

Roger Access Control System

User manual for
PDK-2-STK and PDK-2-DBB demonstration kits

Hardware version: 1.2

Document version: Rev. E



1. INTRODUCTION

This manual contains minimum information necessary to properly use PDK-2-STK and PDK-2DBB demonstration kits with RACS 5 system devices. The PDK-2-DBB is complementary product for PDK-2-STK and it cannot be used independently. Full functional description of RACS 5 system and manuals of individual devices are available at www.roger.pl.

2. PREPARATION FOR USE

2.1 Description

All devices are installed on demo board, connected and preconfigured. MC16 controller operates with factory uploaded demo configuration. PDK-2-STK includes:

- MC16-SVC access controller,
- Memory card installed in the controller,
- MCT80M-BLE reader,
- MCT84M reader,
- RUD-3 administrator reader,
- RUD-1 communication interface,
- Sockets and IOS-1 simulators,
- 10 pcs. of MIFARE® Classic 1k proximity cards,
- Ethernet cable, 2 x RJ45, 2m length,
- Memory card reader,
- USB cable.

PDK-2-DBB includes:

- MCT82 readers (2 pcs.),
- MCT12M readers (2 pcs.),
- MCX-8 expander,
- Sockets and IOS simulators,
- RS485 port cable.

Additionally the memory card of MC16 controller stores _PDK-2 folder with:

- documentation,
- low-level (RogerVDM) and high-level (VISO) configuration files,
- VISO EX license with following limits: 8 doors, 3 partitions, 50 users.

All readers including RUD-3 reader are pre-programmed for SSN card number reading instead of MIFARE® CSN reading. The same applies to included proximity cards.

2.2 PDK-2 setup

PDK-2-STK is ready for use after connection to 230VAC power supply. The connection of Ethernet cable to MC16 controller and LAN/WAN or directly to computer with VISO software can be used for further configuration of the system/controller. Connection of USB cable to RUD-1 communication interface and computer with RogerVDM software can be used for further low level configuration of MCT readers and MCX-8 expander. The set includes Wiegand, RACS CLK/DTA and RS485 sockets for connection of additional readers and other devices. More information on connection of additional devices is given in MC16 manual.

PDK-2-DBB cannot operate independently and it must be connected to PDK-2-STK for configuration and use through RS485A port with included cable.

