

## Roger Access Control System

# MCT84-BK-QB Installation Manual

Firmware version: 1.0.8.209 and newer

Document version: Rev. A



*This document contains minimum information that is necessary for initial setup and installation of the device. The detailed description of configuration parameters and functionalities is specified in respective Operating Manual available at [www.roger.pl](http://www.roger.pl).*

## INTRODUCTION

The reader is designed for operation with MC16 access controller (RACS 5 system). Factory new reader is configured with default settings including ID=100 address.

## DEVICE CONFIGURATION

The reader can be configured in regard of various parameters (including address) in order to adapt it to the requirements of specific installation. Device can be configured from VISO v2 management software or RogerVDM utility software.

**Note:** Remote configuration of device from VISO v2 software is possible only if jumper is placed on MEM contacts (fig. 2). If the jumper is removed then such configuration is blocked. In case of factory new device, jumper is placed on MEM contacts.

## CONFIGURATION WITH VISO V2 PROGRAM

In RACS 5 v2 system the reader can be installed at site without previous configuration. According to AN006 application note, its address and other settings can be configured from VISO v2 management software and during such configuration the access to its service contacts (fig. 2) is not required.

## CONFIGURATION WITH ROGERVDM PROGRAM

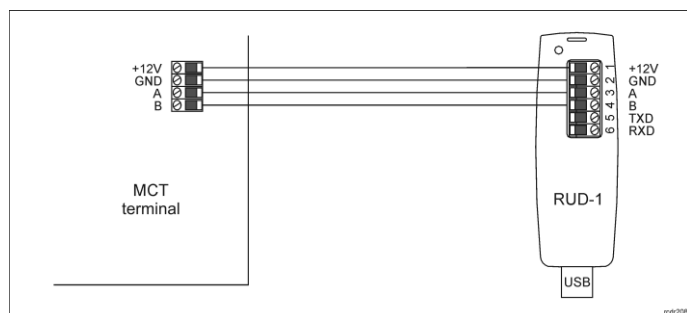


Fig. 1 Connection of MCT terminal to RUD-1 interface

### Programming procedure:

1. Connect the device to RUD-1 interface (fig. 1) and connect the RUD-1 to computer's USB port.
2. Remove jumper from MEM contacts (fig. 2) if it is placed there.
3. Restart the device (switch power supply off and on) and orange LED SYSTEM will pulsate. Then within 5 seconds place jumper on MEM contacts.
4. Start RogerVDM program, select *MCT* device, firmware version, *RS485* communication channel and serial port with RUD-1 interface.
5. Click *Connect*, the program will establish connection and will automatically display *Configuration* tab.
6. Enter unoccupied RS485 address in range of 100-115 and other settings according to requirements of specific installation.
7. Click *Send to Device* to update the configuration of device.
8. Optionally make a backup by clicking *Send to File...* and saving settings to file on disk.
9. Disconnect from RUD-1 interface and leave jumper on MEM contacts to enable further configuration of device from VISO v2 software or remove jumper from MEM contacts to block such remote configuration.

**Note:** Do not read any cards when reader is configured with RogerVDM.

## MANUAL ADDRESSING

Manual addressing procedure enables configuration of new RS485 address with all other settings unchanged.

### Manual addressing procedure:

1. Remove all connections from A and B lines.
2. Remove jumper from MEM contacts (fig. 2) if it is placed there.
3. Restart the device (switch power supply off and on) and orange LED SYSTEM will pulsate. Then within 5 seconds place jumper on MEM contacts.
4. Enter 3 digits of RS485 address in range of 100-115 with any MIFARE card.

5. Leave jumper on MEM contacts to enable further configuration of device from VISO v2 software or remove jumper from MEM contacts to block such remote configuration.
6. Restart the device.

Terminals without keypad can be addressed with multiple card readings where the N number of readings emulates digit of the address. Three series of readings with any MIFARE proximity card are necessary to set the address. After each series wait for two beeps and proceed with the next digit. Zero digit is emulated with 10 readings.

### Example:

Programming of ID=101 address with card readings:

1. Read card 1 time and wait for two beeps.
2. Read card 10 times and wait for two beeps.
3. Read card 1 time and wait for two beeps.
4. Wait till reader is restarted with the new address.

## MEMORY RESET

Memory reset procedure resets all settings to factory default ones including ID=100 address.

### Memory reset procedure:

1. Remove all connections from A and B lines.
2. Remove jumper from MEM contacts (fig. 2) if it is placed there.
3. Restart the device (switch power supply off and on) and orange LED SYSTEM will pulsate. Then within 5 seconds place jumper on MEM contacts.
4. Read any MIFARE card 11 times.
5. Wait till device confirms reset with long acoustic signal.
6. Leave jumper on MEM contacts to enable further configuration of device from VISO v2 software or remove jumper from MEM contacts to block such remote configuration.
7. Restart the device.

