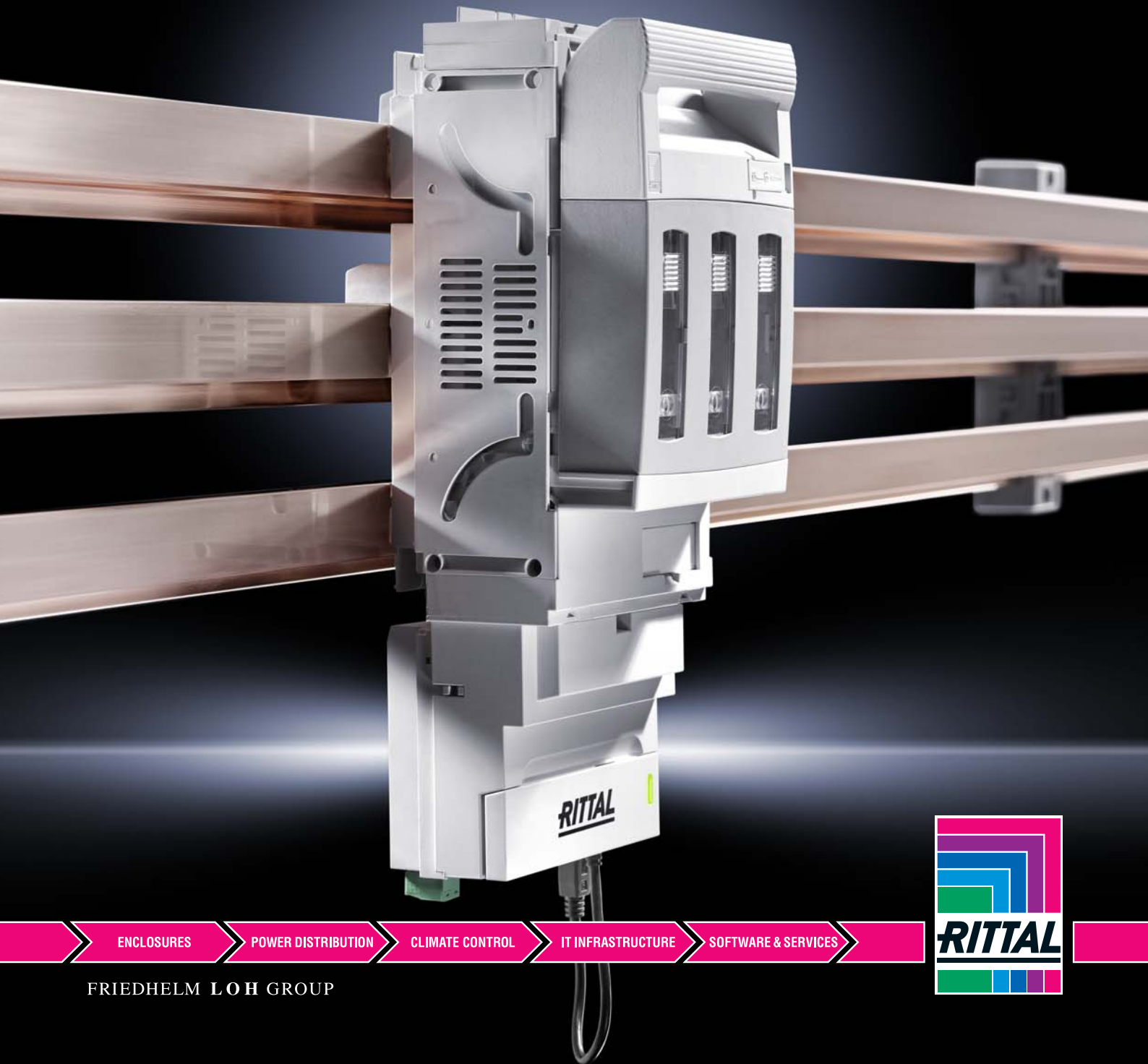# Rittal – The System.

Faster – better – everywhere.

