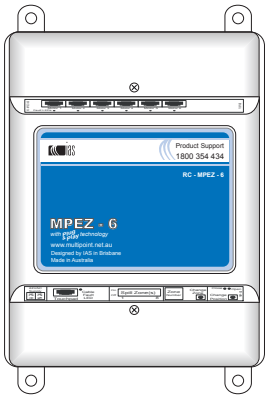
Multipoint EZ-6

Installation Manual



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System Overview:
The MPEZ-6 zoning system comprises of at least one of each of the following components:

- Multipoint easy main processor module (RC-MPEZ-6-IC)
- Multipoint easy main touchpad(s) (RC_MP-#-IC) # = 1,2,3,4,5 &6
- Motorised Damper (d-MD**Y**-**ZZZ**-IC) **Y** = torque rating, **Z** = size of the damper.
- Transformer RM-TFORM-24-5Z for 1 to 5 zones, RM-TFORM-24-9Z for 6 zones.

For individual on/off zone control in each zone, you will require at least one of the following for each zone requiring on/off control:

- Multipoint ezy controller (RC-MP-1-IC).

Main Processor Module:
The MPEZ main processor module (RC-MPEZ-6-IC) is the core component of the Multipoint EZ Zoning System. All zone motors and touchpad(s) connect to and receive power from the main processor module except when the touchpad expansion module is used. All touchpad and motor connections are made with the InnoCAB cable system, terminal connections are provided for the 24V power supply.
The main processor module is physically designed to offer simple installation and operation and may be either Din rail or surface mounted.

Touchpad Expansion Module:
The touchpad expansion module (RC-TPAD-EXP-24V-IC)allows for the connection of more than two touchpads to the main processor module.
Up to a maximum of 18 touchpads can be connected to the system at once, through the use of two touchpad expansion modules, connected to each touchpad connections on the main processor module.
When touchpad expansion modules are used, each expansion module must be wired to it's own separate transformer.
The touchpad expansion module is mounted in the same way as the main processor module.

Multipoint EZ Touchpads:
Multipoint EZ touchpads are available in 1, 2, 3, 4, 5 and 6 zone configurations, and connect to the main processor module via a synchronous data bus.
Each touchpad has one socket which connects to either the main processor module directly or to the optional expansion module if more than one touchpad is required.

The 1 to 4 button touchpads are programmable using DIP switches to control which zones the buttons correspond to. The 5 and 6 button touchpads are non-programmable. The buttons on the 5 and 6 button touchpads correspond directly to the respective motor outputs on the main processor module.
ie. A 5 button touchpad will control motor outputs 1, 2, 3 4 and 5 only.

Motorised Dampers:
Motorised dampers connect directly to the main processor module via the zone output sockets.
D-MD4C-ZZZ-IC dampers may be connected in parallel with a maximum of two motors per output.
D-MD4-ZZZ-IC dampers MUST NOT be connected in parallel and are limited to one motor per zone output.
D-MD1-ZZZ-IC dampers MUST NOT be connected in parallel and are limited to one motor per zone output.

Cabling Requirements:
All touchpad cables should be shielded, and kept as far from power cables as practical (minimum 300mm). Ensure the earth terminal on the main processor module is connected correctly to allow the shielded cables to function as intended.
All motor cables should be standard 6 core flat cable.

Component Positioning:
The main processor module and touchpad expansion modules can be positioned on or near the systems' air handling unit, or in the mechanical services switchboard.
The Touchpads should be mounted in a central location within the air conditioned space. They are designed to be flush mounted to a cavity wall, but may be surface mounted through the use of a mounting block not less than 15mm deep.
The motorised dampers can be mounted at the takeoff point of the rigid duct or mounted in-line in the flexible duct.

Commissioning:
Prior to applying power to the system, double check all wiring connections. Before connecting the touchpads, apply power to the system and use the zone test switches on the main processor module to check that each motor is driving correctly.
Connect the touchpads and repeat the damper check from the touchpad to ensure all components in the system are operating correctly including the spill zone if one is set.

The zone test switches are used as follows:

1. Press the left button , marked 'change zone' to select the appropriate zone as displayed on the 7-segment LED display.
2. Press the right button, marked 'change position' to drive the damper open or closed.
   The LED's will illuminate to display the current status of the zone.
   Yellow = closed
   Green = open

The main processor module will retain the set value until it is next changed by either the test switch or a zone touchpad.
The 'change zone' button can be used to scroll through all eight zones to check their current status.

To set the spill zone(s), move the respective switch on the DIP switch to the 'on' position. Any number or combination of zones may be set as spill zones to suit the installation. Refer to the A/C unit's specifications to determine the minimum airflow that is required.
The spill zone, when set, ensures airflow across the coil is maintained at acceptable levels. If the user turns all zones off, the designated spill zone(s) is forced to open.

Each InnoCAB socket has a red cable fault LED to indicate the presence of faults on that circuit. If the LED is lit, check the cable for short circuits, damage or incorrectly crimped ends.

