CMC-TC
Processing Unit II

DK 7320.100

Assembly, Installation and Operation Manual

RITTAL

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Contents

1   Notes on documentation

The audience for this guide is the technical specialists familiar with the assembly, installation and operation of the system. You should read this operating guide prior to the commissioning and store the guide so it is readily accessible for subsequent use. Rittal can accept no liability for damage and operating problems resulting from non-compliance with these instructions.

1.1   CE labelling

The Control Unit satisfies, as part of the CE conformity, the requirements of the EMC Directive 2004/108/EU. The declaration of conformity can be requested from Rittal Service.

1.2   Retention of documents

This guide and all associated documents are part of the product. They must be given to the operator of the unit. The unit operator is responsible for the storage of the documents so that they are readily available when needed.

1.3   Symbols used and technical terms

The signal word classifies the effects of a danger in case of non-observance of the safety instructions. A differentiation is made between:

– Danger
A dangerous situation for which the failure to comply with this note causes death or severe injury.

– Warning
A dangerous situation for which the failure to comply with this note can cause death or severe injury.

– Caution
A dangerous situation for which the failure to comply with this note can cause (minor) injuries.

– Note
Identification of the situations that can lead to material damage.

The signal words are shown in the following form in the instructions.
For example:

Signal word!
1. Description of the danger and its effect
2. Description of the behaviour of the user to prevent danger

1.4   Other applicable documents

In conjunction with this manual, the manuals for other CMC-TC components and their safety notes, etc. also apply.

This manual is also available as file on the accompanying CD-ROM:

German: 7320100VXXd.pdf
English: 7320100VXXe.pdf

The appropriate current version can also be downloaded as PDF file from the Rittal homepage www.rittal.com.
To view the file, you will need the program Acrobat Reader, which can be downloaded from www.adobe.com.

2   Safety notes

2.1   General safety notes

Please observe the subsequent general safety notes for the installation and operation of the system:

- Only a trained electrician, in particular for wiring the enclosures with mains power, may perform assembly and installation of the system.
- Please observe the valid regulations for the electrical installation for the country in which the system is installed and operated, and the national regulations for accident prevention. Please also observe any company-internal regulations (work, operating and safety regulations).
- Use only original Rittal products or products recommended by Rittal in conjunction with this product.
- Please do not make any changes that are not described in this manual or in the associated manuals.
- The operational safety of the product is guaranteed only for its approved use. The technical data and limit values stated in the technical specifications may not be exceeded under any circumstances. In particular, this applies to the specified ambient temperature range and IP protection category. When used with a higher required IP protection category, the Rittal CMC-TC must be installed in a housing or enclosure with a higher IP protection category.
- The Processing Unit must not be opened. The unit does not contain any parts that need servicing.
- The operation of the system in direct contact with water, aggressive materials or in-flammable gases and vapours is prohibited.
- Before commencing work on the CMC-TC system, it must be disconnected from the mains and prevented from being switched on again.
- Other than these general safety notes, ensure you also observe the specific safety notes when the tasks described in the following chapters are performed.

3   Device description

The Computer Multi Control Top Concept Processing Unit II (subsequently called CMC-TC PU) is an "intelligent" enclosure monitoring system. It is installed in its own housing in the enclosure and uses the attached sensors in various forms to perform the complete physical monitoring of the enclosure, i.e. temperature, humidity, shock, smoke, voltage through to the complete enclosure locking and access control. All this information is transferred using SNMP to a management station where it can be administered.

The CD-ROM supplied contains software (CMC-TC Manager) that can be used to monitor and administer one or more CMC-TC PUs. The associated current version of the CMC-TC Manager can be found at www.rimatrix5.com.

3.1   Housing

The CMC-TC Processing Unit is contained in its own housing that can be fastened with the Velcro strips supplied to the inner side of the side wall, to the punched sections with mounting flanges or to the shelves of the enclosure. Mounting units (see Section 3.7.1 Required accessories) can also be used to install the housing.
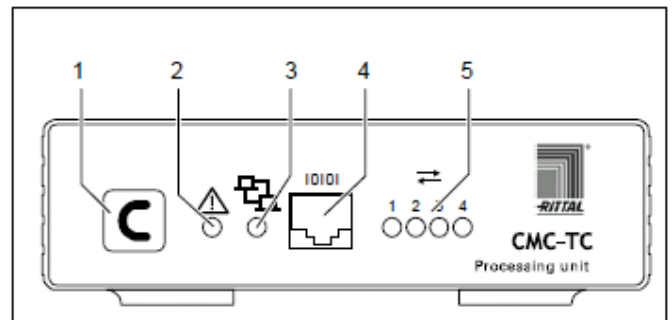
Fig. 1   CMC-TC PU front

Key

1   Acknowledgement key (C key)
2   Status LED
3   Network LED
4   Serial interface (RS-232 connection)
5   Status LED for connected sensor units (Traffic LED)
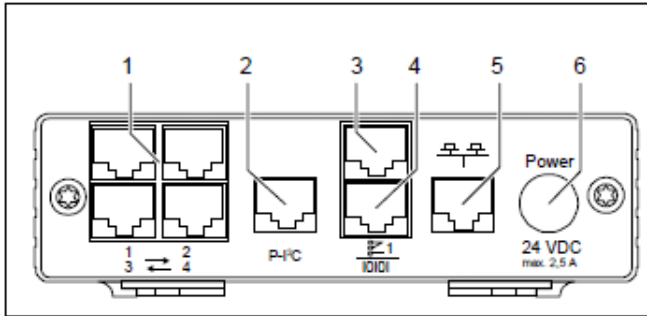
Fig. 2 CMC-TC PU rear

Key
1   Sensor units connections
2   P-I²C bus connection
3   Alarm relay output (floating changeover
    contact)
4   Serial interface (IOIOI)
5   Network connection
6   Power supply connection

3.2   Power supply

The CMC-TC Processing Unit is supplied with power using an external power pack. The connection cable for the external power pack is available as an accessory in various country variants. Choose the variant appropriate for the country-specific regulations. A selection of various connection cables is described in Section 3.7 Accessories.

All connected sensors are supplied with voltage from the CMC-TC Processing Unit.

The CMC-TC Processing Unit has an integrated alarm relay equipped with a floating changeover contact. It is used for the optical or acoustic alarm. A connection with a serial interface that can be used for various sensor units and extended units is also available.

3.3   Network properties

The CMC-TC PU has an 10/100BaseT Ethernet network connection and supports the following protocols:
-   RS232 serial interface:
    e.g. HyperTerminal
-   In the Ethernet network: e.g. TELNET
-   SNMPv1, compatible with popular
    management systems
-   SNMPv3
-   HTTP, HTTPS
-   FTP, SFTP
-   NTP (Network Time Protocol)
-   SSH (Secure Shell)
-   SSL 3.0 (Secure Socket Layer)
-   DHCP (Dynamic Host Configuration Protocol)

Optionally, the CMC-TC PU can also communicate using a Master Unit or using an ISDN or GSM unit. Associated information is contained on the Rittal homepage (www.rittal.com) or in Catalogue 32. Detailed documentation for the GSM and ISDN unit can also be found at www.rimatrix5.com.

The network connection is made using a network cable with RJ45 plug.

The communication is made using a standard browser and so is independent of the operating system.

Any number of Rittal CMC-TC Processing Units can be connected in the network, provided sufficient free IP addresses are available in the network. If this is not the case, up to ten CMC-TC PUs can be extended and administered using the Rittal CMC-TC Master. This distributed configuration allows you to also realise monitoring for enclosure suites without needing any large cabling effort. The network protocols are used for communication (password query, switching commands, status queries, and alarm signals) between the Rittal CMC-TC PU, the administrators and the users in the network (network/internet/intranet).

The SNMP functionality is also independent of the operating system, the network management protocol must, however, support SNMP V1.0 or V3.0.

In addition, the Rittal CMC-TC PU supports the standard MIB II. The private MIB is part of the scope of supply. Further information is provided on the CD-ROM supplied (CMC-TC PU II v1_1d.mib). The associated current version of the MIB can be found at www.rimatrix5.com.

The private MIB is required for integration in most modern building management software applications. It decodes the transferred trap messages to produce unique messages.

3.4   Connectable sensors

Sensor	Model No.
Temperature sensor	DK 7320.500
Humidity sensor	DK 7320.510
Analogue sensor input module "4-20 mA"	DK 7320.520
Access sensor (packs of 2)	DK 7320.530
Vandalism sensor	DK 7320.540
Airflow monitor	DK 7320.550
Smoke alarm	DK 7320.560
Motion detector	DK 7320.570
Digital input module	DK 7320.580
Digital relay output module	DK 7320.590
Voltage monitor	DK 7320.600
Voltage monitor with switch output	DK 7320.610

Sensor	Model No.
Voltage monitor with 16 A switched output	DK 7320.611
48 V voltage monitor	DK 7320.620
Leakage sensor	DK 7320.630
Acoustic sensor	DK 7320.640

Tab. 1   Connectable sensors

The sensors are connected to the CMC-TC I/O unit using RJ12 patch cables.

3.5   System requirements
- Hardware:
  PC with serial interface and 10/100 Mbit network card
- Software:
  Operating system (Linux or Windows)
  Browser (IE 6.0 or equivalent)

3.6   Scope of delivery
The unit is supplied in a packaging unit in a fully assembled state.
- Please check the delivery for completeness.
- Check the packaging carefully for any signs of damage.

Quantity	Description
1	CMC-TC Processing Unit with network interface RJ45 socket (10/100 BaseT)
2	Self-adhesive Velcro fasteners 90 x 15 mm
1	CD-ROM with software and operating manual
1	Checklist for commissioning German/English

Tab. 2   Scope of delivery

3.7   Accessories

3.7.1   Required accessories
Depending on the country-specific specifications, you require an appropriate connection cable for the power pack of the CMC-TC PU.

Accessories	Description	Required	Model No.
Power supply	Assembly power pack 24 V IEC 100-230 V AC, UL approval, 3 A SELV	Yes, depending on the power supply	7320.425
	Assembly power pack 24 V IEC 48 V DC		7320.435

Accessories	Description	Required	Model No.
Connection cable for power pack	Connection cable with IEC 320 connector Country version D	Yes, once for power pack	7200.210
	Connection cable with IEC 320 connector Country version GB		7200.211
	Connection cable with IEC 320 connector Country version F/B		7200.210
	Connection cable with IEC 320 connector Country variant CH		7200.213
	Connection cable with IEC 320 connector Country version USA/CDN, UL approval FT1/VW1		7200.214
	Extension cable with IEC 320 connector and socket		7200.215
Assembly	1 U mounting unit	Optional	7320.440
	1 U single mounting unit with strain relief		7320.450
Programming cable	Programming cable D-Sub 9 to RJ11	Yes, max. 1	7200.221
Extension	Extension unit – voltage	Optional, max. 2	7200.520

Tab. 3   Required accessories

3.7.2   Optional accessories

Accessories	Max. required number of items	Model No.
I/O unit	4	DK 7320.210
Wireless I/O unit	4	DK 7320.240
Access unit	4	DK 7320.220
Climate unit	4	DK 7320.230
Fan Control System (FCS)	4	DK 7320.810
Fan Control System (FCS)	4	DK 7858.488
Automatic door control unit	4	DK 7320.790

Accessories	Max. required number of items	Model No.
RTT I/O unit	4	DK 3124.200
LCP	4	DK 3301.210
LCP	4	DK 3301.230
Active PSM 4-way	4 x 4	DK 7856.200
Active PSM 8-way	4 x 4	DK 7856.201
PCU	4 x 4	DK 7200.001
Active PSM 6-way	4 x 4	DK 7856.203
Active PSM 6-way	4 x 4	DK 7856.204
PSM busbar with measurement	4	DK 7856.016
PSM measuring module	4	DK 7856.019
CMC-TC Display Unit II	1	DK 7320.491
CMC-TC GSM unit	1	DK 7320.820
CMCTC ISDN unit	1	DK 7320.830
RJ12 extension cable; 5.0m	-	DK 7200.450
RJ12 extension cable; 1.0m	-	DK 7320.814
RJ45 extension cable; 0.5m		DK 7320.470
RJ45 extension cable; 2.0m		DK 7320.472
RJ45 extension cable; 5.0m		DK 7320.475
Connection cable RJ45; 10.0m		DK 7320.481

Tab. 4   Optional accessories

3.8 Proper use

The Rittal CMC-TC PU II is used as an enclosure monitoring system for the monitoring and administration of various enclosure parameters. Any use other than that described here shall be deemed improper. Rittal cannot accept any liability for damage associated with the failure to observe these instructions! Where applicable, the instructions for any other accessories used shall also apply.

4   Assembly and installation

Install the CMC-TC PU in an enclosure or in a suitable housing system so that it is also protected from external effects. Also consider not only the permissible ambient temperature and humidity operational areas, but also the application-relevant required IP degree of protection (see Chapter 10 Technical specifications).

4.1 Assembly procedure

Assembly with mounting module 7320.450
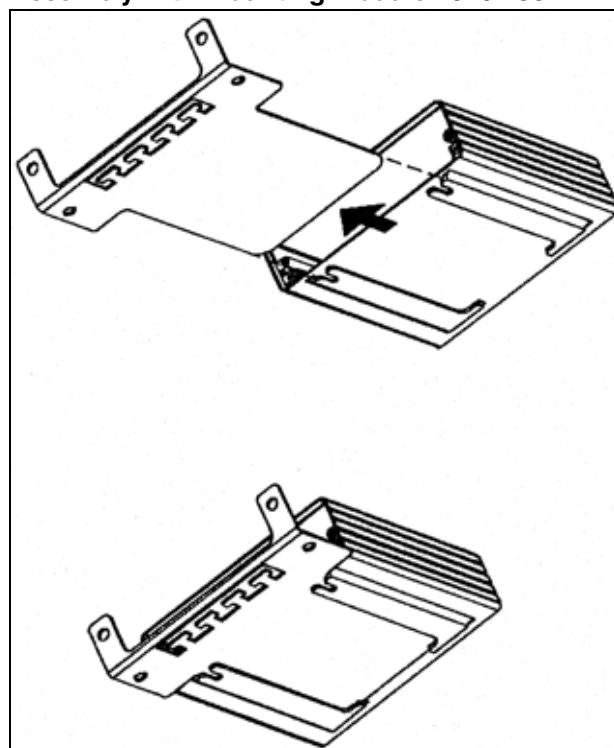
Fig. 3   Assembly with mounting module

1   Push the CMC-TC PU onto the retaining plate of the mounting module 7320.450. Ensure that the retaining plate sits between the guide rails of the CMC-TC PU.

Assembly with Velcro fasteners
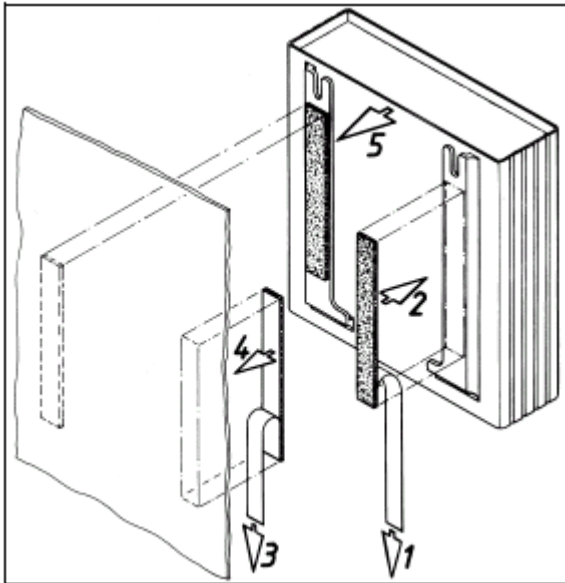
Fig. 4   Assembly with Velcro fasteners

1   Remove the protective foil from the supplied Velcro tapes.
2   Ensure that the adhesive surfaces are free from grease and dust.
3   Attach the Velcro tapes to the CMC-TC PU housing and position the CMC-TC PU at the required attachment location.

Assembly with 1 U mounting unit 7320.440
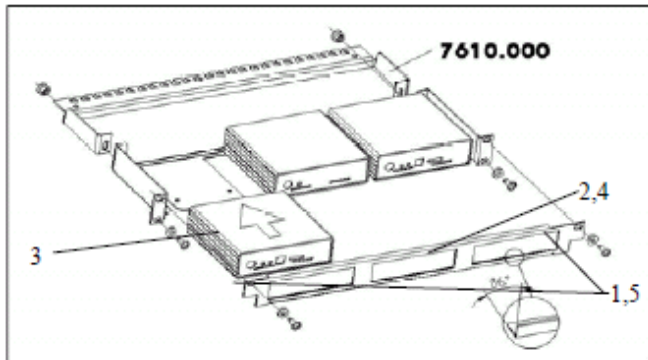
Fig. 5   Assembly with 1 U mounting unit

1   Remove the two upper screws from the cover.
2   Remove the cover.
3   Push the CMC-TC PU onto the retaining plate of the mounting unit. Ensure that the retaining plate sits between the guide rails of the CMC-TC PU.
4   Replace the cover on the mounting unit.
5   Refasten the cover screws on the 1 U mounting unit.

4.2

Installation

Safety instructions and other notes

1   The Rittal CMC-TC Processing Unit may only be operated with PE conductor connection. The PE conductor connection is made by plugging in the IEC connection cable. This requires that the IEC connection cable be connected with the protective conductor at the mains side.
2   The electrical connection voltage and frequency must conform to the rated values specified at the rear of the housing and in the technical specifications (see Chapter 10 Technical specifications).
3   Before working on the Rittal CMC-TC PU, it must be disconnected from the mains and secured against reactivation.
4   Attach the connection cables to the used housing or enclosure using cable ties.
5   To prevent losses caused by unnecessary cable lengths, the cable lengths used must not exceed the lengths stated in the technical specifications (see Chapter 10 Technical specifications).

