Rittal GmbH & Co. KG Auf dem Stützelberg D – 35745 Herborn Germany

Email: Info@rittal.de http://www.cmc-tc.com Service Tel. : (+49) - (0)2772 / 505 - 0 Service Fax : (+49) - (0)2772 / 505 - 2319





CMC-TC Master DK 7320.000 Installation and Operating Instructions

- Last update: 10 January 2006 -

All rights related to this technical documentation are reserved for us. Without our previous consent it must neither be reproduced nor made available for third parties. Nor must it be put to any other misuse by the receiver or third parties. Any violation of the above obliges the violating party to pay compensation and may lead to penal action.

Index [**xx**]



FRIEDHELM LOH GROUP

| 0. | Introduction | 4 |
|------------|---|----------|
| 1. | Safety instructions | 5 |
| 2. | Service and Service Address | 6 |
| 3. | CMC-TC Master | 7 |
| 3.1 | Description | 7 |
| 3.2 | 2 Design | 8 |
| 3.3 | B Functions | 9 |
| Optio | onal: | 9 |
| 4. | Assembly | 10 |
| 4.1 | Mechanical components | 10 |
| 4.2 | 2 Electrical components | 10 |
| 5. | Start-up | 11 |
| 6. | Operation | 11 |
| 7. | Fault messages | 12 |
| 8. | Maintenance | 12 |
| 9. | Cleaning | 12 |
| 10. | Disposal | 12 |
| A 1 | Scope of supply/ Accessories – CMC-TC Master | 13 |
| B 1 | Technical data – CMC-TC Master | 14 |
| C 1 | Functional diagram - Central application in the network | 15 |
| C 2 | Functional diagram – Local operation via console | 16 |
| C 3 | Functional diagram – Operation by network and console | 17 |
| D 1 | Installation instructions – Master | 18 |
| E 1 | Electrical connection: CMC-TC master | 19 |
| E 2 | Configuration via serial interface RS 232 | 21 |
| E 3 | Setting up of the CMC-TC Processing Units | |
| | for operation with the Master | 22 |
| F 1 | Check list – Commencing operation of CMC-TC Master | 24 |
| G 1 | Display and operating elements enclosure | 25 |
| <u>н</u> 1 | Display and operation by terminal program | 20 26 |
| 11 | Operation of CMC-TC master by browser | 20 |
| | Evolution info window | ע∠ ספ |
| - | Explanation info window - Certification information | ע∠ ספ |
| - | | 29 |



Setup page of the selected CMC-TC sensor unit and its CMC-TC PU Alarm actions J 1 Fault messages Master Unit 64 K 1



3

0. Introduction

The stable flow of information and production is the 'lifeline' of an enterprise.

Loss of data, failure of function and production cause extensive and in many cases lifethreatening damage. Therefore, it is the declared company objective to ensure a maximum of safety and reliability.

RITTAL offers the support to achieve this: By means of universal competence in effective prevention, comprehensive safety, and centralized organization, i.e. teamwork for IT safety and reliability! This results are the optimum combination of enclosure monitoring, server administration, and climate control components.

The solution for enclosure monitoring carries the Name RITTAL CMC-TC. This concept includes complete physical monitoring of the enclosure, i.e. temperature, humidity, vibration, smoke, voltage up to complete enclosure locking and access control. All these items of information are transmitted via SNMP to a management station and can easily be administered from this point.

The system is rounded off by its modular structure. Basic monitoring can be implemented in next to no time. When the requirements grow, the system can easily be expanded and can also be combined with other components of the Rittal production range.

For more comprehensive systems the CMC-TC Master is ready, acting as a central management station. It can manage up to 10 self-contained monitoring systems via one IP address in a network. Alarm signals and monitoring-relevant data of the monitoring systems are centrally collected and partly documented. The data collected and prepared can then be called over the 10/100 BaseT connection or directly over a KVM console (Keyboard-Video-Mouse console). The RITTAL SSC console is suited to this purpose. In addition, the Master can be connected to a KVM switch.

The significant features of the RITTAL CMC-TC Master are:

- Central administration of larger enclosure monitoring systems in interlocked networks or stand-alone
- Ethernet network connection 10/100BaseT
- Central web server for configuration
- Local administration via KVM console (2xPS/2 and VGA connection)
- Maximum expansion: Up to 160 temperatures can be measured or up to 80 doors can be administered
- Total compatibility with RITTAL enclosure monitoring system CMC-TC and with the RITTAL enclosure system
- (Room) Monitoring by WebCam



1. Safety instructions



General remarks

The installation and operating instructions contain basic information for installation, for putting into operation, and for operating the RITTAL CMC-TC Master. It is a must to make the instructions available to the installation technician and the administrative operating personnel and that they should read these carefully. RITTAL cannot accept liability for personal injury and material damage resulting from non-observance of the safety advice in the installation and operating instructions. It is essential to observe not only the general safety advice given in this chapter, but also the special safety advice given in the other chapters.

Personnel qualification and authorization

Operation and any changes may be carried out only by authorized specialist personnel or by authorized trained operating personnel.





Risks due to non-observance of safety advice

Non-observance of the safety advice may result in risks for the personnel, as well as to the RITTAL CMC-TC Master together with the connected equipment. Non-observance of the safety advice involves loss of the right to claim for all and any damages.





Working at the CMC-TC

The generally applicable electrical regulations of the country in which the unit is installed and operated must be observed, just as the existing national regulations for the prevention of accidents and any internal rules (work, operating, safety regulations) issued by the operator. Prior to working at the unit this must be disconnected from the supply and secured against being switched on again. Original accessories and accessories authorized by the manufacturer ensure safety. The use of other parts may make void the liability for consequences resulting from this. Repair work at the unit may be done only by RITTAL or by authorized personnel.

Operating reliability

The operating reliability of the unit supplied is only warranted in case of use as intended and according to the rules. The limit values quoted in the technical data (see Appendix **B Technical data**) must not be exceeded under any circumstances. This applies particularly to the allowed ambient temperature range and the allowed IP protection category. For applications with a higher specified IP protection category, complying with the specified protection category. Operation of the CMC-TC system in direct contact with water, aggressive media, or inflammable gases and fumes is prohibited.



2. Service and Service Address

If you have any questions concerning technical or other issues related to our product range RITTAL will of course support you. You may contact us by e-mail or via the address or phone and fax numbers indicated below.

RITTAL GmbH & Co. KG PM IT-Service Auf dem Stützelberg

D-35745 Herborn Germany

http://www.RITTAL.de

Email: Info@RITTAL.de Caution: please always specify the article number in the reference line!

Phone: +49 (0)2772/505-0 Fax: +49 (0)2772/505-2319

Further information and the updated operating instructions for the RITTAL CMC-TC Master are ready for downloading from the RITTAL homepage.



3. CMC-TC Master

3.1 Description

The RITTAL CMC-TC Master is a function block making the administration, co-ordination, documentation, and alarm indication of the monitoring system CMC-TC more comfortable and supporting additional functions. The configuration is consisting of an Embedded Linux PC with integrated 10-fold hub in the 1 U 482.6 mm (19") enclosure, to which up to 10 processing units can be connected. An integrated 10/100 BaseT interface (Ethernet interface) allows the Master to integrate the connection into the network environment of the company. The Master can be operated off the network using the console connections (2xPS/2, 1xVGA). This means the Master can be accessed locally or via the network. A visible or audible alarm can be implemented using the integrated alarm relay.

The CMC-TC Processing Units are linked up by Cat5 cabling with the CMC-TC Master installation. The data connection into the network is made via the Embedded-Linux PC. To guarantee the connection to the network is secure, 128-bit SSL encryption is integrated. Access to the integrated web browser of the Master is possible through a standard browser (Internet Explorer, Mozilla Firefox, etc.). The CMC-TC Master supports the TCP/IP, SNMP, TELNET (TeraTerm), SSH and HTTPS protocols.

The network protocols are used for communication (password and status query, switching commands, and alarm signals) between the CMC-TC system and the authorized users in the network (network, internet and intranet).

See Appendix C Functional diagram

The Rittal CMC-TC Master is platform-independent as long as the platform has a network connection and a web browser available. The SNMP functionality is also platform-independent and must support the SNMP V1.0 network management protocol. In addition, the CMC-TC Master supports the Standard-MIB II. The private MIB is part of the scope of supply; see CD Rom (CMC-TC-Master.MIB).



3.2 Design

The Master is delivered in a 482.6 mm (19") aluminum enclosure. The Master is based on an embedded Linux PC with integrated 10-fold hub. For future further development of the Master, several interfaces such as PCMCIA, serial, infrared and sound interfaces are preconfigured.

At the front the various status conditions like alarm status, network connection, and connected monitoring systems are shown by 13 LEDs. The functions are described in detail in Appendix **G 1 Display and operating elements enclosure**.

The IEC mains connection is located on the rear side of the Master. The power pack is integrated into the Master enclosure. The IEC connection cable is available in various country versions and must be chosen according to the country-specific specifications (see Appendix **A1 Scope of supply/Accessories – Master**).

A connection point is available to ground the enclosure of the Master.

