

# CMC- Top Concept

A redefinition  
of rack security



# IT Controlling

## Security management with Rittal CMC-TC – a success factor

Data losses and the failure of networks and production plant can entail enormous cost risks, and even threaten a company's very existence. For this reason, safeguard your company's "life blood" by ensuring a stable flow of information and secure production flows. As the manufacturer of the world's most comprehensive packaging and climate control ranges, Rittal now unveils the latest generation of monitoring technology: Rittal CMC Top Concept. Individual, simple, cost-effective rack security.



### Climate control

Consistent low temperatures for electronics are a key safety factor in the network and in the production process. Monitoring of the internal rack temperature and the control of climate technology to reliably dissipate heat loss is provided by the Rittal CMC-TC security system to minimise operating costs.



### Power management

Power requirements are on the increase, and there is a growing need for maximum availability of modern IT structures. Rittal addresses the associated additional requirement for redundant power supply with a new, intelligent power distribution system which may be integrated with no loss of enclosure internal volume.

### More compatibility

The CMC-TC is capable of communicating via virtually all standard protocols. Further information and downloads can be found at: [www.rittal.de](http://www.rittal.de) or in the CMC-TC brochure.

### More profitability

The CMC-TC facilitates integration of the decentralised function blocks into your IT system, quickly and without incurring any unnecessary costs.

### More flexibility

The modular layout and almost limitless extendibility means that the CMC-TC grows along with your requirements.

### More individuality

The CMC-TC can be adapted in full to your requirements, from decentralised monitoring via individual processing units, through to control of the complete system by a master unit.

## IT Controlling

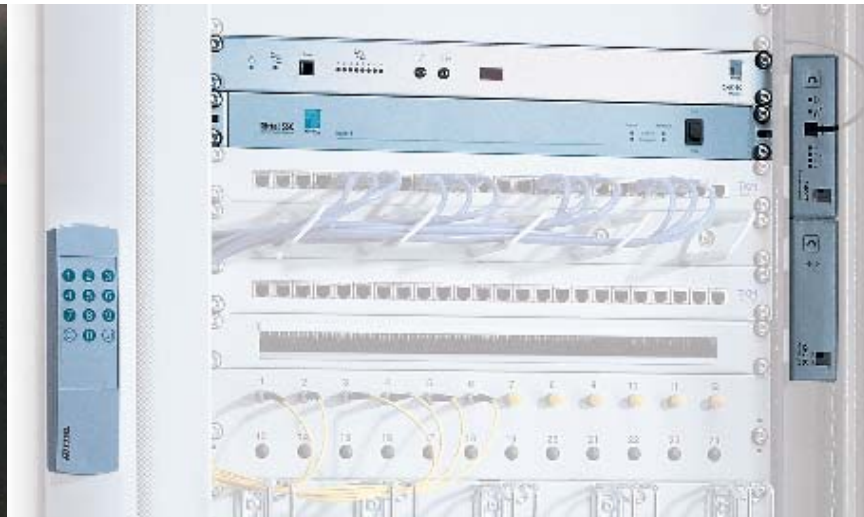
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### Access Control

Access authorisation is one of the most important security factors in any company. With the CMC-TC, this is registered for the entire network. In case of an unauthorised access attempt, the system will raise the alarm. For example, doors may be opened by authorised individuals via a numerical code, magnetic card, smartcard, or the latest transponder technology.



### Rack security

Effective prevention, comprehensive security and central organisation of rack security. The new, modular CMC-TC facilitates the implementation of highly individualised security solutions, thanks to its modular plug & play system, and therefore affords a high level of protection for your investment.

# Concept-based risk minimisation

## The nerve centre for security



### Access authorisation

Is registered with the CMC-TC for the entire network. In the event of an unauthorised access attempt, the system raises the alarm. Smart card readers, magnetic card readers and coded locks are combined with access sensors and electro-magnetic locks.



### Heat

High temperatures and temperature fluctuations pose a major threat to modern microelectronics. By regulating the relevant climate control components, the CMC-TC ensures a constant cool temperature. Any breaches of the limits are reported.



### Smoke

Smoke generation always poses a threat. The system raises the alarm.



### Vandalism

Reportable events include damage-induced vibration or the unauthorised opening of the enclosure. Corresponding sensors supply the information.



### Condensate

Humidity causes incorrect flows. The hygro-sensor initiates preventive action via the CMC-TC.

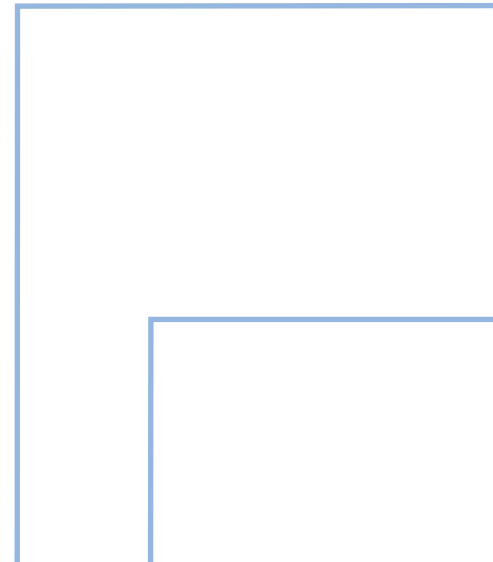


### Signals

Danger is clearly indicated: Decentralised, optical alarm signals on the smoke alarm, the handle system or via signal lights supplement centralised reporting via the CMC-TC.

All enclosure system or room security-related factors are permanently monitored by the Rittal CMC-TC, and any potential risks are logged and indicated in good time.

Appropriate counteractive action can either be initiated automatically, or by the central remote monitoring facility.



	Sensor unit	I/O unit	Access unit	Climate unit
<b>Sensors/actuators:</b>				
7320.500	Temperature sensor	●		●
7320.510	Humidity sensor	●		
7320.520	Analog sensor input module "4 – 20 mA"	●		
7320.530	Access sensor*	●	●	●
7320.540	Vandalism sensor	●		
7320.550	Airflow monitor	●		●
7320.560	Smoke alarm	●		●
7320.570	Motion sensor	●		●
7320.580	Digital sensor input module	●	●	●
7320.590	Digital sensor relay output module	●		
7320.600	Voltage monitor	●		●
<b>Latch/reader:</b>				
7320.700	Electro-magnetic Ergoform-S FR/PS/TC		●	
7320.710	Electro-magnetic Ergoform-S QR		●	
7320.720	Electro-magnetic TS 8 handle		●	
7320.730	Universal latch		●	
7320.740	Relay output module for room door		●	
7320.750	Smart card reader		●	
7320.760	Magnetic card reader		●	
7320.770	Coded lock		●	

\* Up to a maximum of 5 sensors may be connected in series.

### With the new CMC-TC system, all monitoring functions and sensors may be freely selected.

The CMC-TC system allows monitoring applications to be configured cost-effectively and in a targeted manner. The processing unit (PU) with network interface forms the basis. The sensor units are

combined with sensors to form the PU. This determines the function. The PU may optionally be operated via the CMC-TC master for enhanced performance. The finishing touches are provided by the plug & play concept with automatic sensor detection and configuration.

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## The sensor units

### Universal I/O unit

- The I/O unit is the alarm and measurement module.
- Alarm sensors may be connected (e.g. motion detector).
- Analog measurements can be transmitted and monitored (temperature, humidity, 4–20 mA).
- The system is capable of switching relay output modules.
- The unit has 4 universal ports for 4 sensors/actuators.
- The I/O unit must be connected to the PU. Data exchange and power supply to the electronics are provided in this way.

### Access unit

- The access unit serves to control door systems.
- The doors can be opened remotely via the network.
- The doors can also be opened by authorised individuals via a coded lock, magnetic card or smart card.
- The doors of enclosures or rooms can be monitored and activated.
- The unit is designed for two separate door systems.
- The access unit must be connected to the PU. Data exchange and power supply to the electronics are provided in this way.

### Climate unit

- The climate unit serves to control the fan and thus regulate the temperature.
- The physical airflow of the fan is monitored with due regard for the controller.
- If no temperature sensor or airflow sensor is used, the two universal ports can also be fitted with other sensors (see table).
- Simple fan connection via IEC jacks and connectors.
- The unit is designed for one fan system.
- The climate unit must be connected to the PU. Data exchange and power supply to the electronics are provided in this way.

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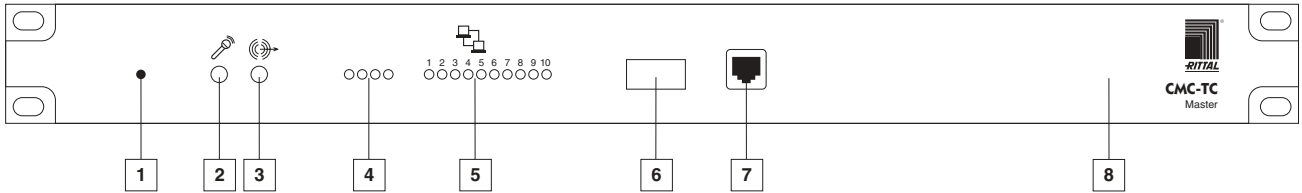
## Processing unit (PU)

- The processing unit (PU) forms the basis of the monitoring system.
- The system can be incorporated directly into the user network via the network interface 10BaseT, TCP/IP, SNMP.
- The system has an integral Web server to enable configuration of the system.
- The system can optionally be linked to the CMC-TC master via the network interface.
- The monitoring functions are determined by the sensor units or sensors/actuators connected to the PU, and may therefore be flexibly selected.
- Up to 4 sensor units may be connected in any given combination (I/O, access, climate).