4.3   Installation procedure

4.3.1   Connecting power supply
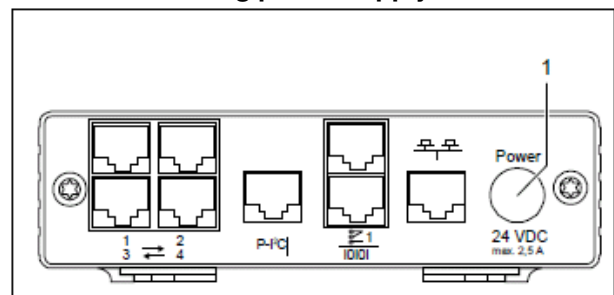
Fig. 6   Connecting power supply

Key

1   Power supply connection

Actions

-   You must connect the CMC-TC PU to the power supply using the power packs described in Section 3.7.1.
-   Insert the power pack plug in the "Power" socket of the CMC-TC PU. Ensure that the marking arrow ⬆ points to the "Power" socket designation.
-   The plug latches itself. After being connected to the power supply, the CMC-TC PU automatically begins a boot task that takes up to three minutes. Once it has completed, the alarm LED illuminates green.

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- To remove the connection plug, draw back the movable ring on the plug and remove the complete plug from the socket.
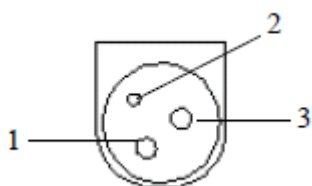
Fig. 7   Pin assignment (plug, viewed from the front)

Key

1   Pin 1: Gnd
2   Pin 2: not assigned
3   Pin 3: +24V

4.3.2   Establishing the network connection
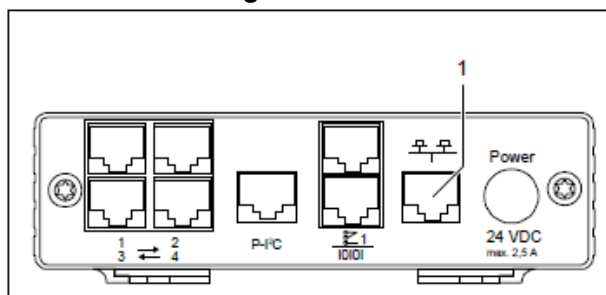
Fig. 8   Establishing the network connection

Key

1   Network connection

Actions

- Use the RJ45 network cable to connect the CMC-TC PU with the existing network structure.

4.3.3   Checking the network connection
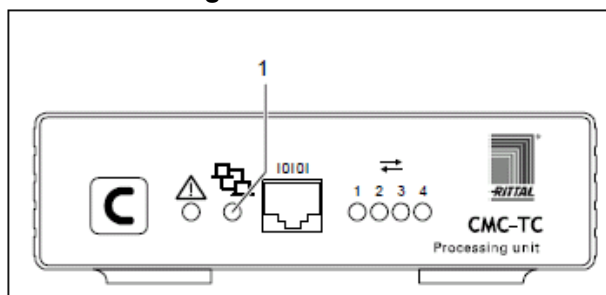
Fig. 9   Checking the network connection

Key

1   Network LED

Actions

- The network connection exists when the Link LED illuminates green or orange. The Link LED on the front also begins to flash when data is being exchanged over the network:

  Green: 10 Mbit transmission
  Orange: 100 Mbit transmission

4.3.4   Establishing the sensor connection

Connecting the sensor
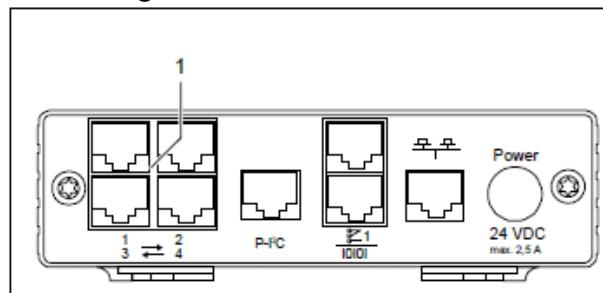
Fig. 10   Establishing the sensor connection

Key

1   Sensor units connections (1-4)

Actions

- Insert the connection plug of the sensor units in any of the four connections.

The connected sensors will be detected automatically by the CMC-TC PU.

Checking the sensor connection
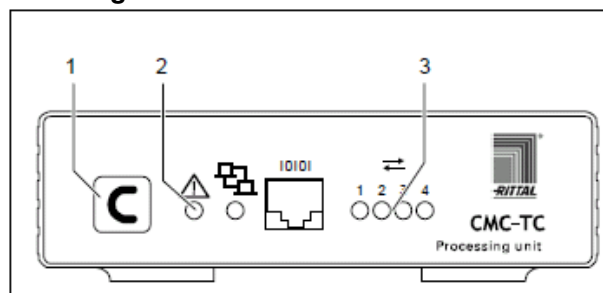
Fig. 11   Checking the sensor connection

Key

1   Acknowledgement key (C key)
2   Status LED
3   Status LEDs for connected sensor units

Actions

Once the sensors have been connected and detected, an acoustic signal sounds and the Status LED of the connection flashes orange.

- Press the C button to confirm the connection of the sensor.

The acoustic signal ends and the Status LED changes from orange to green.

The CMC-TC Processing Unit continually polls the ports of the sensor units. Configuration changes that affect sensors will be detected and signalled automatically. The acoustic signal and the Status LEDs indicate such a change.

4.3.5 Connecting the alarm relay

The alarm relay is connected using the floating changeover contact.

Caution!

Damage danger!

Observe the technical specification of the alarm relay contained in the technical data. The non-observance can damage the alarm relay.
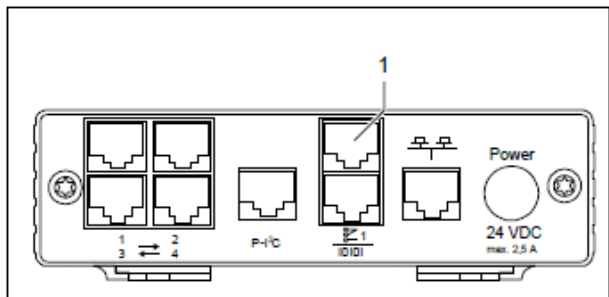
Fig. 12   Connecting the alarm relay

Key

1   Alarm relay output (floating changeover contact)

Actions

- Connect the alarm relay with the RJ12 sockets using RJ12 connectors.

After the alarm relay has been connected, it must be configured using software (see 6.3.21 General configuration of the Processing Unit). Details for the internal circuitry of the alarm relay are shown below:
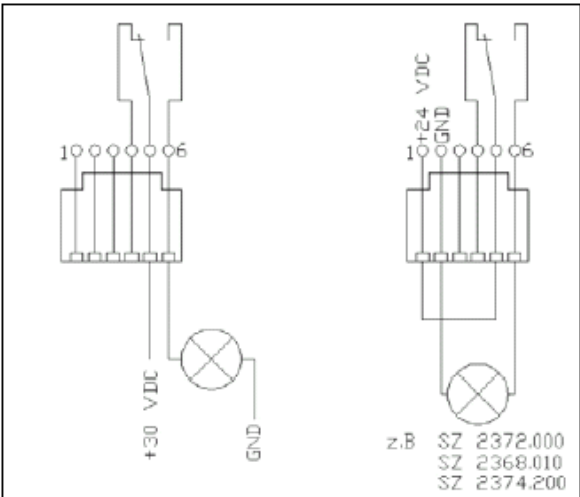
Fig. 13   Power circuit of the alarm relay

4.3.6 Connecting the extension unit

You can use the P-I²C connection (RJ45 socket) to integrate a maximum of two voltage extension units (3-phase, DK 7200.520) in the CMC-TC PU. Further details are contained in the operating guide of the extension unit.
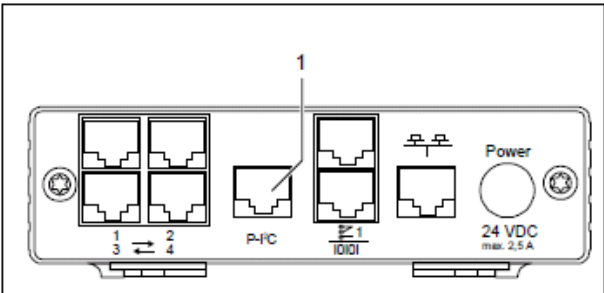
Fig. 14   P-I²C connection

Key

1   Extension unit connection (P-I²C connection)

Actions

- Use an RJ45 cable to establish the connection between the power expansion unit and the P-I²C connection of the Processing Unit.
- Use the DIP switch at the extension unit as follows to address the extension unit:

Switch setting	Addressing
DIP switch at 1	First connected extension unit
DIP switch at 2	Second connected extension unit

Tab. 5   Addressing

4.3.7 Connecting the programming interface

To configure the CMC-TC PU, for example, using a notebook, you can connect both using the serial interface. The RS-232 interface of the CMC-TC PU is provided as RJ10 front socket.
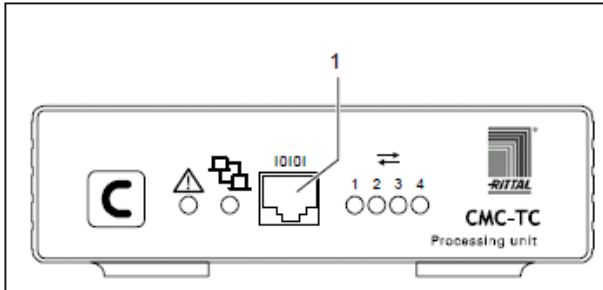
Fig. 15   RS-232 connection

Key

1   Serial interface (RS-232 connection as RJ10 front socket)

Actions

-    Connect the programming cable (DK 7200.221) with the RJ10 front socket and the serial interface of your PC.

5   Commissioning and configuration

Once you have assembled the CMC-TC PU and installed all connections, you must now configure it. You can do this using the serial interface (see Section 4.3.7 Connecting the programming interface), the network connection with a browser (see Section 6.6 Access using a browser) or Telnet (see Section 6.8 Access using Telnet).

You must first establish the connection to the CMC-TC PU. This is shown below using the HyperTerminal program, part of the Microsoft Windows 2000 operating system, as an example. The procedure for other operating systems is similar.

To start HyperTerminal click *<Programs> - <Accessories> - <Communication> - <HyperTerminal>.*

Fig. 16   Enter a name and select a connection

-    Enter name.
-    Assign the icon for the connection.

Fig. 17   Establish connection

- Select the connection using COM port.
- Click "OK".

The properties of the selected COM port are requested once.
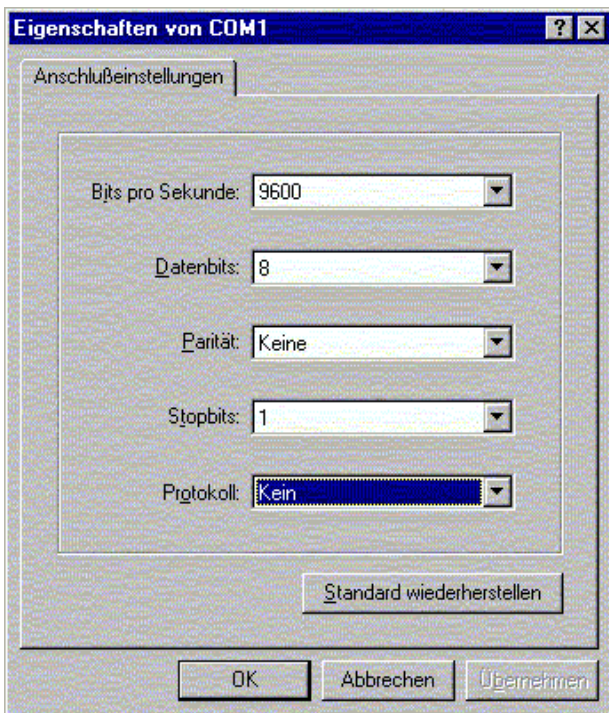
Fig. 18   COM port properties

- Enter the following parameters:
   - Transmission rate: 9600 bits per second
   - Data bits: 8
   - Parity: None
   - Stop bits: 1
   - Protocol: None

The standard level range must be observed for the RS-232 interface, otherwise it is possible that the data will be transferred incorrectly.

The HyperTerminal login window appears.
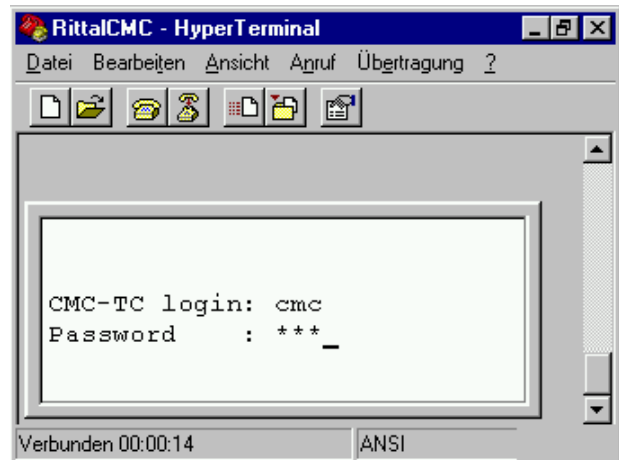
Fig. 19   Login

You must enter your login name (CMC-TC login) and your password here. The default factory setting for both is "cmc".

- You must enter your login name (CMC-TC login) and your password.

You can change your password later (see Section 6.3.12 Configuring passwords).
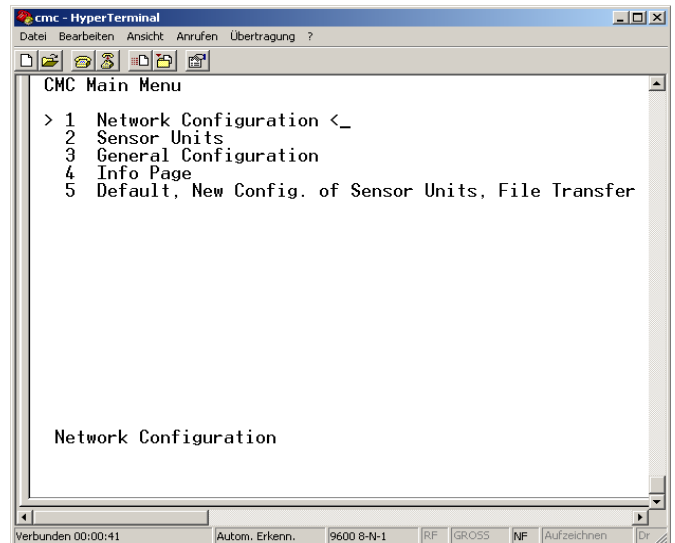
Fig. 20   HyperTerminal start window

- If you have been able to establish the connection to the CMC-TC PU, the HyperTerminal configuration window appears with configuration menu of the CMC-TC PU.
- You can now set up the CMC-TC PU for your local conditions.