All important operating parameters (e.g. application limit, temperature and humidity, etc.) are described in more detail in Appendix **B Technical data –Master.**



3.3 Functions

The functions of the RITTAL CMC-TC Master are focused on the management of up to 10 Processing Units and of the components connected to these, such as sensors, access controls, and climate control components. These functions are administered and controlled by means of the protocols listed below:

- Terminal programs
 - through serial interface RS232: e.g. Hyperterminal
 - in Ethernet network: e.g. through TELNET (Tera Term), SSH
- SNMP V1.0, compatible with the usual management systems
- HTTPS
- TFTP

Optional:

• WebCam support (USB version) up to 2 units (see Appendix A 1 Scope of supply accessories – CMC-TC Master)

See Appendix C 1 Functional diagram

See Appendix I 1 Operation of CMC-TC Master by browser

The more detailed description of the software functions is given in Appendix **J 1 Software functions**, and also the explanation of the layout of the table structure as follows.

| Posi | osition Call of menu De items in | | De | scription of software functions | s Function by | | upp | ort | :ed |
|-------|-------------------------------------|---------------|---------------|---------------------------------|------------------|---------------------|---------------|-----------|-----------|
| V | ↓ ↓ | Possible ↓ | action | Settable value range | De ex ▼ | fault works ✔ | V | V | V |
| Item: | Call: Telnet, Hyperterminal | To-Do | Software f | unction | Value range | Factory setting | Hyperterminal | Telnet | Browser |
| | | 0 Login | | | | | | | |
| 0.1 | | Query | User name | | | see table below. | • | • | \bullet |
| 0.2 | | Querv | Password | | | see table below. | • | \bullet | \bullet |
| | | 1 Network | configuration | n | | | | | |
| 1 | 1.1.1 | Setting | IP Address | | | 192.168.30.100 | • | • | ullet |
| 2 | 1.1.2 | Settina | IP Subnetma | sk | | 255.255.255.0 | • | • | ullet |
| 3 | 1.1.3 | Settina | IP Router | | | 0.0.0.0 | | \bullet | \bullet |

For complete list, see Appendix J 1 Software functions



4. Assembly

The Rittal CMC-TC Master is mounted in the 482.6 mm (19") level of a 482.6 mm (19") rack. Attention must be paid to maintaining the allowed ambient temperature and humidity ranges, as well as the IP protection category as required for the specific application. The appropriate information is given in Appendix **B Technical data**. Compliance with a higher required IP protection category can be achieved by installation in an enclosure or enclosure system having the required protection category.

In addition, the following points must be observed:

- When using accessories in connection with the RITTAL CMC-TC, the installation and operating instructions for the accessories and for the RITTAL CMC-TC must be observed.
- Repair work on the RITTAL CMC-TC may be carried out only by authorized specialist.
- The number of RITTAL CMC-TC Masters in the network is optional, assuming that there are sufficient free IP addresses available.
- In case of modification at or inside the enclosure, e.g. installation of a new CMC-TC monitoring component, it is a must to observe the operating instructions of the enclosure.

4.1 Mechanical components

Note: The RITTAL CMC-TC Master can be mounted optionally in the front or the rear 482.6 mm (19") level.

See Appendix D Installation instructions

4.2 Electrical components

Note: During installation the existing national regulations of the country, in which the RITTAL CMC-TC Master is to be installed and operated, must be observed.

In addition the following points must be observed:

- Existing safety devices must not be put out of action.
- The RITTAL CMC-TC may be operated only with PE conductor connection. The PE conductor connection is made by plugging in the IEC connection cable. The requirement for this is that the IEC connection cable is connected on the mains-side with the PE conductor. The enclosure grounding point must be connected to the potential equalization of the enclosure system to prevent electric shock due to residual hazardous voltages following a malfunction.
- The electric supply voltage and frequency must correspond to the rated values given on the rear side of the device and in Appendix **B 1 Technical Data**.



- Prior to working on the RITTAL CMC-TC this must be made voltage-free and secured against reclosing. Furthermore, the absence of electrical power must be checked.
- Cable clamping and protection is made by means of commercial cable ties at the casing or enclosure used.

See Appendix E 1 Electrical connection: CMC-TC master

5. Start-up

Note: The RITTAL CMC-TC is an independent system without mains switch and automatically loads the firmware (operating system) into the main memory when the mains voltage is connected.

Please follow the steps set out in Appendix F 1 Check list Commencing operation.

See Appendix F 1 Check list Commencing operation of CMC-TC Master See Appendix E 2 Configuration of serial interface RS 232

6. Operation

The RITTAL CMC-TC can be operated by means of the following devices:

- **Terminal program by serial connection**, e.g. Hyperterminal, this operating mode necessitates a direct connection between the PC operator workstation and the CMC-TC Master Intended use: First startup.
- **Terminal program by network connection**, e.g. TELNET (Tera Term), restricted to the required network configuration setups.
- **Standard browser**, affords via a simple graphic surface the more comprehensive administration of the RITTAL CMC-TC Master using service-proven, widely used standard software (browser). Recommended for the administrator and the user.
- **Professional management software**, as e.g. HP OpenView and others, see operating instructions for the corresponding management software.

See Appendix G 1 Display and operating elements enclosure See Appendix H 1 Display and operation by terminal program See Appendix I 1 Operation of CMC-TC Master by browser See Appendix J 1 Software functions



7. Fault messages

Note: By means of the fault messages it is possible to read from the summary of fault messages (see Appendix **K 1 Fault messages**) the kind of the current fault as well as the cause and measures to be taken.

See Appendix K 1 Fault messages

8. Maintenance

The RITTAL CMC-TC is a maintenance-free system which must not be opened for installation or during operation. If the housing or any of the accessory components are opened, all warranty and liability claims will become void.

9. Cleaning

In case of dirtiness, the CMC-TC Master can be wiped clean using a slightly moist cloth. The use of aggressive substances or acids for cleaning will cause damage or destruction of the unit and is absolutely prohibited.

10. Disposal

As the CMC-TC Master mainly consists of the housing and the PCB, the unit is to be disposed of through electronic waste recycling.



A 1 Scope of supply/ Accessories – CMC-TC Master DK 7320.000

Supply includes

- Item 1: One CMC-TC Master with network interface RJ 45 socket (10/100 BaseT)
- Item 2: Captive nuts and bolts M6x14 (4x ea.)
- Item 3: CD ROM

File name

A29668 xx IT 74

- MIB II Management Information Base II
- Operating instructions
- ase II CMC-TC-Master.MIB German: A29669_xx_IT74_G.pdf
- English: A29669_xx_IT74_E.pdf
- Item 4: A startup check list German/English
- Item 5: Packaging

Accessories

| Accessories | Description | P. of | required | Model No. DK |
|-------------------|---|-------|---|-----------------|
| Connection cable | Connection cable IEC connector Country version D | 1 | Yes, 1x | 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 approved FT1/VW1 | 1 | | 7200.214 |
| | IEC extension cable | 1 | | 7200.215 |
| Programming cable | Programming cable D-Sub 9 to RJ 11 | 1 | Yes, max. 1 | 7200.221 |
| Connection cable | Connection cable Master / Processing Unit Cat5 Cable 0.5 m | 4 | Optional, max. 1 cable per connected | 7320.470 |
| Network | Connection cable Master / Processing Unit Cat5 Cable 2 m | 4 | Processing Unit (DK 7320.100) | 7320.472 |
| | Connection cable Master / Processing Unit Cat5 Cable 10 m | 1 | Condition: Cable length up to 10 m is sufficient. | 7320.481 |
| WebCam | WebCam (USB version) | 1 | Optional, max. 2 | on request |
| Processing unit | Processing Unit | 1 | Yes, at least 1 max. 10 units | 7320.100 |
| | Accessories for processing unit, see accessories in the operating and insta Processing Unit (DK 7320.100) | | | |

Note: The RITTAL CMC-TC Master can be operated using terminal programs, as e.g. Hyperterminal and TELNET by SW Tera Term (see Appendix **G 2 Display and operation by terminal program**), and also TFTP (is part of commercial operating systems) or a commercial browser. No further software is required.