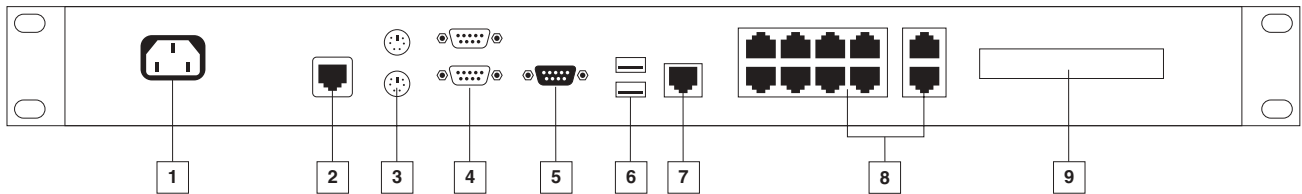
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## Master unit

- The CMC-TC master is required in all situations where large numbers of security-relevant factors must be monitored or where exacting demands are placed on the technology.
- The CMC-TC master offers high performance and helps to conserve IP resources.
- The PU with the sensor units is always required for monitoring.
- Up to 10 processing units (PU) may be connected as a slave.
- The master offers a 10/100BaseT interface to the user network and summarises all monitoring variables on HTTP and SNMP.
- The system can be connected and operated directly via the Rittal SSC.



- 1 Key**  
Offset system reset key with contact hazard protection.
- 2 Input for microphone**  
3.5 mm jack.
- 3 Speaker output**  
3.5 mm jack.
- 4 Status LEDs**  
LED 1 Alarm – Alarm system message.  
LED 2 changeover 10/100 Mbit/s, network interface user network.  
LED 3 Link/Activity, network interface user network.
- 5 LEDs**  
for the 10 network inputs of the processing units 7320.100.
- 6 IrDA**  
Infrared interface.
- 7 RJ 11**  
RS 232 interface for CMC-TC menu program.
- 8 Acoustic alarm**  
There is an acoustic alarm signalling device integrated into the master.



- 1 Voltage supply**  
The IEC jack serves to supply the system  
Connection cable 7200.210 to .214.
- 2 Alarm relay**  
RJ 12 socket with changeover contact.
- 3 Keyboard/mouse**  
PS2 jacks for keyboard and mouse.
- 4 RS 232**  
Two serial D-SUB 9 interfaces.
- 5 VGA interface HD15**  
Connection for monitor or Rittal SSC.
- 6 USB interfaces**  
Standard 1.1, for applications with Rittal camera.
- 7 Ethernet 10/100BaseT**  
RJ 45 jack network interface, user network  
Ethernet 10BaseT/100BaseT, IEEE 802.3 (10/100 Mbit/s), TCP/IP.
- 8 Ethernet 10BaseT (internal)**  
Ten RJ 45 jacks, network inputs for the processing units 7320.100  
Ethernet 10BaseT, IEEE 802.3 (10 Mbit/s), TCP/IP.
- 9 PCMCIA**  
Two PCMCIA ports for applications with the Rittal modem.

## CMC-TC master

The master system may be connected between the processing unit and the user network. There are ten 10BaseT network inputs available for the processing units (PU). The PUs transmit all monitoring-related data and messages to the master system via TCP/IP, SNMP. The master has a 10BaseT/100BaseT network interface for the user network. All monitoring data is

provided in a separate MIB via TCP/IP, SNMP. The system may optionally be configured remotely, via the integral web server, or directly, via a local console. Basic settings can also be implemented serially via RS 232 or Telnet. A Telnet routing function to the individual processing units is also pre-integrated. This provides the user with a clear central monitoring facility. For example, up to 160 temperatures may be accessed or up to 80 enclosure doors

may be monitored and activated via one IP address. Combined applications are also possible, and may be compiled individually from processing units and sensor units. Further functional scope for the CMC-TC master is available on request in the form of a software update.

## Technical specifications

H x D mm	1 U x 200
Rated voltage	100 – 240 V AC 50/60 Hz
Network interface	Ethernet to IEEE 802.3 via 10BaseT/100BaseT, 10/100 Mbit/s
Protocols	TCP/IP, SNMP V1.0, TELNET, SSH, TFTP, HTTP
Ports for processing unit	10 jacks RJ 45, shielded, 10BaseT, TCP/IP, SNMP
Serial interfaces	RJ 11 jack RS 232 menu program, 2 D-SUB 9 jacks RS 232
USB	Standard 1.1 for Rittal web cameras
Infrared interface	IrDA 1.0 (SIR) on the front
PCMCIA	2 x type I/II or 1 x type III for applications with Rittal modem
Relay output module	Change-over contact, max. load capacity 24 V DC, 1 A
Time function	Real-time clock
Temperature application range	+5°C to +40°C

Monitoring system, master	<b>Model No. DK</b>
CMC-TC master	<b>7320.000</b>

### **!** Also required:

Selection aid, see page 14.



### Benefits

- Centralised administration
- Network connection 10/100BaseT
- Central web server for configuration
- Local administration via PS2/VGA console
- Logging function for alarm messages
- Link for USB camera
- Free function selection for monitoring
- Ideal for large computer centres
- **Web access via SSL 3.0**
- **Remote administration via SSH**



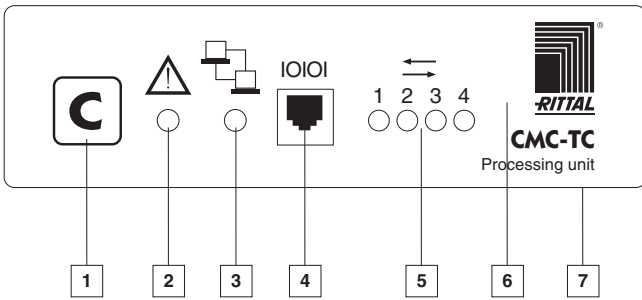
The **access** to the master system via the integral web server can only be achieved via a password and SSL 3.0 or 128 bit encryption.



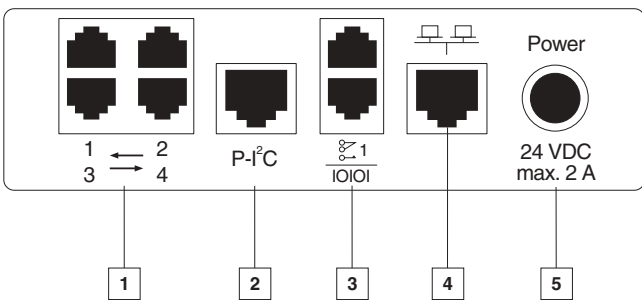
**The graphical Web menu interface** allows convenient monitoring of the system status. Settings can also be made here. The menu adapts automatically to the monitoring functions being operated.



**Rittal USB Web camera**  
Highly sensitive areas may be monitored with the Web camera. JPEG data may be saved. Camera available upon request.



- 1 Control key**  
The C-key is used for sensor/actuator detection, set-up of the system and acknowledgement.
- 2 Alarm LED**  
This LED signals alarms or configuration changes.
- 3 Link/Traffic LED**  
This LED signals the status of the network interface 10BaseT.
- 4 RS 232 interface RJ 11**  
For programming via the serial PC interface.
- 5 LEDs channels of the sensor units**  
These LEDs indicate the status of the attached sensor units.
- 6 Acoustic alarm**  
There is an acoustic alarm signalling device integrated into the PU.
- 7 Mounting fixture**  
For attachment with nylon loop fastener, individual bracket 7320.450 or 1 U mounting unit 7320.440.



- 1 Inputs for sensor unit RJ 45**  
Up to 4 sensor units may be connected to the PU via the 4 inputs. The sensor units determine the function of the PU. There is a choice of 3 sensor units. Connection cable 7230.470 /.472 /.481.
- 2 Power I²C bus RJ 45**  
Up to 2 voltage extension units 7200.520 may be connected via the power I²C bus. Up to 3 AC voltages can be monitored with every extension unit. Connection cable 7230.470 /.472 /.481.
- 3 Alarm relay RJ 12/RS 232 RJ 12**  
The upper RJ 12 jack provides a changeover contact from the PU alarm relay. Connection cable 7200.430. The lower RJ 12 jack provides an open serial interface.
- 4 Ethernet 10BaseT RJ 45**  
Integral Ethernet interface to IEEE 802.3 via 10BaseT half-duplex 10 Mbit/s.
- 5 Power supply**  
The rated voltage for the PU is 24 V DC. There is a choice of various power packs with varying primary voltages. AC power pack 7320.425.



## CMC-TC processing unit (PU)

The processing unit forms the basis of the CMC-TC system. This unit is required for every monitoring application.

### Interface to the customer:

The PU can be incorporated directly into the user network via 10BaseT. The PU can also be linked to the master 7230.000 via this interface (TCP/IP, SNMP).

### Interface to the sensors/actuators:

The PU provides 4 open ports for sensor units. The sensor units determine the

function of the PU. There is a choice of 3 different sensor units (I/O, access, climate) with varying functions. In this way, the monitoring functions can be freely combined.

### Fast, easy programming and installation:

The sensors/actuators are set up via an automatic electronic identity system. Installation is via a flexible plug & play system. This eliminates the need for time-consuming programming and wiring.

### Power supply:

Power is supplied centrally via a power pack in the PU. The attached sensor units and all connected sensors are supplied with power in this way. There is a choice of two input voltages (AC power pack 7320.425 and DC power pack 7320.435).

## Technical specifications

W x H x D mm	136 x 44 (1 U) x 129
Rated voltage	24 V DC
Network interface	Ethernet to IEEE 802.3 via 10BaseT half-duplex 10 Mbit/s
Protocols	TCP/IP, SNMP V1.0, TELNET, FTP, HTTP
Serial interfaces	RS 232
Ports for sensor units	4 jacks RJ 45, shielded
Bus system	Power I²C for extension unit voltage AC
Relay output	Change-over contact max. 24 V DC 1 A
Acoustic display	Piezo signal generator
Time function	Real-time clock
Temperature application range	+ 5 °C to + 45 °C
Humidity application range	5% to 95% relative humidity, non-condensing
IP protection category	IP 40 to EN 60 529

Ethernet TCP/IP SNMP monitoring system	<b>Model No. DK</b>
CMC-TC processing unit (PU)	<b>7320.100</b>



### Also required:

Selection aid, see page 14.





### Benefits

- Freely selectable monitoring functions
- Extendible sensor/actuator ports
- TCP/IP SNMP network connection
- Integral Web server for configuration
- Automatic menu generation
- Simple installation based on the plug & play system
- Alarm continues to record even in the event of a network failure
- Built-in real-time clock
- May be used via power pack for 115/230 V AC or 48 V DC
- Option of mounting on the enclosure frame or 482.6 mm (19") system
- The protocol for the master/slave system is TCP/IP SNMP
- May be used for large computer centres or small individual applications



### The Web server integrated into the PU

shows the states of the 4 sensor units with the connected sensors.



