature
- Due to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements
- With redundant temperature sensor integrated at the air end as standard
- Specific maintenance of the LCP DX due to separation of cooling and server rack
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately

Functions:
- The LCP draws in the air at the sides at the rear of the server enclosures, cools it using high-performance compact impellers, and blows the cooled air back into the front part of the server enclosure at the sides

Temperature control:
- Linear fan control
- Inverter-regulated compressor

Colour:
- RAL 7035

Protection category IP to IEC 60 529:
- IP 20

Cooling medium:
- R410a

Optional:
- Humidifier, reheater or condensate pump
- Higher cooling output

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

LCP Rack DX

Model No.	Packs of	**3311.410**	**3311.420**	Page
Total cooling output/Number of fan modules required kW		**12 / 4**	**12 / 4**	
Width mm		300	300	
Height mm		2000	2000	
Depth mm		1000	1200	
Installation in bayed enclosure suite		Flush	Flush	
Rated operating voltage V, ~, Hz		400, 3~, 50 380 - 480, 3~, 60	400, 3~, 50 380 - 480, 3~, 60	
Type of electrical connection		Connection clamp	Connection clamp	
Air throughput at max. cooling output m^3/h		4800	4800	
Fans may be exchanged with the system operational		■	■	
EC fan		■	■	
Duty cycle %		100	100	
Weight as delivered kg		207.0	227.0	
Accessories				
SNMP card	1 pc(s).	3311.320	3311.320	61
Condenser unit	1 pc(s).	3311.360	3311.360	60

Liquid Cooling Package

Accessories for LCP Page 60 **Chillers for IT cooling** Cat. 34, Page 441 **Network/server enclosures TS IT** Page 22

Benefits:
- Maximum energy efficiency due to EC fan technology and IT-based control
- Minimal pressure loss at the air end, which in turn minimises the power consumption of the fans
- Temperature monitoring and control
- With redundant temperature sensor integrated at the air end as standard
- Minimal area load due to low weight
- Absorbed thermal energy is emitted to the ambient air at the external condenser location, without heating up the installation room
- Ideal for IT cooling of small and medium-sized locations
- One or two racks can be cooled separately
- Due to the speed-regulated compressor, the cooling output is ideally adapted to actual requirements
- Specific maintenance of the LCP DX thanks to separation of cooling and server rack

Functions:
- The LCP is designed for siting within a bayed enclosure suite. Hot air is drawn in from the aisle at the rear of the device, cooled by the high-capacity compact impellers, and blown back into the room or cold aisle after cooling

Temperature control:
- Linear fan control
- Inverter-regulated compressor

Colour:
- RAL 7035

Protection category IP to IEC 60 529:
- IP 20

Cooling medium:
- R410a

Optional:
- Humidifier, reheater or condensate pump
- Higher cooling output

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

LCP Inline DX

Model No.	Packs of	**3311.430**	**3311.440**	Page
Total cooling output/Number of fan modules required kW		**12 / 4**	**12 / 4**	
Width mm		300	300	
Height mm		2000	2000	
Depth mm		1000	1200	
Installation in bayed enclosure suite		Flush	Flush	
Rated operating voltage V, ~, Hz		400, 3~, 50 380 - 480, 3~, 60	400, 3~, 50 380 - 480, 3~, 60	
Type of electrical connection		Connection clamp	Connection clamp	
Air throughput at max. cooling output m^3/h		4800	4800	
Fans may be exchanged with the system operational		■	■	
EC fan		■	■	
Duty cycle %		100	100	
Weight as delivered kg		208.0	233.5	
Accessories				
SNMP card	1 pc(s).	3311.320	3311.320	61
Condenser unit	1 pc(s).	3311.360	3311.360	60

Liquid Cooling Package

Chillers for IT cooling Cat. 34, Page 441 **Network/server enclosures TS IT** Page 22

Applications:
– Air/water heat exchanger for retrofitting to TS IT racks while operational.

Benefits:
– Mounted on the rear of the server rack so that the thermal load of the server rack does not have to be dissipated by the ventilation system
– Even heat distribution in the heat exchanger due to the heatpipe, ensuring that the heat exchanger always has a balanced heat load
– A door opening angle of 135° allows rear access to the server enclosure and makes assembly and configuration inside an enclosure easier
– Optimum energy efficiency, as there is no electrical power consumption whatsoever

Functions:
– The stand-alone unit replaces the rear door
– The waste air is cooled down to room temperature. The heat energy absorbed by the water is transported to the external cold water supply, where it is cooled back down to the required inlet temperature.
– The heat exchanger uses the airflow from the IT equipment and does not require any additional fans for cooling
– Minimal upstream and downstream pressure losses, despite the very compact design
– Water connection from below only

Colour:
– RAL 7035

Cooling medium:
– Water (see Internet for specifications)

Note:
– The air throughput (heated waste air) from the active 482.6 mm (19") components installed in the enclosure must be sufficient to overcome the pressure loss from the perforated heat exchanger rear door
– The total cooling output refers to an outlet temperature of 24°C

LCP Hybrid CW

Model No.	Packs of	**3311.610**	**3311.600**	**3311.710**	**3311.700**	Page
Total cooling output kW		**10**	**20**	**10**	**20**	
Width mm		600	600	600	600	
Height mm		2000	2000	2200	2200	
Depth mm		105	105	105	105	
Usable U		42	42	47	47	
Fill quantity of heatpipe g		650	650	650	650	
Refrigerant		R134a	R134a	R134a	R134a	
Water inlet temperature °C		+ 15	+ 15	+ 15	+ 15	
Volumetric flow of cooling water l/min		30	58	30	58	
Permissible operating pressure (p. max.) bar		6	6	6	6	
Maximum volumetric flow of water l/min		70	70	70	70	
Water connection		DN 25 (G 1")	DN 25 (G 1")	DN 25 (G 1")	DN 25 (G 1")	
Volumetric airflow (air from IT equipment) m^3/h		2700	4000	2700	4000	
Room air temperature (air outlet temperature from LCP Hybrid) °C		+ 24	+ 24	+ 24	+ 24	
Relative humidity %		43	43	43	43	
Weight as delivered kg		76.0	76.0	78.0	81.0	

LCP Hybrid CW

Model No.	Packs of	**3311.810**	**3311.800**	**3311.910**	**3311.900**	Page
Total cooling output kW		**10**	**20**	**10**	**20**	
Width mm		800	800	800	800	
Height mm		2000	2000	2200	2200	
Depth mm		105	105	105	105	
Usable U		42	42	47	47	
Fill quantity of heatpipe g		650	650	650	650	
Refrigerant		R134a	R134a	R134a	R134a	
Water inlet temperature °C		+ 15	+ 15	+ 15	+ 15	
Volumetric flow of cooling water l/min		30	58	30	58	
Permissible operating pressure (p. max.) bar		6	6	6	6	
Maximum volumetric flow of water l/min		70	70	70	70	
Water connection		DN 25 (G 1")	DN 25 (G 1")	DN 25 (G 1")	DN 25 (G 1")	
Volumetric airflow (air from IT equipment) m^3/h		2700	4000	2700	4000	
Room air temperature (air outlet temperature from LCP Hybrid) °C		+ 24	+ 24	+ 24	+ 24	
Relative humidity %		43	43	43	43	
Weight as delivered kg		78.0	81.0	81.0	84.0	

Accessories

Touchscreen display

for LCP Rack, Inline, CW
The colour display offers the opportunity of directly monitoring key LCP functions and implementing settings.

For LCP CW	Packs of	Model No.
3311.130 3311.230 3311.260 3311.530 3311.540 3311.560	1 pc(s).	**3311.030**

Condenser unit

The condenser unit is needed to operate the refrigerant-based LCPs, and comprises the external condenser and fan.
The unit is suitable for roof and wall mounting.

Refrigerant:
– R410a

For LCP DX	Packs of	Model No.
3311.410 3311.420 3311.430 3311.440	1 pc(s).	**3311.360**

Note:
– The pipework between the LCP DX and the condenser is not included with the supply.

Vertical shielding

for enclosure height 2000 mm
To block the airflow on the left and right of the 482.6 mm (19″) level.

Length: 1900 mm

Material:
– Cellular PU foam
– Flame-inhibiting to UL 94 (HF1)
– Self-adhesive on one side

For sealing between	For enclosure width mm	Packs of	Model No.
Side panel and 482.6 mm (19″) level	600	1 pc(s).	**3301.380**
	800	1 pc(s).	**3301.390**
LCP and 482.6 mm (19″) level	600	1 pc(s).	**3301.370**
	800	1 pc(s).	**3301.320**

Connection hose

bottom and top
Flexible connection hose (1800 mm long), may be cut to required length, including union nuts on both sides for connecting the LCP to existing pipework.

For LCP CW	Thread	Water connection from	Packs of	Model No.
3311.130 3311.230 3311.260 3311.530 3311.540 3311.560	1 1/2″	bottom/top	2 pc(s).	**3311.040**

Rear adaptor

for LCP Inline CW
May be positioned to the rear of the set forward LCP Inline to close the existing gap in the rear section.

For LCP Inline CW	Packs of	Model No.
3311.530 3311.560	1 pc(s).	**3311.080**

Accessories

SNMP card

For connecting LCP Rack/Inline DX units to the network.

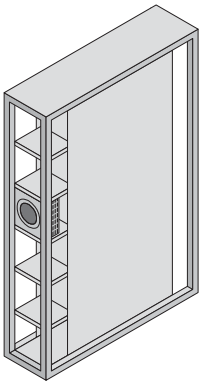
For LCP DX	Packs of	Model No.
3311.410 3311.420 3311.430 3311.440	1 pc(s).	**3311.320**

Fan module

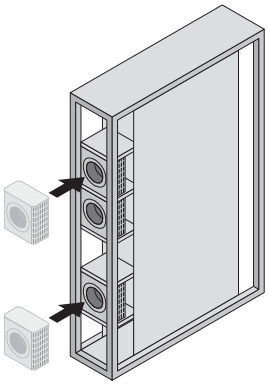
for LCP

To increase the cooling output, individual fan modules may be retro-fitted into the LCPs. This can also achieve redundancy or reduce the electric power consumption of the LCP.

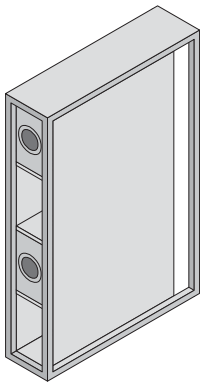
For LCP	Packs of	Model No.
3311.130, 3311.230, 3311.260, 3311.530, 3311.540, 3311.560	1 pc(s).	**3311.011**



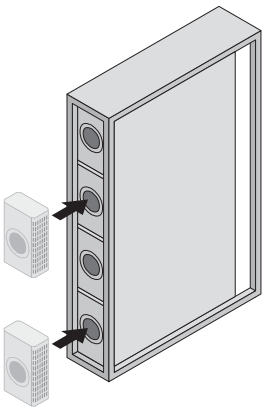
The LCP 3311.130/.230/.530 (max. 30 kW) is supplied with one fan module as standard.



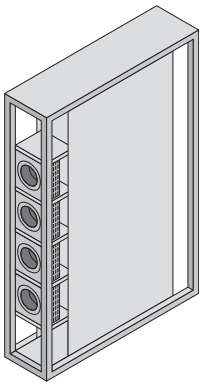
To achieve the max. cooling output of 30 kW, the customer/service should install two additional fan modules.



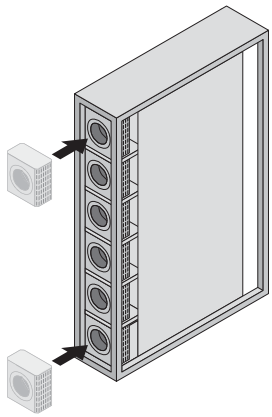
The LCP 3311.540 (max. 30 kW) is supplied with two fan modules as standard.



To achieve the max. cooling output of 30 kW, the customer/service should install two additional fan modules.



The LCP 3311.260/.560 (max. 55 kW) is supplied with four fan modules as standard.



To achieve the max. cooling output of 55 kW, the customer/service should install two additional fan modules.