B1 Technical data – CMC-TC Master

Technical specifications

| Enclosure | Aluminium |
|----------------------------|---|
| Height | 1 U, approx. 4.45 cm |
| Width | 482.6 mm (19"), 447 mm |
| Depth | approx. 200 mm |
| Weight | approx. 0.35 kg without packaging |
| Potential equalization | by enclosure earthing connection at the rear |
| Earthing | by IEC connection socket (IEC 320) at the rear |
| IP protection category | IP 40 according to EN 60529 |
| Keys | 1x Reset key with contact hazard protection |
| Front sockets | 1x Microphone input (3.5 mm jack) |
| | 1x Speaker input (3.5 mm jack) |
| | 1x RJ 11 socket (serial interface RS 232) |
| LED display | 3x, (Alarm, 10/100 Mbit/s, Link) |
| | 10x, (per Processing Unit that can be connected) |
| Infrared interface | 1x IrDA 1.0 (SIR) |
| Acoustic display | 1x, Piezoelectric signal generator |
| Temp. application range | + 5 ℃ to 35 ℃/+ 41 ℉ to 95 ℉ |
| Humidity application range | 5 % to 95 % relative humidity, non-condensing |
| Storage temperature range | -20 °C to 60 °C/ -4 °F to 140 °F |
| Voltage connection: | |
| Power supply | 1x, AC 100 V - 230 V, +/-10% 50/60 Hz |
| Network connection | 1x, RJ 45 socket (Ethernet according to IEEE 802.3, 10BaseT/100BaseT), shielded |
| Processing Unit-Ports: | 10x, RJ 45 sockets, shielded 10BaseT |
| Processing Unit connection | Shielded twisted pair patch cable, category 5, |
| cable | see Appendix A 1 Scope of supply/accessories Processing Unit |
| Maximum line length | |
| Master to Processing Unit | 90 m (UL 3 m) |
| Output Alarm relays | 1x BJ 12 socket shielded |
| Type of relay | Potential-free change-over contact |
| Max. current consumption | 1 A with external power connection |
| Max. voltage | 30 V with external power connection |
| USB interfaces | 2x USB sockets, shielded - USB 1.1 - |
| Console connection: | |
| Keyboard interface | 1x PS/2 |
| Mouse interface | 1x PS/2 |
| Monitor interface | 1x D-Sub 15 socket (HD15) VGA |
| Serial interfaces: | 1x D-Sub 9 - RS 232 – (second port is internally assigned) |
| PCMCIA-Ports: | 2x Type I/II or 1x Type III |
| Protocols | TCP/IP, SNMP V1.0 (incl. MIB II), TELNET (by Tera Term), SSH, TFTP, HTTP with SSL |



C 1 Functional diagram – Central application in the network





C 2 Functional diagram – Local operation via console

Via the console connection it is possible to use a keyboard, mouse and monitor directly at the RITTAL CMC-TC Master. Optionally it is possible to install a keyboard-monitor-mouse switch in between. (Keyboard: PS/2, Mouse: PS/2 and Monitor:

(Keyboard: PS/2, Mouse: PS/2 and Monitor: DSub15)





C 3 Functional diagram – Operation by network and console





D 1 Installation instructions – Master







E 1 Electrical connection: CMC-TC master

Note: Prior to making the electrical connection of the RITTAL CMC-TC Master it is indispensable to observe the notes in Chapter **4.2 Electrical components**.

1. Connection Network connection



The network connection is made by means of network cable with RJ 45 connectors into the existing Ethernet network structure (by client) (see photograph on left). After connecting the supply voltage, the Link LED on the front lights up green for a 10 Mbit connection and orange for a 100 Mbit connection. When data is exchanged, the Link LED starts to blink.

2. Connection Processing Unit (DK 7320.100)



It is possible to connect up to 10 Processing Units to a Master. The connection between the Master and the individual Processing Units is made via network cable Cat5. One network cable is required per Processing Unit. A 10 port 10BaseT hub is integrated into the RITTAL CMC-TC Master to connect the Processing Units (see the figure on the left). When the Master is connected to the power supply, the status LEDs of the 10 port hub are lit on the front of the Master.

3. Connection local console (Monitor, mouse and keyboard) – optional



The preinstalled PS/2 and VGA interfaces are for a monitor, mouse and keyboard console that can be operated locally. **Note:**

The mouse and keyboard must be connected before the Master is booted since these components are not detected once the Master is running. Plugging in components to the PS/2 interfaces during operation can damage the interfaces.



E 1 Electrical connection: CMC-TC master

4. Connection Alarm relay (potential-free changeover contact)



Note: The master unit can be set by the definition of alarm actions so that the alarm relay is actuated with arbitrary sensor states set by the user. The alarm relay remains actuated as long as such a state exists.

With the actuation of the alarm relay the alarm LED on the front of the master unit is switched to red.

The alarm relay is connected through the RJ 12 sockets using RJ 12 connectors. The technical specification of the alarm relay is shown in **Appendix B1 Technical data**, which you must not exceed for technical and safety-relevant reasons. The assignment of the alarm relay is made by software parameterization, see **Appendix I 1 Operation CMC-TC by browser**. The internal circuitry of the alarm relay is shown below.

Spannungsbeschaltung \ power circuit



Note: The alarm relay enters the release condition as soon as the master is on mains voltage. In case of mains failure the alarm relay drops out once, triggering an alarm. Using this function it is possible to implement an on-wire message, e.g. to a central station.

5. Voltage connection and PE conductor connection



The enclosure earthing is to be connected to the potential equalization of the enclosure system. For this purpose an earthing pin is provided at the rear side of the enclosure. The earthing conductor is not part of the scope of supply. The power supply of the Master is made by a country-specific IEC cable, as named in **Appendix A1 Scope of supply/Accessories**. The integrated power pack is to be used exclusively for the voltage supply of the CMC-TC Master!

When on voltage, the Master automatically starts the boot procedure.

6. WebCam connection using USB cable

The connection cable of the RITTAL WebCam is plugged in directly in a vacant USB port of the RITTAL CMC-TC Master. Up to 2 Rittal WebCams are supported. Maximum admissible cable length: 5 m.



E 2 Configuration via serial interface RS 232



Datei Bearbeiten Ansicht Anruf Übertragung ?

Neue Verbindung

Geben Sie den Namen für die neue Verbindung ein, und weisen Sie ihr ein Symbol zu:

MC

OK

Autom. Erkenn.

-

-

-

-

_ 8 ×

Standard wiederherstellen

Abbrechen

Abbrechen

? ×

Autom. Erkenn.

Þ

Neue Verbindung - Hy

Eigenschaften von COM1

Anschlußeinstellungen

Bits pro Sekunde: 9600

Datenbits: 8

Stopbits: 1

Protokoll: Kein

OK

Network configuration <

Setup of connected device

Datei Bearbeiten Ansicht Anruf Übertragung ?

02 28 10 28

CMC Master Main Menu

Network configuration

erbunden 00:00:37 ANSI

🍓 RittalCMC - HyperTer

1

2

ESC=End

Parität: Keine

02 28 88

Beschreibung der Verbi

The serial data transmission to the RITTAL CMC-TC Master is made via the RS 232 interface, which is provided as RJ 11 front socket. The programming cable (see Appendix A1 Scope of supply/Accessories) connects the front socket RJ 11 and a vacant available Com-Port of the Notebook or PC.



The procedure with the Terminal program Hyperterminal, which is part of the Microsoft Windows 2000 operating system, is shown by way of example.

Start by Windows Start button...

<Programs><Desk accessory> <Communication> <Hyperterminal><HyperTerminal>

Another window opens:

- 1. Enter name
- 2. Assign symbol for connection 3. Select connection via Com-Port

The characteristics of the selected Com-Port are scanned once automatically.

Set the following parameters:

Transmission rate: 9600 bits per s Data bits: 8 Parity: None Stop bits: 1 Protocol: None

Note: The standard level range must be maintained for the RS 232 interface.

Start screen under Hyperterminal following input of CMC-TC PU login:

- 1. Enter user name: cmc
- 2. Enter password: cmc

Changing the work's default settings in 1. A Change User Passwords

If the display on the left does not appear, activate the Enter key once. Then the window becomes visible.



2

Offli

3

4

٩

E 3 Setting up of the CMC-TC Processing Units for operation with the Master

DK 7320.000

Before the first startup, several settings must be made at the connected Processing Units which are described below. These settings should be made for each Hyperterminal and serial cable 7200.221. Please note that several settings will become effective only after renewed booting of the Processing Units. You can access restart of the PU I via menu item 1. F Activate Actual Values, and for the PU II via menu item 1. E.

1. Setting the IP address of the Processing Units

The Master unit can administer the connected Processing Units only if these have an IP address from the range **192.168.40.1** to **192.168.40.10**. Double assignment of IP addresses is not allowed and can cause the system to crash. The entry is made by using the software Hyperterminal in menu item 1.1.1 IP Configuration, see also Installation and operating instructions of the Processing Unit.

2. Assignment of Subnet Mask, 255.255.255.0

The Subnetmask with the IP Address 255.255.255.0 must be entered on each Processing Unit. The entry is made by using the software Hyperterminal in menu item 1.1.2 IP Subnetmask, see also Installation and operating instructions of the Processing Unit.

3. Deactivating the DHCP function

The DHCP function with the Processing Units must be deactivated. The entry is made by using the software Hyperterminal in menu item 1.1.4 IP Enable/Disable DHCP, see also Installation and operating instructions of the Processing Unit.

4. Entering receiver of alarm messages (Traps)

With the physical connection between Processing Unit and Master the Trap Receiver Address is entered automatically in the Processing Units. This address must not be changed subsequently. Entry is made in menu item 1.2 (Hyperterminal).

5. Setting of access authority only by SNMP

The exclusive access authority by SNMP must either be deactivated or assigned.

Deactivation is by settings (standard settings) '0.0.0.0'.

The exclusive assignment of the SNMP access authority is by setting of IP address '192.168.40.100'. The settings are made at the Processing Units by software Hyperterminal in menu item 1.3 SNMP Access.



