



H-Pro/PT

Universal portable terminal with RFID 13.56 MHz reader

TECHNICAL SPECIFICATION

The H-PRO/PT universal portable terminal (hereinafter "the terminal") is a device intended for reading and writing data on proximity chips and cards working on the frequency of 13.56 MHz; its extended version enables also reading barcodes.

There are several modifications of the terminal:

H-PRO / PT - the terminal is connected with the control system via a cable which ensures both communication and power supply. This version enables reading and writing data on proximity cards and chips working on the frequency of 13.56 MHz.

H-PRO / PT / BC - features are identical to H-PRO / PT, but this type can also read barcodes.

H-PRO / PT / WU - terminal consists of two parts - stationary and portable. The communication between the two parts is wireless in the UHF band. This version enables reading and writing data on proximity cards and chips working on the frequency of 13.56 MHz.

H-PRO / PT / BC / WU - features are identical to H-PRO / PT / WU, but this type can also read barcodes.

H-PRO / PT / WB - terminal consists of two parts - stationary and portable. The stationary part charges the portable part; the connection between the portable part and the control system is wireless using the BlueTooth technology. This version enables reading and writing data on proximity cards and chips working on the frequency of 13.56 MHz.

H-PRO / PT / BC / WB - features are identical to H-PRO / PT, but this type can also read barcodes.

GENERAL FEATURES:

- Range of working temperatures: -10°C up to +45°C
- Humidity: 5% to 95%
- Plastic cover is shockproof, improved protection against climatic effects, protection class: IP 41

PROXIMITY READING HEAD

- Frequency: 13.56 MHz
- Reading distance: 20 - 40 mm according to the type of card or tag
- Supported cards and tags (reading and writing, reading only in the case of the Wiegand interface):
 - Mifare Standard 1k and 4k (ISO14443A, part 1 to 3)
 - Mifare DES Fire 8 K according to Philips specification
 - Tags and card conforming to ISO14443B
 - Mifare DES Fire according to Philips specification (ISO14443A, part 1 to 4)
 - Mifare DES Fire 2 K according to Philips specification
 - Tags and card conforming to ISO15693
- Supported cards and tags (reading only): Tags TagSys ARI0 210

BARCODE SCANNER

UPC; UCC EAN 128; Code 11, Code 39, Code 93, Code 128; EAN; Codebar

CRYPTOGRAPHY

- Integrated SAM module for the support of cryptography and storage of keys (internally, up to 196 keys according to their type and length)
- Types of supported protocols: CRYPT1, DES, 3DES
- Possibility of remote modification of keys and firmware, SAM module is positively identifiable (it has a dedicated UID)

COMMUNICATION INTERFACE

H-PRO /PT, H-PRO /PT/BC - Variants of communication with the super ordinate system:

- USB interface, version 1.1 or 2.0 (provides also for power supply of the terminal)
- Serial interface WIEGAND (enables only reading ID numbers of cards, but not writing data)
- Serial asynchronous channel with the RS232 interface
- Serial asynchronous channel with the RS485 interface

H-PRO /PT/WU, H-PRO /PT/BC/WU

The communication between the stationary and portable part is wireless, UHF band, with the following features:

- Frequency: 868 MHz
- Channel: 103-109
- Address: 0-255
- Maximum distance of the wireless communication between the stationary and portable part is 20 - 100 m (depending on the environment conditions)
- The stationary part may be supplied in a configuration featuring either an external or an internal antenna. Using the external antenna is suitable if there is a metal barrier between the stationary and portable part or if the distance between these two parts is large.

Variants of communication between the stationary part and the super ordinate system:

- USB interface, version 1.1 or 2.0 (provides also power supply of the terminal)
- Serial asynchronous channel with the RS232 interface
- Serial interface WIEGAND (enables only reading ID numbers of cards, but not writing data)
- Serial asynchronous channel with the RS485 interface
- Ethernet 10 / 100 MBit - supports also power supply through Ethernet (POE)

H-PRO /PT/WB, H-PRO /PT/BC/WB - The communication between the portable part and the super ordinate system is wireless using BlueTooth interface. Addressing for the device is done by a 12 Byte identifier

The maximum distance of the wireless communication is 2 - 10 m (depending on the environment conditions)

SUPPORTED COMMUNICATION PROTOCOLS

- **RPX** 38400 Bd
- **DIP1** 9600 Bd
- **DIP2** 9600 Bd
- **WIEGAND**

COMMUNICATION WITH THE USER

KEYBOARD - foil, 4 buttons

- LED**
- Left red and green
 - Right red and green

ACOUSTIC SIGNALIZATION - integrated buzzer

DISPLAY

Type: Transreflexive, monochromatic display with lighting ensuring visibility in any environment from complete darkness to direct sunlight.

