



FireCell I/O Unit Installation Guide

General

The FireCell I/O unit is available under the following part numbers;

Part No	Variant Type	CE
FC-600-001	Single I/O Unit	0359-CPR-0039
FC-610-001	Dual I/O Unit	0359-CPR-0039

EN54-18:2005 Input/Output Devices

EN54-25 :2008 Component using RF links for fire detection and fire alarm systems for buildings.

The address of the unit is set when programming the device to the systems Radio Hub (see commissioning manual for details). The installation must conform to BS5839:Part 1 (or applicable local codes). *The FireCell I/O Unit is suitable for indoor use only.*

Installation of FireCell I/O Unit

Ensure that all Input / Outputs are sited in accordance with the survey and design details.

Remove the four front plate retaining screws. Retain these for re-assembly when installation is complete. Remove the front plate.

Drill required cable entry points for Input and Output connections. Recommended cable entry points are shown in Figure 1.

Position the Input /Output device in the required location and mark the four fixing positions. These are shown in Figure 1.

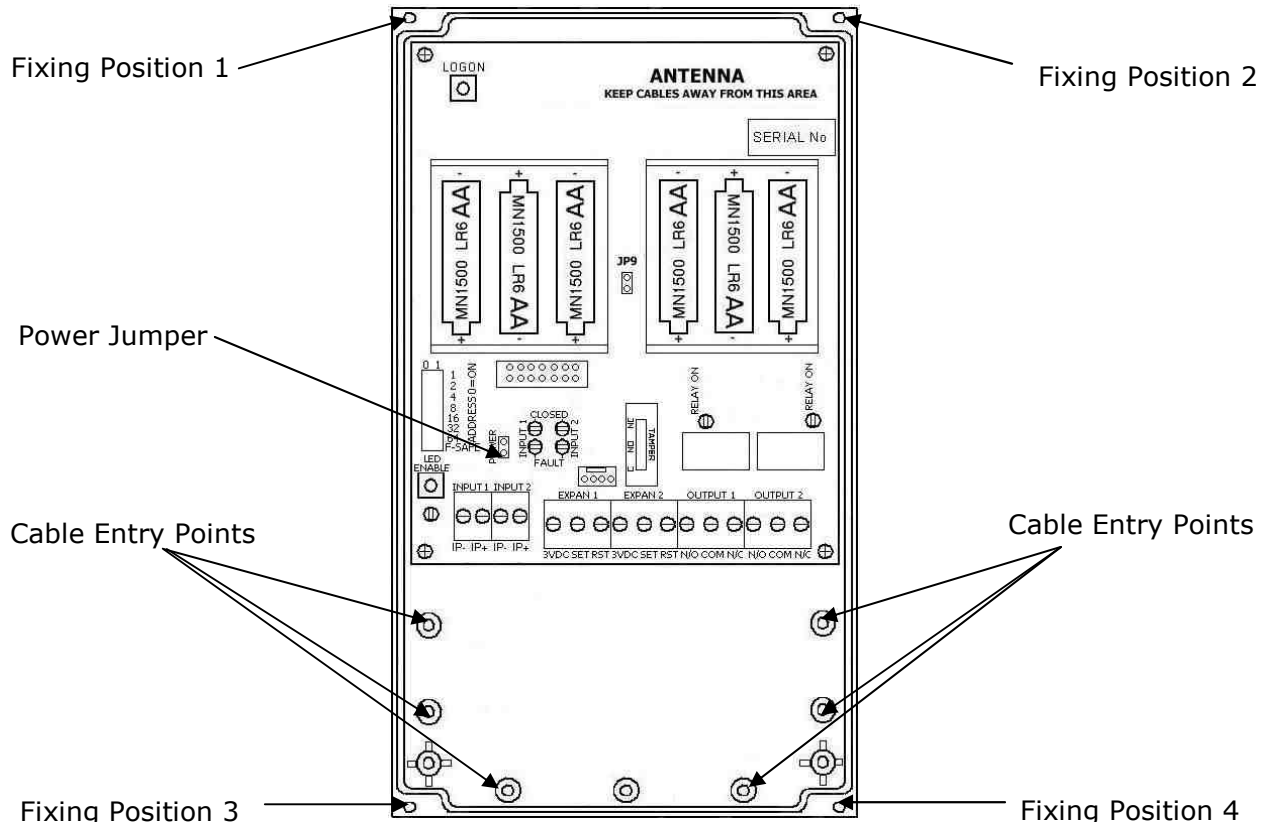


Figure 1

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Using suitable screws and fixings attach the device securely to the wall.

To ensure correct operation, connect the power jumper across the PIN header on the pcb. The location of header is shown in Figure 1.

The unit is powered by 6 x Duracell AA MN1500 LR6 Alkaline Batteries. These are supplied fitted. Should batteries require replacement please ensure they are inserted to the correct polarity as shown previously in Figure 1. Batteries that have been removed must be disposed of in accordance with your country's relevant Waste Electrical and Electronic Equipment (W.E.E.E) regulations.

Please see commissioning manual for log on procedure details.

Indication LED Operation

The FireCell Input /Output Device has six indication LED's. Illumination of these is enabled by pressing the LED enable button (shown in Figure 2). If the enable button is pressed, the following LED's will be illuminated for a time period of 10 minutes and then automatically time out.

Output:-

Each relay output has a red LED associated with it. If the output is activated (Output bit set to 1) the LED will illuminate.

Input Fault:-

Each input has a yellow fault LED associated with it. If the input is in a fault condition the LED will be illuminated.

Input Switch Closed:-

Each input has a red switch closed LED associated with it. If the input is closed the LED will be illuminated.