Roof-mounted cooling units

Climate control accessories Cat. 34, Page 369

Temperature control:
– Control of the server air infeed temperature

Material:
– Sheet steel

Colour:
– RAL 7035

Protection category IP to IEC 60 529:
– External circuit IP 34
– Internal circuit IP 54

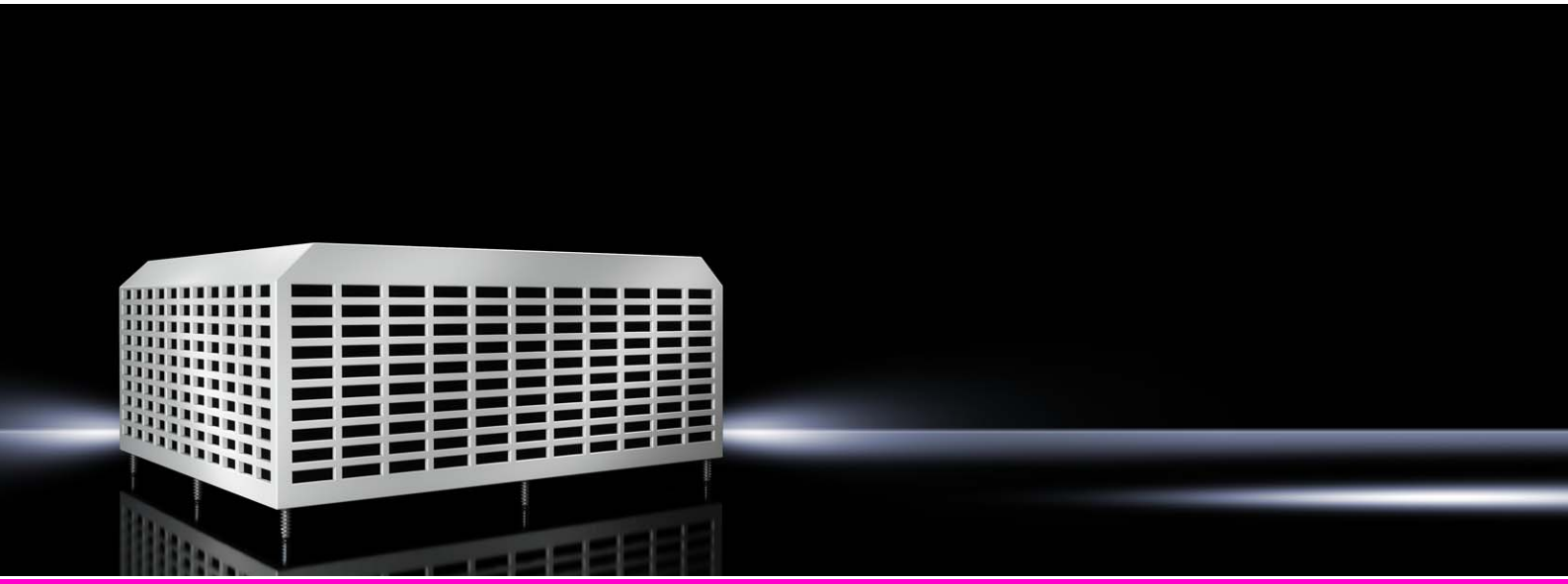
Supply includes:
– Nano-coated condenser
– Integral electric condensate evaporation
– Fully wired ready for connection
– Drilling template
– Assembly parts

Note:
– A roof plate with cut-out to match the enclosure dimensions is required

for the cooling of IT equipment

Model No.	Packs of	**3301.800**	Cat. 34, Page
Total cooling output L25 L35 W		**3000**	
Total cooling output L35 L45 W		**3200**	
Width mm		597	
Height mm		417	
Depth mm		895	
Rated operating voltage V, ~, Hz		230, 1~, 50	
Type of electrical connection		Plug-in terminal strip	
Pre-fuse (T) A		16	
Start-up current max. A		36	
Rated current max. A		9.2	
Refrigerant		R134a	
Permissible operating pressure (p. max.) bar		25	
Duty cycle %		100	
Operating temperature range		+10°C...+45°C	
Setting range		+20°C...+25°C	
Weight as delivered kg		97.0	
Accessories			
Condensate hose	1 pc(s).	3301.612	377
Door-operated switch	1 pc(s).	4127.010	639
Air baffle plates		see page	692
Filter mats	3 pc(s).	3286.500	369

Roof-mounted fan



This new roof ventilation concept offers a wealth of performance, assembly and cost benefits associated with the use of integrated ventilation systems. This roof-mounted fan may be ordered with and without a roof plate. Another outstanding feature is the enormous volumetric flow in proportion to exceptionally low noise levels, making it ideal for use in sensitive office areas.

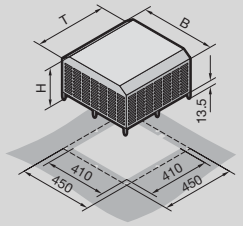
Benefits:
– Easy assembly; the roof plate variant eliminates the need to create mounting cut-outs

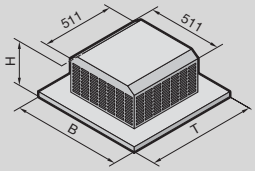
Colour:
– RAL 7035

Supply includes:
– Fully wired ready for connection
– Assembly parts

Note:
– Reduction in the specified air throughput to 800 m^3/h at 40 Pa counterpressure using two vented base/plinth trim panels 8100.802 in the Flex-Block base/plinth system

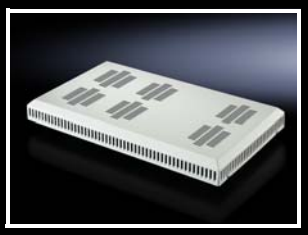
Technical details:
Available on the Internet





for TS, TS IT, for the office sector

Model No.	Packs of	**3164.230**	**3164.620**	Cat. 34, Page
Rated operating voltage V, ~, Hz		230, 1~, 50/60	230, 1~, 50/60	
Air throughput, unimpeded air flow m^3/h		**1500**	**1500**	
Design		without roof plate	with roof plate	
Rated current A		0.3 / 0.35	0.3 / 0.35	
Power consumption W		68 / 81	68 / 81	
Width (B) mm		511	800	
Height (H) mm		227	240	
Depth (T) mm		511	800	
Required mounting cut-out mm		410 x 410	–	
Fan		Radial	Radial	
Operating temperature range		+20°C...+55°C	+20°C...+55°C	
Noise level dB(A)		40	40	
Weight kg		22.4	32.9	
Accessories				
Digital enclosure internal temperature display and thermostat	1 pc(s).	7109.035	7109.035	379
	1 pc(s).	3114.200	3114.200	379
Enclosure internal thermostat	1 pc(s).	3110.000	3110.000	379
Speed control	1 pc(s).	3120.200	3120.200	381



Fan mounting plate

for TS IT

For active ventilation. For use in the cut-out integrated into the roof plate. The unit may optionally be extended with additional fans.

Technical specifications for one fan:
– Fan expansion kit 7980.000, see page 64

Technical specifications of thermostat:
– Rated operating voltage: 250 V
– Temperature range: +5°C…+55°C

Colour:
– RAL 7035

Supply includes:
– 1 fan unit
– 2 fans
– 1 thermostat
– 1 connection cable, top
– Assembly parts

Note:
– Connection via distributor box or country-specific connector

Accessories:
– Fan expansion kit, see page 64

W x D mm	No. of prewired fans	No. of fans supported	**Model No.**
800 x 600, 600 x 1000, 600 x 1200	2	3	**5502.010**
800 x 800, 800 x 1000, 800 x 1200	2	6	**5502.020**

Fan expansion kit

For retro-fitting various fan units or to supplement the fan mounting plate.

Technical specifications 7980.000:
– Rated operating voltage: 230 V~
– Power consumption: 15/14 W at 50/60 Hz
– Air throughput (unimpeded air flow): 160/180 m^3/h, 50/60 Hz
– Noise level (unimpeded air flow): 37 dB (A)
– Operating temperature range: -10°C…+55°C

Technical specifications 7980.100:
– Rated operating voltage: 230 V~
– Power consumption: 14/12 W at 50/60 Hz
– Air throughput (unimpeded air flow): 108/120 m^3/h, 50/60 Hz
– Noise level (unimpeded air flow): 34 dB (A)
– Operating temperature range: -20°C…+70°C

Technical specifications 7980.148:
– Rated operating voltage: 48 V (DC)
– Power consumption: 7.7 W
– Air throughput (unimpeded air flow): 184 m^3/h
– Noise level (unimpeded air flow): 43 dB (A)
– Operating temperature range: -20°C…+70°C

Dimensions W x H x D mm	Packs of	**Model No.**
119 x 119 x 38	1 set(s)	**7980.000**
119 x 119 x 25	1 set(s)	**7980.100**
119 x 119 x 38	1 set(s)	**7980.148**

Supply includes:
– 1 fan expansion kit
– Assembly parts
– 1 connection cable (0.61 m)

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IT monitoring

Monitoring & remote management help to permanently reduce maintenance and operating costs with the system operational, and increase availability. For example, comprehensive monitoring, measurement and control tasks via the CMC III reduce the risk of failure and facilitate preventive intervention.

Your benefits

- A better overview of your IT infrastructure
- Enhanced security
- Automated processes
- Exceptional cost efficiency
- Enormous energy savings
- Simple project management
- Fast installation
- Flexible, individual solutions with standard Rittal products
- High standard of quality with coordinated standard products

Sample applications

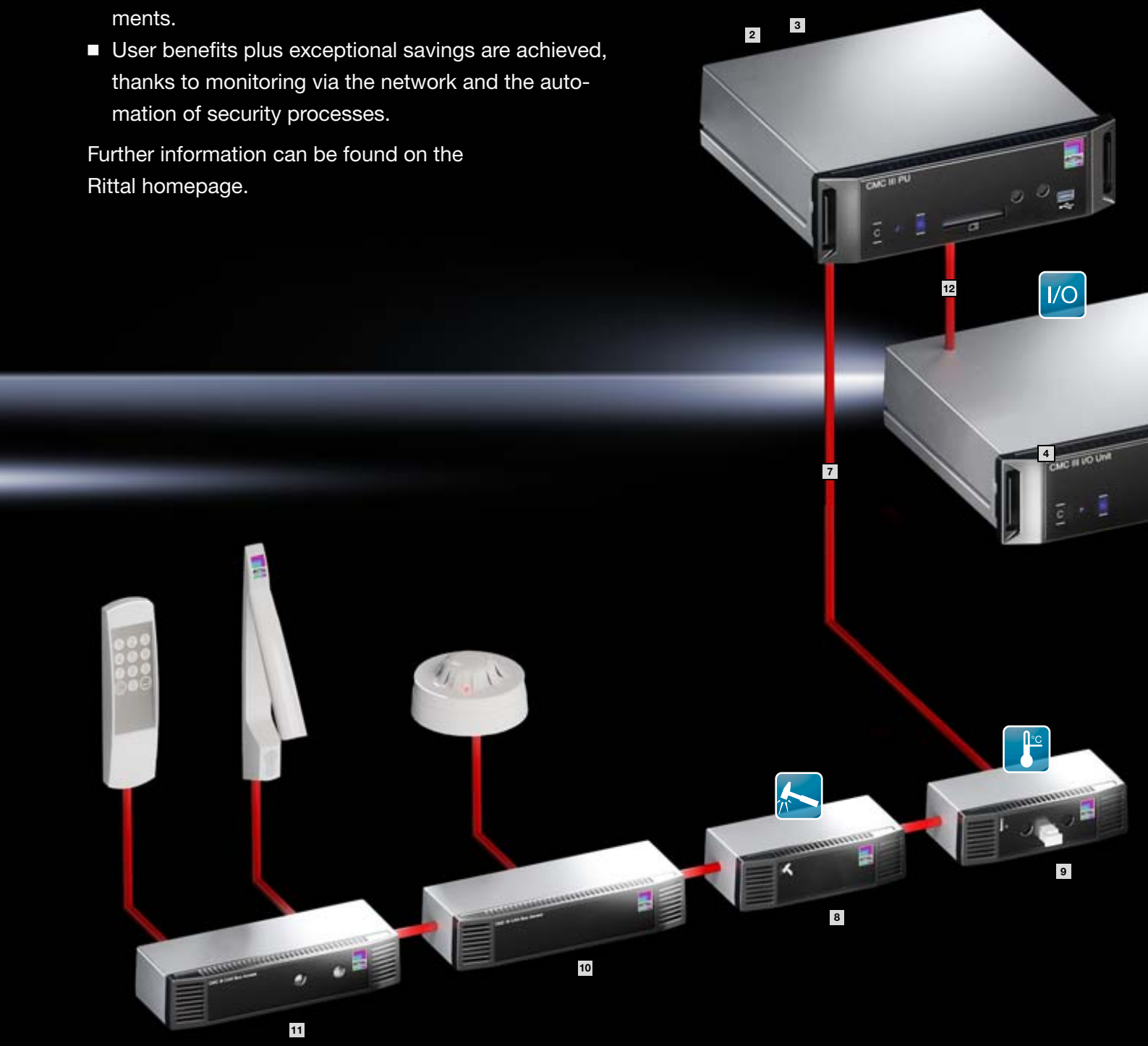
1. CMC III, see page 68
2. Liquid Cooling Package LCP, see page 52
3. Monitor/keyboard unit, see page 81
4. Electric comfort handle TS 8, see Cat. 34, page 460

