Matrix II EH

ACS RFID EM-Marine & HID ProxCard II Reader (125 kHz)

User Manual

1. GENERAL INFORMATION

Matrix II EH RFID reader is used in Access Control Systems (ACS) to read contactless EM-Marine Proximity and HID ProxCard II cards, and transmit the acquired card code via iButton (Dallas Touch Memory) or Wiegand 26 protocols. The reader allows for cards of both EM-Marine and HID ProxCard II standards to be used simultaneously.

2. MOUNTING AND CONNECTION

The reader should be mounted on a flat surface, in a place allowing unimpeded proximity card access to the reader.
To mount the reader, perform the following sequence:
- Mark and drill the mounting holes, per Fig. 1;
- Connect wires to the reader socket, according to layouts on Fig. 4 and 5.
- Remove the thin tab in the reader case, from the side where the cable must come out (Fig. 3), and
  feed the cable through this hole. When power is connected to the reader, the red LED will light up.
- Mount the reader in the desired place and fix it with screws;
- Close the reader holes with supplied plugs (Fig. 2)

Note 1: Do not install readers closer than 10 cm one from another.
Note 2: To achieve the specified reader distance from controller, a CAT5e UTP cable must be used (Fig. 5)

3. OPERATION

The reader operation without external indication control:
1. When power is supplied, in standby mode (no card present in the working zone), the LED shines solid red.
2. On card approach, its number is acquired. If succeeded, the LED turns green for a short time, then switches off, and a short beep also sounds.
3. While the card remains within the working zone, the LED stays off.

The external control for red and green colours of the LEDs and the buzzer is done by shorting corresponding terminals (LED R, LED G, BEEP) to the common ground terminal. The external indication control for one mode can be used with internal indication control for another; by default, both the LED and the buzzer are internally controlled. After external indication control signal has been activated (for example, for the LED), that indication goes under external control, while the other (in this case, the buzzer) remains under internal control.

