

PRT11 v3.0 OUTDOOR PROXIMITY AND PIN READER

General Description

The PRT11 reader is dedicated for use with access controllers which require one from following communication standards:

- *Wiegand26 bit*
- *Wiegand34 bit*
- *Wiegand42 bit*
- *Magstripe (ABA track 2 emulation)*
- *RACS*

The RACS standard is dedicated for operation with PR series controllers manufactured by Roger (www.roger.pl).

PRT11 consist from:

- fully potted electronic module
- metal, vandal-proof silver color keypad
- metal rear panel
- external proximity antenna (cooper wire loop)
- 3 LEDs and buzzer
- TAMPER contact

Note: LEDs and proximity antenna must be installed outside metal panel of keypad.

Reader accepts UNIQUE (EM4001/2) standard cards or compatible and is equipped with three LEDs and buzzer. PRT11 offers *In Circuit Programming* feature which enables firmware downloading into microprocessor memory. Reader has fully potted electronic circuit which makes adequate protection when installed in outdoor locations.

Custom Firmware

On special request *Roger* offer custom specified versions of firmware which can be download to reader during manufacturing process or later. For example customer may request reader that will accept only specified card numbers or equipped with other communication standards. The firmware downloading requires special programming cable and software but doesn't require reader return to producer.

Wiegand and Magstripe formats

When device is set to *Wiegand* or *Magstripe* format an *ON/OFF* led is set to green color permanently, every time a card is read or PIN code is entered a *SYSTEM* led and buzzer are activated together for a short time (beep). Led *Open* in normally off, applying supply minus to IN1 input activates LED *Open* and buzzer simultaneously. PRT11 accept PIN codes followed with [#] mark, PIN codes are transmitted immediately after [#] mark is pressed, reader sends all pressed digits, if number of digit is less then required by relevant format, leading zeros are appended to transmitted PIN code.

RACS format

When reader is set to *RACS* format all LEDs and buzzer are normally handled by access controller except situation when reader lost communication with controller, in this case all three LEDs simultaneously blink. In *RACS* mode the IN1 input line is dedicated to disable reader operation, when this line is shorted with supply minus reader ignores Cards and PINs.

Note: The *RACS* standard accepts up to 8 devices connected to controller through Clock & Data lines, due to this feature every reader should have its individual address (ID number) which will distinguish it on Clock & Data bus. The reader ID number can be set on programming jumpers (see jumper settings table).

Installation

The reader should be mounted using four mounting screws, all electrical connections must be made with power supply switched off. The selection of communication standard and other reader option can be made on jumpers. The loop antenna must be installed outside metal case of reader, it can be covered by non-metal materials like concrete or plastic.

Notes:

- Avoid installing reader antenna near metal surfaces, this can significantly reduce reading range,
- When reader is supplied from another power source then controller, both supply minus (reader's and controller's) must be connected together.
- It is recommend to ground power supply minus.
- Reader equipped with antenna should not cause interferences to other equipment, however other devices can interfere with reader, avoid installing reader close (<0.5m) to another reader or computer monitor, when an essential reading range reduction is observed try to relocate unit.
- The PRT11 antenna must be installed outside metal case of PRT11, other wise RFID identification will not operate.
- It is recommended to located antenna about 5-10 cm distance from PRT11 case.
- When required, the connection wires between antenna and electronic module can be extended up to 1.5 meter.
- Do not change shape of loop antenna, this may result in reduced reading range.

- The reader LEDs may be removed from their original location and installed outside reader's case.