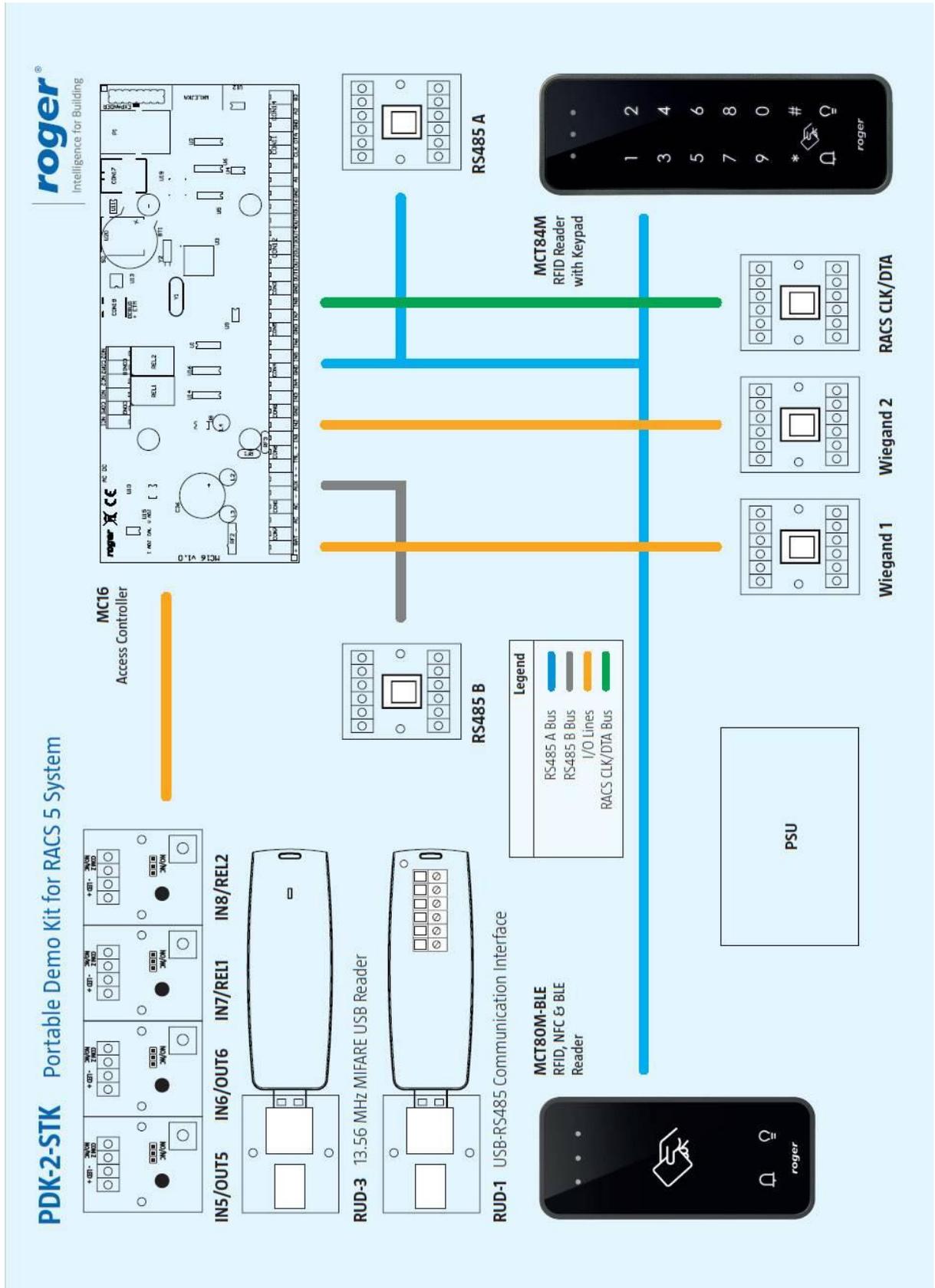
