Smartzone MPM

INSTALLATION MANUAL

www.ias.net.au

Technical specifications:

Electrical Requirements

Power supply ..... 24 volt AC ± 10%
Line frequency ..... 50 Hz

Typical System Power Consumption

Eight zone system with no actuators driving ..... 9 VA (max)
With eight DM4C actuators driving ..... 32 VA (max)
With eight DM4 actuators driving ..... 45 VA (max)

Environmental Requirements

Operating temperature ..... 0 °C to 50 °C
Altitude ..... 0 to 2000 meters
Operating relative humidity ..... 10% to 80%
Avoid static electricity hazards
Avoid electromagnetic radiation sources
Avoid dust contamination
Avoid highly corrosive environments

Technical Notes

In the event of power loss and restore to the controller (i.e. blackout), all zones return to their previous state.

The run relay (refer to page 6) is a digital output, via a set of voltage free contacts, that reflects the Smartzone system state. This output can be connected to a suitable inhibit input on the A/C unit controller to stop the A/C unit when the Smartzone system is off (refer to A/C unit manufacturers documentation).

Cabling Requirements

Any electrical installation of appliances powered by more than 50 volts is to be carried out by a suitably licensed trades person in accordance with AS3000 and the manufacturers connection diagrams.

Device I/O Cabling

All touchpad and sensor cables should be shielded and kept the maximum practical distance from any power cables ≥ 240 volts (minimum = 300mm).
The mechanical connection of the earth terminal on the main processor module to a suitable point enables this shielded cable to function as intended.
All motor cables should be standard 6 core flat cable.
For cable termination instructions refer to the IAS innoCAB crimping instructions.

Component Positioning

The following are recommended positions for each of the required components for a Smartzone Plus system.

Main Processor Module (MPM)

The MPM is best installed within the ceiling space either mounted on the fan coil unit or on the supply air duct. The mounting point should be a relatively clean, dry and free of excess vibration.
Maintain a minimum distance of 300 mm from sources of electromagnetic interference (EMI) such as fan motors etc.

1234/5678 Zone Expansion Module

The 1234/5678 expansion modules must be connected to the right hand side of the MPM via the DB9 connectors.
These modules should be fixed in place with the MPM to ensure the modules cannot come apart during operation.

LCD Touchpad

The LCD touchpad has no sensor and so is independent of any zone. It is best installed 1.5 m off the floor, in a central location within the occupied area of the premises. In cases where more than one touchpad is used it may be appropriate to position touchpads in zones to facilitate remote control. One touchpad on each floor or in each zone is often the case. The touchpad has been designed to be flush mounted to a cavity wall, or if necessary it can be surface mounted through the use of a 15 mm mounting block.

Room Controllers

The room controller/sensors must be mounted within the target zone. The ideal position is 1.5 m off the floor in the return air path. Care must be taken to avoid solar radiation, wall cavity drafts and other heat sources.

Supply Air Sensor

The supply air sensor must be mounted in the main section of the supply air duct, as close to the fan coil as possible. Ensure that, regardless of zoning conditions, the supply air sensor has consistent contact with the active air supply.

NOTE: The supply air sensor comes standard with a 2.5 m cable. This can be extended on site if necessary.

Motorised Damper

The motorised barrel dampers may be fitted direct to the supply air duct or in line in the flexible duct (refer to the data sheet for the barrel dampers for more details).

Commissioning

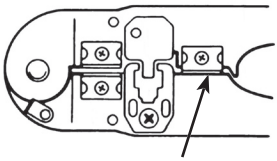
Refer to the LCD Touchpad User Guide for complete commissioning instructions.

InnoCAB Crimping Instructions

⚠ **Never insert uncrimped plugs into the sockets.**
This may cause damage to the socket contacts. Crimped plugs should insert easily into sockets until the locking tab clicks into place. Plugs that have been incorrectly crimped may be difficult to insert, and may cause damage to the socket contacts if forced into place.

