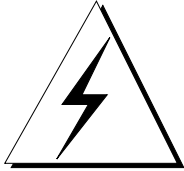


Cardax Prox 125 Reader



CAUTION

This equipment contains components that can be damaged by electrostatic discharge. Ensure both you and the equipment are earthed before beginning any servicing.

Before you Begin

Unpack the Prox 125 reader and check the shipment contains the following items:

- 1 x Prox 125 base with printed circuit board (PCB) assembly already installed
- 1 x Prox 125 facia



Power Supply Requirements

The Prox 125 reader requires a supply of 13.6 V DC $\pm$ 15% at 200 mA.

Prox 125 readers require a good quality power source.

Cabling

Use 4 core, 0.2 mm² (AWG 24) cabling with a maximum, nominal capacitance of 120 pf/m.

Maximum distance between the URI and the Prox 125 reader with this type of cable is 200m (650ft).

Note: You need a special cable terminating tool to connect the building cabling to the Prox 125. The tool has a head (Part No. C861145) and handle (Part No. C861115).

Removing the Facia

To remove the facia from the Prox 125 base you need a T10 Torx driver.

Use the driver to loosen the screw at the bottom of the facia.

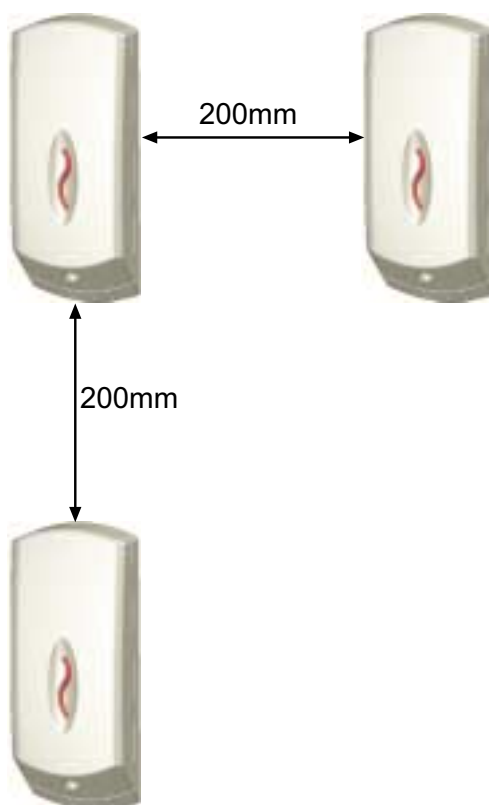
Remove the screw.

Gently pull the lower end of the facia away from the base and then slide the facia down and off the base.

Mounting Distance Between Proximity Readers

The distance between any 2 proximity readers must be greater than 200mm in all directions.

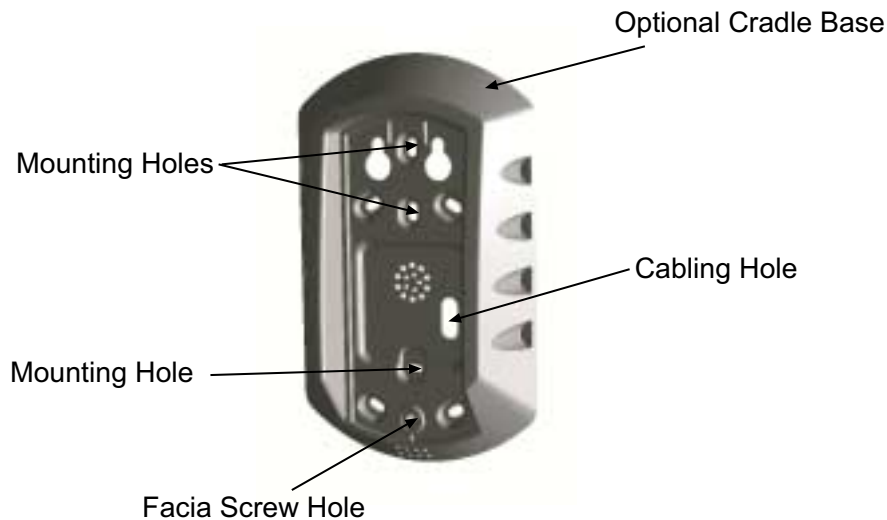
Note: Please note that 200mm in all directions includes the distance through walls.



Mounting

Note: The Prox 125 reader has been designed to metric specifications therefore any imperial measurements provided are approximate only.