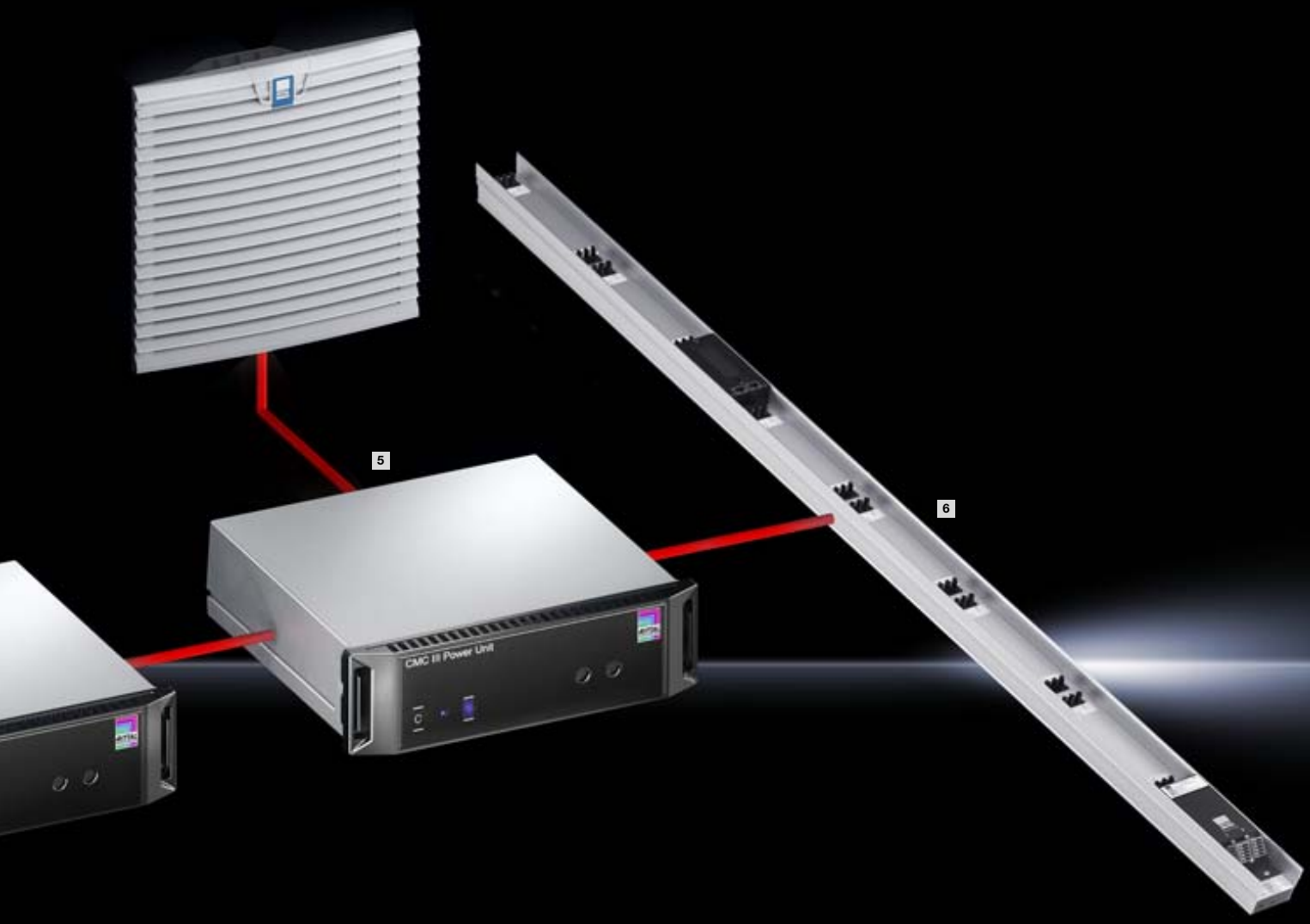
CMC III – Monitoring system

Computer Multi Control (CMC) is an alarm system for network and server enclosures, cases, containers and rooms.

- It monitors temperatures, humidity, access, smoke, energy and many other physical ambient parameters.
- It is a modular system that can be flexibly adapted to meet the customer's specific monitoring requirements.
- User benefits plus exceptional savings are achieved, thanks to monitoring via the network and the automation of security processes.

Further information can be found on the Rittal homepage.

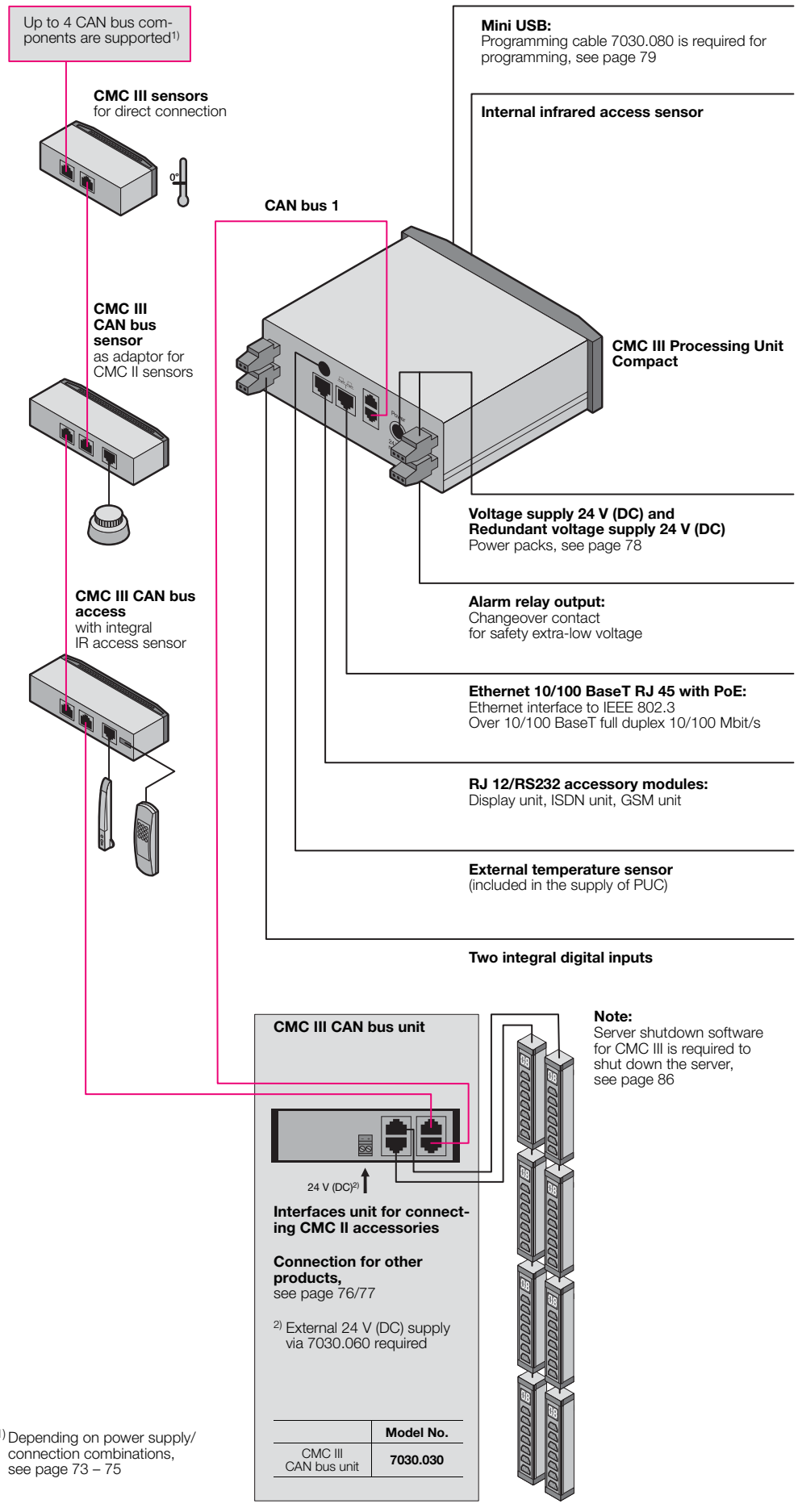




1 **CMC III Processing Unit,** see page 71
2 Power supply
3 Redundant power supply
4 CMC III I/O unit
5 CMC III power unit
6 CMC III PSM measuring bar for direct connection
7 Up to 16 CAN bus systems may be connected
8 CMC III vandalism sensor
9 CMC III temperature sensor
10 CAN bus sensor for connection of CMC II sensors
11 CMC III CAN bus access
12 Up to 16 CAN bus systems may be connected

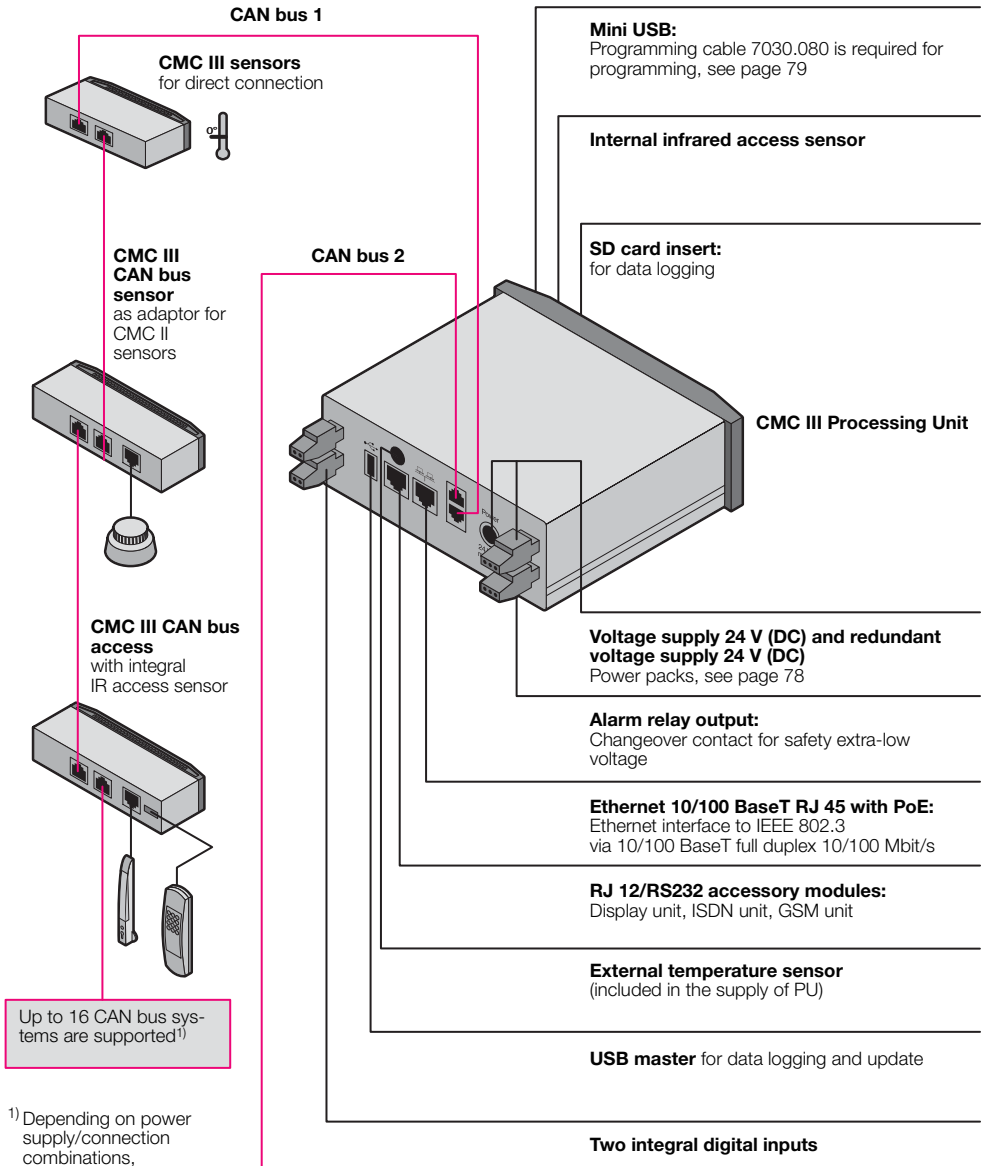
CMC III Processing Unit Compact

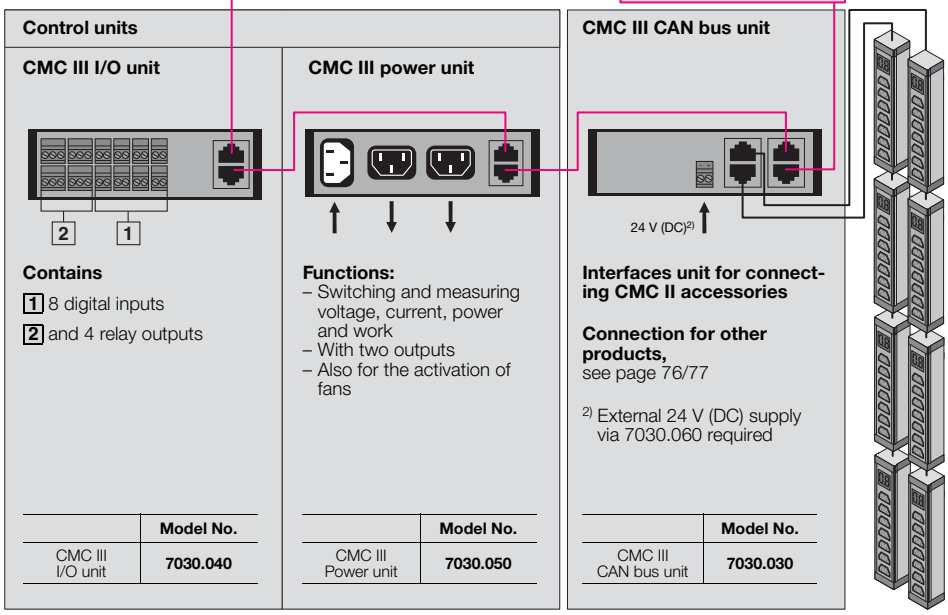
System overview



[1)] Depending on power supply/ connection combinations, see page 73 – 75

System overview





	Model No.
CMC III I/O unit	7030.040

	Model No.
CMC III Power unit	7030.050

	Model No.
CMC III CAN bus unit	7030.030

CMC III Processing Unit/Compact

System overview Cat. 34, Page 448/449 **Basic modules and connection accessories** From page 73

