Roger Access Control System
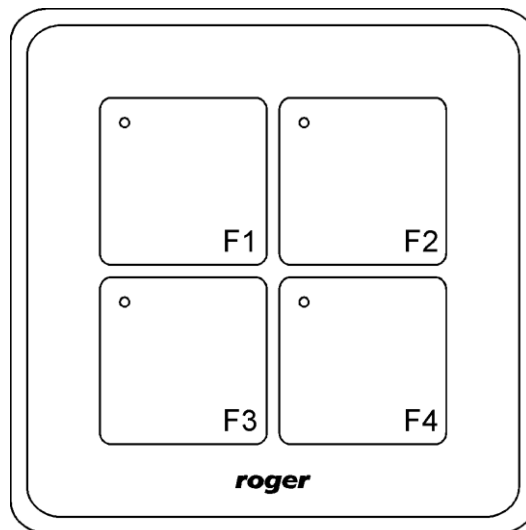
Installation guide for
HRT82FK touch function key panel

Firmware version: 1.0.2.5 or newer

Hardware version: 1.0

Document version: Rev. B

CE

F1   F2

F3   F4

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rcdr200

1. INTRODUCTION

This manual contains minimum information that is necessary to properly install device. Following documents supplement this manual:

- Functional description of HRC controllers
- Installation guide for HRC controllers
- PR821-CH User Manual
- Functional description of PRxx2 controllers

In order to acquire the first one it is necessary to obtain Roger consent and sign non-disclosure agreement (NDA). The remaining ones are available at www.roger.pl.

2. DESCRIPTION AND SPECIFICATION

HRT82FK touch function key panel is peripheral device used in a hotel system based on HRC series controllers, in a hotel system based on PR821-CH controllers and in access control system based on PRxx2 controllers. The device communicates with controller using RACS CLK/DTA bus and enables activation of various functionalities and states with its keys.

HRT82FK front panel includes four programmable LED indicators and four programmable touch buttons which can be used for switching of such hotel indications as 'do not disturb', 'make up room' and 'assistance' as well as for switching T&A modes, Door Modes, automation, etc. The device is equipped with front panel backlight and buzzer.

Table 1. Specification	
Supply voltage	Nominal 12VDC, min./max. range 10-15VDC
Average current consumption	60mA
Tamper resistance	Isolated contact, NC type (normally closed when enclosure is assembled and attached), 24V/50mA
Distance	Between controller and HRT device (RACS CLK/DTA): max. 150m
Environmental class (acc. to EN 50131-1)	Class II, indoor general conditions, temperature: -10°C- +50°C, relative humidity: 10 to 95% (no condensation)
IP code	IP41
Dimensions HxWxD	85 x 85 x 22 mm
Weight	~ 100g
Certificates	CE

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3. INSTALLATION

3.1 Terminals and connection diagram
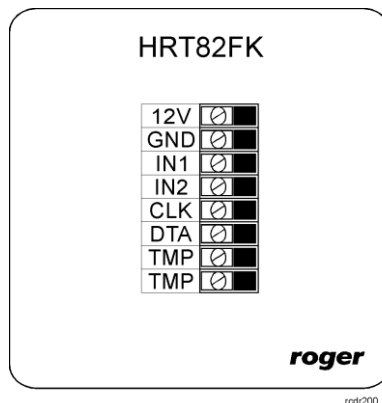
Fig. 1 HRT82FK function key panel

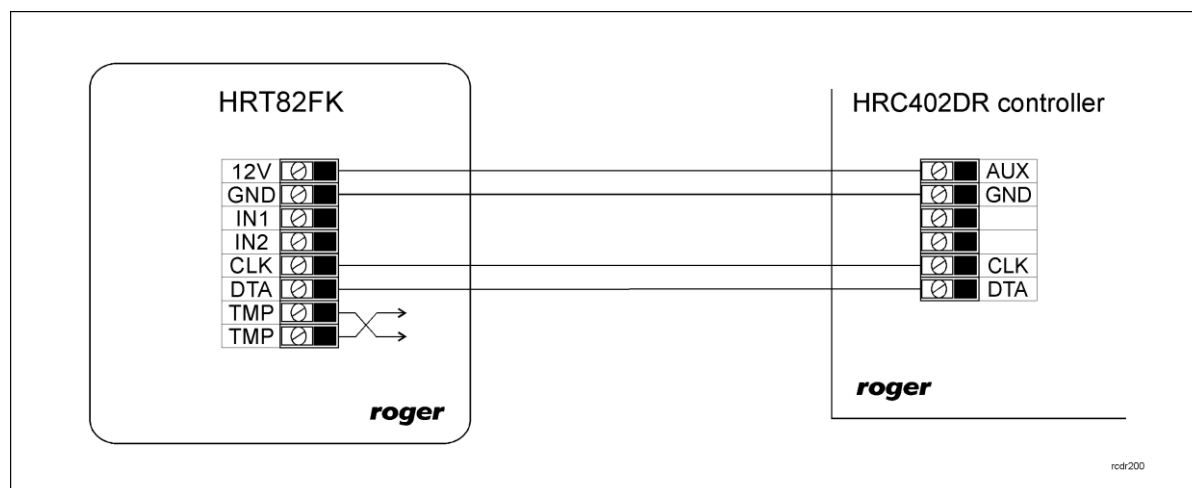| Table 2. HRT82FK terminals			
Term.	Description	Term.	Description
12V	12VDC power supply	CLK	RACS CLK/DTA bus
GND	Ground	DTA	RACS CLK/DTA bus
IN1	not used	TMP	Tamper
IN2	not used	TMP	Tamper