The Prox 125 reader is designed to be mounted on any solid flat surface including metal surfaces. In addition the optional cradle base allows you to mount the reader over most standard international flush boxes.



Drill the holes for the mounting screws.

Note: The recommended mounting height for the Prox 125 reader is 1100 mm from floor level to the centre of the reader unit. However this may vary in some countries and you should check local regulations for variations to this height.

The type of flush box you are using, if any, will determine which mounting holes you use.

Run the building cabling through the cabling hole.

Fit the base to the mounting holes and secure it to the mounting surface using two fixing screws.

Note: It is very important that the base of the reader is flush with and tight against the mounting surface. If you are mounting the Prox 125 reader on a rough surface you should make the surface as smooth as possible under the reader and up to 25 mm (1 in) around the reader.

Connecting to the URI

The Prox 125 reader can connect to either a Cardax IV or CardaxFT URI.

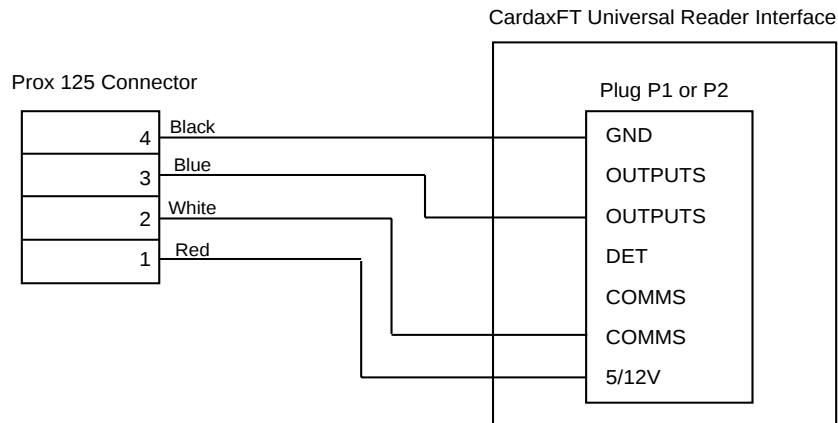
Use the cable terminating tool to connect the cables to the socket as described in the following sections.

Pin number 4 of the Prox 125 connector feeds into the cable terminating tool first.

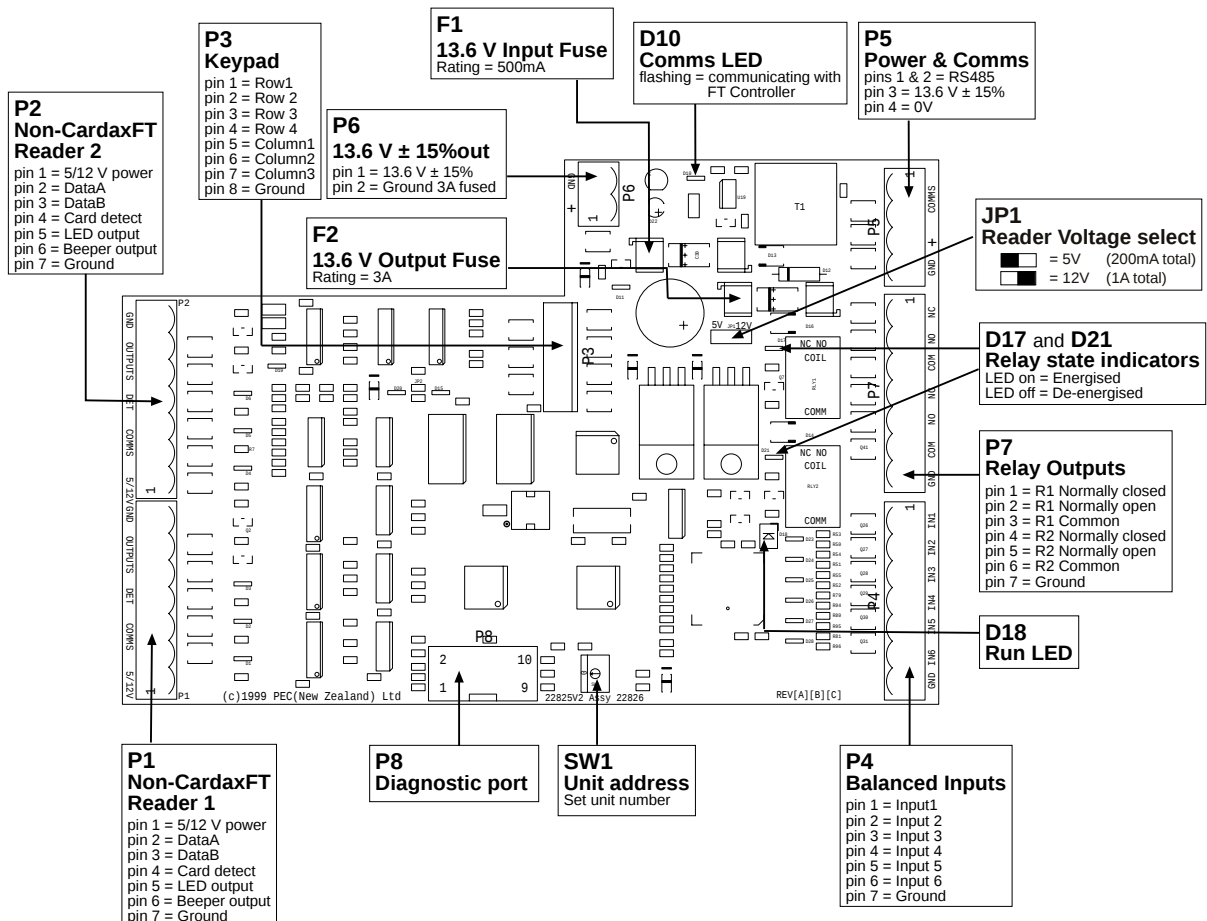
The pin numbers are marked on the connector.