- Redundant voltage supply, plus Power over Ethernet (PoE)
- Simple wiring with CAN bus connection system (RJ 45)
- Connection to control room systems via OPC UA

Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category IP to IEC 60 529:
– IP 30

Supply includes:
– Basic system
– Quick-start instructions
– 4 mounting feet

Approvals:
– cULus

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

		CMC III Processing Unit	CMC III Processing Unit Compact
W x H x D mm		138 x 40 (1 U) x 120 + 12 (front assembly)	138 x 40 (1 U) x 120 + 12 (front assembly)
Operating temperature range		0°C…+45°C	0°C…+45°C
Operating humidity range		5 – 95 % relative humidity, non-condensing	5 – 95 % relative humidity, non-condensing
Sensors/CAN bus connection units		max. 32	max. 4
Max. overall cable length for CAN bus		2 x 50 m	1 x 50 m
Model No.		**7030.000**	**7030.010**
Interfaces	Network interface (RJ 45)	Ethernet to IEEE 802.3 via 10/100BaseT with PoE	Ethernet to IEEE 802.3 via 10/100BaseT with PoE
	Front USB interface	Mini USB for system setting	Mini USB for system setting
	Rear USB interface	For USB stick for data records and SW updates up to 32 GB	–
	Front SD-HC slot	1 x up to 32 GB for data recording	–
	Rear serial RS232 (RJ 12)	1 x for the connection of display unit, GSM unit or ISDN unit	1 x for the connection of display unit, GSM unit or ISDN unit
	CAN bus (RJ 45)	2 x for max. 16 sensors each = 32 sensors in total (quantity restriction, see page 78)	1 x for max. 4 sensors (quantity restriction, see page 78)
Inputs and outputs	Digital inputs (terminal)	2	2
	Relay output (terminal)	Changeover contact max. 24 V (DC), 1 A	Changeover contact max. 24 V (DC), 1 A
Operation/ signals	Push-button	1 x acknowledgement button	1 x acknowledgement button
	Concealed reset button	1 x service button	1 x service button
	Piezo signal generator	1	1
	LED display	1 x multi-colour OK/warning/alarm	1 x multi-colour OK/warning/alarm
	Rear LED	1 x for the network status	1 x for the network status
Protocols	Ethernet	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP	TCP/IPv4, TCP/IPv6, SNMPv1, SNMPv2c, SNMPv3, Telnet, SSH, FTP, SFTP, HTTP, HTTPS, NTP, DHCP, DNS, SMTP, Syslog, LDAP
Redundant power supply	Input 24 V DC (jack)	1 x for connecting CMC III power pack	1 x for connecting CMC III power pack
	Input 24 V DC (terminals)	1 x for direct connection or for connecting CMC III power pack	1 x for direct connection or for connecting CMC III power pack
	Power over Ethernet PoE	1 x 15.4 W	1 x 15.4 W
Functions	Time function	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP	Real-time clock, energy-buffered (24 h) without battery/accumulator, with NTP
	User administration	LDAP	LDAP
	User interface	Integral WEB server	Integral WEB server
	Control room connection	Integral OPC UA server	Integral OPC UA server
Integral sensors	Temperature sensor	NTC sensor with cable, supplied loose	NTC sensor with cable, supplied loose
	Access sensor	Infrared technology in the enclosure front	Infrared technology in the enclosure front

Control units for CMC III Processing Unit

Dimensions:
– W x H x D:
138 x 40 x 120 + 12 mm front frame

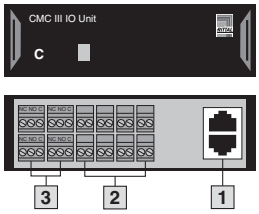
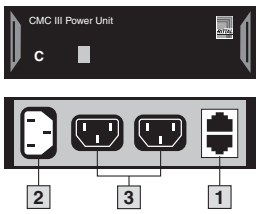
Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category IP to IEC 60 529:
– IP 30

Also required:
– CAN bus connection cable 7030.090/.095, see page 79
– Mounting unit, 1 U, 7030.070, see page 79

		1 Connection RJ 45 2 x CAN bus	2 Inputs	3 Outputs	Model No.	PU Compact (Maximum quantity)	PU (Maximum quantity)
	**Control unit, I/O unit** In the software, the relays can be linked to measurement values so that they are actuated under certain circumstances. This allows devices to be controlled and messages to be forwarded. Cannot be operated with the Processing Unit Compact. – Inputs for potential-free signals – Relay output (changeover contact) can handle loads of up to max. 24 V (DC)/1 A	■	8 x digital	4 x relays	**7030.040**	–	16
	**Control unit, power unit** The input is switched to the outputs via two relays. In this way, the outputs may be linked to measurement values and therefore switched automatically. Examples of potential applications include fan regulation. Manual switching via the CMC III operating interface is likewise supported. Each output is monitored individually, and various values are measured. Cannot be operated with the Processing Unit Compact. – Switches 2 outputs – Measures voltage, current, power, work – Application: For controlling and switching fans, heaters, equipment	■	1 x voltage C14 110 – 230 V 50/60 Hz	2 x current C13 total current max. 10 A	**7030.050**	–	16

Accessories

CMC III sensors for direct connection

CMC III sensors are used for monitoring the physical environment and can be connected directly to the PU via a CAN bus connection cable RJ 45. The sensors may also be linked together to form a bus.

Dimensions:
- 7030.110, .111, .120, .130
  W x H x D: 80 x 28 x 40 mm
- 7030.140, .150, .190, .430, .440
  W x H x D: 110 x 30 x 40 mm
- 7030.400
  Ø x H: 100 x 60 mm

Material:
- Plastic

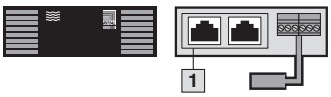
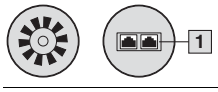
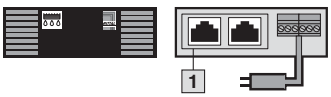
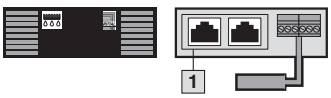
Surface finish:
- Front: Smooth
- Enclosure: Textured

Colour:
- Front: RAL 9005
- Enclosure: RAL 7035
- Smoke detector: White

Protection category IP to IEC 60 529:
- IP 30

Supply includes:
- Sensor
- Mounting bracket
- Assembly parts
- Instructions

Also required:
- CAN bus connection cable 7030.090/.095, see page 79

		1 Connection RJ 45 2 x CAN bus	2 Inputs	Model No.	PU Compact	PU
					Maximum quantity	
	**Temperature sensor** – External NTC sensor, 2 m cable – Measurement range for external sensors: -40°C…+80°C	■	–	**7030.110**	4	32
	**Temperature/humidity sensor** Measurement range: 0°C…+55°C/ 5 % rel. humidity ... 95 % relative humidity	■	–	**7030.111**	4	32
	**Infrared access sensor** Monitoring with reflector on the door, spacing adjustable	■	–	**7030.120**	4	32
	**Vandalism sensor** – Axis: x, y, z – Acceleration limits: -7...7 g, adjustable	■	–	**7030.130**	4	32
	**Analog airflow sensor** – External airflow sensor: 4 – 20 mA – Measurement range: 0.5 – 15 m/s – Application: Fan, filter, climate control devices	■	–	**7030.140**	4	10[1]
	**Analog differential pressure sensor** – Two pressure measuring points (infeed via hose) – Measurement range: -500 m Pa – +500 m Pa – Application: Cold aisle containment, raised floor	■	–	**7030.150**	4	32
	**Universal sensor** Choice of digital inputs depending on the application: – Potential-free signals – S_0 input for energy measurement systems – 1 Wiegand interface (external access systems)	■	2 x digital may be switched over to pulse input S_0 or a Wiegand interface 1 x analog 4 – 20 mA	**7030.190**	4	32
	**Smoke detector** – Monitors the room air for smoke particles using an optical component	■	–	**7030.400**	4	32
	**Leak 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.	■	–	**7030.430**	4	32
	**Leak 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.	■	–	**7030.440**	4	32

[1] Max. 5 pieces for power supply with PoE

Interface for CMC-TC sensors

The CMC III CAN bus sensor supports the connection of selected sensors from the CMC-TC system to the new CMC III, allowing old applications to be upgraded with the CMC III Processing Unit/Compact. As well as the two CAN bus connections, the unit also has another connection for one of the CMC-TC sensors. In this way, the unit functions as an interface between the CMC-TC sensor and the new processing unit, and adapts the sensor data to the CAN bus protocol.

Dimensions:
– W x H x D:
110 x 30 x 40 mm

Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

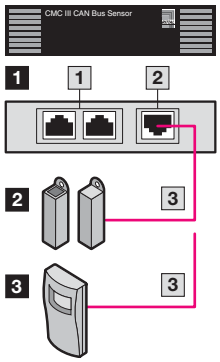
Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category IP to IEC 60 529:
– IP 30

Supply includes:
– Sensor
– Assembly parts
– Mounting parts
– Instructions

The following CMC-TC access sensors may connected to the CMC III CAN bus sensor:
– 1 x temperature sensor
– 1 x analog input 4 – 20 mA
– 5 x access sensors in series
– 1 x airflow sensor
– 1 x smoke detector
– 1 x motion detector
– 1 x digital input
– 1 x digital relay output
– 1 x voltage monitor
– 1 x 48 V voltage sensor
– 1 x leak sensor
– 1 x leak sensor, 15 m sensors
– 1 x door control unit (two connections)
– 1 x DET-AC extinguisher system (three connections)
– 1 x DET-AC early fire detection system (three connections)

Also required:
– CAN bus connection cable 7030.090/.095, see page 79

		1 Connection RJ 45 2 x CAN bus	2 Input RJ 12	3 Output RJ 12	Model No.	PU Compact	PU
						Maximum quantity	
	**1 CAN bus sensor** For connecting one CMC-TC sensor	■	1 x	–	**7030.100**	4	32
	Connectable sensors (max. 1 sensor per CAN bus sensor)						
	2 CMC-TC access sensor – Sensor: Reed contact/magnet – Max. 5 reed contacts in series – 2 m cable included with the supply	–	–	1 x	**7320.530**	–	–
	3 CMC-TC motion detector – Sensor: Infrared – 2 m cable included with the supply	–	–	1 x	**7320.570**	–	–

Accessories

Access System

CMC III unit for controlling and monitoring access to enclosures. One handle and one reader unit may be connected to one CMC III CAN bus access. Via the CMC III Processing Unit/Compact, the handles may be linked to various numerical codes or RFID card numbers, allowing all handles connected to a CMC III Processing Unit/Compact to be controlled with just one reader system. Thanks to the integral infrared sensor, the controlled door is additionally monitored for status (open/closed).

