

3 Field Upgrade Options

Plug-Modules and Upgradeable Functions

Plug-Modules can be either pre-installed at the time of manufacture, or retrofitted in the field to expand the capabilities of the controller. Contact your supplier to purchase these items. Part numbers and circuit board identification numbers for the plug-in modules and accessories are shown in below:

PART NUMBER	AVAILABLE OPTIONS & ACCESSORIES	BOARD IDENTIFICATION NUMBER
MODULE SLOT 1		
PO1-R10	Single Relay Output for plug-in module slot 1	716/01
PO1-S20	Single SSR Driver Output for plug-in module slot 1	716/02
PO1-T80	Triac Output for plug-in module slot 1	716/03
PO1-C21	Linear mA / Voltage Output for plug-in module slot 1	639/01
MODULE SLOT 2 or 3		
PO2-R10	Single Relay Output for plug-in module slot 2 or 3	717/01
PO2-W09	Dual Relay Output for plug-in module slot 2 or 3	644/01
PO2-S20	Single SSR Driver Output for plug-in module slot 2 or 3	717/02
PO2-S22	Dual SSR Driver Output for plug-in module slot 2 or 3	644/02
PO2-T80	Triac module Output for plug-in module slot 2 or 3	647/01
PO2-W08	24VDC Transmitter Power Supply for module slot 2 or 3	642/01
MODULE SLOT A		
PA1-W03	Digital Input for plug-in module slot A	641/02
PA1-W04	Basic Auxiliary Input for plug-in module slot A	653/01
PA1-W06	RS485 Serial Communications for plug-in module slot A	680/01
PA1-ETH	Ethernet Communications for plug-in module slot A	707/01
ACCESSORIES		
PS1-PRF	Profiler Enable Key-code	
PS1-PRW	Blue Control PC Configuration Software & Lead	



CAUTION: Plastic pegs prevent fitting of older non-reinforced single relay modules (board identification numbers 637/01 and 638/01). Fitting the older relay modules reduces the isolation rating to Basic 240V isolation and is therefore not recommended.

Remove this peg when fitting Dual Relay Modules.

Board Positions



Note: All dual relay modules have reinforced isolation.

