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CMC III transponder reader VX

DK 7030.232

DK 7030.233

Assembly and operating instructions

ENCLOSURES

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SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Foreword

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Foreword

Dear Customer,

Thank you for choosing our CMC III transponder reader VX (referred to hereafter as "transponder reader")!

We wish you every success.

Yours,
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We are always happy to answer any technical questions regarding our entire range of products.

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1 Notes on documentation

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1 Notes on documentation

1.1 CE labelling

Rittal GmbH & Co. KG hereby confirms that the CMC III transponder reader VX is compliant with the EC EMC Directive 2014/30/EC. An appropriate declaration of conformity has been prepared. It can be provided on request.



1.2 Storing the documents

The assembly and operating instructions as well as all applicable documents are an integral part of the product. They must be passed to those persons who are engaged with the unit and must always be available and on hand for the operating and maintenance personnel.

1.3 Symbols used in these operating instructions

The following symbols are used in this documentation:



Danger!
Hazardous situation leading directly to death or serious injury if the instructions are not followed.



Warning!
Hazardous situation which may lead directly to death or serious injury if the instructions are not followed.



Caution!
Hazardous situation which may lead to (minor) injuries if the instructions are not followed.



Note:
Identification of situations that can lead to material damage.



Note:
Additional compatible base systems can be found on the internet at www.rittal.com for model no. DK 7030.233. The term "base systems" is used in these instructions as placeholder for the various systems.

- CMC III Access Control/Door Control Module (DCM) assembly and operating instructions

- This symbol indicates an "action point" and shows that you should perform an operation or procedure.

1.4 Associated documents

- Installation and Short User Guide
- Assembly and operating instructions for compatible base systems, e.g. CMC III Processing Unit

2 Safety instructions

2.1 General safety instructions

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

- Use only original Rittal products or products recommended by Rittal in conjunction with the transponder reader.
- Please do not make any changes to the transponder reader that are not described in this manual or in the associated manuals.
- The operational safety of the transponder reader is only warranted in case of use as intended and according to the rules. The technical specifications and limit values stated must not be exceeded under any circumstances. In particular, this applies to the specified ambient temperature range and IP degree of protection.
- The transponder reader may only be opened for mounting purposes. The unit does not contain any parts that need servicing.
- Operating the system in direct contact with water, aggressive materials or inflammable gases and vapours is prohibited.
- Other than these general safety instructions, ensure you also observe the specific safety instructions when the tasks described in the following chapters are performed.

2.2 Service and technical staff

- The mounting, installation, commissioning, maintenance and repair of this unit may only be performed by qualified mechanical and electro-technical trained personnel.
- Only properly instructed personnel may work on a unit while in operation.

3 Product description

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3 Product description

3.1 Functional description and components

3.1.1 Function

The transponder reader serves to release enclosure or room doors through a contactless process whereby a transponder card is held in front of it. The unique card number is checked in the connected CMC III Processing Unit (base systems) and the corresponding door release is initiated where applicable. The transponder reader has an identification that allows it to be detected automatically by the CMC III Access Control/DCM.



Note:

In the following text, the designation "CMC III Processing Unit" refers to the "CMC III Processing Unit" variants and also to the base systems. All text passages that apply only to a specific variant are identified accordingly.

3.1.2 Components

The CMC III transponder reader consists of a compact plastic housing in RAL 9005 or RAL 7035. The reader unit is seated in black at the front. It is indicated with a symbol ("Hand" and "Card").

3.2 Proper use, foreseeable misuse

The CMC III transponder reader VX serves exclusively to release doors using transponder cards. It may be used only together with the CMC III Processing Unit, CMC III Access Control or Door Control Module (DCM). Any other use is not permitted.

The unit is state of the art and built according to recognised safety regulations. Nevertheless, incorrect use may result in damage to or faults with the system and other material assets.

Consequently, the unit must only be used properly and in a technically sound condition! Any malfunctions which impair safety should be rectified immediately! Follow the operating instructions!

The intended use also includes the observance of the documentation provided and fulfilling the inspection and maintenance conditions.

Rittal GmbH & Co. KG is not liable for any damage which may result from failure to comply with the documentation provided. The same applies to the non-observance of the valid documentation for any deployed accessories and the base systems.

Inappropriate use may result in danger. Inappropriate use includes:

- Use of impermissible tools.
- Improper operation.
- Improper rectification of malfunctions.
- Use of accessories not approved by Rittal GmbH & Co. KG.