E 3 Setting up of the CMC-TC Processing Units for operation with the Master

If any other IP addresses are registered, the CMC-TC Master will not be able to find or administer the connected Processing Unit or connected Processing Units with the incorrect entries.

6. Read and write authorization

The Read/Write Community entries of the Processing Unit must all be on the standard settings "**public**". Otherwise, there is no data exchange between the CMC-TC Master and the Processing Units. The entries can be changed by software Hyperterminal in menu item 1.6 Read Community and 1.7 Write Community.

7. Telnet access

If branching is intended from the CMC-TC Master to the connected Processing Units by Telnet-Access, the Telnet function must be cleared with each Processing Unit. The corresponding entry is made by software Hyperterminal in menu item 1.E Enable/Close Telnet for Processing Unit I and in menu item 1.D Enable/Disable Telnet for Processing Unit I. The default option is '**Enabled**'.

8. FTP Access from CMC-TC Master to Processing Unit

The precondition for the FTP access is the activation of the FTP access in the Processing Unit I and use of the user name '**cmc**' and of password '**cmc**'. For Processing Unit II the user name is 'admin' and the password is 'admin'. Activation is made by Hyperterminal in the Processing Unit in menu item 1. 4 Enable FTP.

For further information please refer to Installation and Operating Instructions for the Rittal CMC-TC Processing Unit (DK 7320.100).



DK 7320.000

24

6

F 1 Check list – Commencing operation of CMC-TC Master Note: Prior to installation and commencing operating instructions, including the safety

1 CMC-TC **Note:** Prior to installation and commencing operation the installation and operating instructions, including the safety advice, (see **1. Safety advice**) must be read and observed. The operating instructions are included as a two-language version

(German/ English) as a PDF file together with a current Adobe Acrobat reader version on the enclosed CD-ROM. German: A29669_xx_IT74_G.pdf English: A29669_xx_IT74_E.pdf

Assembly: Prior to installation the installing technician must check the completeness of the scope of supply (see Appendix **A Scope of supply/Accessories**) including the required accessories.

Further to that, the installer must make sure that the system complies with the admissible conditions of use, particularly the admissible ambient temperatures and the required IP protection category, see Appendix **B Technical data**.

See also Appendix D Installation instructions

Electrical connection:

Note: It is indispensable to observe the information given in 4.2 Electrical Components and in **Appendix E 1 Electrical connection – CMC-TC Master**.

- 1. Plug in Ethernet network connection by RJ 45 connector.
- 2. Make connection between Master and PU.
- 3. Connect consoles (Monitor, keyboard and mouse) optional.
- 4. Connect alarm relay.
- 5. Plug in IEC connection cable / earthing of rear panel.

Configuration of CMC-TC Master at commencement of operation: (see Appendix E Configuration of serial interface RS 232) Start terminal program, e.g. Hyperterminal – Part of MS Windows

- 1. Query User name: cmc (Factory setting) Password: cmc (Factory setting)
- 2. Select menu item: 1 Network configuration
 - 1 IP configuration
- 3. Entering/Changing IP Addresses
 - 1. IP Address: 192.168.30.100 (Factory setting)
 - 2. IP Subnet mask: 255.255.255.0 (Factory setting)
 - 3. IP Router xxx.xxx.xxx.xxx

Confirm: ENTER, Store: "Activate values"

Call browser:

- 1. Select the browser as usual
- 2. Enter at http prompt the IP address entered in point 4 of the RITTAL CMC-TC Master:
 - e.g.: http://192.168.30.100
 - The security notes must be confirmed.
 - The login window opens, enter user name and password. Factory setting: **rittal** and **rittal**.
 - Factory setting Supervisor: admin and admin.
- 3. The browser window of the Master, shown on left, opens.











3

4

G 1 Display and operating elements enclosure



| Item | Description | Function | Description |
|----------|------------------------------|---------------|--|
| 1 | Reset key | Key | Start of boot procedure |
| 2 | Microphone connection | Interface | will be supported in future |
| 3 | Speaker connection | Interface | will be supported in future |
| 4 | LED Alarm | Display | Operating voltage |
| | | | light on: is on |
| | | | light off: no voltage |
| | | | during booting procedure: |
| | | | yellow: Booting procedure running |
| | | | red - short: Boot manager starting |
| | | | after booting procedure: |
| | | | yellow: Master is ready for operation |
| | | | red: Alarm, alarm relay is closed |
| | LED Network type | Display | 10BaseT/100BaseT Network connection |
| | | | light off: 10 Mbits |
| | | | orange: 100 Mbits |
| | LED Link | Display | Network connection |
| | | | green: Connection OK |
| | | | green - blinking: Data transfer |
| | | | light off: no connection |
| 5 | LED Processing Unit 1 - 10 | Display | Connection with the Processing Unit x |
| | | | green: Connection OK |
| | | | green - blinking: Data transfer |
| <u> </u> | | late of a set | IIght off: no connection or free port! |
| 6 | | Interface | Intrared Interface will be supported in future |
| 1 | Com socket (KJ 11) Interface | interface | HS 232, Serial Interface for configuration |
| Ø | Beeper (built in) | signaling/ | audible alarm devices |
| 1 | | alarm | |



H 1 Display and operation by terminal program

Note: By means of the terminal programs mentioned below the network settings can be configured and uncomplicated small settings can be made. The freeware terminal program "TERA TERM" is to be used for reasons access and stability. You can find it, e.g. under <u>http://hp.vector.co.jp/authors/VA002416/ttermp23.zip</u>. The basic software settings and keyboard input are explained below:

... through serial interface

Hyperterminal



Condition: see Appendix E 2 Configuration of serial interface RS 232

1. Start terminal program, such as e.g. Hyperterminal (part of MS Windows operating system).

<Start> <Programs> <Accessories> <Communications> <HyperTerminal> <open assigned name, e.g. RITTAL CMC>

Query of Master Logins:

- 1. username: cmc (Work's default setting)
- 2. password: cmc (Work's default setting)

...through Ethernet network connection

TERA TERM



Condition: Network connection, see Appendix **E 1 Electrical connection: Master** - Point 1.

- 1. Start terminal program TERA TERM.
- 2. Start IP Address
- e.g. 192.168.30.100 or e.g. 130.0.2.246

Query of Master Logins:

- 1. username: cmc (Work's default setting)
- 2. password: cmc (Work's default setting)

Note: Operation of the two terminal programs mentioned above is nearly identical in spite of different data transmission routes (per serial cable and per network cabling). For this reason access to the CMC-TC PU is explained for **TERA TERM**.

Terminal programs are operated using the following keys:

Branching into the menu items is by the **numeric** and **alphanumeric keys**, see e.g., the upper two screenshots.

The **Space bar** is used for jumping between the default settings.

ENTER key: Confirmation and acceptance of entries and modifications. Exception is the menu item 1.x Network configuration. Part of the entries are accepted only after calling menu item 1. D Activate actual values.

ESCAPE key: Return to parent menu level.

The keys Space bar or ENTER: update the screen view.

RITTAL

H 1 Display and operation by terminal program

The settable software functions are listed in Appendix **J 1 Software functions** and summarily described. Further information is shown when the corresponding menu items are called.

Selected software functions from the list are described in more detail here:

| Item: 5 / Menu item 1.2 | IP address of receiver of trap messages When using the management software, based on protocol SNMP, the IP address of the receiver of the message is given at this point. You may enter here up to 4 receivers. The IP address entered must also be activated at the same menu item. |
|--------------------------|---|
| Item:16 / Menu item 1.5 | Read Community Access code read authorization for SNMP-capable management software |
| Item: 17 / Menu item 1.6 | Write Community Access code write authorization for SNMP-capable management software |



1. Start standard browser, as normal.

2. Enter IP Address of RITTAL CMC-TC Master below field Address, e.g. http://192.168.30.100 (work's default setting) *****

.....

3. The following page informs you that the login-page and the following pages are transmitted encrypted by SSL.

Explanation info window



Requirements on the browser

The following must be supported:

- SSL Version3 with 128 bit encryption depth
- HTML Version 4.01
- CSS
- Javascript

If there are problems with updating the page, e.g. if the Webcam is no longer updated, the cache of the browser must be deactivated.



Explanation info window – Certification information





Logging in to the CMC-TC Master

| 🚰 RITTAL CMC-TC Master - Microsoft Internet Explorer | _ 8 × |
|--|---|
| Datei Bearbeiten Ansicht Eavoriten Extras ? | 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 |
| 🖕 Zurück 🔹 🤿 🖉 🚰 🔯 Suchen 📾 Favoriten 🥨 Verlauf 📴 🚽 | |
| Adresse https://130.0.2.246/login.html | Vechseln zu |
| RITTAL CMC-TC MASTER | Optimized for Internet Explorer from 5.0 on and Netscape Navigator from 6.2 on Resolution at least 1024x768 pixel |
| Enter username and password to login | |
| Password: | |
| | |
| | |
| | |
| | |
| lei Fertia | A Diternet |

A login, which is valid until the logout function is selected, is queried once. **Note:** The application must then always be **closed** by the **Logout Button** (left at bottom).

