

A programmable reader for mobile and RF identifiers U-Prox mini User manual

Introduction

U-Prox ID reader is intended to be applied in different access control systems, using RS232, Wiegand 26, Wiegand 37, Wiegand 42, Wiegand auto. Personification mode of U-Prox IDentifiers is supported by setting an additional encryption mode.



Identifiers types

U-Prox-mini proximity readers operate with U-Prox ID and ASK and/or FSK IDs. The reader settings, the interface and the identifiers types, which are allowed to work with, can be changed by using mobile application. The reader can be programmed to work with ASK and/or FSK and/or U-Prox ID. The functioning of ASK and FSK IDs will be disabled automatically, while switching on U-Prox ID personification mode.

Design

The reader is placed in elegant plastic case with its future hermetization. Due to the small overall dimensions, U-Prox-mini possesses increased reliability and strength.

Benefits

Case	Material	ABS plastic
	Color	black, gray, white
	Dimensions	80 x 45 x 12,5 mm
	Weight	70 g
Ambient Conditions	Oper. temp.	-35°C . . . +60°C
	Humidity	100% rel. at +25 °C
Power Supply	Voltage	+5. . . +15 VDC
	Current	up to 40 mA
	Max current	up to 50 mA
	Voltage ripple	up to 500 mV _{p-p}

Read range

Typical read range is 50-100 mm and depends on tag type used with it. Read range of U-Prox ID is up to 0.5 m. With a supply voltage of +13.5 V and the voltage ripple up to 50 mV, standard read range for EM-06 identifiers is 80 ... 100 mm, while placing them in parallel to case.

Colour	W2 / W3 / W4 / WS	RS232	DB-9
Functions			
Green	Data 0	Rx	3
White	Data 1	Tx	2
Red	+V	+V	
Black	GND	GND	5
Brown	Red Led	-	
Orange	Green Led	-	
Blue	Beep	-	
Yellow	Hold	Hold	

Wiring

Reader has 8 wire cable for connecting to access control panel. The reader terminal functions are listed in the table above (+ V - external source +12 V): We recommend using multi-core signal cable with 0.22 mm² cross-section of each wire between reader and panel. Using such cable, maximum panel read range is up to 150 m (Wiegand interface). Using a twisted pair to connect reader, you should follow the Figure 1.

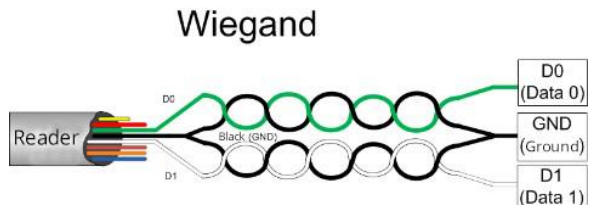


Figure 1

Types of interfaces

Depending on modification, reader supports one of the following interfaces: Wiegand 26, 37, 42 or standard with automatic selection (W2, W3, W4, WS) and RS-232C (RS).

Mounting

We recommend to install reader on the wall next to the door from the lock side. Reader should be installed in the way that is convenient for all users. You should make small recess or hole (diameter is 14 mm) to connect cable under the reader's case. Do not place the reader on metal surfaces, since it causes decreasing of read range. If more than one reader is used in the system, place them not closer than 20 cm one from another to eliminate the effect of double reading.

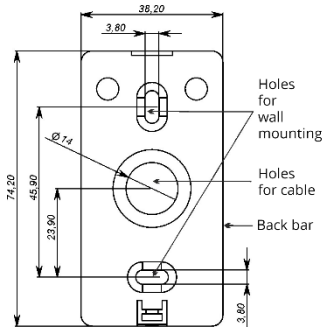


Figure 2

Reader Installation

Loosen the screw at the bottom of the reader. Remove the top cover and detach the back plate.

Use reader back plate as a template, mark out and drill two holes (diameter – 5mm, depth–30mm) at this place (see Fig. 2).

Pass cable into the central hole; fasten the back plate to the wall, using supplied plastic dowels and screws. Connect reader with cable, which attaches it to panel.

Insert reader into the back plate, put the top cover and tighten it with a screw.

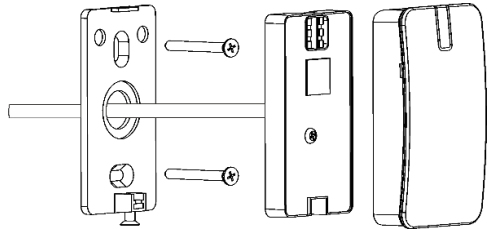


Figure 3

The Reader Operation

RFID Card Code Reading

Code is read when a valid non-contact ID is passed.

Card code reading is annunciated by embedded buzzer and LED lamp according to the interface type and annunciation mode (see Section «Data transfer and Annunciation»).

Repeated reading will be available after 0.8 sec only if card is removed from the reader sensing area.

U-Prox ID code reading

Download and install mobile software U-Prox U-Prox ID. It enables to receive, store U-Prox ID and transfer ID code between reader and smartphone.

Full description of mobile application U-Prox U-Prox ID operation you can find at the link: <http://u-prox.com/UPROXIDEN>

Hold mobile device near the reader (standard distance is 10-40 cm) and press the button

The application will execute data exchange. The card code reading is annunciated by embedded buzzer and LED according to the interface type and annunciation mode (see Section «Data transfer and Annunciation»)



U-Prox ID(Android)

Hold Mode

Reader is turned to the hold mode while yellow wire is shorted to ground. In this mode, reader does not read cards that reduces the current consumption to 25 mA.