3.3 Scope of supply

- CMC III transponder reader VX
- Accessories provided (Fig. 1)
- Installation Guide and Short User Guide

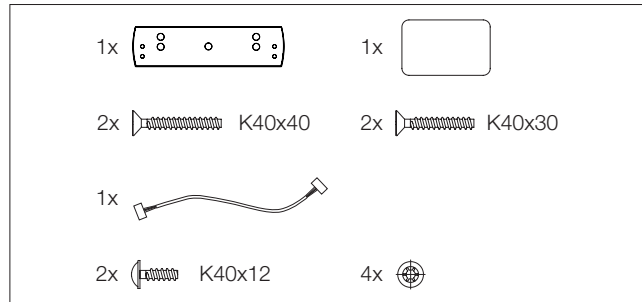


Fig. 1: Accessories provided

4 Transport and handling

4.1 Transport

The unit is delivered in a carton.

4.2 Unpacking

- Remove the unit's packaging materials.



Note:

After unpacking, the packaging materials must be disposed of in an environmentally friendly way. They consist of the following materials:

Polyethylene film (PE film), cardboard.

- Check the unit for any damage that may have occurred during transport.



Note:

Damage and other faults, e.g. incomplete delivery, should be reported immediately, in writing, to the shipping company and to Rittal.

- Remove the unit from the PE film.

5 Installation

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5 Installation

5.1 Safety instructions

- Please observe the valid regulations for installation in the country in which the transponder reader is installed and operated, and the national regulations for accident prevention. Please also observe any internal company regulations, such as work, operating and safety regulations.
- The technical specifications and limit values stated must not be exceeded under any circumstances. In particular, this applies to the specified ambient temperature range and IP degree of protection.
- If a higher IP protection class is required for a special application, the transponder reader must be installed in an appropriate housing or in an appropriate enclosure with the required IP degree of protection.

5.2 Siting location requirements

To ensure the unit functions correctly, the conditions for the installation site of the unit specified in section 8 "Technical specifications" must be observed.

Electromagnetic interference

- Interfering electrical installations (high frequency) should be avoided.

5.3 Installation procedure

There are generally several options for installing the transponder reader:

- Installation on a VX and VX IT sheet steel door
- Installation on a VX glazed door
- Installation on a VX IT glazed door or VX IT vented door

5.3.1 Installation note

- Cover the area around where holes are to be drilled before drilling in order to prevent damage and scratches.

5.3.2 Installation on a VX and VX IT sheet steel door

The installation is performed directly on the frame of a VX and VX IT sheet steel door.

- Drill suitably sized holes at the required part of the frame of the VX sheet steel door (Fig. 2).
- Use a 90° countersink to deburr the holes for cable entry.
- Attach the transponder reader to the prepared location using the pan-head screws provided.

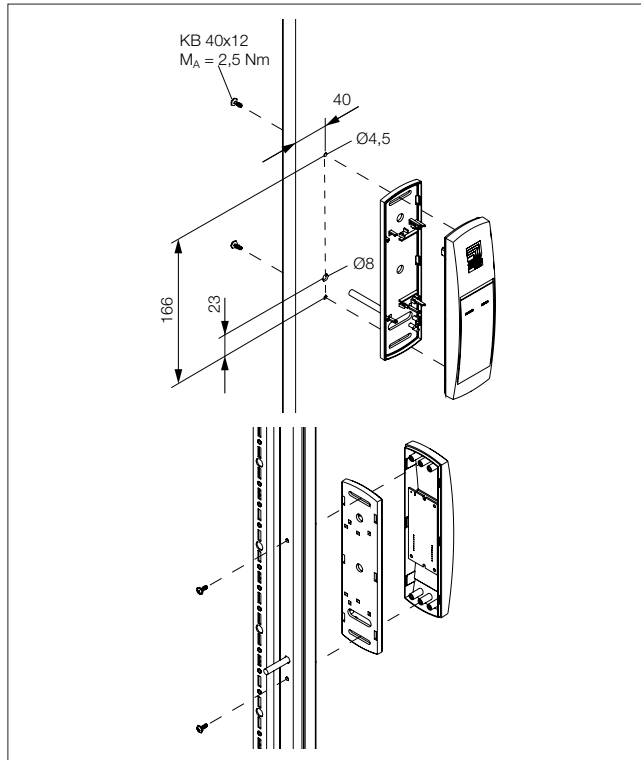


Fig. 2: VX and VX IT sheet steel door installation

5.3.3 Installation on a VX glazed door

The installation is performed directly on the frame of a VX glazed door.