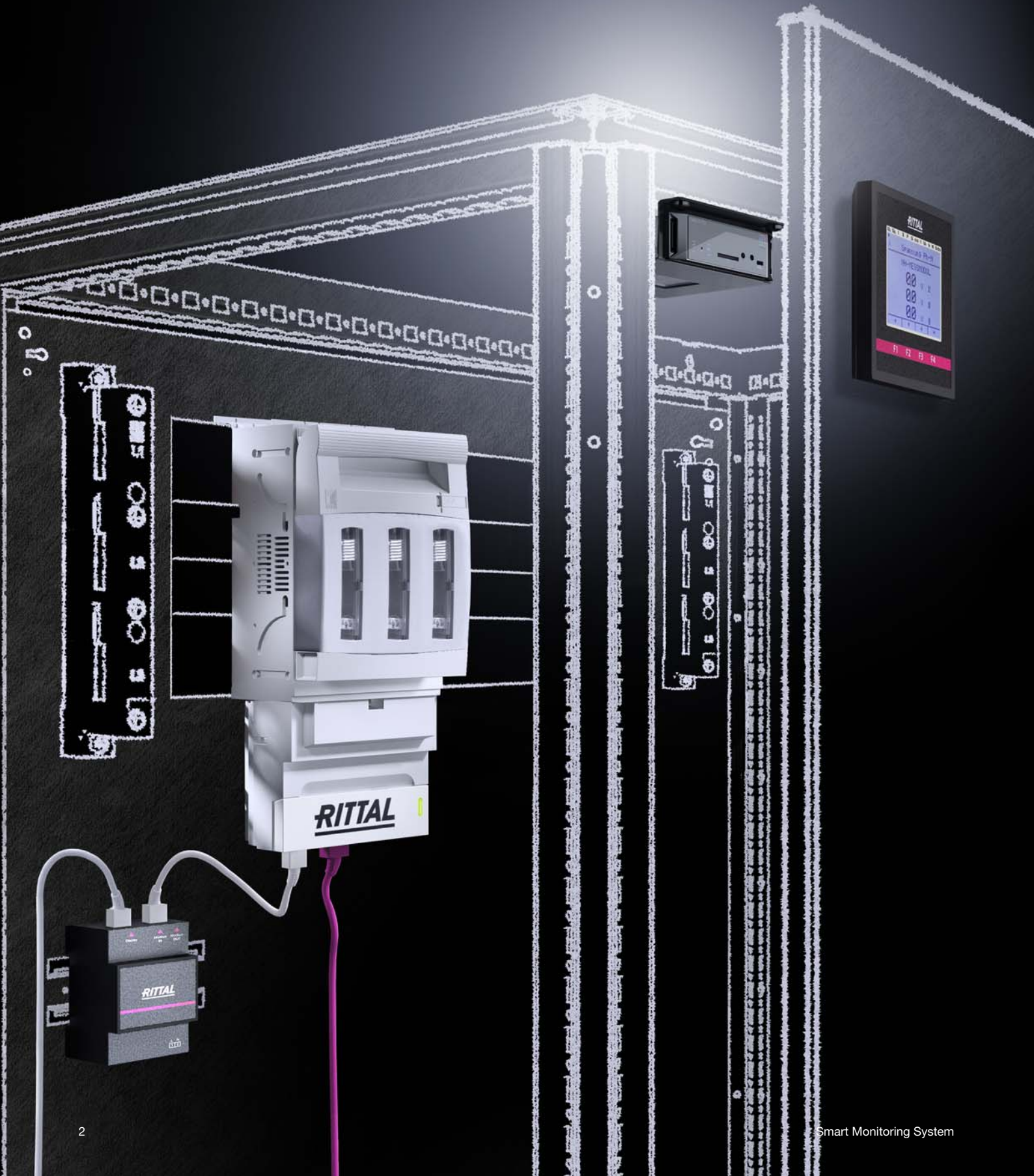## ▶ Smart Monitoring System – compact, secure, efficient
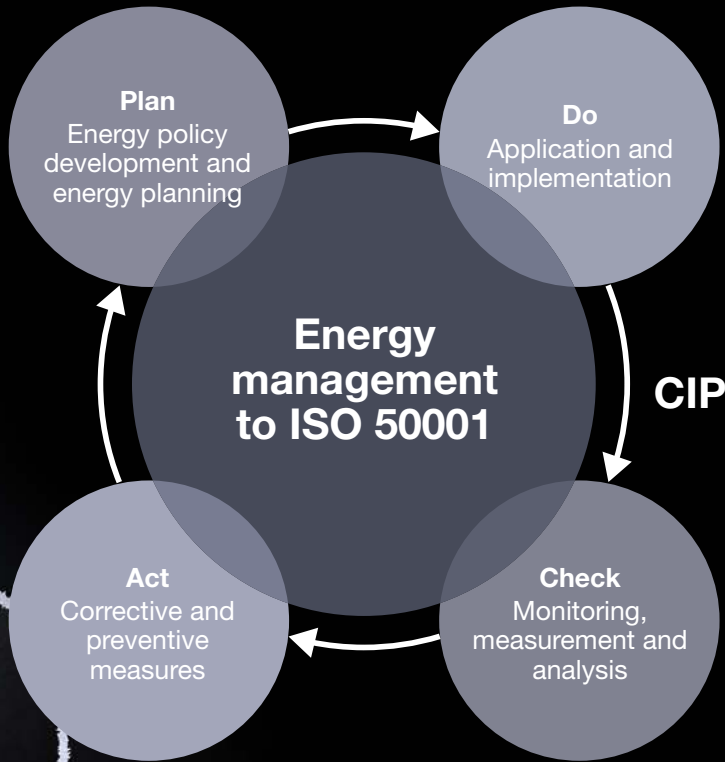
RITTAL