### The Web server integrated into the PU

automatically generates the graphical interface for configuring the sensors/actuators. Links can also be set between the inputs and outputs.



### The Web server integrated into the PU

stores alarm messages independently from the network. These can also be retrieved retrospectively via FTP or HTTP.

## There is a choice of 3 sensor units:

### I/O unit:

the alarm and measurement module

### Access unit:

for controlling door systems

### Climate unit:

for fan control and monitoring

### Benefits:

- Function selection via 3 sensor units
- Open to customer-specific sensors/actuators
- Automatic sensor detection
- Simple installation based on the plug & play system
- No additional power pack required
- Choice of mounting on the enclosure frame or 482.6 mm (19") system
- I/O unit: freely selectable sensors/actuators
- Access unit: personalised access detection
- Climate unit: fan control with airflow monitoring

### Technical description:

The sensors/actuators are set up via an automatic electronic identity system. Because it is installed using a flexible plug & play system, there is no need for time-consuming programming and wiring. Power is supplied centrally via the connection cable to the PU.

### Technical specifications:

W x H x D: 136 mm x 44 mm (1 U) x 129 mm  
 Temperature application range: +5° C to +45° C  
 Humidity application range: 5% to 95% relative humidity, non-condensing  
 IP protection category: IP40 to EN 60 529



Interface for linking the sensor unit and processing unit. Used for data transmission and power supply. Cable 7320.470/.472/.481.



Just one click of the button, and the system reconfigures itself automatically.

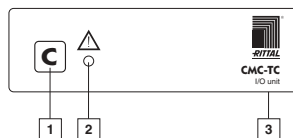


Up to 3 systems may be integrated into the 1 U mounting unit: Model No. 7320.440.

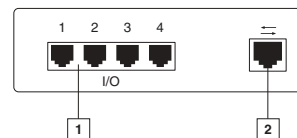
## CMC-TC sensor unit I/O unit



With this sensor unit, alarm messages, status messages and measurements can be forwarded and remote actions can be executed via relay output modules. The I/O unit has 4 universal inputs/outputs. The sensors/actuators listed below can be operated here. The interface to the user network is via the PU (processing unit), which is always required to operate the system.



- ① Control key for detection/set-up of the sensors/actuators
- ② Alarm LED signals alarms or configuration changes
- ③ Mounting fixture for 7320.440 or 7320.450



- ① Four RJ 12 inputs for sensors/actuators (see bottom list)
- ② RJ 45, connection to PU 7320.100 via connection cable 7320.470/.472/.481 (The unit is also supplied with power via this connection.)

Sensor unit I/O unit	<b>Model No. DK</b>
4 universal inputs or outputs	<b>7320.210</b>

### ! Also required:

Sensors/actuators	max.	Model No. DK
Temperature sensor	4	<b>7320.500</b>
Humidity sensor	4	<b>7320.510</b>
Analog sensor input module "4 – 20 mA"	4	<b>7320.520</b>
Access sensor*	4 + 4 serial	<b>7320.530</b>
Vandalism sensor	4	<b>7320.540</b>
Airflow monitor	4	<b>7320.550</b>
Smoke alarm	4	<b>7320.560</b>
Motion sensor	4	<b>7320.570</b>
Digital sensor input module	4	<b>7320.580</b>
Digital sensor relay output module	4	<b>7320.590</b>
Voltage monitor	4	<b>7320.600</b>
Connection cable	1	<b>7320.470</b>

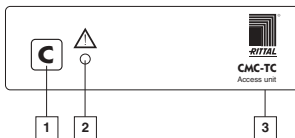
\* Up to a maximum of 5 sensors may be connected in series.

### CMC-TC sensor unit access unit

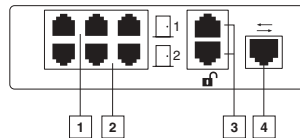


This sensor unit allows the remote release of one or two door systems for access via the network, as well as the initiation of personalised opening via a read system (smart card reader). The system also monitors the status of the door, handle or latch. Authorised access codes can be set up via http. The sensors/actuators/readers listed below can be operated here.

In order to operate the unit, at least one access sensor and at least one latch (e.g. handle) per door system must always be used. See below.



- ① Control key for detection/set-up of the sensors/actuators
- ② Alarm LED signals alarms or configuration changes
- ③ Mounting fixture for 7320.440 or 7320.450



- ① Inputs for access sensor, latch system 1 (see bottom list)
- ② Inputs for access sensor, latch system 2 (see bottom list)
- ③ I<sup>2</sup>C bus for reader units, door system 1 and 2 (see bottom list)
- ④ RJ 45 connection to PU 7320.100 via connection cable 7320.470 / .472 / .481 (The unit is also supplied with power via this connection.)

Sensor unit access unit	<b>Model No. DK</b>
Control of 2 door systems	<b>7320.220</b>

#### ! Also required:

Sensors/actuators	max.	Model No. DK
Access sensor*	2 + 2 serial	<b>7320.530</b>
Digital input module for door release	2	<b>7320.580</b>
<b>Latch/reader</b>		
Electro-magnetic Ergoform-S FR/PS/TC	2	<b>7320.700</b>
Electro-magnetic Ergoform-S QR	2	<b>7320.710</b>
Electro-magnetic TS 8 handle	2	<b>7320.720</b>
Universal latch	2	<b>7320.730</b>
Relay output module for room door	2	<b>7320.740</b>
Smart card reader for door release	2	<b>7320.750</b>
Magnetic card reader for door release	2	<b>7320.760</b>
Coded lock for door release	2	<b>7320.770</b>
Connection cable	1	<b>7320.470</b>

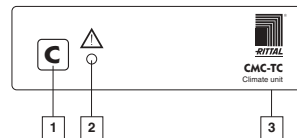
\* Up to a maximum of 5 sensors may be connected in series.

### CMC-TC sensor unit climate unit

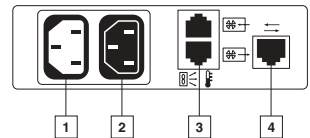


A temperature control circuit is installed with this sensor unit. Temperature setpoints are set via the PU, and these are then compared with the actual temperature. Depending on the evaluation, the fan system is activated. The function of the fans can also be monitored with an airflow sensor. Monitoring is only active with the fan operational. Other sensors may optionally be connected to the unit.

In order to operate the unit as a temperature fan control circuit, at least one temperature sensor must always be used. See below.



- ① Control key for detection/set-up of the sensors
- ② Alarm LED signals alarms or configuration changes
- ③ Mounting fixture for 7320.440 or 7320.450



- ① Input for fan supply 115/230 V AC, cable 7200.210 - .214
- ② Output to fan with cable 7200.215
- ③ Two RJ 12 inputs for sensors (see bottom list)
- ④ RJ 45 connection to PU 7320.100 via connection cable 7320.470 / .472 / .481 (The unit is also supplied with power via this connection.)

Sensor unit climate unit	<b>Model No. DK</b>
Control of a fan system	<b>7320.230</b>

#### ! Also required:

Sensors	max.	Model No. DK
Temperature sensor	2	<b>7320.500</b>
Access sensor*	2 + 2 serial	<b>7320.530</b>
Airflow monitor	2	<b>7320.550</b>
Smoke alarm	2	<b>7320.560</b>
Motion sensor	2	<b>7320.570</b>
Digital input module	2	<b>7320.580</b>
Voltage monitor	2	<b>7320.600</b>
Connection cable	1	<b>7320.470</b>

\* Up to a maximum of 5 sensors may be connected in series.

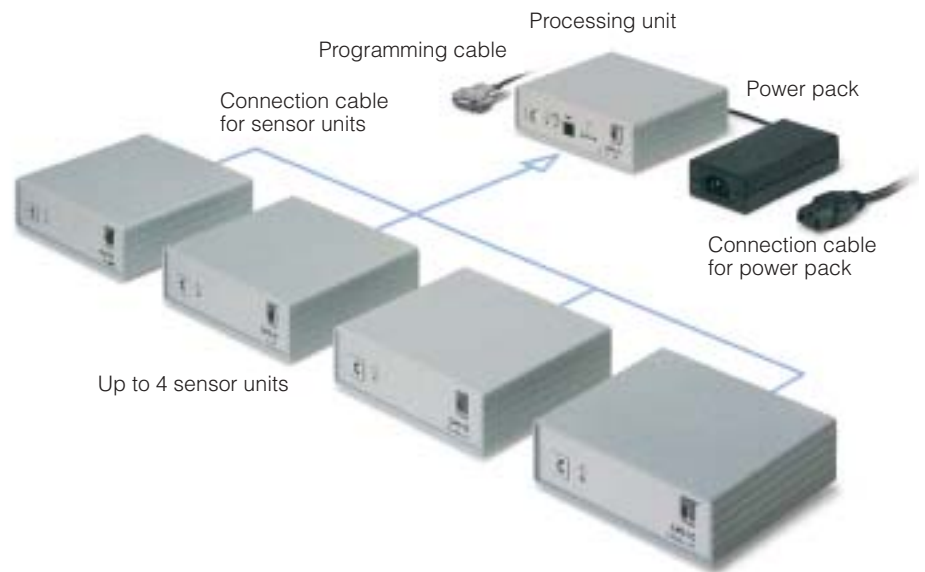
### The basic system

The processing unit (PU) is the basis of any CMC-TC application. Connectivity is offered by the network interface (10BaseT, TCP/IP, SNMP) which connects directly into the user network or to the CMC-TC master. The following products are required for each CMC-TC application:

- Processing unit (7320.100)
- Power pack 100 – 240 V, 50/60 Hz (7320.425) or Power pack 48 V DC (7320.435)
- Connection cable for power pack, country-specific (7200.210 – .214)
- Connection cable, sensor unit (7320.470 / .472 / .481)
- At least one sensor unit (7320.210 / .220 / .230)
- Programming cable (7200.221)

#### Note:

**CMC-TC configurator – The planning tool for the system and the brochure can be found on the Internet at: [www.rittal.de](http://www.rittal.de)**