Resolution: 12x8 characters (1 character 8 x 8 dots)

Displayed data: particular data on the display depend on application

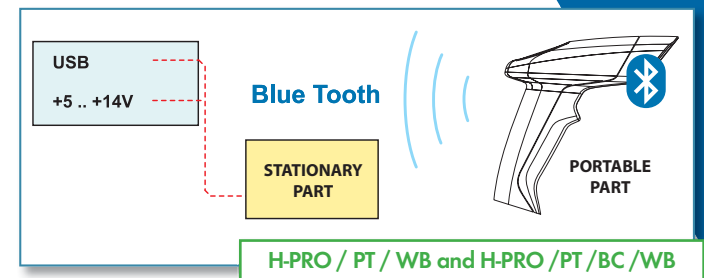
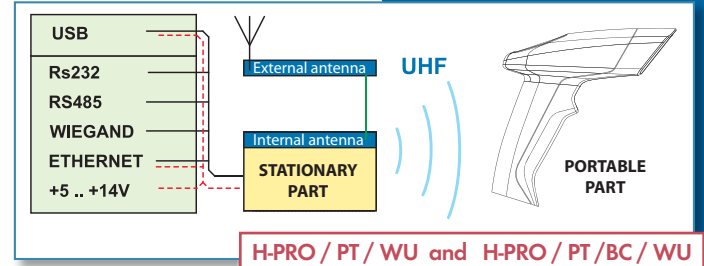
- UHF / Bluetooth address
- operation mode
- arrival / departure
- condition of accumulator
- Start / end connection with the stationary part

POWER SUPPLY

H-PRO / PT - USB or external source +5V to +14V

H-PRO / PT / WU, H-PRO / PT / WB

- Integrated Lithium-Ion accumulator 3.7V / 1600mAh, replaceable
- Power supply of the stationary part and accumulator from the USB interface or external source of +5V to +14V, I_{max} = 0.5A
- Power supply of the stationary part and the accumulator from the Ethernet interface (if it enables the POE function) - applies only to H-PRO/PT/WU/EP, H-PRO/PT/BC/WU/EP
- Typical time of operation at fully charged accumulator 4 hours of permanent operation 12 hours of typical operation (1200 cycles of reading cards, tags or barcodes)



OVERVIEW TYPES

TITLE	VERSION			READER		INTERFACE					POWER SUPPLY		
	Cable	UHF	Bluetooth	RFID 13.56	Barcode	USB	RS232	Wiegand	RS485	Ethernet	USB	5 ... 14V	POE (Ethernet)
H-PRO/ PT/ U	•			•		•					•	•	
H-PRO/ PT/ R2	•			•		•	•				•	•	
H-PRO/ PT/ W	•			•		•		•			•	•	
H-PRO/ PT/ R4	•			•		•			•		•	•	
H-PRO/ PT/ BC/ U	•			•	•	•					•	•	
H-PRO/ PT/ BC/ R2	•			•	•	•	•				•	•	
H-PRO/ PT/ BC/ W	•			•	•	•		•			•	•	
H-PRO/ PT/ BC/ R4	•			•	•	•			•		•	•	
H-PRO/ PT/ WU/ U		•		•		•					•	•	
H-PRO/ PT/ WU/ R2		•		•		•	•				•	•	
H-PRO/ PT/ WU/ W		•		•		•		•			•	•	
H-PRO/ PT/ WU/ R4		•		•		•			•		•	•	
H-PRO/ PT/ WU/ E		•		•		•				•	•	•	
H-PRO/ PT/ WU/ EP		•		•		•				•	•	•	•
H-PRO/PT/BC/WU/U		•		•	•	•					•	•	
H-PRO/PT/BC/WU/R2		•		•	•	•	•				•	•	
H-PRO/PT/BC/WU/W		•		•	•	•		•			•	•	
H-PRO/PT/BC/WU/R4		•		•	•	•			•		•	•	
H-PRO/PT/BC/WU/E		•		•	•	•				•	•	•	
H-PRO/PT/BC/WU/EP		•		•	•	•				•	•	•	•
H-PRO / PT / WB			•	•							•	•	
H-PRO / PT / BC / WB			•	•	•						•	•	

APPLICABLE ONLY TO H-PRO/PT/WU:

- Stationary part with internal antenna - the identification of the terminal does not change.
- Stationary part with external antenna - to the identification of the terminal added prefix AX (e.g. H-PRO/PT/BC/WU/E/AX)