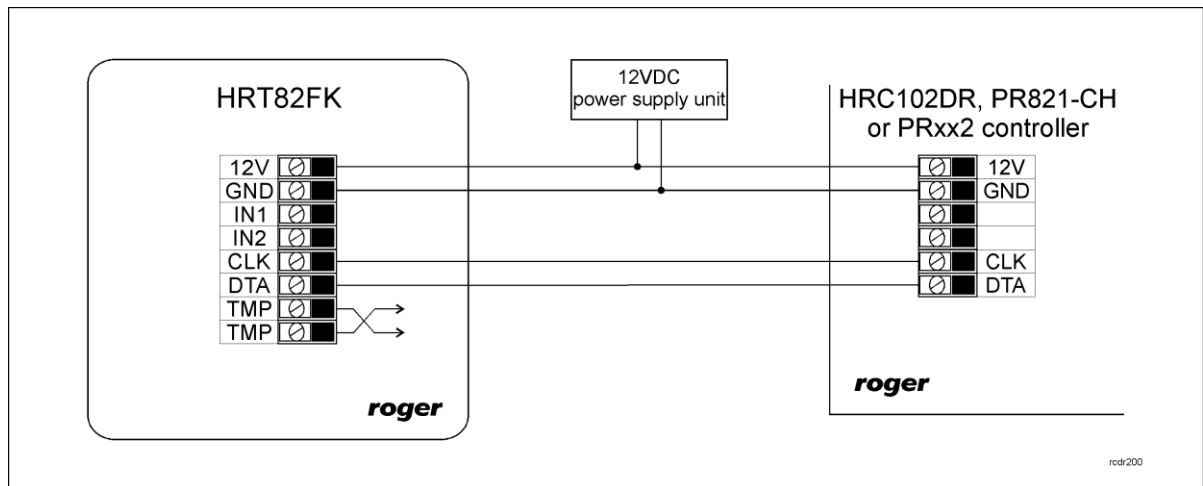Fig. 2 Connection to controller with 12VDC power supply output

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Fig. 3 Connection to controller without 12VDC power supply output

3.2 Power supply

HRT82FK requires 12VDC nominal power supply. The power must be connected to 12V and GND terminals. Additionally, the GND terminal is used as reference potential for the RACS CLK/DTA bus. HRT82FK power supply can be provided by connection to buffer power supply unit (e.g. PS-15DR, PS20) or connection to AUX output of HRC402DR controller (see fig. 2). Backup battery connected to power supply unit or directly to HRC402DR controller can be used in order to ensure operation in case of 230VAC power failure.

Note: All devices connected to the same RACS CLK/DTA bus must be connected to common reference potential (GND).

3.3 RACS CLK/DTA communication bus

RACS CLK/DTA is the addressable bidirectional communication standard developed and applied in Roger controllers in order to enable their communication with peripheral devices. Addresses of all devices connected to CLK and DTA lines must be properly configured in range of 00..15. Standard unshielded signal cables (e.g. U/UTP cat. 5) with maximal length of 150m can be used for RACS CLK/DTA communication.

3.4 Front panel

LED indicators
In the area of each touch key there is located red LED indicator. Each indicator can be assigned one of available functions. In case of PR series controllers the function is configured with PR Master software. In practical applications, indicator is assigned a function associated with a key function in order to signal that the key was used and adequate function or state was activated.

Touch buttons
HRT82FK panel is equipped with four touch keys. Each key can be assigned one of available functions. For operation with HRC or PR821-CH controller usually 'do not disturb', 'make up room' or 'assistance' functions are assigned while for operation with PRxx2 controllers, T&A Mode, Door Mode or automation functions are assigned. In case of PR series controllers functions are configured with PR Master software. PR series controllers can recognize if HRT82FK function key is pressed shorter (default 125ms) or longer (default 3s). Therefore in such application the key can be assigned and used for two different functions.

