

TX-RFID1

RFID electronic module

Manual

Firmware version:	0.2
Revision:	1
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CERTIFICATE OF CONFORMITY



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IMPORTANT INFORMATION



The crossed-out bin sign means that after use of the product within the European Union it must be disposed of in a separate container designated for this purpose. This concerns both the device itself as well as the accessories marked with this sign. Those products should not be disposed of with unsorted household waste.

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The manufacturer of the device promotes a policy of continuous development. The manufacturer preserves the right to introduce changes and improvements to any functions of the product referred to herein without prior notice.

Individual functions shall be available depending on the device software version. You can check the details at your nearest distributor of the devices.

Under no circumstances shall the manufacturer be liable for any loss of data, income or any special, incidental, consequential or indirect damages caused in any way.

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1. BACKGROUND

TX-RFID1 is a universal electronic module equipped with a wireless RFID communication interface and the wired communication interfaces RS-232, CAN, and UART-TTL. The module features the latest technologies and the popular Mifare standard for wireless card reading, which makes it ideal for applications such as access control, automatic identification and universal wireless data communication.

2. FEATURES OF THE READER

2.1. FUNCTIONAL PARAMETERS

RF INTERFACE

- Card reading and writing modes

INTERNAL MEMORY CAPACITY

- 64 kB

WIRELESS TRANSMISSION

- CAN, RS-232, UART-TTL*

Data transmission format

- XML – for RS-232, UART-TTL (the transmission protocol between the module and external device can be implemented according to the customer's requirements)

Configuration

- Done locally using a programmer

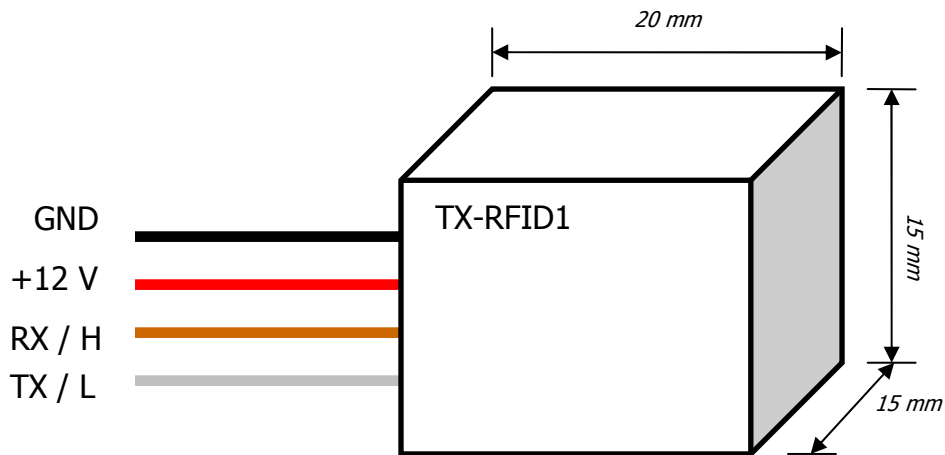
2.2. TECHNICAL PARAMETERS

Power supply	12 VDC
Current consumption	200 mA
Frequency	13.56 MHz
Reading distance	20-50 mm
Wired interface*	CAN, RS-232, UART-TTL
Wire length	50 mm
Transponder	Read / write
Card types	ISO 14443A Mifare; MF1 / Ultralight
Transmission protocols	XML – for RS-232, UART-TTL (other interfaces can be arranged with the manufacturer)
Casing dimensions:	20 mm x 15 mm x 15 mm
Casing material	ABS

Weight:	~30 g
Operating Temperature	-10 ÷ 60°
Humidity	10 ÷ 90%

* The wired interface type depends on the customer's requirements (applies to OEM orders).

2.3. CASING AND LEADS



3. APPLICATIONS

- Access control
- Car immobilisers
- Vending machines
- Protection systems

4. INSTALLATION CONSIDERATIONS

- All electrical connections should be done only when the power supply is disconnected.
- RFID card sensors must be installed at a minimum distance of 0.5 m from each other.
- Install the module in a dry and shaded place, away from any heat or humidity sources.
- Do not install in areas exposed to direct sunlight.
- Installation on metal surfaces may reduce the reading range.

5. CONFIGURATION IN THE TEST MODE

1. Hyperterminal settings
 - Baud rate: 9600 bps
 - Data bits: 8
 - Parity: none
 - Stop bits: 1
 - Flow control: none

- check the "Send line ends with line feeds" and "Echo typed characters locally" checkboxes (File -> Properties -> Settings -> ASCII Setup)
 - activate the connection by selecting Call -> Call
2. Device preparation
- disconnect the power supply
 - connect the programming cable to the RX/TX line
 - connect the power supply
3. Checking the firmware version
- wait for the <TEST_MODE> message
 - send the <version> command (note: the command is case-sensitive)
 - The device should return the serial number and firmware version in the following format:
 - <serial>0x000002af</serial>
 - <version>tx-rfid1-0.2</version>
 - The serial number is in hexadecimal notation.

6. REVISION HISTORY

Date / Revision / Firmware	Description
21.01.2011 / 1 / 0.2	First version of the manual