Factory setting:

| - Administrator | - | - <u>User</u> | |
|-----------------|-------|---------------|--------|
| Name: | admin | Name: | rittal |
| Password: | admin | Password: | rittal |

It is recommended to alter the work's default settings of the user names and passwords during first startup via the browser surface. This will prevent access of a third party to the system by using the known work's default settings.

For this purpose you set up under Admin -> User management a new administrator (log in as administrator to create users) and deleted the default users (admin and rittal). The exact procedure for changing the user settings is described under I 1 -> Tab Admin -> User management.

It is possible for several users to login simultaneously in the Master. It is not possible, however, for a user to login several times using the same name. In this case the name logged-in first is logged-out automatically and cannot continue work on the web page.



Structure of the HTML pages

Note: At this point only the structure of the page layout is explained. The pages will be explained subsequently.





- Tab Trap
 - Trap list of CMC-TC Master



- Tab Trap
 - Setting severity of a trap message

In each case **20 traps per page** are displayed. Buttons with which you can scroll to the other not displayed traps are located above and below the displayed traps if more than 20 traps are present.

Function buttons (from left to right):

- Trap acknowledge button acknowledges all trap messages highlighted red (not confirmed) The invisible traps are also acknowledged with this button. Alternative: Individual trap acknowledgement by button on side
- Trap delete button deletes all (even the not visible) acknowledged trap entries in the trap list. Alternative: Individual trap deletion by button on side.
- **Note**: The trap must be acknowledged first before it can be deleted. In this way unintentional deletion is prevented.
- Trap save button saves the entries of the trap list as text format. Memory location on the access computer and file name can be selected freely. File extension must be .txt.

Saving of traps: important note

A maximum of 2000 traps will be saved.

By trying to save more than 2000 traps at once, the oldest traps will be deleted and only the newest 2000 ones are being kept.

In this window the user has selected by clicking on the "critical" button that only the critical traps, which are marked red, are displayed.

- You see the selection in the legend below from the gray texts of the individual severities that are no longer displayed.
- It is also an indication that other may still exist which are not displayed at present. To display all the traps, you must now again select the lowest severity (undefined).
- The selection of the trap messages refers only to the logged-in users and only for the duration of the session. Other users can make their own settings.

- Tab Overview
 - Overview of the PUs connected to the CMC-TC master

The **overview page** can be styled by the administrator (see tab: **Admin -> Overview page setup**) with a **background graphic**. In this way the status of the connected Processing Units can be acquired at once and at the same time assigned to the corresponding location. Please make sure that the graphic's data size is **less than 5 Megabyte**. Otherwise there will appear an error message which reports that too much data was sent.

Further, please notice that a bitmap will take a little longer to load than a JPEG.

By clicking a PU you switch to the Status tab of the selected processing unit.

Tab – Status

Status display of selected CMC-TC PU

Tab – Setup

Setup page of the selected CMC-TC sensor unit and its CMC-TC PU

Under Setup you can configure the sensor unit you select under Status.

For instance, in the Status tab you can change the names of the PU and connected sensor units. Here you can also change the access codes for the number code locks and the warning and alarm thresholds of the sensors. The Setup tab equals the configuration menu of a PU.

85

% FH (Range: 0...100% rH)

Setnoint High

- Tab Setup
 - Changing access codes of the selected PU online

General: The access codes of the connected number code locks are changed centrally **by Edit access codes online/offline**. In the online version the codes can be changed in the web browser, in the offline version you must download, change and again upload a text file via the input prompt. **Note:** When the PU is connected for the first time, an error message like the one shown in the figure below may appear. If this is the case, you will need to create a file with the text editor. This procedure is described from page 38.

Tab – Setup

Changing access codes of the selected PU online

Open the text editor used on your computer and store the empty text file under the name "accesscodes.txt".

| Datei auswählen | | | | | ? × |
|---|------------------------------|--------------------|---|-----------|-----------|
| Suchen in: | 🔁 Eigene Dateie | n | • | 🗕 🗈 💣 🎟 • | |
| Verlauf Verlauf Desktop Eigene Dateien Arbeitsplatz | igene Bilder ■ access.cmc | | | | |
| | Dateiname: | access | | • | Öffnen |
| Netzwerkumg | Dateityp: | Alle Dateien (*.*) | | • | Abbrechen |

Clicking on the Setup tab opens the window shown below again.

| TRITTAL CMC-TC Master - Microsoft Internet Explorer | | _ 🗆 × |
|---|--|---|
| Datei Bearbeiten Ansicht Eavoriten Extras ? | | and the second se |
| 🖕 Zurück 🔹 🚽 🕤 👔 🚮 🔯 Suchen 🛛 🖼 Favoriten | n 🥑 🖻 - 🗇 107 - | |
| Adresse 🕘 https://130.0.2.213/login.html | | ▼ 🖉 Wechseln zu Links ** |
| RITIAL CMC- | TC MASTER | Optimized for Internet Explorer from 5.0 on and Netscape Navigator from 6.2 on Resolution at least 1024/269 pixel |
| TC Master DK7320.000 HW V111 SW V1.40_1a | utus Setup Images Alarms Admin | |
| Rittal-Controller CMC-TC | CMC-TC | |
| PUI1., PM-IT Rittershausen →PUII1., PM-IT Herborn PUI2., PM-IT Rennerod PUI2. PM IT Heirar | Device Name PU II 1. [040] Device Location PM-IT Herborn [040] | RITTAL |
| PU II 2., PM-IT Hanger | Device Contact ribbe.m@rittal.de [040] | @ 2004 |
| | Device Description Rittal CMC-TC-PU2 Ser. 11301 HW V3.01 - SW | RITTAL GmbH & Co. KG |
| | Change values | Auf dem Stützelberg D-35745 Herborn |
| | | Phone: +49-2772-505-0 |
| | Beeper Off 🔍 On | E-wait mognital.ce Web: www.rittal.com |
| | Quit Alarm Relay 🕓 disable 🔍 enable | FRIEDHELM LOH GROUP |
| | Alarm Relay Options Open 💌 | |
| | Change Values | |
| Show IP addresses | Edit access codes online Edit access codes offline | |
| Logout | | |
| | Selected unit (1) not available on this device, choose another one | |
| | | Click on the link "Edit appage |
| C Fertig | | |
| | | codes offline". |
| | | |

Tab – Setup

Changing access codes of the selected PU online (initial startup)

Search for the file "accesscodes.txt" on your computer. Mark the file and click on Open.

| 🚰 RITTAL CMC-TC Master - Micros | oft Internet Explorer | | | | | |
|--|---|--|--|--|--|--|
| Datei Bearbeiten Ansicht Eavor | Qatei Bearbeten Ansicht Eavoriten Extras 2 | | | | | |
| ↓= Zurück • → → Ø 2 A @ Suchen ■Favoriten 🎯 🖏 • 🎒 107 • | | | | | | |
| Adresse 🕘 https://130.0.2.213/login. | html | 💌 & Wechseln zu Links * | | | | |
| | CMC-TC MASTER | mized for Internet Explorer from 5.0 on and Netscape Navigator from 8.2 on Jution at Least 1024k/708 pixel | | | | |
| TC Master DK7320.000 | Traps Overview Status Setup Images Alarms Admin | | | | | |
| Rittal-Controller • CMC-TC PUI 1., PM-IT Rittershausen PUI 1., PM-IT Rethorm PUI 2., PM-IT Renerood PUI 2., PM-IT Hanberr PUI 1.2, PM-IT Hamburg | Get file with access codes out of Processing Unit 2 Please note that the access file format has changed because of additional features. When uploading the new a extended access features are initialized. See the manual of the Processing Unit for a detailed description of the access file for | ccess file for the first time the RITTAL e2004 | | | | |
| Show IP addresses | Download access file from Processing Unit Enter FTP-Name of PU: Download file Upload access codes file to Processing Unit Enter FTP-Name of PU: Cmc Enter FTP-Password of PU: Access file: C\Dokument Upload file | Enter the FTP name and password for the PU: (factory setting for PU II: FTP Name: "admin" FTP Password: "admin"; For PU I: FTP Name: "cmc" FTP Password: "cmc") | | | | |
| Ertig | | 🔒 🔠 Lokales Intranet 🥢 | | | | |
| | The desired file is now shown in this wir | ndow. | | | | |

I he desired file is now shown in this window. Now click on the "Upload file" button. The file is then loaded onto the Master.

Clicking on the Setup tab opens the window shown below again.

