

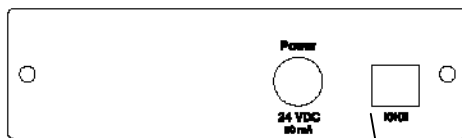
CMC-TC Display Unit

DK 7320.490

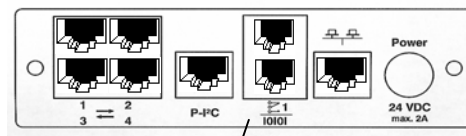
Note:

For reasons of clarity of the presentation, these operating instructions do not contain all information details and also cannot cover every possible case of installation, operation or repair. Technical specifications are subject to change without notice. In case of doubt, the German text prevails.

Accessory:
Display Unit 7320.490



Processing Unit:
PU 7320.100



Connection cable RJ12/RJ12 Cat5,
enclosed.

Description:

The CMC-TC display is connected to the RS232 interface fitted on the rear of the processing unit (PU) using the enclosed RJ 12 cable and it is also supplied with +24V DC. The display is used for setting up various system basic settings as well as displaying the status of the outputs and sensor readings; furthermore, it can also be used for displaying and acknowledging alarm reports.

The CMC-TC display unit can also be secured to the enclosure's level surface using the enclosed self-adhesive Velcro-strips. 1 U DK 7320.440 mounting unit for the 482.6 mm (19") level or a single DK 7320.450 mounting unit for securing it to the punched section with mounting flange in the enclosure can be offered as an option.

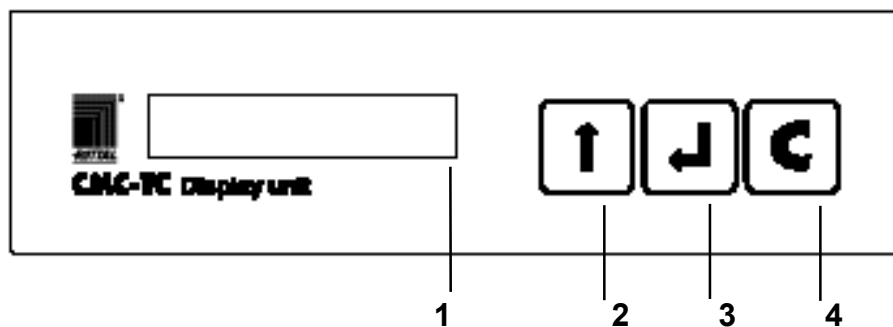
No other components are required to operate the CMC-TC display unit from the processing unit.

Conditions for use / safety instructions:




- The CMC-TC Display Unit must only be used together with the Rittal CMC-TC system.
- The operating manual/safety instructions for the processing unit (7320.100) as well as these product specific instruction apply here. Special attention must be paid to the conditions of use, safety instructions and guarantee conditions listed in them.
- It is absolutely necessary that these cables are installed separately from mains power cables.
- The use of the display unit is exclusively limited to the specified ambient conditions see technical data.
- It is forbidden to open the display unit enclosures. They do not contain parts requiring maintenance.
- It is forbidden to render safety equipment ineffective.
- Direct contact of the display unit with water (e.g. dew), oil sludge or any aggressive substances is forbidden.
- Use in locations with flammable gas or vapour is forbidden. Protection from water, dust, etc. must be ensured by installation in an enclosure or rack
- The CMC-TC system must not be live with voltage when the display unit is connected to the Processing Unit.
- The sensor unit must be installed properly.
- The EMC can be improved by additional measures. Please consult our central office.
- Damage due to non-compliance with these instructions/ambient conditions and the instructions for the Processing Unit 7320.100 is not covered by our warranty. Rittal is not responsible for any consequential damage.
- Injury to persons or damage to property that is due to improper handling or non-compliance with safety instructions is outside Rittal's responsibility. Any such case is not covered by warranty.

Description of CMC-TC display unit 7320.490

Front side:



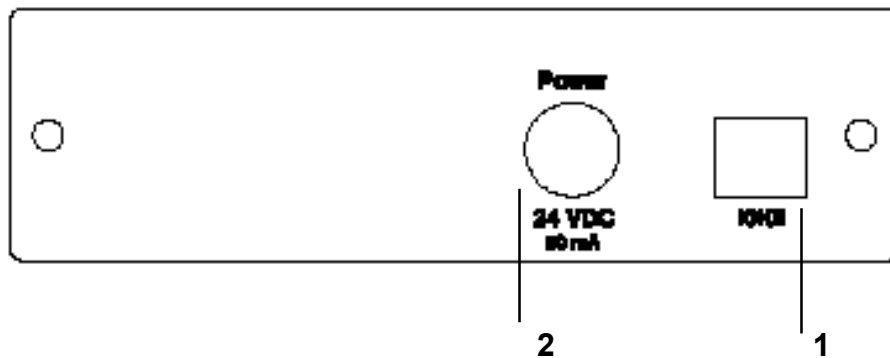
The display (1) includes a backlit LCD display with 2 x 20 characters and 3 mm character height. Furthermore, 3 buttons have been provided for operating the unit and for alarming a beeper:

- 2  This button is called the 'Change' button and is used to alter or for incrementing values in the input menu.
- 3  This button is called the 'Enter' button and is used for starting from within a menu and for calling up as well as terminating the input functions.
- 4  This button is called the 'Clear' button and is used to acknowledge alarm reports and to terminate the input menus. By pressing this button for approx. 2s the message 'Configuration change' can be acknowledged at the 'Processing Unit'.

