PREMIUM-H RFID card reader

PREMIUM-H 125 kHz HID Prox card reader

The PREMIUM-H FSK card reader consists of three parts: a potted unit containing the electronics, a front cover, and an optional spacer plate. A fixed 10 way colour-coded cable protrudes from the back of the potted unit.

The reader will read the code from an 125 kHz HID Prox transponder and output the code in one of many user selectable formats.

The unit also allows for user control of the three LEDs and sounder. A 6-way DIP switch under the front cover is used to select the required output format and LED operational modes.

Specifications :

- Power requirements: 5.0-13.6V dc. Current consumption is 100 mA typical (80mA at 5V)
- RF Frequency: 125 kHz
- Card types supported: HID H10301 (26 bit format), H10304 (37 bit format), …
- Output formats supported:
  - Wiegand
  - Mag Stripe emulation
  - Clock/Data
  - RS232 (9600,n,8,1) EIA and TTL levels.
- Continuous (while tag in the field) or single transmission
- Typical reading range with supply voltage in range 5.5V-13.6V:
  - Key fob tag : 30 mm
  - ISO card : 70 mm
- Typical reading range with supply voltage at 5.0V:
  - Key fob tag : 25 mm
  - ISO card : 60 mm
- 3 LEDs (GREEN, RED, YELLOW).
- Buzzer emits a 60ms beep at 4 kHz when a transponder is read. In addition sounder operates while SOUND input is pulled low.
- Operating temperature range: -20ºC - +60ºC.
- 10 way cable: 1m long
- Weight: 90 grams.
- Dimensions: reader 89 x 45 x 16 mm, optional spacer plate 89 x 45 x 7 mm

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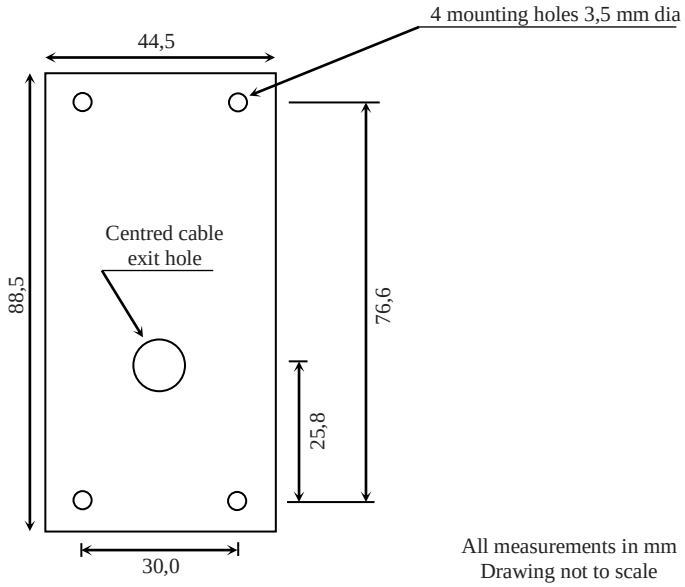
Physical dimensions and mounting details :



All measurements in mm
Drawing not to scale

If the mounting plate is used the reader cable may be brought out of one of four exit points on the mounting plate: top, bottom, left or right. This enables the cable to be run on the surface of the wall.
If no mounting plate is used, a minimum hole size of 6,5 mm must be drilled in the wall at the cable exit position as shown above to allow the cable to exit perpendicular to the reader.

The optional mounting plate may also be used when mounting the reader on a metal surface to reduce the negative effects of metal on the read range.

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Connections :

Colour	Name	Function
BLACK	0V	Connect 0V from power supply.
RED	+VDC	Connect +5V - +13.6V from power supply
PURPLE	RS-232 TX	Output RS-232
BLUE	BUZZER	Controls Buzzer
GREEN	GRN-LED	Controls Green LED in LED Mode 1 or both Red and Green LEDs in LED Mode 2
ORANGE	RED-LED	Controls Red LED in LED Mode 1
YELLOW	YEL-LED	Controls Yellow LED in LED Mode 1
BROWN	DATA / DATA1	Outputs RFID tag code in selected format
WHITE	CLOCK / DATA0 / TTL-TX	Outputs RFID tag code in selected format
GREY	CARD PRESENT	Pulses low when an RFID tag is detected. It stays low while the module output is active

Note : LED and BUZZER inputs are active low. The input is internally pulled high and may be pulled low by an open collector transistor or driven low by the output of a 5V CMOS or TTL gate.

Output mode selection:

The 6-way switch is used to select the output format and LED mode. The required setting is selected from the following tables:

Output mode table

SW1	SW2	SW3	SW4	Output mode
ON	ON	ON	ON	**Inhibit - turn off coil**
ON	ON	ON	OFF	*Unused*
ON	ON	OFF	ON	*Unused*
ON	ON	OFF	OFF	**RS232**
ON	OFF	ON	ON	*Unused*
ON	OFF	ON	OFF	*Unused*
ON	OFF	OFF	ON	*Unused*
ON	OFF	OFF	OFF	*Unused*
OFF	ON	ON	ON	**Mag Stripe - Fast**
OFF	ON	ON	OFF	*Unused*
OFF	ON	OFF	ON	*Unused*
OFF	ON	OFF	OFF	**Mag Stripe - Slow**
OFF	OFF	ON	ON	**Basic Clock/Data**
OFF	OFF	ON	OFF	*Unused*
OFF	OFF	OFF	ON	*Unused*
OFF	OFF	OFF	OFF	**Wiegand**

LED mode table

Mode #	SW5	LED Mode
1	ON	3 Individual LED's each controlled by their own input
2	OFF	RED/GREEN with single control line (GRN-LED)

Note :
In LED Mode 2, both RED and GREEN leds are controlled by the GRN-LED input. When the GRN-LED input is floating or pulled high, the RED led is on and the GREEN led is off. When the GRN-LED input is pulled low (connected to 0V) the GREEN led is on and the RED led is off. The YELLOW led is always off.

Continuous/Single Transmission Mode Table

Mode	SW6	Operation
Continuous	ON	While a tag is in the reader's field the reader will continuously transmit the code in the format chosen by DIP-switches 1-4. The repetition period is dependent on the format chosen but varies between 65ms and 100ms.
Single	OFF	Single transmission when tag is brought into the field. Tag must be removed from field for at least 1 second before a read of this tag is possible again.

Note :
This "continuous transmission" mode can not be guaranteed to work properly on some controllers, depending on the data interfaces. However, the "single transmission" mode will work with all controllers.
It is therefore recommended to test this function prior to site activation.

Power Connections :

The reader has an internal low dropout 5V regulator and so for maximum performance the input voltage must be smooth DC between 5.5V and 13.6V. The reading distance is unchanged for input voltages between 5.5V and 13.6V. For input voltages below 5.5V the read range drops off slightly as given in the specifications earlier. If 5V is supplied to the reader this should be noise-free to achieve maximum possible read ranges.

Declaration of Conformity :

ProxTech International bvba hereby confirms that the product PREMIUM-H is in accordance with the essential demands and other relevant stipulations of the directive 1999/5/EG.
A copy of the Declaration of Conformity can be obtained upon simple request by e-mail on info@proxtech.com.