Roger Access Control System

MCTxxE Readers Installation Manual

Firmware: 1.0.2 and higher

Hardware: v1.0

Revision: Rev. A

CE

This document refers to:

MCT12E, MCT12E-IO, MCT12E-BK, MCT12E-IOBK, MCT32E-IO, MCT64E-IO, MCT66E-IO, MCT68ME-IO

This document contains minimum information that is necessary for initial setup and installation of the device. The detailed description of the reader functionality is described in MCTxxE Readers Operating Manual available on the www.roger.pl website.

INTRODUCTION

The reader is designed to operate within RACS 5 system as a slave unit connected to MC16 through RS485 bus. Factory new reader is addressed to ID=100 and the rest of settings are default.
Before connecting to the controller reader requires an unique address. Programming of other parameters depends on the individual installation scenario requirements and is not obligatory. Addressing of the reader can be done from PC by means of RogerVDM program or manually through the Memory Reset procedure. Configuring of the reader by RogerVDM requires RUD-1 interface (Fig. 1).

PROGRAMMING FROM PC

To perform this method reader has to be connected to PC via RUD-1 interface and programmed by means of RogerVDM software.

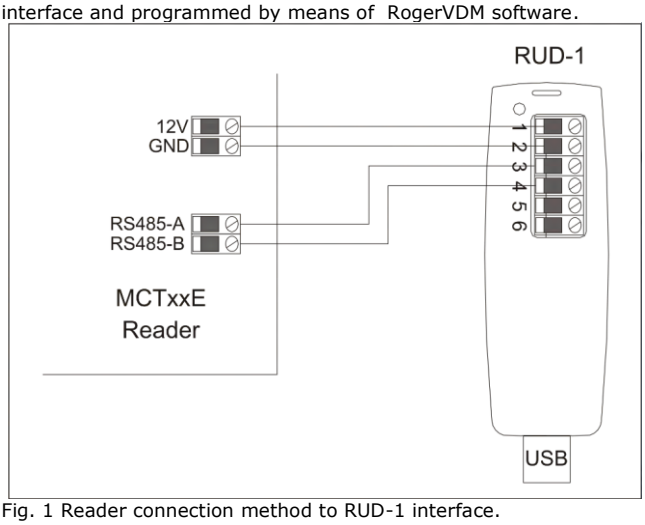


Fig. 1 Reader connection method to RUD-1 interface.

Programming procedure:

1. Connect reader to RUD-1 interface according to Fig. 1 (screw terminals and wires description is in the Table 1).
2. In RogerVDM click: *Device -> New.*
3. Select proper device model, firmware version, communication channel and serial port, on which RUD-1 is installed.
4. Click *Connect*, the software will establish connection with the reader and automatically will proceed to *Configuration* tab, which enables full configuration of the reader.
5. Set a proper RS485 address (in range of 100 to 115) and the rest of configuration (depending of requirements).
6. Click Send to device – the software will send the configuration to reader.
7. As an option, you can save the configuration in a file (*Send to file* command). It allows you to restore the settings which has been sent to device.
8. In RogerVDM click: *Device -> Disconnect.*
9. Disconnect reader from RUD-1 interface.

Note: Do not press keypad or read card when reader is under operation with RogerVDM program .

MEMORY RESET PROCEDURE

Memory reset procedure restores factory settings of the reader and allows to set the RS485 address manually.

To perform memory reset follow these steps:

1. Remove all connections from A, B, CLK and DTA lines.
2. Short CLK and DTA lines or put jumper on MEM contacts (in case of MCT68ME-IO reader).
3. Restart the reader (switch power supply off and on or short RST contacts for a while).
4. When LED STATUS (red), LED OPEN (green) and LED SYSTEM (orange) will light up (for MCT68ME-IO the CONFIG RESET inscription will appear) remove connection between CLK and DTA or take off jumper from MEM contacts.
5. While LED SYSTEM is flashing enter three digits which will set the RS485 address.
6. After entering the third digit reader will restart with new address automatically.

Readers without keypad can be manually programmed by so called multiple card reading method. In this method key pressing is emulated by multiple card reading. In order to emulate key [N] read card N-times and then wait for two beeps. Once you hear two beeps you can proceed further with emulation of next digit. Digit 0 is emulated by 10-times of card reading. Any EM 125 kHz UNIQUE card can be used for multiple card reading method.

