



Technical Details and Safety Instructions for Integra INT-2270 Option Modules

A multifunction Power Quality Meter

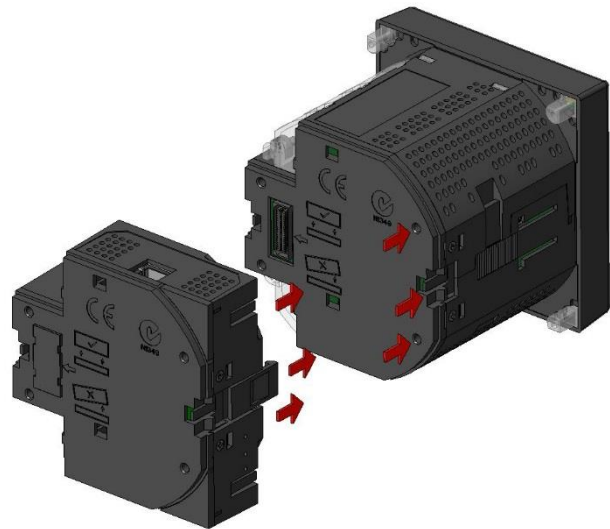
The Integra, INT-2270 and Integra INT-2170, are a multifunction digital meter for the measurement of power quality. They provide measurement isolation and conversion of all main electrical parameters. Both INT-2270 and INT-2170 can be used in single and three-phase balanced or unbalanced, 3 or 4 wire electrical systems.

The INT-2270 has an accuracy of CL0.2S.

The INT-2170 has an accuracy of CL0.5S.

Both include RS485 Modbus RTU communications protocol and Pulse/Alarm input/outputs as standard.

Each option module is sold separately and is installed by the user, following the details below.



Safety

The unit is designed in accordance with BS EN 61010-1:2001 (IEC 61010-1:2001) – Permanently connected use, Normal condition. Installation category III, pollution degree 2, double Insulation. Measurement Category III.

Maintenance

In normal use, no maintenance is needed. As appropriate for service conditions, isolate from electrical power, inspect the unit, and remove any dust or other foreign material present. Periodically check all connections for freedom from corrosion and screw tightness, particularly if vibration is present.

WARNING.

It is essential that the primary current is isolated BEFORE connecting or disconnecting the secondary current connections. The unit is intended for panel mounting. Avoid mounting the unit where there is excessive vibration; in excessive direct sunlight; or outside a reasonably stable ambient temperature.

Warnings ⚡ ⚠ Caution: Risk of Electric Shock

- Installation and servicing should be performed only by qualified, properly trained personnel abiding by local regulations.
- Ensure all supplies are de-energised before attempting connection or other procedures.
- Terminals should not be user accessible after installation.
- If this equipment is used in a manner not specified by the manufacturer, protection provided by the equipment may be impaired.
- During installation suitable PPE, including eye protection MUST be worn at all times

EMC Installation Requirements

Whilst this unit complies with all relevant EU EMC (electromagnetic compatibility) regulations, any additional precautions necessary to provide proper operation of this and adjacent equipment will be installation dependent and so the following can only be general guidance:

- Avoid routing wiring to this unit alongside cables and products that are, or could be, a source of interference.
- The supply to the unit should not be subject to excessive interference. In some cases, a supply line filter may be required.
- To protect the product against incorrect operation or permanent damage, surge transients must be controlled. It is good EMC practice to suppress transients and surges at the source. The unit has been designed to automatically recover from typical transients; however in extreme circumstances it may be necessary to temporarily disconnect the supply for a period of greater than 10 seconds to restore correct operation.
- Screened communication leads are recommended and may be required. These and other connecting leads may require the fitting of RF suppression components, such as ferrite absorbers, line filters etc., if RF fields cause problems.
- It is good practice to install sensitive electronic instruments that are performing critical functions in EMC enclosures that protect against electrical interference causing a disturbance in function.

Specification

Ethernet

The Ethernet modules supports dynamic IP addressing from a DHCP server. Suitable software can be used to fix the IP address if necessary. eg. www.chipkin.com

Physical Connection	RJ45
Standard	IEEE 802.3
Cable	CAT5 or CAT6
Network	10/100Base-T

Modbus TCP/IP

The Ethernet option module acts as a slave device and may be queried by a Modbus® Master device. All messages sent to the device must conform to the Modbus® TCP protocol in Modbus RTU format.

BACnet IP

The BACnet IP product acts a server client and responds to messages from a BACnet/IP client. All messages must conform to the BACnet IP protocol to the ASHRAE standard.