- Tab Setup
 - Changing access codes of the selected PU online

Tab – Setup

Changing access codes of the selected PU online

The codes now specified and the door assignments are displayed in a table like the one shown below. You can set additional codes and door variations by clicking on the link "Add access codes numbers". You must now load the codes on the Master. This is done by entering the FTP name and FTP password. You confirm the upload of the "AccessCodes" by clicking on the "Upload settings" button.

| 🖉 RITTAL CMC-TC Master - Microsoft Internet Explorer | | |
|--|---|---|
| Datei Bearbeiten Ansicht Eavoriten Extras ? | | 19 |
| 🕁 Zurück 🔹 🤿 🚽 🗿 🚰 🛛 🐼 Suchen 💿 Favoriten | 3 🗳 • 🕒 W • | |
| Adresse 🕘 https://130.0.2.213/login.html | | ▼ ⊘Wechseln zu Links ≫ |
| RITTAL TC Master DK7320.000 Trans Departure Stat | TC MASTER | Optimized for Internet Explorer from 6.0 on and Netscape Navigator from 6.2 on Resolution at least 1024-0768 pixel |
| HW V111 SW V1.40_1a | | |
| Rittal-Controller ▼ CMC-TC | Add access code number | |
| PUIL PM-IT Rittershausen PIIII PM-IT Herborn Codenumber: 12 | 34 Door Lock 1 | change |
| PU12, PM-IT Rennerod PU13, PM-IT Rennerod PU13, PM-IT Haiger PU112, PM-IT Hamburg | Add access code number | <u>RITTAL</u> 0 2004 |
| | Upload access code settings to Processing Unit Enter FTP-Name of PU: cmc | RITTAL GmbH & Co. KG Auf dem Stützelberg D-35745 Herborn |
| | Enter FTP-Password of PU: | Phone: +49-2772-505-0 E-Mail: info@rittal.de Web: www.rittal.com |
| Show ID addresses | | FRIEDHELM LOH GROUP |
| | | |
| Seite https://130.0.2.213/cgi-bin/cgibin?SessionId=278526220 | 98Page=Status wird geöffnet | 🔒 📴 Lokales Intranet 🥼 |

Tab – Setup

Changing access codes of the selected PU offline (initial startup)

General: The access codes of the connected number code locks are changed centrally **by Edit access codes online/offline**. In the online version the codes can be changed in the web browser, in the offline version you must download, change and again upload a text file via the input prompt. **Note:** When the PU is connected for the first time, an error message like the one shown in the figure below may appear. If this is the case, you will need to create a file with the text editor. This procedure is described from page 43.

Tab – Setup

Changing access codes of the selected PU offline (initial startup)

Create a text file with the text editor of your PC. The file contents must be structured as shown below. After making the required entries, save this file with the file name "accesscodes.txt".

4-digit number.

specify a range. It is always necessary to enter an unambiguous

Tab – Setup

Changing access codes of the selected PU offline (initial startup)

Return to the CMC-TC master and click on the "Setup" tab.

Search for the file "accesscodes.txt" on your computer. Mark the file and click on Open.

| Datei Bearbeiten Ansicht Eavor ⇔ Zurück • → • ③ ② ③ △ | ten Extras ? @ISuchen @alFavoriten @ 5 4. W | 100 M |
|---|---|--|
| ⇔ Zurück • → • 🙆 😰 🚮 🕛 | 🔕 Suchen 📾 Favoriten 🧭 🔜 🙀 🐺 🔸 | |
| | | |
| Adresse e https://130.0.3.162/login | html | 💌 🧬 Wechseln zu 🛛 Links |
| RITIAL | CMC-TC MASTER | Optimized for Internet Explorer from 6.0 on and Netsoape Navigator from 6.2 on Resolution at least 1024x768 pixel |
| TC Master DK7320.000 | Traps Overview Status Setup Images Alarms Admin | @ 2004 |
| Rittal-Controller | Get file with access codes out of Processing Unit 1 | RITTAL GmbH & Co. KG Auf dem Stützelberg D-35745 Herborn |
| → PU 1 - 4 AUS V1.23e, RITTAL QM | Please note that the access file format has changed because of additional features. When | Phone: +49-2772-505-0 |
| PU III SW V2.15 Datei, Rittal QM- PU IV SW V2.15 Master, Rittal Q PU 5 - 4 CUs V1.23e, RITTAL QN PU 6 - 1 CU 3 AUs V1.23e, RITT PU 8 - V1.31 RTT, RITTAL QM-T | Uploading the new access file for the first time the extended access features are init. See the manual of the Processing Unit for a detailed description of the access file for pass (fact Enter FTP-Name of PU: Enter FTP-Name of PU: Enter FTP-Password of PU: Upload access codes file to Processing Unit Enter ETP-Name of PU: Enter ETP-Name of PU: Enter FTP-Password of PU: Enter FTP-Password of PU: Enter FTP-Password of PU: Enter FTP-Password of PU: Enter FTP-Name of PU: | r the FTP name and word for the PU: ory setting for PU II: Name: " admin " Password: " admin " PU I: Name: " cmc " Password: " cmc ") |
| | Enter FTP-Password of PU: Access file: Upload file | Internet |

upload the file to the master.

Tab – Setup

Changing access codes of the selected PU offline

If the access codes are entered on the PU, select the PU on which the codes are to be changed. The next steps describe how to download the access codes.

A new window is displayed, in which you must click on "Save" and then select a corresponding location. After the file has been downloaded, it can be opened and edited with the text editor of your operating system. When you are finished, save the text file and upload it once more as described on page 44.

| Dateidow | nload | × | 1 | | |
|----------|---|---|---|--|--|
| ৾ | Einige Dateien können auf dem Computer Schaden anrichten. Wenn die Dateiinformationen unten verdächtig aussehen oder Sie der Quelle nicht völlig vertrauen, sollten Sie die Datei weder öffnen noch speichern. | | | | |
| | Dateiname: | accesscodes.txt | | | |
| | Dateityp: | Textdatei | | | |
| | Von: | 130.0.3.162 | | | |
| | | | | | |
| | Soll die Distei geö | ffnet oder auf dem Computer gespeichert werden? | | | |
| | Jon die Datei geo | | | | |
| | Öffnen | Speichern Abbrechen Details | | | |
| | ☑ Vor dem Öffne | en dieses Dateityps immer bestätigen | | | |

Tab – Images

Displaying the Webcam photos stored in the master

Tab – Images

Download or delete the Webcam photos saved in the master

Tab – Alarms

Definition of alarm conditions

You can define in the Alarms tab how state changes at the sensor units should be processed by the master device. A condition is created for each state to be dealt with or a combination of these states.

the weekend, but there should be no notification in the defined period of 3 days.

Tab – Alarms

Definition of alarm conditions

The type of notification is defined in this window. With combined alarm conditions, the occurred state can be described in the trap list with the name.

| | Alarm notification | [|
|------------------------|--|---|
| Alarm Name | Bewegungssensor ALARM [040] | Activation of the alarm relay at the master |
| Relay Master | 🔽 enabled | |
| Show in traplist | 🔽 enabled | |
| Trap severity | 🔍 critical 💿 major 🔍 minor 🔍 informational 🔍 undefined 🦟 | Snow in trap list. |
| Insert to logfile | 🔽 enabled | Severity of the message in the trap. |
| Send to trap receiver | | |
| Send eMail to receiver | | |
| Send popup message to | | Entry in the log file. The log file can be |
| | Save changes Cancel | downloaded under Admin . |

Selection of 4 different trap, email and popup receivers. For these 3 types of message the receivers are set centrally under Admin.

| Alarm actions | | | | | |
|---|--------|--|--|--|--|
| Digitalausgang EIN - Bilder aufzeichner | × | | | | |
| Add another action | | | | | |
| Save settings | Cancel | | | | |

An alarm action can be selected in the drop-down list box under the last setting (see page 57). Alarm events can be created only by an administrator.

Notes:

- Actions and messages are triggered only if the determined condition according to which the alarm condition
 was defined arises. There is no message and performance of actions for conditions that already exist at the
 definition.
- The alarm relay of the master device is reset automatically if there is no longer a condition that should be signaled by alarm relay.

I 1 Bedienung CMC-TC Master über Browser

Tab – Admin

General: Overview of administration page

General: This tab is accessible only for users with administrator rights. Administrators can make general settings that cannot be changed by users who only have write/read authorization, such as changing IP addresses, creating and deleting users or loading firmware updates.

The individual functions are divided into different areas and are discussed in detail on the following pages.

Tab – Admin

General setup

• Tab – Admin

User management

| | | User setup | |
|---------------------|----------------------|--|--------|
| Leave | password field empty | to keep the password settings of existing users. | |
| Name: admin | Password: | 🗌 🔿 read 🔿 write 💿 Admin 🔲 Delete User | Change |
| Name: rittal | Password: | C read 💿 write C Admin 🗖 Delete User | Change |
| Name: husky | Password: | C read C write 👁 Admin 🗖 Delete User | Change |
| Name: ade | Password: | C read C write 💿 Admin 🗖 Delete User | Change |
| Name: moz | Password: | 🗌 C read C write 👁 Admin 🗖 Delete User | Change |
| Name: net | Password: | 🗌 C read C write 💿 Admin 🗖 Delete User | Change |
| Name: erster | Password: | C read C write 👁 Admin 🗖 Delete User | Change |
| Name: daniel | Password: | C read C write 💿 Admin 🗖 Delete User | Change |
| Name: read | Password: | 💿 read IC write IC Admin 🗖 Delete User | Change |
| Name: write | Password: | 🔿 🔿 read 💿 write 🔿 Admin 🗖 Delete User | Change |
| Name: rosenthal | Password: | C read C write 💿 Admin 🗖 Delete User | Change |
| Name: | Password: | ◯ read ◯ write ◯ Admin | Add |

Setting of the access authorization for max. 100 users can be made only by a user with administrator rights.