3.5 Wall mounting and installation guidelines

HRT82FK consists of front panel and base which are factory assembled and require manual disassembly prior to installation according to fig. 4.
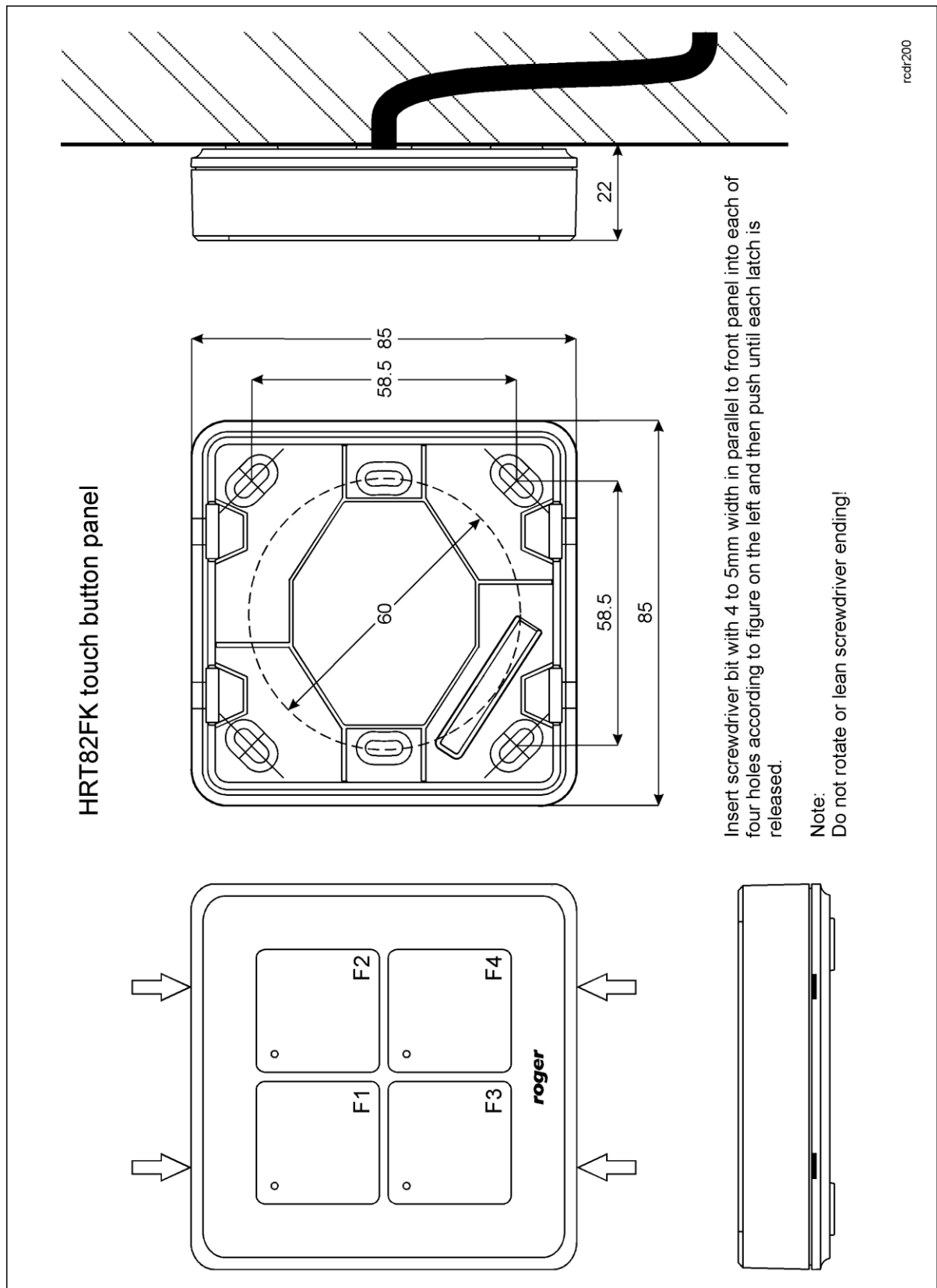
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Fig.4 HRT82FK latches and wall mounting

Installation guidelines

- Install device on wall far from sources of heat and moisture
- It is recommended to install device on Ø60mm flush mounting box

- All electric connections must be made with power supply switched off
- Run connection wires through hole in device base and then connect wires to screw terminals
- If device and controller are supplied from different power supply units then it is necessary connect GND terminals of both devices
- Front panel can be regularly cleaned with wet cloth and mild detergent. Do not clean by means of abrasive materials and strong cleaners like alcohols, solvents, etc.
- Damages resulting from improper maintenance or use are not covered by warranty

4. CONFIGURATION

4.1 Device programming

The address of factory new HRT82FK is ID=12 and such device is ready to communicate with HRC, PR821-CH or PRxx2 controller requiring no additional configuration. Additionally, HRC controller can operate with up to four HRT82FK panels. In such case each panel must have unique address in range of 12..15.

