PP1 Panel-Mount Reader

Scope

The guide explains how to install standard specification PP1 panel-mount readers. Customer specific variants require an addendum to this guide.

Specifications

	PP1-EM1	PP1-HT1	PP1-HT2	VP1-DP1
Technology:	EMxxx	Hitag 1	Hitag 2	DualProx
Size (mm):	55 x 55 x 16 (H x W x D), 48 mm mounting hole centres. Fits inside a standard UK electrical back box.			
Colour:	Black			
Material:	ABS Plastic – Stabilised against Ultra Violet light			
Reading range:	Up to 20 mm dependant on the type of token or card			
Operating Temp:	-30°C to 50°C ambient			
Rating:	IP66 - suitable for outdoor and indoor use			
Supply voltage:	5VDC to 16VDC			
Max. current:	< 70 mA			
Data outputs:	Reader selectable 26-Bit Wiegand or 10-digit Clock & Data plus RS232 (10 digits at 9600 bauds)			Reader selectable 26-Bit or 44-Bit Wiegand plus PAC compatible serial data
Connections:	Pigtail or 3m cable			
Cable details:	8 core screened, 7/0.2, 0.22 mm² stranded.			

Mounting

The reader has been designed to fit into a standard door entry panel with an aperture of approximately 40mm x 40mm. It must be mounted behind a polycarbonate window.

Avoid mounting readers directly beside each other or back to back; we recommend a separation of approximately 0.5 metres where possible for best performance.

The mounting holes of the reader are 48mm apart. Use M3 nuts with appropriate fixings.

Connections should be made either directly to the host controller or in a suitable terminal box inside the building.

Wiring

Core colour	Function
Red	+VDC
Black	Ground
Yellow	LED input
Green	Wiegand Data 0 / Data
White	Wiegand Data 1 / Clock
Brown	Not used
Orange	Format select (see below)
Blue	Serial Data Output

Format Select:

The output format is selected by connecting 'Format Select' to either Ground or +VDC as follows:

Models	Connect to Ground	Connect to +VDC
PP1-EM1 PP1-HT1 PP1-HT2	10-Digit Clock & Data	26-Bit Wiegand
PP1-DP1	26-Bit Wiegand	44-Bit Wiegand

Reader Operation

The LED lights red when power is connected.

When a token or card is presented, the LED blinks green briefly.

The LED changes to green while the LED input line (yellow) is pulled low (typically indicates that the door is unlocked).

NOTE: The output lines of the reader are fed by an open collector transistor – a biasing resistor may be required on some host controllers for correct operation. Please refer to the controller reference documentation.

Power & Testing

Connect power to the controller and ensure that the LED lights red.

Present a valid card to the reader and check that the LED blinks green.

Ensure that the LED responds to the access controller as expected. This will depend upon how you have wired the reader and the way in which the access controller operates.

If the card details are not recognised by the access controller, check all connections and ensure that you have connected the 'Format Select' input correctly according to the table on page 2.

Note: If the LED does not give any indication when a card is presented, it is likely that the reader technology does not match that of the card.