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# CMC-TC Processing Unit II
# DK 7320.100

Assembly, Installation and Operation

FRIEDHELM LOH GROUP

A29290 33 IT 74

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# 1 Documentation Notes

The audience for this guide is the technical specialists familiar with the assembly, installation and operation of the CMC-TC Processing Unit.

- You should read this operating guide prior to the commissioning and store the guide so it is readily accessible for subsequent use.

Rittal cannot accept any liability for damage and operational malfunctions that result from the non-observance of this guide.

This guide applies to software level as of Version 2.50 of the Processing Unit II.

## 1.1 Associated Documents

The guides for other CMC-TC components and their safety notes also apply together with this guide.

This guide is also provided as a file on the accompanying CD-ROM:

German: 7320100VXXd.pdf

English: 7320100VXXe.pdf

To view the guide you require the Acrobat Reader program; Acrobat Reader can be downloaded from www.adobe.com

## 1.2 CE Certification

The conformance declaration is contained in the appendix.

## 1.3 Retention of the Documents

This guide and all associated documents are part of the product. They must be given to the operator of the unit and must be stored so they are available when needed.

## 1.4 Used Symbols

The following safety and other notes are used in this guide:

**Symbol for a handling instruction:**

- This bullet point indicates that you should perform an action.

**Safety and other notes:**

**Danger!**
**Immediate danger to health and life!**

**Warning!**
**Possible danger for the product and the environment!**

**Note!**
Useful information and special features.

# 2 Safety Notes

Observe the subsequent general safety notes for the installation and operation of the unit:

- Assembly and installation of the CMC-TC PU, in particular for wiring the enclosures with mains power, may be performed only by a trained electrician. Other tasks associated with the CMC-TC PU, such as the assembly and installation of system components with tested standard connectors, and the operation and configuration of the CMC-TC PU may be performed only by instructed personnel.
- Observe the valid regulations for the electrical installation for the country in which the unit is installed and operated, and the national regulations for accident prevention. Also observe any company-internal regulations (work, operating and safety regulations).
- Prior to working at the CMC-TC system, it must be disconnected from the power supply and protected against being switched on again.
- Use only genuine or recommended parts and accessories (see Section 3.7 Accessories). The use of other parts can void the liability for any resulting consequences.
- Do not make any changes to the CMC-TC Processing Unit that are not described in this guide or in the associated guides.
- The operational safety of the unit is guaranteed only for its approved use. The limit values stated in the technical specifications (see Chapter 12 Technical Specifications) may not be exceeded under any circumstances. In particular, this applies to the permitted ambient temperature range and to the permitted 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 operation of the CMC-TC system in direct contact with water, aggressive materials or inflammable gases and vapours is prohibited.
- In addition to these general safety notes, also observe any special safety notes listed for the specific tasks in the individual sections.

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# 3 Unit 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 on 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 cabinet locking and access control. All this information is transferred using SNMP to a management station where it can be administered.

The supplied CD-ROM 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 is located on www.rimatrix5.com.

## 3.1 Housing

The CMC-TC Processing Unit is contained in its own housing that can be fastened with the supplied Velcro strips 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.

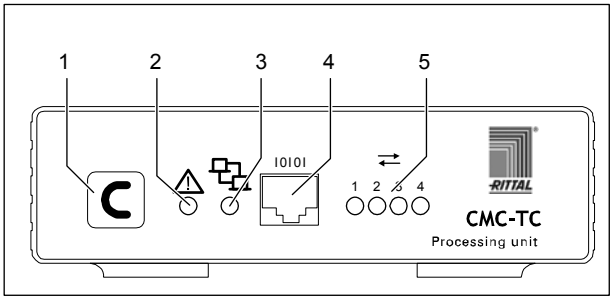


*Fig. 1 CMC-TC PU front side*

**Key**

1 Acknowledge key (C key)
2 Status LED
3 Network LED
4 Serial interface (RS-232 connection)
5 Status LED for connected sensor units (Traffic LED)

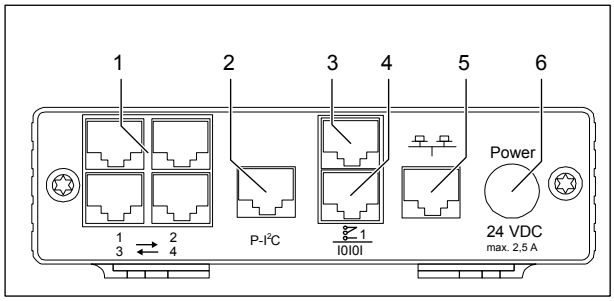


*Fig. 2 CMC-TC PU rear side*

**Key**

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

## 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 change-over contact. It is used for the optical or acoustic alarming. There is also a connection with a serial interface that can be used for various sensor units and expansion units.

## 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.de) 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 suitable network cable with RJ-45 plug in the existing Ethernet network structure.

The communication is made using a standard browser and is operating-system-independent.

The number of Rittal CMC-TC Processing Units in the network is unlimited, provided adequate 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, only the network management protocol must 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 supplied CD-ROM (CMC-TC PUII v1_1d.mib). The associated current version of the MIB can be found in the internet at www.rimatrix5.com.

The private MIB is required for integration in a building management software system. It decodes the transferred trap messages to produce unambiguous 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 | DK 7320.530 |
| Vandalism sensor | DK 7320.540 |
| Airflow monitor | DK 7320.550 |
| Smoke alarm | DK 7320.560 |
| Motion sensor | DK 7320.570 |
| Digital input module | DK 7320.580 |
| Digital relay output module | DK 7320.590 |
| Voltage monitor | DK 7320.600 |
| Voltage monitor with switched output | DK 7320.610 |
| 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 interlinked with the CMC-TC I/O unit using category 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 Supply

The unit will be delivered in a packaging unit in fully-assembled state.

- Check the delivered components for completeness.
- Check that the packaging does not show any signs of damage.

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| Quantity | Designation |
|---|---|
| 1 | CMC-TC Processing Unit with network interface RJ-45 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 in German/English |

*Tab. 2 Scope of supply*

**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 | Designation | Packs of | Required | Model No. |
|---|---|---|---|---|
| Power supply | Installation power pack 24 V IEC 100-230 V AC, UL approval, 3 A SELV | 1 | Yes, depending on power supply | 7320.425 |
| | Installation power pack 24 V IEC 48 V DC | 1 | | 7320.435 |
| Connection cable for power pack | Connection cable IEC connector Country version D | 1 | Yes, once for power pack | 7200.210 |
| | Connection cable IEC connector Country version GB | 1 | | 7200.211 |
| | Connection cable IEC connector Country version F/B | 1 | | 7200.210 |
| | Connection cable IEC connector Country version CH | 1 | | 7200.213 |
| | Connection cable IEC connector Country version USA/CDN, UL approval FT1/VW1 | 1 | | 7200.214 |
| | Extension cable IEC connector and socket | 1 | | 7200.215 |
| Assembly | 1 U mounting unit | 1 | Optional | 7320.440 |
| | 1 U single mounting unit with strain relief | 1 | | 7320.450 |
| Programming cable | Programming cable D-Sub 9 to RJ 11 | 1 | Yes, max. 1 | 7200.221 |
| Extension | Extension unit – voltage | 1 | 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 opening control Unit | 4 | DK 7320.790 |
| RTT I/O Unit | 4 | DK 3124.200 |
| LCP | 4 | DK 3301.210 |
| LCP | 4 | DK 3301.230 |
| Active PSM 4-way | 4x4 | DK 7856.200 |
| Active PSM 8-way | 4x4 | DK 7856.201 |
| Active PSM 8-way (19") | 4x4 | DK 7200.001 |
| Active PSM 6-way | 4x4 | DK 7856.203 |
| Active PSM 6-way | 4x4 | DK 7856.204 |
| PSM busbar with measurement | 4 | DK 7856.016 |
| PSM measuring module | 4 | DK 7856.019 |
| PCU | 4x4 | DK 7200.001 |
| CMC-TC Display Unit II | 1 | DK 7320.491 |
| CMC-TC GSM Unit | 1 | DK 7320.820 |
| CMCTC ISDN Unit | 1 | DK 7320.830 |
| Extension cable RJ12; 5.0 m | - | DK 7200.450 |
| Extension cable RJ12; 1.0 m | - | DK 7320.814 |
| Extension cable RJ45; 0.5 m | | DK 7320.470 |
| Extension cable RJ45; 2.0 m | | DK 7320.472 |
| Extension cable RJ45; 5.0 m | | DK 7320.475 |
| Extension cable RJ45; 10.0 m | | DK 7320.481 |

*Tab. 4 Optional accessories*

## 3.8 Proper Use

The Rittal CMC-TC PUII serves as an enclosure monitoring system for the monitoring and administration of various enclosure parameters.

A use different from that described here is considered to be an improper use. Rittal cannot accept any liability for damage resulting from the improper use or the non-observance of this guide. The guides for the used accessories may apply.

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# 4 Assembly

## 4.1 Assembly Notes

Install the CMC-TC PU in an enclosure or in a suitable housing system so that it also has additional protection from external effects. Also consider the permitted ambient temperature and humidity operational areas and the application-related required IP degree of protection (see Chapter 12, page 58).

## 4.2 Assembling CMC-TC

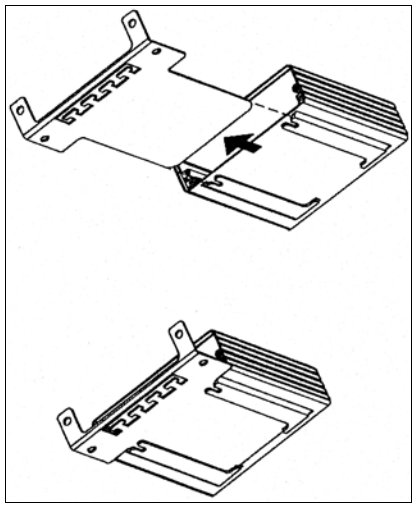

*Fig. 3 Assembly with the mounting module*

- Move the CMC-TC PU on the retaining plate of the mounting module. Ensure that the retaining plate sits between the guide rails of the CMC-TC PU.

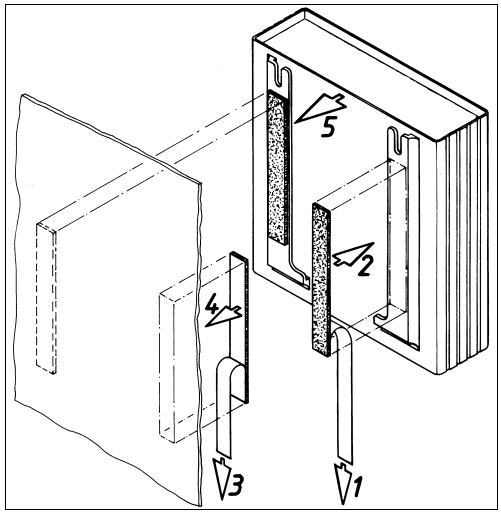


*Fig. 4 Assembly with Velcro fasteners*

- Take the self-adhesive Velcro fasteners from the supplied accessories and remove the protective foil from the Velcro fasteners.
- Ensure that the adhesion surfaces are free from grease and dust.
- Attach the Velcro fasteners to the housing of the CMC-TC PU and position the CMC-TC PU at the required attachment location.

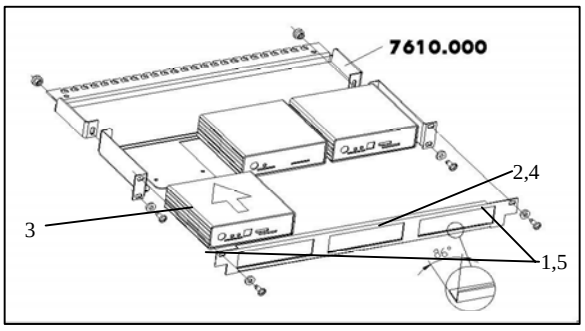


*Fig. 5 Assembly with 1 U mounting unit*

1. Remove the two upper screws of the trim piece.
2. Remove the trim piece.
3. Move the CMC-TC PU on 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 trim piece on the mounting unit.
5. Screw the trim piece back on the 1 U mounting unit.

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# 5 Installation

**Danger!**
**The assembly and installation may be performed only by trained specialists.**

## 5.1 Safety and Other Notes

- The Rittal CMC-TC Processing Unit may be operated only with connected protective earth conductor. The protective earth conductor connection is made by plugging in the IEC connection cable. This requires that the IEC connection cable at the power supply side be connected with the protective earth conductor.
- 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 page 58).
- Before commencing work on the Rittal CMC-TC PU, it must be disconnected from the mains power supply and protected against being reconnected.
- Protect the connection cables using cable ties on the used housing or enclosure.
- To prevent unnecessary cable losses, the used cable lengths must not exceed the lengths specified in the technical specifications (see Chapter 12, page 58).