Dimensions:
– W x H x D:
110 x 30 x 40 mm

Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category IP to IEC 60 529:
– IP 30

Supply includes:
– CAN bus access
– Assembly parts
– Mounting parts
– Instructions

Also required:
– CAN bus connection cable 7030.090/.095, see page 79

	Connection	Inputs		Outputs		Model No.	PU Compact	PU
	1	2	3	4	5		Maximum quantity	
	RJ 45 2 x CAN bus	RJ 12	Flat-pin connector	RJ 12	Flat-pin connector			
1 CAN bus access – For connecting one handle and one reader unit to monitor a door. – Integral IR access sensor	■	1 x	1 x	–	–	**7030.200**	2	16[1]
Connectable handles and reader units (max. 1 handle and max. 1 reader unit per CAN bus access)								
2 Handles **– TS 8 handle with master key function** – Handle monitoring – Rated voltage: 24 V (DC) – 3 m cable, 2 m extension cable included with the supply	–	–	–	1 x	–	**7320.721**	–	–
3 CMC III reader units **– Coded lock** – Coded lock with up to 8 digits, freely selectable – 3 m cable included with the supply	–	–	–	–	1 x	**7030.220**	–	–
– **Transponder reader** – By contactlessly holding a transponder card in front of it, authorisation (UID of the card) is checked in the CMC III Processing Unit/Compact, and the corresponding door(s) is/are released – Technology: Transponder 13.56 MHz – Tags: ISO 14443A, ISO 14443B, ISO 15693, ISO 18000-3 – 3 m cable included with the supply	–	–	–	–	1 x	**7030.230**	–	–

[1] Max. 5 pieces for power supply with PoE

Interface for PSM, PCU

The CMC III CAN bus unit acts as an interface between the CMC III Processing Unit and the PSM measurement bars and modules.
The unit has four connections. Two connections represent the interface to the CAN bus and to the other CMC III sensors, while up to four PSM modules (i.e. a total of up to eight PSM modules per CMC III CAN bus unit) or one measurement bar may be connected to each of the other two connections. When connecting PSM modules, the CMC III CAN bus unit must be externally supplied with 24 V via terminals.

Dimensions:
– W x H x D:
138 x 40 x 120 + 12 mm front frame

Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

Protection category IP to IEC 60 529:
– IP 30

Supply includes:
– CAN bus unit
– Assembly parts
– Mounting parts
– Instructions

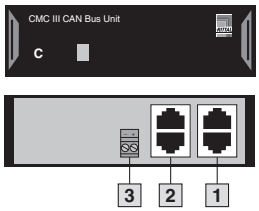
For connecting the following products:

2 x 4 x Power Control Unit (PCU) 8-way	7200.001
2 x 4 x Power Control Unit (PCU) C13 LED, 8-way	7859.225
2 x 4 x Power Control Unit (PCU) C13/19 LED, 6-way	7859.235
2 x 4 x PSM socket module C13, 8-way	7856.201
2 x 4 x PSM socket module C13/earthing-pin, 6-way	7856.203
2 x 4 x PSM socket module C13/19, 6-way	7856.204
2 x 4 x PSM socket module C13/earthing-pin LED, 6-way	7859.212
2 x 4 x PSM socket module C13 LED, 8-way	7859.222
2 x 4 x PSM socket module C13/19 LED, 6-way	7859.232

Note:
Allow one power pack 7030.060 for every CMC III CAN bus unit

Also required:

– CAN bus connection cable 7030.090/.095, see page 79

		Connection RJ 45				PU Compact	PU
		1	2	3		Maximum quantity	
		2 x CAN bus		Inputs			
	**CAN bus unit** For connecting: – PSM socket strips – PCU 482.6 mm (19″) socket strips	■	2 x for PSM, PCU, see page 78	Connection clamp required for operating the 24 V power pack 7030.060	**7030.030**	1	4

Accessories

PSM and slave PDU for direct connection

	Model No.	PU Compact	PU	Page
		Maximum quantity		
PSM measurement bars 16 A, with 2 infeeds	7859.050	4	8	410[1)]
PSM measurement bars 32 A, with 1 infeed	7859.053	4	8	410[1)]
PSM MID measuring module 16 A, with 2 infeeds	7859.312	4	8	46
PSM MID measuring module 32 A, with 2 infeeds	7859.332	4	8	46
Slave PDU international, managed, 16 A, 12 x C13	7955.901	3	6	41
Slave PDU international, managed, 16 A, 24 x C13, 4 x C19	7955.910	3	6	41
Slave PDU international, managed, 32 A, 24 x C13, 4 x C19	7955.911	3	6	41
Slave PDU international, managed, 16 A, 18 x C13, 3 x C19	7955.931	3	6	41
Slave PDU international, managed, 16 A, 24 x C13, 6 x C19	7955.932	3	6	41
Slave PDU international, managed, 32 A, 24 x C13, 6 x C19	7955.933	3	6	41
Slave PDU UK, managed, 13 A, 16 x UK	7955.940	3	6	42
Slave PDU UK, managed, 16 A, 16 x UK, 4 x C19	7955.941	3	6	42
Slave PDU UK, managed, 32 A, 16 x UK, 4 x C19	7955.942	3	6	42

[1)] See Catalogue 34

Accessories:

– CAN bus connection cable 7030.090/.095, see page 79

Power supply unit

for PU, PU Compact, CAN bus unit, CAN bus DRC, Door Control System.
The power pack is specifically tailored to the CMC III design and may be positioned in a CMC III mounting unit. As well as a special connector for the CMC III Processing Unit/Compact, there are also two further terminals available as 24 V outputs.

Technical specifications:
– Input voltage: 100 – 240 V / 50/60 Hz
– Output voltage: 24 V (DC)/2.5 A
– Length of 24 V DC connection cable: 0.6 m

Dimensions:
– W x H x D:
138 x 40 x 120 + 12 mm front frame

Material:
– Plastic

Surface finish:
– Front: Smooth
– Enclosure: Textured

Packs of	Model No.
1 pc(s).	**7030.060**

Colour:
– Front: RAL 9005
– Enclosure: RAL 7035

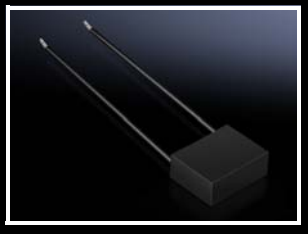
Supply includes:
– Mounting parts
– Instructions

Also required:

– Connection cable, see page 79

Accessories:

– Mounting unit, see page 80



Interference suppressor for fans

for CMC III
For connecting fans via the CMC III Power Unit 7030.050. Prevents excessive start-up currents. One interference suppressor is required for each fan.

Material:
– Plastic

Colour:
– RAL 9005

Supply includes:
– Mounting parts

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

Programming cable

For first-time commissioning of the Processing Unit (PU) or PU Compact. To this end, the CMC III Processing Unit/Compact is connected to the USB interface of a PC with the programming cable. A driver for Windows systems is also included with the supply and must be installed on the PC.

Supply includes:
– CD with driver and system description

Packs of	Model No.
1 pc(s).	**7030.080**

CAN bus connection cable

This can be used to connect the PU to the CAN bus sensors III, units III and control units III as a bus. Also for cabling together. Thanks to the different lengths, the CMC III system may be adapted to various applications and individually assembled.

CMC III CAN bus connection cable	Length m	Packs of	Model No.
RJ 45	0.5	1 pc(s).	**7030.090**
RJ 45	1	1 pc(s).	**7030.091**
RJ 45	1.5	1 pc(s).	**7030.092**
RJ 45	2	1 pc(s).	**7030.093**
RJ 45	3	1 pc(s).	**7030.480**
RJ 45	4	1 pc(s).	**7030.490**
RJ 45	5	1 pc(s).	**7030.094**
RJ 45	10	1 pc(s).	**7030.095**

Connection cable/extension

For connecting to:
- CMC III power pack C13
- CMC III power unit C13
- PCU C19
- PDU C19

Technical specifications:
– PVC cable, 3-pole, with IEC cable coupling (non-heating appliances) with contact protection CEE22
– Length: Minimum 1.8 m

Country version	Voltage (V)	Packs of	Model No.
D/F/B/C13	230	1 pc(s).	**7200.210**
IEC 320 device extension C13/C14	230/115	1 pc(s).	**7200.215**
Connection cable D/C19	230/115	1 pc(s).	**7200.216**
Connection cable C19/C20	230/115	1 pc(s).	**7200.217**

Extension cable RJ 12

with RJ 12 connector/jack
To extend the cable connections to CMC-TC sensors.

Length m	Packs of	Model No.
1	2 pc(s).	**7320.814**

Mounting unit, 1 U

Makes it easier to install CMC III units in network and server enclosures.
Mounting in the 482.6 mm (19″) section (for three CMC III units).

To accommodate
- PU
- PU Compact
- Control units
- CMC III CAN bus unit
- CMC III CAN bus DRC
- CMC III power pack
- CMC III GSM/ISDN unit
- CMC III door control module

Can accommodate up to 3 CMC III enclosures and is secured in the 482.6 mm (19″) frame.

Packs of	Model No.
1 pc(s).	**7030.070**

Material:
– Sheet steel

Surface finish:
– Zinc-plated

Supply includes:
2 blanking covers

Accessories:

– Cable clamp strap 7030.087, see page 80

Accessories

Cable clamp strap

for CMC III

For securing to the rear of the CMC III 482.6 mm (19') mounting unit 7030.070. Enables tidy cable routing behind the built-in CMC III devices and attachment of the cables for strain relief purposes. Cables can easily be laid in a loop to allow the built-in CMC III devices to be removed from the mounting unit without the need for tools.

Supply includes:
– Mounting parts

Packs of	Model No.
1 pc(s).	**7030.087**

Mounting unit

For mounting on the enclosure section (for one CMC III unit)

To accommodate
- PU
- PU Compact
- Control units
- CMC III CAN bus unit
- CMC III CAN bus DRC
- CMC III power pack
- CMC III GSM/ISDN unit
- CMC III door control module

Can accommodate one CMC III enclosure and is mounted on the enclosure frame.

Packs of	Model No.
1 pc(s).	**7030.071**

Material:
Sheet steel

Surface finish:
– Zinc-plated

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. Covers 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: 7035

Supply includes:
– RJ 12 cable
– GSM aerial
– Mounting parts
– Instructions

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 SMS 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: 7035

Supply includes:
– RJ 12 cable
– Mounting parts
– Instructions

Monitor/keyboard unit, 1 U

with 17″ TFT display and VGA/DVI connection

Main components:
– TFT monitor 17″
– Keyboard, German or English
– Touchpad

The unit is housed in a pull-out drawer. The monitor can be flipped up and the drawer latches into the end position. This means that the unit only requires 1 U in the 482.6 mm (19″) rack.

Benefits:
- With digital and analog interfaces, VGA, DVI-D, PS/2, USB
- Simple, one-person installation
- Optionally with integrated KVM switch for up to 8 servers

Technical design:
– 432 mm/17″ TFT display
– Physical resolution: 1280 x 1024
– Format: 4 : 3
– Colours: 16.7 million
– Brightness approx. 350 cd/m^2 (typ.)
– Contrast ratio: approx. 1000 : 1
– Mains voltage: 100 – 240 V/50 – 60 Hz
– Ambient temperature: +5°C…+45°C (operation)
– Max. power consumption in operation, without optional KVM system: 32 W
– Max. power consumption with closed monitor unit, without optional KVM system: < 1 W
– Rear connections: Mains voltage, VGA, DVI, PS/2, USB, power supply for KVM
– Lockable at the front
– Cables are safely routed in the energy chain

Accessories:
– For connecting multiple servers: KVM switch, see page 81

Width	Height U	Depth mm	Installation depth mm	Packs of	Colour	Keyboard	**Model No.**
482.6 mm/ 19″	1	680	680 – 850	1 pc(s).	RAL 7035	German	**9055.310**
						English	**9055.312**
					RAL 9005	German	**9055.410**
						English	**9055.412**

KVM switch

SSC view 8 USB
For rear attachment on the monitor/keyboard unit. The SSC view 8 USB may be operated with up to 8 servers. It is operated via the monitor/keyboard unit with an OSD menu or hotkeys.

Technical specifications:
– Server/console connections
Video: VGA/HD15
Keyboard/mouse: PS/2 or USB
– Max. video resolution: 1280 x 1024 at 85 Hz
– Bandwidth: 200 MHz
– Power consumption: 10 W
– W x H x D: 482.6 x 44 x 140 mm
– Voltage supply: 12 V (DC) via monitor/keyboard unit

Protection category IP to IEC 60 529:
– IP 20

Colour:
– RAL 9006

	Packs of	**Model No.**
SSC view 8 USB	1 pc(s).	**7552.002**

Connection cable for server/VGA	Length m	Packs of	**Model No.**
PS/2	2	1 pc(s).	**7552.120**
PS/2	4	1 pc(s).	**7552.140**
USB	2	1 pc(s).	**7552.122**
USB	5	1 pc(s).	**7552.142**

Also required:
– Monitor/keyboard unit, see page 81

Dynamic Rack Control DRC

Dynamic Rack Control is an inventory system for data centres.
It allows all 482.6 mm (19″) components in the rack to be managed easily and clearly.