Relay or an open collector transistor can switch on hold mode.

It is prohibited to supply the external voltage to the yellow wire!



U-Prox ID (Apple iOS)

Data transfer and Annunciation

Reader has two-colour LED indicators and buzzer.
LED and buzzer control depends on the interface type.

Wiegand Interface

Engaging of LED and buzzer is automatic or by grounding of corresponding wire (see Section «Wiring»)

Annunciation mode:

	Buzzer	Red LED	Green LED
00	Beep on card read	LED normally on, switch off at reading	Blinking at reading
01	Control from outside	LED normally on, switch off at reading	Blinking at reading
02	Beep on card read	Switch off	Blinking at reading
03	Control from outside	Switch off	Blinking at reading
04	Beep on card read	LED normally on, switch off at reading	Control from host
05	Control from outside	LED normally on, switch off at reading	Control from host
06	Beep on card read	Control from host	Control from host
07	Control from outside	Control from host	Control from host
08	Beep on card read Possibly to control from outside	LED normally on, switch off at reading Possibly to switch off from outside	Blinking at reading Possibly to switch on from outside

Data transfer from the reader corresponds to the specified standard.

Interface RS232

ID reading is accompanied by transferring the packet with its code to panel.
Transmission of control packet to the reader is required, to control annunciation. Packets should be transmitted with 2 400 bps rate, 8 bit data, no parity, 1 stop bit.

Personalization mode

Reader supports mode in which it reads only those U-Prox ID codes that are encrypted with the known encryption key, set during programming.

Reader programming

Download and install mobile software U-Prox Config. The reader is fully configured with it.

Run the reader in the programming mode –short D0 (green) and D1 (white) terminals with each other and power up the reader.

Attention!!! «To access, shorten green and white wires and then restart reader» message appears in the program window in case of unauthorized connection attempt (D0 and D1 terminals aren't shorted).

Start U-Prox Config, press "Search" button and then device search will be started. After scanning, select reader from list and press "Connect" button to upload reader settings.

Main application menu available for the reader settings adjustment, up- and downloading, save or restore reader settings for future use (as template) and update its firmware, after successful upload. You can check the serial number and firmware version of device, set ID types for reader operation, type of front-end interface and annunciation modes in the "Settings" section.

You can also switch on personification mode by setting encryption password of U-Prox IDentifiers (8 symbols).

Item "Record to device" will be available in the main menu after setting up reader. Application downloads new settings into the reader after 'Record to device' button press.

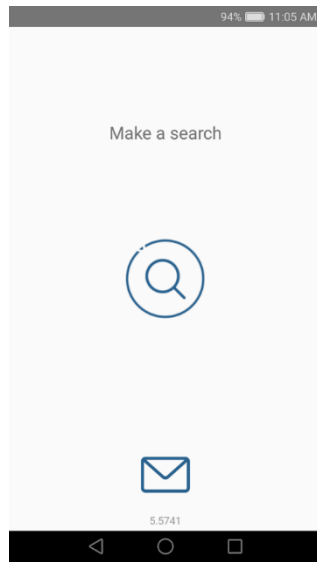
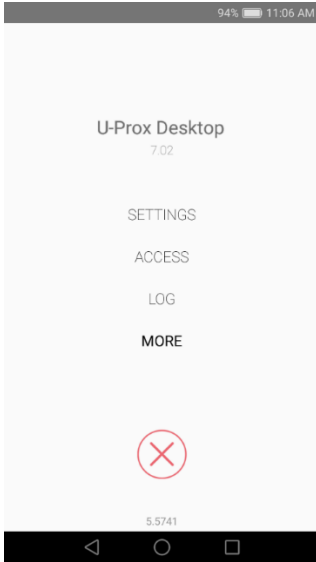


U-Prox Config (Android)



U-Prox Config (iOS)

Full description of mobile application U-Prox U-Prox ID operation you can find at link:
<http://u-prox.com/UPROXCFGEN>



Limited Warranty

The manufacturer guarantees the correspondence of U-Prox mini reader to the requirements of technical regulations ETSI EN 300 330-2 V1.5.1 (2010-02); IEC60839-1-3-2001; EN 50385: 2007 during warranty period of storage and operation under the fulfillment of transportation, storage and operation conditions, that are established by technical specifications.

Warranty period of storage is 6 months from the date of manufacture. Warranty period of operation is 18 months from the date of purchase.

If a defect caused by the fault of the manufacturer is identified, the manufacturer will provide the defect removal within 10 days from the date of receiving the complaint.

Consumer will be deprived of warranty service, in case of commissioning or repair work by an organization that does not have the authority of the manufacturer to carry out those works.

For warranty services, please contact:

Certificate of acceptance

Reader U-Prox mini, serial number

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corresponds to ETSI EN 300 330-2 V1.5.1 (2010-02); IEC60839-1-3-2001; EN 50385: 2007; and is considered usable.

Content

1. Reader - 1 pc.
2. Passport with instructions.
3. Screw - 2 pcs.
4. Dowel - 2 pcs.
5. Individual package.

QC passed

Date of sale " ____ " _____ 20 ____ y.