If necessary, HRT82FK settings can be modified with RogerVDM software (available at www.roger.pl) after connection to RUD-1 communication interface.
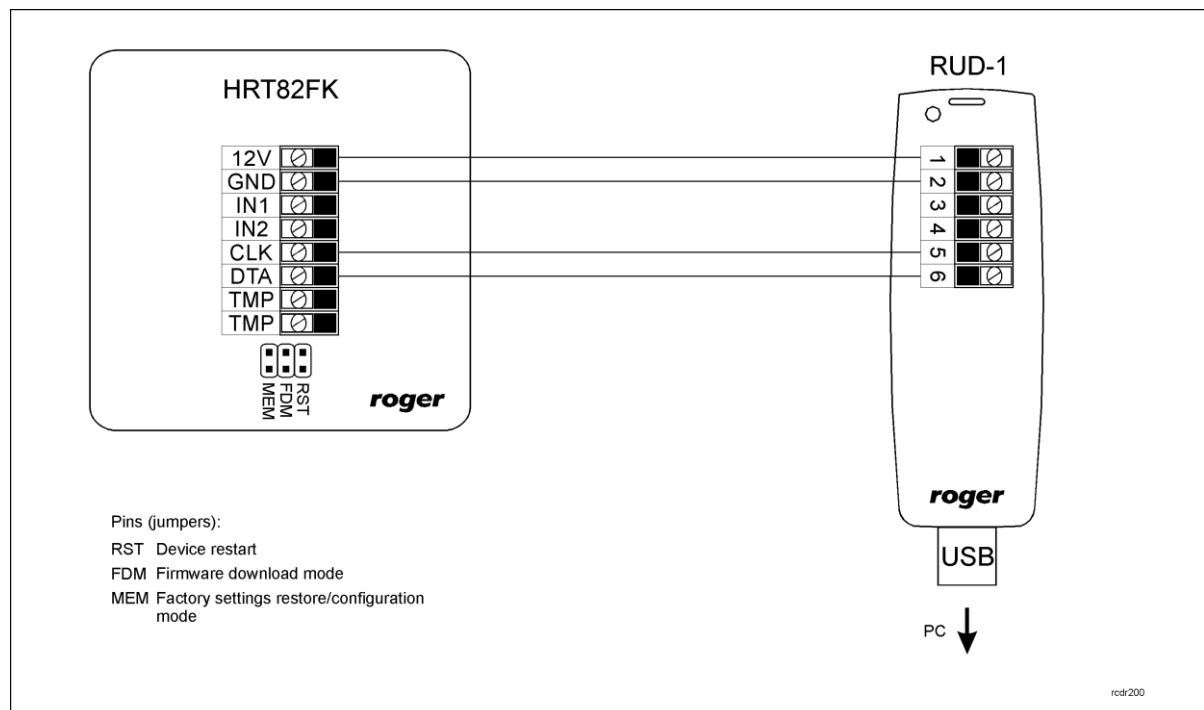

Fig. 5 HRT82FK and RUD-1 connection

Connection and configuration procedure
1. Connect device to RUD-1 communication interface according to fig. 5
2. Place jumper on MEM pins
3. Restart the device (place and remove jumper on RST pins or switch power supply off and on)
4. Install and start RogerVDM software
5. In the opened window select device, firmware version, communication channel and serial port with connected RUD-1 – see fig. 5
6. Select Connect button, the software shall establish connection with the device and automatically switch to configuration window
7. Enter required settings (configuration window is shown in fig. 7, while options are described in table 4)
8. Select Send to Device button – the software shall upload new settings
9. Remove jumper from MEM pins
10. Restart the device (place and remove jumper on RST pins or switch power supply off and on)

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Note:
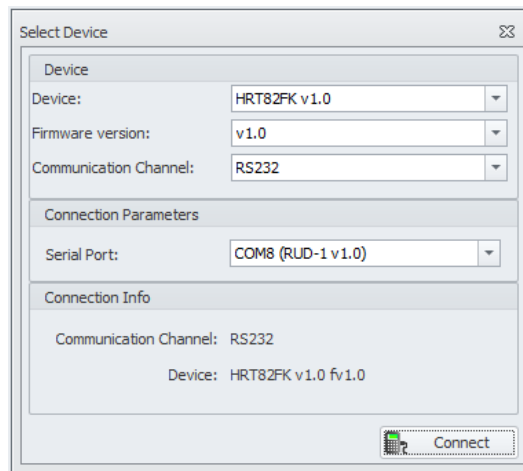During connection procedure placing jumper on MEM pins and restarting the device restores its factory default settings.

