



Bidirectional 125 KHz (HID[®]) reader

Functional characteristics

The FD-RC01 and FD-RC02 are card readers module which can read data from HID proximity cards with the following characteristics:

- ◆ Able to energize HID cards at 125KHz at a distance of about 2 cm from the antenna (antenna is located at the center of the reader)
- ◆ Able to read the data on HID cards
- ◆ Read data registration (entry/exit) by means of photo sensors on the left and right of the reader
- ◆ Visual indications through 2 multicolored LEDs (red/green/yellow/blue) in the little arrow symbols on either side of the reader
- ◆ Indication of a field present by sequential illumination of the blue wave symbols on either side of the reader
- ◆ Audible signal through an internal buzzer
- ◆ Connection to the FD-BUS using SPP (Serial Proprietary Protocol) at a speed of 115.2 Kbaud (default) or 19.2 Kbaud
- ◆ Address selection for the reader by means of a rotary switch on the back of the device
- ◆ Double connector (internally in parallel) for easy reconnection to the FD-BUS.

Only FD-RC02

- ◆ Display of alphanumeric and semi-graphical information on an LCD display, on 2 rows of 16 characters with BLUE backlight
- ◆ Automatic disabling of the display backlight to save energy when operated from the battery

Protection

The equipment is protected against the following events:

- ◆ polarity reversal on the cables (RJ45) connecting to the FD-BUS
- ◆ voltage surge in the power supply and data lines

Modes of Operation

The FD-RC0x module can read HID[®] contactless cards in registered and non-registered mode.

- ◆ In registered mode (entry/exit for attendance registration), the HID[®] card is read by presenting the card at the luminous wave symbols on the left or right of the reader.
- ◆ In non-registered mode (access control) the HID[®] card is read by presenting the card at the center of the reader.

Visual indicators

The FD-RC0x module can give the user indications by means of:

- ◆ alphanumeric LCD display (only FD-RC02)
- ◆ 2 multicolored LEDs located in the arrow symbols
- ◆ blue LEDs in the wave symbols
- ◆ buzzer

The most common indications are as follows:

- ◆ When switched on, the module displays the address previously set with the rotary switch.
- ◆ If there is no polling from the Field Manager, the module displays the message "No communication" and both arrows flash yellow.
- ◆ When the module receives the configuration from the Field Controller, the blue wave symbols on either side of the reader begin flashing.
- ◆ On access grant, the arrow symbol corresponding to the direction of passage is lit green. and an audible signal is given.

Parameter	Description
Dimensions	130x70x43mm
Weight	210g
Power supply	Through the FD-BUS connectors From 8V _{DC} to 14V _{DC} 160 mA nominal (at 14V _{DC}) 200 mA with LEDs lit (at 14V _{DC}) 100 mA with backlight off (at 14V _{DC}) (only FD-RC02)
Processor	P89C664 Philips at 11.0592 MHz
Connections	FD-BUS (2 RJ45s in parallel) with RS485 and power supply
FD-BUS communication	Differential RS485 serial interface Baud rate (nominal) 11,5000 baud
Rice transmitter	Reading of HID proximity cards at 125KHz Excitation of transponder by continuous wave Typical reading distance 40 mm
Bidirectional reading	Direction management by 2 photo sensors
Operating temperature	0°C to 50°C
Protection class	IP55
Address selector	0 to 15 by rotary switch selector
Relative humidity	Up to 95% without condensation
Mounting	Wall-mounted with the supplied wall bracket
Indicator signals	Alphanumeric display, 16x2 with blue backlight 2 multicolored LEDs (red/green/blue) in the arrow symbols on either side 4 wave-shaped inserts giving flashing blue signal Audible signal through an internal buzzer
Other functions	Protection against reversed polarity at input Battery power saving by switching off the backlight
Compliance	 Directives 89/336/EEC, 93/68/EEC, 92/31/EEC EN60950, EN 55022, EN 61000-4, ETS 300-330