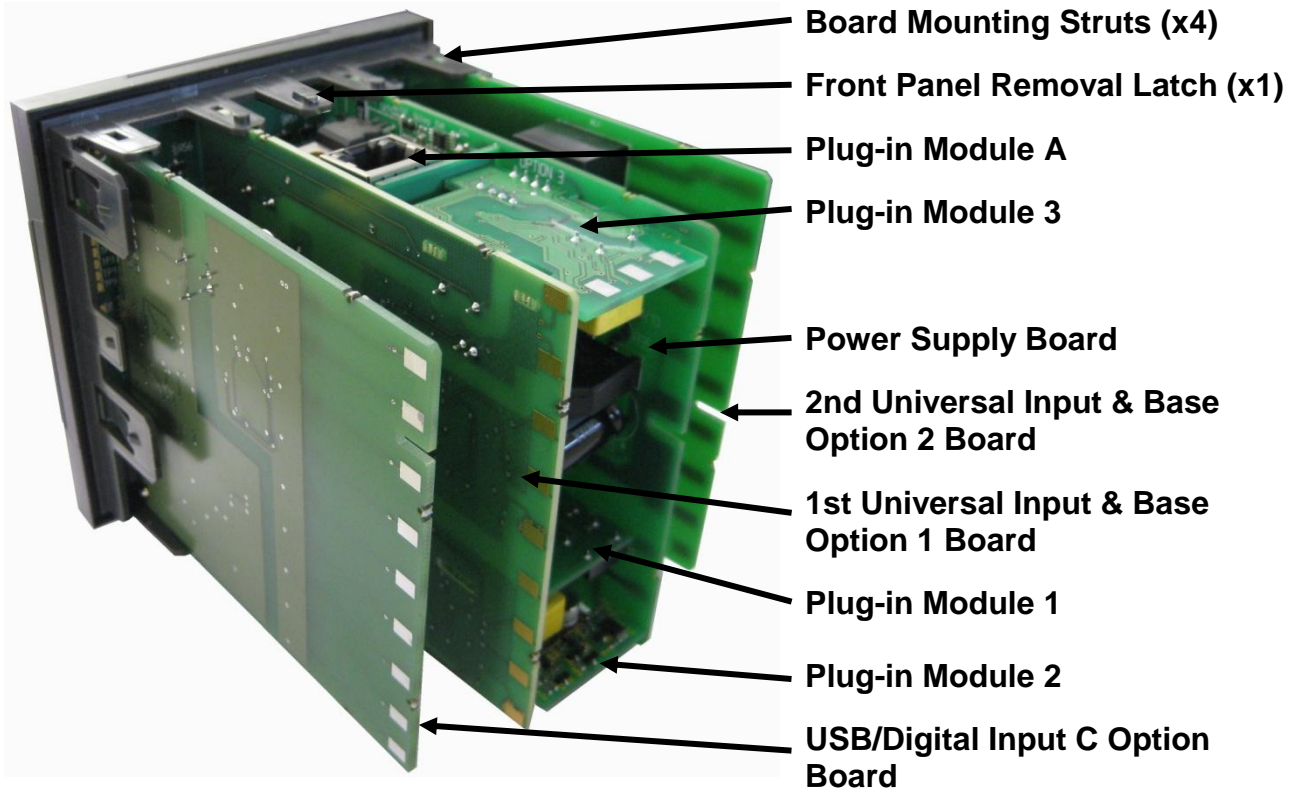


Figure 3. Rear view (uncased) & board positions

Preparing to Install or Remove Plug-in Modules



CAUTION: Before removing the instrument from its housing, ensure that all power has been removed from the rear terminals. Modules / boards should be replaced by a technically competent technician.

1. Grip the edges of the front panel (there is a finger grip on each edge) and pull it forwards approximately 10mm, until the Front Panel Removal Latch prevents further movement. The purpose of the latch is to prevent removal of the instrument without the use of a tool.
2. The Front Panel Removal Latch must be pushed down to allow removal of the instrument. Using a tool (e.g. screwdriver or pen tip), press down it down through the front central ventilation hole. This will release the instrument from the case.
3. The internal boards can now be accessed. Take note of the orientation of the instrument and boards for subsequent replacement into the housing. The positions of the boards, their mountings and the Front Panel Removal Latch are shown above.