Fig. 6 Device select window in RogerVDM software

Fig. 7 Configuration window in RogerVDM software

Table 4. Configuration parameters		
Parameter	Values	Description
General		
Device Name	16 ASCII characters	Device description which can be filled with any comment by installer
Transmission Format		
RACS CLK/DTA Address	0..15	Device address on RACS CLK/DTA bus. Default address ID=12 is required for communication with controller.
Communication timeout	0..255	The device signals communication failure when selected timeout [0.5s] elapses. When 0 is selected then failure is not signalled at all.
Optical Signalization		
Backlight Dim	On, Off	When activated, panel will temporary switch off keypad backlight when key is pressed.
Acoustic Signalization		
Buzzer loudness level	0..100%	Buzzer loudness level. Buzzer is switched off when 0 level is selected

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Key Press Confirmation Signal On Buzzer	Yes, No	When activated, button pressing is signalled with buzzer.
Advanced Settings		
Key Short Press [s]	0,125..1	Function key short press time.
Key Long Press [s]	1,125..3	Function key long press time. Key long press can be recognized only by PR series controllers.

4.2 Firmware update

HRT82FK firmware can be updated with RogerVDM (available at www.roger.pl) after connection to RUD-1 communication interface.

Firmware update procedure
1. Connect device to RUD-1 communication interface according to fig. 5
2. Install and start RogerVDM software
3. Close Select Device window
4. In top menu select Tools->Update firmware
5. In the opened window select device, port with connected RUD-1 and specify path to firmware file (*.hex) – see fig. 7
6. According to displayed message place jumper on FDM pins and restart the device (place and remove jumper on RST pins or switch power supply off and on)
7. Select Update button
8. After firmware upload remove jumper from FDM pins and reset device (place and remove jumper on RST pins or switch power supply off and on)
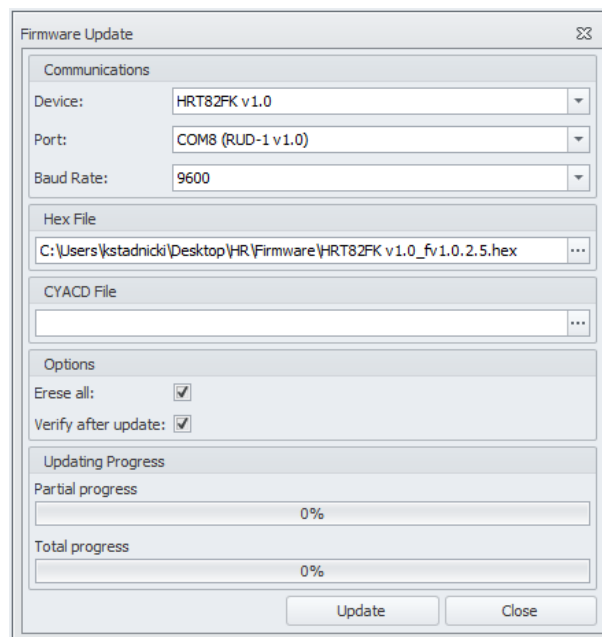

Fig. 8 Firmware update window in RogerVDM software
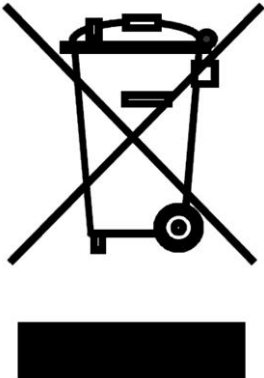
4.3 Memory reset

In order to restore HRT82FK factory default settings place jumper on MEM pins and then restart the device either by placing and removing jumper on RST pins or by switching power supply off and on. Moreover, memory reset is also part of connection and configuration procedure (see 4.1).

5. ORDERING INFORMATION

Table 5. Ordering information	
HRT82FK	Touch type function key panel
RUD-1	Communication interface with 12VDC power supply output

6. PRODUCT HISTORY

Table 6. Product history		
Version	Released	Description
HRT82FK v.1.0	07/2014	The first commercial version of the product

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.

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