Connecting to the CardaxFT URI

Connect the cables to the socket as shown.

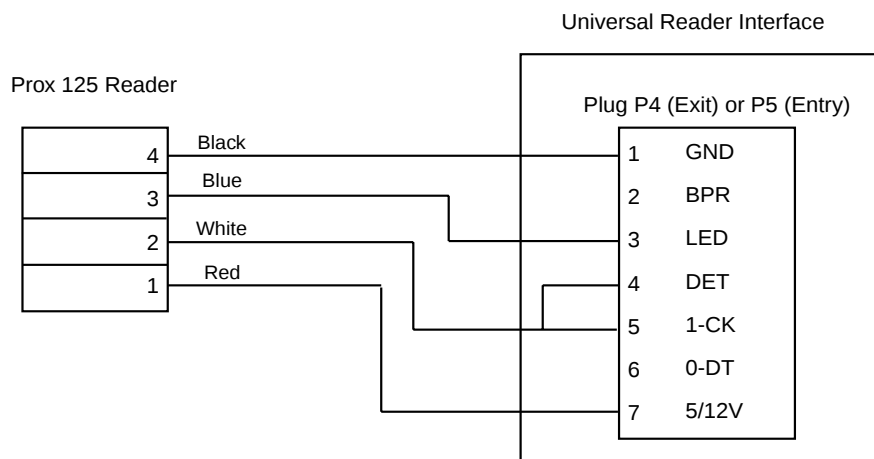


Connect the Prox 125 connector to either the P1 or P2 plug on the CardaxFT URI. Refer to the CardaxFT URI component layout diagram, below, for the location of the plugs.



Connecting to the Cardax IV URI

Connect the cables as shown in the diagram below.



Note: Refer to *Cardax IV URI Settings*, later in this Installation Note, for the location of the Cardax IV URI components

Replacing the Facia

Fit the Prox 125 facia onto the base and tighten the screw at the bottom of the facia using a T10 Torx driver.

Initialisation

Initialising with the CardaxFT URI

The CardaxFT URI must be allocated a unique unit address which is set up at the CardaxFT URI and at the Command Centre FT Server. Refer to the CardaxFT Universal Reader Interface Installation Note and the Command Centre FT documentation.

Note: When configuring Command Centre FT you will need to know the plug (P1 or P2) to which the Prox 125 reader is connected.

Initialising with the Cardax IV URI

Type of Door Lock

Depending on the type of lock fitted to the door that the reader is controlling, you will need to initialise the URI with the door either closed or open.

If you initialise the URI with the door held open, it sets the door to unlock and remains unlocked until the door is fully closed again. If you initialise the URI with the door closed it sets the door to unlock and resets to lock as soon as the door is opened.

Note: If you are installing the Prox 125 reader to control a turnstile you should consult the turnstile manufacturer for details of the locking mechanism used.

Push-Button Exit

If the door has a push button exit, ensure the URI Exit terminal has the push-button fitted and correctly terminated with a 10 kΩ resistor before you power on.