## 5.2 Connecting the Power Supply

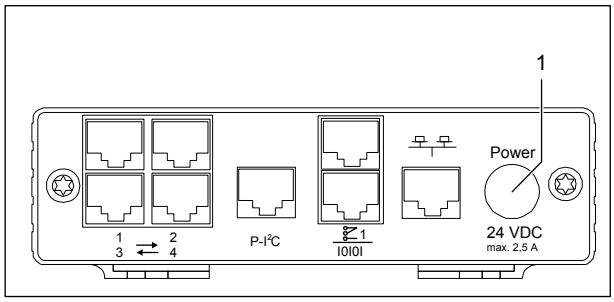


*Fig. 6 Connecting the power supply*

**Key**

1 Power supply connection

You must connect the CMC-TC PU to the power supply using the power packs described in Section 3.7.1 Required Accessories.

- 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 approximately three minutes. Once it has completed, the alarm LED illuminates green.

To remove the connection plug, pull back the moveable ring on the plug and then pull the complete plug out of the socket.

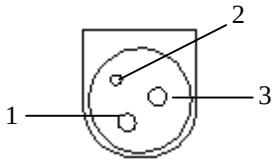


*Fig. 7 Pin assignment (plug, from the front)*

**Key**

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

## 5.3 Establishing the Network Connection

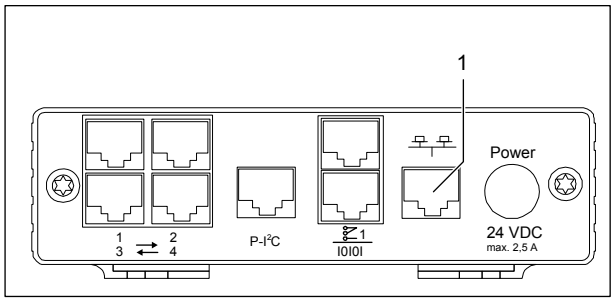


*Fig. 8 Establishing the network connection*

**Key**

1 Network connection

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

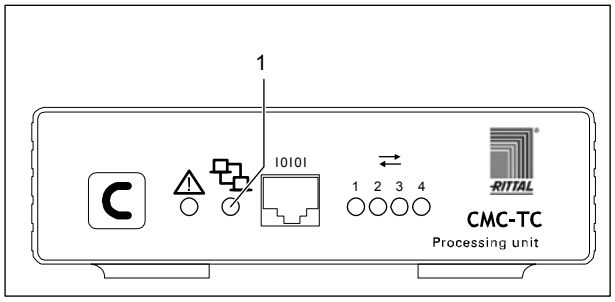


*Fig. 9 Checking the network connection*

**Key**

1 Network LED

The network connection is established as soon as the Link LED lights green or orange. In addition, the Link LED starts to flash when data exchange occurs over the network:

Green: 10 Mbit transmission

Orange: 100 Mbit transmission

## 5.4

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## Establishing the Sensor Connection

### 5.4.1 Connecting the Sensor

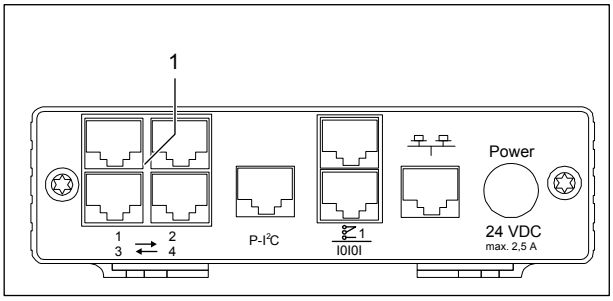


*Fig. 10 Establishing the sensor connection*

**Key**

1 Sensor units connections (1-4)

- 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.

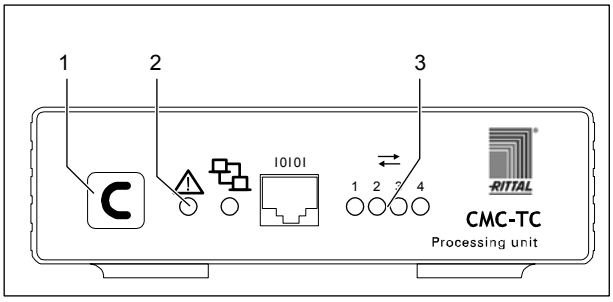


*Fig. 11 Checking the sensor connection*

**Key**

1 Acknowledge key (C key)

2 Status LED

3 Status LEDs for connected sensor units

When the sensors are connected and detected, a signal sounds and the Status LED of the connection flashes orange.

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

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

The CMC-TC Processing Unit continually polls the ports of the sensor units. Configuration changes to sensors are detected and reported automatically. The indication is made by the acoustic signal and by the Status LEDs.

## 5.5 Connecting the Alarm Relay

The alarm relay is connected using the floating changeover contact.

**Warning!**
**Damage danger!**
**Observe the technical specification of the alarm relay contained in the technical data. If these details are not observed, the alarm relay can be damaged.**

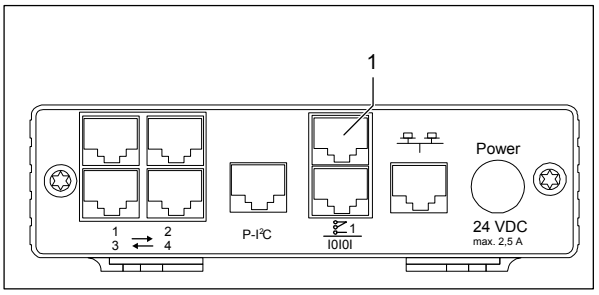


*Fig. 12 Connecting the alarm relay*

**Key**

1 Alarm relay output (floating changeover contact)

- Connect the alarm relay with the RJ-12 sockets using RJ-12 connectors.

After the connection, you must configure the alarm relay using the software (see 7.3.21 General Configuration of the Processing Unit). The internal circuitry of the alarm relay is shown below:

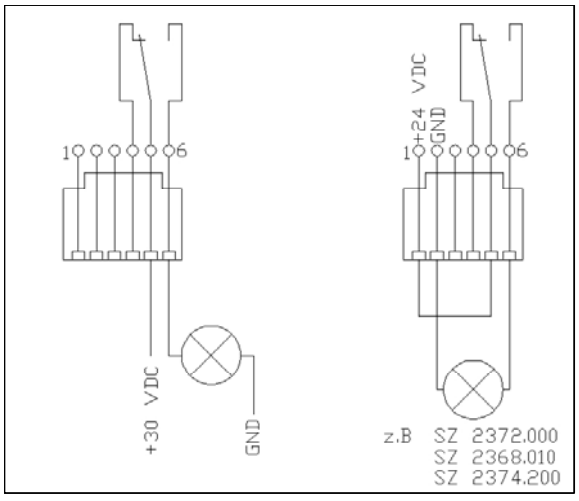


*Fig. 13 Power connection of the alarm relay*

## 5.6 Connecting the Voltage Extension Unit

You can use the P-I²C connection (RJ-45 socket) to integrate a maximum of two voltage extension units (3-phase, DK 7200.520) in the CMC-TC PU. Further information is contained in the operating instructions of the voltage extension unit.

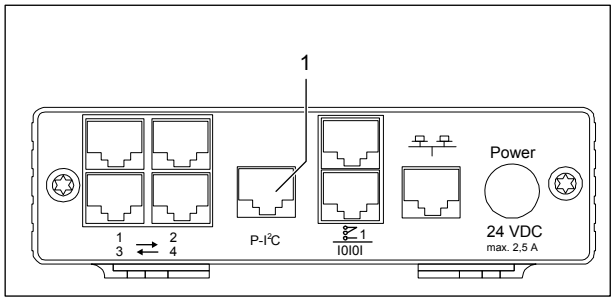


*Fig. 14 P-I²C connection*

**Key**

1 Voltage extension unit connection (P-I²C connection)

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

| Switch setting | Addressing |
|---|---|
| DIP switch at 1 | First connected expansion unit |
| DIP switch at 2 | Second connected expansion unit |

*Tab. 5 Addressing*

## 5.7 Connecting the Programming Interface

If you want to configure the CMC-TC PU, for example, using a notebook, you can connect both devices with each other using the serial interface.
The RS-232 interface of the CMC-TC PU is provided as RJ-10 front socket.

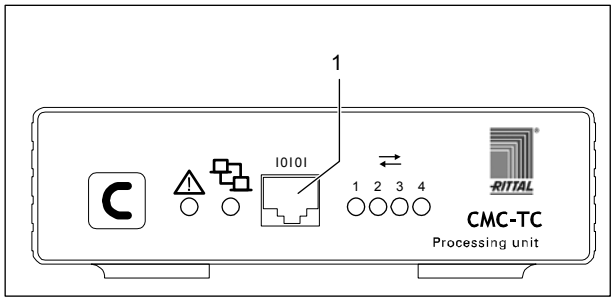


*Fig. 15 RS-232 connection*

**Key**

1 Serial interface (RS-232 connection as RJ-10 front socket)

- Connect the programming cable (DK 7200.221) with the RJ-10 front socket and with the serial interface of your PC.

EN

# 6 Commissioning

Once you have assembled the CMC-TC PU and installed all connections, you must now configure it. You can do this using either the serial interface (see Section 5.7 Connecting the Programming Interface), the network connection with an internet browser (see Section 7.6 Access Using a Browser) or Telnet (see Section 7.8 Access Using Telnet).

You must first establish the connection to the CMC-TC PU. This is shown in the following sections using the example of the “HyperTerminal” terminal program that is part of the Microsoft Windows 2000 operating system. The process is similar for other operating systems.

To start “HyperTerminal”, click <Programs> - <Accessories> - <Communication> - <HyperTerminal>


*Fig. 16 Enter name and select connection*

- Enter name
- Assign symbol for connection


*Fig. 17 Establish connection*

- Select connection via COM Port
- Click “OK”

The properties of the selected COM ports must be specified once.

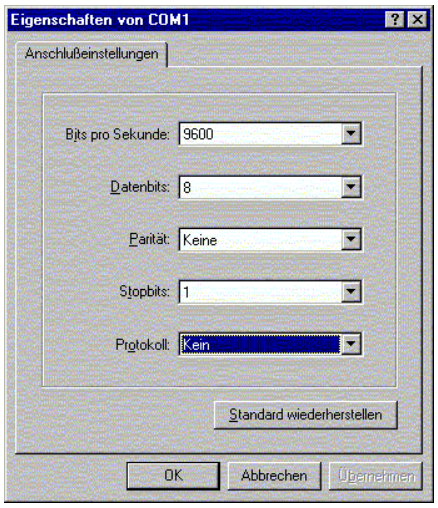


*Fig. 18 COM port properties*

- Enter the following parameters:

Transmission rate: 9600 bits per second

Data bits: 8

Parity: None

Stop bits: 1

Protocol: None

To ensure that the data is transferred without error, the standard level range must be observed for the RS-232 interface.

The login window for HyperTerminal appears.

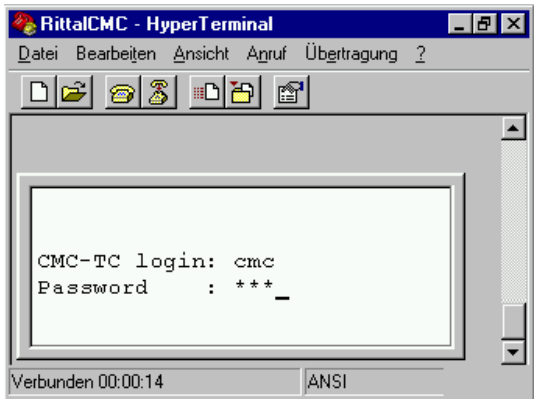


*Fig. 19 Login*

You must enter your login name (CMC-TC login) and your password here. As supplied, “cmc” is set as default setting for both entries.

- Enter your login name (CMC-TC login) and your password.

You can change the password subsequently (see Section 7.3.12 Configuring the Passwords).

