Roger Access Control System MCX2 and MCX8 Expanders Installation Guide

Firmware: 1.1.6 and newer

Hardware version: v1.0

Document version: Rev. B

CE

This document refers to following products:

MCX2, MCX8

This manual contains minimum information that is necessary to properly install device. For more information refer to RACS 5 documentation which is available at <u>www.roger.pl</u>.

INTRODUCTION

The expander is designed to operate within RACS 5 system as a slave unit connected to MC16 through RS485 bus. Factory new expander is addressed to ID=100 and the rest of settings are default.

Before connecting to the controller expander requires an unique address in range of 100-115. Programming of other parameters depends on the individual installation scenario requirements and is not obligatory. Addressing and setting parameters of the expander can be done from PC by means of RogerVDM program.

PROGRAMMING FROM PC

To configure the expander connect it to RUD-1 interface (Fig. 1) and run RogerVDM program.



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

RogerVDM programming procedure:

- Connect expander to RUD-1 interface according to Fig. 1 (screw 1. terminals and wires description is in the Table 1).
- Put jumper on JP7 contacts (location of contacts is described in 2. Fig. 3 and Fig.4).
- 3. Restart device (switch power supply off and on or press RESET button for a while).
- 4
- While LED Pwr is flashing, in RogerVDM click: *Device -> New*. Select proper device model, firmware version, communication 5. channel and serial port, on which RUD-1 is installed.
- Click Connect, the software will establish connection with the 6. expander and automatically will proceed to Configuration tab. 7
- Set the address (EPSO ID value in range of 100 115) and also the rest of parameters (if necessary). 8.
- Click Send to device the software will send the configuration to expander.
- 9. Optionally, save configuration parameters to file using Save to file button.
- 10. Click Device->Disconnect.

11. Disconnect expander from RUD-1 interface and remove jumper from JP7 contacts.

FIRMWARE UPDATE

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

- Connect expander to RUD-1 interface according to Fig. 2. 1.
- 2. Put jumper on FDM contacts (location of contacts is given on Fig. 3 and Fig. 4).
- Restart the expander (switch power supply off and on or press 3. RESET button for a while).
- 4. Run RogerVDM program.
- Choose: Tools -> Update Firmware. 5. Select device type, communication port for RUD-1, and path to 6.
- firmware file (*.hex).
- Click Update and follow the instructions on the screen. 7.
- Restart the expander one more time. 8.



Fig. 2 Connecting expander to RUD-1 interface for firmware upgrade.

OTHER INFORMATION



Fig. 3 MCX2 expander with enclosure and MCX2-BRD expander without enclosure view.





Fig. 4 MCX8-BRD expander view.



Max. cable distance between controller and any MCT/MCX must not exceed 1200m.
Each device must have individual address from 100..115 range.
All devices connected to RS485 comm. bus must share the same GND reference level.
For RS485 A and B lines the unshielded, twisted pair of wire is recommended.

6. Except loop any other cable topology is allowed.

Fig. 5 Expander connection to MC16 access controller.



Fig. 6 Power supply of expander.

Table 1: Screw terminals description.		
Terminal	Description	
+12V	Power supply plus	
GND	Power supply minus (ground)	
IN1IN8	IN1IN8 input lines	
A	RS485 interface, line A	
В	RS485 interface, line B	
NCx	Relay output RELx normally closed contact	
COMx	Relay output RELx common contact	
NOx	Relay output RELx normally open contact	

Table 2: Technical Data			
Supply voltage	12VDC nominal, 10-15VDC		
Avg. current	MCX2/MCX8: 30mA (relay output off)		
consumption			
Inputs	MCX2: Two (IN1, IN2)		
	MCX8: Eight (IN1IN8)		
	parametric type inpu	ut lines NO/NC/2EOL/3EOL	
	electrically biased to	$+12V$ via $15k\Omega$ resistor,	
	triggering level app.	3.5V	
Relay output	MCX2: Two relay output lines		
	REL1: 30VDC/1.5A		
	REL2: 30VDC/5A		
	MCX8: Eight relay output lines		
	RELIREL8: 30VDC/1.5A		
Califa diata a sa	Single NU/NC contact, max. load 30V/1.5A		
Cable distances	RS485: 1200m between expander and access		
	controller		
Ingress Protection IP41: MCX2			
	IP20: MCX2-BRD/M	CX8-BRD	
Environmental class	Class I, indoor general conditions,		
(according to EN	temperature: +5°C to +40°C, relative		
50133-1)	humidity: 10 to 95% (no condensation)		
Dimensions HxWxD	MCX2:	85 x 62 x 73mm	
	MCX2-BRD:	80 x 54 x 20mm	
	MCX8-BRD:	72 x 155 x 20mm	
Weight	MCX2:	approx. 110 g	
	MCX2-BRD:	approx. 50 g	
	MCX8-BRD:	approx. 115 g	
Certificates	CE		



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