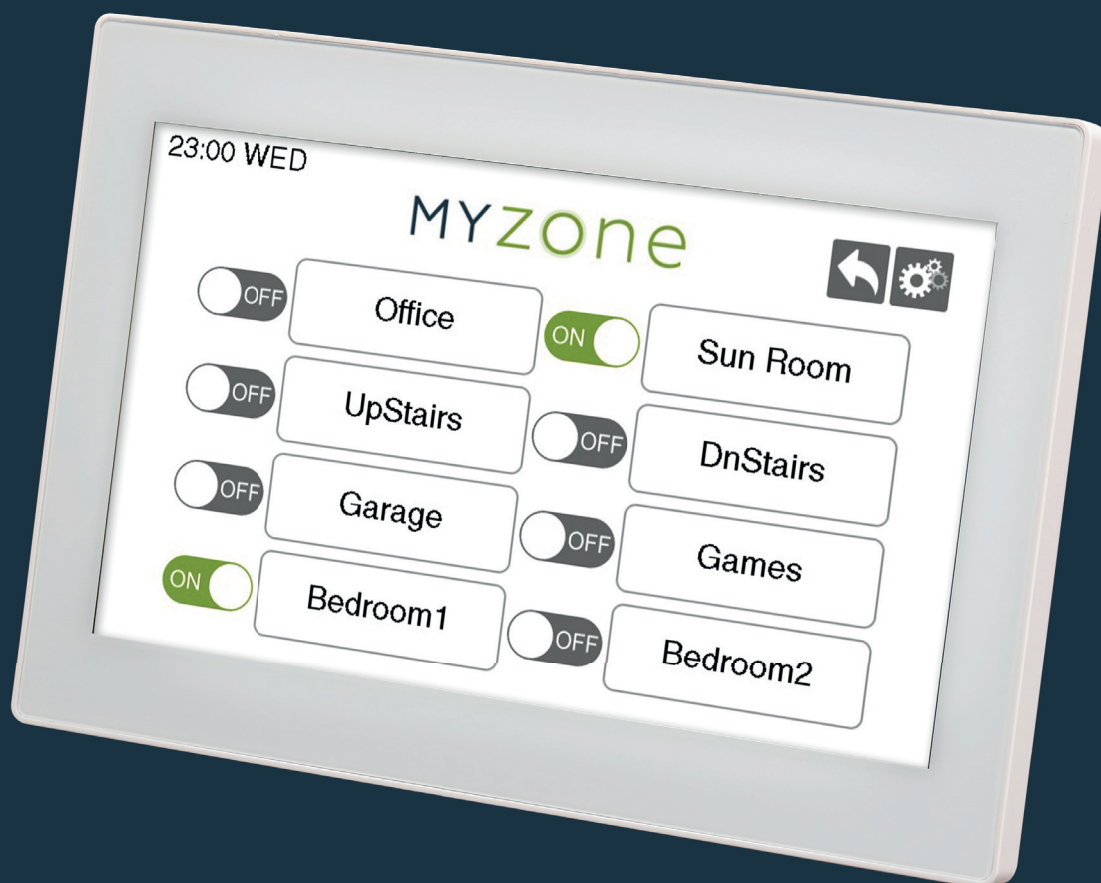


Installation Manual



MYzone2

Climate Control System

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01 Introduction

The MyZone 2 system had been developed to provide individualised control over airflow in each room. Traditional zone selection systems provide two position on or off control over airflow often resulting in over or under conditioning. The MyZone 2 system allows the occupant of each room to adjust the airflow to precisely match their comfort target.

MyZone 2 comes standard with two touchpad ports.

MyZone 2 can operate with two types of motorised dampers. The ZoneBoss Modulating motor (default) or the Belimo LMU Series.

Damper selection is done through the Settings menu. Other configuration features include total zones present, favourites present, spill display/hide, buzzer enable/disable.

MyZone 2 provides an unparalleled level of control over the airflow in every zone guaranteeing that comfort expectations are met.

02 System Overview

MyZone 2 is ideally suited for any structure with dynamic heat loads, especially residential applications where individual requirement differs for each room. The system is implemented independently of the plant controller.

2.1 How it Works

Although the installation, commissioning and operation of the system are simple the actual control process is ingenious. The operation can be separated into 3 areas:

1. Individual Zone Airflow Management
2. Total Airflow Management
3. Safety Modes

2.1.1 Individual Zone Airflow Management

One of the strengths of the MyZone 2 system is the way it handles each zone as an independent entity. The zone damper position can be adjusted for each zone in five percent increments providing precise flow control in each room. A time proportional damper positioning algorithm (TPDP) is used to modulate and monitor damper position.