Touchpad DIP Switches:

The DIP switch configuration on the 4 button touchpad sets the zone number assigned to the first button on the touchpad. The following buttons are assigned to the next zones in order. The assigned zones loop back to zone 1 if the zone number would exceed 6.
By adding the DIP switch numbers together, the value of the first assigned zone can be determined.

Ie. For the 4 button touchpad, if the switch 1 and 3 on the DIP switch are both set to the on position, the first button on the touchpad is now set to zone 4 (Sw 1 + Sw 3 = Zone 4), the following buttons will be set to 5, 6 and 1 in order.

The table below shows the simplest DIP switch combinations, however, any combination of DIP switches may be used to obtain the desired zone settings.

The 8 button touchpad is non-configurable. Each button on the touchpad corresponds directly to the respective zone.

Touchpad Button Zone Assignment:

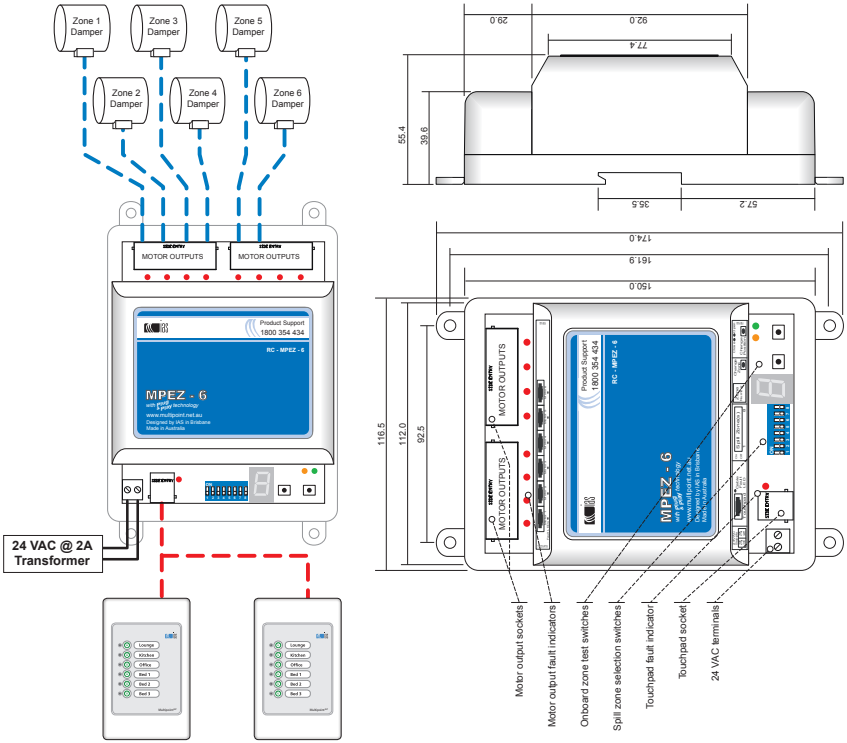
Switch 1	Switch 2	Switch 3	Switch 4	Assigned Zones
Off	Off	Off	Off	1,2,3,4
On	Off	Off	Off	1,2,3,4
Off	On	Off	Off	2,3,4,5
Off	Off	On	Off	3,4,5,6
Off	Off	Off	On	4,5,6,1
On	Off	Off	On	5,6,1,2
Off	On	Off	On	6,1,2,3

Operation Instructions:

To operate a zone, simply press the button to turn the respective zone on. The zone on/off state is shown by the green LED beside the button. Full airflow should be available from ten seconds to two minutes after switching the zone on, depending on the type of damper motor being used. To allocate an RC-MP1-IC to a zone, select the dipswitches to add up to the corresponding zone number.

In the event of a power loss and restore to the controller (ie. blackout), the controller will return all zones to the position last set by the user.

Basic Connection Diagram:

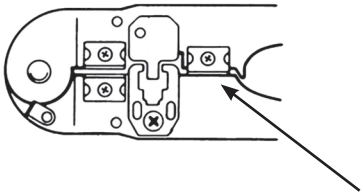


CRIMPING INSTRUCTIONS

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.

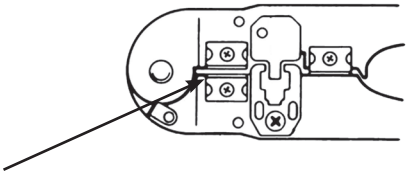
Cable connections are polarity conscious.
It is essential that every cable termination for each installation is performed with the coloured inner conductors in the same order and position in the plug. Any two cable ends should appear identical if held side by side (provided they are of the same cable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

Step 1



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

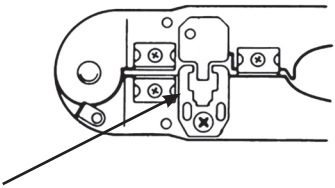
Step 2



- Insert the cable between the stripper blades of the crimping tool so that it 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.

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