Main Board Connectors

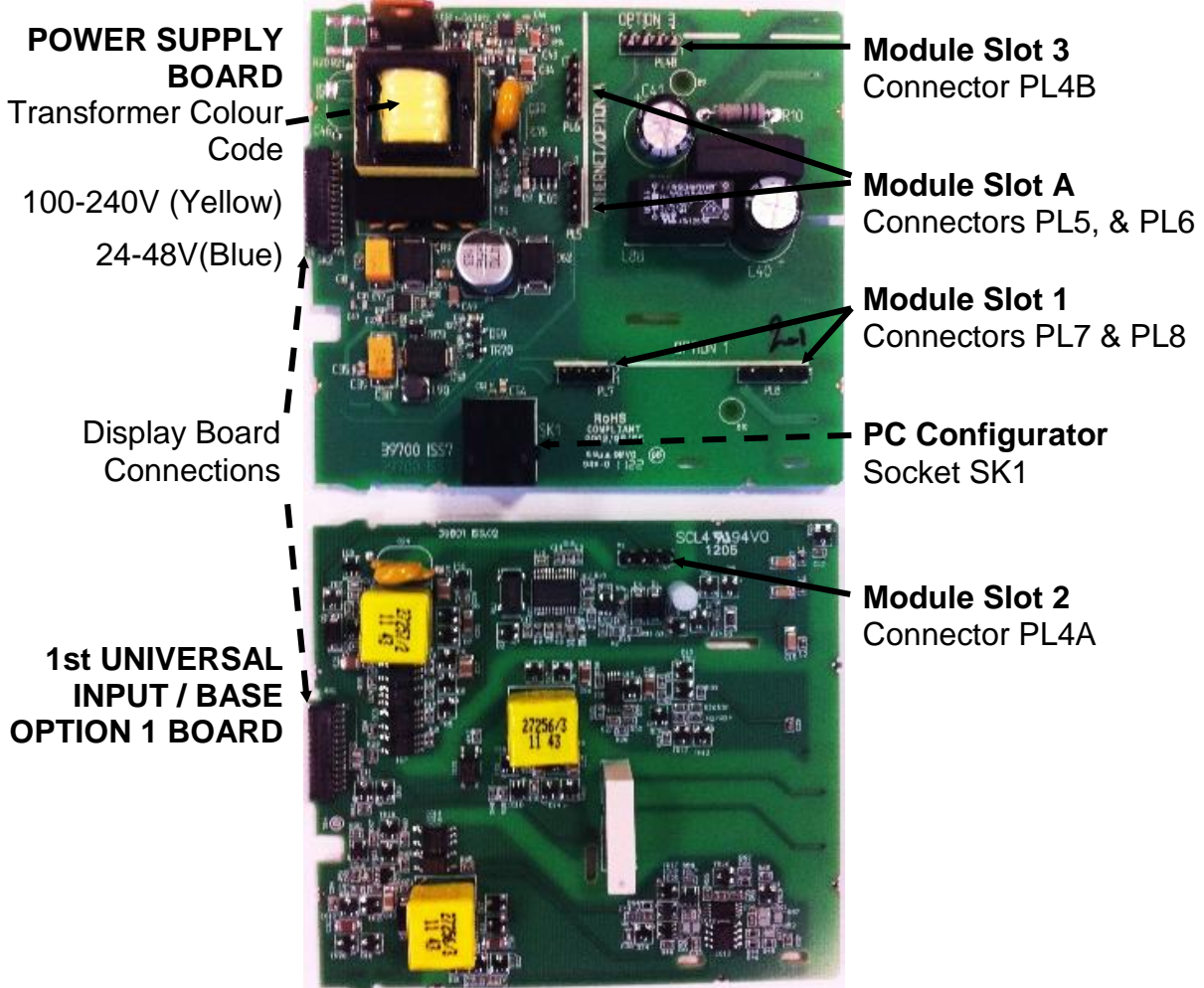


Figure 4. Main board connectors

This product is designed to allow the user to reconfigure some hardware options in the field by changing the plug-in modules in slots 1, 2, 3, & A located on the power supply and 1st universal input boards. The main boards (display/CPU, power supply, inputs 1 & 2 and digital input/USB) are factory fitted, but may be removed while reconfiguring the plug-in modules. Take care when re-fitting these boards. Observe the power supply board transformer colour, and case labelling to check the supply voltage, otherwise irreparable damage may occur.



CAUTION: Replacement of boards must be carried out by a technically competent technician. If the Power Supply board does not match the labelling, users may apply incorrect voltage resulting in irreparable damage.

Removing/Replacing Option Modules

1. To remove or replace Plug-in Modules 1, 2, 3 or A it is necessary to detach the power supply and input boards from the front panel by lifting first the upper and then lower mounting struts.
2. Remove or fit the modules to the connectors on the power supply and input boards. The location of the connectors is shown below. Plastic pegs prevent fitting of older non-reinforced single relay modules – *Remove the peg to fit dual relay modules*
3. Assemble the Power Supply and Input boards together. Tongues on each option module locate into slots cut into the main boards, opposite each of the connectors. Hold the Power and Input boards together and relocate them back on their mounting struts.
4. Push the boards forward to ensure correct connection to the front Display/CPU board and re-check the installation of the Option C and/or 2nd Input / Base Option 2 boards if present.



CAUTION: Check for correct orientation of the modules and that all pins are located correctly.

Replacing the Instrument in its Housing



CAUTION: Before replacing the instrument in its housing, ensure that all power has been removed from the rear terminals.

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

1. Hold the Power Supply and Input boards together.
2. Align the boards with the guides in the housing.
3. Slowly and firmly, push the instrument into position in its case.



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.

Auto Detection of Plug-in Modules

The instrument automatically detects which plug-in modules have been fitted into each slot. The menus and screens change to reflect the options compatible with the hardware. The modules fitted can be viewed in the product information menu, as detailed in the Product & Service Information Mode section of this manual.

Data Recorder Board

If installed, the Data Recorder memory and Real Time Clock (RTC) components are located on a plug-in daughter board attached to the front Display/CPU board.



CAUTION: Servicing of the Data Recorder/RTC circuit and replacement of the lithium battery should only be carried out by a technically competent technician.



Profiler Enabling



If you purchased a controller with the Profiler option installed, these features will be enabled during manufacture.

Controllers supplied without the Profiler option installed can be upgraded in the field by purchasing a licence code number from your supplier. A unique code must be purchased to enable profiling on each controller that requires it.

Entering the Profiler Enable Code

Hold down the  and  keys during the power-up “splash screen”.

Using the  or  keys, enter the 16-character licence code in the displayed screen.

Press  to move on to the next character. Press  to move back to the previous character.

Press  after entering the final character.

To confirm if profiling is installed in your instrument, check the Controller Feature Information in Product & Service Information Mode.