

### 3 Plug-in Options

#### Options Modules and Functions

A range of plug-in option modules is available to add additional input, output and communication functions to the instruments in the range. These modules can be either pre-installed at the time of manufacture, or retrofitted in the field.

The modules are installed between the instruments main circuit boards into the four option slots. These are designated as Slots 1, 2, 3, A & B. Installation is detailed below.

**Note:**

*Slot 1 modules cannot be fitted into Slot 2 or 3. Slot 2 & 3 modules cannot be fitted into Slot 1. Some Slot 2 & 3 modules should only be fitted into one of the two slots. This is detailed in the - Option Module vs. Model Matrix below.*

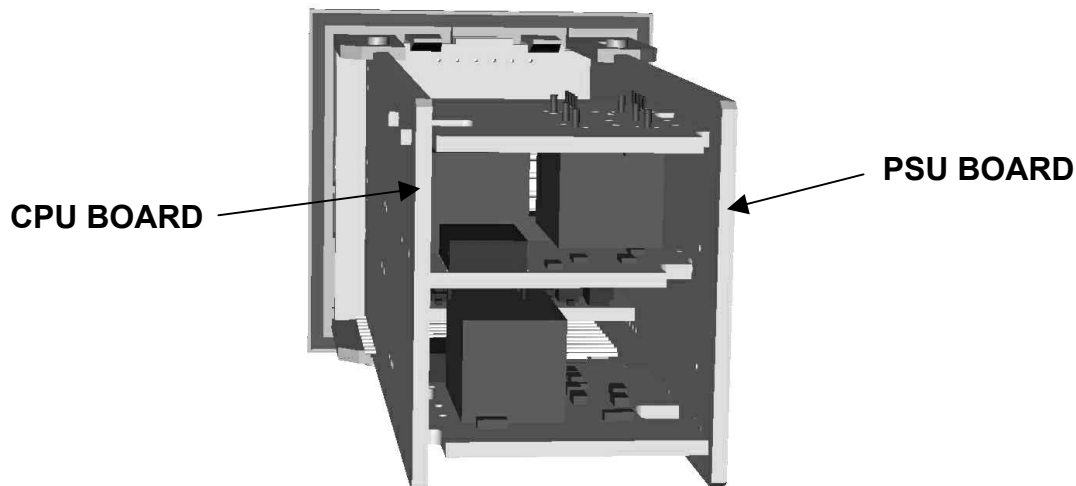


Figure 4. Typical rear view (uncased) & main board positions

#### Auto Detection of Option Modules

The instrument automatically detects which option modules have been fitted into each slot. In Configuration Mode, the menus will change to reflect the options compatible with the hardware fitted. The modules fitted can be viewed in the Product Information Mode.

Table 1. Option Module vs. Model Matrix

MODULE PART NUMBER & Function	MODEL NUMBER							
	P1160	P1800	P1400	P1161	P1801	P1401	P6010	P1810
<b>OPTION SLOT 1</b>								
<b>PO1-C10</b> Relay								
<b>PO1-C50</b> SSR Driver								
<b>PO1-C80</b> Triac								
<b>PO1-C21</b> Linear mA/V DC								
<b>OPTION SLOT 2</b>								
<b>PO2-C10</b> Relay								
<b>PO2-C50</b> SSR Driver								
<b>PO2-C80</b> Triac								
<b>PO2-C21</b> Linear mA/V DC								
<b>PO2-W09</b> Dual Relay								
<b>OPTION SLOT 3</b>								
<b>PO2-C10</b> Relay								
<b>PO2-C50</b> SSR Driver								
<b>PO2-C21</b> Linear mA/V DC								
<b>PO2-W08</b> TransmitterPSU								
<b>PO2-W09</b> Dual Relay								
<b>OPTION SLOT A</b>								
<b>PA1-W06</b> RS485 Comms								
<b>PA1-W03</b> Digital Input								
<b>PA1-W04</b> Basic RSP Input								
<b>OPTION SLOT B</b>								
<b>PB1-W0R</b> Full RSP Input								
<b>SOFTWARE &amp; ACCESSORIES</b>								
<b>PS2-CON</b> Config Software								

<b>KEY</b>	Option Possible	Option Not Possible
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## Preparing to Install or Remove Options Modules

### CAUTION:

Before removing the instrument from its housing, ensure that all power has been removed from the rear terminals.

