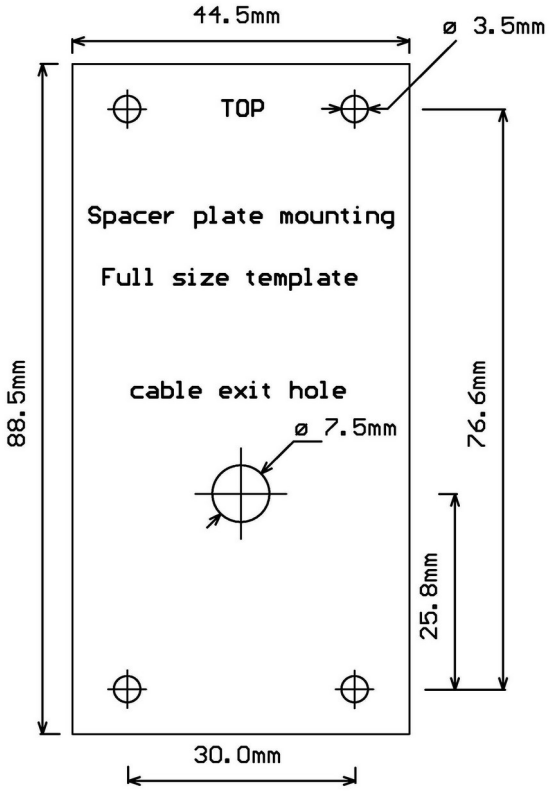
688-54 Rev 4.1 FSK Proximity Reader

Short form datasheet

Specifications

- Power requirements: +5.0 V to +13.6 V DC. Current consumption 75 mA (typical)
- RF Frequency: 125 kHz
- Card types supported: HID H10301 (26 bit format), H10304 (37 bit format), H10306 (34 bit format), 30 bit proprietary format, 42 bit proprietary format
- Output formats supported: Wiegand, Mag stripe emulation, Clock/Data, RS232 (9600,n,8,2) with both EIA compatible levels and TTL levels
- Continuous output with tag in field or single transmission
- Typical read range: 30 mm for keyring tags, 60 mm for ISO cards
- 3 indicator LEDs (RED, YELLOW, GREEN), controlled by user
- Beeper (4 kHz tone) controlled by user, additionally emits a 50 ms beep when card is read
- Operating temperature range: -20 ºC to +60 ºC
- 10 way cable: 1m long
- Weight: 95 grams
- Dimensions: Reader 89 x 45 x 17 mm, optional spacer plate 89 x 45 x 7 mm

Physical Dimensions and Mounting Details



If the spacer plate is used the reader cable may be brought out of one of four exit points on the spacer: top, bottom, left or right. This enables the cable to be run on the surface of the wall. If no spacer plate is used a recommended hole size of 7.5 mm must be drilled in the wall at the cable exit position to allow the cable to exit perpendicular to the reader.

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

Connections

Colour	Name	Function
GREY	PRESENT	Open collector output, drives low during transmission of output data
WHITE	CLOCK/DATA0/TTL TX	Open collector output, tag data in selected format
BROWN	DATA/DATA1	Open collector output, tag data in selected format
YELLOW	YELLOW LED	Input, controls YELLOW LED in LED Mode 1, active low
ORANGE	RED LED	Input, controls RED LED in LED Mode 1, active low
GREEN	GREEN LED	Input, controls GREEN LED in LED Mode 1 and both RED and GREEN LEDs in LED Mode 2, active low
BLUE	BEEPER	Input, controls BEEPER, active low
PURPLE	RS232 TX	Output, RS232 Tx, EIA compatible levels/polarity
RED	+VDC	Power, connect to positive of power supply (+5V to +13.6V)
BLACK	0V	Power, connect to 0V of power supply

Note. Open collector outputs are pulled high internally to +5V through 10k resistors. Inputs are pulled high internally and require to be taken low to control the beeper and LEDs, they may be left floating if unused.

Output Mode Selection

SW1	SW2	SW3	SW4	Output format
ON	ON	ON	ON	Inhibit – turn off coil
ON	ON	ON	OFF	Unused
ON	ON	OFF	ON	Unused
ON	ON	OFF	OFF	RS232 – long number format
ON	OFF	ON	ON	RS232 – hex long number format
ON	OFF	ON	OFF	Unused
ON	OFF	OFF	ON	Unused
ON	OFF	OFF	OFF	RS232 – site/card format
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 Selection

LED Mode	SW5	Function
1	ON	3 Individual LEDs each controlled by their own input
2	OFF	RED/GREEN with single control line (GREEN): when the GREEN input is floating or pulled high, the RED LED is on and the GREEN LED is off; when the GREEN 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 Selection

Mode	SW6	Function
Continuous	ON	While a tag is in the field the reader continuously transmits the tag data in the format selected by the DIP switches 1-4. Repetition rate is format dependant but varies between 80ms to 260ms
Single	OFF	When a tag enters the field the output is transmitted once only. The tag must be removed from the field for at least 1 second before the same tag can be re-read and it's tag data re-transmitted