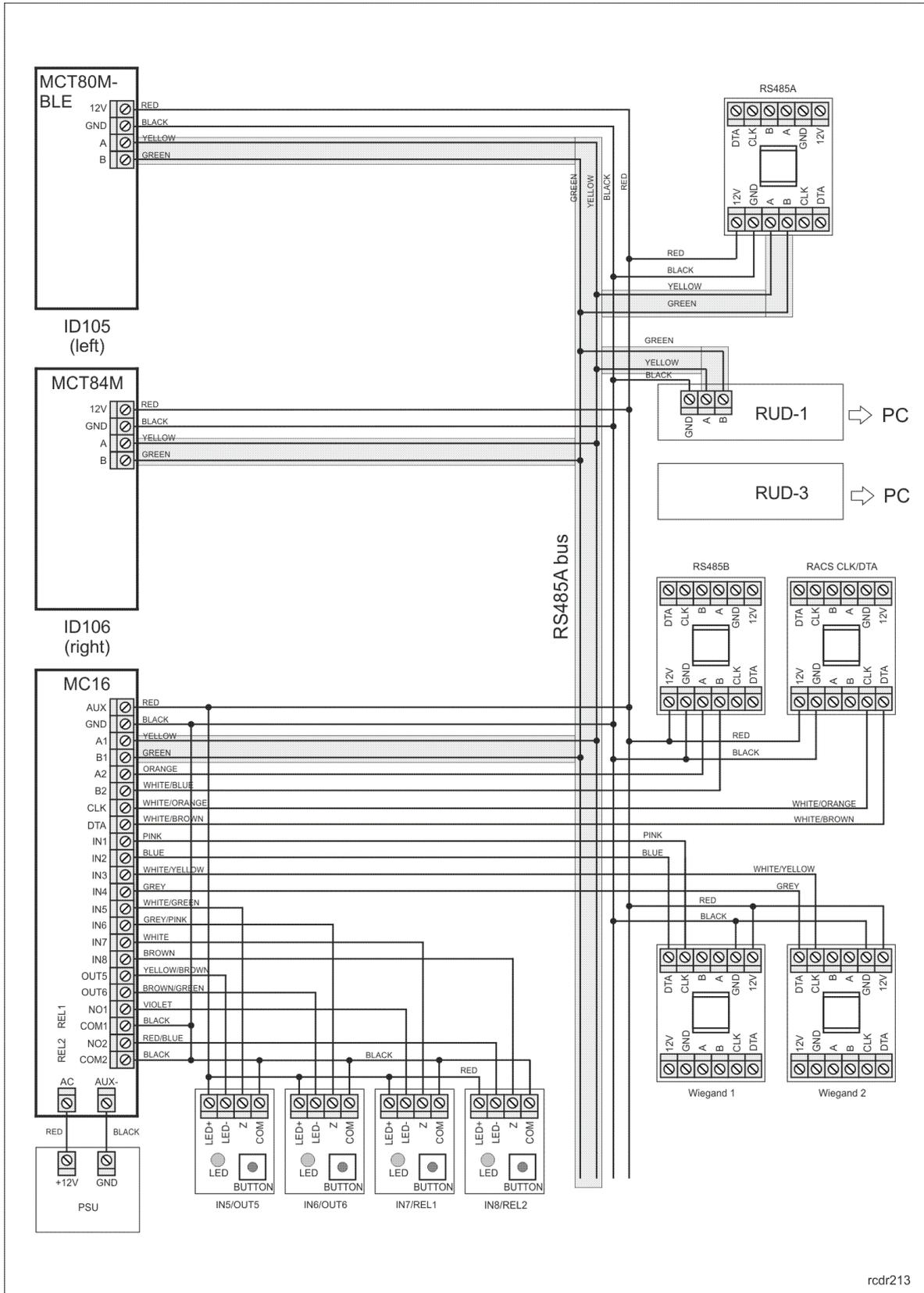