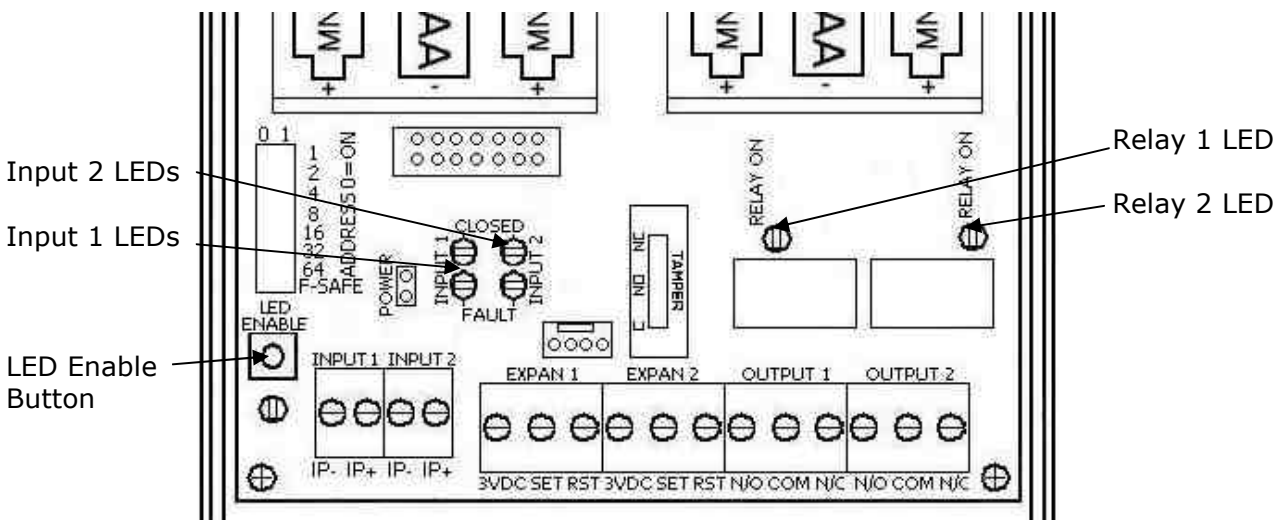


Figure 2

Output Connection Wiring

The FireCell Input / Output device has two clean contact relay outputs available. These are shown in Figure 2. The single output device if ordered will utilise Output 1 relay only. The relay outputs are capable of switching 2A @ 24V DC.

Output bit state	Relay state
0	Common and Normally Closed connected
1	Common and Normally Open connected

On power up both relay outputs will be reset to Output bit state 0.

Output Fail to Safe Mode

This function is enabled/disabled by loop address switch 8. Switch 8 to the 1 position enables this mode of operation and switch 8 to the 0 position disables the mode. As default this mode is disabled.

When the function is enabled, each relay output will assume the output bit state 0 in the event of:-

- Communication loss to the Radio Cluster Communicator
- Failure of any battery pack

Note: Switches 1 to 7 are not used

Input Connection Wiring

The FireCell Input / Output device has two inputs available. The location of these are shown in Figure 2. The single input device if ordered will utilise Input 1 only. Connection details are shown below in Figure 3.

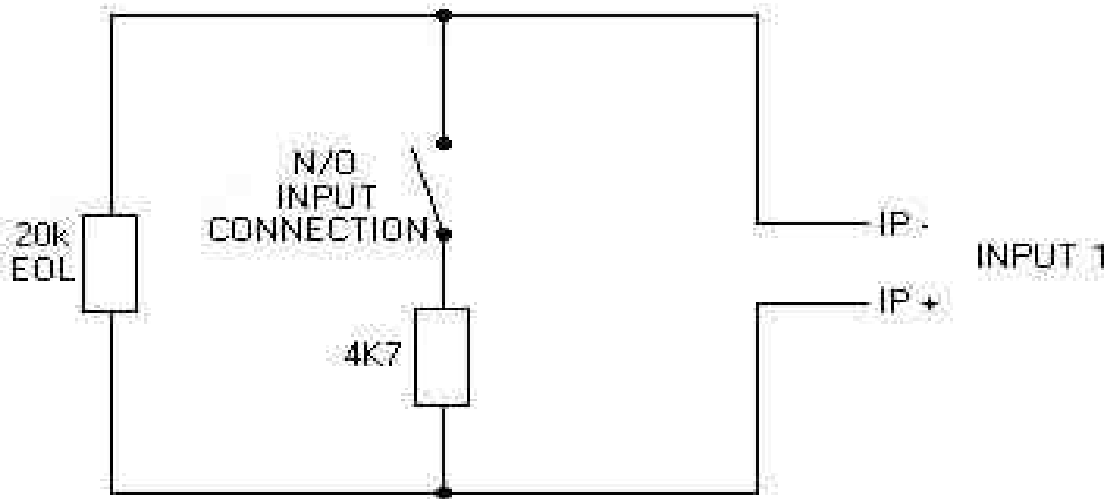


Figure 3.

20K Resistor colour coded as Red / Black / Orange

4K7 Resistor colour coded as Yellow / Violet / Red

20K = Normal Condition

3k8 = Alarm Condition

Open Circuit = Tamper Condition

Short Circuit = Tamper Condition

Functional Testing.

When polled by a compatible panel, the FireCell Input / Output device, in its normal condition will return an analogue value of 16*.

	Analogue Value	Input Status
Input Open (Normal Condition)	16*	0
Input Closed (Alarm Condition)	16*	1
Open Circuit	4	N/A
Short Circuit	4	N/A
Tamper	4	N/A

* The Slot 5 Analogue value for the Open and Closed input conditions are shown in relation to the devices signal strength. Therefore these can vary between Analogue Value 16, 14, 13 or 5.