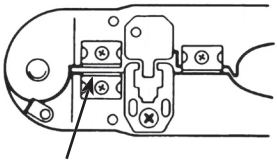
⚠ **InnoCAB connections are polarity conscious.**
It is essential that every cable termination for each installation is performed with the coloured inner conductors in the same order and position in the plug. Any two cable ends should appear identical if held side by side (provided they are of the same cable type - i.e. shielded or unshielded).

Step 1



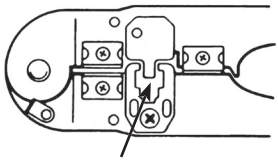
Cut the InnoCAB cable to the desired length. Take care to ensure the ends are cut square.

Step 2



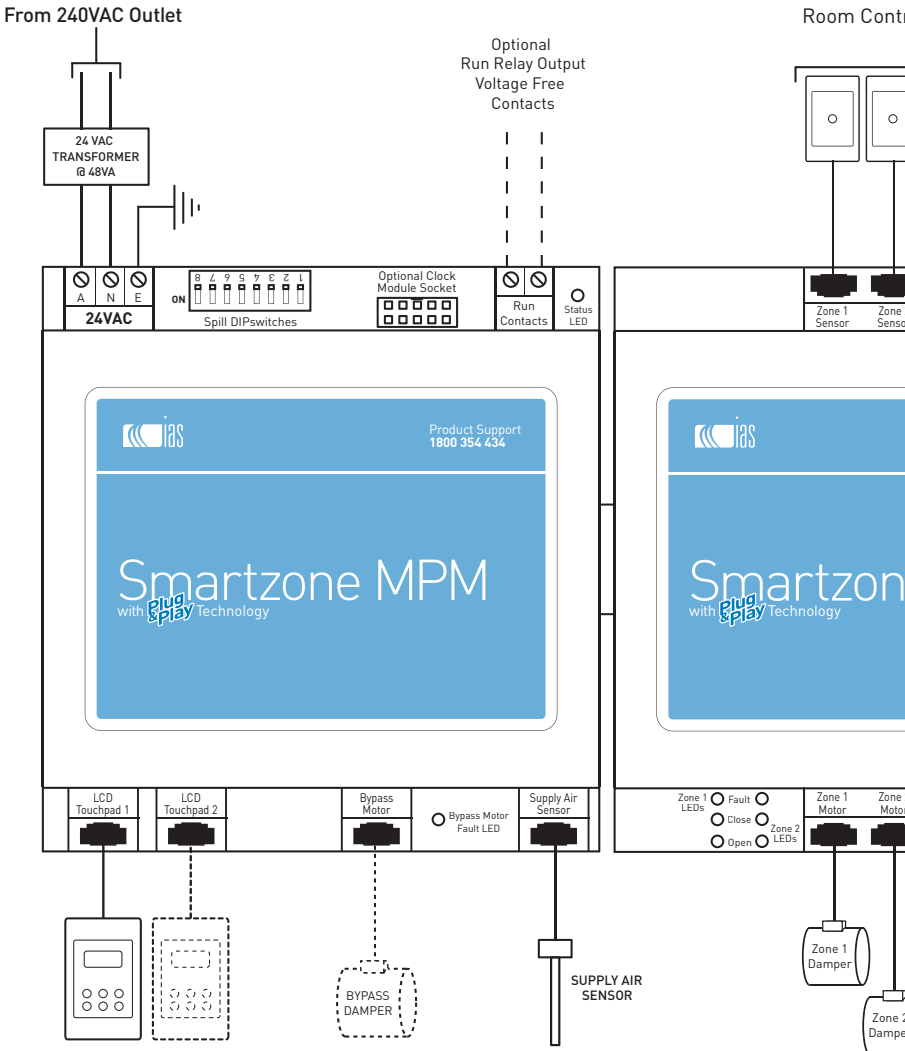
Insert the cable between the stripper blades of the crimping tool so that it touches the metal stop.
Squeeze the handles and pull the tool to remove the cables outer sheath and expose the insulated inner conductors. Ensure the insulation on the inner conductors is not damaged.