- Drill suitably sized holes at the required part of the frame of the VX glazed door (Fig. 3).
- Use a 90° countersink to deburr the holes for cable entry.
- Clean away any splinters at the point where the transponder reader is to be attached.
- Attach the transponder reader to the prepared location using the flat-headed screws provided.

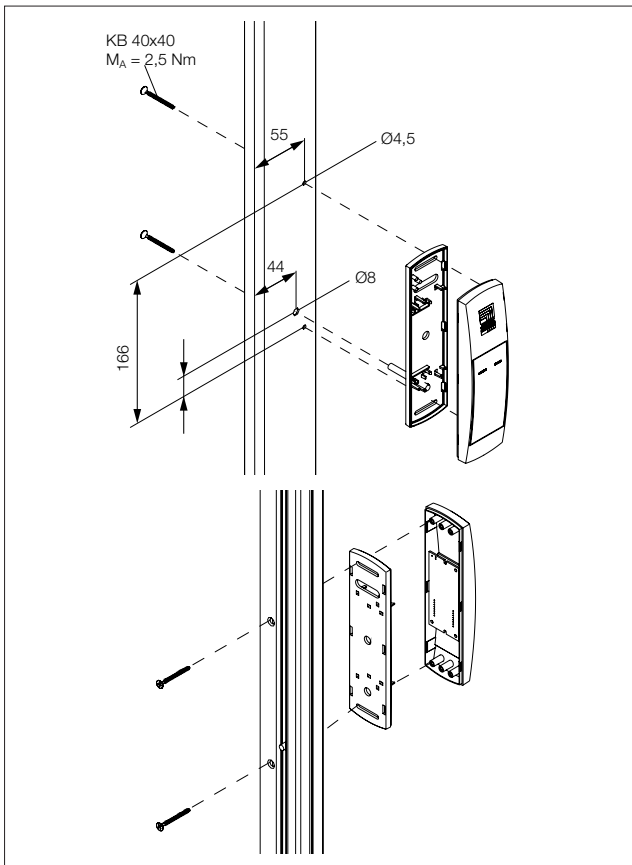


Fig. 3: VX glazed door installation

5.3.4 Installation on a VX IT glazed door or VX IT vented door

The installation on the frame of a VX IT glazed door or VX IT vented door is performed with the provided compensating panel.

- First dismantle the locking bars.
- Drill suitably sized holes at the required part of the frame of the VX IT glazed door (Fig. 4).
- Use a 90° countersink to deburr the holes for cable entry.
- Clean away any splinters at the point where the transponder reader is to be attached.
- Attach the compensating panel incl. transponder reader to the prepared location using the flat-headed screws provided.
- Finally, reattach the locking bars.

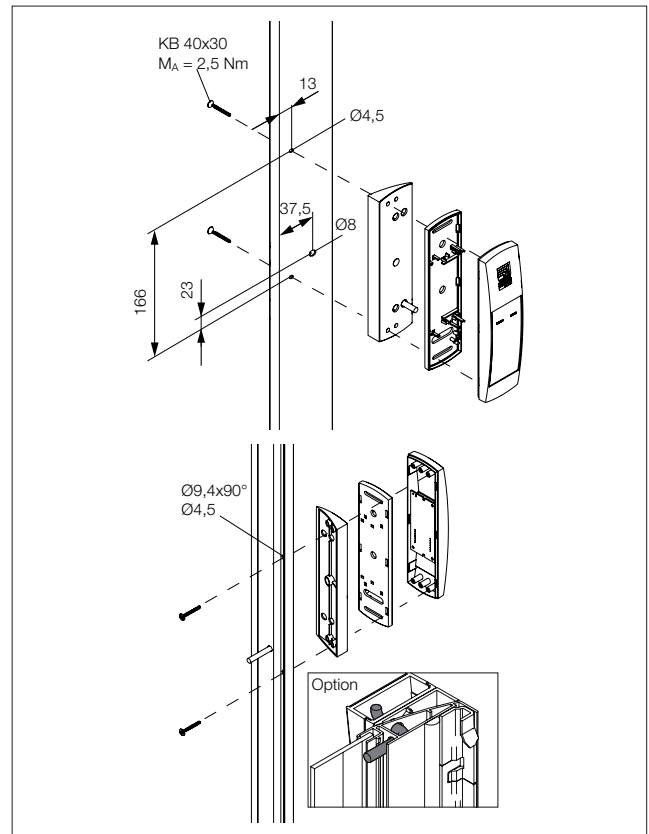


Fig. 4: VX IT glazed door, VX IT vented door installation

5.4 Connecting the transponder reader



Note:

The transponder reader is compatible with the CMC III Access Control (DK 7030.202) and the Door Control Module (DCM, DK 7030.501).

The Access Control/DCM supplies the transponder reader with the necessary operating voltage via the connection cable. A separate power supply unit does not need to be connected.

- First disconnect the CAN bus from the Access Control/DCM.
- Fit the associated handle to the door to be monitored.
- Connect this handle via the connection cable to the Access Control/DCM.
- Connect the transponder reader via the connection cable to the Access Control/DCM.
- Connect the CAN bus to the Access Control/DCM again.

6 Operation

6.1 Activating the transponder reader

After connecting the transponder reader to an Access Control/DCM using the connection cable, the transponder reader starts automatically (see section 5.4 "Connecting the transponder reader"). Separate activation is not required.

6.2 Operating and display elements

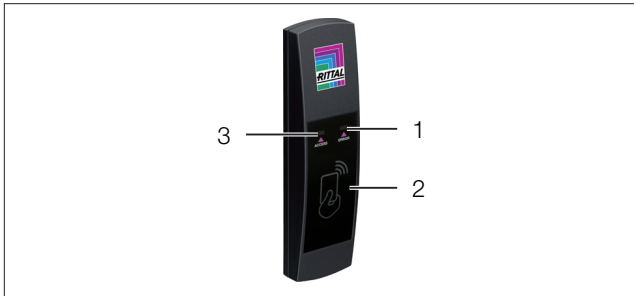


Fig. 5: Front of the transponder reader

Legend

- 1 "ERROR" LED (white)
- 2 Transponder reader
- 3 "ACCESS" LED (white)

6.3 LED displays

Two LEDs for the status display are integrated into the front of the transponder reader (Fig. 5, item 1 and item 3).

Designation	Status
ACCESS	If the connection is correct, continuously flashes every 5-10 seconds. If an authorised transponder card is applied, the LED lights up continuously for approx. 2 seconds.
ERROR	If an unauthorised transponder card is applied, both LEDs (ACCESS and ERROR) flash together every 5-10 seconds.

Tab. 1: LED flashing codes

6.4 Operating the CMC III Processing Unit from the website

After logging on to the CMC III Processing Unit, the web interface for operating the device is displayed.

6.4.1 Configuration tab

Access authorisation settings can be made in the "Security" group frame in the **Configuration** tab.

- First select the "Processing Unit" node in the navigation area.
- Select the **Configuration** tab in the configuration area.

To add a new transponder card:

- Hold the transponder card in front of the transponder reader **before** selecting the "Access Configurations" dialogue.

Regardless of the next work steps:

- In the **Security** group frame, click on the **Access Configuration** button.
The "Access Configurations" dialogue opens.

To configure a transponder card:

- Select the line with the required entry to change the configurations stored for this.
- Click the **Edit** button.
The "Access Configuration" dialogue opens.

Parameter	Explanation
Type	Configuration of an access. The "Card" entry must be selected here.
Code	Transponder card code.
User	Selection of the user authorised for the access. The user must have been created in advance.
Information	Specific additional information for the access. This text is also added for the user in the CMC III Processing Unit logfile.

Tab. 2: "Access Configuration" dialogue

All connected access modules are displayed in tabular form.

Parameter	Explanation
Use	Enable or disable individual access modules.
Device Name	Specific description of the Access Control/DCM or (virtual) access controller to which the access module to be switched is connected.
Serial Number	Serial number of the Access Control/DCM or (virtual) access controller to which the access module to be switched is connected.

Tab. 3: "Devices" table



Note:

A user must be assigned to the transponder card. Otherwise, access isn't possible even with the appropriate transponder card.

To delete an access authorisation via transponder card:

- Select the line with the required entry you wish to delete.