Model No. DK	CMC-TC main products
7320.000	CMC-TC master
7320.100	CMC-TC processing unit
7320.210	CMC-TC I/O unit
7320.220	CMC-TC access unit
7320.230	CMC-TC climate unit
7200.520	Extension unit 3 x voltage 100 – 230 V AC

Model No. DK	Programming cable/mounting unit/ connection cable RJ 45
7200.221	Programming cable
7320.440	CMC-TC 1 U mounting unit
7320.450	CMC-TC individual mounting unit
7320.470	CMC-TC connection cable, sensor unit 0.5 m (Packs of 4)
7320.472	CMC-TC connection cable, sensor unit 2 m (Packs of 4)
7320.481	CMC-TC connection cable, sensor unit 10 m

Model No. DK	Connection cable/power pack
7200.210	Connection cable D/B/F/A
7200.211	Connection cable GB
7200.213	Connection cable CH
7200.214	Connection cable USA/CDN
7200.215	IEC 320 extension
7320.425	CMC-TC power pack 24 V, input 100 – 230 V AC
7320.435	CMC-TC power pack 24 V, input 48 V AC

Model No. DK	Cable RJ 11/RJ 12/miscellaneous
7200.420	Connection cable 5 m, CMC socket strip RJ 11 (Packs of 4)
7200.430	Connection cable 5 m, alarm relay PU/Master RJ 12 (Packs of 4)
7200.440	Extension cable 5 m, CMC socket strip RJ 11/ RJ 11 (Packs of 4)
7200.450	Connection cable 5 m sensors/actuators RJ 12/RJ 12 (Packs of 4)
7200.490	Interference-suppression capacitors (Packs of 20)

#### Note:

The Model No.'s. for the sensors, actuators and locking systems can be found directly with the sensor units on page 10.

Model No. DK	Mechanical adaptor for the locking systems
7200.344	Adaptor for reader units VR (Packs of 10)
7200.345	Adaptor for reader units PC (Packs of 10)
7200.346	Adaptor for reader units PS (Packs of 10)
7200.347	Adaptor for reader units TS 8 designer door (Packs of 10)
7200.371	Locking rod PS 2000 mm
7200.372	Locking rod FR 2000 mm
7200.611	Installation kit, PS sheet steel door for U locking*
7200.612	Installation kit, PS glazed steel door for U locking*
7200.613	Installation kit, FR sheet steel door for U locking*
7200.614	Installation kit, FR glazed steel door for U locking*
7200.615	Installation kit, TS 8 sheet steel door for U locking*
7200.616	Installation kit, TS 8 glazed door door for U locking*
7200.617	Installation kit VR for U locking*

\* U = Universal

### ● CMC-TC display unit



#### For the local representation of CMC alarm and status messages on the rack.

The CMC-TC display unit is designed for connection to processing unit 7320.100. It comprises 2 lines each with 20 characters. The character height is 3 mm. The display is illuminated in order to ensure legibility even in poor light conditions.

It is mounted in the 1 U component support 7320.440 or with the individual mounting unit 7320.450. Power supply is via the processing unit. The display is also ideal for use as a service tool for commissioning.

#### Technical specifications:

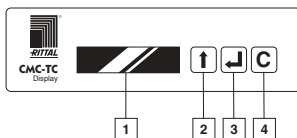
- Plug & play installation via RJ 12 connector
- 2 x 20 characters
- Character height 3 mm
- Illuminated

#### Supply includes:

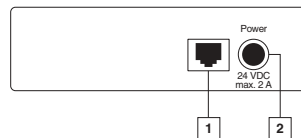
CMC-TC display module, connection cable for connection to the processing unit, instructions, assembly parts.

#### ! Also required:

CMC processing unit 7320.100, see page 8.



- ① LCD display, illuminated 2 x 20 characters
- ② "Change"/selection
- ③ "Enter" to confirm
- ④ "Clear" to delete/acknowledge



CMC-TC display unit	<b>Model No. DK</b>
Alarm text display	<b>7320.490</b>

#### Note:

Note – only one "Display" unit or one "GSM unit", may be connected to one PU.

### ● GSM unit for CMC-TC



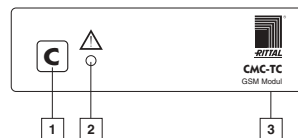
In order to configure a redundant transmission channel or if there is no network infrastructure available, the unit may be used for alarm forwarding. The alarm signal is designed in SMS format. The GSM unit is linked to the processing unit 7320.100 via a serial interface. The power supply is likewise achieved via the connection cable. The only other thing needed to operate the module is a SIM card. This may either be a "data only" card or a conventional SIM card. The GSM unit operates in the 900/1800 MHz frequency range – in other words GSM network cards may be used.

Up to four target call numbers may be set and allocated to the various events.

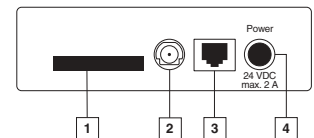
To activate CMC-TC switch outputs, an SMS message may be sent to the modem via any commercially available mobile phone, and actions executed via this route. The aerial is contained in the system. Power supply is via the processing unit.

Other functions, where offered by the provider:

- Fax
- E-mail
- Voice mail



- ① "Clear" to acknowledge
- ② Alarm LED



- ① SIM card rack mount
- ② Aerial system
- ③ RJ 12 jack for connection to the serial interface of the PU
- ④ The GSM unit may optionally be supplied with 24 V DC, 500 mA via this input. For applications with the PU this is not necessary.

GSM unit	<b>Model No. DK</b>
SMS function	<b>7320.820</b>

#### Note:

Note – only one "GSM unit" or one "Display" unit, may be connected to one PU.

#### ! Also required:

Components	<b>Model No. DK</b>
Processing unit	<b>7320.100</b>

A commercially available SIM card for GSM networks must be provided by the customer.

# Accessories/Connection tables

Required accessories		24 V DC power pack	IEC connection cable	Programming cable	Connection cable, sensor unit	Mounting unit	Interference suppression capacitor
<b>Model No. DK</b>		<b>7320.425 7320.435</b>	<b>7200.210 7200.211 7200.213 7200.214 7200.215</b>	<b>7200.221</b>	<b>7320.470 7320.472 7320.481</b>	<b>7320.440 7320.450</b>	<b>7200.490</b>
Item selection		Page 15	Page 15	Page 15	Page 16	Page 15/16	Page 21
7320.000	Master		●	●			
7320.100	Processing unit	●	●	●		○	
7320.210	I/O unit				●	○	
7320.220	Access unit				●	○	
7320.230	Climate unit		●		●	○	○
7320.600	Voltage monitor with IEC jack		●				
7320.700	Electromagnetic Ergoform-S handle for FR, QR, PS, TC with automatic detection						
7320.730	Universal latch w. auto. detection						
7320.750	Smart card reader						
7320.760	Magnetic card reader						
7320.770	Coded lock						
7200.630	CMC socket strip						
7200.520	Voltage expansion unit		●		●		
2372.000	CMC alarm signal lamp						

Required accessories		Adaptor for reader units	Connection cable RJ 11/12	Extension cable RJ 11/12	Locking bar PS/FR	Attachment for universal latch	Digital sensor input model
<b>Model No. DK</b>		<b>7200.344 7200.345 7200.346 7200.347</b>	<b>7200.420 7200.430</b>	<b>7200.440 7200.450</b>	<b>7200.371 7200.372</b>	<b>7200.61X</b>	<b>7320.580</b>
Item selection		Page 23	Page 16	Page 16	Page 22	Page 22	Page 20
7320.000	Master						
7320.100	Processing unit						
7320.210	I/O unit			RJ 12 ○ *)			
7320.220	Access unit			RJ 12 ○ *)			
7320.230	Climate unit			RJ 12 ○ *)			
7320.600	Voltage monitor with IEC jack						
7320.700	Electromagnetic Ergoform-S handle for FR, QR, PS, TC with automatic detection				●		
7320.730	Universal latch w. auto. detection					○	
7320.750	Smart card reader	●					
7320.760	Magnetic card reader	●					
7320.770	Coded lock	●					
7200.630	CMC socket strip		RJ 11 ●	RJ 11 ○			●
7200.520	Voltage expansion unit						
2372.000	CMC alarm signal lamp		RJ 12 ●	RJ 12 ○			

○ = Optional accessories

● = Required accessories

\*) = In conjunction with CMC-TC accessories (sensors/actuators/handles/readers) type R12



## Connection cable/extension

The cable is used for connecting to:

- CMC-TC master
- 24 V power pack for PU
- Climate unit (connected fan)
- Voltage monitor
- Voltage expansion unit

### Technical specifications:

PVC cable, 3 pole, with IEC cable coupling (non-heating appliances) with contact protection CEE22.

### Supply includes:

1 connection cable, length 2.5 m.

Country version	Voltage (V)	Model No. DK
D	230	<b>7200.210</b>
GB	230	<b>7200.211</b>
F/B	230	<b>7200.210</b>
CH	230	<b>7200.213</b>
USA / CDN	230/115	<b>7200.214</b>
Extension for non-heating appliances	230/115	<b>7200.215</b>



## 24 V DC power pack for PU

A 24 V DC power pack is required to supply the processing unit with power. There are two variants available:

- The 100 – 240 V AC power pack requires an IEC connection cable to supply the voltage.
- An alternative power pack is designed for the telecommunications sector (48 V battery voltages) and is connected at the input end via a terminal block.

Both power packs contain an output cable, 1.65 m long.

Primary input voltage	Output voltage	Model No. DK
100 – 240 V AC/50/60 Hz	24 V DC	<b>7320.425</b>
48 V DC	24 V DC	<b>7320.435</b>



### Also required:

IEC connection cable for DK 7320.425 power pack – see above.

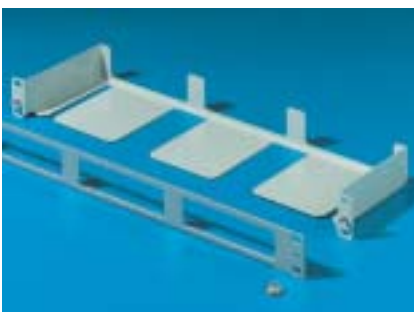


## Programming cable

The interface cable is used to configure the network parameters in the processing unit and the master unit.