1. Remove the instrument from its housing by gripping the side edges of the front panel (there is a finger grip on each edge) and pull the instrument forwards. This will release the instrument from the rear connectors in the housing and will give access to the PCBs.
2. Take note of the orientation of the instrument for subsequent replacement into the housing. The positions of the main and option PCBs in the instrument are shown below.

## Removing/Replacing Option Modules

With the instrument removed from its housing:

1. To remove or replace modules into Option Slots 1,A or B, it is necessary to gently separate the CPU and PSU PCBs. This is achieved by detaching the main boards (PSU and CPU) from the front moulding by lifting first the upper, and then lower mounting struts as shown. This frees the boards from the front. If only Option slots 2 or 3 are to be changed, this stage is not required as these slots are accessible without separating the main boards from the front.

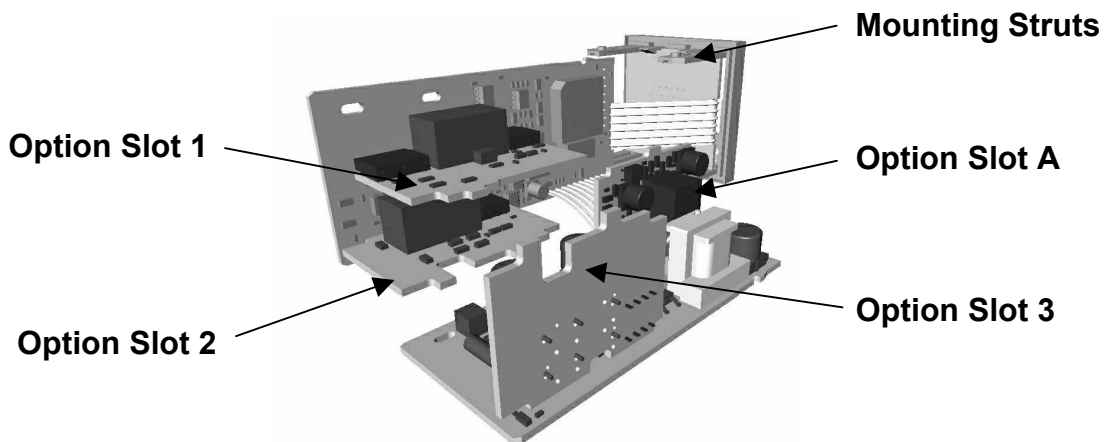


Figure 5. Location of Option Modules -  $\frac{1}{16}$  DIN Instruments

### CAUTION:

Take care not to put undue stress on the ribbon cable attaching the display and CPU boards.