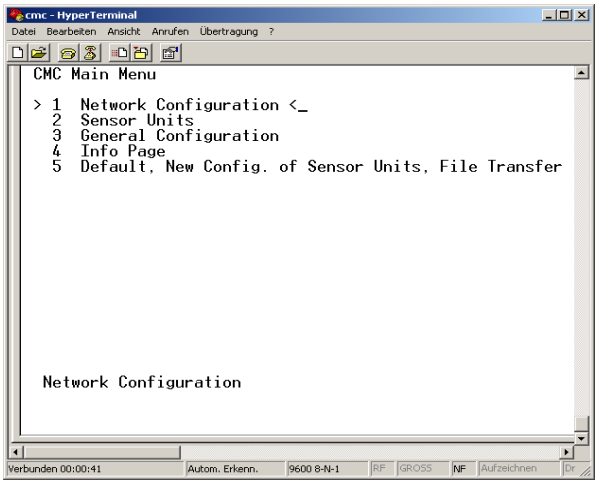


*Fig. 20 HyperTerminal start window*

If you have been able to establish the connection to the CMC-TC PU, the HyperTerminal configuration window with the CMC-TC PU configuration menu appears.

You can now set up the CMC-TC PU for your local conditions.

EN

# 7 Operation

## 7.1 Menu Structure

The terminal program menu has the following structure:

| 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 Baud Rate |
| 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 Username SMTP Server |
| 1.2.2.2 SNMPv1 Manager | 1.5.4 Password SMTP Server |
| 1.2.2.3 SNMPv1 Manager | 1.5.5 E-Mail Sender Name |
| 1.2.2.4 SNMPv1 Manager | 1.5.6 E-Mail Reply to |
| 1.2.2.5 SNMPv1 Manager | 1.5.7 E-Mail upon Unit Messages |
| 1.2.2.6 SNMPv1 Manager | 1.5.8 E-Mail Address |
| 1.2.2.7 SNMPv1 Manager | 1.5.8.1 E-Mail Address |
| 1.2.2.8 SNMPv1 Manager | 1.5.8.2 E-Mail Address |
| 1.2.2.9 SNMPv1 Manager | 1.5.8.3 E-Mail Address |
| 1.2.2.A SNMPv1 Manager | 1.5.8.4 E-Mail 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 |
| 1.2.7 Default SNMPv3 User Name | 1.8 System Contact |
| 1.2.8 Default SNMPv3 Password | 1.9 System Location |
| 1.2.9 Confirm SNMPv3 usmUser/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-TC-IOU´ | 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 E-Mail |
| 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 Name Sensor Unit |
| 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 |
| 3.9 SMS Configuration | 3.9.7.3 SMS Phone Number |
| 3.9.1 PIN GSM-Card | 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*

## 7.2 Operating Notes

The following sections list as tables all the configuration parameters of the CMC-TC. The basic operation is always the same:

- Navigate within the menu structure using the "up" ↑ and "down" ↓ arrow keys.
- Scroll in fields with several predefined values using the "left" ← and "right" → arrow keys.
- Enter the required data in fields for text and numeric information from the keyboard.
- You can use the "Esc" key to cancel the inputs.
- Confirm all inputs with the "Return" or "Enter" key.

## 7.3 Setting the Base Configuration

The base configuration requires only the setting of the network configuration, the alarm relay and the trap receiver. You can make further settings using a browser or Telnet.

### 7.3.1 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:<br>Enable or disable the function |
| Settings Ethernet Port | Configure the network interface of the CMC-TC PU on your network. Possible settings:<br>Auto, 100/Half, 100/Full, 10/Half, 10/Full |

Restart the system 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, then during the restart, a connection will be established to a DHCP server present in the network; an IP address is obtained from this server. 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 necessary when the DHCP is deactivated.

### 7.3.2 Configuring the Trap Receiver

To receive messages and information, so-called trap messages, from the CMC-TC PU, the IP address of the console on which a management software system (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 receiver of the messages (factory setting 0.0.0.0). |
| Enable/Disable | Enable or disable the receiving at the preceding receiver. |

Enter any additional recipients (maximum four) in the lines provided below.

### 7.3.3 Configuring the 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 the access, you can permit the access for required IP addresses (maximum 12). The access is then blocked for all other IP addresses that have not been entered. If no IP address has been entered, every management software system in the network has access to the CMC-TC PU.

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| 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 is to have access to the CMC-TC PU. |

### 7.3.4 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 then 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 then enter the new name. |

### 7.3.5 Configuring the Authentication Traps

For an SNMP request (read or write) to the PUII with invalid Read/Write Community, the PUII sends an authentication trap to all activated trap receivers.

| Navigation | |
|---|---|
| Main menu – 1 Network Configuration – 2 SNMP Configuration – 5 Enable Auth. Traps | |
| **Parameter** | **Explanation** |
| Enable Auth. Traps | Enable or disable FTP with the ← and → arrow keys. |

### 7.3.6 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 a higher security functionality than SNMPv1. SNMPv3 requires an authentication.

| Navigation | |
|---|---|
| Main menu – 1 Network Configuration – 2 SNMP Configuration | |
| **Parameter** | **Explanation** |
| 6 Change SNMP Version | Set the SNMPv1 and SNMPv3 using the ← and → arrow keys. |
| 7 Default SNMPv3 User Name | Set the user name for SNMPv3 access ´cmc´ (max. 20 characters). Press the “Backspace” key to clear the factory setting and then enter the password. |
| 8 Default SNMPv3 Password | Set the password for the SNMPv3 access ´cmc´ (max. 20 characters). Press the “Backspace” key to clear the factory setting and then enter the password. |
| Confirm SNMPv3 usmUser/Passw | Confirm the SNMPv3 authentication using the ← and → arrow keys. |

### 7.3.7 Configuring the NTP

The Network Time Protocol (NTP) is a standard for the time synchronisation of the internal clock using 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 can be entered (primary and secondary server). The time information from the NTP server is based on the coordinated world time (UTC) as reference time. The times in the various time zones of the world are derived from this time. Consequently, the current time zone must be set in the CMC-TC menu. The current date and the current time are then displayed with the correct value taking account of the time zone and the daylight saving status. Because the daylight saving begin and end in the various time zones differ, 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 | Enable or disable NTP with the ← and → arrow keys. |
| 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 then 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 then enter the IP address of the second NTP server. |
| 4 NTP Offset to UTC | Set the time zone of your country using the ← and → arrow keys. |
| 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 set in hours.<br>Press the “Backspace” key to clear the factory setting and then enter the interval time. |
| 6 Dayl. Saving Time, Begin | Enter the begin of the daylight saving time.<br>Press the “Backspace” key to clear the previous input and then enter the new data in the following format.<br>m = month (1...12)<br>n = week of the month (1 = first week, 5 = last week of the month)<br>d = day (0 = Sunday, 6 = Saturday) |
| 7 Dayl. Saving Time, End | Enter the end of the daylight saving time.<br>Press the “Backspace” key to clear the previous input and then enter the new data in the following format.<br>m = month (1...12)<br>n = week of the month (1 = first week, 5 = last week of the month)<br>d = day (0 = Sunday, 6 = Saturday) |

### 7.3.8 Configuring the 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) | Enable or disable PPP with the ← and → arrow keys. |
| 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 on the Processing Unit. |
| 4 Username (DialIn) | Set an arbitrary user name for the login on the Processing Unit (max. 20 characters). |
| 5 Password (DialIn) | Set an arbitrary password for the login on 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) | Enable or disable PPP with the ← and → arrow keys. |
| 8 IP Addr. CMC (Dialout) | Enter the IP address of the Processing Unit for the dial-in on the client. |
| 9 IP Addr. Client (Dialout) | Enter the IP address of the client for the dial-in on the client. |
| A Username (Dialout) | Enter a user name as authentication on the client.<br>Note: The user name must be entered as user account in the client (max. 20 characters). |
| B Password (Dialout) | Enter a password as authentication on the client.<br>Note: The password must be identical with the password of the user account (max. 20 characters). |
| C Phone Number (Dialout) | Enter the telephone number that the Processing Unit should call in order to send a trap. |
| D Modem Type | Select the modem type: Analogue, ISDN or GSM (when a |

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| | |
|---|---|
| | GSM unit is used as modem, ensure that the SIM card does not have a PIN number). |
| E MSN (for ISDN) | When an ISDN modem is used, the MSN number must be entered. |
| F Modem Baud Rate | Bit rate with which the serial interface communicates with the external modem (for an analogue modem). |

### 7.3.9 Configuring the Sending of E-Mails

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

| **Navigation** | |
|---|---|
| Main menu – 1 Network Configuration – 5 SMTP (E-mail) Configuration | |
| **Parameter** | **Explanation** |
| 1 IP Addr. SMTP Server | Enter the IP address of the SMTP server. |
| 2 SMTP Server Authentication | Enable (Yes) or disable (No) for an authentication on the SMTP server using the ← and → arrow keys. |
| 3 Username SMTP Server | Enter the user name for the SMTP server. |
| 4 Password SMTP Server | Enter the password for the SMTP server. |
| 5 E-Mail Sender Name | Enter the sender address of the PUII. |
| 6 E-Mail Reply to | If a user responds to this alarm message, the response mail will be sent to the entered address. |
| 7 E-Mail upon Unit Messages | For a timeout, etc. on a unit, an e-mail can be sent as notification. Set "Yes" or "No" using the ← and → arrow keys. |
| 8 E-Mail Address | Enter up to four different e-mail addresses. |

### 7.3.10 Configuring the 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). Used for differentiation when several systems are used. |
| 4 Enable Syslog | Switches the Syslog function on (enabled) or off (disabled). The default value is "disabled". |

### 7.3.11 Configuring the 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 | The Processing Unit can be assigned any name. Press the “Backspace” key to clear the factory setting and then 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 then enter the new contact address. |
| 8 System Location | Enter the location name. Press the “Backspace” key to clear the factory setting and then enter the new installation location. |

### 7.3.12 Configuring the Passwords

You can change the passwords of the Processing Unit as required. The associated character length may 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 then enter the 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 then enter the password. To verify the new password, it must be re-entered a second time. |

### 7.3.13 Changing the HTTP Port

The standard http port for some networks is not assigned to port 80. You can change the port number to meet your requirements.

| **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 then enter the new port. |

### 7.3.14 HTTPS (SSL) Function

For security, the Processing Unit supports SSL encryption. This encryption 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 | Enable or disable SSL with the ← and → arrow keys. |
| 5 Change https Port | Set the https port 80-10000 (factory setting: 443). Press the “Backspace” key to clear the factory setting and then enter the new port. |

### 7.3.15 Configuring the FTP Access

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

| **Navigation** | |
|---|---|
| Main menu – 1 Network Configuration – A Enable FTP | |
| **Parameter** | **Explanation** |
| A Enable FTP | Enable or disable FTP with the ← and → arrow keys. |

### 7.3.16 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 an alternative to FTP.

### 7.3.17 Configuring the Timeout Window

The console and Telnet Timeout window is used for the automatic logout after a defined time. If, for example, a user has not performed any action on the Processing Unit over a period of five minutes, the user 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.<br>0 = No timeout<br>5 = If no changes have been made during the previous five minutes. Press the “Backspace” key to clear the factory setting and then enter the new time. |

### 7.3.18 Configuring the Telnet Access

Telnet provides the same administrative rights as those using the serial interface. If Telnet access is not wanted, you can deactivate it.

| **Navigation** | |
|---|---|
| Main menu – 1 Network Configuration – C Enable/Disable Telnet | |
| **Parameter** | **Explanation** |
| C Enable / Disable Telnet | Enable or disable Telnet with the ← and → arrow keys. |

**Note!**
In addition to access using Telnet, an SSH client (e.g. Putty) can be used to make an encrypted access to the PUII

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configuration. Unlike the Telnet access, the SSH access cannot be disabled.