The RJ 11 connector is connected to the front jack of the PU/master, whilst the 9-pole SUB-D connector is connected to a serial PC interface.

Packs of	Model No. DK
1	<b>7200.221</b>



## Mounting unit 1 U

The mounting unit can accommodate up to 3 sensor units or processing units in the 482.6 mm (19") attachment level.

### Material:

Sheet steel, spray finished

### Colour:

RAL 7035

Packs of	Model No. DK
1	<b>7320.440</b>



# Cables/mounting accessories



## Mounting module

The mounting module accommodates individual sensor units or processing units, for mounting on the frame section.

**Material:**  
Sheet steel, spray finished

**Colour:**  
RAL 7035

Packs of	Model No. DK
1	7320.450



## Connection cable RJ 45

This cable is responsible for data exchange and power supply to a sensor unit via the processing unit. There is an RJ 45 connector at each end of the shielded cable.

Length	Packs of	Model No. DK
0.5 m	4	7320.470
2.0 m	4	7320.472
10.0 m	1	7320.481



## Connection cable RJ 11, RJ 12

The RJ 12 connection cable allows the alarm relay output of the processing unit to be used for individual alarm lights/indicators. The RJ 11 connection cable facilitates connection to the CMC socket strip in conjunction with the digital input module. The cable is equipped with an RJ 11/12 connector at one end. The other end is open. Length 5 m.

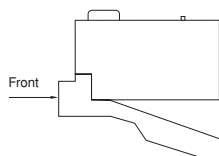
Connector	Packs of	Model No. DK
RJ 11	4	7200.420
RJ 12	4	7200.430



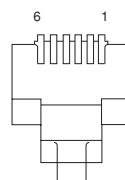
## Extension cable RJ 11, RJ 12

The cable is used to extend the sensor supply cables (RJ 12) and individual actuator cables. The cable is equipped with an RJ 11/12 connector at one end. There is an RJ 11/12 jack at the other end. Length 5 m.

Connector/jack	Packs of	Model No. DK
RJ 11	4	7200.440
RJ 12	4	7200.450



Front view (example: RJ 12)







## Temperature sensor

The sensor assumes the function of a temperature monitor and contains an identifier so that it is automatically detected and set up by the CMC-TC system. It is connected to a sensor unit via the connection cable (supplied loose). If required, extension cable RJ 12 may be used. The sensor is also capable of controlling a fan on the climate unit.

Packs of	Model No. DK
1	7320.500

### Technical specifications:

**Type:** NTC  
**Resistance:** 10 kOhm at 25 °C  
**Tolerance:** ± 2 °C  
**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends  
**Temperature application range:** + 5 °C to + 45 °C

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●



## Smoke alarm

The smoke alarm is based on an opto-electronic smoke particle evaluation within a measurement chamber. The alarm contains an identifier so that it is automatically detected and set up by the CMC-TC system. Power supply and alarm relay to the sensor unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.500

### Technical specifications:

**Alarm type:** Combustion product alarm (smoke)  
**Sensor/transmitter:** Silicone PIN photodiode/GaAs infrared LED  
**Measurement frequency:** Once every ten seconds  
**Current rating:** max. 61 mA  
**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends  
**Dimensions** (alarm with base/plinth): D = 100 mm, H = 50 mm

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●



## Humidity sensor

The sensor measures relative air humidity and converts it into a frequency signal. It contains an identifier so that it is automatically detected and set up by the CMC-TC system. Power supply and data evaluation is via the I/O sensor unit using the connection cable (supplied loose). If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.510

### Technical specifications:

**Sensor:** With humidity/frequency converter (50 kHz at 76 % relative humidity)  
**Sensor measurement range:** Relative humidity 10...90 % rel. hum. ± 3% (at 20°C)  
**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends  
**Temperature application range:** + 5 °C to + 45 °C

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		



## Airflow monitor

The airflow monitor determines whether the fan is achieving its full operating capacity. Storage damage, dirty filter mats or jammed fan blades are promptly detected and reported by the sensor. The sensor contains an identifier so that it is automatically detected and set up by the CMC-TC system. Its switch point is adjustable. Power supply and data exchange to the sensor unit is via the attached connection cable. If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.500

### Technical specifications:

**Connection:** RJ 12 connector, 6-pole on cable  
**Connection cable:** Length 2 m

### Note:

The sensor can be operated with a temperature-controlled fan via the climate sensor unit.

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●



## Voltage monitor

The voltage monitor picks off the mains voltage being monitored via the mains cable, and reports its status to a sensor unit: Voltage ON or voltage OFF. The monitor contains an identifier so that it is automatically detected and set up by the CMC-TC system. The connection cable (supplied loose) should be used for connection to the sensor unit. If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.600

### Technical specifications:

#### Monitored rated voltage:

230 V AC 50/60 Hz

#### Connection:

IEC connector, RJ 12 jack, 6-pole

**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

#### Temperature application range:

+ 5 °C to + 45 °C

**Protection category:** IP 40



### Also required:

Selection aid, see page 14.



### Possible alternative:

Voltage monitor with IEC switch output DK 7320.610, see page 24.

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●



## CMC socket strip

With integral

- Interference suppressor filter
- Overvoltage protection
- Alarm contact

In the event of interference caused by overvoltage, the connected active network components are protected. The relay message contact allows undervoltage and any malfunctions caused by overvoltage to be reported via the CMC in the network (SNMP trap). A green lamp on the strip indicates that the device is operational. The second protective device is the interference suppressor filter, which protects valuable equipment as a passive component.

Model No. DK	7200.630
--------------	----------

### Technical specifications:

**No. of sockets:** 9

**Length of strip:** 650 mm

**Rated voltage:** 230 V AC, 50/60 Hz

**Rated current:** 16 A

**Relay alarm output:** RJ 11 jack

**Load capacity of relay:** 50 V DC 100 mA

#### Technical specifications

#### Overvoltage protection:

**Arrester, utilisation category:** D

**Surge current resistance per conductor:** 2.5 kA

**Maximum surge current resistance:** 8 kA



### Also required:

A digital input module and an RJ 11 connection cable is needed to link the CMC socket strip to the CMC-TC system. Selection aid, see page 14.



To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●

## CMC extension unit

The CMC extension unit picks off three independently monitored mains voltages via power cords and forwards the measurements to the processing unit. It is linked to the PU via the RJ 45 connection cable on the P-I<sup>2</sup>C port (separate accessory). Up to two extension units may be connected in series to one PU. A separate power pack is not required. Alarm limits may be preset for all voltages.

Max. number per PU	Packs of	Model No. DK
2	1	7200.520

### Technical specifications:

#### Voltage inputs:

3 x 100 – 230 V AC, IEC connector

**Interface:** I<sup>2</sup>C, P-I<sup>2</sup>C, max. cable length 2 m

#### Temperature application range:

+ 5 °C to + 45 °C

**Protection category:** IP 40



### Also required:

Selection aid, see page 14.

To fit PU:

Processing unit
●



## Vandalism sensor

The vandalism sensor contains a position-insensitive alarm contact and an identifier, so that it is automatically detected and set up by the CMC-TC system. Connection to the I/O sensor unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.540

### Technical specifications:

Mercury-free, position-insensitive

**Connection:** RJ 12 jack, 6-pole

**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		



## Access sensor

Access sensors monitor doors, side panels or windows in the network enclosure. The magnet is secured to the moving part (e.g. side panel), whilst the reed contact is fastened to the immobile part (enclosure frame). The permanent magnet holds the reed contact in a closed position. When the door is opened or the side panel removed, the reed contact drops off and opens the circuit. This leads to an alarm in the CMC. The access sensor contains an identifier so that it is automatically detected and set up by the CMC-TC system. It is connected to a sensor unit via the connection cable (supplied loose). Up to five access sensors may be connected in series to one monitoring line, if necessary in conjunction with extension cable RJ 12. The jumper plug constitutes the termination.

Item	Packs of	Model No. DK
Access sensor	2	7320.530
VR mounting bracket	4	7200.335*

\* Extended delivery times.

### Technical specifications:

**2 magnets** (for mounting on the moving part, directly adjacent)

**2 sensors** with reed contact (for mounting on the enclosure frame)

**Connection 1:** RJ 12 jack, 6-pole (connection to sensor unit)

**Connection 2:** RJ 12 jack, 6-pole (series connection with additional access sensors or termination with the jumper plug)

**2 RJ 12 jumper plugs** for termination

**2 connection cables:** Length 2 m, RJ 12 connector 6/6 at both ends

To fit sensor unit:

I/O unit	Access unit	Climate unit
●	●	●



## CMC motion detector

The motion detector may be used either in network enclosures or in rooms. Any modifications to the enclosure, such as opening a door or side panel, are reported. The motion detector is also capable of detecting human presence in the room or in front of the data enclosure. The detector contains an identifier so that it is automatically detected and set up by the CMC-TC system. Power supply and data exchange to the sensor unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.570

### Technical specifications:

**Alarm type:** Infrared (IR) detector

**Range:** max. 7 m

**Current rating:** max. 30 mA/24 V DC

**Connection:** RJ 12 jack, 6-pole

**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

### Dimensions:

W x H x D: 59 x 102 x 32 mm

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		●



## Analog sensor input module

The input module facilitates the connection of individual, external analog sensors (4 – 20 mA) to the I/O sensor unit. As an adaptor, it performs an identification function, so that an external sensor is automatically identified and set up by the CMC-TC system.

Sensors with 4 – 20 mA signal output and 24 V DC operating voltage (max. 50 mA) may be connected. The internal power source of the CMC-TC is made available. Connection to the sensor unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used.

Packs of	Model No. DK
1	7320.520

### Technical specifications:

**Analog input:** 4 – 20 mA at 24 V DC  
**Max. current output of module:** 50 mA  
 Sensors without GND may also be used.

**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

**Sensor connection:**  
 Pull-off terminal strip, 3-pole

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		



## Digital sensor input module

The input module allows individual, external digital sensors to be connected to a sensor unit. As an adaptor, it performs an identification function, so that an external sensor is automatically identified and set up by the CMC-TC system. External sensors and transmitters must have a floating contact (normally closed or normally open), because the module provides the internal power source.