Note: Leave the password fields of the other users empty, as they could be altered after confirming 'Change'.

Procedure for creating a user:

- 1. Entry of the name and of the password under which the user should be logged in.
- 2. Selection of the authorization. There are 3 possibilities:
 - 1. only reading (read)
 - 2. reading and writing (read/write)
 - 3. admin
- With **admin rights** one can make **all settings** with the **two first authorizations** (read and read/write) you have **no access** to the **Admin** tab.
- Users with a **read/write authorization** can make the same settings as an administrator in all tables (apart from *Admin*).
- Users who have only a read authorization can not access the *Images* tab or the *Admin* tab. They can
 only "observe", i.e. they cannot confirm or delete any traps, change states at the connected sensor
 units, create or change alarms, etc.
- 3. The settings are accepted and the user created with the **Add** button.

Procedure for changing the setting of a user:

- The name under which a user logs in cannot be changed. If it should be changed, a new user is created with the required name and the old user is deleted.
- The procedure for changing the other data (password and authorization) of a user is the same as for creating a new user. The changes are accepted with the **Change** button following the relevant user.

- Procedure for deleting a user:

The check mark after **Delete User** is set after the user to be deleted and deletion is confirmed with **Change**.

Recommendation:

 Change the default setting for safety reasons. For further details see I 1 -> Logging in to the CMC-TC Master

In the "User login settings" box, you can specify whether several users or only one user may be granted access to the HTTP page at one time. You can also specify how long a user may be logged in for a single HTTP session. Entering the number "0" means: Access without time limitations.

You can similarly decide whether a user can log back in under the same name after logging off.

Tab – Admin

Alarm notification receiver

Predefined alarms can be sent to the trap, email and popup addresses stated here. The setting of which alarms to whom and in which form they are sent can be made in the **Alarms** tab.

| Traps Overview Status Setup Ir | nages Alarms Admin | | |
|---|--|---|--|
| IP Trap Receiver IP Trap Receiver IP Trap Receiver IP Trap Receiver | Trap receiver configuration 1: 130.0.2.232 2: 130.0.2.233 3: 0.0.0.0 4: 0.0.0.0 Change configuration | Enable: 🔽 🗲 Enable: 🔽 Enable: 🗖 Enable: 🗖 | 4 different trap receivers can be allocated and activated or deactivated through the IP address of the receiver PCs. The changes are accepted with Change configuration . |
| IP of SMTP Serve | eMail server configuration r: Change eMail server configuration | < | Enter the IP address of the e-mail output server. This setting is a prerequisite so that entered mail addresses under eMail receiver configuration reach the receivers. |
| eMail Address 1: eMail Address 2: eMail Address 3: eMail Address 4: | eMail receiver configuration mustermann.k@meinefirr | Enable: 🔽 Enable: 🗖 Enable: 🗖 Enable: 🗖 | 4 different email receivers can be entered and deactivated or activated. |
| Windows (lp address 1: lp address 2: lp address 3: lp address 4: | Change configuration | figuration Enable: 🔽 🗲 Enable: 🗖 Enable: 🗖 | Up to 4 different PC popups can be sent. Sending to the different IP addresses can be deactivated or activated. To guarantee the receipt of popups, the messenger has to be started on every receiving PC first. |

Tab – Admin

Remote shutdown settings

You can create various configurations with this dialog for shutting down the server or PC through the master. You can select these shutdown settings in the alarm configuration in the last window under "Alarm actions".

| Traps Overview S Description: S Type: Windows; Force: false Message: D h | Status Setup images A Shutdown HL-Server ; lp: 192.168.200.13; User: / Vas System wird wegen ge eruntergefahren. <u>Creat</u> | Iarms Admin Administrator; Domain: WORI fährlicher Umgebungsbedin <u>e new shutdown setting</u> | <u>delete</u> KGROUP; Delay: 60s; <u>change</u> ung automatisch <u>Test</u> | You can again change, delete or test the different shutdown configurations. In the test the set computer is shut down. You can create new shutdown configurations through this link. |
|---|---|--|--|--|
| Windo | Remote | shutdown setup | n be shut down, | Select the operating system: Linux or Windows. |
| Shutdown type | : • Windows • | Linux | | Designation of the server or PC. |
| Description: IP address: | | | | IP Address of the computer |
| User password Domain name: | i: | _ ← | | User name, password and domain of the target computer. |
| Delay time: Message: | 60 s < | (| | Time delay before the process is triggered. |
| Force closing o | of applications: ves | ettings Cancel | | Force shutdown of the applications. Note: Files that are not saved are lost. |
| To test if the re If the remote s Settings: | Remo mote shutdown of the sel hutdown could be initiate Type: 1 Description: 1 IP address: 1 User name: 2 Domain: 1 Delay time: 1 Message: 1 Force: 1 | Acte shutdown test ected PC works with this s d you get a corresponding in Windows Shutdown HL-Server 192.168.200.13 Administrator WORKGROUP 60 s Das System wird wegen ge Umgebungsbedineng auto false | ettings hit the buttons below. message on the remote PC. Hährlicher matisch heruntergefahren. | You can test a shutdown configuration with "Test". You can shut down the target computer with "Initiate shutdown". The shutdown can be aborted with "Abort Shutdown". |
| | Initiate shutdown | Abort shutdown | Cancel | |

Tab – Admin

General information on the shutdown of computers

Shutdown for Windows operating systems

There is an interface for network-assisted shutdown of Windows systems for Windows 2000, XP and the server versions. A precondition for using this interface is that the following system services are running on the system to be shut down:

- File and printer enable
- Workstation service
- Server (RPC support)
- Remote procedure selection

Finally a user account for which a certain system right with the designation "Forcing the shutdown from a computer system" is set must be available.

Note: If the remote shutdown doesn't work with Windows XP, you need to change the following settings (please process step by step):

- 1. click "Start" button
- 2. select "run"
- 3. insert "cmd" and click ok
- 4. insert "Secpol.msc /s" and press enter
- 5. select "Security Settings" from the left panel
- 6. double click "Network access: Sharing and security model for local accounts"
- 7. select "classic" from the
- 8. pull-down-menu and click ok
- 9. System reboot

Shutdown for Linux operating systems

In Linux systems the shutdown is not as in Windows operating systems through a standardized RPC interface. Instead, a program that performs the shutdown is selected locally on the Linux system by SSH access. Since a shutdown can be occasioned normally only by the "root" administrator, a selection with which an arbitrary user can execute a program with administrator rights was selected. The "sudo" command was used for this purpose. The following preconditions are necessary so that a shutdown can be performed successfully.

- An SSH service through which a user can log in from the CMC-TC master device must run on the Linux system.
- The user who should initiate the shutdown must have the authorization to select the "/sbin/shutdown" program through the "sudo" command.
- The "sudo", "echo" and "/sbin/shutdown" programs are required locally on the relevant computer.

The command to shut down the Linux system looks as follows: echo [password] | sudo –S –b /sbin/shutdown –h +[delay time] '[message text]

The command for aborting a running shutdown process is echo [password] | sudo –S /sbin/shutdown –c

To enable access from the CMC-TC master device to the system to be shut down, the fingerprint of the relevant Linux computer exchanged at the log-in must be known to the master device. This precondition is fulfilled as follows:

If the data required for the shutdown process have been entered by the administrator through the web page of the master device, it is also possible to test the shutdown process through the web page. A shutdown process can be initiated and aborted again by mouse click. If it is found in this test that the fingerprint of the Linux system is unknown, it can be registered permanently after inquiry by the master device. Only then can the shutdown process be performed alarm-controlled.

Note: The "sbin/shutdown" program possibly disables the login of users before the shutdown is executed. In this case the shutdown process of the master device can no longer be aborted, since the master device no longer has any possibility of connection to the system. This also applies to the test of the shutdown settings. It can be that the possibility of logging in from the outside is not disabled immediately after the start of the shutdown process, but only some time after the actual shutdown takes place. Therefore, if the abort of the shutdown process initially functions, this is no guarantee that the process can be aborted in every case.

Tab – Admin

Alarm actions

Alarm actions that can be incorporated in alarm conditions in the **Alarms** tab can be created here.

Tab – Admin

Webcam settings

Tab – Admin

Webcam settings

| Download images from Hardo | Download images from Harddisk in a single archive file | | | | | | |
|----------------------------|--|--|--|--|--|--|--|
| 1st step: Create i | mage archive | | | | | | |
| Regularly saved images | Alarm action images | | | | | | |
| 2nd step: Download th | ne 'images.tar'-file | | | | | | |
| - Download | archive | | | | | | |
| 3rd step: Delete i | mage archive | | | | | | |
| Delete ar | chive | | | | | | |
| 4th step: Delete im | ages (optional) | | | | | | |
| Regularly saved images | Alarm action images | | | | | | |
| | | | | | | | |

Instruction for saving the camera images from the hard disk of the Master via HTTP:

Note:

The **file extension** of the file "images.**tar**" must not be changed, otherwise there might be reading problems. The name of the file, however, can be changed.