2.1.2 Total Airflow Management

As damper positions change in individual zones MyZone 2 recalculates the total airflow requirement and uses a spill function to maintain system operating pressures within acceptable range.

2.2 System Components

The MyZone 2 system is tailored to suit each application by incorporating the following components into a standard ducted HVAC system.

1. MZWFCBT8-V2 (Control Box & Transformer)
2. MZWFTP8-V2 (MyZone 2 Touch Screen)

2.2.1 MZWFCB8-V2

The MyZone 2 Control Box includes eight damper outputs, 2 touchpad ports and spill selection.

2.2.2 MZWFTP8-V2

The MyZone 2 Touch Screen provides an interface for precise damper positioning and user control.

03 Technical Specifications

3.1 Electrical Requirements

Power input to system – 24 Volts AC +/- 10%

Line Frequency – 50 Hz

3.2 System Power Consumption

Number of Zones	ZoneBoss 3Nm	Belimo 5Nm
2	14.2 VA	12.8 VA
3	19.4 VA	15.8 VA
4	24.5 VA	18.8 VA
5	29.7 VA	21.8 VA
6	34.8 VA	24.8 VA
7	40.0 VA	27.8 VA
8	45.2 VA	30.8 VA

The power consumption data in this table represents maximum values with all motors driving and 2 x LCD touchpads with backlighting on. Typical loads will be less than this.

3.3 Environmental requirements

Operating Temperature – 0°C to 60°C

Altitude – 0m to 2000m

Operating Relative Humidity – 10% to 80%



Avoid exposure to:

- Static electricity
- Intense electromagnetic radiation
- Dusty conditions
- Highly corrosive environments
- Excess vibration

3.4 Inputs/Outputs

3.4.1 24 VAC Power Input

3.4.2 24 VAC Zone Motor Outputs

8 x 6P6C RJ12 Socket

3.4.3 Touchpad I/O

2 x 6P6C RJ12 Socket

3.4.4 Spill Zone I/O

8 x Dipswitches – Spill Zone Settings

3.5 Zone Motor Ratings

The MyZone 2 system is specifically designed for operation with 24 volt motors. All dampers in a MyZone 2 system must have the same actuator type. Please refer to the relevant Actuator Data Sheet for more details. MyZone 2 works with three position actuators only.

04 Installation

Zoning systems seem complex, however the MyZone 2 system has been designed to dramatically simplify the cabling process. The key to its simplicity is in the way the different processes have been separated.

- a. Zone motors connect to the 6P6C RJ12 damper output sockets.
- b. MyZone 2 Touch Screen connects to the touchpad socket.

4.1 Wiring

Shielded cable to all touchpads and sensors is recommended to minimise the effects of external interference. Cabling regulations apply.

Cables are to be kept to the maximum practical distance from any power cables ≥ 240 volts (minimum distance 300mm).

Maximum cable length is not to exceed 20m.

28AWG or higher 6P6C RJ12 cable must be used.

The following cables are recommended:

CAB12 (1609219) – six core flat cable for damper motors

CAB20IAS (1609221) – five core + shield flat cable for all touchpads

Refer to section 5 for crimping instructions.

4.2 Component Positioning

The following are recommended positions for each of the required components for a MyZone 2 System.

4.2.1 Control Box (MZWFCBT8-V2)

The main processor module 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 relatively clean, dry and free of excess vibration.

Maintain a minimum distance of 300mm from sources of electromagnetic interference (EMI) such as fan motors etc.

4.2.2 MyZone Touch (MZWFTP8-V2)

The MyZone 2 touch screen is best installed 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.

