Installation Note

SM501 Contactless Smartcard Reader and SM501K Contactless Smartcard and PIN Reader

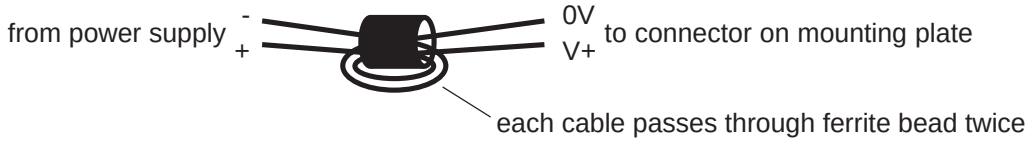
IN107

Mounting, connecting and setting up

Mount the Reader in a suitable position near the door approximately 1.2m from the floor. The Reader can be installed outside in a sheltered position.

The Reader has a mounting plate with two oval mounting holes which are suitable for most installations - you first need to break open the mounting holes using a screwdriver. There are also four round holes in the mounting plate which will align with a standard wall box of the type used, for example, for light switches.

1. If the Reader is fixed to the mounting plate, undo the four screws which are in each corner, then place the mounting plate in position on the wall or door frame and mark the position of the two mounting holes. Note: the mounting plate must be positioned with its connector at the top left.
2. Drill the two mounting holes. The holes accept 3.5mm machine screws or No 6 wood screws.
3. The connections are made to the connector on the mounting plate. Pass the cable through the large hole in the centre of the mounting plate. Note: the two power supply cables must be passed twice through the hole in the ferrite bead supplied with the Reader before they are joined to the connector, as shown in the following diagram:



4. Make the connections shown in the following table as required:

Name	Function
V+	Power supply +V (+ve) unregulated DC max 36.0V, min 10.0V, 250mA max
0V	Power supply 0V (-ve), (also ground reference for data output)
Amber	Either: Amber LED control - 0V for amber LED Or: BCLINK data interface Rx
Horn	Horn - 0V to sound
Red	Either: Red LED control - 0V for red LED Or: BCLINK data interface address
Green	Either: Green LED control - 0V for green LED Or: Single wire LED control 0V for green LED, +5V for red LED (0V also switches off amber LED)
D0	Data zero for Wiegand output Data for Mag Stripe output BCLINK data interface Tx
D1	Data one for Wiegand output Clock for Mag Stripe output
DA	Data Available for Wiegand or Mag Stripe output

Note: do not apply a voltage greater than +5V to the horn input or the LED inputs

4. Route the cable tidily, then screw the mounting plate to the wall or door frame. Make sure all braid and loose filaments of wire are cut right back or insulated with tape or sleeving.

5. Set the jumpers on the Reader to provide the functions you require, as described in the following tables:

INTERFACE

Jumper JU1	Function
1	32 bit Wiegand
2	34 bit Wiegand
3	10 character Mag Stripe
4	26 bit Wiegand
5	37 character Mag Stripe

DATA

Jumper JU2	Function
1	Read chip serial number from any Mifare card
2	Read Girovend information only from Girovend cards
3	Read Cotag information only from Cotag cards
4	not used
5	not used

LED CONTROL

Jumper JU3	Function
1	Internal - LED and horn inputs are disabled
2	Single wire LED control - 0V on GREEN input for green LED, +5V on GREEN input for red LED
3	External - LEDs and horn can be controlled using the RED, GREEN, AMBER and HORN inputs - 0V to activate
5	BCLINK

6. Locate the Reader on the mounting plate with the LEDs at the top left and press it home - the Reader cannot be pushed fully home unless it is the correct way round.

7. Tighten the screws, then insert the little plastic plugs supplied with the Reader into the screw-holes so that the screws cannot be seen and the case looks neat. (Note that the plastic plugs cannot be removed without damaging them - four spare plugs are supplied with each Reader.)

8. Power up the Reader and test it: hold a smart card close to the outline of the card engraved on the face of the Reader - the Reader should bleep when the card is read and the host should receive the card data output. Each key-press should give an amber flash and the host should receive PIN data.

For more information on the SM501 and SM501K Readers, please see the Handbook HB02/104.

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) This device may not cause harmful interference, and 2) This device must accept any interference received, including interference that may cause undesired operation.