### 7.3.19 Activating the Restart

You can also restart (reboot) the Processing Unit after a software crash using this menu item.

| Navigation | |
|---|---|
| Main menu – 1 Network Configuration – D Activate Actual Values | |
| **Parameter** | **Explanation** |
| D Activate Actual Values | Perform restart (Yes) or do not perform restart (No) using the ← and → arrow keys. |

### 7.3.20 Configuring the Connected Sensors

The sensors can be configured using HyperTerminal. This method of operation is required only when the browser setting is 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. |

### 7.3.21 General Configuration of the Processing Unit

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

| Navigation | |
|---|---|
| Main menu – 3 General Configuration | |
| **Parameter** | **Explanation** |
| 1 Temperature Unit | Set the Celsius or Fahrenheit unit using the ← and → arrow keys. |
| 2 Beeper | Set on (alarm beeper on) or off (alarm beeper off) using the ← and → arrow keys. |
| 3 Quit Alarm Relay | Set the alarm relay acknowledge using the ← and → arrow keys.<br>In case of an alarm, the "C key" can be used to reset the alarm relay on the PU. |
| | Disabled = the alarm relay is reset automatically after an alarm.<br>Enabled = the alarm relay is reset after an alarm by pressing the "C key". |
| 4 Alarm Relay Options | Set the alarm relay function using the ← and → arrow keys.<br>Close = alarm relay contact is closed.<br>Open = alarm relay contact is open.<br>Off = alarm relay contact is disabled. |
| 5 Web Access | Set the web access using the ← and → arrow keys.<br>Full = full access. All current values can be fetched and settings changed on the Processing Unit.<br>View = display. Only the current values are displayed. The settings cannot be changed.<br>No = block web access. The Processing Unit can no longer be called from the web. |
| 6 Actual Date | Set the current date.<br>Press the "Backspace" key to clear the factory setting and then enter the current date.<br>Date format: dd.mm.yyyy |
| 7 Actual Time | Set the current time.<br>Press the "Backspace" key to clear the factory setting and then enter the current time.<br>Time format: hh:mm:ss |
| 8 Check Link | The individual Trap Receivers can be checked for reachability.<br>Press the "Backspace" key to clear the factory setting and enter the number of the Trap Receiver. |
| 9 SMS Configuration | Applies only when an ISDN or GSM unit is connected. |

### 7.3.22 Configuring the SMS Notification (GSM Unit)

This function is only active if an ISDN unit is connected.

| Navigation | |
|---|---|
| Main menu – 3 General Configuration – 9 SMS Configuration | |
| **Parameter** | **Explanation** |

| | |
|---|---|
| 1 PIN GSM Card | Set the 4-digit PIN number of the GSM card. |
| 2 SMS Service Number | Set the SMS service number. The specified format must be observed, e.g. +491710760000 |
| 6 SMS upon Unit Messages | For a timeout, etc., an SMS for notification can be sent to a unit. Set using the ← and → arrow keys, "Yes" or "No". |

### 7.3.23 Configuring the SMS Notification (ISDN Unit)

This function is only active if an ISDN unit is connected.

| **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 as follows: +49/2772/123456 |
| 4 ISDN Pre-Dial Number | Set the number to obtain an external line. This entry is required when you have connected the ISDN unit to a telephone system. |
| 5 ISDN Command | Set the SMS command for sending SMS messages over the fixed-line network. For example, "8888 ANMELD" for the T-Com network. or "09003266900" for the Arcor network. |
| 6 SMS upon Unit Messages | For a timeout, etc., an SMS for notification can be sent to a unit. Set using the ← and → arrow keys, "Yes" or "No". |

### 7.3.24 Entering the Telephone Numbers for SMS Notification

This function is only active if an ISDN or GSM unit is connected.

| **Navigation** |
|---|
| Main menu – 3 General Configuration – 9 SMS Configuration – 7 SMS Phone Numbers |

| **Parameter** | **Explanation** |
|---|---|
| 1 - 4 SMS Phone Number | Set the SMS target call number. E.g. +4927725051234 |

### 7.3.25 Calling the CMC Information Page

To display the current information for the Processing Unit, you can display an information page from the Processing Unit. This page displays all settings for the network connection, 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. |

### 7.3.26 Resetting All Settings in the Main Menu

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

| **Navigation** | |
|---|---|
| Main menu – 5 Default, NewConfig. of Sensor Units, File Transfer | |
| **Parameter** | **Explanation** |
| 1 Set General Configuration to Default | Activate (Yes) or deactivate (No) the sensor settings using the ← and → arrow keys. |

### 7.3.27 Manual Search for Sensors

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

| **Navigation** | |
|---|---|
| Main menu – 5 Default, NewConfig. of Sensor Units, File Transfer | |
| **Parameter** | **Explanation** |
| 2 Sensor Unit Detection | Activate (Yes) or deactivate (No) the sensor detection using the ← and → arrow keys. |

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## 7.4 Transferring Files Using the Serial Interface

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

| Navigation | |
|---|---|
| Main menu – 5 Default, NewConfig. of Sensor Units, File Transfer – 3 Serial File Transfer (ZModem) | |
| **Parameter** | **Explanation** |
| 1 Send File to CMC | Start (Yes) or do not start (No) the Zmodem using the ← and → arrow keys. |

You will now be requested to specify the path for the file to be transferred. To do this, click "Find" and search for the file.
Select Zmodem as protocol and click "Send". Once the file has been transferred, press the Esc key to return to the main menu and to save the setting.

## 7.5 Saving Files Using the Serial Interface

You can save individual files from the Processing Unit 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 file that you want to save from the Processing Unit on your computer. |

Now use the find icon to select a target folder for the file to be saved.
Enter Zmodem as receive protocol and click "Receive" to confirm your input.

## 7.6 Access Using a Browser

Open your Web browser as usual. Enter the IP address of the Processing Unit in the address field and call the page.

### 7.6.1 Login

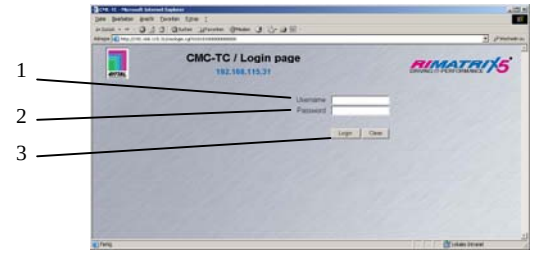


*Fig. 22 Login window*

**Key**

1 User name
2 Password
3 Login or Clear button

Enter in the login window the http user name and the http password of the Processing Unit.

Factory setting:
User name: admin
Password: admin

To confirm the input, click the Login button. To clear the input, click the Clear button.

### 7.6.2 Main Page View

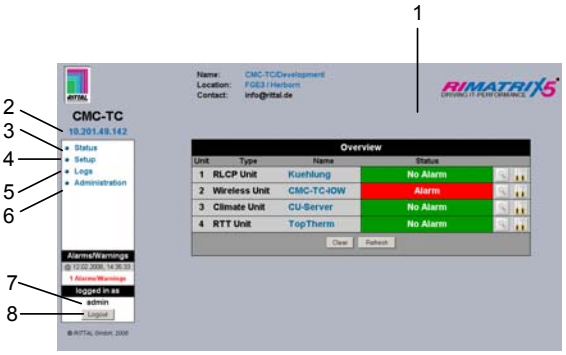


*Fig. 23 Main page overview*

**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 User name
8 User logout

The following buttons can be used to navigate easier 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.

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

***Home button:*** Links from each units overview page or from the setup pages directly to the home page.

## 7.6.3

### Main Settings

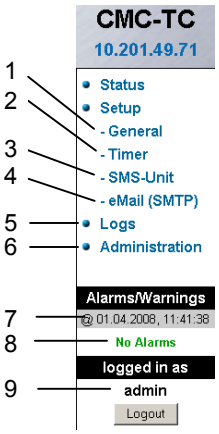


*Fig. 24 Main settings*

**Key**

1 General
This link can be used to make basic settings of the PUII (name, location, contact name, temperature unit, beeper, alarm relay acknowledge, alarm relay options, background colour, date and time).

2 Timer function (see 7.6.4 Configuring the Scheduler)

3 SMS unit (see 7.6.5 Configuring the GSM Unit or 7.6.6 Configuring the ISDN Unit)

4 E-Mail (SMTP)

5 Event Logging (see 7.6.8 Calling the Log File)

6 Administration links to the user administration, if you are logged on 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

## 7.6.4 Configuring the Scheduler

You can program up to 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. Now specify the time window (format: hh:mm).
4. Specify what the timer should perform during this time.

The following functions can be selected from item 4:

| Designation | Function |
|---|---|
| dis.keypad unit | Deactivates 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) | Deactivates the SMS |

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| | |
|---|---|
| | notification function. |
| Alarm Scheduler | Disables the alarms configured for "Scheduled Alarm off" in the sensor configuration. |
| disable Trap Receiver | Deactivates the SMS notification function for a specific receiver. |
| 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 receiver.<br>A maximum of 150 messages can be transferred for each status mail. If more than 150 messages are present, only the most recent 150 will be sent in the e-mail. |

## 7.6.5 Configuring the GMS Unit

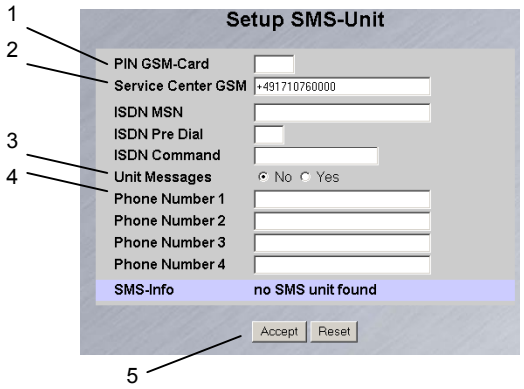


*Fig. 25 Setup for SMS unit*

**Key**

1 PIN GSM-Card
Enter here the PIN for your GSM card.

2 Service Centre GSM
Set the Service Centre number. This number varies depending on the mobile telephone provider. Observe the notation (e.g. +491710760000).

3 Unit Messages
Set whether for a unit error, for example, timeout or configuration change, an SMS should be sent.

4 Enter the target call numbers (max. four target call numbers, e.g. +4927725051234).

5 Accept or Reset button
Accept or reset the settings.

## 7.6.6 Configuring the ISDN Unit

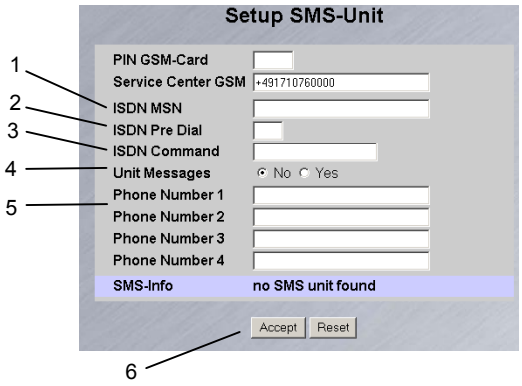


*Fig. 26 Setup for ISDN unit*

**Key**

1 ISDN MSN
Enter here the MSN number of the ISDN connection. The MSN number must be entered as follows: +49/2772/123456

2 ISDN Pre Dial
If the ISDN unit is to be connected to a telephone system, you must enter the number used to obtain an external line, for example, "0".

3 ISDN Command
Specify the SMS command so that SMS can be sent over the fixed-line network (e.g. the following command must be entered for T-Com: "8888 ANMELD").

4 Unit Messages
Set whether for a unit error, for example, timeout or configuration change, an SMS should be sent.

5 Phone Number 1 - 4
Enter here the target call numbers to receive an SMS when an alarm is issued; these numbers are entered in the following format: +492772123456.

6 Accept or Reset button
Accept or reset the settings.

## 7.6.7 Configuring the Sending of E-Mails

If you have not entered the e-mail addresses of the alarm recipient using Hyperterminal, you can do this here now. Proceed as follows:

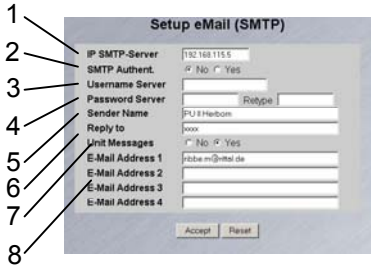


*Fig. 27 Setup for sending e-mails*

**Key**

1 IP SMTP Server
Enter here the IP address of the SMTP server.

2 SMTP Authent.
If your SMTP server requires a user name and password for the authentication, click "Yes".

3 Username Server
Enter the user name for the authentication.

4 Password Server
Enter the password of the server for the authentication and repeat the input in the "Retype" field.

5 Sender Name
Enter a sender name. This name is then used as sender in the alarm mail.

6 Reply to
If a reply is to be sent for the alarm mail, you can specify the e-mail address for the recipient to which 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 an e-mail. To do this, click "Yes".

8 E-Mail Address 1-4
Enter here up to four different e-mail addresses.

To accept and save the settings, click the "Accept" button.

## 7.6.8 Calling the Log File

Two different types of logging are performed. Firstly, the "Alarm Log". This displays all alarms that the logged-in user is permitted to view.

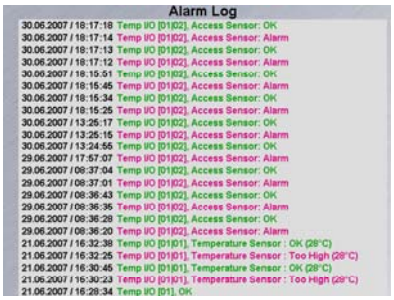


*Fig. 28 Alarm log*

Secondly, the "Event Log". This shows the time when each user performed a login and logoff, when an update was performed, when a file was uploaded or downloaded, and various other events.