Example:
In order to program 101 address:

1. Read card 1 time and wait for double beep.
2. Read card 10 times and wait for double beep.
3. Read card 1 time and wait for double beep.
4. Wait until reader restarts with a new address and factory settings.

FIRMWARE UPGRADE

Firmware can be upgraded by means of RogerISP software and RUD-1 communication interface (Fig. 1). The file with latest firmware is available at www.roger.pl

Firmware upgrade procedure:

1. Connect reader to RUD-1 interface according to Fig. 1.
2. Put jumper on FDM contacts (location of contacts is given on Fig. 2).
3. Restart the reader (switch power supply off and on or short RST contacts for a while).
4. Run RogerISP software.
5. Select communication port where the RUD-1 interface has been installed and choose programming through RS485.
6. Choose path to firmware file (*.hex).
7. Click Program and follow the instructions.
8. Remove jumper from FDM contacts and restart the reader.

DRAWINGS

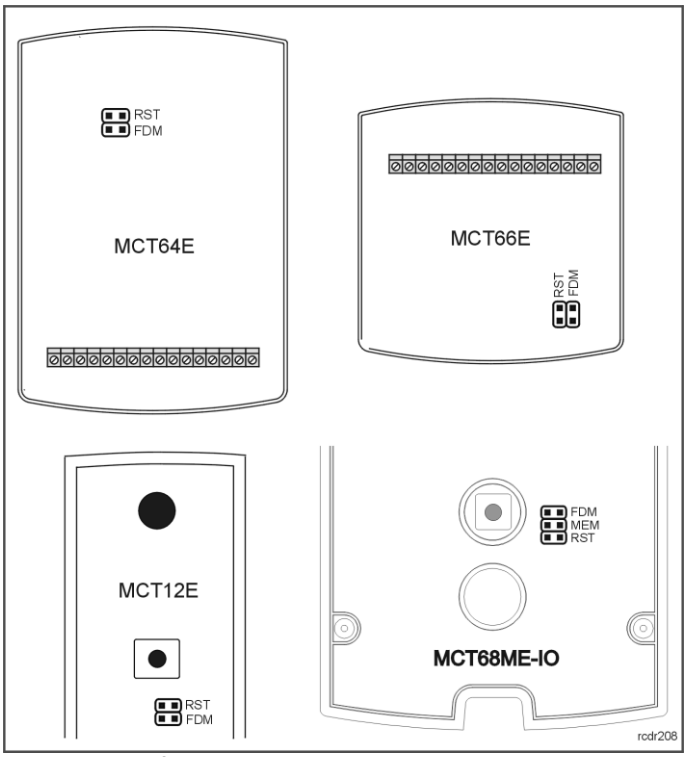


Fig. 2 Location of service contacts.

Table 1: Connection screw terminals/wires description

Name	Wire colour (MCTxxE-IO)	Wire colour (MCTxxE)	Description
12V	Red	Red	Supply plus
GND	Black	Blue	Supply minus
IN1	Pink		IN1 input line
IN2	Blue		IN2 input line
IN3	White-yellow		IN3 input line
RS485 A	Brown	Brown	RS485 bus, A line
RS485 B	Green-white	White	RS485 bus, B line
CLK	White	Green	RACS CLK/DTA bus, CLK line
DTA	Green	Yellow	RACS CLK/DTA bus, DTA line
TMP	Yellow	Pink	Tamper Switch
TMP	Grey	Grey	Tamper Switch
IO1	Yellow-brown		IO1 output line
IO2	Green-brown		IO2 output line
REL1-NC	Grey-pink		REL1 relay output (NC)
REL1-COM	Red-blue		REL1 common relay terminal
REL1-NO	Violet		REL1 relay output (NO)

