Installation and User Instructions for S813 Enrollment Readers
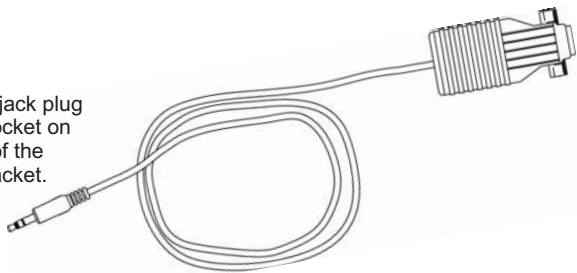
The S813 Enrollment Reader is used to capture fingerprints, and to encode Philips® MIFARE® or Philips MIFARE DESFire contactless smart cards.

The S813 connects to a serial port of a controlling Security Management System (SMS) PC using the supplied cable.
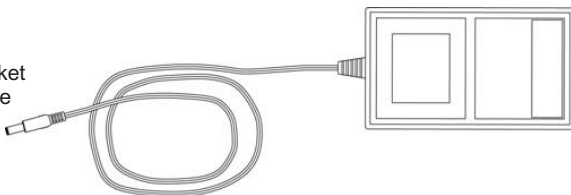

Reader Connections

This illustration shows the connections from the reader to the RS232-to-RS485 converter and power supply. There should be no need to make these connections yourself - use the supplied cables.

RS232-to-RS485 Converter

Note the apparent reverse in polarity between the converter and reader (from "-" to "+" and vice versa)

Twisted pair

0V
12V   12Vdc power

S813 Reader TB1

0V | Do not use | TX+ | TX- | I/0 | RX+ | RX- | +12V

Installation

Connect to a serial port of a PC installed with the SMS software. Set up the port in the Install/Client Ports screen of the SMS software.

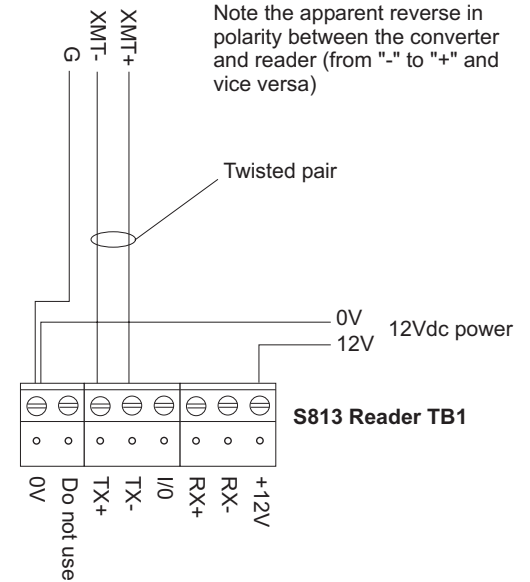Insert the jack plug into the socket on the back of the reader bracket.

Insert the power plug into the socket on the back of the reader bracket.

Connect the 12Vdc power source to the mains supply.

Reader Links and Switches

The following links are provided on the reader's PCB:

LK1   (Audio feedback) - Set to "0" for sound off. Set to "1" for sound on.

LK2   (TERM) - Ensure that this link has been removed.

LK3   (TEST) - Ensure that this link has been removed.

Ensure that all bit switches in SW2 (RDR ADDR) are set to the OFF position.

Enrollment Procedure

To use the enrollment reader:

1. Log in to the SMS software at the PC that the reader is connected to.

2. Start the fingerprint enrollment procedure from the Fingerprint Enrollment screen, accessed through the Badge tab of the Card Holders screen. Follow the prompts.

    Note: Refer to the enrollment guidelines overleaf.

3. Start the encoding procedure from the Fingerprint Enrollment screen. When prompted, present the card to be encoded under the finger pad of the reader (tabs are provided on the base plate if you prefer to rest the card against the reader). You will hear a "bleep" when the card has been encoded.

Use the following tips to ensure good enrollment.

A - Use the Correct Fingers

Use index, middle or ring fingers (not thumbs or little fingers):

B - Place Finger Correctly

Make sure each finger is placed with the first joint of the finger resting on the raised ridge at the front of the sensor. Cover as much of the sensor area as possible with the finger:

✓ **CORRECT**   ✗ **INCORRECT**

C - Apply Moderate Pressure

Too much pressure may cause smudging of the fingerprint. Too little pressure may prevent the ridge patterns from being captured.

D - Check the Displayed Fingerprint Core

Check the displayed fingerprint in the Fingerprint Enrollment screen. Make sure that the fingerprint core is centered in the Fingerprint Image box. Here are examples of typical cores:
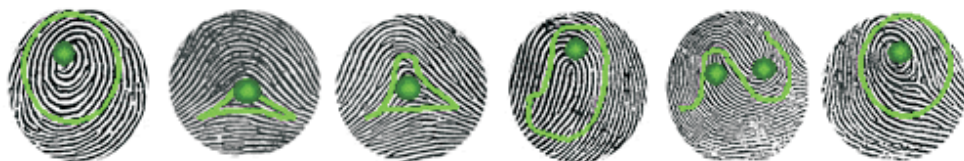
## E - Check the Quality and Content

Manually check the quality and content of each fingerprint displayed in the Fingerprint Enrollment screen.

The Quality and Content indicators show estimated quality and content scores. The indicators are shown in green if the estimated scores match or exceed the minimum values set in the Configure/User/Accounts screen. The indicators are shown in red if this is not the case.

Examples:

Quality: Good.
Content: Core is properly centered. Surface area and ridge pattern are well defined.
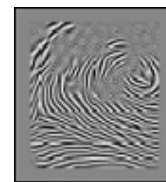
Quality: More pressure is needed to improve the image. Enroll again.
Content: Core is properly centered.

Quality: Poor - ridges are not well defined. Enroll using a different finger that provides a better image.
Content: Core is properly centered, but is not well defined.

Quality: Good.
Content: Core is not centered. The same finger should be enrolled again.

F - Set the Acceptance Threshold

When a fingerprint is presented to an S813 Fingerprint Reader during an access-control transaction, it is compared against the fingerprint stored on the card and a score is produced. The closer the match, the higher the score. To gain entry, the score calculated by the reader must be greater than or equal to the acceptance threshold specified in the Fingerprint Enrollment screen.

The default acceptance threshold is specified in the Configure/Preferences screen. You can specify a different value by selecting **Custom Acceptance Threshold** in the Fingerprint Enrollment screen. The specified value is stored on the card during encoding.

Note:

- Too high a value may result in a reader not being able to confirm identity. Too low a value may result in poor security.
- You cannot change the acceptance threshold to be less than the minimum allowed setting in your user privileges (Configure/User/Accounts).
- The card-level acceptance threshold can be overridden for a specified reader in the Install/Devices/Readers screen. This may be useful for readers in high-security areas.

Specifications
Input voltage: 9-14V.
Input current: 250mA @ nominal 12Vdc supply.
Operating temperature: 32 to 122°F (0 to 50°C).
Operating humidity: 15 to 90%, non-condensing.
Maximum encoding range: 1" (25mm).
Approvals: EN50133, R&TTE, IP605.
For internal use only.