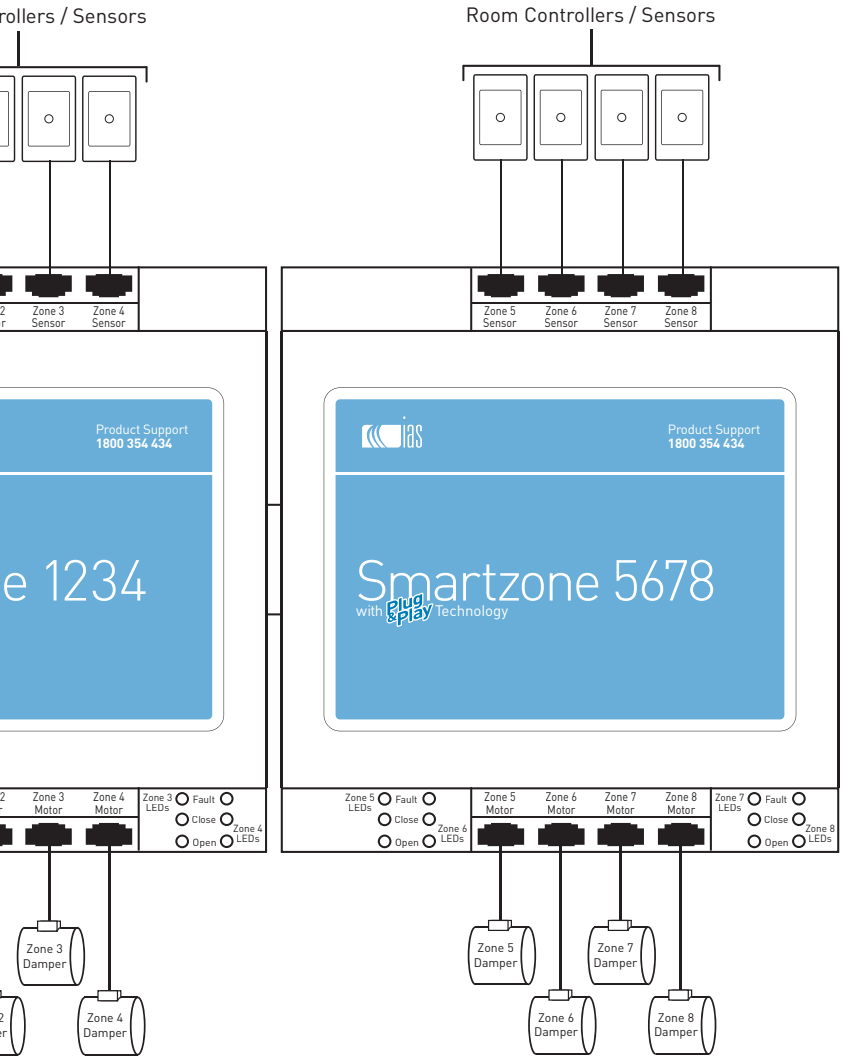
Step 3



Insert a plug into the plug holder of the crimping tool. It will click into place.
Insert the prepared cable end into the plug, taking care to ensure the coloured inner conductors are in the same order and position each time.
Squeeze the handles **firmly** to set the contacts and secure the cable.

Typical 8 zone system setup




rollers / Sensors
Room Controllers / Sensors
Zone 3 Sensor
Zone 4 Sensor
Zone 5 Sensor
Zone 6 Sensor
Zone 7 Sensor
Zone 8 Sensor
Product Support
1800 354 434
e 1234
Product Support
1800 354 434
Smartzone 5678
with Plug & Play Technology
Zone 3 Motor
Zone 4 Motor
Zone 3 LEDs
Fault
Close
Open
Zone 4 LEDs
Zone 5 LEDs
Zone 6 LEDs
Zone 5 Motor
Zone 6 Motor
Zone 7 Motor
Zone 8 Motor
Zone 7 LEDs
Zone 8 LEDs
Zone 3 Damper
Zone 4 Damper
Zone 5 Damper
Zone 6 Damper
Zone 7 Damper
Zone 8 Damper

Product Support
Freecall **1800 354 434**
www.ias.net.au
support@ias.net.au

Sales
Phone: 1300 306 125
sales@ias.net.au

Designed and manufactured in Australia by
Innovative Air Systems Pty Ltd