*Fig. 29 Event log*

Up to 100 messages are recorded. If the storage area is full with 100 messages and a new message is received, the oldest message will be deleted.

## 7.6.9 Administration

Login as administrator on the login page (see 7.6.1 Login).

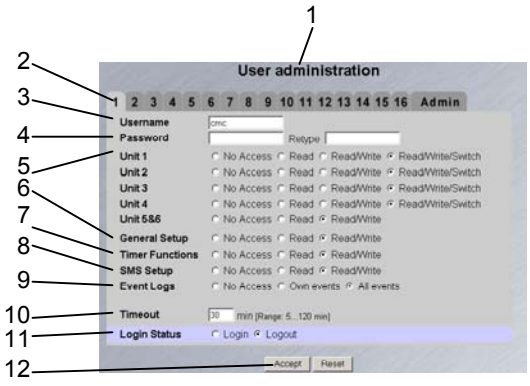


*Fig. 30 User administration*

**Key**

1 Page title

2 User page:
Up to sixteen different users or user groups can be created (max. 20 characters; special characters are not permitted).

3 Username:
Enter the user name or group name. Maximum character length: 20 characters (special characters are not permitted).

4 Password:
The password may contain a maximum of 20 characters (special characters are not permitted).

5 Unit 1 – 6:
The access rights for the individual units are specified per user or user group.
No Access: The user does not have any access to the unit.
Read: User only has read rights. Settings cannot be changed.
Read/Write: User has read and write rights. User has access to the unit; the user can read and change the settings but not switch the unit 1 – 4.
Read/Write/Switch: User has read, write and switching rights. Connected socket strips, and digital and analogue inputs/outputs can be operated by the user.

6 General Setup:
No Access: The user does not have any access to the unit.
Read: User only has read rights. Settings cannot be changed.
Read/Write: User has read and write rights. The user has access to the unit, and can read and change the settings.

7 Timer Functions:
No Access: The user does not have any access to the unit.
Read: User only has read rights. Settings cannot be changed.
Read/Write: User has read and write rights. The user has access to the unit, and can read and change the settings.

8 SMS Setup:
No Access: The user does not have any access to the unit.

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Read: User only has read rights. Settings cannot be changed.
Read/Write: User has read and write rights. The user has access to the unit, and can read and change the settings.

9 Alarm Logs:
No Access: The user does not have any access to the Event Logging page.
Own alarms: If a user only has access to one or more units, the user will see only the alarm messages of the units assigned to the user.
All alarms: The logged in user is permitted to view all alarm messages.

10 Timeout:
If a user does not make any activity in the browser window for an extended period of time, the user will be logged off from the system after a set time.

11 Login Status:
If you are logged in as administrator, you can log off logged in users.

12 Accept/Reset Button:
Accept button: Accept settings.
Reset button: Settings are not 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.

## 7.7 Configuring the Sensors

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

| Navigation |
|---|
| Main menu |

The sensor overview window appears.

### 7.7.1 General Overview (Status Window)

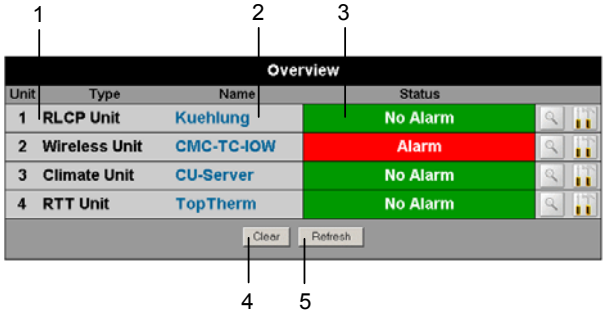


*Fig. 31 I/O units overview*

**Key**

1 Connection number and type of the sensor units.

2 Name of the sensor unit: Click to change to the sensor overview (7.7.2) of the I/O unit.

3 Warning and alarm status of the sensor
green: No warning/alarm
yellow: Warning
red: Alarm (malfunction)
unit detected: New sensor unit has been connected to the PUII
Configuration changed: New sensor connected to the I/O unit or configuration change of a sensor

4 Acknowledge events
Click the Clear button to acknowledge timeouts and configuration changes. This causes the CMC-TC PU to be queried again and the web page rebuilt.

5 Refresh
Forces an immediate updating of the CMC-TC PU web page.
The sensor overview will also be updated automatically every ten seconds.

### 7.7.2

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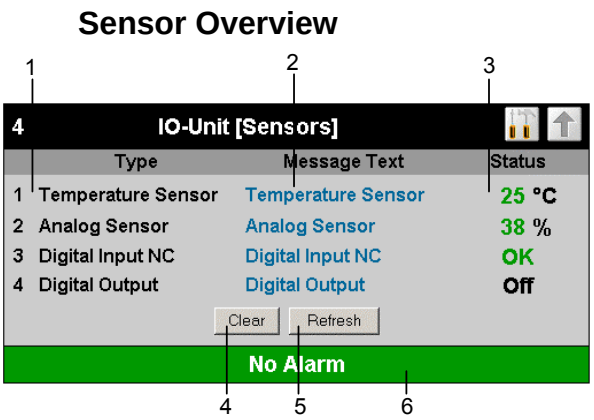


*Fig. 32 Sensors on an I/O unit overview*

**Key**

1 Connection number and sensor type.

2 Message text of the sensor. Can be selected freely using the sensor configuration (7.7.3).

3 Status or measurement value of the sensor. The font colour indicates the status of the sensor. For analogue values, an arrow indicates the overshooting or undershooting of the alarm or warning thresholds.

4 Acknowledge events
Click the Clear button to acknowledge timeouts and configuration changes. This causes the CMC-TC PU to be queried again and the web page rebuilt.

5 Refresh
Forces an immediate updating of the CMC-TC PU web page.
The sensor overview is also updated automatically every ten seconds.

6 Warning and alarm status of the sensors (overall)
green: No warning/alarm
yellow: Warning
red: alarm (malfunction)

## 7.7.3 General Overview (Sensor Configuration)

You can individually set the attached sensors. Because the structure of the configuration overview is generally always identical, it is 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 PUII.

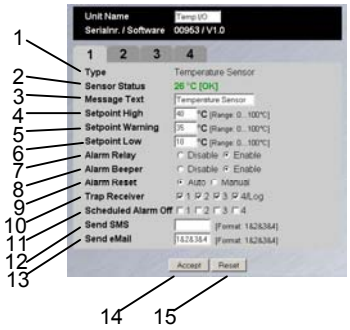


*Fig. 33 Configuring the sensor – overview*

**Key**

1 Connected sensor type.

2 Current status of the connected sensor.

3 This message text will also be transferred when a warning/alarm message is sent and serves as information for the recipient of the message to identify the sensor. You can delete the specified text and add your own message text (e.g. TempSensor-Rack1).

7 You can set for each sensor whether (enable) or not (disable) the alarm relay is to be switched for an alarm.

8 You can set for each sensor whether (enable) or not (disable) the integrated alarm beeper is to be activated for an alarm.

9 You can set for each sensor type whether after a warning or alarm status the CMC-TC PU should self-acknowledge (auto) or the administrator must acknowledge manually (manual).

10 By clicking the individual option fields you can determine to which of the entered trap receivers the traps for this sensor are to be sent.

11 By clicking the individual option fields you can set which alarm configuration is to be enabled or disabled. You can specify the individual functions in the "Setup – Timer" menu item and assign the associated scheduler.

12 You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4).

13 You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4).

14 Accept all changes.

15 Reset all settings to their default values.

The following buttons can be used to navigate easier between the individual pages:

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

***Home button:*** Links from each units overview page or from the setup pages directly to the home page.

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### 7.7.4 Configuring the Temperature Sensor

You configure the temperature sensor (DK 7320.500) as follows:

| Navigation | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "TempSensor rack 1". |
| Setpoint High | Temperature limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Temperature limit which when overshot 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 relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.5 Configuring the Humidity Sensor

You configure the humidity sensor (DK 7320.510) as follows. The humidity is specified as relative humidity (% rH).

| Navigation | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Air humidity rack 1". |
| Setpoint High | Humidity limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Humidity limit which when overshot causes a warning message to be issued. |
| Setpoint Low | Humidity limit which when undershot causes an alarm message to be issued. |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of a warning/alarm. |

| | |
|---|---|
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.6 Configuring the Analogue Sensor Input Module

You configure the analogue sensor input module (DK 7320.520) as follows. The individual values are specified as percentage.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Analogue sensor rack 1". |
| Setpoint High | Input current limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Input current limit which when overshot 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) an alarm relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any |

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|---|---|
| | changes are not accepted. |

### 7.7.7 Configuring the Access Sensor

You configure the access sensor (DK 7320.530) as follows:

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Access sensor rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.8 Configuring the Vandalism Sensor

You configure the vandalism sensor (DK 7320.540) as follows. The individual values are specified as pulses.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Vandalism sensor rack 1". |
| Setpoint High | Pulse limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Pulse limit which when overshot 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) an alarm relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the adminis- |

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|---|---|
| | trator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.9 Configuring the Air Flow Sensor

You configure the air flow sensor (DK 7320.550) as follows. Only the status of the sensor is specified.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the sensor name | |
| **Parameter** | **Explanation** |
| 1 … n | Connection number of the sensor. |
| Type | Sensor type. Will be detected automatically. |
| Sensor Status | Air flow status and sensor status. Green = OK, red = alarm. |
| Message Text | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Air flow rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.10 Configuring the Smoke Detector

You configure the smoke detector (DK 7320.560) as follows. Only the status of the sensor is specified.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a |

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|---|---|
| | designation that uniquely identifies your sensor, e.g. "Smoke detector rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.11 Configuring the Motion Detector

You configure the motion detector (DK 7320.570) as follows. Only the status of the sensor is specified.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Motion detector rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.12 Configuring the Digital Input Module

You configure the digital input module (DK 7320.580) as follows. Only the status of the sensor is specified.

| Navigation | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Digital input rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.13 Configuring the Digital Output Relay Module

You configure the digital output relay module (DK 7320.590) as follows. Only the status of the sensor is specified.

| Navigation | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Digital output rack 1". |
| Delay | Delay time for next switch on or off. 0 s = no release time; 999 s = 999 seconds release time. |
| Timeout | Module behaviour for failure of the PUII provided the module itself is still being supplied with power:<br>stay = return to the original status after expiration of the time; switch off = the output is switched off after expiration of the time; switch on = the relay is switched on after expiration of the time. |
| Trap Receiver | Specify which of the entered trap receivers is to be sent status messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |

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|---|---|
| Combinations | Configure the switching combinations (see 7.7.14 Configuring Switching Combinations for the Digital Relay Output Module). |
| Switch Output | Manual enable (On) or disable (Off). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.14 Configuring Switching Combinations for the Digital Relay Output Module

You configure the switching combination for the digital relay output module (DK 7320.590) as follows. Various switching combinations can be set.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the sensor name – Switching combinations | |
| **Parameter** | **Explanation** |
| If status of | Select the first sensor for the switching combination. |
| is | Select the first sensor status 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 status for a switching operation. |
| Then.....output | Select the switching state when the switching combination is satisfied. Switch off = deactivate relay output; switch on = activate relay output. |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.15 Configuring the Voltage Monitor

You configure the voltage monitor (DK 7320.600) as follows. Only the status of the sensor is specified.

| **Navigation** |
|---|
| Main menu – Setup – Click the sensor name |

| **Parameter** | **Explanation** |
|---|---|
| 1 … n | Connection number of the sensor. |
| Type | Sensor type. Will be detected automatically. |
| Sensor Status | Input state and sensor status. Green = OK, red = alarm. |
| Message Text | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "VltgRack01". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.16 Configuring the Voltage Monitoring for the Voltage Monitor with IEC Switch Output

You configure the voltage monitor with IEC switch output (DK 7320.610) as follows. The individual values are specified in volts.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "VltgRack01". |
| Setpoint High | Voltage limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Voltage limit which when overshot 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) an alarm relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.17 Configuring the Switch Output for the Voltage Monitor with IEC Switch Output