6 Operation

6.1 Becoming familiar with the menu structure

The menu structure of the terminal program has the following form:

1 Network Configuration	
1.1 IP Configuration	1.4.2 IP Addr. CMC (DialIn)
1.1.1 IP Address	1.4.3 IP Addr. Client (DialIn)
1.1.2 IP Subnet Mask	1.4.4 Username (DialIn)
1.1.3 IP Def. Gateway	1.4.5 Password (DialIn)
1.1.4 Enable/Disable DHCP	1.4.6 Callback No. (DialIn)
1.1.5 Settings Ethernet Port	1.4.7 Enable PPP (Dialout)
1.2 SNMP Configuration	1.4.8 IP Addr. CMC (Dialout)
1.2.1 Trap Receiver Configuration	1.4.9 IP Addr. Client (Dialout)
1.2.1.1 IP Trap Receiver	1.4.A Username (Dialout)
1.2.1.2 Enable/Disable	1.4.B Password (Dialout)
1.2.1.3 IP Trap Receiver	1.4.C Phone Number (Dialout)
1.2.1.4 Enable/Disable	1.4.D Modem Type
1.2.1.5 IP Trap Receiver	1.4.E MSN (for ISDN)
1.2.1.6 Enable/Disable	1.4.F Modem Baudrate
1.2.1.7 IP Trap Receiver	1.5 SMTP (eMail) Configuration
1.2.1.8 Enable/Disable	1.5.1 IP Addr. SMTP Server
1.2.2 SNMPv1 IP Access	1.5.2 SMTP Server Authentication
1.2.2.1 SNMPv1 Manager	1.5.3 SMTP Server Username
1.2.2.2 SNMPv1 Manager	1.5.4 SMTP Server Password
1.2.2.3 SNMPv1 Manager	1.5.5 eMail Sender Name
1.2.2.4 SNMPv1 Manager	1.5.6 eMail Reply to
1.2.2.5 SNMPv1 Manager	1.5.7 eMail upon Unit Messages
1.2.2.6 SNMPv1 Manager	1.5.8 eMail Address
1.2.2.7 SNMPv1 Manager	1.5.8.1 eMail Address
1.2.2.8 SNMPv1 Manager	1.5.8.2 eMail Address
1.2.2.9 SNMPv1 Manager	1.5.8.3 eMail Address
1.2.2.A SNMPv1 Manager	1.5.8.4 eMail Address
1.2.2.B SNMPv1 Manager	1.6 Syslog Configuration
1.2.2.C SNMPv1 Manager	1.6.1 IP Addr. Syslog Server
1.2.3 Read Community	1.6.2 IP Addr. Syslog Server
1.2.4 Write Community	1.6.3 Syslog Facility
1.2.5 Enable Auth. Traps	1.6.4 Enable Syslog
1.2.6 Change SNMP Version	1.7 System Name

1 Network Configuration	
1.2.7 Default SNMPv3 User Name	1.8 System Contact
1.2.8 Default SNMPv3 Password	1.9 System Location
1.2.9 Confirm SNMPv3 us-mUser/Passw	
1.3 NTP Configuration	1.A Security
1.3.1 Enable NTP	1.A.1 Change Password User ´cmc´
1.3.2 IP Addr. NTP Server 1	1.A.2 Change Password User ´admin´
1.3.3 IP Addr. NTP Server 2	1.A.3 Change HTTP Port
1.3.4 NTP Offset to UTC	1.A.4 Enable SSL
1.3.5 NTP Update Frequency (h)	1.A.5 Change HTTPs Port
1.3.6 Dayl. Saving Time, Begin	1.B Enable FTP
1.3.7 Dayl. Saving Time, End	1.C Cons./Teln. Timeout Minutes
1.4 PPP Configuration	1.D Enable/Disable Telnet
1.4.1 Enable PPP (DialIn)	1.E Activate Actual Values

2 Sensor Units	
2.1 e.g. IO Unit 1:'CMC-TCIOU'	2.1.1.C Trap Receiver 4/Log
2.1.1 e.g. Temperature Sensor	2.1.1.D Alarm Reset
2.1.1.1 Status	2.1.1.E Send SMS
2.1.1.2 Value	2.1.1.F Send eMail
2.1.1.3 Setpoint High	2.1.2 e.g. Humidity Sensor
2.1.1.4 Setpoint Warning	2.1.3 not available
2.1.1.5 Setpoint Low	2.1.4 not available
2.1.1.6 Message Text	2.1.5 Sensor Unit Name
2.1.1.7 Alarm Relay	2.1.4 Status of Unit
2.1.1.8 Beeper	2.2 Unit 2 not available
2.1.1.9 Trap Receiver 1	2.3 Unit 3 not available
2.1.1.A Trap Receiver 2	2.4 Unit 4 not available
2.1.1.B Trap Receiver 3	

3 General Configuration	
3.1 Temperature Unit	3.9.2 SMS Service Number
3.2 Beeper	3.9.3 ISDN MSN
3.3 Quit Alarm Relay	3.9.4 ISDN Pre-Dial Number
3.4 Alarm Relay Options	3.9.5 ISDN Command
3.5 Web Access	3.9.6 SMS upon Unit Message
3.6 Actual Date	3.9.7 SMS Phone Numbers
3.7 Actual Time	3.9.7.1 SMS Phone Number
3.8 Check Link	3.9.7.2 SMS Phone Number

3 General Configuration	
3.9 SMS Configuration	3.9.7.3 SMS Phone Number
3.9.1 GSM Card PIN	3.9.7.4 SMS Phone Number

4 Info Page

5 Default, New Config. Of Sensor Units, File Transfer	
5.1 Set General Configuration to Default	5.3.1 Send File to CMC
5.2 Sensor Unit Detection	5.3.2 Receive File from CMC
5.3 Serial File Transfer (ZModem)	

Fig. 21   Menu structure

6.2   Operating notes
The following sections list all configuration parameters of the CMC-TC as tables. The basic operation is always the same:
- Use the "up" ↑ and "down" ↓ arrow keys to navigate within the menu structure.
- Use the "left" ← and "right" → arrow keys to scroll within fields that have several default values.
- Enter from the keyboard any required data in fields for text or numeric information.
- The "Esc" key can be used to cancel your inputs.
- Press "Return" or "Enter" to confirm all inputs.

6.3   Setting the base configuration
You only need to set the network configuration, the alarm relay and the trap receiver for the base configuration. You can make further settings from a browser or using Telnet.

6.3.1   Network configuration
You can use this menu to change your network settings.

Navigation
Main menu – 1 Network Configuration – 1 IP Configuration

Parameter	Explanation
IP Address	Enter your IP address (factory setting 192.168.0.190).
IP Subnet Mask	Enter your IP subnet mask address (factory setting 255.255.255.0).
IP Def. Gateway	Enter the IP for the router (factory setting 0.0.0.0).
Enable/Disable DHCP	Set whether the CMC-TC PU should obtain the IP address automatically: Enable or disable the function.

Parameter	Explanation
Ethernet Port Settings	Configure the network interface of the CMC-TC PU on your network. Possible settings: Auto, 100/Half, 100/Full, 10/Half, 10/Full

A restart must be performed to save the settings:

Navigation
Main menu – 1 Network Configuration – D Activate Actual Values

Parameter	Explanation
Activate Actual Values	Activate new values: Select "Yes" and press the Return key to perform a restart.

If DHCP is enabled, a connection to a DHCP server present in the network will be established during the restart and an IP address obtained from it. If no IP address can be obtained from the DHCP server, the last valid IP address or default address will be used. A restart is also required for disabling DHCP.

6.3.2   Configuring the trap receiver
To obtain messages and notifications, so-called trap messages, of the CMC-TC Master PU, the IP address of the console on which the management software package (e.g. HP OpenView) is installed, must be entered. The management software must support the SNMP protocol.

Navigation
Main menu – 1 Network Configuration – 2 SNMP Configuration – 1 Trap Receiver Configuration

Parameter	Explanation
IP Trap Receiver	Enter the IP address of the messages recipient (factory setting 0.0.0.0).
Enable/Disable	Enable or disable the receiving at the receiver located above.

Enter any other required receivers (maximum four) in the lines available below.

6.3.3 Configuring SNMPv1 access

Management software that supports SNMP (e.g. HP OpenView or CMC-TC Manager) can access the CMC-TC PU via the network. To restrict access, you can permit access for specified IP addresses (max. 12). Access is then blocked for all other IP addresses that have not been entered. If no IP address has been entered, any management software in the network has access to the CMC-TC PU.

Navigation

Main menu – 1 Network Configuration – 2 SNMPv1 IP Access

Parameter	Explanation
SNMPv1 Manager	Set the IP address for the PC with the SNMP management software that may access the CMC-TC PU.

6.3.4 Configuring the read/write community

To make the settings for a management software system on the CMC-TC, you must set the community of the Processing Unit and the management software.

Navigation

Main menu – 1 Network Configuration – 2 SNMP Configuration – 3 Read Community / 4 Write Community

Parameter	Explanation
3 Read Community	Set the Read Community for the trap handling. Press the Backspace key to clear the factory setting and enter the new name.
4 Write Community	Set the Write Community for the trap handling. Press the Backspace key to clear the factory setting and enter the new name.

6.3.5 Configuring the authentication traps

For an SNMP query (read or write) to the PU II with invalid Read/Write Community, the PU II will send an authentication trap to all enabled trap receivers.

Navigation

Main menu – 1 Network Configuration – 2 SNMP Configuration – 5 Enable Auth. Traps

Parameter	Explanation
Enable Auth. Traps	Use the ← and → arrow keys to enable or disable FTP.

6.3.6

Changing the SNMP version

As of software version 2.45, the Processing Unit II supports two types of SNMP. SNMPv1 and SNMPv3 are available. SNMPv3 provides more security than SNMPv1. An authentication is required for SNMPv3.

Navigation

Main menu – 1 Network Configuration – 2 SNMP Configuration

Parameter	Explanation
6 Change SNMP Version	Use the ← and → arrow keys to set the SNMPv1 and SNMPv3.
7 Default SNMPv3 User Name	Set the username for ´cmc´ SNMPv3 access (max. 20 characters). Press the Backspace key to clear the factory setting and enter the new password.
8 Default SNMPv3 Password	Set the password for ´cmc´ SNMPv3 access (max. 20 characters). Press the Backspace key to clear the factory setting and enter the new password.
Confirm SNMPv3 us-mUser/Passw	Use the ← and → arrow keys to confirm the SNMPv3 authentication.

6.3.7 Configuring NTP

Network Time Protocol (NTP) is a standard for the time synchronisation of the internal clock over the network. The NTP function synchronises the local, internal clock of the CMC-TC using external time signals obtained from an NTP server. To use this function in the CMC-TC, the network connection to an NTP server must be possible. The IP addresses for two NTP servers (primary and secondary server) can be entered. The time information from the NTP server uses the coordinated world time (UTC) as reference time. The times in the various time zones of the world are derived from this time. For this reason, the current time zone must be set in the CMC-TC menu. The current date and the current time are then represented with the current value taking account of the time zone and the daylight saving setting. Because the begin and end of the daylight saving period differ in the various time zones, these two values can also be set in the CMC-TC.

Navigation

Main menu – 1 Network Configuration – 3 NTP Configuration

Parameter	Explanation
1 Enable NTP	Use the ← and → arrow keys to enable or disable NTP.
2 IP Addr. NTP Server 1	Set the first IP address of the NTP server. Press the Backspace key to clear the factory setting and enter the IP address of the first NTP server.
3 IP Addr. NTP Server 2	Set the second IP address of the NTP server. Press the Backspace key to clear the factory setting and enter the IP address of the second NTP server.
4 NTP Offset to UTC	Use the ← and → arrow keys to set your country's time zone.
5 NTP Update Frequency (h)	Set the interval how often the Processing Unit should query the NTP server for the current date and time. The values must be entered in hours. Press the Backspace key to clear the factory setting and enter the interval time.
6 Dayl. Saving Time, Begin	Enter the start of the daylight saving period. Press the Backspace key to clear the factory setting and enter the new entry in the following format: m = month (1...12) n = week of the month (1 = first week, 5 = last week of the month) d = day (0 = Sunday, 6 = Saturday)
7 Dayl. Saving Time, End	Enter the end of the daylight saving period. Press the Backspace key to clear the factory setting and enter the new entry in the following format: m = month (1...12) n = week of the month (1 = first week, 5 = last week of the month) d = day (0 = Sunday, 6 = Saturday)

6.3.8

Configuring PPP

You can administer the CMC-TC PU from a remote location using an analogue modem. To do this, connect the modem to the serial interface of the Processing Unit.

Navigation

Main menu – 1 Network Configuration – 4 PPP Configuration

Parameter	Explanation
1 Enable PPP (DialIn)	Use the ← and → arrow keys to enable or disable PPP.
2 IP Addr. CMC (DialIn)	Set the IP address of the Processing Unit to establish a connection from a client to the Processing Unit.
3 IP Addr. Client (DialIn)	Set the IP address of the client to dial-in to the Processing Unit.
4 Username (DialIn)	Set an arbitrary username used for login to the Processing Unit (max. 20 characters).
5 Password (DialIn)	Set an arbitrary password for the login to the Processing Unit (max. 20 characters).
6 Callback No. (DialIn)	Enter the telephone number to which the Processing Unit should call back.
7 Enable PPP (Dialout)	Use the ← and → arrow keys to enable or disable PPP.
8 IP Addr. CMC (Dialout)	Enter the IP address of the Processing Unit for the dial-in to the client.
9 IP Addr. Client (Dialout)	Enter the IP address of the client for dial-in to the client.
A Username (Dialout)	Enter a username as authentication of the client. Note: The username must be entered as user account in the client (max. 20 characters).
B Password (Dialout)	Enter the password used as authentication of the client. Note: The password must be identical with the password of the user account (max. 20 characters).
C Phone Number (Dialout)	Enter the telephone number to which the Processing Unit should call in order to send a trap.
D Modem Type	Select the modem type Analogue, ISDN, GSM (note when a GSM unit is used as modem, the SIM card may not have any PIN number).
E MSN (for ISDN)	When an ISDN modem is used, the MSN number must be entered.
F Modem Baud Rate	The bit rate used by the serial interface to communicate with the external modem (for an analogue modem).

6.3.9 Configuring the sending of e-mails

As of software version 2.45, the CMC-TC PU II can send alarm messages as e-mail using an SMTP server.

Navigation

Main menu – 1 Network Configuration – 5 SMTP (eMail) Configuration

Parameter	Explanation
1 IP Addr. SMTP Server	Enter the IP address of the SMTP server.
2 SMTP Server Authentication	Use the ← and → arrow keys for an authentication (Yes) or (No) on the SMTP server.
3 SMTP Server Username	Enter the username for the SMTP server.
4 SMTP Server Password	Enter the password for the SMTP server.
5 eMail Sender Name	Enter the sender address of the PU II.
6 eMail Reply to	When a user answers this alarm message, the response mail will be sent to the entered address.
7 eMail upon Unit Messages	For a timeout, etc. in a unit, an e-mail can be sent as notification. Use the ← and → arrow keys to set "Yes" or "No".
8 eMail Address	Enter up to four different e-mail addresses.

6.3.10 Configuring Syslog

Navigation

Main menu – 1 Network Configuration – 6 Syslog Configuration

Parameter	Explanation
1 IP Addr. Syslog Server	Syslog Server 1 to which all alarm and event logs are sent.
2 IP Addr. Syslog Server	Syslog Server 2 to which all alarm and event logs are sent.
3 Syslog Facility	Specifies the origin of the log message (Local0..Local7). Serves as differentiation when several systems are used.
4 Enable Syslog	Enables or disables the Syslog function. The default value is "disabled".

6.3.11

Configuring system name, contact and location

A unique name, a contact address (e-mail) and a location can be entered for the Processing Unit.

Navigation

Main menu – 1 Network Configuration

Parameter	Explanation
6 System Name	An arbitrary name can be assigned for the Processing Unit. Press the Backspace key to clear the factory setting and enter the new name.
7 System Contact	Set the contact address (e.g. xyz@rittal.de). Press the Backspace key to clear the factory setting and enter the new contact address.
8 System Location	Enter the name of the installation location. Press the Backspace key to clear the factory setting and enter the new installation location.

6.3.12 Configuring passwords

You can change the passwords of the Processing Unit as required. The string length must not exceed 20 characters. Special characters are not permitted.

Navigation

Main menu – 1 Network Configuration – 9 Security

Parameter	Explanation
1 Change Password User ´cmc´	Set the password for the ´cmc´ user (max. 20 characters). Press the Backspace key to clear the factory setting and enter the new password. To verify the new password, it must be re-entered a second time.
2 Change Password User ´admin´	Set the password for the ´admin´ user (max. 20 characters). Press the Backspace key to clear the factory setting and enter the new password. To verify the new password, it must be re-entered a second time.

6.3.13 Changing the HTTP port

For some networks, the standard http port is not set to port 80. You can change the port number to meet your needs.

Navigation

Main menu – 1 Network Configuration – 9 Security

Parameter	Explanation
3 Change http Port	Set the http port 80-10000 (factory setting: 80). Press the Backspace key to clear the factory setting and enter the new port.

6.3.14 HTTPS (SSL) function

For security, the Processing Unit supports SSL encryption. This is used for the secure data exchange between the CMC-TC PU and the workstation.

Navigation

Main menu – 1 Network Configuration – 9 Security

Parameter	Explanation
4 Enable SSL	Use the ← and → arrow keys to enable or disable SSL.
5 Change https Port	Set the https port 80-10000 (factory setting: 443). Press the Backspace key to clear the factory setting and enter the new port.

6.3.15 Configuring FTP access

The FTP access is used exclusively for downloading software updates, log files and configuration files. It can remain deactivated for normal use.

Navigation

Main menu – 1 Network Configuration – A Enable FTP

Parameter	Explanation
A Enable FTP	Use the ← and → arrow keys to enable or disable FTP.

6.3.16 SFTP access

The secure FTP access includes the SSH data encryption. The function is always active and cannot be disabled. SFTP can be used as alternative to FTP.

6.3.17

Configuring the timeout window

The console and Telnet timeout window is used for the automatic logout after the set time. If a user, for example, has not performed any work on the Processing Unit within five minutes, he/she will be logged off automatically.

Navigation

Main menu – 1 Network Configuration – B Cons./Teln. Timeout Minutes

Parameter	Explanation
B Cons./Teln. Timeout Minutes	Set the Timeout function in minutes. 0 = no timeout 5 = when no changes have been made within the previous five minutes. Press the Backspace key to clear the factory setting and enter the new time.

6.3.18 Configuring Telnet access

When you use Telnet, you have the same administrative rights as for the serial interface. If access is not to be made using Telnet, you can deactivate it.

Navigation

Main menu – 1 Network Configuration – C Enable/Disable Telnet

Parameter	Explanation
C Enable / Disable Telnet	Use the ← and → arrow keys to enable or disable Telnet.

Note!

In addition to access using Telnet, an encrypted access to the PU II configuration using an SSH client (e.g. Putty) is possible. In contrast to Telnet access, the SSH access cannot be disabled.

6.3.19 Activating restart

You can use this menu item to reboot the Processing Unit in the unlikely event of a software crash.

Navigation

Main menu – 1 Network Configuration – D Activate Actual Values

Parameter	Explanation
D Activate Actual Values	Use the ← and → arrow keys to perform a restart (Yes) or not (No).

6.3.20 Configuring connected sensors

The sensors can be configured using HyperTerminal. This method of operation is necessary only when the browser setting has been set to view mode.

Navigation

Main menu – 2 Sensor Units

Parameter	Explanation
1-4 connected units	Access to the connected units with the installed sensors.

6.3.21 General configuration of the Processing Unit

The main configuration of the Processing Unit is used to parameterise the hardware and the sensor units. You can also parameterise the date and time, temperature unit, alarm relay, etc.