Fig.1 PDK-2-STK functional diagram



rcdr213

Fig. 2 PDK-2-STK connection diagram

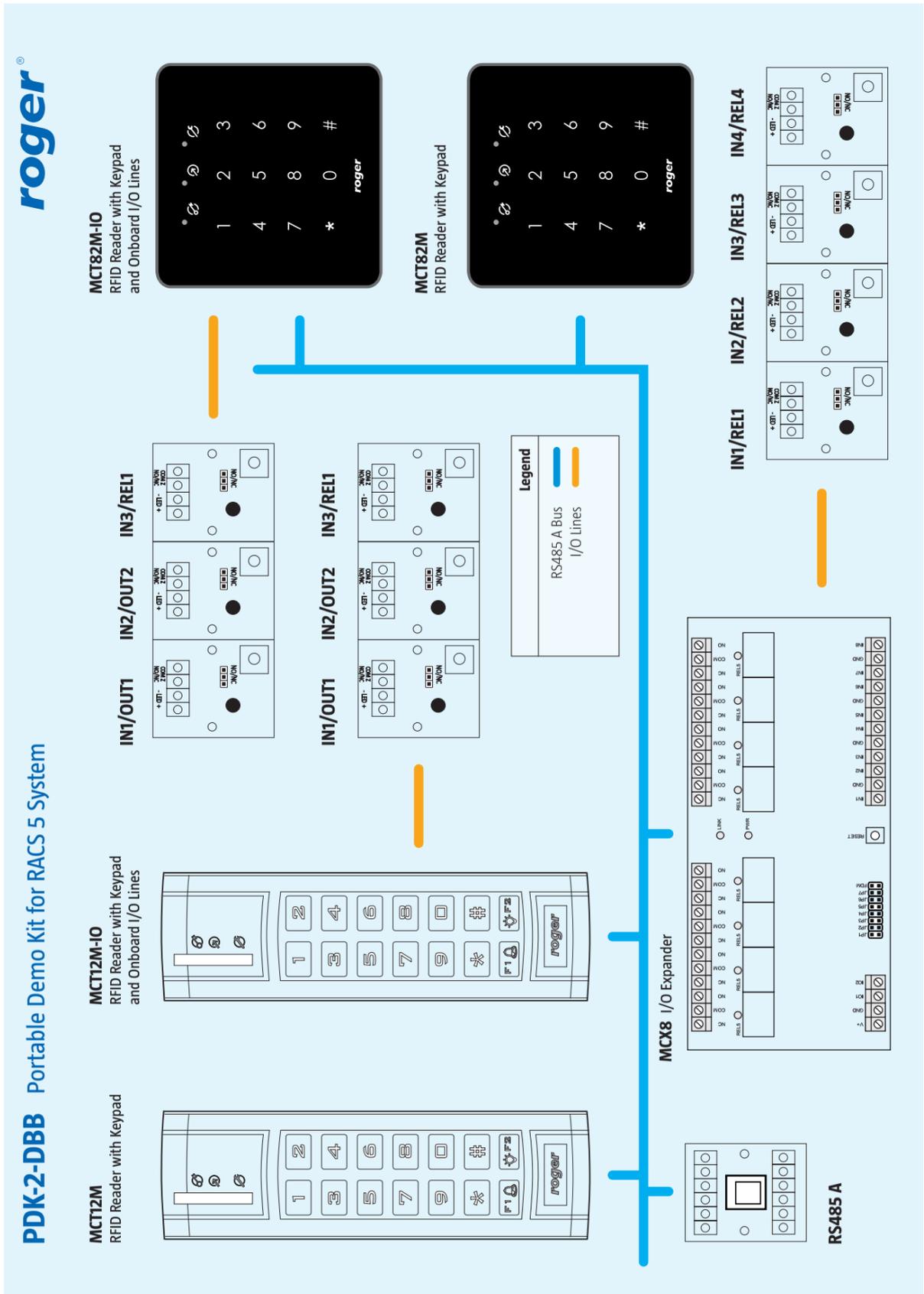


Fig.3 PDK-2-DBB functional diagram

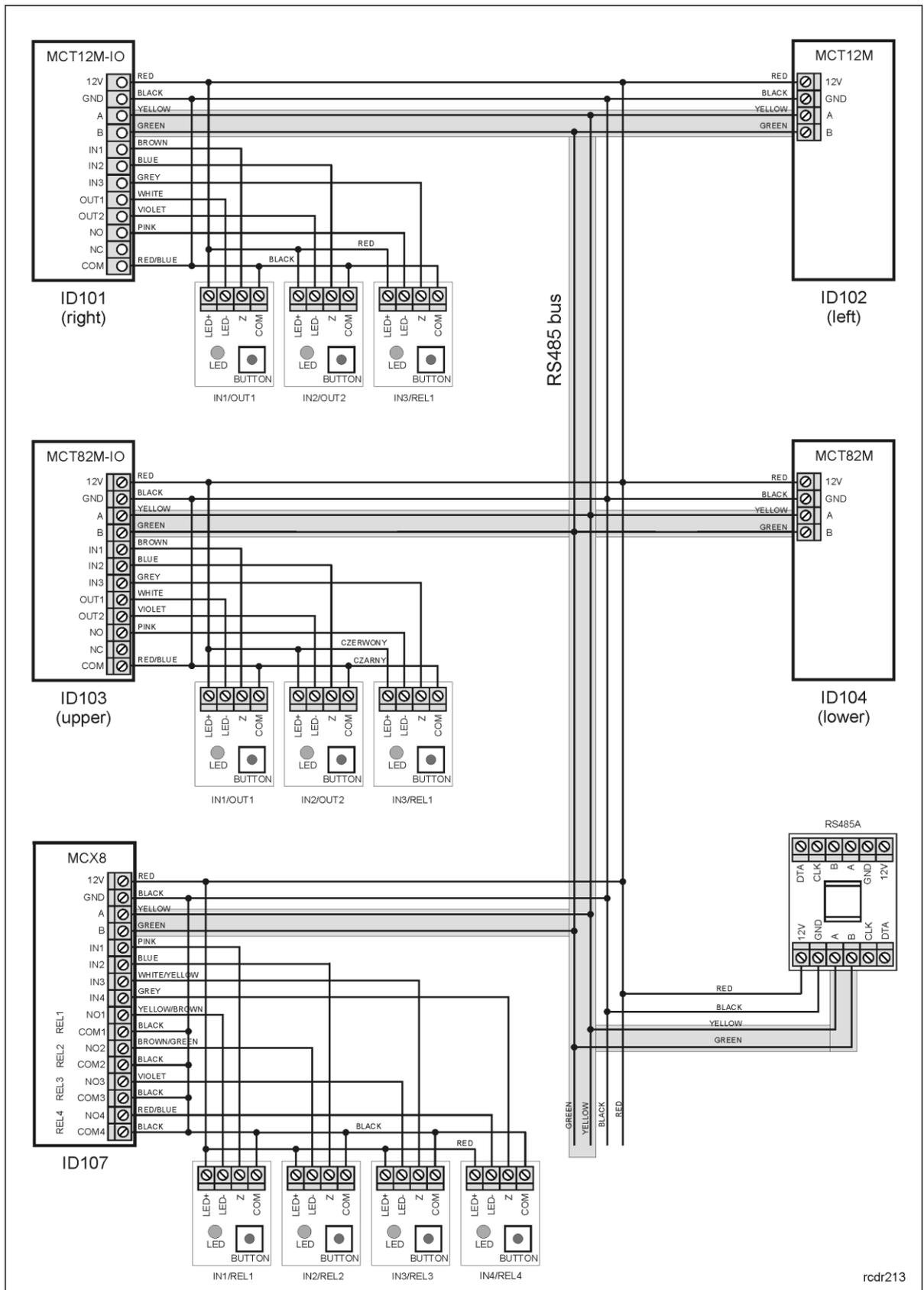


Fig. 4 PDK-2-DBB connection diagram

2.3 Low level configuration (RogerVDM)

RogerVDM software enables low level configuration of RACS 5 devices in order to adapt them to the requirements of particular installation. Generally low level configuration of peripheral devices (MCT readers, MCX expander) and RUD-3 reader at PDK-2-STK and PDK-2-DBB is not necessary for starting and typical use of both kits. In case of MC16 the configuration of such network parameters as IP address, mask and gate as well as configuration of communication key might be required. Default IP address of MC16 controller is 192.168.0.213 while communication key is "1234". Detailed description of low level configuration with RogerVDM software is given in manuals of individual devices. The latest manuals and software are available at www.roger.pl. PDK-2-STK/PDK-2-DBB low level settings were exported and stored on MC16 memory card in _PDK-2 folder. They can be read and uploaded to devices.

2.4 High level configuration (VISO)

VISO ST software offers advanced access control functions including building automation and alarm system control. It is offered free of charge and it does not require hardware license key. VISO ST can be used for configuration and operation of PDK2-STK/PDK-2-DBB kits. Detailed description of high level configuration with VISO software is given in its manual. The latest manual and software are available at www.roger.pl. PDK-2-STK/PDK-2-DBB high level demo settings are stored on MC16 memory card in _PDK-2 folder as *.sdf database. It can be read and uploaded to devices.

2.5 VISO EX

The VISO EX version provides a certain group of additional features not available within VISO ST, i.e. :

