



ZONE SWITCH DAMPER CONTROL SYSTEM

Operation & Installation Instructions



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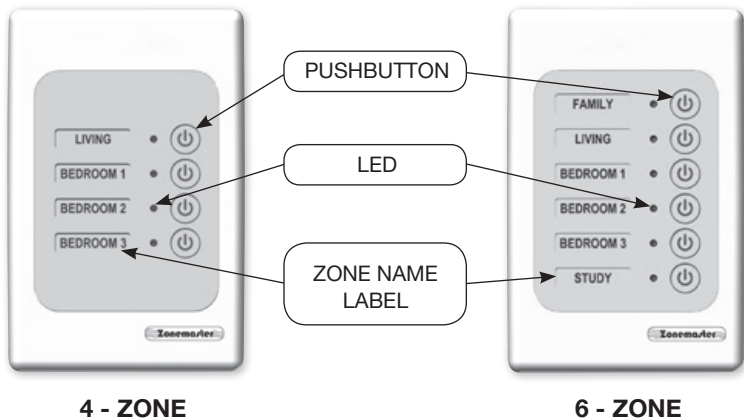
Liability

Please read the instructions before installing the Zonemaster Zone Switch control system.

Polyaire Pty Ltd does not accept any responsibility for loss or damage that may occur as a result of the incorrect installation of this Zonemaster Zone Switch control system.

OPERATION INSTRUCTIONS

1) Wall Controller Layout (Touchpad)



2) Turn Zone ON/OFF

- Press the pushbutton once to turn the zone ON. The LED will light up indicating the zone is On (Zone Opened). The LED will stay on until the zone is turned OFF.
- Press the pushbutton again to turn the zone OFF. The LED will turn OFF indicating the zone is OFF (Zone Closed).

Note: If power fails, zones will automatically resume their original position once power is back.

INSTALLATION INSTRUCTIONS

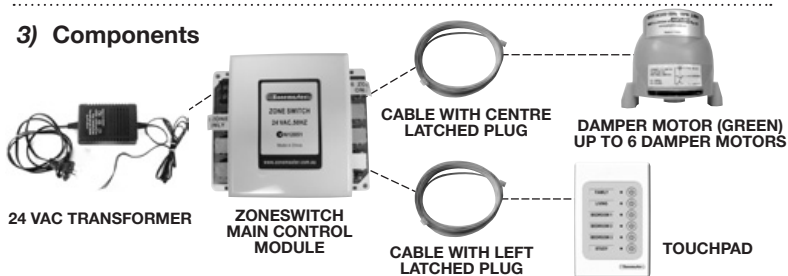
1) Application

The Zonemaster Zone Switch control system is a simple On/Off control system engineered to manage the air flow from the Air Conditioning unit to different outlets. This system is well suited to all ducted reverse cycle and ducted heating systems in light commercial, residential and apartment applications.

2) Features

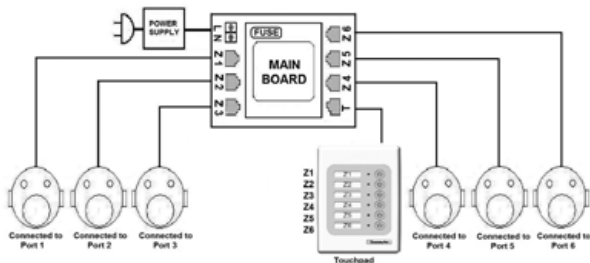
- Supports up to 6 individual zones.
- All dampers are directly connected to the main control module in a 'star' architecture.
- LED indicators to show the ON/OFF status of the zones.
- Personalised zone labelling using stickers.
- All zones automatically resume their original on/off state once power up after power outage.
- 24 volts for easy and safe installation and maintenance.

3) Components



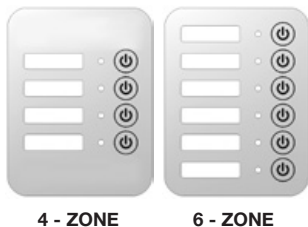
4) Wiring Schematic

NOTE: The zones on the touchpad are marked as Z1, Z2, Z3, Z4, Z5 and Z6 from the top of the touchpad.



5) Zoning areas and selecting 4-zone or 6-zone label

Air conditioned areas can be zoned according to their functions and daily usage such as Family room, Lounge, Library, etc. These zone names are chosen as desired along with a 4-zone or 6-zone label. For 1 to 4 zones it is recommended to use the 4-zone label and for 5-6 zones it is recommended to use the 6-zone label. The 4-zone and 6-zone labels (provided) are shown in the picture.



IMPORTANT NOTE: The Zone Switch system does not contain any safety features to prevent the pressure from building up and causing duct damage. Please make sure a separate dedicated open spill zone is designed with this system to prevent the above from occurring.

6) Main Module Preparation

Mount the main control module by screwing the box to a roof frame or Polyaire Diffusion Fitting. It is recommended to mount the main control module equidistant from all the damper motors.