Ordering information

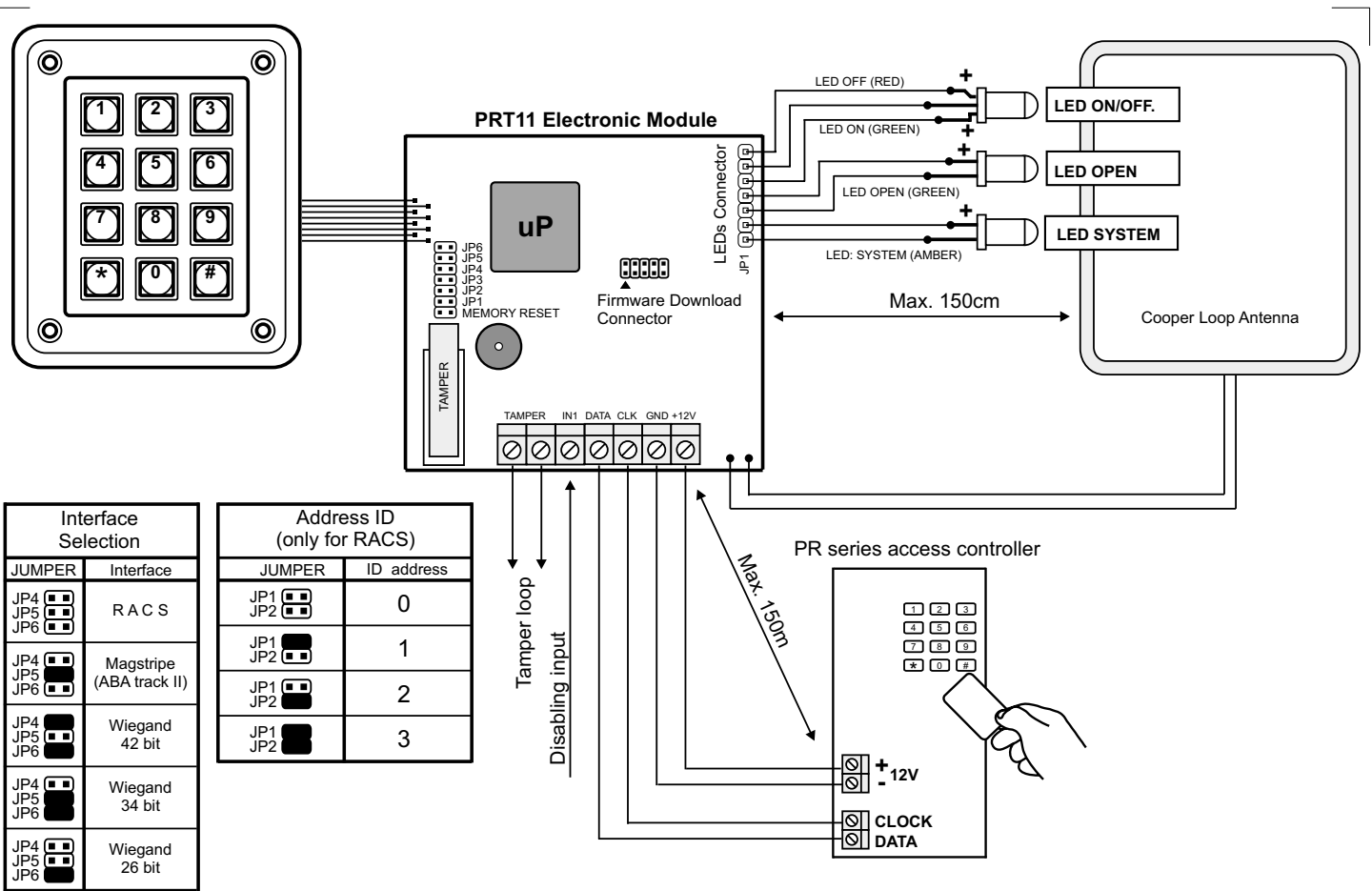
| | |
|-------|---|
| PRT11 | PRT11 PIN code access terminal with cooper wire loop antenna. |
|-------|---|

Technical Specification

| | |
|------------------------------|---|
| Operating voltage range | 10...16VDC |
| Current consumption: | avg. 60mA |
| Tamper | NC contact, 50mA rating |
| Reading range | up to 12 cm for ISO card (depends on card quality) |
| Card type | UNIQUE 125 KHz, ASK Modulation, 64 bit or other types EM4001/2 compatible |
| Operating temp. range | -20...+55° C. |
| Cable distance to controller | 150 meters (500 ft) |
| Operating humidity | 10 to 95% (non condensing) |
| Ingress protection code: | IP56 (outdoor location) |
| Dimensions | 118.5 X 99.5 X 33 mm |
| Weight | 890 g |

Connection Terminals Assignment

| Function | Description |
|----------|---|
| +12V | Supply input (plus) |
| GND | Supply input (minus) |
| CLK | [Data 0] for <i>Wiegand</i> formats or [Clock] for <i>Magstripe</i> and <i>RACS</i> formats |
| DTA | [Data 1] for <i>Wiegand</i> formats or [Data] for <i>Magstripe</i> and <i>RACS</i> formats |
| IN1 | For <i>Wiegand</i> and <i>Magstripe</i> formats this input line activate led <i>OPEN</i> and buzzer, for <i>RACS</i> format this input can be used to deactivate reader and keypad operation. In both cases input is triggered by supply minus. |
| TAMP | Tamper output. |



PRT11 Installation Diagram (valid for RACS)