You configure the switch output of the voltage monitor with IEC switch output (DK 7320.610) as follows. Only the status of the sensor is specified.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "VltgRack01". |
| Delay | Delay time for next switch on or off. 0 s = no release time; 999 s = 999 seconds release time. |
| Timeout | Module behaviour for failure of the PUII provided the module itself is still being supplied with power:<br>stay = return to the original status after expiration of the time; switch off = the output is switched off after expiration of |

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| | |
|---|---|
| | the time; switch on = the relay is switched on after expiration of the time. |
| Trap Receiver | Specify which of the entered trap receivers is to be sent status messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Combinations | Configure the switching combinations (see 7.7.18 Configuring Switching Combinations for the Voltage Monitor with IEC Switch Output). |
| Switch Output | Manual enable (On) or disable (Off). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.18 Configuring the Switching Combinations for the Voltage Monitor with IEC Switch Output

You configure the switching combination for the voltage monitor with IEC switch output (DK 7320.610) as follows. Various switching combinations can be set.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the sensor name – Switching combinations | |
| **Parameter** | **Explanation** |
| If status of | Select the first sensor for the switching combination. |
| is | Select the first sensor status 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 status for a switching operation. |
| Then.....output | Select the switching status when the switching combination is satisfied. switch off = disable switch output; switch on = enable switch output. |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.19 Configuring the Voltage Monitoring for the Voltage Monitor with 16 A Switch Output

You configure the voltage monitor with 16 A switch output (DK 7320.611) as follows. The individual values are specified in volts.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "VltgRack01". |
| Setpoint High | Voltage limit which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Voltage limit which when overshot 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) an alarm relay should switch in the event of a warning/alarm. |

| | |
|---|---|
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.20 Configuring the Switch Output for the Voltage Monitor with 16 A Switch Output

You configure the switch output of the voltage monitor with 16 A switch output (DK 7320.611) as follows. Only the status of the sensor is specified.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a status message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "VltgRack01". |
| Delay | Delay time for next switch on or off. 0 s = no release time; 999 s = 999 seconds release time. |
| Timeout | Module behaviour for failure of the PUII provided the module itself is still being supplied with power:<br>stay = return to the original status after expiration of the time; switch off = the output is switched off after expiration of the time; switch on = the relay is switched on after expiration of the time. |
| Trap Receiver | Specify which of the entered trap receivers is to be sent status messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Combinations | Configure the switching combinations (see 7.7.21 Configuring Switching Combinations for the Voltage Monitor with 16 A Switch Output). |
| Switch Output | Manual enable (On) or disable (Off). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.21 Configuring the Switching Combinations for the Voltage Monitor with 16 A Switch Output

You configure the switching combination for the voltage monitor with 16 A switch output

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(DK 7320.611) as follows. Various switching combinations can be set.

| Navigation | |
|---|---|
| Main menu – Setup – Click the sensor name – Switching combinations | |
| **Parameter** | **Explanation** |
| If status of | Select the first sensor for the switching combination. |
| is | Select the first sensor status 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 status for a switching operation. |
| Then.....output | Select the switching status when the switching combination is satisfied. switch off = disable switch output; switch on = enable switch output. |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.22 Configuring the 48 V Voltage Monitor

You configure the 48 V voltage monitor (DK 7320.620) as follows. Only the status of the sensor is specified.

| Navigation | |
|---|---|
| Main menu – Setup – Click the sensor name | |
| **Parameter** | **Explanation** |
| 1 … n | Connection number of the sensor. |
| Type | Sensor type. Will be detected automatically. |
| Sensor Status | 48 V voltage monitor state and sensor status. Green = OK, red = alarm. |
| Message Text | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "48 V VltgRack01". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.23 Configuring the Leakage Sensor

You configure the leakage sensor (DK 7320.630) as follows. Only the status of the sensor is specified.

| Navigation | |
|---|---|
| Main menu – Setup – Click the 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Leakage Rack01". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.24 Configuring the Acoustic Sensor

You configure the acoustic sensor (DK 7320.640) as follows. Various limit values can be entered as percentages.

| **Navigation** | |
|---|---|
| Main menu – Setup – Click the sensor name | |
| **Parameter** | **Explanation** |
| 1 … n | Connection number of the sensor. |
| Type | Sensor type. Will be detected automatically. |
| Sensor Status | Measured loudness as percentage and sensor status. Green = OK, yellow = warning, red = alarm. |
| Message Text | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Acoustic Rack01". |
| Setpoint High | Loudness limit (as percentage) which when overshot causes an alarm message to be issued. |
| Setpoint Warning | Loudness limit (as percentage) which when overshot causes a warning message to be issued. |
| Setpoint Low | Loudness limit (as percentage) which when undershot causes an alarm message to be issued. |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of a warning/alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of a warning/alarm. |
| Alarm Reset | Should a warning/alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent warning/alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered |

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| | |
|---|---|
| | previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.25 Configuring the Fan Control System (FCS)

You configure the FCS (DK 7320.810) 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "FCS-Temp Rack01". |
| Setpoint High | Temperature limit which when overshot causes an alarm message to be issued. |
| Setpoint | Temperature limit above which the fan operates at 100% power. |
| Setpoint Low | Temperature limit which when undershot causes an alarm message to be issued. |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any 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 | The message text which is also transferred when a warning/alarm message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "FCS-Fan Rack01". |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any 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, red = alarm, grey = fan not connected. |
| Message Text | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "FCS fan rack 1". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.26 Configuring the Fan Alarm System (FAS)

You configure the FAS (DK 7320.811) 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 | Sensor status. Green = OK, red = alarm. |
| Message Text | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "FAS-Fan Rack01". |
| Alarm Relay | Whether (enable) or not (disable) an alarm relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |

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| | |
|---|---|
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

### 7.7.27 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 7.7.4 |
| Humidity | Section 7.7.5 |
| Access | Section 7.7.7 |
| Digital input | Section 7.7.12 |

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).

## 7.8 Access Using Telnet

You can also configure the Processing Unit using Telnet. This requires that you have used the terminal program to permit access using Telnet (see Section 7.3.18 Configuring the Telnet Access).

### 7.8.1 Login Using Telnet

The following section describes the access using Telnet under Windows.

a. Open the input prompt and enter the command: telnet <IP-address>
b. Confirm with Enter or Return.
c. Enter for “Login” the Telnet login (factory setting: ´cmc´). Confirm with Enter or Return.
d. Enter for “Password” the Telnet password (factory setting: 'cmc'). Confirm with Enter or Return.

### 7.8.2 Telnet Main Menu

After the login by Telnet, the same main menu as for access using HyperTerminal appears. Because all procedures are similar, refer to 7.

**Note!**
In addition to access using Telnet, an SSH client (e.g. Putty) can be used to make an encrypted access to the PUII configuration. Unlike the Telnet access, the SSH access cannot be disabled.

## 7.9

### Performing a Software Update

Download from the internet page www.rimatrix5.com (Security) in the download area, the software update to your PC. Unzip the file into a separate folder, for example, with the name: puupdate.

**Note!**
The update takes approximately 10 minutes.
Also observe the guidelines for the update provided for download with the update in the internet.

**Warning!**
**The update must not be cancelled, because this can cause the complete failure of the PUII.**

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

The PUII must be reachable in the network with the specified IP address.

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

The CMC-TC Processing Unit independently performs two restarts during the update process. This operation 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 lights again and the *Updating finished, login to Rittal CMC PU <IP-address> again* message appears.

## 7.10 Error Messages

Operating/Alarm LED off.

| Cause | Correction |
|---|---|
| Power pack not connected. | Connect power pack. |
| Power pack defective. | Replace the defective power pack with an operational one. |
| Power supply missing. | Establish the power supply. |
| PUII is booting. | Wait several minutes until the LED illuminates. |

Link/Traffic LED off.

| Cause | Correction |
|---|---|
| Network connection | Connect RJ-45 network |

| | |
|---|---|
| missing. | 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 via Telnet.

| Cause | Correction |
|---|---|
| Telnet access for the PUII blocked. | Use the HyperTerminal to activate the Telnet access. |
| Incorrect IP address entered. | Check the IP address. |
| Incorrect user name entered. | Check the user name. |
| Incorrect password entered. | Check the password. |

No access authorisation via browser.

| Cause | Correction |
|---|---|
| Incorrect user name entered. | Check the user name. |
| Incorrect password entered. | Check the password. |

No access authorisation via HyperTerminal.

| Cause | Correction |
|---|---|
| Incorrect user name entered. | Check the user name. |
| Incorrect password entered. | Check the password. |

No settings can be made via browser.

| Cause | Correction |
|---|---|
| Web access set only to read authorisation. | Set the access authorisation using Hyperterminal or Telnet in the Web Access menu item.<br>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 | Correction |
|---|---|
| The entries for the read and write authorisation (read and write community) are not set correctly. | Use HyperTerminal or Telnet to compare the read and write authorisation with the management software. |
| Trap receivers have not been entered. | Check the trap receivers. |

Sensor not detected or not displayed.

| Cause | Correction |
|---|---|
| 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.<br>It sometimes helps to briefly insert a different sensor in order to directly switch back to the first sensor. |

## 7.11 Structure 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 part of the MIB in particular must satisfy the modular flexible system concept of the CMC-TC system. For this reason, the associated 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 |

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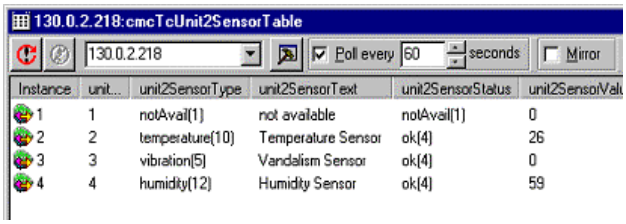
| | | | |
|---|---|---|---|
| **Active PSM** | 12 (3 per module) | 12 (3 per module) | 12 (3 per module) |
| **Climate Unit** | 2 | 1 | 3 |

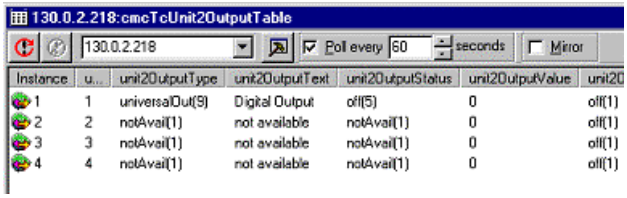
Note that the number of possible sensors, outputs and messages is stored in the associated MIB variables.

Sensors:



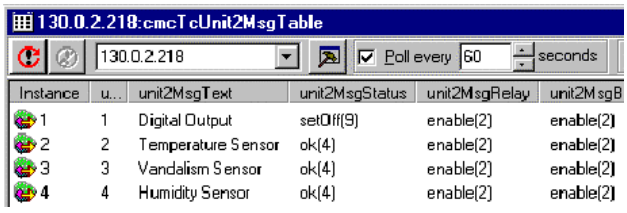

**Note!**
The numbers in column 2 correspond to the port numbers of the I/O Unit. The sensors are assigned in accordance with their physical connection. This table does not show the outputs, refer to the next table.

Outputs:




**Note!**
The numbers in column 2 correspond to the port numbers of the I/O Unit. The shown outputs correspond to their physical connection on the port.

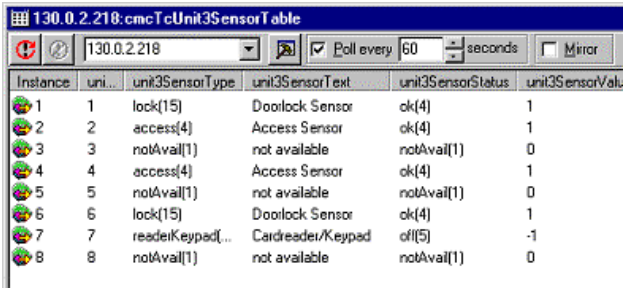
Messages:




**Note!**
The numbers in column 2 correspond to the port numbers of the I/O Unit. The shown table entries correspond to the current status and the configuration settings for the port.

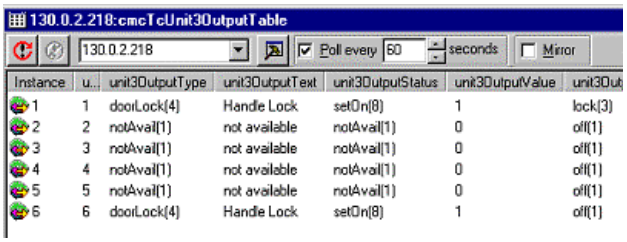
### Representation of the table and the sample table entries of the Access Unit

Sensors:



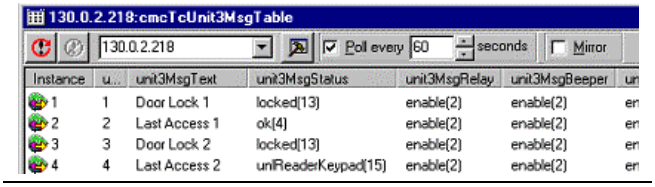

**Note!**
Column 2 indicates to which port the accessory components are connected. Ports 1, 2, 3 and 7 correspond to door system 1; ports 4, 5, 6, and 8 correspond to door system 2.