Navigation

Main menu – 3 General Configuration

Parameter	Explanation
1 Temperature Unit	Use the ← and → arrow keys to set Celsius or Fahrenheit.
2 Beeper	Use the ← and → arrow keys to set the alarm beeper on or off.
3 Quit Alarm Relay	Use the ← and → arrow keys to set the alarm relay confirmation. In case of alarm, the "C" key can be used to reset the alarm relay on the PU. Disabled = the alarm relay will be reset automatically after an alarm. Enabled = the alarm relay will be reset after an alarm by pressing the "C" key.
4 Alarm Relay Options	Use the ← and → arrow keys to set the alarm relay function. Close = alarm relay contact is closed. Open = alarm relay contact is open. Off = alarm relay is disabled.
5 Web Access	Use the ← and → arrow keys to set the web access. Full = full access. All current values can be displayed and settings changed on the Processing Unit. View = display. Only the current values are displayed. Changes to the settings cannot be made. No = block web access. The Processing Unit can no longer be called from the web.

Parameter	Explanation
6 Actual Date	Set the current date. Press the Backspace key to clear the factory setting and enter the current date. Date format: dd.mm.yyyy
7 Actual Time	Set the current time. Press the Backspace key to clear the factory setting and enter the current time. Time format: hh:mm:ss
8 Check Link	The connectivity of the individual trap receivers can be tested. Press the Backspace key to clear the factory setting and enter the number of the trap receiver.
9 SMS Configuration	True only for connected ISDN or GSM unit.

6.3.22 Configuring SMS notification (GSM unit)

This function is active only for connected GSM unit.

Navigation

Main menu – 3 General Configuration – 9 SMS Configuration

Parameter	Explanation
1 GSM Card PIN	Set the 4-digit PIN number of the GSM card.
2 SMS Service Number	Set the SMS service number. The specified format must be used, e.g. +491710760000
6 SMS upon Unit Messages	A notification SMS can be sent when a timeout, etc., occurs on a unit. Use the ← and → arrow keys to set "Yes" or "No".

6.3.23 Configuring SMS notification (ISDN unit)

This function is active only for connected ISDN unit.

Navigation

Main menu – 3 General Configuration – 9 SMS Configuration

Parameter	Explanation
3 ISDN MSN	Set the MSN number of your ISDN connection. The number must be entered in the following format: +49/2772/123456
4 ISDN Pre-Dial Number	Set the telephone number to obtain an external line. This is necessary when the ISDN unit is connected to a telephone system.
5 ISDN Command	Set the SMS command for sending an SMS over the telephone fixed-line network. For example, "8888 ANMELD" for the T-Com network or "09003266900" for the Arcor network.
6 SMS upon Unit Messages	A notification SMS can be sent when a timeout, etc., occurs on a unit. Use the ← and → arrow keys to set "Yes" or "No".

6.3.24 Entering the telephone numbers for SMS notification

This function is active only for connected GSM unit.

Navigation

Main menu – 3 General Configuration – 9 SMS Configuration – 7 SMS Phone Numbers

Parameter	Explanation
1 - 4 SMS Phone Number	Set the SMS destination telephone number. For example: +4927725051234

6.3.25 Calling the CMC information page

To display the current information for the Processing Unit, you can display an information page about the Processing Unit. This page displays all settings for the network connection, the software and hardware version, etc.

Navigation

Main menu – 4 Info Page

Parameter	Explanation
4 Info Page	The CMC Info Page provides a complete overview of the Processing Unit configuration.

6.3.26 Resetting all settings in the main menu

You can reset all your sensor settings. Passwords and network settings will not be reset.

Navigation

Main menu – 5 Default, New Config. of Sensor Units, File Transfer

Parameter	Explanation
1 Set General Configuration to Default	Use the ← and → arrow keys to activate (Yes) or not activate (No) the sensor settings.

6.3.27 Manual search for sensors

Under some circumstances, the Processing Unit sensors will not be detected immediately. In this case, you can activate a manual search for the sensors.

Navigation

Main menu – 5 Default, NewConfig. of Sensor Units, File Transfer

Parameter	Explanation
2 Sensor Unit Detection	Use the ← and → arrow keys to activate (Yes) or not activate (No) the sensor detection.

6.4 Transferring files using the serial interface

You can use the serial interface to transfer individual data, such as access files, to the Processing Unit.

Navigation

Main menu – 5 Default, New Config. of Sensor Units, File Transfer – 3 Serial File Transfer (Zmodem)

Parameter	Explanation
1 Send File to CMC	Use the ← and → arrow keys to start (Yes) or not start (No) the Zmodem.

You will now be requested to specify the path for the file to be transferred. To do this, click "Search" and search for the file.

Select Zmodem as protocol and click "Send". Once the file has been transferred, press the Esc key several times to return to the main menu and to save the setting.

6.5 Saving files using the serial interface

You can save individual Processing Unit files on your PC.

Navigation

Main menu – 5 Default, New Config. of Sensor Units, File Transfer – 3 Serial File Transfer (Zmodem)

Parameter	Explanation
2 Receive File from CMC	Enter the name of the Processing Unit file that you want to save on your computer.

Now use the Search icon to select a destination folder for the file to be saved. Remove ZModem as receive protocol and click "Receive" to confirm your input.

6.6 Access using a browser

Call your web browser as usual. Enter the IP address of the Processing Unit in the address bar and call the page.

6.6.1 Login
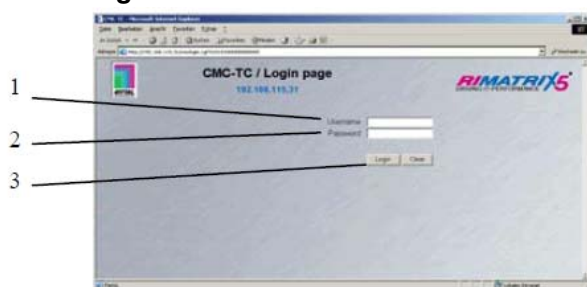
Fig. 22   Login window

Key
1   Username
2   Password
3   Login or Clear button

Actions
-    Enter in the login window the http user name and the http password of the Processing Unit. Factory setting:
     Username: admin
     Password: admin
-    To confirm the input, click the Login button. To clear the input, click the Clear button.

6.6.2

Main page view
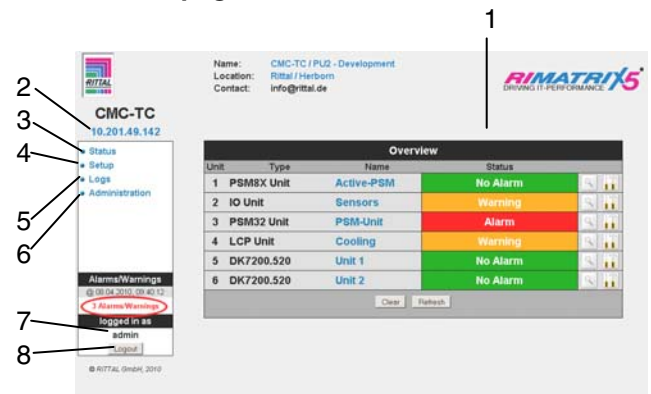
Fig. 23   Main page view

Key
1   Status window
     As shown above
2   IP address of the Processing Unit
3   Link to the main page view
4   Setup link
5   Alarm and event logging link
6   Administration link
7   Username
8   User logout

The following buttons are provided to simplify the navigation between the individual pages:

 Setup button:
Links from the overview page (main or units overview) to the setup pages of the associated unit.

 Overview button:
Links from the main overview page to the units overview page.

 Back button:
This button can be used to go back one page from any page.

 Home button:
Links directly to the main page from any units overview page or from the setup pages.

 This button can be used to switch between horizontal and vertical view on the units overview page.

6.6.3
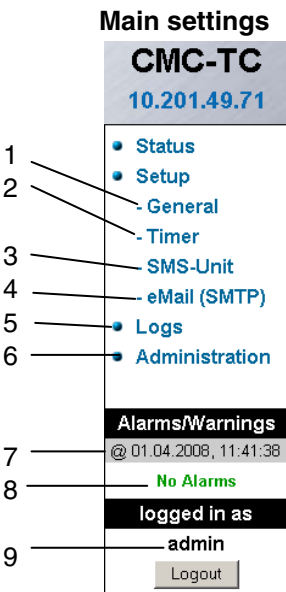
Main settings

Fig. 24   Main settings

Key
1   General
     This link can be used to make fundamental settings on the PU II (name, location, contact name, temperature unit, beeper, alarm relay confirmation, alarm relay options, background colour, date and time).
2   Timer function (see 6.6.4 Configuring the scheduler).
3   SMS unit (see 6.6.5 GSM unit or 6.6.6 Configuring the ISDN unit).
4   eMail (SMTP).
5   Event Logging (see 6.6.8 Viewing the log file).
6   Administration linked to the user administration provided you are logged in as administrator. Otherwise you can only change your own password.
7   Date and time of the last alarm/warning status change.
8   Current status of the alarms and warnings.
9   Logged in user.

6.6.4   Configuring the scheduler
You can program a maximum of eight timers.
1   Specify whether the timer is to be active or inactive.
2   Select the day or days when the timer is to be active.
3   Specify the time window (format: hh:mm).
4   Specify what the timer is to perform during this time.

The following functions can be selected from item 4:

Description	Function
Dis.keypad unit	Disables the associated keypad.
Unlock unit	Opens the door (front or rear) of the associated unit.
Disable Trap Receiver	No alarms are sent to the trap receiver.
Disable SMS (General)	Disables the SMS notification function.
Alarm Scheduler	Disables the alarms configured for "Scheduled Alarm off" in the sensor configuration.
Disable SMS Receiver	Disables the SMS notification function for a specific recipient.
Disable e-Mail Rec.	Deactivates the e-mail notification function for a specific receiver.
Status e-Mail to Rec.	Sends a status e-mail to a recipient. A maximum of 150 messages are transferred for each status mail. If more than 150 messages are present, only the most recent 150 will be sent in the e-mail.

6.6.5   Configuring the GSM unit
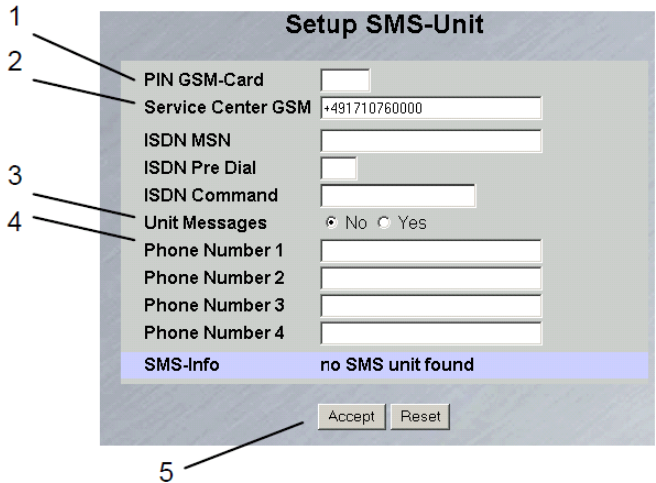
Fig. 25   Setup for SMS unit

Key
1   GSM Card PIN
     Enter the PIN for your GSM card here.
2   GSM Service Centre
     Set the service centre number. This differs depending on the mobile telephone system provider. Observe the notation (e.g. +491710760000).

3   Unit Messages
    Set whether for a unit error, e.g. timeout or
    configuration change, an SMS is to be sent.
4   Enter the destination telephone numbers (max.
    four destination telephone numbers, e.g.
    +4927725051234).
5   Accept or Reset button
    Accept or reset the settings.

6.6.6   Configuring the ISDN unit

Fig. 26   Setup for ISDN unit

Key
1   ISDN MSN
    Enter here the MSN number of the ISDN
   connection. The MSN number must be entered
    in the following format: +49/2772/123456
2   ISDN Pre Dial
    If the ISDN unit is to be connected to a
    telephone system, you must, for example, enter
    a "0" to obtain an external line.
3   ISDN Command
    Specify the SMS command so that an SMS can
    be sent over the fixed-line network (for
    example, the following command must be
    specified for T-Com: "8888 ANMELD").
4   Unit Messages
    Set whether for a unit error, e.g. timeout or
    configuration change, an SMS is to be sent.
5   Phone Number 1-4
    Enter here the destination telephone numbers
    that are to receive an SMS should an alarm
    occur; the following format must be used:
    +492772123456.
6   Accept or Reset button
    Accept or reset the settings.
6.6.7

Configuring the sending of e-mails
If you have not yet used HyperTerminal to enter the
e-mail addresses of the alarm recipients, you can
do this here. Proceed as follows:

Fig. 27   Setup for sending e-mails

Key
1   IP SMTP server
    Enter the IP address of the SMTP server here.
2   SMTP Authent.
    If your SMTP server requires a username and
    password for authentication, click "Yes".
3   Username Server
    Enter the username for authentication.
4   Password Server
    Enter the password of the server used for
    authentication and repeat the input in the
    Retype field.
5   Sender Name
    Enter a sender name, this name is then
    specified as sender in the alarm mail.
6   Reply to
    If a reply to the alarm mail is required, you can
    specify an e-mail address to which recipient the
    response mail is to be forwarded.
7   Unit Messages
    If the individual units display an error message
    (configuration change, timeout), you can send
    this alarm as mail. To do this, click "Yes".
8   E-Mail Address 1-4
    Enter a maximum of four different e-mail
    addresses here.
Click the "Accept" button to accept and save the
settings.

6.6.8 Viewing the log file

Two different types of logging are performed. The first is the "Alarm Log". This displays all alarms that the logged-in user is allowed to view.
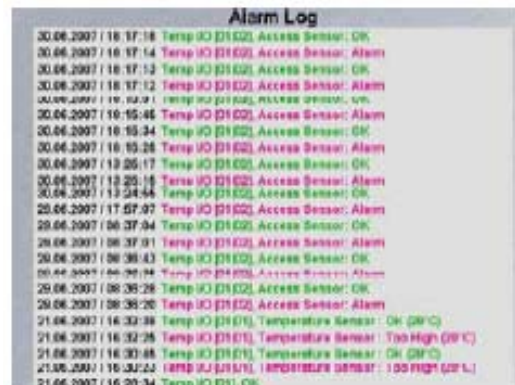
Fig. 28   Alarm Log

The other is the "Event Log". This displays which user logged in and logged out at what time, when an update occurred, when a file was uploaded or downloaded, and various other events.
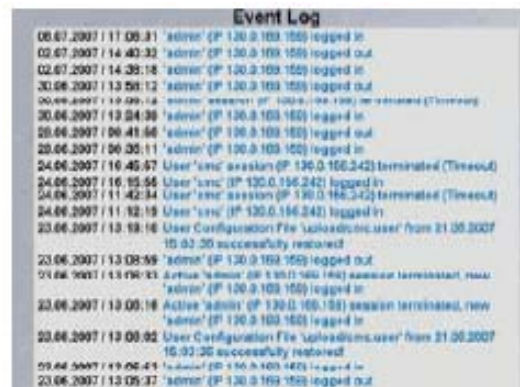
Fig. 29   Event Log

A maximum of 100 messages are recorded. If the memory is full with 100 messages and a new message arrives, the oldest message will be deleted.

6.6.9

Administration

Log in as administrator on the login page (see 6.6.1 Login).
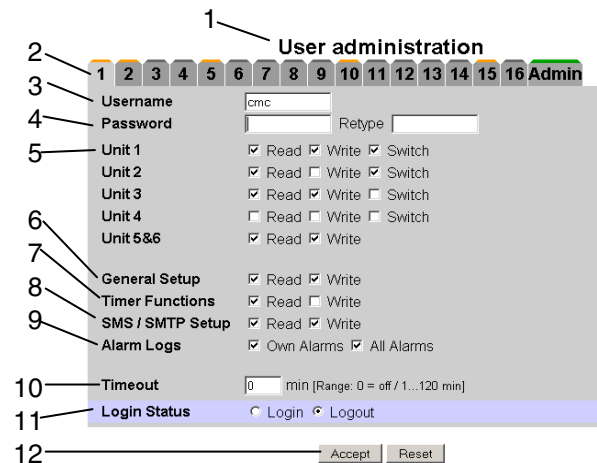
Fig. 30   User administration

Key

1   Page title
2   User page
    A maximum of 16 different users or user groups can be defined (max. 20 characters; special characters are not permitted).
3   Username
    Enter the username or group name. Maximum number of characters: 20 characters (special characters are not permitted).
4   Password
    Password input: Up to 20 characters permitted (special characters are not permitted).
5   Unit 1 – 6
    The access rights are defined on the individual units for each user or user group. Nothing selected: The user has no access to the unit.
    -    *Read:* The user receives only read rights. Settings cannot be changed.
    -    *Write* (Read will be activated automatically): The user receives read and write rights, and has access to the unit, and can read and change the settings but not switch the unit 1 – 4.
    -    *Switch* (Read will be activated automatically): The user receives read and switching rights but no write rights. Connected power socket strips and digital and analogue inputs/outputs can be used by the user.
6   General Setup
    Nothing selected: The user has no access to these functions.
    -    *Read:* The user receives only read rights. Settings cannot be changed.
    -    *Write* (Read will be activated automatically): The user receives read and write rights, and

has access to these functions, and can read and change the settings.

7 Timer Functions

Nothing selected: The user has no access to the unit.

- *Read:* The user receives only read rights. Settings cannot be changed.
- *Write* (Read will be activated automatically): The user receives read and write rights, and has access to these functions, and can read and change the settings.