The display is automatically recognised by the CMC-TC/PU after it has been switched on. In this case, the hyper-terminal interface on the front side of the PU no longer functions. If this interface needs to be reactivated, the user must log off from the display menu or disconnect the display from the PU; if the connection to the display is lost, it will also be switched back again to the hyper-terminal interface. If a log in has not been made via the hyper-terminal interface within 60s, it will be automatically switched back to the display again.

Description of CMC-TC display unit 7320.490

Rear side:



- 1 The CMC-TC display is connected to the processing unit via the RS232 interface using the enclosed connecting cable (RJ 12/RJ12). The + 24V DC supply and the data exchange are made via the connecting cable.
- 2 The separate 24V DC supply connection has been provided for future further developments of the CMC-TC system.

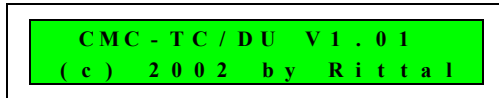
Technical specifications:

2 x 20 character display
Character height: 3 mm
Illuminated display
Maximum cable length: 2 m
24V DC measuring voltage with supply connection to the processing unit
Shock: 1g
Usable temperature range: +5°C to +45°C
Storage temperature range: -10°C to +60°C
Protection category: IP 40

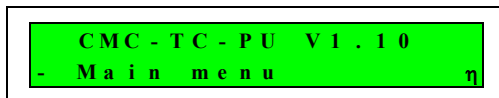
User guide:

- **Display during normal operation**

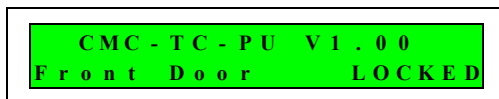
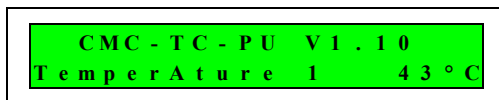
After the operating voltage has been applied to the display unit, the version number of the software will be displayed. The current version is as follows:




The following reports are displayed on the screen during a normal operating run of the processing unit:





All sensor values (analog or digital) will be displayed alternately, after they have been selected; e.g.

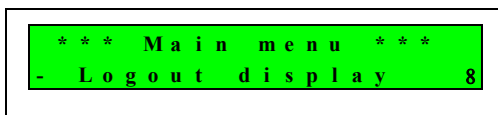
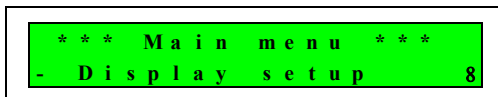
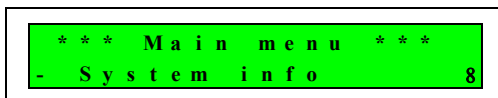
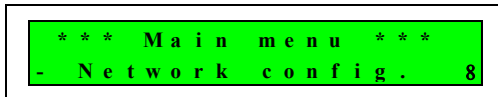
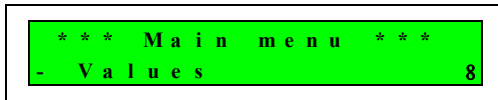


Use the  button to jump to the main menu.

- **Main menu:**


The following menu options are displayed one after the other in the main menu. Use the  button jump to the next menu option.

Use the  button to call up the selected menu option.



- Use the  button to exit the menu and jump back to main menu.

'Values' sub-menu

The status of all of the sensors or outputs, which are connected to the PU, can be displayed via this menu option. Use the  button to proceed to the next sensor / output. The following information will be displayed per sensor / output:


Number of the sensor unit and connection
Name of the sensor unit
Sensor name
Measured value or status of the sensor / output

```
Unit 1 / 3 : Cabinet 1
Temperature 3 π 38 °C
```


```
Unit 3 / 2 : Server 2
Humidity ρ 57%
```

The following characters displayed in front of the measured value indicate if the measured value lies within the entered limit values:

Character π: Measured value is greater than 'Setpoint high'
Character ρ: Measured value is greater than 'Setpoint warning'
Character θ: Measured value is less than 'Setpoint low'

Use the  button to select the respective sensor / output to be displayed in normal operation; this will be displayed as a dot in front of the measured value, e.g.

```
Unit 4 / 4 : PC-cabinet
Voltage • 200V
```

Use the  button to exit the menu and jump back to main menu.