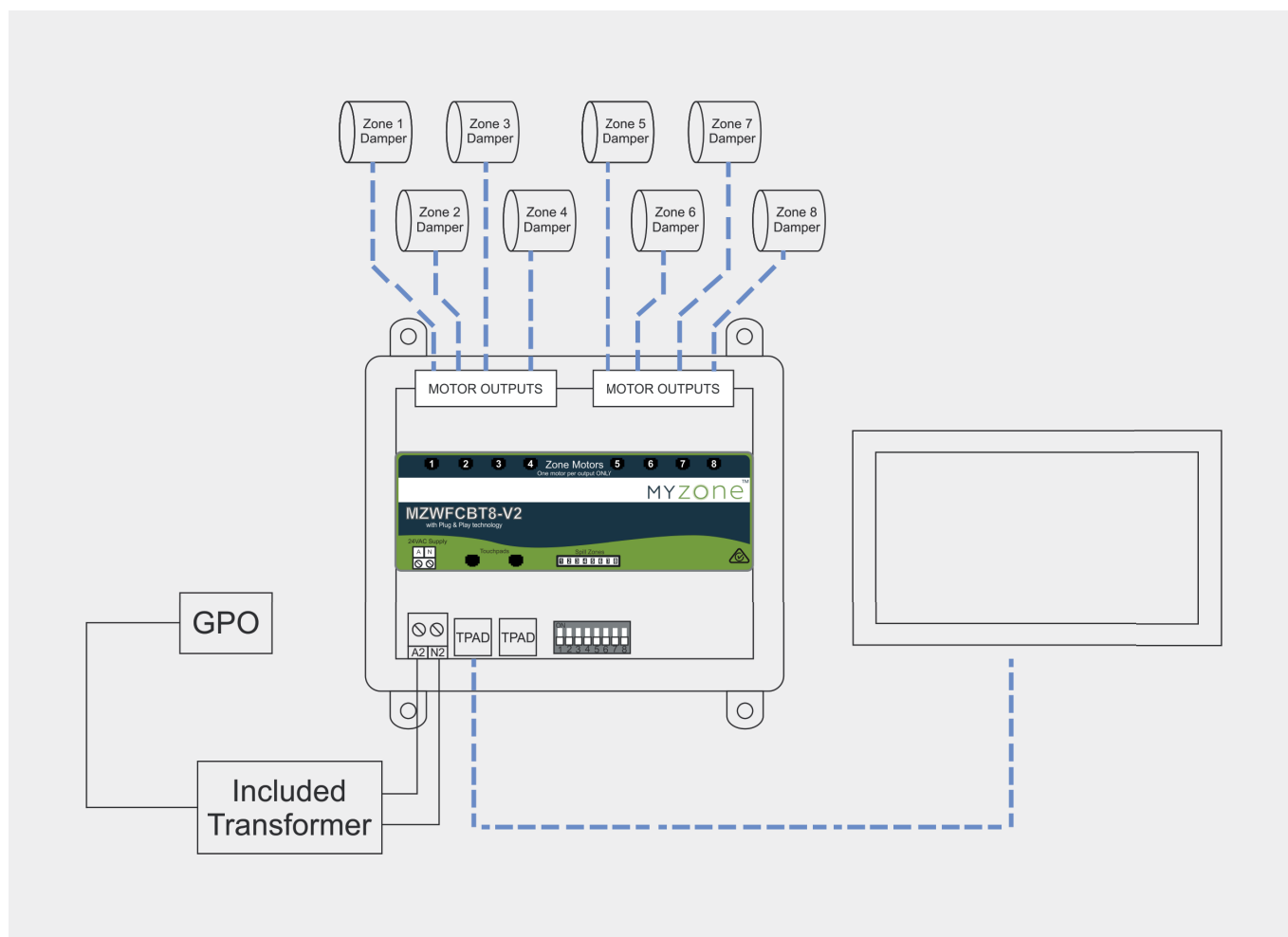
The touchpad has been designed to be mounted using the provided c-clip and wall mount box.

4.2.3 Motorised Damper

The motorised dampers should be fitted in line with the flexible duct. Care should be taken to make certain that all dampers/motors are of the same type. MyZone 2 utilises time proportional modulation and conducts a honing sequence on start up. Inconsistent damper drive times will result in inaccurate damper position and lower system performance.

4.2.4 Spill System Overview

The MyZone 2 ingenious spill system is the secret behind how it is able to adjust flow at each zone without causing the system to operate outside the acceptable pressure range. The MyZone 2 constantly monitors the position of the dampers via the time proportional damper positioning (TPDP) system. When the spill set point is achieved, the MyZone 2 opens the damper selected to operate as the spill.



05 Crimping Instructions

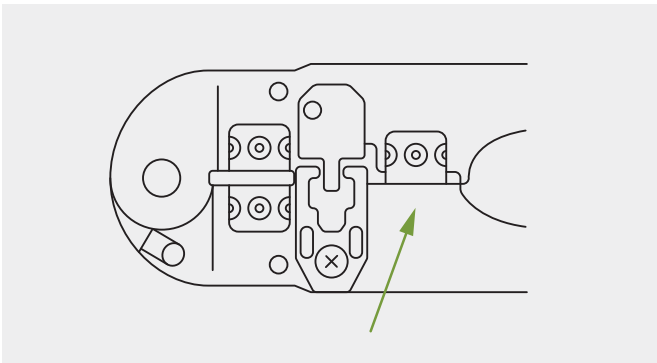
⚠ Never insert uncrimped plugs into the sockets.