8 SMS Setup

Nothing selected: The user has no access to the unit.

- *Read:* The user receives only read rights. Settings cannot be changed.
- *Write* (Read will be activated automatically): The user receives read and write rights, and has access to these functions, and can read and change the settings.

9 Alarm Logs

Nothing selected: The user has no access to the Event Logging page.

- *Own alarms:* Users see only the alarm messages of their assigned units.
- *All alarms:* The logged in user can view all alarm messages.

10 Timeout

If a user does not perform any activity in the browser window for an extended period of time, the user will be logged off from the system after the specified time.

11 Login Status

If you are logged in as administrator, you can log off logged-in users.

12 Accept/Reset button

Accept button: Settings will be accepted. Reset button: Settings will not be accepted.

⚠️ **Note!**

If you are logged in as user, you can only change your password in the Administration window.

Logged-in users can only change their own password.

6.7

Configuring the sensors

You can make various settings for each sensor. The CMC-TC PU has four connections. One sensor unit (I/O unit, Access unit, etc.) can be connected to each connection.

Navigation

Main menu

The sensor overview window appears.

6.7.1 General overview (status window)

Fig. 31   I/O units overview

Key

1 Connection number and type of the sensor units
2 Name of the sensor unit: Click to switch to the sensor overview (6.7.2) of the I/O unit.
3 Warning or alarm status of the sensor
- Green: No warning/alarm
- Yellow: Warning
- Red: Alarm (malfunction)
- *Unit detected:* New sensor unit has been connected to the PU II.
- *Configuration changed:* New sensor has been registered on the I/O unit or configuration change of a sensor.
4 Acknowledge events
Click the Clear button to confirm timeouts and configuration changes. This checks the CMC-TC PU and updates the web page.
5 Refresh
Forces the immediate update of the CMC-TC PU web page.
The sensor overview is also updated automatically every ten seconds.

6.7.2 Sensor overview

Fig. 32   Sensors overview on the I/O unit

Key

1 Connection number and sensor type
2 Message text of the sensor. Can be selected freely using the sensor configuration (6.7.3).
3 Status or measured value of the sensor. The font colour indicates the status of the sensor. For analogue values, an arrow also indicates the over- or undershooting of the alarm or warning thresholds.
4 Acknowledge events
   Click the Clear button to confirm timeouts and configuration changes. This checks the CMC-TC PU and updates the web page.
5 Refresh
   Forces the immediate update of the CMC-TC PU web page.
   The sensor overview is also updated automatically every ten seconds.
6 Warning or alarm status of the sensors (overall)
   Green: No warning/alarm
   Yellow: Warning
   Red: Alarm (malfunction)

6.7.3 General overview (sensor configuration)

You can individually set the connected sensors. The structure of the configuration overview is generally always identical and shown here as an example.
To reach this page, click the message text of the sensor or the tool icon 🔧 on the general overview (status window) of the PU II.

Fig. 33   Configuring sensor – overview

Key

1 Connected sensor type
2 Current status of the connected sensor
3 This information text will also be transferred when a warning/alarm message is sent; it also serves as information for the recipient of the message to identify the sensor. You can delete the specified text and add your own information text (e.g. TempSensorRack1).
8 You can set for each sensor whether (enable) or not (disable) the alarm relay should be switched when an alarm occurs.
9 You can set for each sensor whether (enable) or not (disable) the integrated alarm beeper should be activated when an alarm occurs.
10 You can set for each sensor type whether after a warning or alarm status the CMC-TC PU should be acknowledged automatically (Auto) or be acknowledged manually by the administrator (Manual).
11 You can click the individual option fields to specify to which of the entered trap receiver the traps for this sensor will be sent.
12 Click the individual option fields to set which alarm configuration is to be activated or deactivated. You can specify the individual functions from the "Setup – Timer" menu item and assign the associated schedulers.

13 You can enter up to four mobile telephone numbers that you have entered previously from Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
14 You can enter up to four e-mail addresses that you have entered previously from Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
15 Accept all changes.
16 Advanced settings.
17 Reset all settings to the default values.

The following buttons are provided to simplify the navigation between the individual pages:

Back button:
This button can be used to go back one page from any page.

Home button:
Links directly to the main page from any units overview page or from the setup pages.

6.7.4 Configuring the temperature sensor
The temperature sensor (DK 7320.500) is configured as follows:

Navigation
Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured temperature and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "TempSensor Rack01".
Setpoint High	Temperature limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Temperature limit which when exceeded causes a warning message to be issued.
Setpoint Low	Temperature limit which when undershot causes an alarm message to be issued.
Relay Alarm	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.

Parameter	Explanation
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.5 Configuring the humidity sensor
The humidity sensor (DK 7320.510) is configured as follows: The humidity is specified as relative humidity (% rH).

Navigation
Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured humidity and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Humidity Rack01".
Setpoint High	Humidity limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Humidity limit which when exceeded causes a warning message to be issued.
Setpoint Low	Humidity limit which when undershot causes an alarm message to be issued.

Parameter	Explanation
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.6 Configuring the analogue sensor input module

The analogue sensor input module (DK 7320.520) is configured as follows: The individual values are specified as percentage.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured input current as percentage and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Analogue sensor Rack01".

Parameter	Explanation
Setpoint High	Input current limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Input current limit which when exceeded causes a warning message to be issued.
Setpoint Low	Input current limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.7 Configuring the access sensor

The access sensor (DK 7320.530) is configured as follows:

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Access sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Access sensor Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.8 Configuring the vandalism sensor

The vandalism sensor (DK 7320.540) is configured as follows: The individual values are specified as pulses.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured pulses and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vandalism Rack01".
Setpoint High	Pulse limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Pulse limit which when exceeded causes a warning message to be issued.
Setpoint Low	Pulse limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.9 Configuring the airflow sensor

The airflow sensor (DK 7320.550) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Airflow status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Airflow Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.10

Configuring the smoke detector

The smoke detector (DK 7320.560) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Smoke detector status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Smoke detector Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.11

Configuring the motion detector

The motion detector (DK 7320.570) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Motion detector status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Motion detector Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

Configuring the digital sensor input module

The digital sensor input module (DK 7320.580) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Input status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Dig. input Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.12

6 5BOperation

6.7.13 Configuring the digital relay output module

The digital relay output module (DK 7320.590) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Relay output status; enabled = on, disabled = off.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Dig. output Rack01".
Delay	Delay time before switching on or off again. 0 s = no initiation time; 999 s = 999 seconds initiation time.
Timeout	Module behaviour in case of failure of the PU II provided the module itself is still supplied with power: stay = after expiration of the time, return to the original state; switch off = after expiration of the time, the output will be switched off; switch on = after expiration of the time, the relay will be switched on.
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Combinations	Configure the switching combinations (see Section 6.7.14 Configuring switching combinations for the digital relay output module).
Switch Output	Manual switch on (On) or switch off (Off).
Accept	Accept the changes.

Parameter	Explanation
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.14 Configuring switching combinations for the digital relay output module

The switching combination for the digital relay output module (DK 7320.590) is configured as follows: Various switching combinations can be set.

Navigation

Main menu – Setup – Click sensor name – Switching combinations

Parameter	Explanation
If status of	Select the first sensor for the switching combination.
is	Select the first sensor state for a switching operation.
and/or	Select an "and" or "or" operation.
status of	Select the second sensor for the switching combination.
is	Select the second sensor state for a switching operation.
Then…output	Select the switching state when the switching combination is satisfied. switch off = disable relay output switch on = enable relay output
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.15 Configuring the voltage monitor

The voltage monitor (DK 7320.600) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Input status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vltg Rack01".
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.

Parameter	Explanation
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.16 Configuring the voltage monitoring for the voltage monitor with IEC switching output

The voltage monitor with IEC switching output (DK 7320.610) is configured as follows: The individual values are specified in volts.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured voltage and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vltg Rack01".
Setpoint High	Voltage limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Voltage limit which when exceeded causes a warning message to be issued.

Parameter	Explanation
Setpoint Low	Voltage limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.17 Configuring the switching output for the voltage monitor with IEC switching output

The switching output for the voltage monitor with IEC switching output (DK 7320.610) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Output Status	Relay output status; enabled = on, disabled = off.

Parameter	Explanation
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vltg Rack01".
Delay	Delay time before switching on or off again. 0 s = no initiation time; 999 s = 999 seconds initiation time.
Timeout	Module behaviour in case of failure of the PU II provided the module itself is still supplied with power: stay = after expiration of the time, return to the original state; switch off = after expiration of the time, the output will be switched off; switch on = after expiration of the time, the relay will be switched on.
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Combinations	Configure the switching combinations (see 6.7.18 Configuring switching combinations for the voltage monitor with IEC switching output).
Switch Output	Manual switch on (On) or switch off (Off).
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.18 Configuring switching combinations for the voltage monitor with IEC switching output

The switching combination for the voltage monitor with IEC switching output (DK 7320.610) is configured as follows: Various switching combinations can be set.

Navigation

Main menu – Setup – Click sensor name –

Switching combinations

Parameter	Explanation
If status of	Select the first sensor for the switching combination.
is	Select the first sensor state for a switching operation.
and/or	Select an "and" or "or" operation.
status of	Select the second sensor for the switching combination.
is	Select the second sensor state for a switching operation.
Then…output	Select the switching state when the switching combination is satisfied. switch off = disable switching output switch on = enable switching output
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.19 Configuring the voltage monitoring for the voltage monitor with 16 A switching output

The voltage monitor with 16 A switching output (DK 7320.611) is configured as follows: The individual values are specified in volts.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured voltage and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vltg Rack01".
Setpoint High	Voltage limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Voltage limit which when exceeded causes a warning message to be issued.
Setpoint Low	Voltage limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) a warning/alarm should cause an acoustic signal to be issued.

Parameter	Explanation
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.20 Configuring the switching output for the voltage monitor with 16 A switching output

The switching output for the voltage monitor with 16 A switching output (DK 7320.611) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Output Status	Relay output status; enabled = on, disabled = off.
Message Text	Message text also transferred when a status message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Vltg Rack01".
Delay	Delay time before switching on or off again. 0 s = no initiation time; 999 s = 999 seconds initiation time.

Parameter	Explanation
Timeout	Module behaviour in case of failure of the PU II provided the module itself is still supplied with power: stay = after expiration of the time, return to the original state; switch off = after expiration of the time, the output will be switched off; switch on = after expiration of the time, the relay will be switched on.
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Combinations	Configure the switching combinations (see 6.7.21 Configuring switching combinations for the voltage monitor with 16 A switching output).
Switch Output	Manual switch on (On) or switch off (Off).
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.21 Configuring the switching combinations for the voltage monitor with 16 A switching output

The switching combination for the voltage monitor with 16 A switching output (DK 7320.611) is configured as follows: Various switching combinations can be set.

Navigation

Main menu – Setup – Click sensor name – Switching combinations

Parameter	Explanation
If status of	Select the first sensor for the switching combination.
is	Select the first sensor state for a switching operation.
and/or	Select an "and" or "or" operation.

Parameter	Explanation
status of	Select the second sensor for the switching combination.
is	Select the second sensor state for a switching operation.
Then...output	Select the switching state when the switching combination is satisfied. switch off = disable switching output switch on = enable switching output
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.22 Configuring the 48 V voltage monitor

The 48 V voltage monitor (DK 7320.620) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	48 V voltage monitor status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "48 V Vltg Rack01".
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.

Parameter	Explanation
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.23 Configuring the leakage sensor

The leakage sensor (DK 7320.630) is configured as follows: Only the status of the sensor is specified.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Leakage sensor status and sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when an alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Leakage Rack01".
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.

Parameter	Explanation
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.24

Configuring the acoustic sensor

The acoustic sensor (DK 7320.640) is configured as follows: Various limit values can be specified as percentage.

Navigation

Main menu – Setup – Click sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured noise level as percentage and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Acoustic Rack01".
Setpoint High	Noise level limit as percentage which when exceeded causes an alarm message to be issued.
Setpoint Warning	Noise level limit as percentage which when exceeded causes a warning message to be issued.
Setpoint Low	Noise level limit as percentage which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) a warning/alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm.
Alarm Reset	Whether or not a warning/alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the warning/alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.

Parameter	Explanation
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.25 Configuring the Fan Control System (FCS)

The Fan Control System (DK 7320.810) is configured as follows:

Navigation
Main menu – Setup – Click the first sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured temperature and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "FCS Temp Rack01".
Setpoint High	Temperature limit which when exceeded causes an alarm message to be issued.
Setpoint Warning	Temperature limit which when exceeded causes a warning message to be issued.
Setpoint Low	Temperature limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.

Parameter	Explanation
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

Click tab 2 to continue the configuration.

Navigation
Main menu – Setup – Click the second sensor name

Parameter	Explanation
2	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "FCS Fan Rack01".
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

Click tab 3 to continue the configuration.

Navigation
Main menu – Setup – Click the third sensor name

Parameter	Explanation
3	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Fan Status	Sensor status. Green = OK, yellow = warning, red = alarm, grey = fan not connected.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "FCS Fan Rack01".
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.

Parameter	Explanation
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not an alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.26 Configuring the Fan Alarm System (FAS)

The Fan Alarm System (DK 7320.811) is configured as follows:

Navigation

Main menu – Setup – Click the first sensor name

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Measured temperature and sensor status. Green = OK, yellow = warning, red = alarm.
Message Text	Message text also transferred when a warning/alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "FAS Temp Rack01".
Setpoint High	Temperature limit which when exceeded causes an alarm message to be issued.
Setpoint	Temperature limit above which the fan operates at 100% power.

Parameter	Explanation
Setpoint Low	Temperature limit which when undershot causes an alarm message to be issued.
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not an alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.7.27 Wireless sensors

The configuration of the wireless sensors corresponds to the configuration of the associated cable-connected sensor.

Wireless sensor type	see configuration in
Temperature	Section 6.7.4
Humidity	Section 6.7.5
Access	Section 6.7.7
Digital input	Section 6.7.12

The connection of the wireless sensors to the wireless I/O unit is described in detail in the Wireless I/O Unit manual (7320.240).

6.8 Access using Telnet

You can also configure the Processing Unit using Telnet. This requires that you be permitted to have access with the terminal program using Telnet (see 6.3.18 Configuring Telnet access).

6.8.1 Login using Telnet
This section describes access using Telnet with Windows.
a. Open the command prompt and enter the following command: *telnet <IP address>*
b. Press "Return" or "Enter" to confirm.
c. Enter for "login" the Telnet login (factory setting: 'cmc'). Press "Return" or "Enter" to confirm.
d. Enter for "password" the Telnet password (factory setting: 'cmc'). Press "Return" or "Enter" to confirm.

6.8.2 Telnet main menu
After login using Telnet, the same main menu as for access using HyperTerminal appears. Because all procedures are similar, refer to chapter 6.

Note!

In addition to access using Telnet, an encrypted access to the PU II configuration using an SSH client (e.g. Putty) is possible. In contrast to Telnet access, the SSH access cannot be disabled.

6.9 Perform a software update
Download from the www.rimatrix5.com (Security) internet page in the download area, the software update to your PC. Unpack the file into a separate folder, e.g. with the name: puupdate.

Note!

The update takes approx. 10 minutes. Also refer to the update guidelines that the update makes available for download in the internet.

Caution!

The update must not be interrupted, because otherwise a complete failure of the PU II can result.

- Open the command prompt and navigate to the folder that contains the unpacked software update.
- Enter the following command: *update <IP address>* (e.g. update 192.168.0.130).

The PU II must be reachable in the network using the IP address entered.

The file will now be sent to the CMC-TC Processing Unit. This is displayed with several #-characters in the command prompt window.

The CMC-TC Processing Unit automatically performs two restarts during the update process. The process takes several minutes. Do not change anything on the CMC-TC. Do not disconnect the Processing Unit from the mains. Wait until the Operating LED illuminates again and the message *'Updating finished, login to Rittal CMC PU <IP address> again'* appears.

6.10 Error messages

Operating/Alarm LED off

Cause	Rectification
Power pack not connected	Connect power pack.
Power pack defective	Replace the defective power pack with an operational one.
Missing power supply	Establish the power supply.
PU II booting	Wait several minutes until the LED illuminates.

Link/Traffic LED off

Cause	Rectification
Network connection missing	Connect RJ45 network cable.
Incorrect IP address	Check the IP address.
Incorrect subnet mask	Check the subnet mask.
Incorrect gateway address	Check the gateway address.

No access authorisation using Telnet

Cause	Rectification
Telnet access blocked for the PU II	Activate Telnet access using HyperTerminal.
Incorrect IP address entered	Check the IP address.
Incorrect username entered	Check the username.
Incorrect password entered	Check the password.

No access authorisation using the browser

Cause	Rectification
Incorrect username entered	Check the username.
Incorrect password entered	Check the password.

No access authorisation using HyperTerminal

Cause	Rectification
Incorrect username entered	Check the username.
Incorrect password entered	Check the password.

No setting capability using the browser

Cause	Rectification
Web access set only to read authorisation	Set the access authorisation using HyperTerminal or Telnet in the Web Access menu. Alternatively, the administrator must set the appropriate rights for the user in the web interface.

SNMP does not send (or traps do not arrive)

Cause	Rectification
The read and write community entries are not set correctly	Use HyperTerminal or Telnet to compare the read and write authorisation with that of the management software.
Trap receivers have not been entered	Check the trap receivers.

Sensor not detected or not displayed

Cause	Rectification
Sensor not contained in the software	Perform a software update.
Sensor defective	Replace sensor.
Sensor not connected	Connect sensor; if necessary, remove and reinsert the sensor several times. It sometimes helps to briefly insert a different sensor in order to directly switch back to the first sensor.