Outputs:




**Note!**
Column 2 indicates the physical connection of the port assignment.

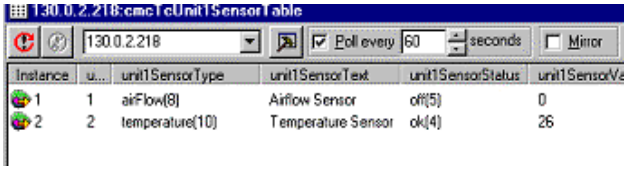
Messages:




**Note!**
The shown 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

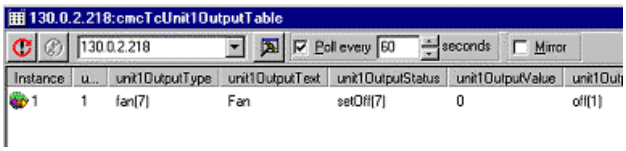
Sensors:




**Note!**
The numbers in column 2 correspond to the port numbers of the Climate Unit. The sensors are assigned in accordance with

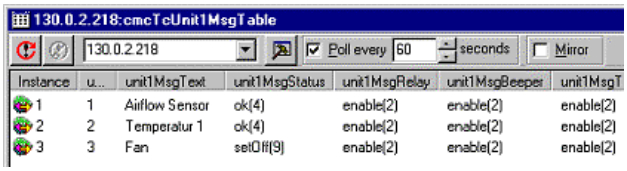
their physical connection. This table does not show the outputs, refer to the next table.

Outputs:




**Note!**
Column 2 indicates the physical connection and the status of the port.

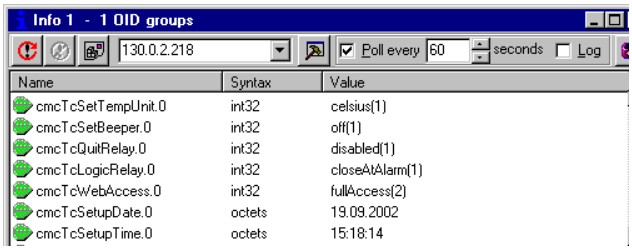
Notifications:




**Note!**
The numbers in column 2 correspond to the port numbers of the Climate Unit. The shown 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.




## 7.12 ActivePSM (4-way)

The ActivePSM modules are available in various configurations.

| PSM module | Configuration | Model No. |
|---|---|---|
| Active 4-way | 4x C13 | 7865.200 |
| Active 8-way | 8x C13 | 7856.201 |
| Active 8-way | 8x C13 (19") | 7200.001 |
| Active 6-way | 2x C13, 4x C19 | 7856.204 |
| Active 6-way | 2x C13, 4x earthing contacts | 7856.203 |

The information for the ActivePSM (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.

### 7.12.1 Getting Acquainted with the Module Connections

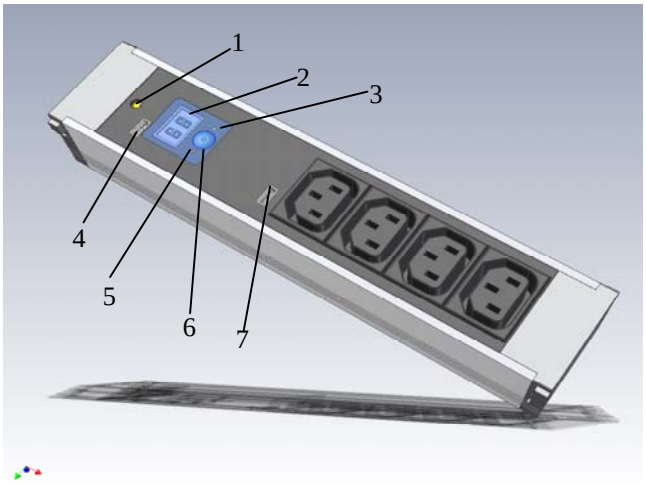



*Fig. 34 ActivePSM (4-way)*

**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).

### 7.12.2 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 integer 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 "I" and "II".

These LEDs each flash in accordance with the installation position of the module.

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| Parameter | Explanation |
|---|---|
| Green | OK |
| Orange | Warning, fuse triggered or mains voltage missing. |
| 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.

### 7.12.3 Displays

| Parameter | Explanation |
|---|---|
| Flashing display | Current not within the limits. |
| 0.0 displayed | No consumers connected to the ActivePSM. |
| 3.2, etc., displayed | Consumers connected; their "consumed" current value is 3.2 A. |
| n.P. displayed | "No power" means that no power is supplied to the PSM bus 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 ActivePSM is contained on the next page.

### 7.12.4 Setup Menu for the Local Pushbutton

Important parameters must be set for the initial commissioning of the active 4-way PSM. The following list displays how the active 4-way 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:<br>1 = fixed circuit 1<br>2 = fixed circuit 2<br>3 = automatic | Enter |

### 7.12.5 Connecting the ActivePSM to the CMC-TC

The ActivePSM is connected to the CMC-TC Processing Unit II (in short, PUII) 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 PUII and the ActivePSM is made using a special adaptor 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 ActivePSM.

**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.



Enter

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**Integration of ActivePSM and PSM Busbars**
The ActivePSM is centred over the busbar's plug connector and pressed on under gentle force. The ActivePSM is connected correctly when all four of the ActivePSM'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 ActivePSM is connected. The busbar also serves as a redundant power supply, so the ActivePSM can be installed in either direction between Circuit 1 and Circuit 2.

**Power supply:** The power is supplied to the ActivePSM electronics from the CMC-TC Processing Unit II (PUII). This requires that the Category 5 patch cable is inserted in the RJ 45 socket of the PUII and in the adaptor cable of the ActivePSM. Up to four modules can be connected in series on a PUII channel. Unique addresses must be assigned for each module (1, 2, 3, 4).

**Note!**
For the series connection of PSM modules to the PUII, only one active PSM module type can be cascaded for each sensor unit input of the PUII.

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 ActivePSM 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.

## 7.12.6 Monitoring Using a Browser

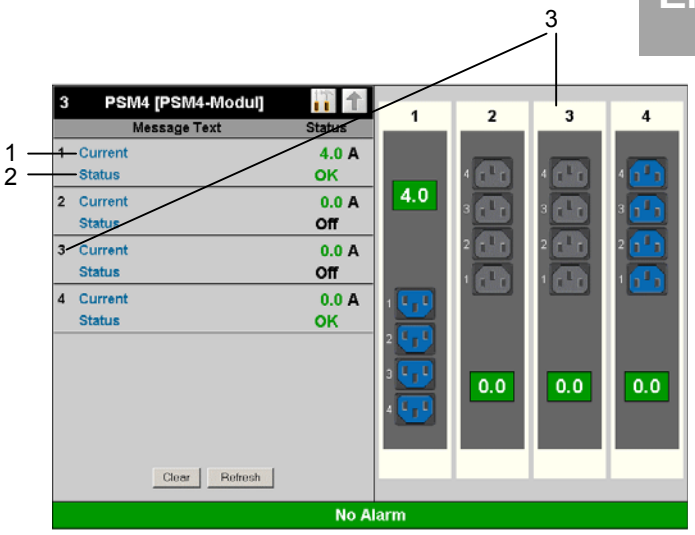


*Fig. 35 ActivePSM browser display*

Key

1 Current: Display of the actual current value of the consumers (server, etc.) connected to the ActivePSM.

2 Status: Indicates whether the specified 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.

## 7.12.7 Configuring the ActivePSM

| **Navigation** | |
|---|---|
| Main menu – Status – Click 1 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 | The message text which is also transferred when a warning message is sent. Enter here a designation that uniquely identifies your sensor, e.g. "Current Rack01". |
| Setpoint High | Current limit which when overshot causes an alarm message to be issued. |
| Setpoint Low | Current limit which when overshot causes an alarm message to be issued. |

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| | |
|---|---|
| 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 values saved most recently; any changes are not accepted. |

| **Navigation** | |
|---|---|
| Main menu – Status – Click 2 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 relay should switch in the event of an alarm. |
| Alarm Beeper | Whether (enable) or not (disable) an audio signal should be issued in the event of an alarm. |
| Alarm Reset | Should an alarm be acknowledged automatically (Auto) or does it need to be acknowledged by the administrator (Manual). |
| Trap Receiver | Specify which of the entered trap receivers is to be sent status messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

| **Navigation** | |
|---|---|
| Main menu – Status – Click 3 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 | Specify which of the entered trap receivers is to be sent alarm messages. Enter the trap receivers at 7.3.2 Configuring the Trap Receiver. |
| Scheduled Alarm Off | Specify which alarm configuration should be enabled or disabled. The individual functions can be setup from the "Setup – Timer" menu item. |
| Send SMS | You can enter up to four mobile wireless numbers that you entered previously at Setup – SMS Unit; each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Send E-Mail | You can enter up to four e-mail addresses that you entered previously at Setup – E-Mail (SMTP); each number is separated with the ampersand character "&" (e.g. 1&2&3&4). |
| Accept | Accept the changes. |
| Reset | Reset all settings to the values saved most recently; any changes are not accepted. |

## 7.13 Metered PSM

**Note!**

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

## 7.14 Monitoring the LCP and RTT I/O Unit

The LCP/RTT I/O unit is connected to the CMC-TC Processing Unit II (in short PUII) 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.

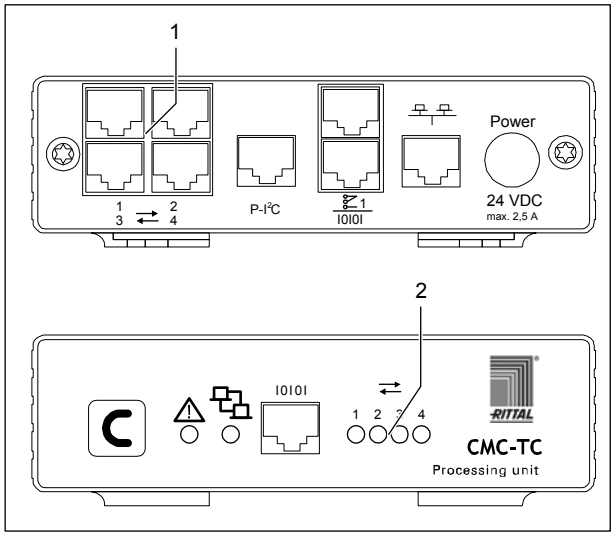


*Fig. 36 Establishing the sensor connection*

**Key**

1 Sensor units connections (1-4)

2 Status LEDs for connected sensor units

The network connection of the PUII (item 1) is made using the network cable with RJ45 plug in the existing Ethernet network structure.
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.

## 7.15 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 PUII. This form of access control has the following properties:
a 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:

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| "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.

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 maximum eight keypads (card readers) all have the same authority. This means, irrespective where the code is entered, the door(s) specified in the access file will be released.

## 7.16 Saving and Transferring Configuration Files

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

The configuration can also be transferred to other CMC-TC systems that have the identical wiring and construction.

**Note!**
Warning, this function may only be used when the CMC-TC systems are identical with regard to:

- sensor types and the used ports
- sensor units and the used ports and addresses
- 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 PUII system will not accept the configuration.

Save configuration files:

Once the commissioning, installation and the settings of all text items, limit values, links, network settings, 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 PUII.

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

| | |
|---|---|
| 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 transferring the file. The correctness of the transfer can be seen in the event log.

**Note!**
Warning, during the editing of the net.cfg file, under no circumstances may the format or the file structure be changed. If this is not observed, the system may suffer a complete failure.

Transferring configuration files:

Prerequisite -> 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 PUII.

Configuration files on the target device to which transfers are made:

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

# 8 Maintenance and Cleaning

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 any accessory components will void any warranty and liability claims.

## 8.1.1 Cleaning

**Warning!**

**Danger of damage!**
**Do not use any aggressive substances, such as white spirit, acid, etc., for cleaning because such substances can damage the unit.**

Use a slightly moistened soft cloth to clean the housing.

# 9 Storage and Disposal

## 9.1.1 Storage

If the device is not used for a longer period, we recommend that it is disconnected from the mains power supply and protected from dampness and dust.