- system division to landlord-tenant partitions,
- integration with third party systems through Integration server.

PDK-2-STK includes test VISO EX license file stored on MC16 controller memory card, folder: _PDK2/VISO EX license/. In order to activate VISO EX license it is necessary to:

- install license service (during RogerSVC setup),
- copy the VISO EX license file from MC16 microSD card to PC/Server, where license service is installed,
- plug RUD-3 USB reader to PC/Server, where license service is installed,
- configure and start license service.

2.6 Roger Mobile Key application

In order to use mobile devices for identification (Android, IOS) on the MCT80M-BLE reader it is necessary to install and configure the free Roger Mobile Key application. To download it, scan the appropriate QR code:

Android	IOS
	

3. PDK-2 USE

3.1 List of proximity cards

MCT and RUD-3 readers as well as included Mifare® proximity cards are programmed for SSN reading. SSN is number stored in the memory of Mifare® card according to below low level settings (RogerVDM):

Mifare Classic settings	
Sector type	[1]: SSN
Format	[0]: HEX
First byte position (FBP)	0
Last byte position (LBP)	7
Sector ID	1
Application ID	5156
Block ID	0
Key type	[0]: A
Key	Unknown

Table 1. List of cards			
ID	First name	Last name	Card number in full and in 8,16bit formats
000	MASTER	MASTER	0098785687677 021, 63613
001	Casillas	Ahriman	0047245397482 011, 36330
050	Mauro	Connors	0047245394739 011, 33587
100	Mauro	Levine	0047245400091 011, 38939
101	Paige	Aaron	0047245400686 011, 39534
102	Leslie	Stein	0047245392886 011, 31734
103	Miles	Porter	0124565833730 179, 51202
104	Derrick	Madrid	0124565828408 179, 45880
105	Stephen	Rubin	0124565843203 179, 60675
106	Irune	Devilbiss	0124565833500 179, 50972

3.1 Demo configuration

After connection of power supply to PDK-2-STK its functioning can be verified with included proximity cards, readers and IOS-1 simulators.