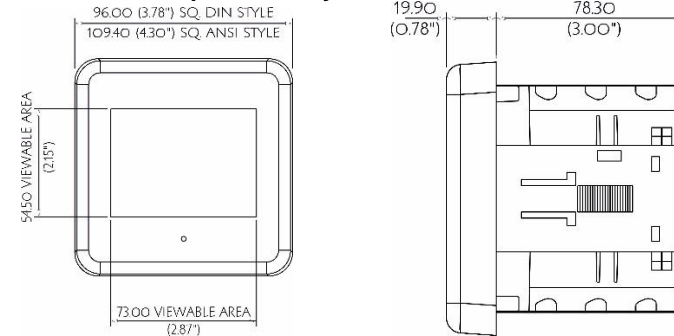
SNMP

Simple Network Management Protocol acts as an agent in an SNMP managed network. SNMP is often use for monitoring devices on an Ethernet network.

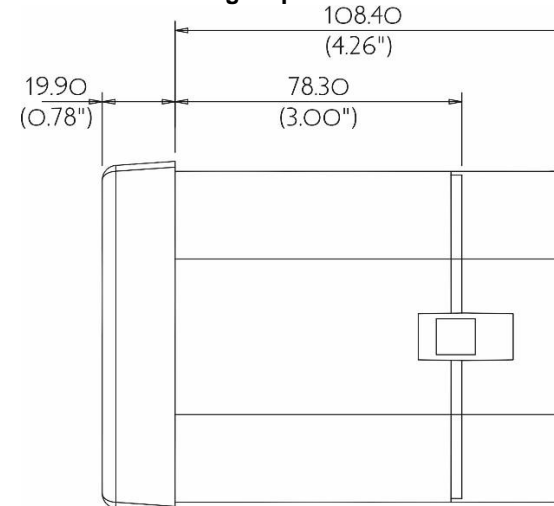
Mechanics

Dimensions	96 × 96 DIN 4.3" x 4.3" ANSI
Depth (1 Module)	Front of Panel 19.9mm (0.78") Rear of Panel 108.4mm (4.26")
Depth (2 Module)	Front of Panel 19.9mm (0.78") Rear of Panel 138.5mm (5.45")
Material	UL 94V0

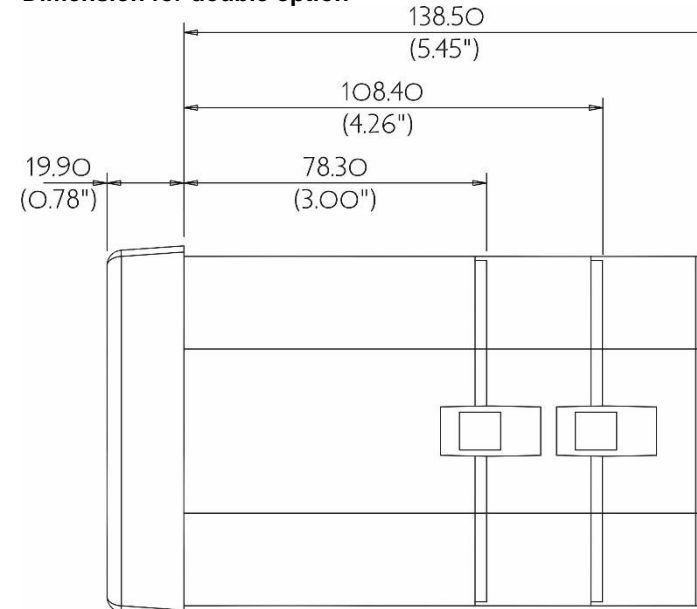
Dimension for product only



Dimension for single option

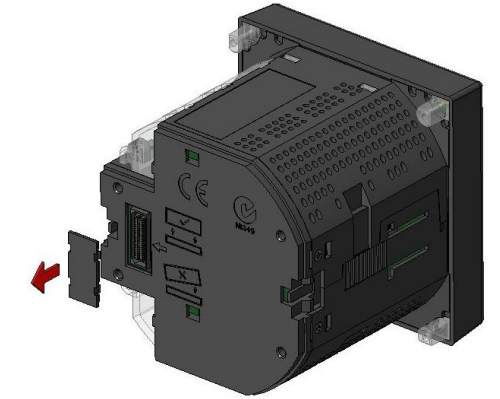


Dimension for double option

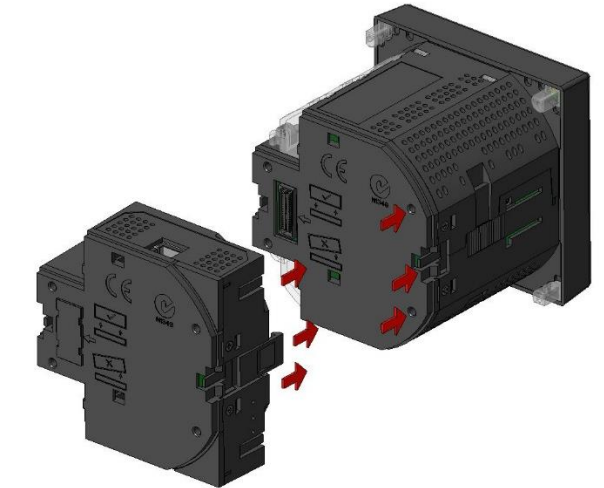


Connecting a module

- Using a screwdriver, carefully remove the cover protecting the external connector.