Your benefits

- Capacity management and visualisation of all built-in components
- Position logging of components to 1/3 U accuracy
- Storage of key information about the built-in device directly on the tag (zero current)
- Data retrievable via Web browser, integration and automatic detection via SNMP
- RFID technology to ISO 15693

RFID aerial

for TS IT

For insertion into the 482.6 mm (19″) section of the TS IT.
Position detection of the components is accurate to within 1/3 U, therefore there are 3 aerial elements and signalling LEDs integrated into each U. Reading and writing of the RFID tags is likewise signalled by one LED in each case.

Supply includes:
– Assembly parts

U	Packs of	Model No.
42	1 pc(s).	**7890.242**
47	1 pc(s).	**7890.247**

Also required:
– RFID controller 7890.500, see page 83
– RFID tags 7890.020, see page 83

RFID tags

1 RFID tag is required for each component. Each tag has a “Unique ID” (UID, not sequential), which cannot be altered; all other data is stored on the tag in conformity with ISO 15693. The tag is stuck to the inside right of the 482.6 mm (19″) mounting bracket using its adhesive surface. The component is later screw-fastened to the 482.6 mm (19″) level, including the tag.

Technical specifications:
– Type: passive, writable
– Frequency: 13.56 MHz

Packs of	Model No.
20 pc(s).	**7890.020**

RFID controller

Connects the RFID aerial to the CAN bus DRC. In this way, the CMC is able to notify automatic changes, graphically depict the enclosure with the built-in components, and list capacity management. One RFID controller is required per rack/aerial.

Connections:
– RJ 45 jack for a maximum of one CAN bus DRC
– Mini-DIN for a maximum of one RFID aerial

Supply includes:
– Nylon loop tapes for attachment

Packs of	Model No.
1 pc(s).	**7890.500**

Also required:
– CAN bus connection cable, see page 79
– CMC III, CAN bus DRC, see page 83
– Attachment

CMC III CAN bus DRC

For connecting an RFID controller 7890.500 to the PU/PU Compact.
4 CAN bus DRCs may be connected to the processing unit, or 2 to the processing unit compact.

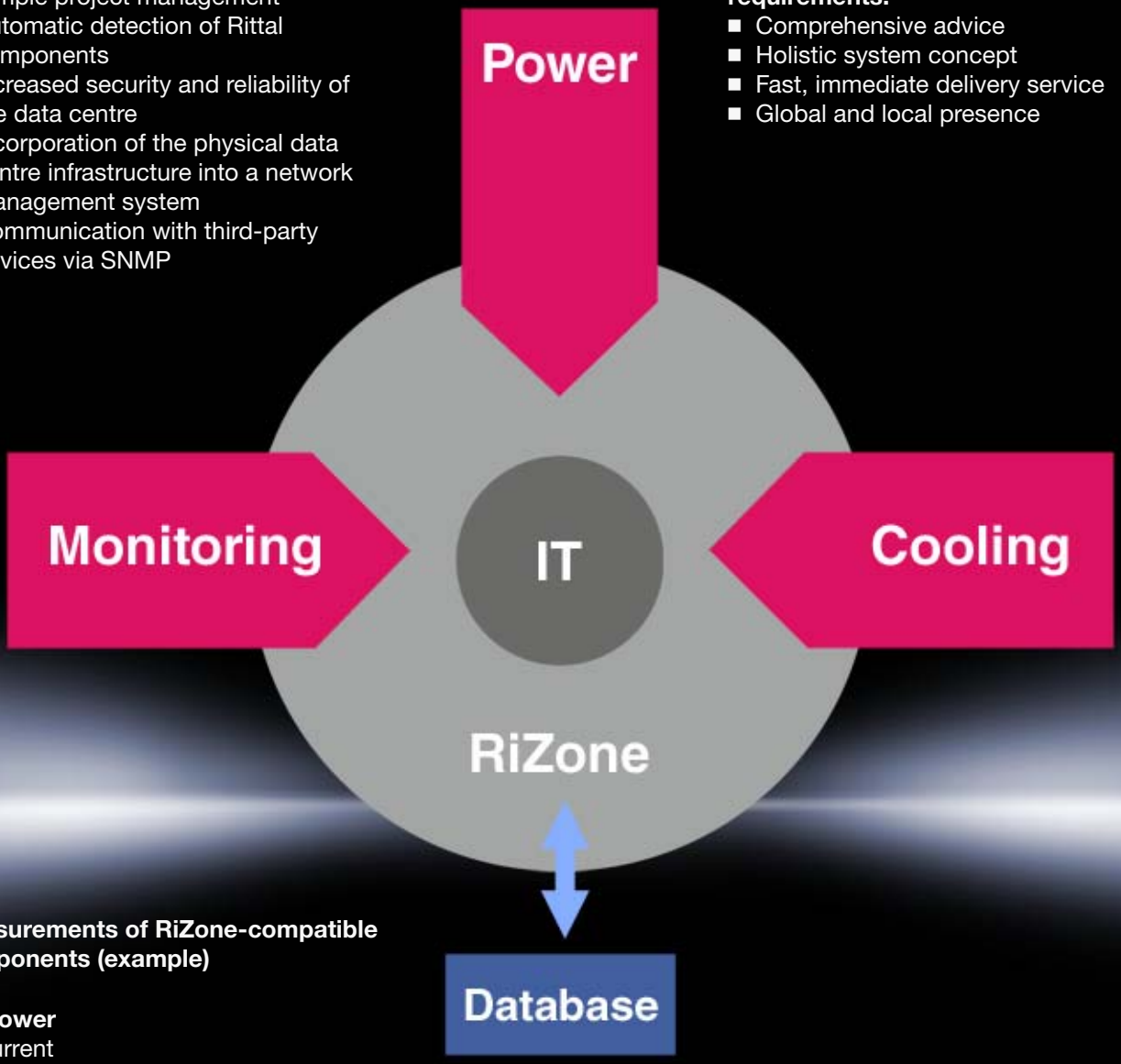
Packs of	Model No.
1 pc(s).	**7030.550**

Also required:
– CAN bus connection cable, see page 79
– Mounting unit, 1 U, 7030.070, see page 79
– Power supply unit, 7030.060, see page 78

RiZone – Customer-focused, cost-efficient

Six good reasons to choose RiZone
- Energy optimisation throughout the entire data centre
- Simple project management
- Automatic detection of Rittal components
- Increased security and reliability of the data centre
- Incorporation of the physical data centre infrastructure into a network management system
- Communication with third-party devices via SNMP

Combine the sum total of all RiZone benefits with the particular benefits offered by Rittal, whatever your requirements.
- Comprehensive advice
- Holistic system concept
- Fast, immediate delivery service
- Global and local presence



Measurements of RiZone-compatible components (example)

Ri4Power
- Current
- Voltage
- Energy
- Power

UPS
- Inverter status
- Status of primary network
- Battery status

PSM/PDU
- Current measurement of PSM bars
- Measurement of power consumption per socket with active PSM
- Switching of individual sockets

Cooling/LCP
- Inlet temperature
- Setpoint (target value)
- Averaged air injection temperature

Chiller
- Inlet and return temperature
- Pump speed
- Operating mode
- Power consumption

CMC
- Temperature
- Moisture
- Access

DRC (Dynamic Rack Control)
- Position of all 482.6 mm (19˝) installed equipment
- Free height units
- Connected height units
- Online Asset Monitoring

DCIM – Data Centre Infrastructure Management

RiZone – Perfect support of IT infrastructure components

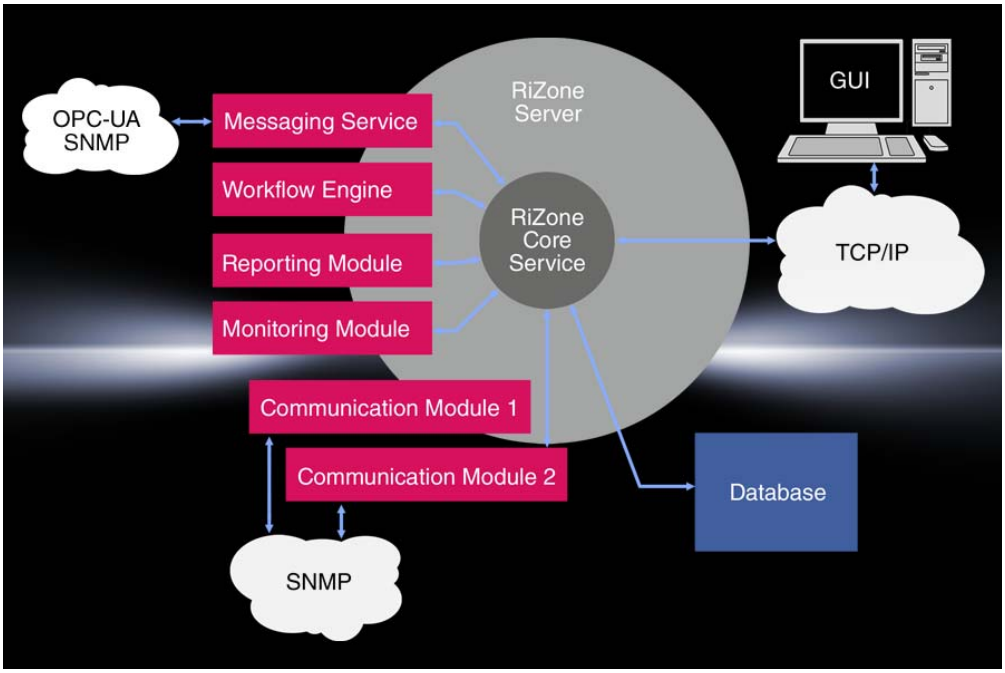
Rittal components – from server enclosures to power supply and climate control, through to security and monitoring technology – are optionally supported during integration and in the operational phase, thanks to coordinated sensors and control.

- The physical data centre infrastructure is incorporated into a data centre infrastructure management system.
- Simple configuration
- Automatic detection of Rittal components
- Workflow editor for user-defined scenarios (what happens if ...)
- Enhanced security and reliability
- Energy optimisation in the data centre
- Integration of SNMP-compatible third-party equipment

RiZone plus Rittal components creates a system solution with maximum energy efficiency.

Note:
– RiZone Appliance Standard,
– RiZone Appliance IP node licence,
– Server shutdown software,
see page 86

- **Messaging Service**
  The protocols SNMP and OPC-UA form the interface to superordinate management systems
- **Workflow engine**
  Control loops for optimisation of the data centre and individual escalation management
- **Reporting module**
  Reports based on any given data compilation and time interval
- **Monitoring module**
  Internal watchdog module ensures reliability
- **Communication module**
  Communication with SNMP-compatible devices in the physical data centre infrastructure
- **Autodiscovery**
  Detection of all SNMP-compatible IT infrastructure components
- **Database**
  Own SQL database or link to external MS-SQL and Oracle databases
- **Administration**
  Configuration of RiZone (user and rights management, network integration)
- **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
- **Off-line project planning**
  – Pre-configuration of RiZone projects
  – Supports Rittal CMC III components as well as RiMatrix S
  – Components are easily replaced using drag and drop



RiZone Appliance Standard

RiZone is supplied as a hardware or software appliance.

As a hardware appliance, RiZone is supplied with global support, installed on a powerful 1 U server. The software appliance is available as a virtual server which can easily be used on existing hardware in the data centre.

Note:
– Both appliances support communication with Rittal devices and devices from third-party manufacturers via an integral MIB browser

Also required:
– RiZone Appliance IP node licence according to the number of IP nodes available.

Standard version	Model No.		
Hardware appliance[1)]	Server with Windows	RiZone software	RiZone graphics tool
	7990.101	**7990.201**	**7990.301**
Software appliance[1)]	Hard drive + Windows	RiZone software	RiZone graphics tool
	7990.103	**7990.203**	**7990.303**

[1)] All Model Nos. on the same line belong together, and must always be ordered together

RiZone Appliance IP node licence

The flexible RiZone licence model allows optimum adaptation to any project size, while at the same time allowing the opportunity to grow with the data centre.

The volume licences for the IP nodes are graduated from 25 to 100 nodes and may be adapted precisely to the size of the data centre. For each active component or other SNMP-compatible component to be covered, one node licence is required.

For number of IP nodes[1)]	Console licences included	Model No.	
		RiZone software	RiZone graphics tool
25	4	**7990.206**	**7990.306**
100	8	**7990.208**	**7990.308**

[1)] All Model Nos. on the same line belong together, and must always be ordered together

Server shutdown software

for CMC III

Client software to control the server shutdown via CMC III. The software supports all common operating systems and versions (e.g. Windows 7, VISTA, XP, Server 2003/2008, UNIX/LINUX and VMWARE Sphere/ESX Server, CITRIX XEN etc).
One licence is required for each server to be shut down on an event-controlled basis.