Connection to the sensor unit is via the connection cable (supplied loose). If required, the extension cable RJ 12 may be used.

In conjunction with the access unit, any given door release system (e.g. transponder) may be connected with a floating relay contact via the input module.

Packs of	Model No. DK
1	7320.580

### Technical specifications:

**Floating external sensor contact:**  
 Voltage min. 24 V DC load capacity

**Current:** min. 10 mA load capacity

**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

**Sensor connection:**  
 Pull-off terminal strip, 3-pole

To fit sensor unit:

I/O unit	Access unit	Climate unit
●	●	●



## Digital actuator output module

The actuator module allows individual, external extra-low voltage actuators to be switched via a changeover contact. As an interim relay, it performs the functions of identification and isolation, so that an actuator is automatically detected and set up by the CMC-TC system.

Connection to the I/O sensor unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used. At the output end, the module contains a pull-off terminal strip for assignment with actuator cables. The power supply to the actuator must be provided externally.

The output relay can be switched remotely via SNMP or HTTP. Alternatively, alarm links can also be created with alarm inputs.

Packs of	Model No. DK
1	7320.590

### Technical specifications:

**Condition of the actuator:**  $\cos\Phi = 1$

**Max. load of switch contact:**

1 A, 30 V DC and 0.5 A, 48 V AC

**Max. switching voltage:** 48 V AC; 48 V DC

**Max. switched current:** 1 A

**Max. switching load:** 30 W, 62.5 VA

**Min. switched current:** 1 mA at 5 V DC

**Connection:** RJ 12 jack, 6-pole

**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends

**Sensor connection:**  
 Pull-off terminal strip, 3-pole

To fit sensor unit:

I/O unit	Access unit	Climate unit
●		



## Room door output module

The room door output module allows external door opener systems to be switched via a changeover contact. As an interim relay, it performs the functions of identification and isolation, so that a door opener is automatically detected and set up by the CMC-TC system. Connection to the access unit is via the connection cable (supplied loose). If required, extension cable RJ 12 may be used. At the output end, the module contains a pull-off terminal strip for assignment with actuator cables. Power supply to the door opener must be provided externally.

Packs of	Model No. DK
1	7320.740

### Technical specifications:

**Condition of the actuator:**  $\cos\Phi = 1$   
**Max. load of switch contact:** 1 A, 30 V DC and 0.5 A, 48 V AC  
**Max. switching voltage:** 48 V AC; 48 V DC  
**Max. switched current:** 1 A  
**Max. switching load:** 30 W; 62.5 VA  
**Min. switched current:** 1 mA at 5 V DC  
**Connection:** RJ 12 jack, 6-pole  
**Connection cable:** Length 2 m, RJ 12 connector 6/6 at both ends  
**Sensor connection:** Pull-off terminal strip, 3-pole

To fit sensor unit:

I/O unit	Access unit	Climate unit
	●	



## CMC alarm signal lamp

The alarm signal lamp serves as a collective fault signal for all alarms in the CMC, e.g. excess temperature, fan defect, smoke alarm etc. The CMC offers a user-friendly menu allowing the operator to select which message will affect the CMC alarm relay. The alarm signal lamp is activated via the alarm relay. The lamp can be attached to the network enclosure or any other desired position, e.g. in the corridor. The RJ 12 connection cable is required for connection to the PU.

Item	Model No. SZ
LED steady light component 24 V DC	2372.000
Connection component	2368.010

### Technical specifications:

**Rated operating voltage:** 24 V DC  
**Rated current:** 60 mA



### Also required:

Selection aid, see page 14.

To fit PU:

Processing unit
●



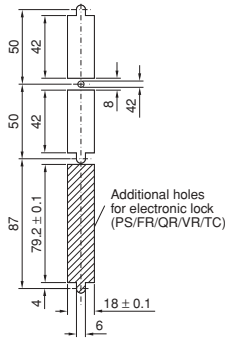
## Interference suppression capacitors for fans

The capacitors are used for the interference suppression of fans with self-starting shaded pole motors. One capacitor should be connected directly parallel to the mains voltage for each fan unit. The capacitors are equipped with a terminal, which means that they are easily fitted to the fan cable.

Design	Packs of	Model No. DK
100 nF	20	7200.490

### Technical specifications:

**Dielectric strength:** 275 V AC  
**Capacity:** 100 nF  
**Type:** X2



## Handle systems with electromagnetic latching

The lock unit consists of a Rittal handle system, the handle of which is electromagnetically latched. It contains an identifier so that it is automatically detected and set up by the CMC-TC system. Power supply and data exchange to the access unit is via the attached connection cable. If required, the RJ 12 connection cable (supplied loose) may be used. An access sensor (DK 7320.530) is always required for door monitoring. With the door closed and the handle locked home, latching is activated by switching on the lock magnet.

The CMC-TC allows the handle to be released by deactivating the lock magnet, so that the door can be opened. This deactivation can be initiated via an access unit such as smart card readers, magnetic card readers, coded locks and/or network management systems. The handle system likewise contains handle monitoring. The CMC-TC raises the alarm if the handle is not swung in and locked home after closing the door.

The supplied push-button insert can also be exchanged for **lock inserts**.

**Note:** When using the Ergoform-S handle, an additional hole is required.

To fit sensor unit:

I/O unit	Access unit	Climate unit
	●	

Handle system	Model No. DK
TS comfort handle	<b>7320.720</b>
Ergoform-S handle for FR, PS, TC, VR	<b>7320.700</b>
Ergoform-S handle for QR	<b>7320.710</b>

### Note:

The locking bars listed below are required for PS and FR glazed doors:

### Locking bars

Design	Model No. DK
Lower door locking bar for 2000 mm high PS enclosures	<b>7200.371</b>
Lower door locking bar for 2000 mm high FR enclosures	<b>7200.372</b>

Other sizes available on request.

### Technical specifications:

**Rated voltage:** 24 V DC

**Rated current:** max. 100 mA

**Connection cable:**

Length 3 m, RJ 12 connector

**Connection cable:**

Length 2 m, RJ 12/RJ 12 connector

**Coupler for extension:**

RJ 12/RJ 12 jack

**Temperature application range:**

+5°C to +40°C

**Protection category:** IP 40



### Also required:

Selection aid, see page 14.



### Possible alternative:

Transponder system, see page 25.



To fit sensor unit:

I/O unit	Access unit	Climate unit
	●	

## Universal lock unit

The security lock consists of a base unit and a lock counterpart. The base unit is attached to the enclosure frame, whilst the lock counterpart is attached to the door. A mechanical setting allows you to choose between two states: at zero current when open/at zero current when closed.

In order to identify the operating mode used, one of the two identifier modules (supplied loose) should be used, to allow automatic detection and set-up by the CMC-TC system. Power supply and data exchange is via the access unit, using the identifier module and connection cables (supplied loose). If required, extension cable RJ 12 may be used.

An access sensor (DK 7320.530) is always required for door monitoring.

### Technical specifications:

**Rated voltage:** 24 V DC

**Rated current:** 140 mA

**Temperature application range:**

+ 10 °C to + 40 °C

### Note:

Mounting kits for the various different enclosure types and enclosure doors are listed in the table.

Lock unit	Model No. DK
Packs of 1 kit	<b>7320.730</b>

Installation kit	Model No. DK
PS steel door	<b>7200.611</b>
PS alum. glazed door	<b>7200.612</b>
FR steel door*	<b>7200.613</b>
FR glazed door*	<b>7200.614</b>
PS steel door	<b>7200.615</b>
TS glazed door	<b>7200.616</b>
VR enclosure	<b>7200.617</b>

\* Attachment in 600 mm wide FR enclosures is only possible with recessed mounting of the 482.6 mm (19") or metric attachment levels.

### Supply includes:

**1 base unit** with connection cable 0.1 m, RJ 12 connector

**1 lock counterpart**

**2 identifier modules** with RJ 12 jack, 6-pole (connection to access unit),

RJ 12 jack, 6-pole (connection to universal lock)

**1 connection cable** for identifier modules, 2 m, RJ 12/RJ 12 connector without mounting kit.



### Also required:

Selection aid, see page 14.



## Smart card reader/ magnetic card reader/ coded lock

The door handle is released for authorised individuals who have identified themselves with a smart card/magnetic card/combination code. Smart card readers/magnetic card readers/coded locks are mounted above the enclosure handle and may also function as a central unit to release several doors.

The entire access process can also be registered with a network connection to the CMC-TC.

### Technical specifications:

**Rated voltage:** 24 V DC

**Rated current:** max. 20 mA

**Interface:** I<sup>2</sup>C bus

**Smart card type:** I<sup>2</sup>C chip

**Magnetic card type:**

Magnetic strip card with data on track 2

### Note:

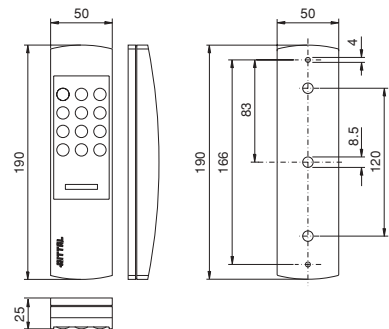
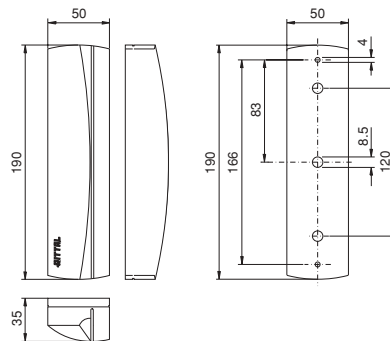
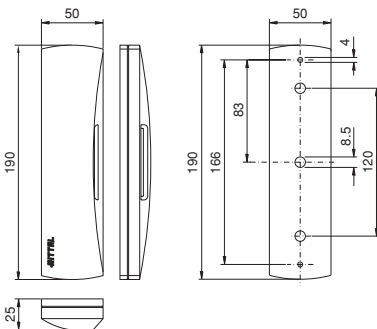
Smart card readers/magnetic card readers/coded locks can only be used in conjunction with the CMC-TC and an electric lock. 3 cards are supplied with the smart card reader/magnetic card reader. Each card contains a four-digit code, which is different on all three cards. All cards are access-authorised. On the coded lock, the code may be entered directly.