According to demo configuration uploaded with VISO software the MC16 controls access at two doors. Each door is equipped with single MCTxx reader and exit button. In case of door 1 (MCT80M-BLE reader) a door contact can be simulated with button connected to IN5 input of the controller and forced door open alarm can be presented with the output OUT5. Exit button is connected to IN7 input of the controller. In case of door 2 (MCT84M reader) a door bell can be simulated with button connected to IN6 input of the controller or F1 function key at the reader. Door bell signalling is presented at OUT6 output of the controller. Exit button is connected to IN8 input of the controller.

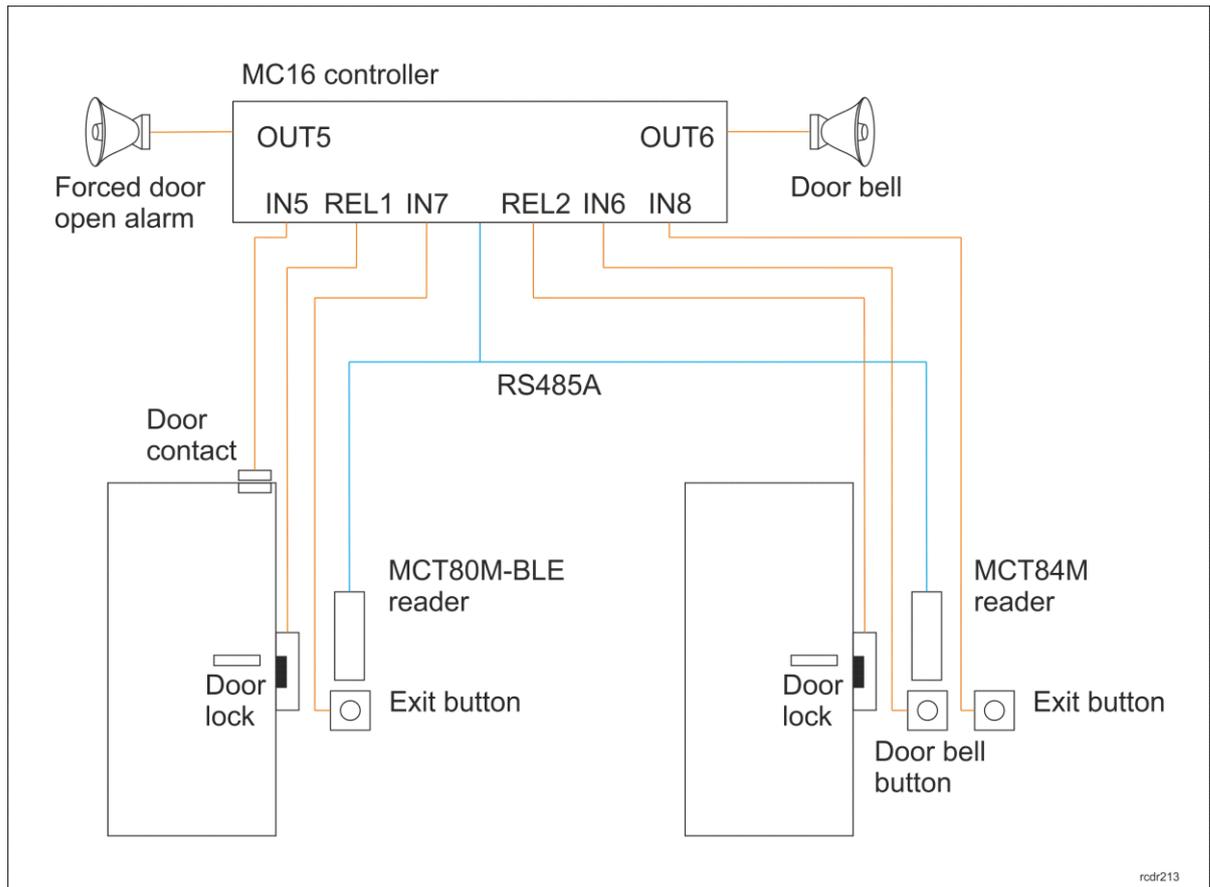


Fig. 5 Conceptual design of demo configuration

- Use any included proximity card on the MCT80M-BLE reader to activate REL1 relay output of the MC16 controller for 4 sec. (door 1 opening).
- Use NFC or Bluetooth identification with value 1234 (assigned to MASTER user) on the MCT80M-BLE reader to activate REL1 relay output of the MC16 controller for 4 sec. (door 1 opening).
- Use any included proximity card on the MCT84M reader to activate REL2 relay output of the MC16 controller for 4 sec. (door 2 opening).
- Enter 1234 PIN of the MASTER user on the right MCT84M reader to activate REL2 relay output of the MC16 controller for 4 sec. (door 2 opening). Confirm the PIN with # button.
- Activate IN7 input with the button to activate REL1 relay output of the MC16 controller for 4 sec. (door 1 opening).
- Activate IN8 input with the button to activate REL2 relay output of the MC16 controller for 4 sec. (door 2 opening).
- Activate IN5 input with button when access is not granted by controller (i.e. REL1 is not activated) to raise forced door open alarm and activate OUT5 output of the controller for 15 sec.
- Activate IN6 input with button to activate OUT6 output of the controller for 8 sec. (door bell).
- Press F1 function key on MCT84M reader keypad to activate OUT6 output of the controller for 8 sec. (door bell).

3.2 Demo configuration upload

It is not possible to read high level settings from controllers in RACS 5 system. In order to review demo settings it is necessary to upload the configuration from backup to VISO software. Then it is possible to modify the settings with VISO and upload them again to MC16 controller. Demo backup configuration is stored on MC16 memory card in _PDK-2 folder as *.sdf . Backup importing procedure is described in VISO manual.

4. ORDERING INFORMATION