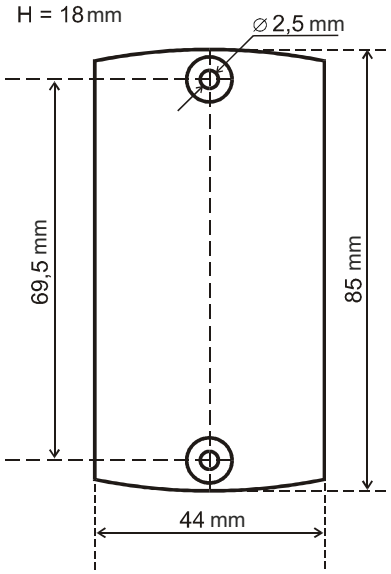

Figure. 1
Reader Dimensions

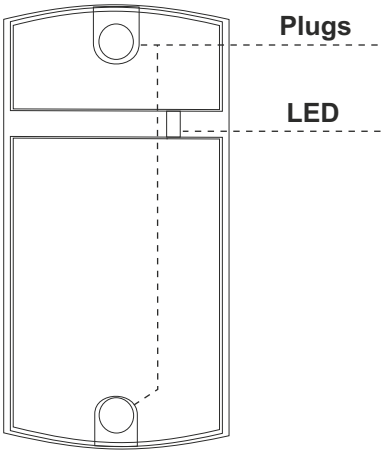

Figure. 2

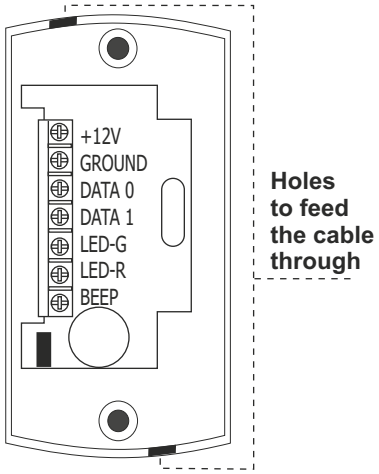

Figure. 3

CONNECTION LAYOUT

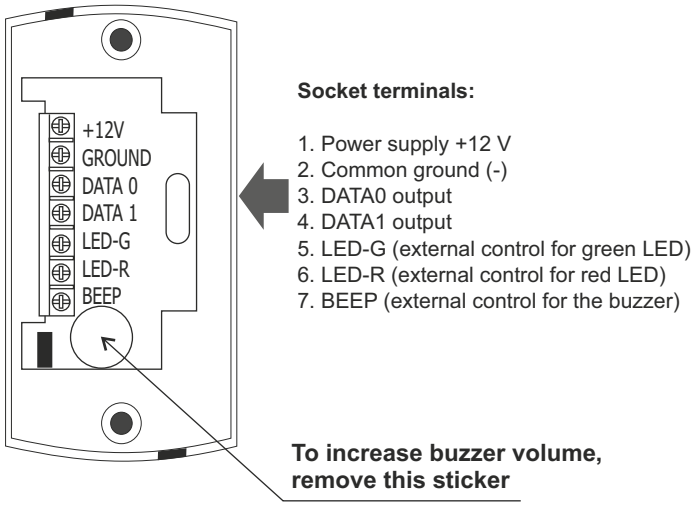

Figure. 4

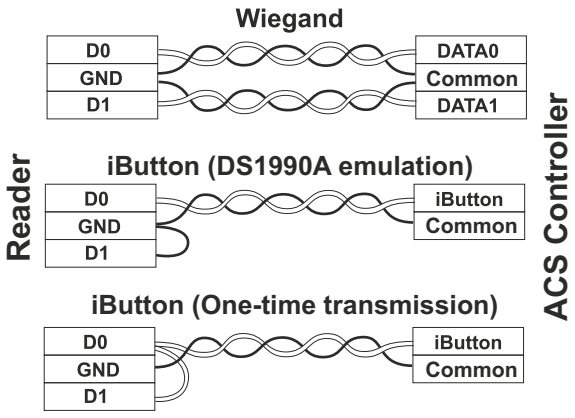

Figure. 5
Connecting the reader to ACS controller.

4. SPECIFICATIONS

- Working frequency: .....125 kHz;
- Supported tokens: .....EM-Marine and HID ProxCard II cards;
- Card standard detection: .....Automatic, no additional configuration required;
- Card reading distance: .....2…14 cm;
- Output interface: .....iButton (Dallas Touch Memory), Wiegand 26;
- Line distance from controller:
    - via iButton protocol: .....15 m;
    - via Wiegand 26 protocol: .....up to 100 m;
- Card reading status indication: .....visual bicoloured LED, audial buzzer;
- Indication control: .....internal or externally controlled;
- Powersupply voltage: .....12 V DC;
- Standby mode current: .....max 35 mA;
- Dimensions: .....85 x 44 x 18 mm.

5. OPERATING CONDITIONS

Ambient temperature: -30…40°C.
Humidity: Up to 80% at 25°C.
Device specifications may differ from described in this manual when operating under non-recommended conditions.

6. PACKAGE CONTENTS

- MATRIX II EH Reader: 1
- Tabs: 2
- Screws 3x30: 2
- Wall Plugs: 2

7. LIMITED WARRANTY

Device is covered by limited warranty for 24 months from sale date.
The warranty becomes void if:
- this Manual is not followed;
- device has physical damage;
- device has visible traces of aggressive chemicals exposure;
- device circuits have visible traces of tamper by unauthorised parties.

While covered, the Manufacturer will repair the device or replace any broken parts, free of charge, where fault is caused by manufacturer's defect.

8. CONTACTS

Authorized representative in the European Union:
ICONTROL SIA
1B Balta Street, LV - 1055, Riga, Latvia
E-mail: info@icontrol.lv
Phone: +371 24422922
www.icontrol.lv

The symbol of crossed-throught waste bin on wheels means that the product must be disposed of at f separate collection point. This also applies to the product and all accessories marked with this symbol. Products labeled as such must not be disposed of with normal household waste, but should be taken to a collection point for recycling electrical and electronic equipment. Recycling helps to reduce the consumption of raw materials, thus protecting the environment.

CE