- 1. Choose between the buttons "regularly saved images" and "alarm images". The images are packed automatically in an archive. Depending on the number of images, e.g. for regularly saved images up to 20000 images (10000 each per webcam), the process **can last several minutes**.
- 2. The packed file is transferred to the previously mentioned subdirectory via the network connection by HTTP. The name of the file (**images**.tar), however, can be changed.
- 3. After the transfer has been completed the packed file "images.tar" can be deleted from the hard disk of the CMC-TC Master. There is no further security check.
- 4. The saved images (regularly saved images or alarm images) can be deleted.

Note: It is possible that the browser does not download the archive directly from the Master unit but retrieves an already loaded archive in the browser cache. If you notice that during a download an old archive is loaded, clear the cache of the browser and repeat the download.

When using the Internet Explorer you can clear the cache via the menu Extras -> Internet options with the button "**Delete files...**".

• Tab – Admin

Logfile management

The logfile is a text file in which all traps are listed. In addition alarms can be recorded in the logfile if this was selected in the alarm configuration. The logfile is not deleted on switching off or restart of the master.

Overview page setup

Configuration page for the Overview tab

An image can be loaded for the overview page on the master with this box. You can enter the path manually or select an image on the hard disk with **Browse**.

The selected image is replaced by the current image with upload.

This box indicates the absolute position, taking the top left corner as the zero point. If a position specification is changed, the corresponding unit is moved to the new position. The position changes are confirmed and accepted by clicking on **Save**. Alternatively, the position can be changed by clicking once on the PU concerned. A second click then defines the new position to which the PU is to be moved.

Tab – Admin

Update connected device

Function to update the connected PUs. To ensure that no conflicts can arise with the master, PU I must have **at least** firmware version **1.21**. If the version number of PU I is greater than or equal to V1.23 or that of PU II greater than or equal to V2.15, the status "no" will be displayed under "Update".

| ſraps Overview Status Setup Ima | ges Alarms Admin | | | | NESULUI | |
|--|--------------------|---|---|---|---|----------------|
| Please initiat | te a software upda | ate for the mark | ed devices | | | |
| Device Name | Device Location | Device IP | Version | Update | | |
| PU 1 - 4 AUs V1.23e | RITTAL QM-T | 192.168.40.1 | V1.23 | no | | |
| PU II - V2.15 Datei | RITTAL QM-T | 192.168.40.2 | V2.15 | no | | |
| PU III SW V2.15 Datei | Rittal QM-T | 192.168.40.3 | V2.15 | no | | |
| PU IV SW V2.15 Master | Rittal QM-T | 192.168.40.4 | V2.15 | no | | |
| PU 5 - 4 CUs V1.23e | RITTAL QM-T | 192.168.40.5 | V1.23 | no | | |
| PU 6 - 1 CU 3 AUS V1.23e | RITTAL QM-T | 192.168.40.6 | V1.23 | no | | |
| PU 8 - V1.31 RTT | RITTAL QM-T | 192.168.40.8 | V1.31 | / no | | |
| Please enter the following information to perform the Enter FTP-Name of PU: Enter FTP-Password of PU: Enter Telnet-Name of PU: Enter Telnet-Password of PU: Perform update | e update | You to butto The in FTP. enter So th must Enter Note pass | reach the new firr User n red for t at the c be res r Telne Telne word ca | ne Upda e selecte nware is ame and this. changes et. This t user na t and FT an be dif | Ite dialog with the "Update ed PU. Is loaded on the PU throug d password must be Is can be accepted, the PL is done through Telnet. ame and password. TP user name and fferent. | , ,h , I |

Tab – Admin

• Firmware update

Download the firmware update from the Internet and unpack it into a separate directory.

| Foraf | irmware update of the CMC-TC Master unit the following steps are necessary. |
|-------|---|
| | 1st step: Activate TFTP-Server of the Master unit |
| | TFTP-Server state (checked if already enabled) |
| | Change TFTP-Server settings |
| | |
| | |
| | 2nd step: Upload the 'update.tar.gz'-file to the master unit via TFTP |
| ł | 2nd step: Upload the 'update.tar.gz'-file to the master unit via TFTP 3rd step: Now the update file can be set up. After that the master will automatically be rebooted. |

First step: Activating TFTP server on the master device: Set check mark and confirm with Change TFTP-Server settings. Second step: Open the input prompt in Windows. Load the update file by TFTP on the master. Switch to the directory containing the unpacked file. Command: Inter IP address of the Master tftp -i 192.168.30.100 put update.tar.gz Third step: Install the update and restart the master using the Set up update and reboot button.

J 1 Software functions

| Item: | Call: Telnet, Hyperterminal | To-Do | Software option Va rar | | Work's default setting | Hyperterminal | Tera Term | Browser |
|-------|--------------------------------|--|--|--------------------------|------------------------------|---------------|-----------|-----------|
| | | 0 Login | | | | | | |
| 0.1 | | Querv | User name | | See table below | • | • | • |
| 0.2 | | Querv | Password | | See table below | ● | • | • |
| | | 1 Network configur | ration | | | | | |
| 1 | 1.1.1 | Settina | IP Address | | 192.168.30.100 | • | • | • |
| 2 | 1.1.2 | Settina | IP Subnetmask | | 255.255.255.0 | • | • | • |
| 3 | 1.1.3 | Setting | IP Router | | 0.0.0.0 | • | • | • |
| 4 | 1.2 | Settina | IP Trap Receiver address 1-4 | | 0.0.0.0 | • | • | • |
| 5 | 1.2 | Activate | IP Trap Receiver address 1-4 | | disable | • | • | • |
| 6 | 1.3 | Activate | Access exclusively through SNMP | | disable | • | • | • |
| 7 | 1.4 | Activate | TFTP | | disable | • | • | • |
| 8 | 1.5 | Settina | Read Community [character] | 020 | public | • | • | • |
| 9 | 1.6 | Setting | Write Community [character] | 020 | public | • | • | • |
| 10 | 1.7 | Settina | Svstem name [character] | 040 | | • | • | • |
| 11 | 1.8 | Settina | System contact [character] | 040 | | • | • | • |
| 12 | 1.9 | Setting | System location [character] | 040 | | • | • | • |
| 13 | 1.A | Change | Passwords user [character] | 320 | | • | • | • |
| 14 | 1.B | Setting | Telnet shutdown function timeout [min] | Enable/close/ disable | enable | • | • | not close |
| 15 | 1.C | Settina | Telnet access | 0100 | 0 | • | • | • |
| 16 | 1.D | Svstem boot | Accept updated values | no/yes | no | • | • | • |
| | | | | | | | | |
| | | 2 Branching to Telnet menu of Processing Units | | | | | | |

Table Factory settings for user name and passwords

| | Username | Password | Encryption |
|-------------------------|----------|----------|---------------|
| Hyperterminal | cmc | cmc | - |
| Tera Term | cmc | cmc | - |
| Browser – User | rittal | rittal | 128 Bit (SSL) |
| Browser – Administrator | admin | admin | 128 Bit (SSL) |

DK 7320.000

K 1 Fault messages Master Unit

| Item: | Fault | Fault | Cause | Who? | Remedy |
|-------|---|--|---|--------|---|
| 1 | LED active/alarm | No operating | Power supply unit not connected or unit cable damaged | 0 | Connected power supply unit, see Appendix E 1 Electrical connection: |
| | | Vollage | | | CMC-TC master unit , or replace unit cable. |
| 2 | LED Processing Unit "off" | Processing unit not detected | No Processing Unit connected | ٢ | Connect Processing unit, see Appendix E 3 Preparation of the CMC-TC Processing Units for operation with the Master |
| 3 | Link/Traffic LED "off" | No network connection | Network connection cable missing or network connection cable defective | ٢ | Plug in or replace network connection cable. See Appendix E 1 Electrical connection: CMC-TC master unit |
| | | | Different IP address IP address IP Subnet mask: IP Router | © | Make sure that the stated IP address in the browser agrees with that in the master, if necessary correct IP addresses. See Appendix F 1 Check list Commencing Operation and I 1 Operation by browser |
| | | | Detection of the CMC-TC in the network environment – Test selection of the CMC-TC: 1. Open input prompt 2. Enter command ping with IP address of the CMC-TC master unit, e.g. ping 192.168.30.100 3. Wait for answer, approx. 10 | | |
| | Symbol: authorized user network administrator | | detected OK master answers, is detected OK master does not answer then | © © | Wrong IP address, check No network connection between master and PC workstation, check Network faulty, test |
| 4 | No access rights | User login is not recognized | User name or password wrong | 0 | Enter user name or password again Check whether the passwords were changed by the Administrator of the Master Unit. |
| 5 | | Wrong com- munity entries (SNMP-enabled) | The entries of the read authorization "read community" or of the write authorization "write community" do not agree | Ÿ | Test the entries of the "ready community" or of the "write community" through hyperterminal or TELNET with the settings of the SNMP management software, see Appendix J 1 Software functions |

Note: The notes in Appendix E 3 Setting up the CMC-TC Processing Units for operation with the master must be complied with absolutely, since otherwise it will not function.