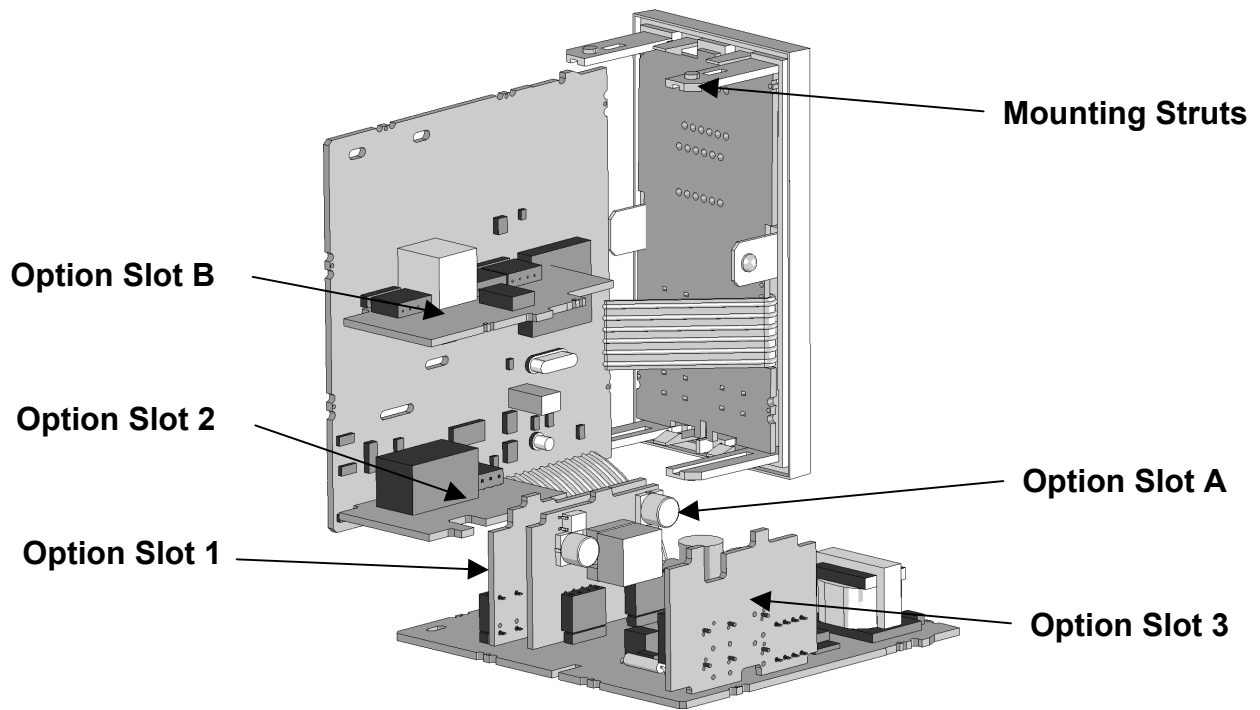


Figure 6. Location of Option Modules - 1/8 & 1/4 DIN Instruments

**CAUTION:**

Take care not to put undue stress on the ribbon cable attaching the display and CPU boards.

- Remove or fit the modules into the Option slots as required. The location of the connectors is shown below. Tongues on each option module locate into a slots cut into the main boards, opposite each of the connectors.

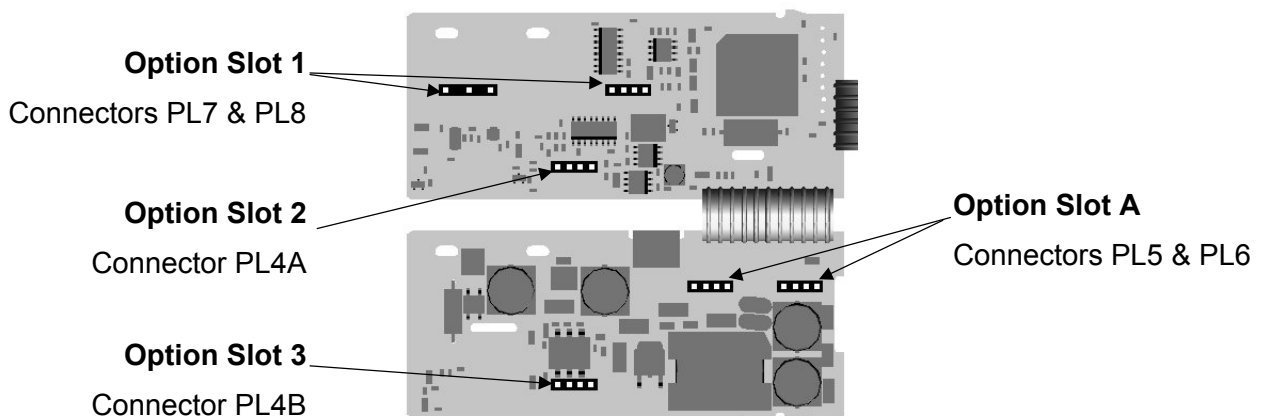


Figure 7. Option Module Connectors - 1/16 DIN Instruments

**CAUTION:**

Check for correct orientation of the modules and that all pins locate correctly into the socket

