

# 718-52 REV4 MIFARE<sup>®</sup> Reader

## Shortform Datasheet

### Specifications

Power requirements: 5.0 to 13.8V dc. Current consumption: 120 mA (typical).

RF Frequency: 13.56MHz

Card types supported: MIFARE<sup>®</sup> Std 1k, 4k, PlusX/PlusS and Ultralight, NTAG2XX

Mifare application directory (MAD1 and MAD2) supported.

Optional AES authentication for MIFARE<sup>®</sup> Plus.

Contactless interface as per specification: ISO/IEC 14443 Type A.

Typical reading range - 20mm to 50mm, dependant upon card manufacturer

3 LEDs (GREEN, RED, YELLOW) controlled by active low inputs.

Beeper emits a 4kHz tone, controlled by active low input.

Operating temperature range: -20°C to +60°C.

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.

Output formats supported: Wiegand (up to 128 bits), Mag Stripe (up to 20 chars), RS232 EIA levels (baud rates 2400-115200) and RS232 TTL levels (baud rate 9600 only).

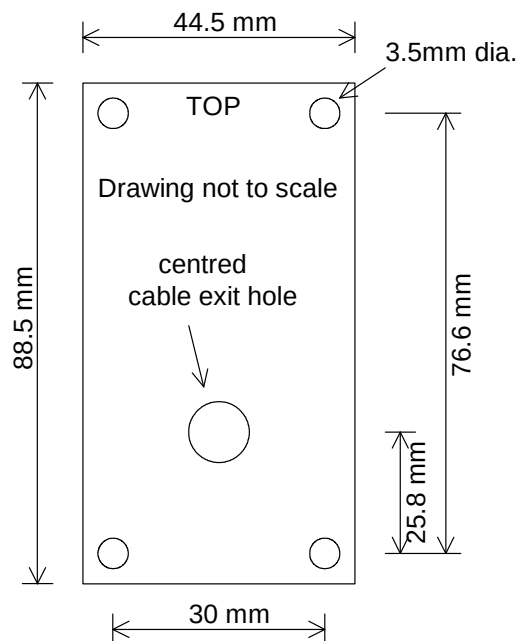
Continuous (while tag in the field) or single transmission.

The card's UID can be output when in RS232 mode.

### 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 minimum hole size of 6.5mm 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 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

The table below details the function of each wire:

Colour	Name	Function
BLACK	0V	Connect 0V to power supply
RED	+VDC	Connect to power supply, +5V to +14V
PURPLE	RS232 TX	RS232 TX <sup>1</sup>
BLUE	BEEP	Connect to 0V to sound beeper
ORANGE	RED LED	Connect to 0V to turn LED on
GREEN	GREEN LED	Connect to 0V to turn LED on
YELLOW	YELLOW LED	Connect to 0V to turn LED on
BROWN	DATA1/DATA	Open collector data output <sup>2</sup>
WHITE	DATA0/CLOCK/TXTTL <sup>3</sup>	Open collector data output <sup>2</sup>
GREY	RS232 RX	RS232 RX <sup>1</sup>

Note 1. Baud rate is configurable

Note 2. Open collector has a 10k internal pullup to 5V.

Note 3. When you select RS232 TTL mode, the TXTTL wire will have correct polarity for direct connection to a 5V microprocessor's UART.

## Factory Reset State

A new reader will start in the factory reset state and has the following functionality:

### LEDS

The red and green LEDS will flash alternatively ON and OFF with a period of 1 second. The LEDS will not respond to any card reading.

### Card in Field

The reader will poll a MIFARE card in the field for its UID and if received will attempt to read 'Configuration' data. If the card contains valid configuration data the card's configuration settings will be loaded into the reader which will reset and resume operation in a configured state. Note that all LEDS will be off in the configured state.

### Beeper

The beeper will respond with a single 500ms beep if a valid configuration card was read and the settings were accepted.

## Configuration Card

Configuration cards can be programmed using the 719-52 or 727-53 Mifare card programmer.