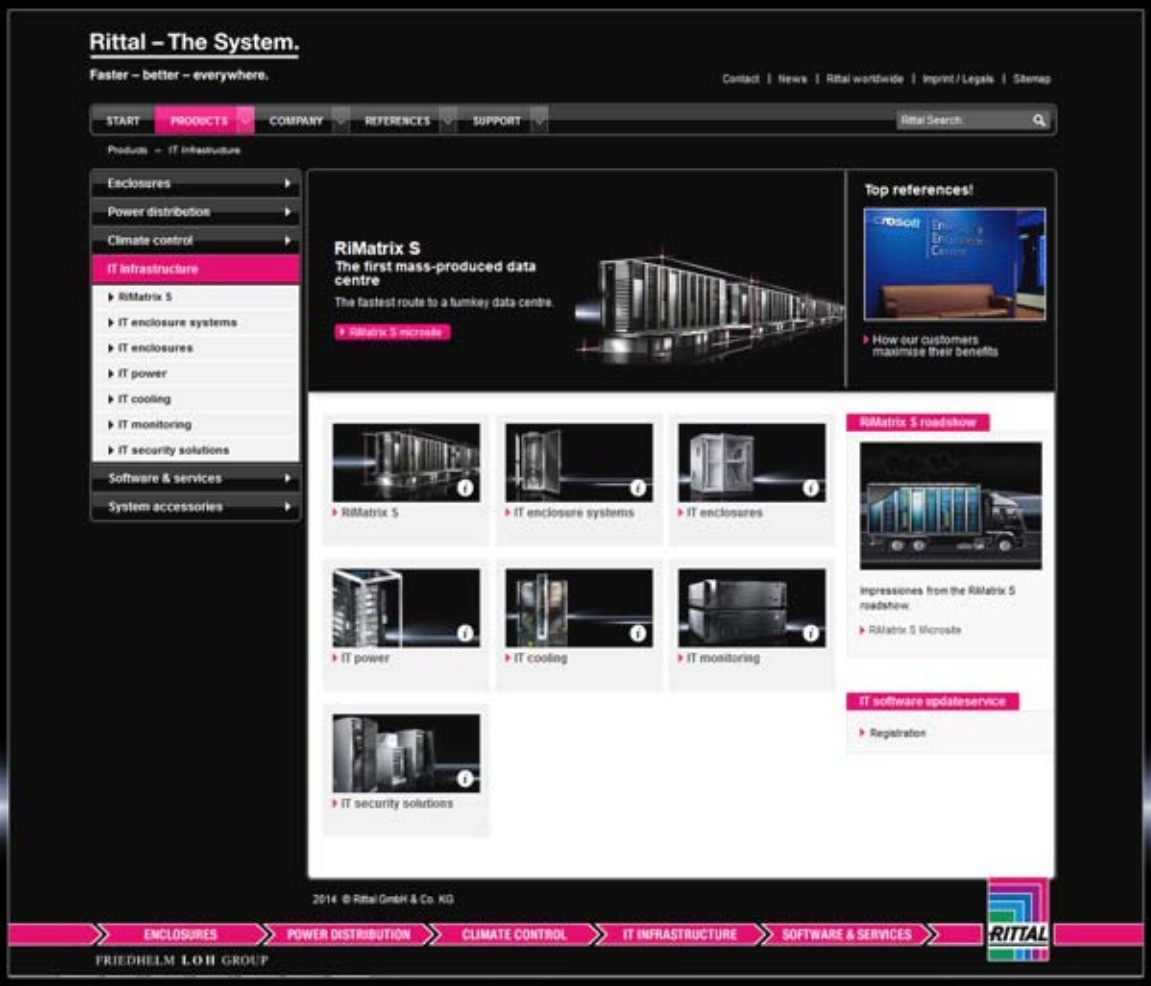
Licences	Model No.
Single licence	**7857.421**

Note:
– Software updates and a complete list of currently supported operating systems may be found on the Internet

Rittal – The System.

Faster – better – everywhere.

Rittal Internet – Always "up-to-date"



Rittal – The System.

Faster – better – everywhere.

IT security solutions

Rittal offers the right protection concept for every business security requirement. As well as security rooms, micro data centres provide optimum protection against potential physical threats to your IT. The compact safes are particularly ideal as a protection concept for small and medium-sized enterprises, by providing a physical cover for individual server racks. Across all systems, the 482.6 mm (19″) fire alarm and extinguisher systems offer optimum fire protection in closed server enclosures. These systems are readily incorporated into the CMC III monitoring system via a CAN bus interface.

Your benefits

- Simple, flexible integration into existing building structures
- Extendible for long-lasting cost-effectiveness and future-proof investments
- Optimum space utilisation, thanks to the flexible modular system
- System-tested protection from potential physical threats
- Compatible with cross-plant IT infrastructures

Sample applications

1 Micro Data Centre, Level E with cooling, see page 92

2 Micro Data Centre, Level A, see page 93

3 Micro Data Centre, Level B as compact data centre, see page 93

Micro Data Centre as compact data centre

Reliable prevention of data losses

A safe that controls everything

- Security safes as physical protection against potential threats such as fire, water, smoke and unauthorised access
- Robust, flexible rack, especially for server and network technology
- Efficient cooling solutions in a range of designs and outputs
- IT-specific power distribution
- Networkable monitoring and security solutions with the CMC III system
- Early fire detection and automatic rack extinguishing

Micro Data Centre

- Complete solution in the smallest possible space and in next to no time
- No need for expensive upgrades to existing premises
- Efficient cooling and extinguishing solution

Level E – High level of protection for your IT

- Maximum security in the Rittal Micro Data Centre product range
- Optimum protection concept for one or more server rack solutions for small and medium-sized enterprises
- Modular layout for installation in hard-to-access locations and for retrospective enclosure of existing IT structures
- Future-proof investment, thanks to the options of extendibility, dismantling and re-assembly
- System-tested security and a high level of protection; testing has been carried out by accredited institutes and confirmed with test reports
- Modified air baffle plates for optimum air routing, for efficient cooling of the micro data centres

Usable U	42/47	
Usable interior depth mm	1000/1200	
Colour of enclosure/service door	RAL 7035	
Colour of operator door	RAL 9005	
Fire protection	Fire resistance class F 90 to DIN 4102 Part 2, compliance with limits ΔT < 50 K, rel. humidity < 85% over 30 minutes[1)]	
Burglar resistance	WK II tool attack analogous to DIN V ENV 1630/1999-04/WK II[4)] WK III tool attack analogous to DIN V ENV 1630/1999-04/WK II[3)] WK IV tool attack analogous to DIN V ENV 1630/1999-04/WK II[3)]	
Protection category IP to IEC 60 529	IP 56[4)]	
Smoke protection	Based on DIN 18 095-2: 1991-03[4)]	
Modularity	■	
May be enclosed with the system operational	■	
Extendibility	■	

[1)] The Micro Data Centre was tested as a system
[2)] All critical connection points were tested as a system

Micro Data Centre

Level B – Solid protection for your IT
- Optimum protection concept for a server rack
- Modular layout for installation in hard-to-access locations
- Form-fit connection with the stable TS 8 framework structure
- Front and rear 482.6 mm (19″) level of the TS IT rack already included with the supply
- Lower weight than the Level E Micro Data Centre
- Tested security – testing has been carried out by accredited institutes and confirmed with test reports

Level A – Solid protection for small IT applications
- Ready-installed safe as a complete system
- Integral cooling
- Integral TS 8 frame structure with front and rear 482.6 mm (19″) level
- Base/plinth with ground clearance
- Tested safety – The tests were carried out as system tests and confirmed via test reports

	42/47	15
	1000/1200	1000
	RAL 7035	RAL 7035
	RAL 9005	RAL 9005
	Fire resistance class EI 90/F 90 to DIN EN 1363-1: 1999/ based on DIN 4102-2:1997[2)]	Fire resistance class F 90 to DIN 4102 Part 2, compliance with limits ΔT < 50 K, rel. humidity < 85% over 10 minutes[1)]
	RC 2 tool attack analogous to DIN EN 1630/2011-09/RC 2[3)]	WK II tool attack analogous to DIN V ENV 1630/1999-04/WK II[1)]
	IP 56[3)]	IP 55[1)]
	Based on DIN EN 1634-3: 2005-01[3)]	–
	■	Safe is supplied assembled including cooling unit
	–	–
	–	–

[3)] The single safe was tested as a system with single-leaf doors and mechanical lock
[4)] The single safe was tested as a system with one single-leaf door and one bifold door and mechanical lock

Fire alarm and extinguisher system DET-AC III/EFD III

System accessories Cat. 34, Page 507 **Network/server enclosures** Cat. 34, From page 22

Advantages:
- Early fire detection
- Automatic extinguishing (DET-AC)
  - Innovative extinguisher gas NOVEC™ 1230
  - Eco-friendly
  - Uncritical for IT components, non-conductive
- 482.6 mm (19″) rack mount with just 1 U
- Testing by VdS (VdS Schadenverhütung GmbH tests and certifies individual components and entire systems for damage prevention at its own laboratories)
- CAN bus interface for direct connection to the CMC III monitoring system

Note:
- All three systems are designed solely for use in closed, non-accessible enclosure systems

DET-AC III Master
The active extinguisher system for use in closed 482.6 mm (19″) server enclosures includes the smoke extraction system and the extinguisher unit in a 482.6 mm (19″) subrack with just 1 U. The smoke extraction system is identical to that used in the EFD III smoke extraction system. When a main alarm is activated, the extinguishing process will begin automatically. The NOVEC™ 1230 extinguisher medium is stored in the extinguisher tank in liquid form. For the extinguishing process, the tank is pressurised, causing the extinguisher medium to evaporate at the extinguisher nozzle and is distributed in the server enclosure. Alarms and malfunctions may be forwarded directly to the CMC III monitoring system via the CAN bus interface. Floating contacts allow alarms (pre-alarm and main alarm) and collective fault signals to be forwarded from the device to a superordinate point (monitoring or control system).

EFD III
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. Alarms and malfunctions may be forward to a superordinate point (monitoring or control system) via floating contacts. The integral CAN bus interface facilitates direct connection to the CMC III.

DET-AC III Slave
This add-on unit to the DET AC III Master includes an additional extinguisher unit. Combined use allows the extinguishing of up to five bayed enclosures. 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. The DET-AC III slave system can also be used in combination with the EFD III system.

Technical details:
Available on the Internet

	Fire alarm and extinguisher system DET-AC III Master	Early fire detection system EFD III	Additional unit DET-AC III Slave
Model No.	**7338.121**	**7338.221**	**7338.321**
Width mm	482.6 (19″) rack mount	482.6 (19″) rack mount	482.6 (19″) rack mount
Height mm	44 (1 U)	44 (1 U)	44 (1 U)
Depth mm	660	490	660
Weight, approx. kg	15.5	9.6	12.5