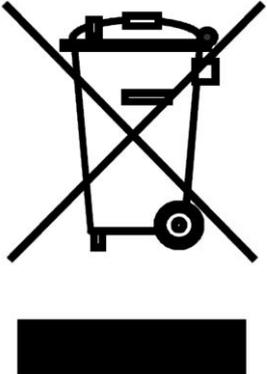
Table 2. Ordering information	
PDK-2-STK	RACS 5 portable demonstration kit with MC16 access controller
PDK-2-DBB	Additional RACS 5 portable demonstration kit offered as extension to PDK-2-STK kit.
MC16-SVC	Service access controller.
MCT80M-BLE	Mifare® 13.56 MHz Classic/DESFire/Plus/NFC/Bluetooth outdoor reader with 2 function keys, black panel, dark grey enclosure.
MCT84M	Mifare® 13.56 MHz Classic/Ultralight reader with touch type keypad, two function keys, black panel, dark grey enclosure.
MCT12M-IO	Mifare® 13.56 MHz Classic/Ultralight outdoor reader with keypad, two function keys , 3 inputs, 2 transistor outputs, 1 relay output.
MCT12M	Mifare® 13.56 MHz Classic/Ultralight outdoor reader with keypad, two function keys.
MCT82M-IO	Mifare® 13.56 MHz Classic/Ultralight reader with touch type keypad, 3 inputs, 2 transistor outputs, 1 relay output, black panel, dark grey enclosure.
MCT82M	Mifare® 13.56 MHz Classic/Ultralight reader with touch type keypad, black panel, dark grey enclosure.
MCX8-BRD	I/O expander, 8 inputs, 8 relay outputs.
RUD-3	Mifare® 13.56 MHz Classic/Ultralight USB reader and card programmer
RUD-1	Universal, portable USB-RS485 communication interface dedicated to Roger access control devices.

5. CLEANING

The devices can be periodically cleaned with a slightly damp cloth and mild, non-abrasive detergents. In particular, it is not allowed to use alcohols, solvents, gasoline, disinfectants, acids, and rust removers for cleaning. Damage resulting from improper maintenance or improper use is not covered by the warranty.

6. PRODUCT HISTORY

Table 3. Product history		
Product version	Released	Description
1.0	08/2016	The first commercial version of the product
1.1	02/2020	MCT84M reader replaced by MCT80M-BLE reader
1.2	09/2020	MC16-PAC-4 controller replaced by MC16-SVC

	<p>This symbol placed on a product or packaging indicates that the product should not be disposed of with other wastes as this may have a negative impact on the environment and health. The user is obliged to deliver equipment to the designated collection points of electric and electronic waste. For detailed information on recycling, contact your local authorities, waste disposal company or point of purchase. Separate collection and recycling of this type of waste contributes to the protection of the natural resources and is safe to health and the environment. Weight of the equipment is specified in the document.</p>
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