Authorised codes can be set in the CMC-TC via RS 232 or Telnet. The input code is transmitted to the CMC-TC and, where applicable, to the network management system, via the I<sup>2</sup>C bus. A mounting adaptor for a TS aluminium glazed door is supplied loose with every reader.

	Model No. DK
Smart card reader	<b>7320.750</b>
Magnetic card reader	<b>7320.760</b>
Coded lock	<b>7320.770</b>

To fit sensor unit:

I/O unit	Access unit	Climate unit
	●	



## Adaptor for reader units

The adaptors are used to install the reader units. They are screw-fastened between the designer profile of the door frame and the reader unit. No adaptor is required for shallow mounting levels. For TS aluminium glazed doors, an adaptor is supplied with every reader unit. One adaptor is required for each reader unit.

Glazed door enclosure type	Packs of	Model No. DK
VR	10	<b>7200.344</b>
PC	10	<b>7200.345</b>
PS	10	<b>7200.346</b>
TS design	10	<b>7200.347</b>

Type PC: For PC glazed doors

Type VR: For VR glazed doors and VR sheet steel doors

Type PS: For PS aluminium glazed doors



## Voltage monitor with IEC switch output

This sensor is used in conjunction with the CMC-TC to monitor voltage limits. These limits may be configured via the web interface or SNMP. As an additional option, this voltage may also be switched on and off via the module in order to reboot the connected equipment via Ethernet. It is connected via standard, commercially available IEC320 connectors as the input signal, and an IEC320 socket to connect the equipment.

### Technical specifications:

- Plug & play installation via IEC320 connector
- The switching operation may be initiated in a time- or event-based manner or via SNMP or WEB
- The maximum and minimum limits of voltage measurement are freely selectable
- Measurement range 100 – 250 V AC, 50/60 Hz
- Max. switching load 250 V AC and 8 A at  $\cos \phi = 1$

### Supply includes:

Sensor module, sensor cable for connection to the CMC, assembly parts.

	<b>Model No. DK</b>
Voltage monitor	<b>7320.610</b>



### Also required:

	<b>Model No. DK</b>
CMC I/O unit	<b>7320.210</b>

### Optionally available:

IEC connection cable 7200.210, German version, IEC extension cable 7200.215 for connecting the equipment.

### To fit sensor unit:

I/O unit	Access unit	Climate unit
●		



## Access door panels for FR<sup>(i)</sup>

The access door panels contain an electromagnetic lock with a security lock. They may be exchanged for the existing trim panel of the FR<sup>(i)</sup> door. The door panel is easily linked to the CMC-TC monitoring system, allowing the FR<sup>(i)</sup> door to be remotely opened and monitored via the network. If a door trim panel variant with read system is selected, door release may also be implemented via the CMC-TC using the respective medium (smartcard, magnetic card or numerical code pad). The standard door panels of FR<sup>(i)</sup> doors are easily exchanged for access door panels. There are jacks provided for

connection to the CMC-TC. This ensures plug & play exchange. The system may be connected to access unit 7320.220. To operate the system, an access sensor 7320.530 is additionally required. For the door panels with card reader systems, 3 cards are included with the supply.

### Technical specifications:

**Rated voltage:** 24 V DC

**Interface:** I<sup>2</sup>C

**Smartcard type:** I<sup>2</sup>C chip

**Magnetic card type:**

Magnetic strip card with data on track 2. The read system is designed for cards with both a high and a low level of magneticism.

### Access door panels to exchange for standard trim panels in FR<sup>(i)</sup> doors

Access door panel for	Enclosure height mm	Electromagnetic lock system	Read system	Model No. DK
FR <sup>(i)</sup>	①	●	–	<b>7320.900</b>
FR <sup>(i)</sup>	2000	●	Smart card reader	<b>7320.910</b>
FR <sup>(i)</sup>	2000	●	Magnetic card reader	<b>7320.920</b>
FR <sup>(i)</sup>	2000	●	Coded lock	<b>7320.930</b>

● Electromagnetic lock system for the CMC-TC monitoring system.

All other height variants (FR<sup>(i)</sup> enclosure height 600, 1200, 1800 and 2200 mm) are available on request.

① The electromagnetic lock system is supplied without panel and can easily be mounted onto the enclosure frame (for FR<sup>(i)</sup> front and rear doors).





## Handle system for universal installation with electromagnetic locking for the CMC-TC monitoring system

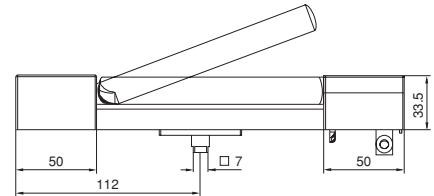
The universal handle is equipped with a pitch pattern of mounting holes which will fit many existing door systems. This handle is ideal for retrofitting to projects with varying enclosure types and variants. The new handle may be connected to the CMC-TC system via plug & play. Additionally, an access sensor 7320.530 should always be used to enable polling of the door status. The handle is equipped with a connection cable and an RJ 12 connector, which may be plugged into the access unit 7320.220 of the CMC-TC system. The handle is equipped with a push-button insert which may be depressed when the electromagnetic lock is released.

**Technical specifications:**  
**Rated voltage:** 24 V DC  
**Rated current:** max. 100 mA  
**Connection cable:**  
 Length 5 m, RJ 12 connector

	Type	Model No. DK
Electromagnetic handle	CMC-TC	<b>7320.950</b>

Extended delivery times.

### Dimensions



### Mounting holes



## Handle system for TS 8 doors with integral transponder release system from Simons & Voss

The electromagnetic TS 8 transponder handle may be retrofitted in the doors of TS 8 enclosures. The handle is equipped with an integral radio transponder solution. The transponder receiver with battery is integrated into the handle housing. Apart from the transponder transmitter, no additional accessories, such as additional electronics, cables, power pack etc., are required. The handle is easily exchanged without the need for wiring. If battery servicing is required, this is indicated acoustically.

**Door release with hand-held transmitter:**  
 The transponder transmitter is actuated from the handle, as a result of which the latter is unlatched for a specified time window and may be opened by pressing the push-button.

**Door release with the CMC-TC transmitter:**  
 The transponder transmitter is linked to the CMC-TC system via the room door output 7320.740 and the access unit. The transmitter is placed in the enclosure frame, near the handle. In this way, the door may be released via the CMC-TC system. Additionally, an access sensor 7320.530 should always be used to enable polling of the door status.

	Type	Model No. DK
Electromagnetic handle	Transponder stand-alone application	<b>7320.960</b>
Transponder transmitter	Hand-held transmitter	<b>7320.961</b>
Transponder transmitter	CMC-TC transmitter	<b>7320.962</b>

Extended delivery times.

### Benefits:

- No cables on the handle, because the electronics and battery are integrated into the handle.
  - Several users may be set for one handle.
  - Plug & play installation both mechanical and electrical.
  - Individual control of the transponders and the set-up of each transponder is possible for up to 3 locking systems.
  - With additional overlay to automatically block the old transponder in the event of reprogramming.
  - Counterfeit-proof data communication is achieved via radio using crypto-codes.
  - The "challenge response procedure" ensures protection against surveillance.
  - The standard interface means that connections to other access and monitoring systems are not a problem.
- The lock and organisation system is graded in the highest category with respect to unlocking protection to BSI 7500.

Systems with extra electronics and access control from Simons & Voss available on request.



# Speed monitored/controlled fan system

## Rittal Fan Control System FCS and Fan Alarm System FAS



### Fan Control System FCS

#### Speed-monitored fan system

The Fan Control System regulates and controls the speed of up to 6 fans 7320.812, 24 V DC. This helps to save energy and reduce the noise level of the fans, as well as extending the service life of the fans. The failure of one or more fans is detected and notified in the form of a collective fault signal via LED display, beeper and integral alarm relay (floating change-over contact).

Control is temperature-based using an external temperature sensor 7320.500. The temperature setpoint is set via a switch on the front. The system may also optionally be set and monitored via the network (Web/SNMP). It is connected directly to the CMC-TC (processing unit) 7320.100.

FCS	Model No. DK
Without fan	<b>7320.810</b>

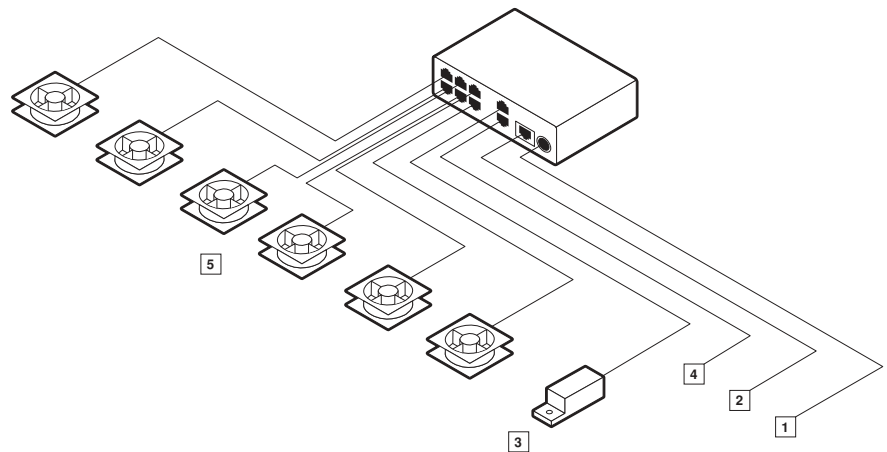
- ① Supplied with 24 V/48 V DC via
- Supply connection cable (direct) 7320.813
- CMC 24 V power pack 100 – 230 V AC (input) 7320.425
- CMC 24 V power pack 48 V DC (input) 7320.435

For operation with 48 V DC, fans with 48 V DC must be used.

- ② RJ 45 jack for connection to the processing unit 7320.100 (optional)
- ③ CMC-TC temperature sensor 7320.500
- ④ Alarm relay output 48 V DC, 1 A (floating change-over contact)
- ⑤ Fan with speed control 7320.812 (24 V DC). 48 V DC fans may optionally be used.

#### Note:

Supplied pre-configured on request: The FCS system may be fitted in all Rittal fan roofs.