Fire alarm and extinguisher system DET-AC III/EFD III

Model No.		7338.121	7338.221	7338.321	Cat. 34, page
Basic data					
Material of enclosure		Sheet steel	Sheet steel	Sheet steel	
Colour of enclosure		RAL 7035	RAL 7035	RAL 7035	
Colour of front panel		RAL 9005	RAL 9005	RAL 9005	
Protection category		IP 30	IP 30	IP 30	
Rated operating voltage					
Rated voltage V, ~, Hz		100 – 240 (AC), 1~, 50/60	100 – 240 (AC), 1~, 50/60	24 (DC)	
Emergency power supply h		approx. 4	approx. 4	approx. 4	
Max. permissible useful current		1.0 A at 24 Volt[1)]	1.0 A at 24 Volt[1)]	–	
Max. permissible charging current		350 mA at 24 Volt	350 mA at 24 Volt	–	
Airflow monitoring		approx. ±10% of total airflow	approx. ±10% of total airflow	–	
Temperature					
Ambient temperature		+10°C…+40°C (operation)	+10°C…+40°C (operation)	+10°C…+40°C (operation)	
		-20°C…+65°C (storage without batteries)	-20°C…+65°C (storage without batteries)	-20°C…+65°C (storage without batteries)	
		-15°C…+40°C (storage of batteries)	-15°C…+40°C (storage of batteries)	-15°C…+40°C (storage of batteries)	
Humidity		up to 96% humidity, non-condensing	up to 96% humidity, non-condensing	up to 96% humidity, non-condensing	
Connections					
Connection terminal for relay output (pre-alarm, fire alarm, extinguishing)		■	■	■	
Connection terminal for relay output (collective fault)		■	■	■	
Jack (RJ 12) for connection of door contact switch		■	■	■	
Connection terminal for door contact switch		■	■	■	
3 x jacks (RJ 12) for forwarding (collective fault, pre-alarm, main alarm)		■	■	■	
2 x CAN connections for master-slave linking		■	■	■	
Connection of external alarm device		■	■	■	
Connection of external fill level monitoring and activation of external tank, max. 500 mA		–	■	–	
Connector for manual call point		■	■	■	
Power supply (UB), max. 500 mA		■	■	■	
USB interface		■	■	■	
CAN bus interface to CMC III		■	■	■	
Front panel					
Display with status messages displayed in plain text		■	■	–	
1 green LED (operational)		■	■	–	
1 yellow LED (deactivation)		■	■	–	
1 red LED (extinguisher system triggered)		■	■	–	
1 red LED (extinguisher system activated)		■	■	–	
1 yellow LED (blockage)		■	■	–	
1 yellow LED (malfunction)		■	■	–	
Extraction pipe (must be ordered separately)					
Extraction holes		Min. 4 extraction holes, Ø 3 mm	Min. 4 extraction holes, Ø 3 mm	–	
Extraction pipe (external diameter: 22 mm, internal diameter: 18 mm)		Adhesive-free connection system, black	Adhesive-free connection system, black	–	
Sensors					
Optical smoke detector (sensitivity: approx. 3.5%/m light obscuration)		■	■	–	
Optical smoke detector HS (sensitivity: approx. 0.25%/m light obscuration)		■	■	–	
Tank					
Material		Aluminium	–	Aluminium	
Empty volume		approx. 2.0 litres	–	approx. 2.0 litres	
Contents		approx. 1.8 litres NOVEC™ 1230	–	approx. 1.8 litres NOVEC™ 1230	
Extinguisher is emitted under pressurisation via propellant cartridge Integral electrical activation unit		■	–	■	
Integral extinguisher loss/fill level monitoring (indication of > 15% loss)		■	–	■	
Also required	Packs of				
Pipe kit	1 pc(s).	**7338.130**	**7338.130**	**7338.130**	
Access sensors[2)]	2 pc(s).	7320.530	–	7320.530	75
CAN bus connection cable RJ 45, 1 m[3)]	1 pc(s).	7030.091	7030.091	–	79
Depth-variable slide rails	2 pc(s).	5501.480	5501.480	5501.480	687[4)]

[1)] The sum total of all connected units must not exceed the admissible useful current of 1.0 A
[2)] One access sensor is required for each door
[3)] Depending on the distance between the CMC III and DET AC III/EFD II, a different length should be selected for the CAN bus connection cable
[4)] See Catalogue 34

Security rooms

System accessories Cat. 34, Page 507 **Network/server enclosures** Page 22

Basic protection room
The basic protection room provides a high-quality, system-tested solution. It is an optimum, modular room-within-a-room solution for protecting IT/infrastructure components such as extinguisher systems, uninterruptible power supplies and climate control. The flexible modular system means that it can be extended whilst the IT systems are operational.

Benefits:
- System-tested protection levels
- Multi-functional risk coverage
- Dust- and noise-reduced installation
- Dismantling and reassembly plus extendibility = investment security
- May be adapted for use in other room systems, such as the High Availability room

Criterion	Standards	
System testing	Testing the following standards as a complete system or construction	
Fire protection	ECB·S certification to EN 1047-2, 50 K temperature increase and 85% rel. humidity for up to 24 hours (reheating period), flame impingement time 60 minutes	
	50 K temperature increase and 85% rel. humidity without reheating period, flame impingement time 30 minutes	
	F 120 to DIN 4102	
	F 90 to DIN 4102	
Corrosive fire gases	Acrid gas-tightness based on DIN 18 095	
Falling debris	Impact test at 200 kg	
Water	IP X6 to IEC 60 529	
	Protection from standing water	
Dust	IP 5X to IEC 60 529	
Unauthorised access	WK IV to DIN V ENV 1630, door system only	
	WK III to DIN V ENV 1630, or DIN V 18 103 (ET2)	
	WK II to DIN V ENV 1630	
Explosion	Detonation test	
EMC	Protection from high-frequency irradiation and radiation	

System-tested structures are tested as a complete construction, comprising the cell structure and built-in modules such as doors, cable shields or ventilation units. By contrast, generic component testing only refers to individual parts.

Conventional construction methods refer to room structures made of plasterboard, concrete and other standard construction materials which do not offer sufficient protection for data centre applications. Conventional construction methods are generally unsuitable for use as a fire wall and are therefore only subjected to component testing.

Security rooms

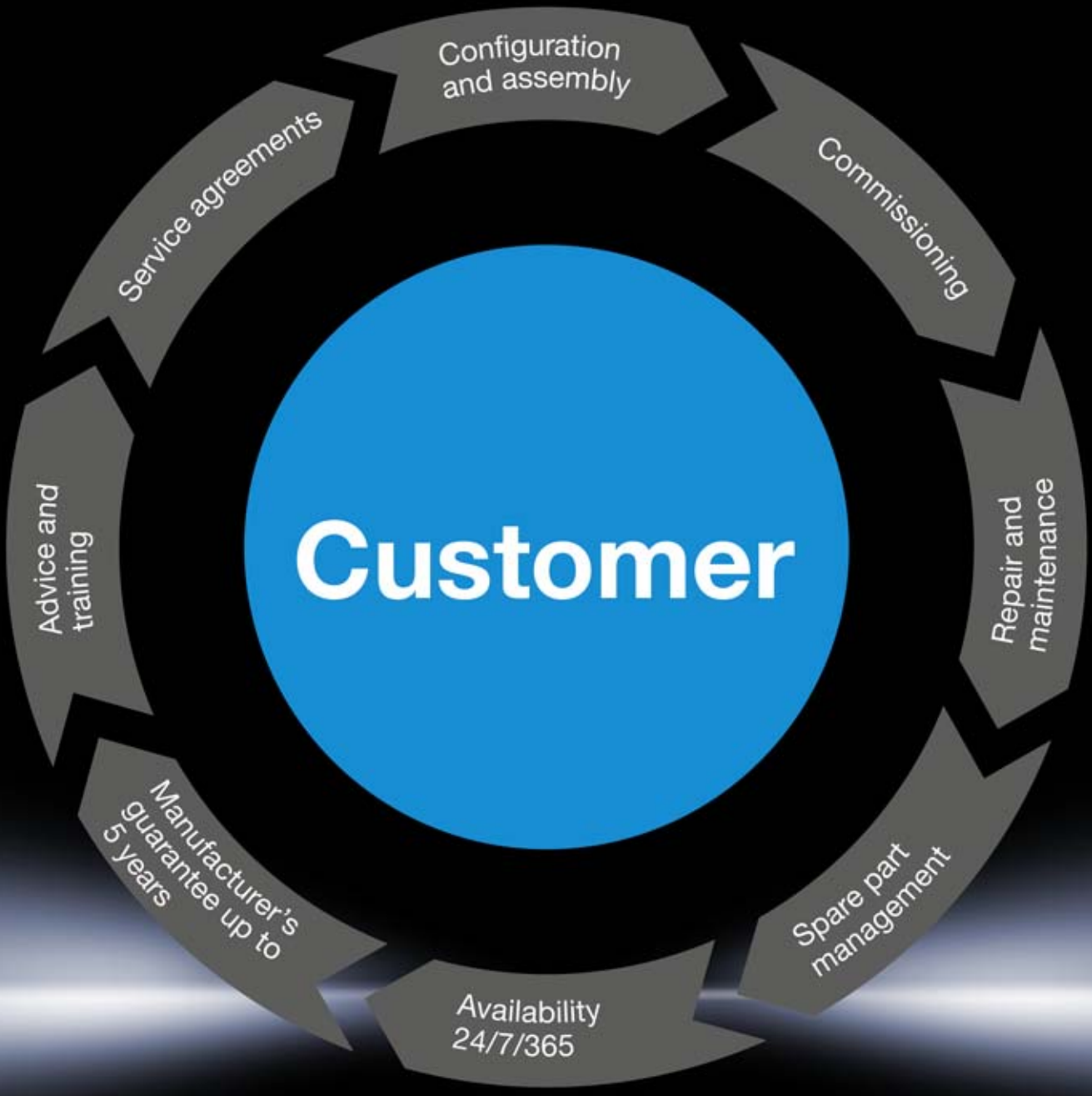
System accessories Page 507 **Network/server enclosures** Page 90

High Availability room
The High Availability room offers maximum physical protection for data centres and IT system locations. The system was certified by ECB (European Certification Body GmbH) to ECB·S regulations.
This certification confirms that the High Availability room meets the requirements of EN 1047-2 without restriction. Moreover, the construction of the security room is subject to continuous quality monitoring by an independent agent.

Benefits:
- System-tested High Availability protection
- Multi-functional risk coverage
- Dust- and noise-reduced installation
- Dismantling and reassembly plus extendibility = investment security
- ECB·S certification
- Independent quality monitoring
- May be adapted for use in other room systems, such as the basic protection room

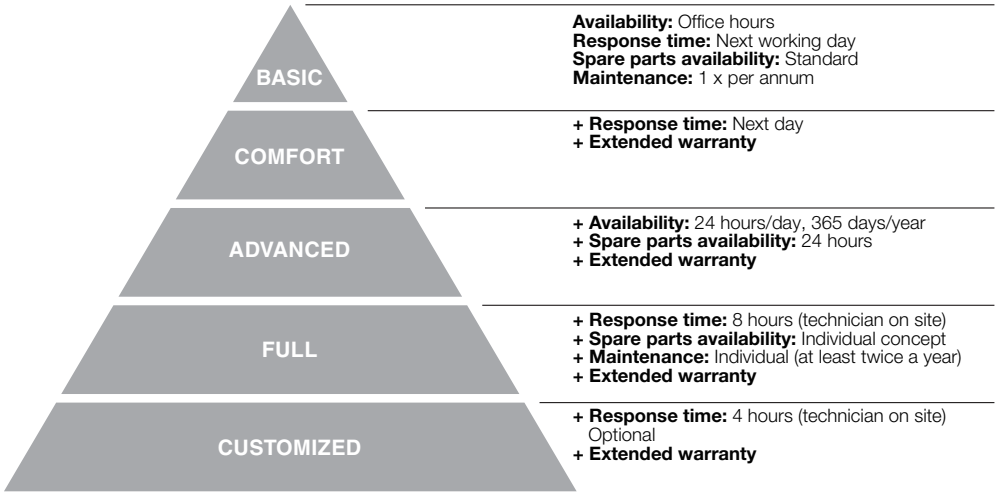
	Basic protection room	High Availability room
	■	■
	–	■
	□	–
	–	■
	■	–
	■	■
	■	■
	■	■
	–	■
	■	■
	–	■
	□	■
	■	–
	–	■
	■	■

■ Standard □ Optional


Configuration and assembly
Commissioning
Repair and maintenance
Spare part management
Availability 24/7/365
Manufacturer's guarantee up to 5 years
Advice and training
Service agreements
Customer

Flexible service contracts: The right solution to match your requirements

Features of the Rittal service packages at a glance:



Availability: Office hours
Response time: Next working day
Spare parts availability: Standard
Maintenance: 1 x per annum

+ Response time: Next day
+ Extended warranty

+ Availability: 24 hours/day, 365 days/year
+ Spare parts availability: 24 hours
+ Extended warranty

+ Response time: 8 hours (technician on site)
+ Spare parts availability: Individual concept
+ Maintenance: Individual (at least twice a year)
+ Extended warranty

+ Response time: 4 hours (technician on site)
Optional
+ Extended warranty

The benefits to you:
- Short response times thanks to local technicians
- Preserve the value of your equipment
- Extended warranty up to 5 years
- Spare parts held in stock
- Cost transparency

5 years
Manufacturers' warranty
in conjunction with a signed service agreement

We are committed to perfection at every phase

PRE-SALES

We pave the way for your decision-making.
Requirement analysis
+ Load test
+ Thermography
+ Simulation and calculations

IMPLEMENTATION

Because we would love to be on board when you arrive at a solution.
Installation/integration
+ Commissioning
+ Instruction
+ Certification

AFTER-SALES

We take our responsibilities very seriously.
Maintenance/installation
+ Repairs
+ Spare parts management
+ Training
+ Service contracts

Spare parts – any time, anywhere

Added value, thanks to global availability of individual parts

Professional spare parts management guaranteeing maximum global availability of spare parts, and graduated service contracts matched precisely to your individual requirements: That is what you can expect from Rittal International Service. A service contract enables you to spell out many details, such as the availability of spare parts, specifically for your equipment or system. International service: At your service, any time, anywhere.

The benefits to you:
- Customer-specific components are held in stock on the basis of individual service contracts
- Decentralised warehousing to ensure fast and reliable spare parts availability
- Approved original spare parts from the manufacturer

Rittal service addresses

may be found on the Rittal homepage.

Rittal – The System.

Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

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