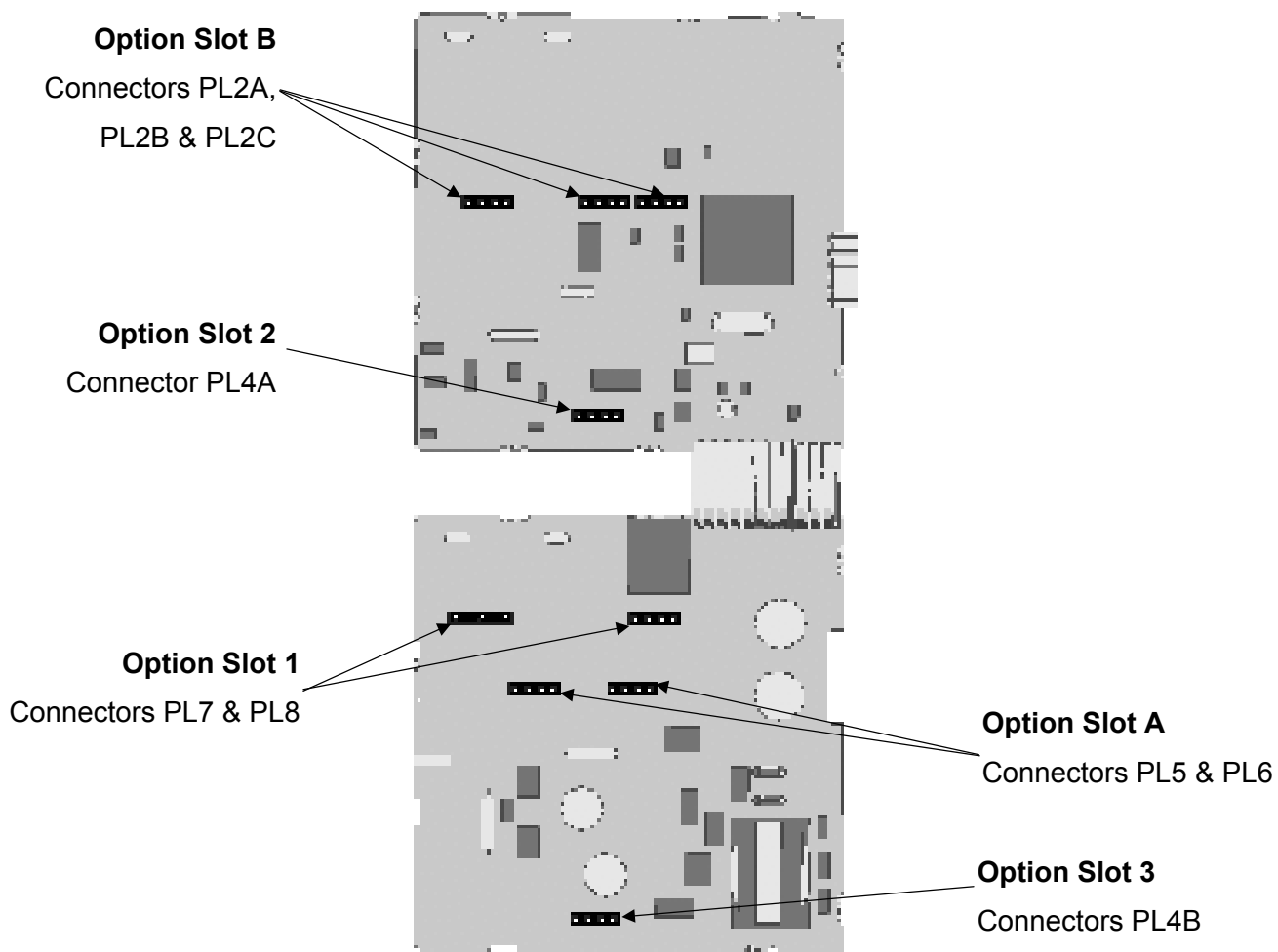


Figure 8. Option Module Connectors -  $\frac{1}{8}$  &  $\frac{1}{4}$  DIN Instruments

**CAUTION:**

Check for correct orientation of the modules and that all pins locate correctly into the socket

## Replacing the Instrument in its Housing

With the required option modules correctly located into their respective positions the instrument can be replaced into its housing as follows:

1. If required, move the CPU and PSU boards back together, taking care to locate the option module tongues into the slots in the board opposite. Hold the main boards together whilst relocating them back into the mounting struts on the front panel.
2. Align the CPU and PSU PCBs with their guides and connectors in the housing.
3. Slowly and firmly, push the instrument in position.

### **CAUTION:**

**Ensure that the instrument is correctly orientated. A mechanical stop will operate if an attempt is made to insert the instrument in the wrong orientation, this stop MUST NOT be over-ridden.**