Doing so 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.

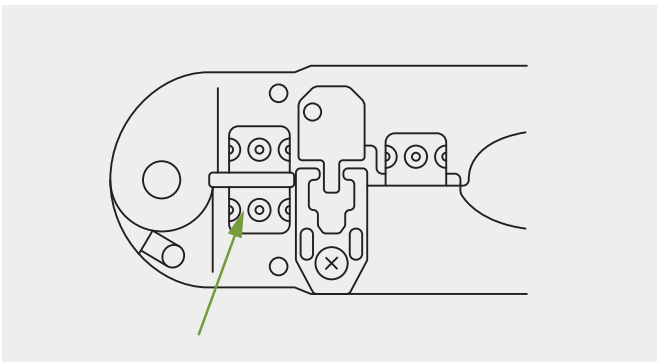
It is essential that every cable termination for each installation is performed with the coloured inner conductors in the same order and position in the plug. Any two cable ends should appear identical if held side by side (provided they are of the same cable type – i.e. shielded or unshielded).

Step 1



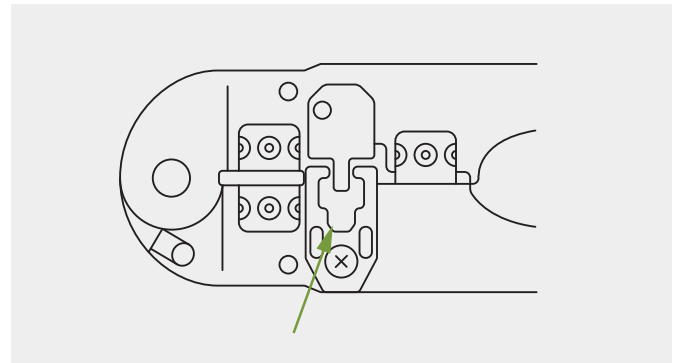
- Cut the cable to the desired length. Take care to ensure the ends are cut square.

Step 2



- Insert the cable between the stripper blades of the crimping tool so that it touches the metal stop.
- Squeeze the handles and pull the tool to remove the cable's 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.

06 Commissioning

6.1 Before connecting system power supply

1. Ensure that all modules are correctly mounted, and the power supply is connected properly.
2. Ensure that all touchpads and motors are connected as per the connection diagram supplied.

NOTE: DO NOT CONNECT MYZONE 2 MZWFTP8-V2 TO MOTOR OUTPUTS.

3. Ensure the air conditioning system is OFF

6.2 Spill Zone Configuration

1. A spill zones(s) may be designated by turning on one or more the of the spill DIP switches on the MZWFCBT8-V2 Main Processor Module.

6.3 Initial Power Check

When power is applied to the system, the start-up routine will drive all zone damper motors to the fully open position, then all dampers will drive to the appropriate position as dictated by the zone status, and, if the zone is on, the system conditions.

1. Connect the 24VAC power supply to the MyZone 2 system.
2. Check the main modules for fault LEDs (any red LED indicates an excess current fault on the output – generally a cable short).

6.4 System Configuration

The following system configuration steps must be completed to ensure the system will operate correctly with the motors supplied, and that the system safety mechanisms are operating as intended. Using the MZWFTP8-V2 System Configuration settings are accessed by pressing the “Zones” icon from the Home screen, from the “Zone Overview Screen” press the “Settings” icon in the top right corner. System configuration settings are password protected to prevent accidental tampering. The password is “4321”.

Please see MyZone 2 User Manual for instructions.

1. Set Present Zones
2. Set Motor Time
3. Display / Hide Spill Zones
4. Enable / Disable Buzzer
5. Favourites Set
6. Name Favourites
7. Name Zones
8. Balance System with min and max zone airflow settings
9. Set System Time Clock
10. Set Individual Zone time clock schedules (if required)
11. Set Individual favourite time clock schedules (if required)

6.5 Damper Motor Check

1. Select the appropriate zone and turn the zone Off (make sure the zone drives to the off position).
2. Select the appropriate zone and set the damper to 100% open position (check the damper drives to the on position).
3. Select the appropriate zone and set the damper to the 50% open position (check the damper drives to the half way position).
4. Repeat this for each zone.

6.6 Spill Check

1. Turn all zones Off one at a time.
2. Verify the spill zone(s) activates (the zone name will change to green to indicate that zone is spilling).

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