- If necessary, select another entry by keeping the shift key pressed. All lines from the first entry selected to the last entry selected (inclusive) are selected.
- If necessary, select further entries by keeping the "Ctrl" key pressed. These lines are added individually to the selection.
- Click the **Delete** button.
All selected access authorisations are immediately deleted without a confirmation prompt.

6.4.2 Monitoring tab

The description of the transponder reader is added and the current status of the transponder reader can be viewed in the **Monitoring** tab.



Note:

As the transponder reader does not have a separate entry in the left tree structure, all information on this point can be found in the CMC III Access Control/DCM operating instructions.

6.5 Manual changes to the "access.cmc3" file

Alternatively, the access authorisation settings can also be made directly in the "access.cmc3" file. This file is created automatically in the "upload" directory of the CMC III Processing Unit when it is started for the first time. Alternatively, they can be created by holding a transponder card in front of the transponder reader.



Note:

If the "access.cmc3" file is removed from the folder, access is only then possible using the three predefined access codes "1001", "1002" and "1003". All other access authorisations have to initially be added again to a newly created file.

6.5.1 Downloading the file



Note:

The following descriptions assume that you establish an (S)FTP connection using the "FileZilla" program. If another program is used, the file may have to be downloaded and uploaded in a different way.

- First establish an FTP or SFTP connection to the CMC III Processing Unit from a PC (see the assembly and operating instructions for the CMC III Processing Unit).
- In the left-hand subwindow (PC), switch to the folder where you wish to locally save the "access.cmc3" file.
- Switch to the "upload" folder in the right-hand subwindow (CMC III PU).

- Right-click the "access.cmc3" file and select the "Download" action.
- Disconnect the (S)FTP connection between the PC and CMC III PU.

If there is no "access.cmc3" file in the "upload" directory, this has to be created first.

- Hold any transponder card in front of the reader unit.
The file is now generated in the "upload" folder.
- Establish an (S)FTP connection between the PC and CMC III PU again and download the file.
- Disconnect the (S)FTP connection between the PC and CMC III PU again.

6.5.2 Editing the file

The file can now be edited using a text editor. Rittal recommends using "Notepad++" for this instead of the standard "Notepad" editor installed under Windows. This is available online as freeware.

```

1 #----- Access-File CMC-III -----
2 # Name      : Name of the Unit
3 # Location  : Location of the Unit
4 # Contact   : Contact Person
5 # IPv4-Address : 192.168.10.190
6 # IPv6-Address 1 :
7 # IPv6-Address 2 :
8 # IPv6-Addr. Auto :
9 # IPv6-Addr. Local: fe80::2d0:93ff:fe25:f07b
10
11 4-Eyes:30
12 Key:1001; User:: Information:: Handle:
13 Key:1002; User:: Information:: Handle:
14 Key:1003; User:: Information:: Handle:
15 Crd: User:: Information:: Handle:
16
length:495 lines:16 Ln:1 Col:1 Sel:0|0 Dos/Windows ANSI INS

```

Fig. 6: "access.cmc3" file in Notepad++

The file is structured as follows:

- Lines starting with a "#" are comment lines. These contain basic information on the CMC III Processing Unit.
- Lines with "Crd" as first entry contain the authorised card numbers of the transponder cards.
- The line with "4-Eyes" as first entry contains the time interval for the registration in the four-eyes principle.
- Lines with "Keypad" as first entry contain the assignment of reader units to individual access modules.

Transponder cards

The individual lines contain the following entries:

Parameter	Explanation
Crd	Card number of a transponder card for authorised access.
User	User to be entered in the CMC III Processing Unit logfile on opening with the associated transponder card. This user has to exist in the CMC III PU.
Information	Specific additional information for the access. This text is also added for the user in the CMC III Processing Unit logfile.

Parameter	Explanation
Handle	Serial number of the Access Control/DCM or (virtual) access controller to which the access module to be switched is connected. Several comma-delimited entries for different Access Control/DCM can also be added here.

Tab. 4: Entries for transponder cards



Note:
In addition, the file can contain lines that begin with the "Key" parameter. Such lines contain information about the number codes that are used with a numeric code reader.

The entries are explained in detail using the following example configuration.