Table 2: Technical description

Supply voltage	10-15 VDC
Current consumption (average)	MCT12E/MCT12E-IO: ~50 mA MCT12E-BK/MCT12E-IOBK: ~40 mA MCT64E-IO: ~50 mA MCT66E-IO: ~40 mA MCT68ME-IO: ~100 mA
Inputs	Three NO/NC inputs (IN1..IN3) internally connected to the power supply plus through a 15kΩ resistor, approx. 3.5V triggering level
Relay outputs	Relay output (REL1) with single NO/NC contact, 30V/1.5A DC/AC of max. load
Transistor outputs	Two transistor outputs (IO1, IO2), open collector type, 15VDC/1A of max. load
Reading distance	up to 10 cm (for MCT66E) up to 7 cm (for MCT12E, MCT64E, MCT68ME-IO)
Anti-sabotage protection (TAMPER)	Isolated contact, 50mA/24V, NC when enclosure is closed
Proximity cards	EM 125 kHz Unique, EM4100/4102 compatible
Distances	Up to 1200 m of cable distance between controller and reader
Ingress protection	IP65
Environmental class (according to EN 50133-1)	Class IV, outdoor, temperature: -25°C – +60°C, relative humidity: 10 to 95% (non-condensing)
Dimensions H x W x D	MCT12E: 152,5 X 46 X 23(35) mm MCT64E-IO: 115 X 80 X 35 mm MCT66E-IO: 85 X 85 X 27 mm MCT68ME-IO: 170 X 110 X 42 mm
Weight	MCT12/64/66E: approx. 150g MCT68ME-IO: approx. 410g
Approvals	CE

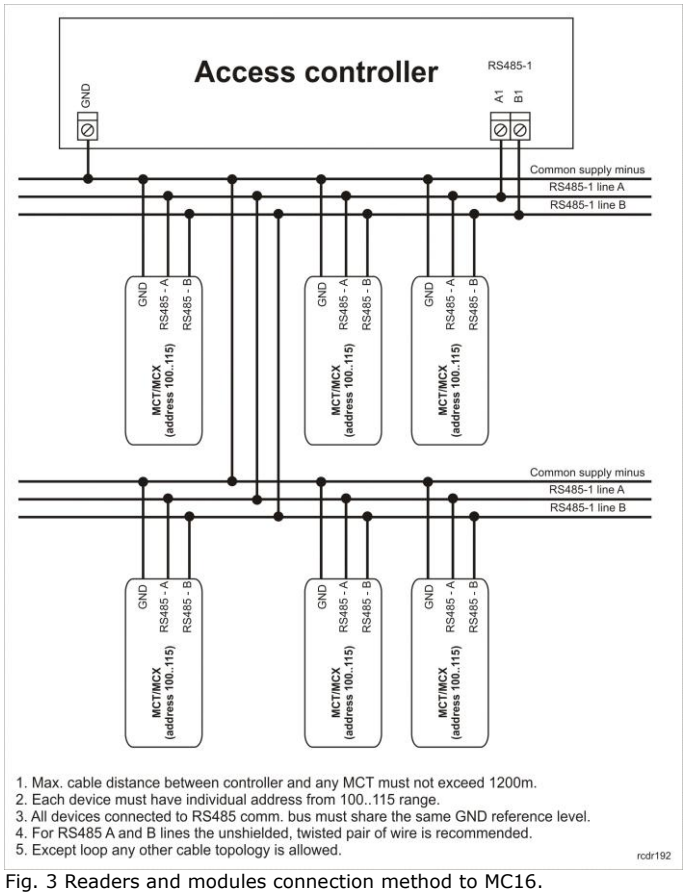
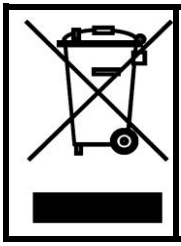


Fig. 3 Readers and modules connection method to MC16.



The symbol of a crossed-through waste bin on wheels means that the product must be disposed of at a separate collection point. This also applies to the product and all accessories marked with this symbol. Products labeled as such must not be disposed of with normal household waste, but should be taken to a collection point for recycling electrical and electronic equipment. Recycling helps to reduce the consumption of raw materials, thus protecting the environment. Weight of the equipment is specified in the document.

Contact:
Roger Sp. z o.o sp. k.
82-400 Sztum
Gościszewo 59
Tel.: +48 55 272 0132
Fax: +48 55 272 0133
Tech. support: +48 55 267 0126
Tech. support (GSM): +48 664 294 087
E-mail: biuro@roger.pl
Web: www.roger.pl