

MaxAir Zone Setup – Multiple Sensors

MaxAir supports zones with multiple sensors, where the 'control temperature' is derived from the average readings reported by all 'active' sensors.

From the Zone Add/Edit dialogue sensors can be added or deleted using the plus, minus buttons



Edit Zone: Central Heating20:23

☒ Enable Zone Enable this Zone if you want this Zone to be controlled

Index Number In the List of Zones where you want to place this Zone on the home screen

1

Zone Name Zone display name

Central Heating

Zone Type Zone type i.e. Heating, Hot Water or Electrical Immersion

Heating

Default Temperature Default temperature this Zone, used when no scheduled temperature is active.

25

Maintain Default Temperature Maintain Zone Default Temperature when no Schedule is Active

No

Maximum Temperature Maximum temperature this Zone can reach before Zone heating will shut-off for safety

25

Setpoint Deadband Check link for [Deadband](#)

0.5

Primary Temperature Sensor Node ID for the Sensor

Central Heating

Secondary Temperature Sensor Node ID for the Sensor

Bedroom 1

Zone Controller ID Select Zone Controller Type and Number

Central Heating

Boost Button ID Boost console if you have any

0

Boost Button's Child ID Boost button number if you have any

0

System Controller

50-Gas Boiler Controller Relay Node ID: 23

SubmitCancel

Outside: 23° C ☁ Clouds - few clouds

Note: It is possible to attach both multiple Sensors and Zone Controllers.

Zone Control

Single Sensor

Edit Sensor: Central Heating19:36

Before System Controller

When Sensor is NOT Allocated to a Zone, Locate Tile either Before or After the System Controller Tile on the Home Screen

Index Number

In the List of sensors where you want to place this sensor on home screen

1

Sensor Type

Temperature, Humidity, etc

Temperature

Sensor Name

Select either Outside Weather or Sensor to be used to calculate the Start Time Offset Applied.

Central Heating

Sensor ID

Node ID for the Sensor

21 - Temperature Sensor

Sensor Child ID

Node Child ID for the Sensor

0

Mode

Sensor Readings Captured either Continuously or Only on Value Change

On-Change

Timeout

On Change Mode - maximum interval in Minutes between Sensor readings if no Value Change

10

Sensor Resolution

Resolution between +/- 0.0 to 1.0

0.2

Sensor Correction Factor

Positive or Negative Correction Factor

0.00

Frost Protection

The System will protect itself against frost. To Disable protection you can set the temperature to 0

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Frost Controller

The zone controller to be activated when frost protection is triggered by this temperature sensor.

Central Heating

Fail Timeout

Maximum interval in Minutes before the device is considered to have failed to reported. Fault monitoring is disabled for the device if Timeout is set to 0.

0

Submit

Cancel

Outside: 25° C

Clouds - scattered clouds

If a single sensor is attached to the zone, then zone control will be achieved using the parameters allocated to that sensor e.g.

Frost Control will use the *Frost Protection* and *Frost Controller* parameters allocated.

Sensor Timeout will be configured using the *Fail Timeout* parameter. If this is set to 0 then the Zone will remain active even if the sensor never reports, otherwise the Zone will be suspended if the Sensor does not report within the *Fail Timeout* interval.

Multiple Sensors

Note: when adding a 'Secondary Sensor' from the Zone Add/Edit dialogue, only those sensors with a *Fail Timeout* setting which is not 0, will be available for selection. This is in order that the average reading can be calculated effectively.

Control Temperature

The Zone control temperature will be the average calculated from the individual sensor readings. If a 'Fail Timeout' has been set for a sensor and it fails to report within this period, then it will be removed from the average calculation. The Zone will be suspended if all attached sensors, which have a non-zero 'Fail Timeout' fail to report. Only the *Primary Sensor* can have a *Fail Timeout* of 0, if this is the case then the Zone will NOT be suspended if ALL the attached sensors fail to report and the last reading reported by the *Primary Sensor* will be used as the control temperature.

Frost Control

Frost Control will be achieved by using the individual sensor settings and reported temperature. Hence different trigger temperatures could be used for each sensor, if desired. If the Zone has multiple Zone Controllers attached then each sensor could be linked to different Zone Controllers.

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Zone Status Popup

Central Heating

Attached Sensors
Green - has not exceeded timeout or no timeout set
Red - Exceeded set timeout

Central Heating	27.8°
Bedroom 1	27.5°
Average Temperature	27.7°

You can Disable a Schedule by clicking on the temperature circle OR
You can Re-Enable a Schedule by clicking on the 'D' circle.

20

WeekDays AM06:30:00 - 09:30:00

Graph 24hClose

The Zone Status popup will show a list of the attached sensor, with the current temperature shown in green if the sensor has reported within its *Fail Timeout* period, or else it will be displayed in red.

If multiple sensors are attached, then the Average Temperature will be displayed.

Zone Graphs

In the case of multiple sensors, the calculated Average Temperature will be used for the graph displays.

Note: When multiple sensors are configured, the calculated average temperature is added to the database 'messages_in' table. This will occur on-change of else every 10 minutes, the table entry id will be of the form 'zavg_zone_id'.

Zone Settings Popup

Selecting the Zone menu item from the Settings/Node and Zone Configuration menu will display the a list of currently configured zones, including any allocation of multiple sensors.

Zone Settings

Maximum Zone Temperature
Sensor Node ID
Controller (Relay) Node ID.

Central Heating	Max 25 - Sensor: 21 - GPIO: 23-22 Max 25 - Sensor: 20 - GPIO: 23-22	
Hot Water	Max 45 - Sensor: 42 - GPIO: 23-21	

CloseAdd Zone

Note: This dialogue can be used to Add/Delete/Edit the zone configurations.