Check Software Version

You should check the URI software version to ensure it is correct for your installation. The software version number is written on the label of the EPROM mounted at the bottom right of the URI processor board.

URI software versions that are compatible with the Prox 125 reader are shown below:

Software	Reader Type
vW6.1x series or later	One door Cardax Prox or Swipe Readers
vW7.1x TC series or later	URI Special Options : Cardax Turnstile format
vW9.1x series or later	Two door Cardax Prox or Swipe Readers

Note : The vW6.xx and vW9.xx series will have one of the following suffixes:

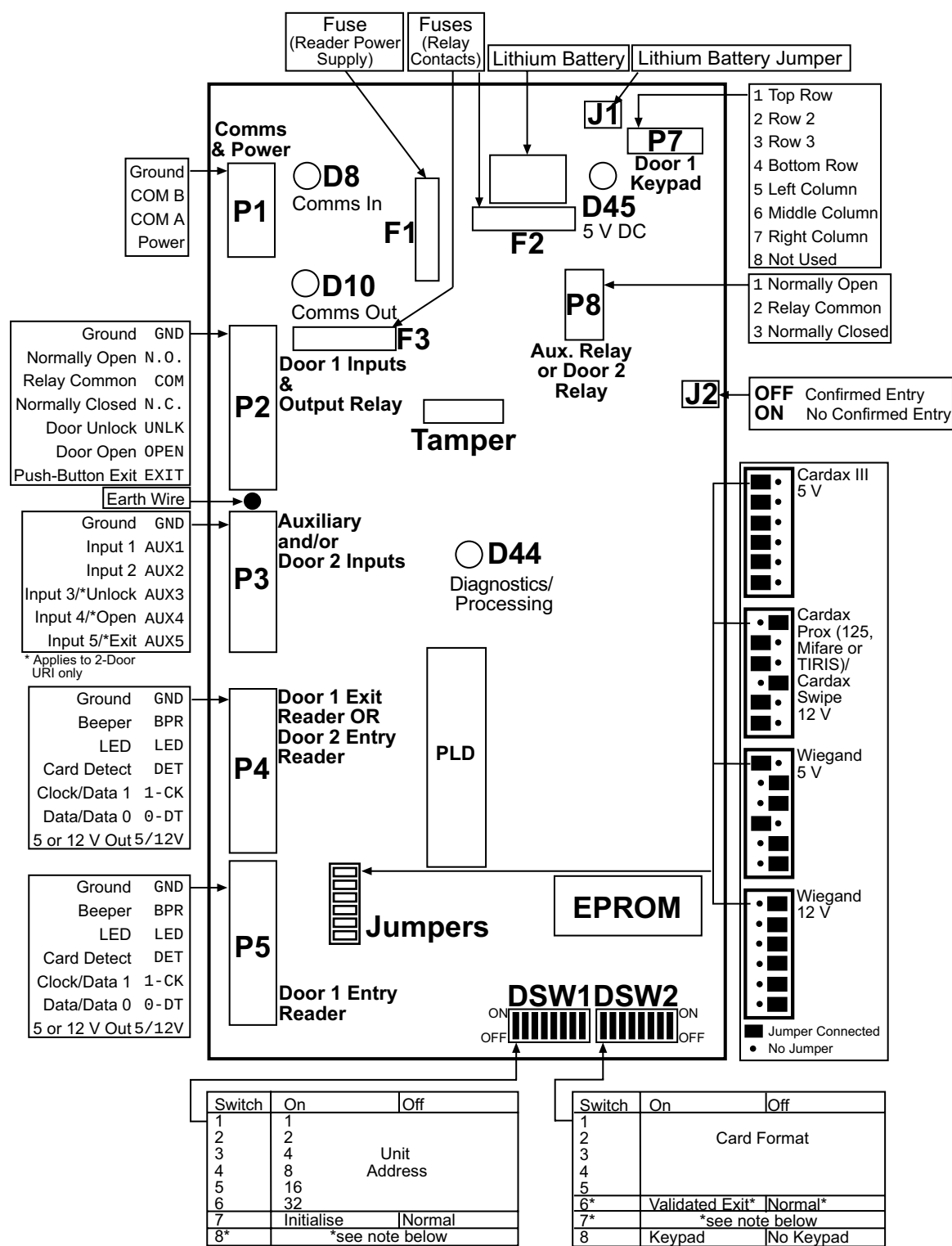
GT = 2 wire modem connection

G = 4 wire modem connection

// = direct connection via comms lines ie. no modem

Cardax IV URI Settings

Please refer to the diagram below for the location of the Cardax IV URI components.