## FIRMWARE UPDATE

The firmware of device can be changed to newer or older version. The update requires connection to computer with RUD-1 interface (fig. 1) and starting RogerVDM software. The latest firmware file is available at [www.roger.pl](http://www.roger.pl).

**Note:** Backup configuration with RogerVDM software before firmware update because the update will restore factory default settings.

### Firmware update procedure:

1. Connect the device to RUD-1 interface (fig. 1) and connect the RUD-1 to computer's USB port.
2. Place jumper on MEM contacts (fig. 2).
3. Restart the device (switch power supply off and on).
4. Start RogerVDM program and in the top menu select *Tools* and then *Update firmware*.
5. In the opened window select device type, serial port with RUD-1 interface and path to firmware file (\*.frg).
6. Click *Update* to start firmware upload with progress bar in the bottom.
7. When the update is finished, disconnect from RUD-1 interface and remove jumper from MEM contacts. Additionally it is recommended to start memory reset procedure.

## APPENDIX

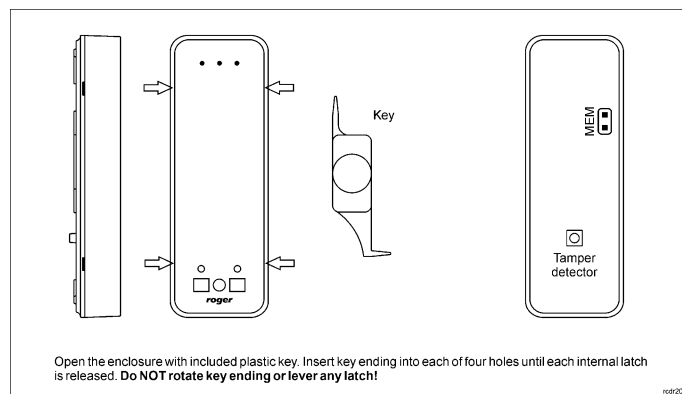


Fig. 2 Enclosure opening and location of service contact

Table 1. Wires		
Name	Wire colour	Description
12V	Red	Supply plus
GND	Black	Ground
A	Yellow	RS485 bus, line A
B	Green	RS485 bus, line B

Table 2. Specification	
Supply voltage	Nominal 12VDC, min./max. range 10-15VDC
Current consumption (average)	~80 mA (additional 120mA if barcode scanner is configured for continuous operation)
Tamper protection	Enclosure opening reported to access controller
Identification methods	13.56MHz MIFARE Ultralight, Classic, Plus and Desfire proximity cards Mobile devices (Android, iOS) with NFC Mobile devices (Android, iOS) with BLE (Bluetooth Low Energy) v4.1 1D barcodes: UPC A, UPC E, EAN 8, Interleaved 2 of 5, EAN 13, GS1-128, Code 128; 2D barcodes: QR, PDF417, Data Matrix
Reading range	Up to 7 cm for MIFARE cards and NFC Up to 10 m for BLE – depends on ambient conditions and particular mobile device. Terminal's radio power can be increased within low level configuration.
Distance	1200 m maximal cable length for RS485 bus between controller and terminal
IP Code	IP65
Environmental class (according to EN 50133-1)	Class IV, outdoor general conditions, temperature: -25°C to +60°C, relative humidity: 10 to 95% (no condensation)
Dimensions H x W x D	130 x 45 x 22 mm
Weight	~100g
Certificates	CE

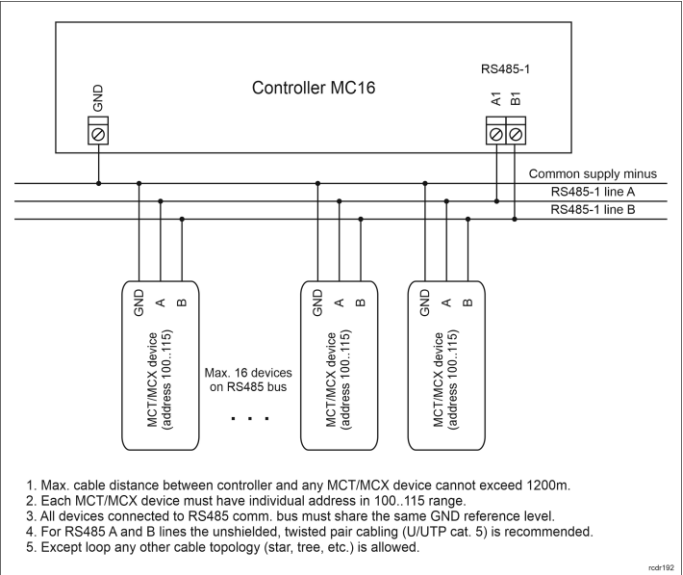


Fig. 3 Connection of terminals and expanders to MC16 access controller

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