6.11 Structural layout of the MIB of the Processing Unit

Only the device-typical part of the MIB of the Processing Unit (CMC-TC.MIB) is briefly described here. This area of the MIB, in particular, must take account of the modular and flexible system concept of the CMC-TC system. For this reason, the related information that applies to the sensor units (e.g. I/O unit, Access unit, Climate unit) and the downstream sensors or actuators is mainly shown in tables.

A table for the sensors, the outputs/actuators and the messages is provided for each connectable sensor unit. It is possible to connect up to four sensor units to the Processing Unit.

The number of table rows differs for each table type and depends on the maximum number of available ports for the sensor unit.

Overview of the maximum table entries for each sensor unit.

Sensor unit	Sensors	Outputs	Messages
I/O unit	4	4	4
Access unit	8	6	4
FCS	3	1	3
RTT	40 (4 per device)		
RLCP	36	16	4
Active PSM	12 (3 per module)	12 (3 per module)	12 (3 per module)
Climate unit	2	1	3

Note that the number of possible sensors, outputs and messages is stored in a dedicated MIB variable.

Sensors:

Note!

The numbers in column 2 correspond to the port numbers of the I/O unit. The sensors are assigned in accordance with their physical connection. Outputs are not displayed in this table, refer to the following table.
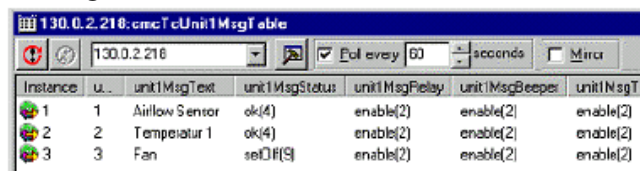
Outputs:

Note!

The numbers in column 2 correspond to the port numbers of the I/O unit. The displayed outputs correspond to their physical connection on the port.

Messages:

Note!

The numbers in column 2 correspond to the port numbers of the I/O unit. The displayed table entries correspond to the current status and the configuration settings for the port.

Representation of the table and the sample table entries of the Access unit

Sensors:

Note!

Column 2 indicates to which port the accessory components are connected. Ports 1, 2, 3 and 7 correspond to door system 1; ports 4, 5, 6, and 8 correspond to door system 2.
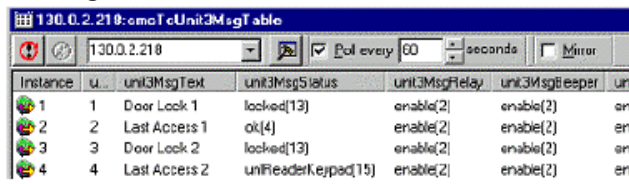
Outputs:

Note!

Column 2 indicates the physical connection of the port assignment.

Messages:
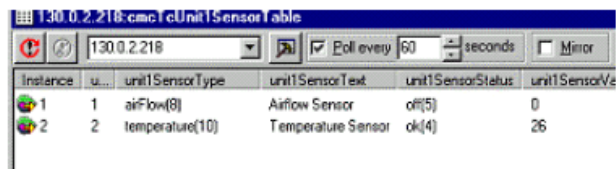
Note!

The displayed table entries correspond to the current status and the configuration settings for the door closing system 1 or 2.

Representation of the table and the sample table entries of the Climate unit
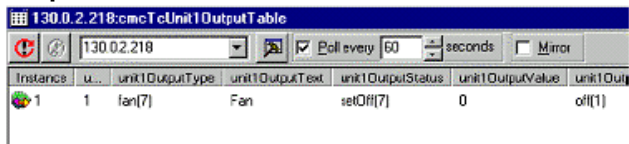
Sensors:

Note!

The numbers in column 2 correspond to the port numbers of the Climate unit. The sensors are assigned in accordance with their physical connection. Outputs are not displayed in this table, refer to the following table.

Outputs:

Note!

Column 2 indicates the physical connection and the status of the port.

Messages:

Note!

The numbers in column 2 correspond to the port numbers of the Climate unit. The displayed table entries correspond to the current status and the configuration settings for the

port.

Representation of the general setup table and sample table entries

Another table provides the general setup settings shown below.

6.12 Active PSM (4-way)
The Active PSM modules are available in various configurations.

PSM module	Configuration	Model No.
Active 4-way	4xC13	7865.200
Active 8-way	8xC13	7865.201
Active 8-way	8xC13 (19")	7200.001
Active 6-way	2xC13, 4xC19	7865.204
Active 6-way	2xC13, 4 x earthing contacts	7865.203

The information for the Active PSM (4-way) described here also applies to the four other active module types. Additional details for the other module types are contained in the associated operating instructions.

6.12.1 Getting acquainted with the module connections
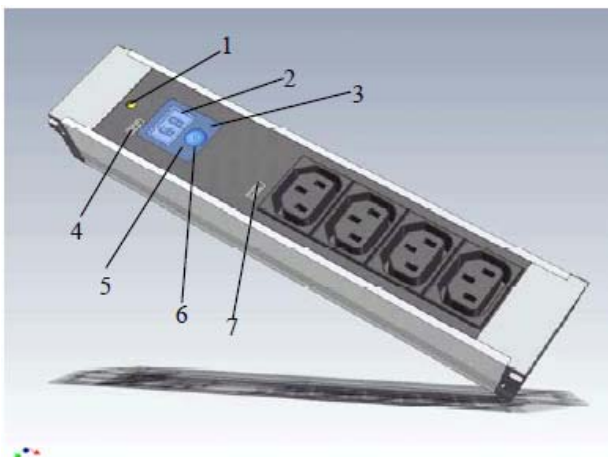
Fig. 34   Active PSM (4-way)

Key
1   Fuse (10 A thermal circuit-breaker)
2   Display element (display of the actual current value)

3   LED circuit 2 (depending on the installation position and the configuration, the LED illuminates)
4   Connection to the Processing Unit or to the previous module
5   LED circuit 1 (depending on the installation position and the configuration, the LED illuminates)
6   Pushbutton (used for configuring the module)
7   Connection to the next module (up to four modules can be cascaded)

6.12.2 Display and operating elements
2-digit 7-segment display, digit height 10 mm, colour: Red
The 7-segment display shows the actual current value.
In setting mode, it also shows the settings parameter.
Up to a value of 9.9 A, the current is shown with one decimal place; above 10 A, the current is shown as integral value without decimal place.
In a fault situation, this display flashes.
Note that any changes made to the installation position also change the reading direction of the 7-segment display.
Two 3-colour LEDs (green, orange, red), labelled as "I" or "II".
Each of these LEDs flashes appropriately depending on the installation position of the module.

Parameter	Explanation
Green	OK
Orange	Warning, fuse activated or mains voltage absent
Red	Maximum current value exceeded or minimum current value undershot

Pushbutton:
The pushbutton is used to enter or change the limit values, the BUS address and for the fixed definition of the reading direction of the display.
Briefly pressing the pushbutton changes the setting value or the setting level.
Press the pushbutton for a longer period (approx. 4 seconds) to confirm the set value or the preselected setting level.

6.12.3 Displays

Parameter	Explanation
Flashing display	Current not within the limits
0.0 displayed	No consumers connected to the Active PSM
3.2 etc. displayed	Consumers connected; their "consumed" current value is 3.2 A

Parameter	Explanation
n.P. displayed	"No power" means that no power is supplied to the PSM busbar or the fuse has deactivated the system
LED display green	Everything OK
LED display red	Value not within the limits
LED display orange	No voltage or fuse has deactivated the system

A detailed description of the setting menu for the Active PSM is contained in the next section.

6.12.4 Setup menu for the local pushbutton

Important parameters must be set for the initial commissioning of the 4-way Active PSM. The following list displays how the 4-way Active PSM is set.

Short press   = UP
Long press (approx. 4 seconds) = Enter
When no pushbutton is pressed for approximately five seconds, the system returns to the base display.

Actual current value base display			
Enter			
"L" display	Enter	Set the low limit value by pressing the pushbutton briefly.	Enter
"H" display	Enter	Set the high limit value by pressing the pushbutton briefly.	Enter
"A" display	Enter	Set the BUS address by pressing the pushbutton briefly.	Enter
"o" display	Enter	Set the display orientation: 1 = fixed circuit 1 2 = fixed circuit 2 3 = automatic	Enter

6.12.5 Connecting the Active PSM to the CMC-TC

The Active PSM is connected to the CMC-TC Processing Unit II (in short, PU II) using one of the RJ45 connections of the Processing Unit. This socket also functions as the power supply for the module display. The connection between the PU II and the Active PSM is made using a special adapter cable and a Cat5 cable (7320.472). The adaptor cable is included in the scope of supply. The connecting cables must not exceed the specified maximum length of 10 m, otherwise Rittal cannot warrant that the product will function correctly.
Insert the Cat5 cable in the provided sockets of the PU and in the adaptor cable of the Active PSM.

Note!

Prior to the installation and commissioning, read and observe the installation and operating instructions, in particular, the contained safety notes.

These operating instructions are available in two languages as a downloadable PDF file at http://www.rimatrix5.com.

Assembly
Before commencing the installation, ensure the completeness of the scope of supply. Also ensure that the system complies with the admissible conditions of use, in particular, the permitted ambient temperatures and the required IP protection category.

Integration of Active PSM and PSM busbars
The Active PSM is centred over the busbar's connectors and pressed on using gentle force. The Active PSM is connected correctly when all four of the Active PSM's catches are engaged in the busbar. To remove the module from the bus, you must carefully retract and withdraw all four catches at the same time.
Ensure no consumers are connected to the sockets, otherwise they will be disconnected from the power supply when the module is removed from the busbar.
In addition, you must note the direction in which the Active PSM is connected. The busbar also serves as a redundant power supply, so the Active PSM can be installed in either direction between Circuit 1 and Circuit 2.

Voltage supply:
The power is supplied to the Active PSM electronics from the CMC-TC Processing Unit II (PU II). This requires that the Category 5 patch cable is inserted in the RJ45 socket of the PU II and in the adaptor cable of the Active PSM. Up to four modules can be connected in series on a PU II channel. Unique addresses must be assigned for each module (1, 2, 3, 4).

Note!

For the series connection of PSM modules to the PU II, only one Active PSM module type can be cascaded for each sensor unit input of the PU II.

Example:

Sensor input 1: 3x Active PSM (4-way, 7865.200)

Sensor input 2: 4x Active PSM (8-way, 7856.201)

Sensor input 3: 2x Active PSM (8-way, 7200.001)

Cascaded PSM modules must be numbered consecutively (module 1 = address 1, module 2 = address 2, etc.)

If only one module is connected, address 1 must be specified here.

Once the Active PSM is supplied with power, 0.0 A appears on the display. The display shows the immediate active current drawn by diverse consumers when they are connected to the sockets.
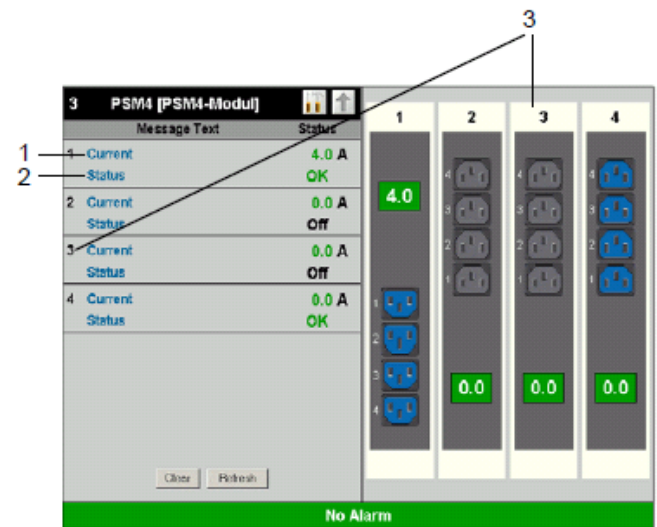
6.12.6 Monitoring using the browser

Fig. 35   Active PSM browser display

Key
1 *Current:* Display of the actual current value of the consumers (server, etc.) connected to the Active PSM.
2 *Status:* Indicates whether the entered current limit value is observed. A message will be issued if the current lies outside the limit values.

3   Position: Indicates the installation position (0°
     or 180°) of the associated module.

6.12.7 Configuring the Active PSM

Navigation
Main menu – Setup – 1. Click current

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Sensor status. Green = OK, red = alarm.
Message Text	Message text also transferred when an alarm message is sent. Enter a designation here that uniquely identifies your sensor, e.g. "Current Rack1".
Setpoint High	Current limit which when exceeded causes an alarm message to be issued.
Setpoint Low	Current limit which when undershot causes an alarm message to be issued.
Delay	Time in seconds how long the power socket should remain switched off.
Relay Output	Off = manual disable of the PSM module; On = manual enable of the PSM module.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

Navigation
Main menu – Setup – 2. Click status

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Sensor status. Green = OK, red = alarm.
Alarm Relay	Whether (enable) or not (disable) an alarm should switch an alarm relay.
Alarm Beeper	Whether (enable) or not (disable) an alarm should cause an acoustic signal to be issued.
Alarm Reset	Whether or not an alarm should be acknowledged automatically (Auto) or must be acknowledged by the administrator (Manual).
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.

Parameter	Explanation
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

Navigation
Main menu – Setup – 3. Click position

Parameter	Explanation
1 ... n	Connection number of the sensor.
Type	Sensor type. Will be detected automatically.
Sensor Status	Sensor status. Black = Circuit 1, blue = Circuit 2
Trap Receiver	Set to which of the entered trap receivers the alarm messages should be sent. Enter the trap receivers at 6.3.2 Configuring the trap receiver.
Scheduled Alarm Off	Set which alarm configuration should be enabled or disabled. The individual functions can be specified from the "Setup – Timer" menu item.
Send SMS	You can enter up to four mobile telephone numbers that you have entered previously at Setup – SMS-Unit; each number is separated with an ampersand "&", e.g. 1&2&3&4.
Send eMail	You can enter up to four e-mail addresses that you have entered previously at Setup – eMail (SMTP); each address is separated with an ampersand "&", e.g. 1&2&3&4.
Accept	Accept the changes.
Reset	Reset all settings to the last-saved values; changes are not accepted.

6.13 Metered PSM

Note!

The installation and commissioning of the PSM busbars with measurement is described in the operating instructions for the Metered PSM.

6.14 Monitoring the LCP and RTT I/O unit

The LCP unit or RTT I/O unit is connected to the CMC-TC Processing Unit II (PU II) using one of the four RJ45 connections.

Note!

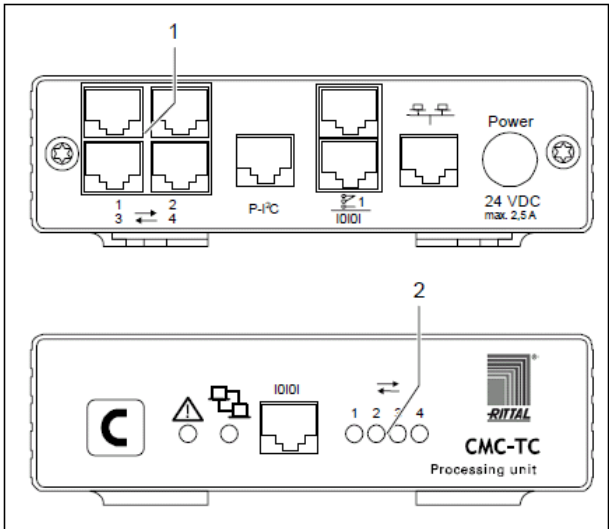**The installation and commissioning of the LCP and RTT I/O unit is described in the operating instructions for the LCP or RTT I/O unit.**

Fig. 36   Establishing the sensor connection

Key
1   Sensor units connections (1-4)
2   Status LEDs for connected sensor units
The network connection of the PU II (item 1) is made using a network cable with RJ45 plug.
The data connection exists when the appropriate Link LED (item 2) illuminates green/orange. Establishing the connection for the RTT I/O unit can take as long as 70 seconds.

6.15 Access control using an external access file

An extended access control is integrated in the Processing Unit II software. The access codes can be edited using a text file sent by FTP to the PU II. This form of access control has the following properties:
A single keypad (or card reader) can be used to control up to eight doors on four Access units.

Up to 200 different codes can be stored (each code can release up to eight doors concurrently).
If several identical codes with different authorisations are entered, only the first entry will be used.
The file must have the name **'access.cmc'** and can be created and edited using any ASCII text editor (e.g. Notepad). A line with the following syntax must be created for each access code:

„1234"	,	„0102"	=	user

User identification: This optional maximum 8-digit decimal number (10000-99999999) can be used to specify whether a user identification will be sent with the trap message.

Separator: (e.g. '=')

Door release: This 4-digit number contains a decimal number 0...3 for each of the four possible Access units. This number specifies which door is to be released:
0 –   do not release any door
1 –   release door 1
2 –   release door 2
3 –   release door 1 and 2
This number must always contain four digits, irrespective of how many Access units are connected; a '0' must be specified for any Access units that are not present.
Important: The position of the digit specifies the assignment to the Access unit. The first digit (from the left) controls the Access unit connected to port 1 of the PU. The second digit controls the Access unit on port 2, etc.

Separator: (e.g. comma)

Release code: This 4-digit decimal number contains the release code entered from the keypad or entered on the magnetic card or chip card. The release code can have the number 0001 to 9999; four digits must always be entered.

In contrast to the code input from the web page, no range can be entered here. A unique 4-digit decimal number must always be specified.