- Hold each clip at the side of the module and clip into the rear of the product. It is important that the option module is plugged squarely into place.



SETUP

Should setup of the option module be required. Enter the setup screens by following the procedure below.

- Press and hold the top button for 5 seconds.

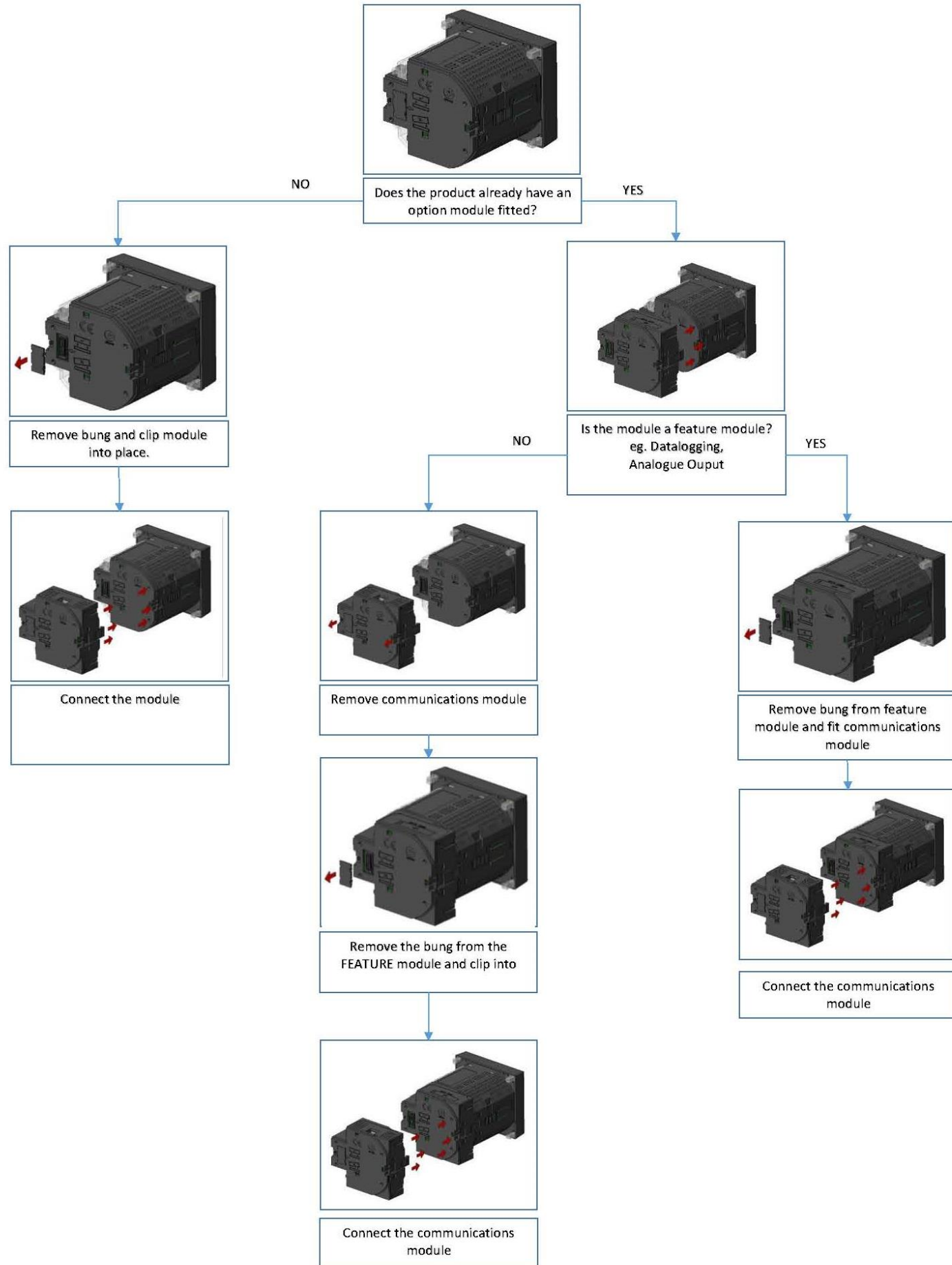


- Entering the correct password will enter the setup mode.



Connecting Two Modules




If a module is already connected or a second option module is required follow the guide below.



Standards and Approvals

Electromagnetic compatibility	
Electrostatic discharge	IEC 61000-4-2
Immunity to radiated fields	IEC 61000-4-3
Immunity to fast transients	IEC 61000-4-4
Immunity to Impulse waves	IEC 61000-4-5
Conducted immunity	IEC 61000-4-6
Immunity to magnetic fields	IEC 61000-4-8
Immunity to voltage dips	IEC 61000-4-11
Safety	
	IEC 61010

Explanation of Symbols

-  Refer to manual
-  Danger of electric shock
-  Do not discard

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