Further information concerning the operating conditions is contained in the technical specifications.

## 9.1.2 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.

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# 10 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.

## 10.1 Language selection for the browser interface

The menu item

**Setup > General > Language**

**(German: 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.

## 10.2 Extended options under “Combinations”

Switching combinations, e.g. for the digital relay output module (see Chapter 7.7.14), 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.

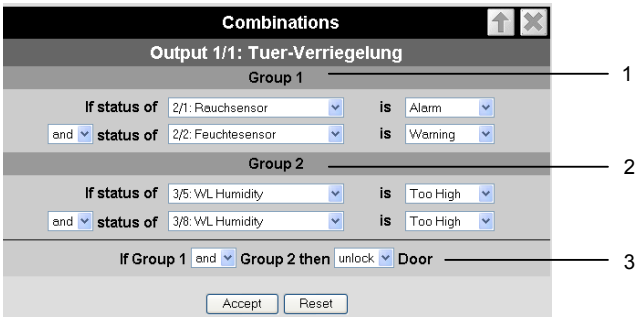


*Fig. 37 Extended “Combinations” configuration*

**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.

## 10.3 New functions for the alarm and event log

Two new functions have been added to the alarm and event log (see Chapter 7.6.8): **Delete** and **Refresh**.

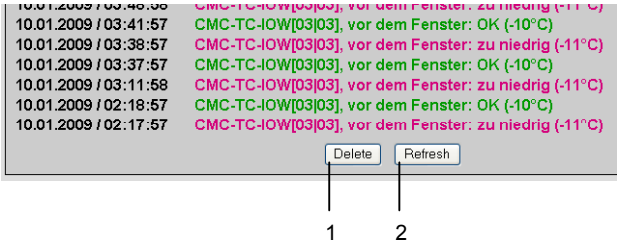


*Fig. 38 Alarm and event log*

**Key**

1 Delete button: Deletes all entries from the log.

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

## 10.4 Test functions for traps, e-mail, SMS and pings

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

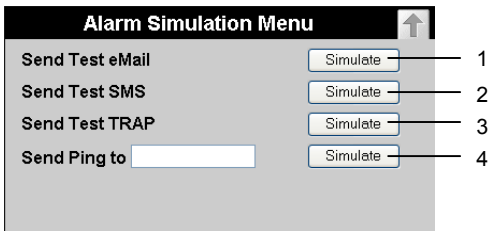


*Fig. 39 Alarm simulation menu*

**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 Chapter 7.3.2)

4 Sends a ping to the specified IP address

## 10.5 Scaling of the 4...20 mA sensor inputs of the input module

In the settings for the analog 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.

## 10.6 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.

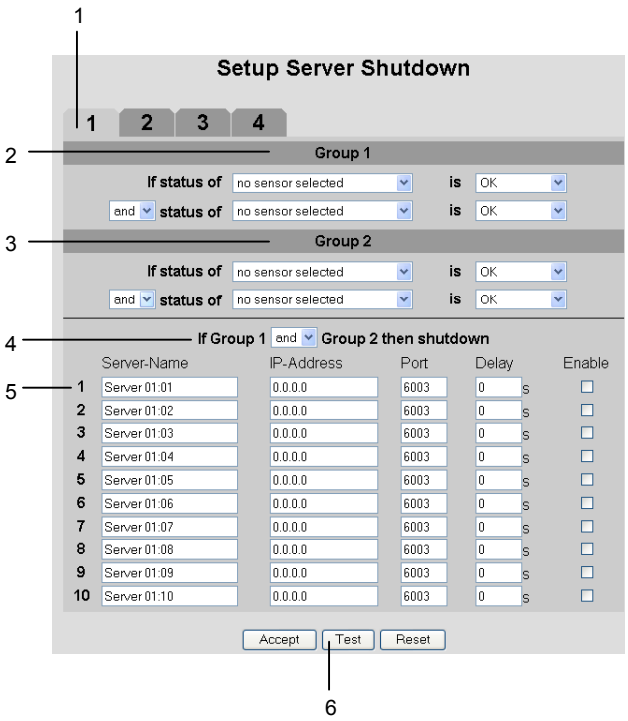


*Fig. 40 Server shutdown configuration*

**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 (point 4).
*Enable*: If this check box is marked, the server is shut down if the switching conditions are met (point 4). In addition, the connection to this server will be tested when the Test button (point 6) is clicked.

6 Test button to test the connections to the servers.

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**Note!**
**The Test button does not send shut-down commands to the servers!**
It merely checks whether communication with the specified servers is possible. This test is performed for all the servers on all four tabs for which the Enable check box is marked.

A maximum of four sensor values, configured in two groups as for the general switching combinations (see chapter 10.2), 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.

## 10.7 Configuration of automatic door opening

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

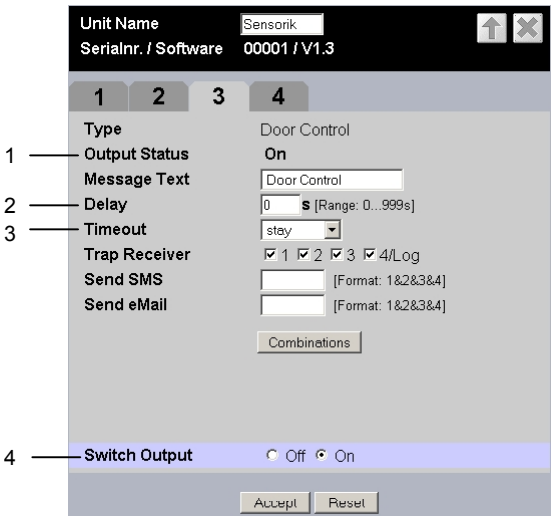


*Fig. 41 Configuration of automatic door opening*

**Key**

1 Current status of the door control.

2 Time for which the contact remains open upon opening 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**

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## 10.8 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.

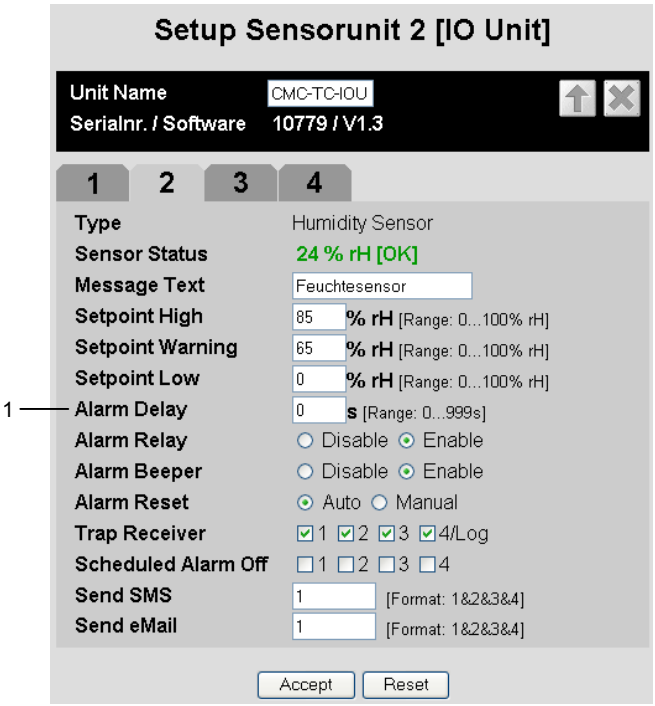


*Fig. 42 Configuration of delayed alarms*

**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 ActivePSM busbars/modules.

## 10.9 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.

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## 11 Customer Service

If you have any technical questions or questions concerning our product spectrum, contact the following service address:

Tel.: +49 (0)2772/505-1855
http://www.rimatrix5.de
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 guides and updates of the Rittal CMC-TC are available for download under Security on the Rimatrix5 homepage.

## 12 Technical Specifications

| Designation | CMC-TC |
|---|---|
| **Housing** | |
| 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 pushbutton, acknowledge pushbutton |
| 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 transmitter |
| $I^2C$ connection | RJ45 socket (P-$I^2C$), shielded |
| **Alarm relay** | |
| Output | 1 x RJ12 socket, shielded |
| Configuration | Potential-free change-over contact |
| Rated voltage | 24 V DC, internal or<br>24 V for external power supply |
| Current | 200 mA |
| **Operational area** | |
| Temperature | +5 to +45 °C<br>+42 to +113 °F |
| Humidity | 5 – 95 % |
| Storage temperature | -20 to +60 °C<br>-4 to +140 °F |
| Rated voltage | 1 x 24 V DC<br>2.5 A SELV |
| Fuse | Miniature fuse T2A, 250 V,<br>UL approval |
| Network | 1 x RJ-45 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 the Access Unit | 10 m, after consultation with Rittal maximum 50 m, UL approval |
| PU to the Climate Unit | 10 m, after consultation with Rittal maximum 50 m, UL approval |
| PU to the Wireless I/O Unit | 10 m, after consultation with Rittal maximum 50 m |
| **Protocols** | |
| Available protocols | - TCP/IP<br>- SNMP v1 (incl. MIB II)<br>- SNMP v3<br>- TELNET, SSH<br>- FTP, SFTP<br>- http, https, SSL 3.0<br>- NTP<br>- DHCP |

*Technical Specifications*

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

# 13 Technical 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 for a mobile telephone.

**Internet browser**

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

**Link**

A link causes a jump to another Internet page or establishes a connection between two Internet pages.

**MAC address**

The MAC address is a unique combination of alphabetic characters and digits assigned to a network interface that may be assigned just once throughout the world. One of its uses is to identify a network interface in a network.

**MIB (Management Information Base)**

The MIB was developed to fetch and change network elements. The MIB II was defined in the RFC 1213. Some manufacturers define their own MIBs that provide information about the special properties of their product. The MIBs are registered for the OID with the IANA (Internet Assigned Numbers Authority). Once an object has been assigned to an OID, the meaning can no longer be changed. There also cannot be any overlapping with other OIDs.

**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 monitor network components on a central management station.

**Telnet**

Telnet is a protocol for 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 receiver of SNMP messages.

**Web Access**

The Web Access is used to define the access possibility via the Internet.

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# 14 Declaration of Conformity

# Konformitätserklärung

Declaration of Conformity

**Reg. Nr.: 5 232 302 - 1**

Wir
*We*

**Rittal**
**GmbH & Co. KG**
Postfach 16 62
35726 Herborn
Germany

erklären, dass das Produkt
*declare that the product*

CMC-TC - Schranküberwachung
*Rack-Monitoring and Control*

CMC-TC
DK 7320.100 CMC-TC Prozessor Unit (PU)
DK 7320.111 BasicCMC
DK 7320.210 CMC-TC Sensoreinheit I/O Unit (IOU)
DK 7320.220 CMC-TC Sensoreinheit Access Unit (AU)
DK 7320.230 CMC-TC Sensoreinheit Climate Unit (CU)

mit der/den folgenden Norm(en) oder Normativen Dokument(en) übereinstimmt.
*is in conformity with the following standard(s) or other normative document(s)*

| | |
|---|---|
| EN 60950-1 | Ausgabe 2003/03 |
| EN 55022 | Ausgabe 2003/09 |
| EN 61000-3-2 | Ausgabe 2006/10 |
| EN 61000-3-3 | Ausgabe 2006/06 |
| EN 61000-6-2 | Ausgabe 2006/03 |
| EN 61000-6-3 | Ausgabe 2005/06 |

Gemäß den Bestimmungen der Richtlinie(n)
*Following the provisions of Directive(s)*

Niederspannungsrichtlinie Nr.: 73/23/EWG und Änderungen
*Low Voltage Directive* *and updates*
EMV – Richtlinie Nr.: 89/336/EWG und Änderungen
*EMC Directive* *and updates*

Herborn, 28 Dezember 04

Jahr der ersten Kennzeichnung: 2002
*Year of first marking:*

W. Schmid / Geschäftsführer
*W. Schmid / Executive Vice President*

Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern"
*This declaration of conformity is suitable to the European Standard EN 45014 "General criteria for suppliers declaration of conformity"*

**NWGQ7** October 23, 2003
**Information Technology Equipment Including Electrical Business Equipment Certified for Canada**

**RITTAL GMBH & CO KG** **E215843**
**AUF DEM STUETZELBERG, 35745 HERBORN GERMANY**

**Computer multi control units - Top concept**, Model(s) CMC - TC AU, CMC - TC CU, CMC - TC IO, CMC - TC PU.

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**LOOK FOR LISTING MARK ON PRODUCT**