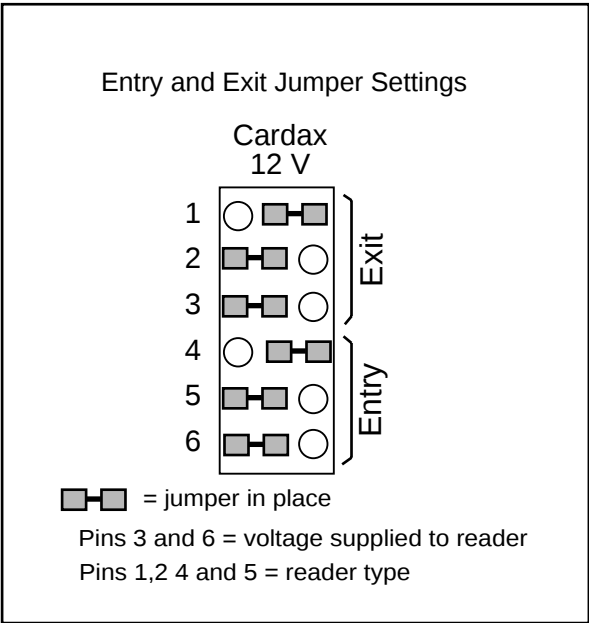


Tamper the URI by opening the door of the cabinet. This releases the tamper switch.

The URI has a set of six jumpers grouped into two sets of three. One group is labelled ENTRY and the other is labelled EXIT.

ENTRY jumpers set the voltage and card type of the reader connected to plug **P5**. EXIT jumpers set the voltage and card type of the reader connected to plug **P4**.

Set the Entry and Exit jumpers for the Prox 125 reader as shown below:



Connector **J2** on the URI controls the Confirmed Entry function. If you initialise the URI with no jumper fitted on **J2** the Confirmed Entry function will be ON. To switch the Confirmed Entry function OFF, you must initialise the URI with a mini-jumper fitted across both pins of connector **J2**.

Connect the Prox 125 reader to the URI Entry Plug **P5**.

Note: If you are using two entry readers (2 door software) you must connect the second entry reader to URI Plug **P4** to initialise the URI.

If you are only using an Exit reader you must connect the reader to the Entry Plug **P5** to initialise the URI. Ensure Entry and Exit jumpers are set to the same configuration. After you have initialised the URI you should connect the Exit reader to URI Exit Plug **P4**.

Set DIPSW1 as follows:

Switches	On	Off
1 2 3 4 5 6	1 2 4 8 16 32 } Unit Addresses	
7	Initialise	Normal
8	1 door software = liftcar reader 2 door software = keypad on door 2	1 door software = door reader 2 door software = no keypad on door 2

Set DIPSW2 as follows, where 0 = OFF and 1 = ON:

Reader	DIPSW2 12345678
Prox 125 only, no authorised exit	00000000
Prox 125 only, with authorised exit	00000100
Prox 125 with external keypad, no authorised exit	00000011
Prox 125 with external keypad, with authorised exit	00000111



CAUTION

Do not fit the lithium battery jumper (J1) before powering up the URI. If the jumper is fitted you must remove it and wait 10 seconds.

Power up the URI.

The yellow LED (**D45**) should be permanently ON. This indicates that 5 V is present on the board.

The green LED (**D44**) should flash twice, pause, then flash twice again. This is a continuous sequence while the URI is initialised and indicates it is processing.

The red LED (**D8**) should flash if polls are received from the Commander.

Note: A URI can be initialised without being connected to a Commander

Set DIPSW1:7 to ON.

Present a Prox 125 card to the Prox 125 reader.

Note: You must present the card within 30 seconds of setting DIPSW1:7 to ON. If you are initialising with two readers connected to the URI, you should present the card to the reader on URI plug **P5**.

Set DIPSW1:7 to OFF

The green LED (**D44**) will begin flashing continuously.

The other red LED (**D10**) will flash each time the URI replies to a poll from the Commander.

Fit one of the berg mini jumpers supplied in the URI dispatch kit across both pins of the lithium battery connector **J1**.

Restore the tamper by closing the door of the URI cabinet.

Approvals and Standards

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Note: Changes or modifications not expressly approved by Cardax (International) Ltd could void the user's authority to operate the equipment.



ACN: 002132943