Network configuration 'sub-menu





The network settings for the Ethernet interface are implemented in this sub-menu. These settings are required for the commissioning of the CMC-TC/PU. The following settings can be implemented here:



```
 Edit IP address
130.000.002.220
```

```
 Edit Netmask
255.255.000.000
```

```
 Gateway address
000.000.000.000
```

```
 Enable DHCP
enable / disable
```

Use this  button to select the next sub-menu. Use this  button to start the entry in the selected menu option. The first byte of the IP address (or net-mask or gateway) will flash when the entry has started. Use this  button to set the byte to be between 0 – 255. Use this  button to import the setting and switch over to the next byte. The input session will be terminated when all 4 bytes have been entered.

Use this  button to switch between 'disable' and 'enable' during the DHCP setting up. Use this  button to exit the menu and jump back to main menu again.

Attention! If a network setting has been modified, a 'reboot' of the PU will be carried out and the new network setting will then be imported.

- **'System info' sub-menu**



The following CMC-TC/PU information can be displayed in this sub-menu:

```
HW: V2.01 SW: V1.05  
Serialno.: 02647
```

```
Systemname:  
CMC-TC Development
```

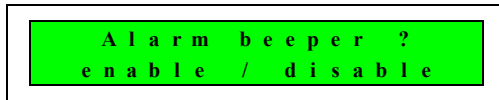
```
Systemlocation:  
Rittal Herborn
```

```
Systemcontact:  
Administrator
```

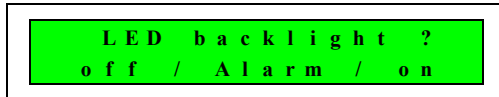
Use this  button to switch through the display information. 'System name', 'System location' and 'System contact' can be entered via the terminal menu or the web browser. Use the  button to exit the menu and jump back to main menu.

'Display set up' sub-menu

The following settings for the display unit can be implemented from this sub-menu:



This setting enables the internal beeper in the display unit, i.e. an acoustic signal will be generated as an alarm.

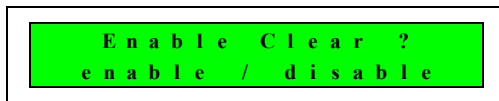


The function of the backlighting can be determined using this setting:

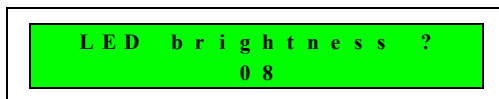
off: switched off during normal operation; on if button is pressed

Alarm: flashes if an alarm is generated; on if button is pressed



on: always switched on





Used to enable the clear button if an alarm is generated, i.e. if an acoustic alarm is activated, it can be deactivated using the clear button.



The brilliance of the LED background illumination can be set between 0 – 15 using this function.

Use the  button to select the next sub-option. Use the  button to modify the settings for the selected menu option.

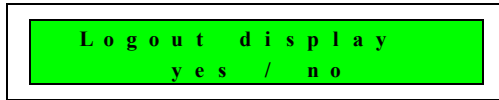
Use the  button to exit the menu and jump back to main menu.



Use this  button to select the next sub-option. Use the  button to modify the setting for the selected menu option. The settings for the display unit are saved in the PU, i.e. if another display unit is connected up, the same settings will be applied to the new display.

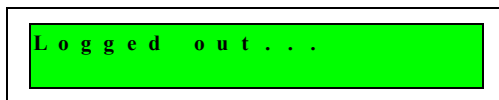
'Logout display' sub-menu


As the display unit physically uses the same interface as the COM-interface on the front of the PU, it might become necessary to switch back to this interface, e.g. in order to implement settings via the hyper-terminal.

The following question is displayed on the screen after the menu is called up:




Use this  button to switch between 'yes' and 'no'. If 'yes' is confirmed using the  button, a logout will be executed and confirmed by the following report being displayed:



Use the  button to exit the menu and jump back to main menu.

If a login has not been made via the hyper-terminal interface within 60s, it will be automatically switched back to the display again. If, however, a login has been made it must be observed that before closing the hyper-terminal a logout is executed so that it will be switched back to the display again. As an alternative a 'Console timeout' can be entered by which a logout is executed automatically.

Alarm displays


If one or more alarm reports are present, they will be displayed in the following manner. Use this  button to display the individual alarms one after the other.

```
Alarm 1 of 3 8
Temperature 1 θ 12 °C
```

```
Alarm 2 of 3 8
Movement report alarm
```

```
Alarm 3 of 3 8
Humidity π 89%
```

The maximum number of alarm reports present is displayed in the upper line. The significance of the character displayed in front of the measured values corresponds to that given in the 'Values' sub-menu; see Chapter 'Values' sub-menu with regard to this.

If the alarm beeper is enabled, the beeper of the display unit will be activated whenever a new fault occurs. Use the  button to acknowledge the alarm and switch off the beeper.

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Umschalten auf Perfektion **RITTAL**