#### Functions:

- Speed-regulated speed control
- Fan speed control
- Optional connection via Web/SNMP
- Redundant fan control; the air throughput of all fans is automatically increased in the event of a system failure.

- Plug & play installation via RJ 12 connector system
- 482.6 mm (19") mounting is possible via 7320.440



### Fan Alarm System FAS

#### Speed-controlled fan system

The Fan Alarm System controls the speed of up to 6 fans 7320.812, 24 V DC. The failure of one or more fans is detected and notified in the form of a collective fault signal via LED display, beeper and integral alarm relay (floating change-over contact). The system is designed as a plug & play system. The system may also be optionally monitored via the network (Web/SNMP). It is connected directly to the CMC-TC (the I/O unit) 7320.210.

FAS	Model No. DK
Without fan	<b>7320.811</b>

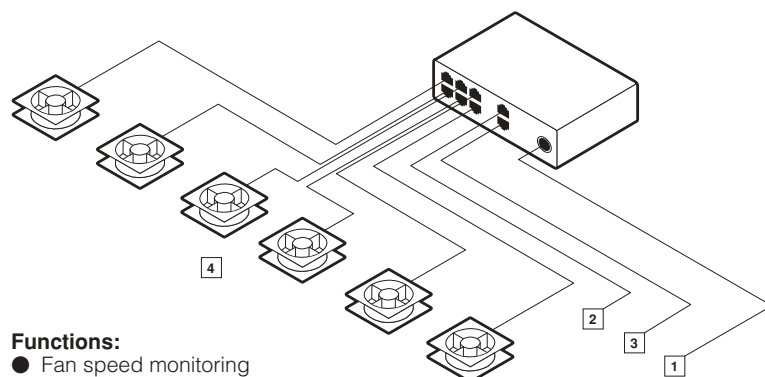
#### Note:

Supplied pre-configured on request: The FAS system may be supplied fitted in all Rittal fan roofs.

- ① Supply with 24 V/48 V DC via
- Supply connection cable (direct) 7320.813
- CMC 24 V power pack 100 – 230 V AC (input) 7320.425
- CMC 24 V power pack 48 V DC (input) 7320.435

For operation with 48 V DC, fans with 48 V DC must be used.

- ② RJ 12 jack for connection to the I/O unit 7320.210 (optional)
- ③ Alarm relay output 48 V DC, 1 A (floating change-over contact)
- ④ Fan with speed control 7320.812 (24 V DC). 48 V DC fans may optionally be used.



#### Functions:

- Fan speed monitoring
- Optional connection via Web/SNMP
- Plug & play installation via RJ 12 connector system
- 482.6 mm (19") mounting is possible via 7320.440

# Speed monitored/controlled fan system

## Rittal Fan Control System FCS and Fan Alarm System FAS

### The advantages at a glance:

- Excellent air throughput at a high operating ratio
- Monitoring of fan speed
- Plug and play compatibility system
- Easily installed in Rittal fan roofs
- Long service life
- Noise minimisation/speed control
- Alarm notification via the CMC-TC optionally possible in the network
- Open supply system  
24/48 V DC/100 – 230 V AC
- EMC compatibility via DC fan systems

### Equipment at a glance

Features	FCS DK 7320.810	FAS DK 7320.811
Fan speed control	●	●
Pre-selectable speed	●	
Temperature-dependent speed	●	
Speed increase in case of fan failure	●	
Collective fault signal	●	●
Floating change-over contact	●	●
LAN connection via PU	●	
LAN via I/O unit + PU		●
Configurable via LAN	●	
Alarm signal	Beeper, LED, relay, RJ45 output for PU	Beeper, LED, relay, RJ12 output for I/O unit



### Fan 24 V DC with speed control

Fan with integral speed control with RJ 12 connector/connection cable 1.5 m for connecting to FCS 7320.810 and FAS 7320.811.

Rated voltage: 24 V DC  
 Rated current: 0.28 A (max.)  
 Rated output: 6.72 W (max.)  
 Air throughput (unimpeded air flow):  
 165 m<sup>3</sup>/h  
 Speed: 2650 rpm  
 Noise level: 41.0 dB (A)

**Note:**  
 Fan variant with 48 V DC available on request.

	Packs of	Model No. DK
Fan	2	7320.812



### Supply connection cable for FCS/FAS

If the customer has access to 24 V or 48 V DC, the FCS/FAS systems may be supplied with power (max. 48 V DC) via the supply connection cable. No power packs are then required for the application.

	Model No. DK
Supply connection cable	7320.813

# CMC monitoring system

## Software for Computer Multi Control



### Network management systems

By using SNMP management programs such as HP Open View or Novell Manage Wise, it is possible to incorporate and address the CMC-TC system via SNMP. The required MIB is included with the supply. Incorporating the MIB entails a simple copying process. Standard MIB-II (RFC 1213) is also supported. It is included with the supply of the network management system (NMS). The private MIB contains all the required system variables and can be conveniently linked to the functions of software such as HP Open View, Novell Manage Wise etc.

#### Note:

The MIB is also available as a download on the Internet at [www.rittal.de](http://www.rittal.de) and is included with the supply of every CMC-TC system.



### Rittal SNMP manager based on Java

The SNMP manager is a Java-based product, enabling it to be used in various operating systems. The only requirement is that Java Development Kit JDK 1.3 or Java Runtime Environment JRE 1.3 should be installed on the corresponding system. Java can be downloaded from the Internet at [www.sun.com](http://www.sun.com).

The SNMP software is open. Any given MIBs may be incorporated. The MIB browser is user-friendly and can be converted into an individual interface. Tables and various graphical representations of the values being monitored can also be compiled. A graphical interface is pre-configured for the CMC.

The

- MIB of the CMC-TC master system 7320.000
- MIB of the processing unit 7320.100
- MIB of the power control unit 7200.000 can also be incorporated.

A trap receiver serves to report the alarms. All key alarm data is included in this alarm list. The administrator is notified of every incoming alarm by an alarm window.

#### Advantages:

- Open to operating systems, thanks to Java (Windows/Linux)
- Open to the MIBs of various SNMP devices
- User-friendly MIB browser
- Individual graphical interface
- Graphical interface for the CMC
- Compatible with the MIB of CMC-TC and PCU
- Trap alarm receiver
- Immediate notification of alarms on screen
- Data logging function
- Trap file start function

#### Note:

The software is available free of charge from the Internet. [www.rittal.de](http://www.rittal.de)



### CMC-TC configurator

The CMC-TC configurator automatically compiles all the modules and accessories required for a CMC project. The user simply enters the monitoring requirements and the ambient conditions. The outcome is a list containing all the item numbers required for the project. In this way, a project can be compiled quickly and effectively. The prerequisite for working with this software is MS Excel, Version 97 or above.

The CMC-TC configurator is available for downloading free of charge from the Internet at [www.rittal.de](http://www.rittal.de).



### CMC-TC manager

The new CMC-TC manager allows all Rittal SNMP agents to be managed in a single software package.

- CMC II (7200.100)
- PCU Web sockets (7200.000)
- CMC-TC processing unit (7320.100)

The graphical interface provides the relevant information about the system and offers the option of configuring the systems via SNMP.

The only requirement is that Java Runtime Environment JRE 1.3 should be installed on the corresponding PC system. Java is available for downloading from the Internet at [www.sun.com](http://www.sun.com).

The various products (PCU, CMC II, CMC-TC) can be sorted according to types or locations. All important alarm messages enter the built-in trap receiver, and can be recorded with the logging function. Alarm messages can be forwarded directly using the e-mail function. The search function is used to distinguish and automatically list the SNMP agents.

### Advantages:

- Open to operating systems, thanks to Java (Windows/Linux)
- Graphical information and operator interface for:
  - CMC II
  - Web socket strip PCU
  - CMC-TC/processing unit
- Full integration of the management information base (MIB) of Rittal systems
- Trap receiver with logging function
- E-mails are sent in the event of trap alarm messages
- System search function
- User-oriented system listing on the basis of locations

### Note:

The software is available free of charge via the Internet.

[www.rittal.de](http://www.rittal.de)



### Infosim StableNet™ CMC-TC with HP Open View Integration

Integration into HP Open View NNM means that StableNet™ CMC-TC is centrally and permanently available. The management functions of HP Open View have been extended to optimum effect: NNM monitors the traps occurring in Rittal CMC-TCs and forwards them to StableNet™ CMC-TC. The MIB of processing unit 7320.100 of the CMC-TC system has also been incorporated.

### Functions:

- Integral trap manager
- Various alarm functions, e.g. e-mail, SMS etc.
- Integral MIB browser (cf. illustration)
- Graphical display of the monitored values with diagrams and tables
- Individual representation and organisation of the monitoring tools
- Pre-configured graphical interface for the CMC-TC
- Microsoft® Outlook® "look and feel"
- Multi-platform (JAVA)

**Other products** from the StableNet™ suite with the option of integrating the StableNet™ CMC-TC manager:

### StableNet™ ARC

#### Advanced Router Configuration

- Management of all network components and CMC-TCs from within HP Open View NNM
- Efficient management of routers and switches

### StableNet™ PME

#### Performance Management Engine

- Evaluation of the data obtained with StableNet™ CMC-TCs by means of comprehensive reporting functions
- Various opportunities for measuring network performance

### Note:

Further information is available on the Internet at:

[www.infosim.net](http://www.infosim.net)

or by e-mailing your enquiry to [info@infosim.net](mailto:info@infosim.net)

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System climate control



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- Server enclosures/server administration*
- ISP/ASP racks*
- Telco racks*
- Office solutions*
- Distributor racks*
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- Interactive terminal systems*

Rittal has one of the largest ranges of enclosures available for immediate delivery. However, Rittal also supplies integral solutions at a high level – up to Level 4. Fully assembled and functional, according to your specific requirements. Wherever your location.

The global alliance between production, distribution and service guarantees customer proximity. World-wide! Wherever in the world you develop and implement solutions for yourself and your customers, we are close at hand.

Rittal GmbH & Co. KG  
 P.O. Box 1662  
 D-35726 Herborn  
 Telephone: +49(0)2772 505-0  
 Telefax: +49(0)2772 505-2319  
 eMail: info@rittal.de  
 www.rittal.com

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