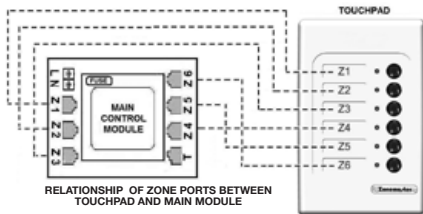
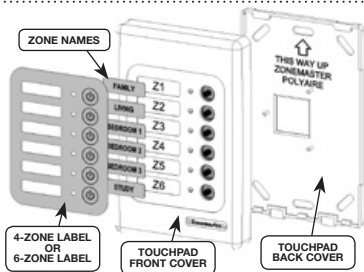
7) Touchpad Preparation

a) Exploded Diagram

The picture to the right shows an exploded view of the touchpad assembly.

b) Pushbutton (on Touchpad) and Zone output ports (on Main module)

Pushbutton Z1 on the touchpad controls zone output Z1 on the main control module and the LED light close to the button on the touchpad indicates the zone status. The picture shows the relevant pushbutton and zone output port on the touchpad and the main control module.



c) Applying Zone Names to Zones

It is essential to apply correct names against the zones to make sure the end user is fully aware of the location of each zone. The zone names are printed on a sticker which is to be peeled off as desired and applied in the relevant zone name recess on the touchpad first. There are 29 preset names which can be used or personal names can be written on the 4 blank stickers provided. After applying the zone name label on the touchpad, peel off the transparent protective covering film from the top of the label.

BATHROOM	FAMILY	OFFICE
BEDROOM 1	GAME	PLAYROOM
BEDROOM 2	GIRL'S	RUMPUS
BEDROOM 3	GUEST RM	STUDY
BILLIARD	KID'S	TV ROOM
BOY'S	KITCHEN	UPSTAIRS
COMPUTER	LIBRARY	THEATRE
DAY	LIVING	
DINING	LOUNGE	
DNSTAIRS	MASTER	
ENSUITE	NIGHT	

IMPORTANT NOTE: If a 4-zone system is used, the zone names are to be stuck on Z2, Z3, Z4 and Z5 recess respectively. For a 6 zone system, the zone names are to be applied on the Z1, Z2, Z3, Z4, Z5 and Z6 recess respectively. For a system with less than 4 or 6 zones, the blank stickers can be applied on the relevant zone recesses that are not being used.

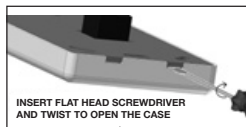
d) Applying 4-Zone or 6-Zone Label

The 4-zone or 6-zone label is applied after the zone names have been applied on the touchpad. The 4-zone or 6-zone label is peeled off from the sticker and then applied on to the touchpad. Ensure the label has been applied within the recess provided. After the label is applied on the touchpad, peel off the transparent protective covering film from the top of the label.

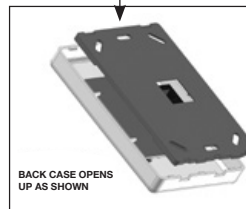
NOTE: For a 4 zone system, use the ports Z2, Z3, Z4 and Z5 on the touchpad and connect the damper motors to the relevant ports Z2, Z3, Z4 and Z5 on the main module respectively.

8) Installing the Touchpad

a) Insert a flat head screw driver into the two gaps at the bottom of the casing and turn the screw driver blade just enough to open the cover as shown in the figure to the right and then remove the back cover by sliding it out.



b) Position the back cover on the wall (about 1.5m high from the floor) and mark the positions for screws and the cut-out hole for the socket. Cut the hole and retrieve the touchpad cable (from the main module) and plug it into the touchpad. Mount the back cover to the wall on the marked place.



c) Attach the front cover to the back cover.

9) Troubleshooting Guide

PROBLEM	SUGGESTED ACTION
No response from the touchpad / The LED does not turn On/Off.	<ul style="list-style-type: none">• Check if the cable from the touchpad to the main module is plugged in properly• Check if the cable is faulty with a cable tester. If yes, replace the cable.• Check if the power to the main module is turned ON / check if there is a power failure.• Check if the red LED on the main module is OFF. If yes, the fuse might have to be replaced.• The touchpad or main module might be faulty. Replace the touchpad first and if the problem still exists replace the main module.
Dampers have no response when turned on or off	<ul style="list-style-type: none">• Check if the cable from the main module to the damper motor is plugged in properly.• Check if the cable is faulty with a cable tester. If yes, replace the cable.• Check if the damper motor is faulty by connecting the same zone output port to a spare damper motor. If yes, replace the damper motor.• If the problem still exists, the main control module might be faulty. Replace the main control module.
Zones don't open/close as desired	<ul style="list-style-type: none">• Check if the damper motor of that particular zone is connected to the right port on the main control module and corresponds with the touchpad.
Damper Motor drives the wrong way	<ul style="list-style-type: none">• Damper blade might be installed in the wrong position. If yes, reposition the damper blade by removing the damper motor and then re-align the damper blade to the respective position.• Check if the cable connecting the damper motor and the main control module is faulty. If yes, then replace the cable.

APPENDIX A - SPECIFICATIONS

Electrical Requirements

Power supply:	24VAC \pm 10%
Line frequency:	50 Hz
Fast Blow Fuse:	1.5A M205

Transformer

Input Voltage:	240VAC, 50 Hz
Output Voltage:	24VAC, 50 Hz
Wattage:	24W

Components Power Consumption

Touchpad:	0.5 VA
Main Control Module:	2VA

Zone Output

Output Voltage:	24VAC, 50Hz
Current:	200mA (1 damper motor)

Environmental Requirements

Operating temperature:	0°C to 60°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

Maximum Single Cable Length

Control Cable (Centre Latched):	20 metres
Data Cable (Left Latched):	10 metres

APPENDIX B - ZONEMASTER CABLE TESTER



Cable Tester

(Item Number: 657089)

1) Application of the Cable Tester

Zonemaster cable tester is used to test all RJ12 cables before the start of the installation process thus reducing considerable diagnostic time if the fully installed system is subsequently found to have a problem.

2) Features of the Cable Tester

- Tests Centre Latched and Left Latched RJ12 cables.
- Portable, quick and easy to test cables.
- Bright LED's to indicate a faulty cable in the dark roof spaces.
- 9V battery operated.
- User Instructions provided.



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