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Transparency for more efficiency

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

Energy management to ISO 50001

Plan
Energy policy development and energy planning

Do
Application and implementation

Check
Monitoring, measurement and analysis

Act
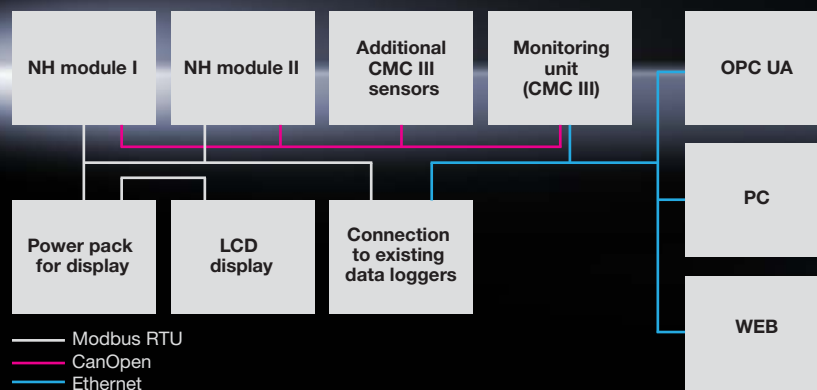Corrective and preventive measures

CIP

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

- Identify potential savings
- Boost energy efficiency
- Increase competitiveness
- Reduce CO_2 emissions on a sustainable basis
- Benefit from tax relief

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

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

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

NH module I | NH module II | Additional CMC III sensors | Monitoring unit (CMC III) | OPC UA | PC | WEB

Power pack for display | LCD display | Connection to existing data loggers

— Modbus RTU
— CanOpen
— Ethernet

NH measurement module for RiLine NH fuse-switch disconnectors

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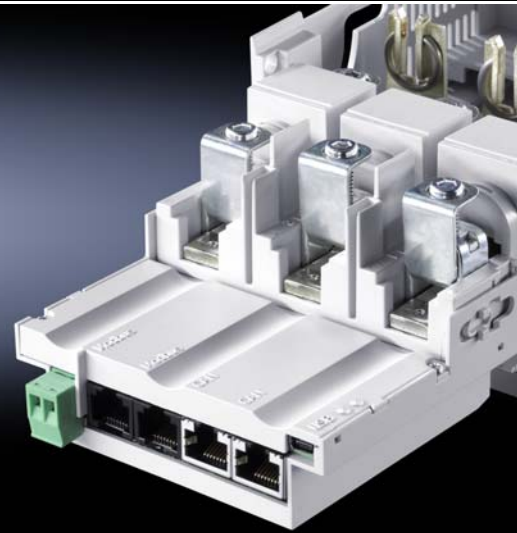- Quick and easy assembly

The components of the Rittal Smart Monitoring System

NH measurement module

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

Display and power pack

- Display over 50 measurement parameters on the backlit LCD display
- 20 NH measurement modules can be depicted on one display
- Intuitive configuration of alarm and limit values
- Intuitive configuration of alarm and threshold values

CMC III monitoring unit

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

NH measurement module

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

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

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

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

Colour:
– RAL 7035

Supply includes:
– NH measurement module
– Connector 2 x 2.5 mm^2 with preassembled bridge
– USB cable (mini-B connector on micro-B jack)

for NH fuse-switch disconnectors

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

Accessories

LCD display
for monitoring

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

Material:
– Polyphenylene ether (PPE)

Colour:
– RAL 9005

Protection category IP to IEC 60 529:
– IP 51 (front)
– IP 41 (enclosure)

Supply includes:
– LCD display
– Modbus RTU cable (RJ12), length: 2 m

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

⚠ Also required:

– Power pack, see page 7

Power pack
for LCD display
For mounting on support rails to EN 60 715, 7.5 mm high.

Material:
– Polycarbonate
– Fire protection corresponding to UL 94-V0

Colour:
– RAL 9005

Protection category IP to IEC 60 529:
– IP 20

Supply includes:
– Power pack
– Connector 2 x 2.5 mm²

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

CMC III

CMC III Processing Unit/ Compact

see Cat. 34, page 450

Rittal – The System.

Faster – better – everywhere.

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

You can find the contact details of all
Rittal companies throughout the world here.

www.rittal.com/contact

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