The normal access control is voided when this access file is copied to the Processing Unit II, i.e. the codes stored in the file now have priority. To reactivate the normal access control, the file must be deleted using FTP. This causes all access authorisations to be lost and new authorisations must be entered. To enter the default values, a reboot must be performed after the file has been deleted. The transfer to the Processing Unit II is made with FTP by the 'admin' user. The file must be transferred to the 'upload' directory.

It is possible to connect up to eight keypads (or card readers) to the system. This requires, however, that a door (handle and access sensor) is present at the connection to which the keypad (card reader) is connected. These keypads (card readers) all have the same authority. This means, irrespective of where the code is entered, the door(s) specified in the access file will be released.

6.16 Backup and transfer of configuration files

This function can be used to save the configuration for the CMC-TC system and, if necessary, restore it on the system later.

The configuration can also be transferred to other CMC-TC systems that are wired and structured identically.

Note!

Caution, this function may only be used when the CMC-TC systems are identical with respect to:

- **the sensor types or ports that are used**
- **the sensor units or the ports and addresses that are used**
- **software versions**

In addition, no sensors or sensor units may be missing or connected in a different sequence.

If these conditions are not observed, the PU II system will not accept the configuration.

Save configuration files:

When the commissioning, installation and the setting of all text, limit values, links, network setting, etc., has been completed, this information can be saved on an external system (network PC).

The FTP or SFTP protocol can be used to establish access to the **Download** directory in the PU II.

The three files can be loaded there and saved on the network PC.

cmc.cfg	System data (cannot be edited)
cmc.user	User administration data (cannot be edited)
net.cfg	Network settings (can be edited)

The changes are accepted immediately after the file has been transferred. The correctness of the acceptance can be seen in the event log.

Note!

Caution! When editing the net.cfg file, the format or the file structure must not be changed under any circumstances.

Failure to comply with this instruction can lead to complete system failure.

Transferring configuration files:

Condition:

The three configuration files have been saved beforehand.

The FTP or SFTP protocol can be used to establish access to the Upload directory in the PU II.

Configuration files that are transferred to the destination unit:

cmc.cfg	Installation data (cannot be edited)
cmc.user	User administration data (cannot be edited)
net.cfg	Network settings (can be edited)

7 Inspection and maintenance

7.1 Inspection
The system must be checked regularly for its complete correct functioning. Rittal recommends a regular function test when required. The intervals between the tests should be no longer than one year.

7.2 Maintenance
The Rittal CMC-TC Processing Unit is a maintenance-free system. The housing does not need to be opened for the installation or during operation.

⚠ **Note!**

Opening the housing or accessory components voids any warranty or liability claims.

7.3 Cleaning

Caution!

Danger of damage!

⚠ **Do not use aggressive substances such as cleaner's naphtha, acids, etc., for cleaning the device as they may cause damage.**

Use a slightly moistened soft cloth to clean the housing.

8 Storage and disposal

8.1 Storage
If the device is not used for a long period, we recommend that you disconnect the device from the mains and protect it against moisture and dust. Further information about the operational conditions is contained in the technical specifications.

8.2 Disposal
Because the CMC-TC Processing Unit consists primarily of the housing and PCB, the unit must be disposed of through the electronic waste recycling system when it is no longer required.

9 Changes from software version 2.6

A number of changes and new functions have been implemented in various areas of the CMC-TC Processing Unit II from software version 2.6. These amendments are documented in this chapter.

9.1 Language selection for the browser interface

The menu item **Setup > General > Language** or **Einstellung > Allgemein > Sprache** permits you to switch between the English and German versions of the browser interface.

This language setting is used not only for the browser interface, but also for log files, e-mail texts, SMS texts and the display output.

9.2 Extended options under "Combinations"

Switching combinations, e.g. for the digital relay output module (see Section 6.7.14), were in the past limited to combinations of two sensor values. From software version 2.6, it is possible to define logical combinations of up to four sensors. To this end, the sensors are first configured in two "groups" of two sensors each. These groups can then be combined by way of a further AND or OR operation.

As of software version 2.9, *'is'* or *'is not'* in the dropdown list can be used to query the negated sensor status.

Note:

A warning message will now be displayed (fig. 37 below) that informs the user that when 'Combinations' is used, a check should be made after each change to the system configuration whether all set 'Combinations' are still appropriate. For example, it is possible that sensors used in 'Combinations' have been deregistered and so a useful function of this 'Combination' is no longer possible.
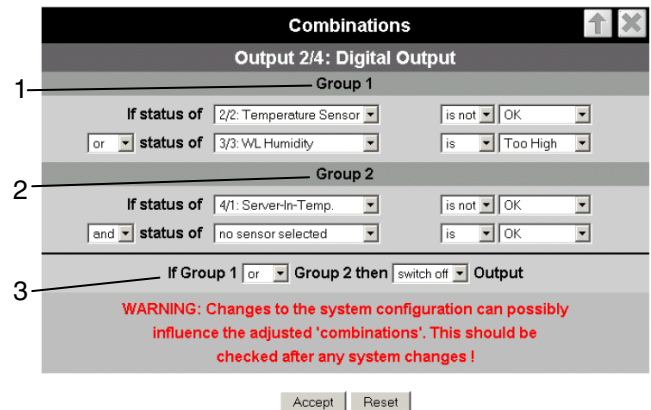
Fig. 37   Extended "Combinations" configuration

Key

1   *Group 1*: Combination of the first two sensors. The sensors and logic operation can be chosen freely using any of the connected sensors.

2   *Group 2*: Combination of sensors 3 and 4. The sensors and logic operation can be chosen freely using any of the connected sensors.

3   Combination of the two groups (AND/OR operation). The final result then controls triggering of the action. In this example, the door is unlocked.

To provide a complete overview of all set *'Combinations'*, the *'combination.log'* log file is maintained in the download directory of the PU II. All settings will be entered as text in this file for each change to the *'Combinations'*. The user can use any text edi-tor to display this file, and print it for documentation purposes.

9.3 New functions for the alarm and event log

Two new functions have been added to the alarm and event log (see Section 6.6.8): **Delete** and **Refresh**.
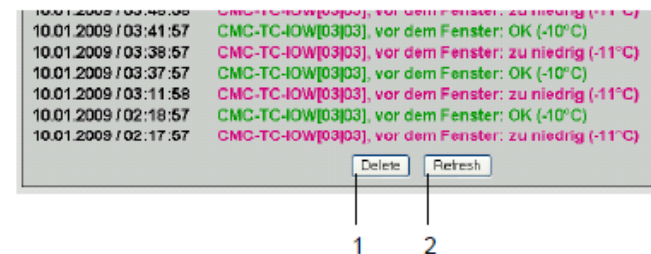
Fig. 38   Alarm and event log

Key

1   Delete button: Deletes all entries from the log.

2   Refresh button: Refreshes the log page and displays the latest log entries.

9.4 Test functions for traps, e-mail, SMS and pings

The alarm simulation menu is called via the menu item Administration > Admin > Simulation. It is possible to test the e-mail, SMS and trap functions here, and to send a ping to a specified IP address.
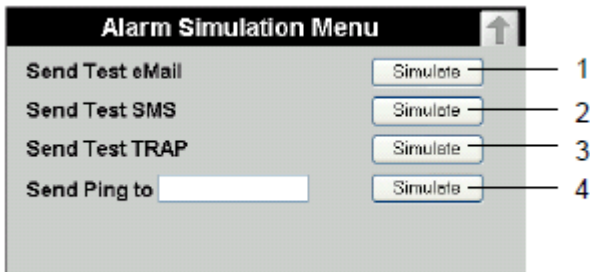

Fig. 39   Alarm simulation menu

Key

1   Sends a test e-mail to all e-mail addresses entered under *Setup > Email*
2   Sends a test SMS to all telephone numbers entered under *Setup > SMS-Unit*
3   Sends a test trap to all entered and enabled trap receivers (see Section 6.3.2)
4   Sends a ping to the specified IP address

9.5 Scaling of the 4..20 mA sensor inputs of the input module

In the settings for the analogue sensor input module 7320.520, it is now possible to define start and end values for automatic scaling of the output. In other words, you can specify which measurement values are to correspond to an input of 4 mA or 20 mA. During operation, the Processing Unit II then converts the current input value accordingly before outputting the corresponding measurement value.

It is furthermore possible to specify the unit to be displayed with the measurement values. This serves to simplify evaluation and improves display clarity when using this universal sensor option.

9.6

Server shutdown function

The function **Setup > Shutdown** can be used to shut servers down conditionally via the Processing Unit II. The prerequisite is that an RCCMD client must be installed on the target servers.

> **Note!**
>
> **The installation file for the RCCMD client can be downloaded from www.rimatrix5.com under Service&Support > Downloads. A 30-day test licence is also available there.**

The same warning message as displayed for 'Combinations' also appears here. This message, however, will have already been displayed for the invocation of the 'Server Shutdown' function. After clicking 'OK' to confirm or a delay time of approximately 10 seconds return is made to the 'Setup Server Shutdown' page.

As for 'Combinations', as of software version 2.9, *'is'* or *'is not'* from the dropdown list can also be used here to query the negated sensor status.
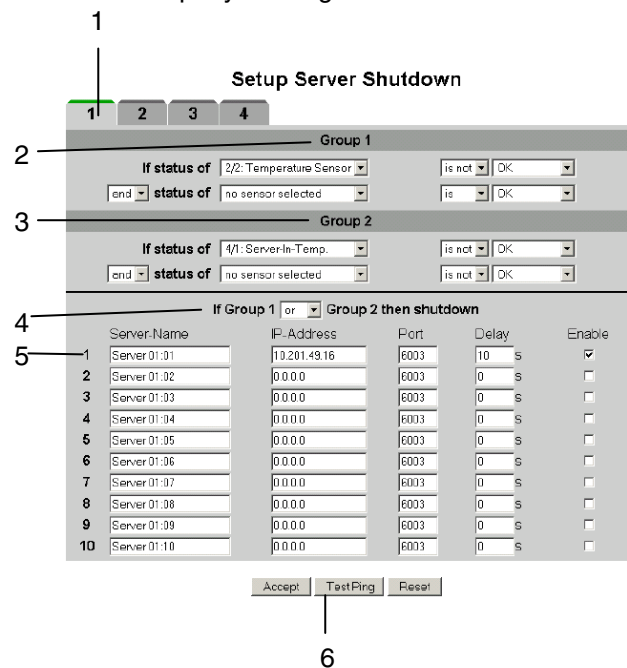
Fig. 40   Server shutdown configuration

Key

1   Tabs for the 4 server groups. Each group controls up to 10 servers.
2   Group 1: Combination of the first two sensors. The sensors and logic operation can be chosen freely using any of the connected sensors.
3   Group 2: Combination of sensors 3 and 4. The sensors and logic operation can be chosen freely using any of the connected sensors.

4   Combination of the two groups (AND/OR operation). The final result then triggers the shutdown of the server group.

5   Each line contains settings for one server.
- *Server Name*: Freely chosen server name
- *IP Address*: IP address of the server.
- *Port*: Port used to communicate with the RCCMD client (default: 6003).
- *Delay*: Delay in seconds before the shutdown command is sent to the server when the switching conditions are met (item 4).
- *Enable*: If this field is activated by setting a check mark, the server will be shutdown should the condition (item 4) occur. In addition, the connection to this server will be tested when the Test button (point 6) is clicked.

6   Test ping button. Sends a ping to the servers to test the connections to them.

Note!

The Test Ping button does not send shutdown commands to the servers!

It merely checks whether communication with the specified servers is possible. All servers entered on the four tabs that have been enabled by setting the check mark are considered.

A maximum of four sensor values, configured in two groups as for the Combinations, can be used to shut the servers down on the basis of defined conditions.

The tabs 1 to 4 permit the configuration of four server groups. Within each group, up to 10 servers can be sent a shutdown command on the basis of the specified sensor conditions. The conditions must be defined individually for each server group.

The 'sd_combination.log' log file is also maintained in the download directory for the 'Server Shutdown Combinations'. This log file contains all server names (with their relevant settings) that have been activated with 'Enable'.

9.7

Automatic Door Opening Control Unit

Fig. 41 shows the configuration screen for the Automatic Door Opening Control Unit 7320.790. Also observe the instructions given in the user manual enclosed with the unit.

Fig. 41   Configuration of automatic door opening

Key

1   Current status of the door control.

2   When opening the door, the time for which the contact remains open before switching back to the status "closed".

3   Timeout response of the door control.
   Stay: Current status is maintained
   Open: Door control opens
   Close: Door control closes

4   Manual switching of the door control.
   It is necessary to confirm the action by clicking on **Accept**

9.8 Delayed alarms

To prevent a warning or alarm being issued in case of insignificant short-time fluctuations, it is possible to define a delay time for each sensor.

Fig. 42   Configuration of delayed alarms

Key

1   Alarm Delay: Delay between exceeding of the threshold value and actual issuing of an alarm. The time must be specified in seconds (between 0 and 999 seconds).

The "Alarm Delay" value defines how long a threshold value must be exceeded before the corresponding warning or alarm is issued. Example of a temperature sensor: If the alarm delay is set to 120 seconds and the threshold for a warning is set to 50°C, an increase in temperature to 55°C will only result in a warning being issued if this excess temperature is measured for at least 120 seconds. If the measurement falls back below 50°C after 60 seconds, for example, no warning will be issued, despite the fact that the temperature was for a time above the defined threshold value.

> ⚠ **Note!**
>
> **It is not possible to enter "Alarm Delay" values for Active PSM busbars/modules.**

9.9

Protection against cross-site scripting (XSS)

As protection against a cross-site scripting attack, the input fields of the browser interface, e.g. the message texts, accept only a certain set of characters.

The permissible characters are:

- A-Z, a-z
- 0-9
- _.,;= +:?/%$*@-&()
- Space

All other characters are deemed invalid and are automatically rejected.

9.10 Hysteresis and offset value for analogue sensors

As of software update 2.9, the hysteresis value can be set for the following sensors:

- Temperature sensor: default = 5%
- Wireless temperature sensor: default = 5%
- Analogue sensor 4…20 mA: default = 5%
- Humidity sensor: default = 5%
- Wireless humidity sensor: default = 5%
- Voltage sensor: default = 5%
- Voltage measuring board DK 7200.520:   default = 2%

Click the 'Advanced' button to reach the website with the advanced settings. You can now set the hysteresis value here.

Fig. 43   Humidity sensor – Advanced settings

On this page you can now also enter the offset value to compensate for any sensor deviations. This function is available for the following sensors:

- Temperature sensor: Range: -5°C...5°C
- Wireless temp.
  sensor: Range: -5°C...5°C
- Analogue sensor
  4...20 mA: Range: -10%...10%
  Of the complete measurement range
- Humidity sensor: Range: -20%...20%
- Wireless
  Humidity sensor: Range: -20%...20%
- Voltage sensor: Range: -20V...20V
- Voltage measuring
  board 7200.520: Range: -20V...20V

Click the 'General' button to return to the general settings page.

9.11 Display of the current messages (alarms/warnings)

As of software version 2.9, all currently pending warnings and alarms will be grouped and displayed on an overview page. This page can be invoked from a link (see marking in fig. 44).

Fig. 44   Overview page with active alarms/warnings

The overview page of the currently displayed alarms or warnings displays the time when the event occurred and messages, as in the 'Alarm Log'.
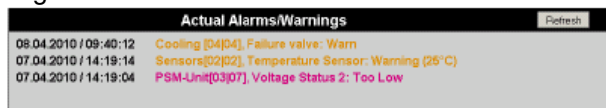
Fig. 45   Current alarms/warnings

9.12 Suppress system messages using alarm relay

All pending warnings and alarms were previously displayed with the alarm relay (e.g. timeout, etc.). There is now also a setting to suppress these messages ('Unit Messages disabled').

This setting can be made from 'Setup General Configuration'; the default setting is 'Unit Messages enabled'.
The following messages will then no longer be output with the alarm relay:

- Timeout
- Unit detected
- Configuration change
- Unit error

All other functions of these system messages, such as log entry, send email, etc., are not affected.

Fig. 46   'Unit Messages disabled' setting

9.13 Append measured values to SMS

Previously, only the status message itself (alarm, warning, etc.) was sent for a status message as SMS. The current measured value is now also sent to sensors that supply analogue values.
An SMS that was sent by a PSM busbar for an excessively high current value could have the following form:

12.04.2010 12:44 'CMC-TC/PU2 – Development', PSM-Module (03), Status (PSM): Too High (6.5A)

9.14 Lifecheck for SMS function

It is now possible to cyclically send an SMS time-controlled. For this purpose, the four timer functions 'Status SMS to Receiver 1' to 'Status SMS to Receiver 4' are now also provided in the 'Setup/Timer' menu (see fig. 47). This function can be used to send a status SMS time-controlled to as many as four receivers. The four receivers correspond to the four receiver telephone numbers specified as 'Setup / SMS Unit'.
At the specified time, an SMS will be sent with the current system status. For this purpose, information about the number of alarms and warnings also shown on the left-hand side of the website is used.

A status SMS then would have the following form:

**13.04.2010 15:51 'CMC-TC/PU2 – Development',
2 Alarms/Warnings (@ 13.04.2010, 14:48:09)**

Fig. 47 'Status SMS to Receiver' timer setting

9.15 Group formation of PSM/PCU busbars

Individual PSM/PCU relay outputs can now be combined to form groups; this means several relay outputs that belong to a group can be switched with a single switching command for switching from both 'Combinations' and the website. This has the advantage that the 'Combinations' only needs to be specified for one output and all other outputs of this group are also switched.

