Installation and User Instructions for S844 Readers

The S844 is a contactless smart-card reader, with LCD and keypad. The reader can be set to use Wiegand or 20mA current loop pseudo-random communications.

The S844 is able to read Personal Identity Verification (PIV II) type A and B, Philips MIFARE and Philips MIFARE DESfire smart cards. For Philips MIFARE and Philips MIFARE DESfire cards, the S844 supports the use of unencoded cards (where only the unique card serial number is read), or cards encoded with a card number. Several encoding formats are supported.

The reader can simultaneously support two different card types/formats (e.g. non-encoded MIFARE and smartMAX-encoded MIFARE DESfire, or non-encoded MIFARE and smartMAX-encoded MIFARE). The reader is automatically configured to accept the first two card types/formats presented after power is applied.

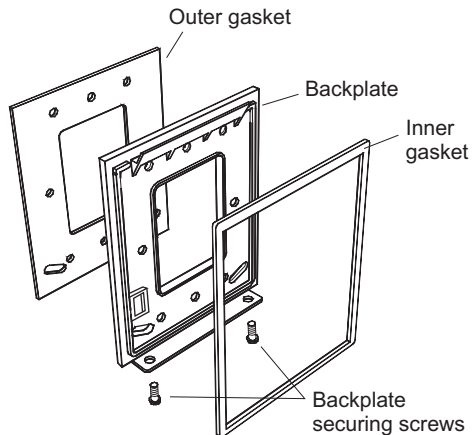**Note:** For PIV II compliance, Wiegand communications should be used.

1 Fit the Weatherproofing Kit

When mounting outside, the two-part gasket kit must be fitted:

a) Remove the backplate from the reader by releasing the two securing screws.

b) Remove the cutouts and backing paper from the two gaskets, then stick them to the backplate as shown.
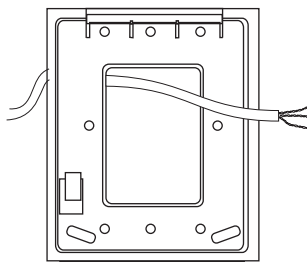
The optional heater kit maintains the reader at the correct temperature when mounted outside. With the backplate off, remove the backing paper from the two elements, then stick them to the inner sides of the reader. The heaters must be connected to a 24V AC supply (min 25VA).

Outer gasket

Backplate

Inner gasket

Backplate securing screws

2 Mount the Backplate

With the backplate off (see above), mount the backplate adjacent to the opening edge of the door and at a convenient height. Feed the required cables through the backplate:
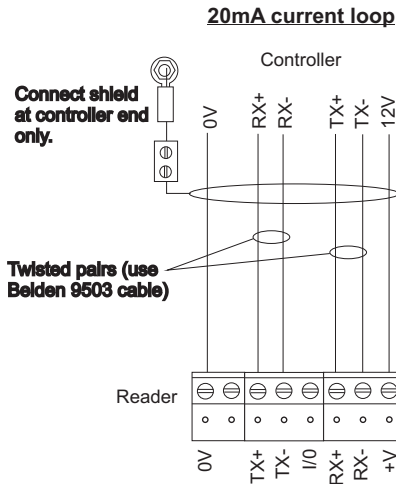
! The cable from the controller.

! The cable from the heater, if used (must be a separate cable).

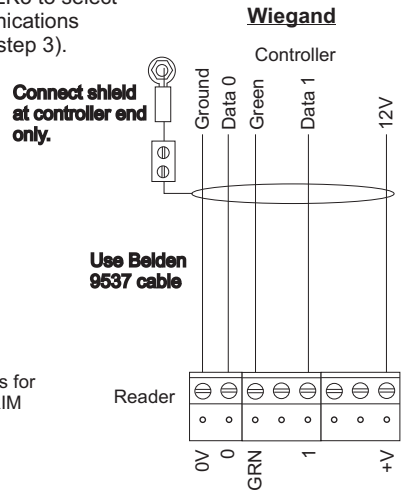! A cable from a Remote Interface Module (RIM), if used. A RIM can reduce cable lengths to door furniture.

You should find that the backplate has holes for connection to most standard electrical backboxes.

3 Reader Links

Set LK1 (USER FB) to 1 for sound on, or 0 for sound off. If a jumper is provided for LK2 (TEST), park it across one pin only. Set LK3 (COMMS) across the center and WGD pin for Wiegand communications, or across the center and C/L pin for 20mA current loop communications.

4 Reader Connections

Note: Use LK3 to select the communications mode (see step 3).

20mA current loop

Controller

Connect shield at controller end only.

Twisted pairs (use Belden 9503 cable)

Controller terminals: 0V, RX+, RX-, TX+, TX-, 12V

Reader terminals: 0V, TX+, TX-, I/O, RX+, RX-, +V

The I/O terminal is for connection to a RIM (see the RIM Instructions).

Wiegand

Controller

Connect shield at controller end only.

Use Belden 9537 cable

Controller terminals: Ground, Data 0, Green, Data 1, 12V

Reader terminals: 0V, 0, GRN, 1, +V

Note: The **FERRITE** must be fitted!
Slide the ferrite sleeve onto cable before wiring terminal block. Ferrite to be placed 50mm (2") up cable and held in place with cable ties.

5 Using the Reader

Present the card face-on to the reader until you hear a "bleep". Cards can be presented in rapid succession; there is no need, for example, to wait for "UNLOCKED" to disappear before presenting another.

If the reader has been enabled for user-code mode at the controller, you can gain access by pressing the # key, entering your card number, then pressing the * key.

About the Reader Messages

READY – The reader is waiting for a valid card to be presented.

UNLOCKED – The lock is released and you may open the door.

ACCESS DENIED & LOCKED – You do not have access rights to gain entry, or the reader did not read your card properly (in this case, present it again).

ENTER PIN – Enter your PIN. If you make a mistake, the message INCORRECT PIN is momentarily displayed, followed by ENTER PIN, to prompt you to try again.

CARD PIN AND # – Enter the DESfire card PIN, then press # if the PIN is less than 8 digits.

(Flashing or steady) – These auxiliary indicators can be configured to operate in conjunction with conditional commands.

A Setup menu can be displayed by pressing the * and # keys simultaneously while power is applied. You can use the menu to change the contrast and language used for the LCD (default English). At the prompts, press * for No and # for Yes.

Specifications
Input voltage: 10.2-14Vdc.
Input current (excl. heater): 180mA @ nom. 12Vdc.
Operating temperature: -4 to 158°F (-20 to 70°C) without heater.
Operating humidity: 15 to 90%, non-condensing.
Maximum read range: 3/4" (20mm).
Approvals: EN50133, R&TTE, IP656.