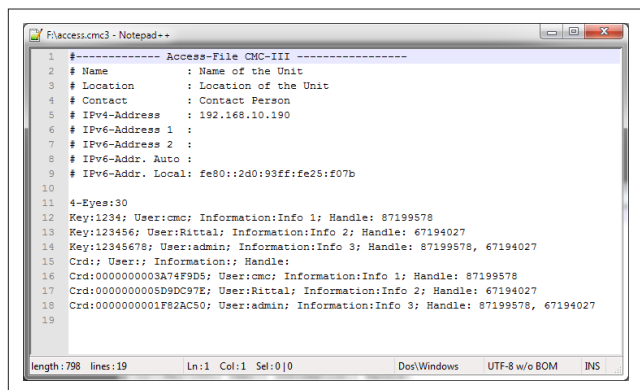


Fig. 7: Example configuration

- Handle 1 is opened using access code "1234" (line 11 in the editor window). User "cmc" and the information "Info 1" are entered in the CMC III PU logfile.
- Handle 2 is opened using access code "123456" (line 12). User "Rittal" and the information "Info 2" are entered in the CMC III PU logfile.
- Both handles are opened using access code "12345678" (line 13). User "admin" and the information "Info 3" are entered in the CMC III PU logfile.

In lines 15 to 17, a transponder card has also been assigned to each of the users. These transponder cards open the same handles as the access codes above. The respective users and associated information are entered in the CMC III PU logfile.

Time interval for the four-eyes principle

The time interval for registration in the four-eyes principle is specified in the line with the "4-Eyes" entry.

Parameter	Explanation
4-Eyes	Time interval in seconds within which the two persons must register with their transponder cards or their number code.

Tab. 5: Time interval for the four-eyes principle

Assignment of reader units to access modules

The lines for the assignment of reader units to access codes contain the following entries:

Parameter	Explanation
Keypad	Serial number of the Access Control or the (virtual) access controller to which the reader unit is connected with the following assigned handles or doors.
Handle	Serial number of the Access Control/DCM or (virtual) access controller to which the access module to be switched is connected. Several comma-delimited entries for different Access Control/DCM can also be added here.

Tab. 6: Assignment of reader units to access modules



Note:
If **no** access module is assigned to the "Handle" entry, the reader unit will be assigned to **all** access modules. In this case, all doors activated for the transponder card or the number code will be opened, irrespective of which reader unit is used.

6.5.3 Uploading the file

Once all entries have been made in the "access.cmc3" file, this file has to be stored in the "upload" directory on the CMC III Processing Unit again.

- Establish an FTP or SFTP connection to the CMC III Processing Unit from a PC again.
- Switch to the "upload" folder in the right-hand sub-window (CMC III PU).
- In the left-hand subwindow (PC), switch to the folder where you have stored the revised version of the "access.cmc3" file.
- Right-click the "access.cmc3" file and select the "Upload" action.
- If the file cannot be uploaded this way, first delete the existing "access.cmc3" file from the "upload" directory and then upload the file from the PC again.
- Finally, disconnect the (S)FTP connection between the PC and CMC III PU.

The access authorisations have now been updated.

7 Storage and disposal

7.1 Storage

If the device is not used for a long period, Rittal recommends that it be disconnected from the mains power supply and protected from damp and dust.

7.2 Disposal

Since the transponder reader consists mainly of the "housing" and "circuit board" parts, the device must be passed on to the electronic waste recycling system for disposal.

8 Technical specifications

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8 Technical specifications

Technical specifications		CMC III transponder reader VX
Model no.		DK 7030.232/DK 7030.233
W x H x D (mm)		50 x 190 x 25
Operating temperature range		0 °C...+55 °C
Storage temperature		-45 °C...+85 °C
Operating humidity range		5%...95% relative humidity, non-condensing
Protection category		IP 40 to IEC 60 529
Technology		Transponder 13.56 MHz
The following tags can be read	ISO 14443A	Mifare, Legic Advant, HID, FeliCa, (Legic Prime on request). Detailed information can be found in the internet at www.rittal.de for model no. DK 7030.232 or DK 7030.233.
Frequency		13.56 MHz
Connection cable (m)		2.9
Inputs and outputs	Interface for Access Control/DCM	1 x
Operation/signals	LED display	2 x white

Tab. 7: Technical specifications

9 Customer service addresses

For technical queries, please contact:

Tel.: +49(0)2772 505-9052

E-mail: info@rittal.de

Homepage: www.rittal.com

For complaints or service requests, please contact:

Tel.: +49(0)2772 505-1855

E-mail: service@rittal.de

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