Fig. 48 shows as example an 8-way PSM busbar with individual current measurement. For outputs that have been grouped, the numbering of the outputs 1...8 will be coloured orange.

Fig. 48 Representation of an 8-way PSM busbar for group formation

Fig. 49 shows how the group number is set for this PSM type from the website.
The meaning of this group number is:
0 – no grouping (default)
1...99 – belongs to a group

Fig. 49 Setting of the 8-way PSM busbar group formation

For a 6-way German socket strip, the grouped outputs 1...6 are also coloured orange.
Fig. 50 shows the setting of the group number from the website for this PSM type.
The meaning of this group number is:
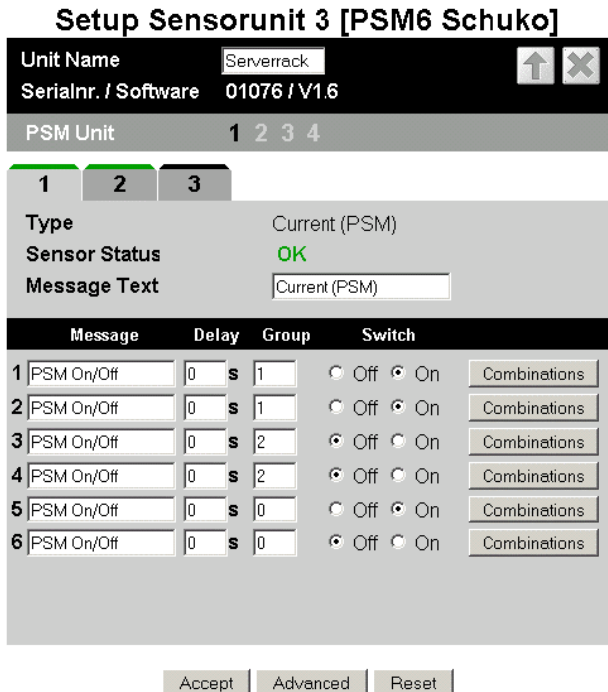0 – no grouping (default)
1...99 – belongs to a group

Fig. 50   Setting of the 6-way German socket busbar group formation

9.16 Delay function for the DK 7320.740 door output module

If for a Door Opening solution, for example, a keypad is also used to interrupt the magnet current, this has the disadvantage that the current to the magnets remains switched off until the door output module is switched on again. This occurs as standard only after the door is closed. This requires that the door is first pressed closed for approximately 2 to 3 seconds until the access sensor detects the closing of the door, the magnets switch and the door remains closed.
This meant a change was made for the activation of the DK 7320.740 door output module so that the module will be switched on again after a delay of approximately 10 seconds following the unlocking. This time suffices to open the door reliably. The door can then be held closed again and the magnets hold the door closed immediately.
9.17

Switch between vertical and horizontal view

The button can be used to switch between the horizontal and the vertical view (see figs. 51 and 52).
Which view is more appropriate depends on the screen resolution and should be decided by each user themself.

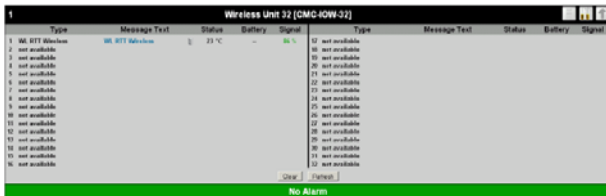Fig. 51   Registered Wireless Unit 32 without sensors (in vertical view)

Fig. 52   Wireless Unit 32 in the horizontal view

9.18 DRC function changes

9.18.1   Bugfix: Software update

If more than one RFID controller is connected concurrently to a PU, it is possible after a software update that the controllers do not leave the "Firmware update" status at positions 2, 3 and 4. This fault has been rectified. More than one RFID controller can now be updated concurrently on a PU without problem.
9.18.2

Representation of old RFID tags (with 0 U) in the rack view

Previously, old RFID tags were shown only in the list view (with 0 U). With immediate effect, these tags are also shown in the rack view. The user sees immediately why the "Configuration changed" status is pending. The tags can now be deregistered from the rack view.

9.18.3 Masking out tag double detections

If an RFID tag is not positioned exactly over an aerial coil, two aerial coils can detect it concurrently. This situation is known as coupling. To prevent each coupling from generating a message in the CMC system, the two neighbouring aerial coils (above and below a registered tag) are masked out. This means no further tag can be detected there. In case of an active masking-out, the LED of the aerial coil that incorrectly detects a tag illuminates slightly dimmed.

This masking-out becomes active only when the RFID tag is registered on the system, namely acknowledged. This means particular care must be taken during the installation that the RFID tag is detected by only one aerial coil.

9.19 PSM busbars with individual current measurement

The support of PSM/PCU modules with individual current measurement was already implemented in the previous versions V2.70 / V2.80. The following PSM/PCU modules are supported:
- PSM 8 x C13 variant
  Model No.: 7859.222
- PCU 8 x C13 variant
  Model No.: 7859.225
- PSM 4 x earthing contact / 2 x C13 variant
  Model No.: 7859.212
- PCU 4 x earthing contact / 2 x C13 variant
  Model No.: 7859.215
- PSM 4 x C19 / 2 x C13 variant
  Model No.: 7859.232
- PCU 4 x C19 / 2 x C13 variant
  Model No.: 7859.235

Software update 2.9 changed the following items for the input of the setpoints:
- The maximum value for the setpoints of the individual measurements depends on the socket type. The maximum value is 10 A for C13 sockets; the maximum value is 16 A for C19 sockets and German-style sockets. The maximum value for the total current is always 16 A.

- The setpoints are checked for mutual plausibility:
  - The 'Setpoint Low' must be less than or equal to the 'Setpoint Warning'.
  - The 'Setpoint Warning' must be less than or equal to the 'Setpoint High' and greater than or equal to the 'Setpoint Low'.
  - The 'Setpoint High' must be greater than or equal to the 'Setpoint Warning'.
- 'Meaningless' inputs (e.g. negative currents) are now ignored.

9.20 Delay warning/alarm for voltage measuring board

The DK 7200.520 voltage measuring board is able to measure three different alternating voltages. If it is used to monitor a 3-phase power supply and this power supply now fails or is switched off, it is possible that different measured values will be appended to the alarm messages because the three voltages are queried at different times. For this reason, the alarm message from this voltage measuring board will always be delayed by five seconds. This causes all three voltages to be reported correctly in case of voltage failures.

9.21 Setting DRC parameters using XML file

For each RFID controller connected to the PU II, an XML file will be created in the 'Download' FTP directory that contains all information about the DRC system. This file can be downloaded, for example, to save the rack configuration. Depending on which interface the controller is connected to the PU, the XML file has the name 'drc1.xml', 'drc2.xml', 'drc3.xml' or 'drc4.xml'.

The XML file can be edited after it has been downloaded. To accept the changes, the XML file must be uploaded with FTP into the 'upload' directory of the PU. The uploaded XML file is processed fully-automatically by the PU and, if necessary, the DRC system data updated.

Important note:
The successful processing of the XML files requires that they have the identical structure as the XML files created by the PU II.
The following items must be satisfied for the PU II to process and accept the XML data:
- The serial number from the XML file must match that of the DRC controller.
- The data for 'rackDescr' must be complete

Before new data from the XML file is written to the RFID tag, the PU II compares the UIDs of the real RFID tag with the corresponding data record of the XML file. Should the UIDs match, if required (when

the data differs), the new data will be taken from the XML file. If the UIDs do not match, processing continues with the next data record of the XML file.

An entry will be made in the event list of the PU after the XML file has been processed. This entry shows whether an error has occurred and how many RFID tags have been updated.

Fig. 53   Entry in the event list after XML update

During the processing of the XML file, a log file that contains detailed information will be created in the PU download directory. It shows, for example, which tags have been updated and those that have not been.

9.22 PSM measuring busbar, 32 A

A variation of the existing measuring busbar is available as the new product 7856.003. 32 A, single-phase power is supplied to this measuring busbar. Internally, a division is made into two separate, fused circuits each of 16 A. Each of these circuits can supply three PSM modules.

To differentiate this measuring busbar, it has a different software identification. The measured values supplied by the bar are displayed on the website as shown in fig. 54.

Because a single-phase power supply is used here, each of the modules is obviously provided with the same voltage. This means the voltage measured for module 1 is also shown for modules 2 and 3.

As previously, the currents are measured six times and shown separately for each module.

Fig. 54 shows as example a bar for which the second circuit has been switched off.
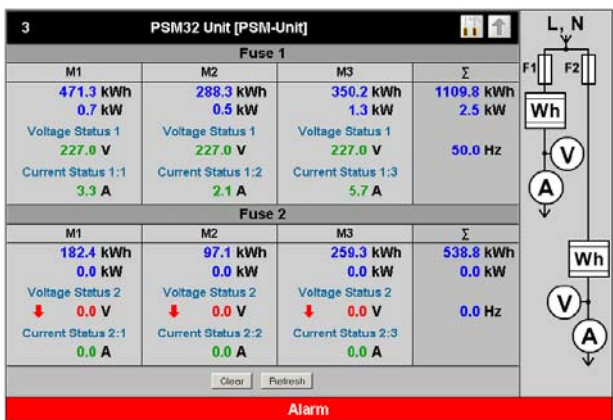

Fig. 54   PSM measuring bar 7856.003

Fig. 55 shows for example the setting for circuit 1 (fuse 1) using tab 1. Tabs 2 and 3 for the previous settings for the second and third phase of the mains voltage do not exist for this type.
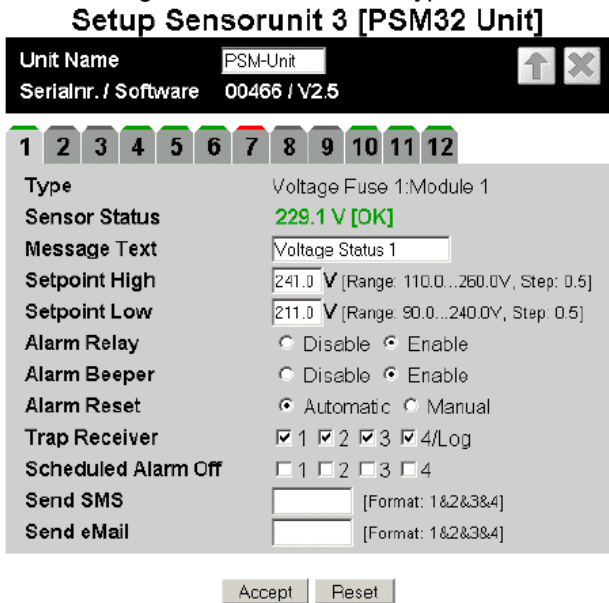

Fig. 55   PSM measuring busbar 32 A / voltage status 1

Fig. 56 shows the setting for the current 1:1 from tab 4. The settings for the two other currents are made from tabs 5 and 6.
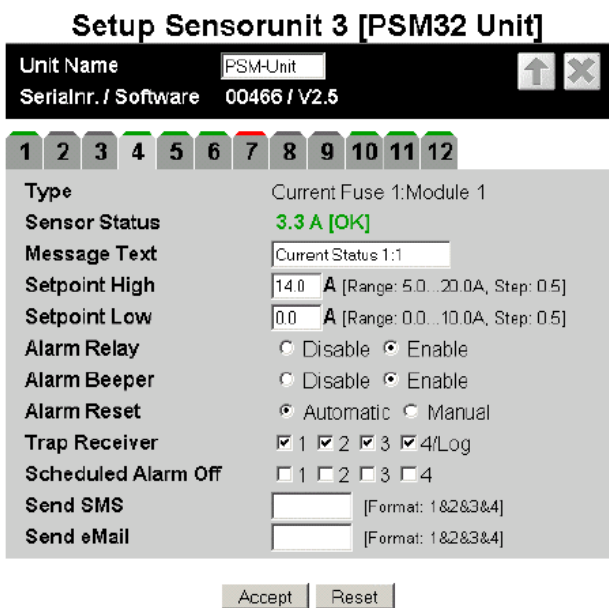

Fig. 56   PSM measuring busbar 32 A / current status 1:1

Fig. 57 shows the setting for the voltage for circuit 2; the voltages for the second and third phase of the circuit also do not exist for this second circuit (tabs 8 and 9).

EN

Fig. 57   PSM measuring busbar 32 A / voltage status 2

10 Technical specifications

Description	CMC-TC
Enclosure	
Housing type	Plastic covering with metal trim
Height	1 U / 44.5 mm
Width	136 mm
Depth	129 mm
Weight without packaging	approx. 0.6 kg
Potential equalisation	- [1]
Earthing	- [1]
Protection category	IP 40 to EN 60529
Interfaces	
Pushbuttons	1 membrane key, acknowledgement key
Front socket	1 x RJ10 socket (RS 232 serial interface)
LED display	6 x (active/alarm, link, for each connectable sensor island)
Acoustic signal	1 x piezo signal transducer
I²C connection	RJ45 socket (P-I2C), shielded
Alarm relay	
Output	1 x RJ12 socket, shielded
Design	Potential-free changeover contact
Rated voltage	24 V DC, internal or 24 V for external power supply
Current	200 mA
Operating range	
Temperature	+5 to +45°C +42 to +113°F
Humidity	5 – 95 %
Storage temperature	-20 to +60°C -4 to +140°F
Rated voltage	1 x 24 V DC, 2.5 A SELV
Fuses	Miniature fuse T2A, 250 V, UL approval
Network	1 x RJ45 socket (Ethernet, 10/100 BaseT), shielded
Sensor island	4 x RJ45 sockets, shielded, for shielded twisted-pair patch cable, Category 5
Maximum cable length	
PU to I/O unit	10 m, after consultation with Rittal maximum 50 m, UL approval
PU to Access unit	10 m, after consultation with Rittal maximum 50 m, UL approval
PU to Climate unit	10 m, after consultation with Rittal maximum 50 m, UL approval
Maximum cable length	

Description	CMC-TC
PU to wireless I/O unit	10 m, after consultation with Rittal maximum 50 m
Protocols	
Available protocols	- TCP/IP - SNMP v1 (incl. MIB II) - SNMP v3 - TELNET, SSH - FTP, SFTP - http, https, SSL 3.0 - NTP - DHCP

Tab. 6   Technical specifications

[1] Not required because safety extra-low voltage 24 V DC

11 Circuit diagrams

A word template for creating circuit diagrams can be downloaded from the RimatriX5 homepage www.rimatrix5.com. This template allows all products of the CMC-TC system to be represented and integrated in circuit diagrams.

12 Glossary

CMC-TC
CMC-TC (Computer Multi Control – Top Concept) is a Rittal product used to monitor network enclosure components.

GSM card
A GSM card is a telephone card of a mobile telephone.

Internet browser
An Internet browser can be used to display html pages (and pages that conform to a similar standard). The CMC-TC PU can be configured using a user interface displayed with an Internet browser.

Link
A link is a branch to another internet page or establishes a connection between two Internet pages.

MAC address
The MAC address is a letter and number combination of a network interface that is unique worldwide. It is used to identify a network interface in a network, etc.

MIB (Management Information Base)
The MIB was developed to fetch and change network elements. The MIB II has been defined in the RFC 1213. Some manufacturers define their own MIBs that reflect the special characteristics of their product. The MIBs are registered as OID with the IANA (Internet Assigned Numbers Authority). Once an object has been assigned to an OID, the meaning may no longer be changed. An overlapping with other OIDs is not permitted.

SMS service number
This is a telephone number that the telephone provider makes available for sending SMS messages.

SNMP (Simple Network Management Protocol)
The SNMP is a simple network management protocol based on TCP/IP. It was developed to allow network components to be monitored at a central management station.

Telnet
Telnet is a protocol to allow guest access to a remote server. The Telnet program provides the required client functions of the protocol.

Trap

Trap is the sending of SNMP messages.

Trap receiver
The trap receiver is the recipient of SNMP messages.

Web access
The web access is used to define the access capability via the Internet.

13 Customer service
If you have technical questions, or questions regarding our product range, please contact the service address as follows:

Tel.: +49 (0)2772/505-1855
http://www.rimatrix5.com
E-mail: info@rittal.de

Note!
To allow us to process your enquiry quickly and correctly, please always specify the article number in the subject line for e-mails.

Further information and the current operating instructions and updates of the Rittal CMC-TC can be downloaded from the Security section of the RimatriX5 homepage.

Schaltschrank-Systeme
Industrial Enclosures
Coffrets et armoires électriques
Kastsystemen
Apparatskåpssystem
Armadi per quadri di comando
Sistemas de armarios
インダストリアル エンクロージャー

Stromverteilung
Power Distribution
Distribution de courant
Stroomverdeling
Strömfördelning
Distribuzione di corrente
Distribución de corriente
分電・配電システム

Elektronik-Aufbau-Systeme
Electronic Packaging
Electronique
Electronic Packaging Systems
Electronic Packaging
Contenitori per elettronica
Sistemas para la electrónica
エレクトロニクス パッケージシステム

System-Klimatisierung
System Climate Control
Climatisation
Systeemklimatisering
Systemklimatisering
Soluzioni di climatizzazione
Climatización de sistemas
温度管理システム

IT-Solutions
IT Solutions
Solutions IT
IT-Solutions
IT-lösningar
Soluzioni per IT
Soluciones TI
ITソリューション

Communication Systems
Communication Systems
Armoires outdoor
Outdoor-behuizingen
Communication Systems
Soluzioni outdoor
Sistemas de comunicación
コミュニケーションシステム

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