Installation and User Instructions for S870-EX Keypad Readers

The S870 is a 125kHz proximity card reader that is capable of reading HID® format card, with LED's and keypad. The reader can be set to use Wiegand or 20mA current loop communications.

For additional information regarding the installation, configuration and proper use of this product:
SMS Software User Guide, P/N 9600-0429 Issue 7.0.4 or later,
M2150 Design Guide, P/N 9600-0420 Issue Issue 1.6.4 or later.

1 Fit The Weather Proofing Kit

When mounting outside, the gasket kit must be fitted:
a) Remove the backplate from the reader after screwing the securing screw 'C' fully **IN**.
b) Position the gasket between the back plate and the mounting surface.

   Note: For UL listed applications, use only manufacturer provided gasket, P/N 87X-GASKET.
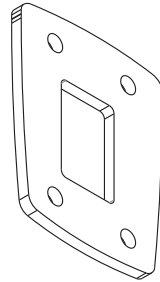
2 Mount the Backplate

Mount the backplate using countersunk headed screws adjacent to the opening edge of the door.

If fixing hole 'A' is used then the breakout must be removed and the screw must not protrude.

Feed the cable from the controller through the backplate.

If the wall tamper function is to be used then the small hole in breakout 'B' may be used to mark the position of the wall screw before the breakout is removed. An appropriate wall screw should then be adjusted in height to protrude through the hole to activate the tamper lever.

The front cover is secured to the backplate by UNSCREWING the securing screw 'C' via the small hole in the enclosure so that the screw head locates in the counterbored hole on the inside of the enclosure.

The screw should not be removed from the backplate.
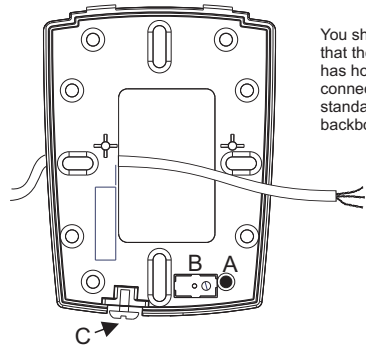
You should find that the backplate has holes for connection to most standard electrical backboxes.
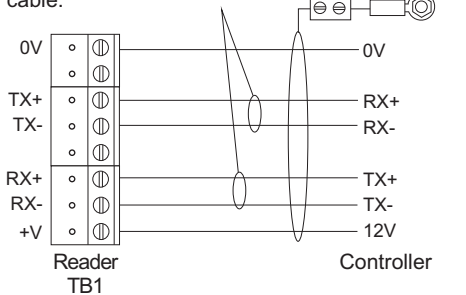
3 Reader Connections

Note: (For UL Installations only)

1). Consult local AHJ (Authority Having Jurisdiction) when installing access control readers and locking mechanisms to any portal in an egress path.
2). The use of Fail Closed / secure configuration shall be determined by local building codes and the local AHJ.
3). Wiring methods shall be in accordance with NEC (National Electrical Code) ANSI/NFPA 70.
4). All Interconnected devices must be UL listed.
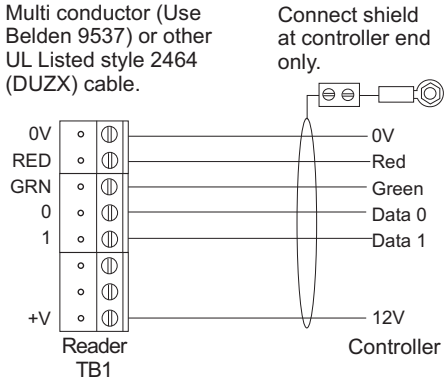
4 **Reader Connections contd.**

20mA current loop

Twisted pairs (use Belden 9503) cable or other UL Listed style 2464 (DUZX) cable.

Connect shield at controller end only.

Reader TB1		Controller
0V		0V
TX+		RX+
TX-		RX-
RX+		TX+
RX-		TX-
+V		12V

Wiegand

Multi conductor (Use Belden 9537) or other UL Listed style 2464 (DUZX) cable.

Connect shield at controller end only.

Reader TB1		Controller
0V		0V
RED		Red
GRN		Green
0		Data 0
1		Data 1
+V		12V

Note: Use SW1 switch2 to select the communications mode (See Step 5).

5 **Reader Links**

Set SW1 switch2 (COM) to W for Wiegand communications, or C for 20mA current loop communications. Set SW1 switch1 (USER F/B - Keypad audio feedback) to 1 for sound on, or 0 for sound off.

6 **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 "GREEN LED's" 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.

LED Status Indicator

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

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

YELLOW – Enter your PIN. If you make a mistake, the RED LED's are momentarily displayed, followed by YELLOW LED's, to prompt you to try again.

Specifications
Input voltage: 9-14Vdc.
Input current: 120mA @ nom. 12Vdc.
Operating temperature: -40 to 158°F (-40 to 70°C)
Operating humidity: 15 to 90%, non-condensing.
Maximum read range: 4" (100mm).
Approvals: EN300330, EN301489

CE