

heatmiser®



Model: **EDGE-HC**

Model: Edge-HC

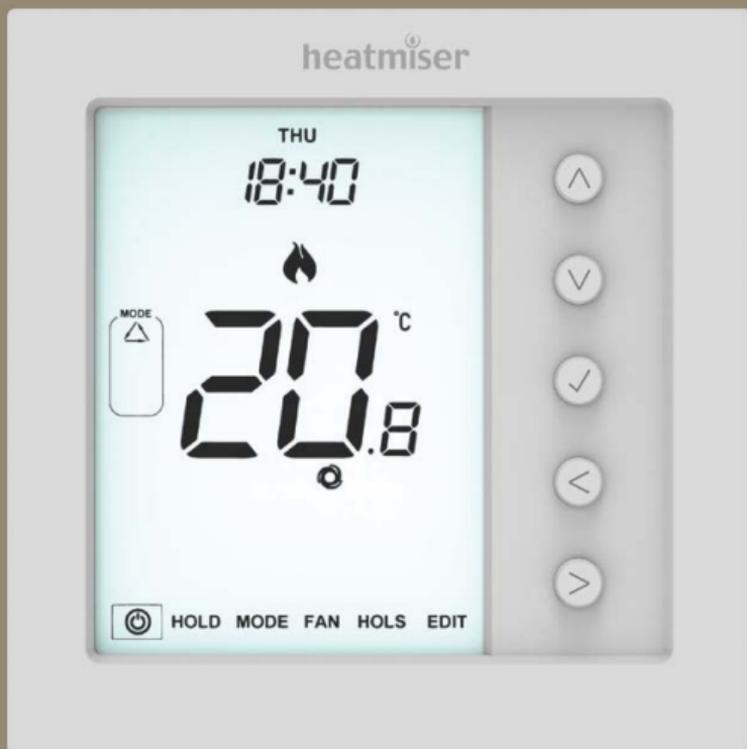




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Installation Procedure



Do

Mount the 'edge-HC' at eye level. Recommended height **1.5 meters**.
Read the instructions fully so you get the best from our product.

Don't



Do **not** install near to a direct heat source as this will affect functionality.

Do **not** position behind curtains or block by furniture.

Do **not** install near electric fires, televisions, wall or table lamps as this may also prevent the thermostat from working properly.

Do **not** push hard on the LCD screen as this may cause irreparable damage.

This thermostat is designed to be flush mounted and requires a back box of 35mm (minimum depth) to be sunk into the wall prior to installation.

Step 1

Using a small screwdriver, slightly loosen the screw from the bottom face of the thermostat. You can then carefully separate the front half from the back plate.

Step 2

Place the 'edge-HC' LCD front plate somewhere safe.

Terminate the wires as shown in the diagrams on pages 28-32 of this booklet.

Step 3

Screw the 'edge-HC' back plate securely into the back box.

Step 4

Replace the front of the thermostat onto the back plate, by locating the pins in the socket then insert the top edge first. Now push in the bottom edge, securing it in place with the retaining screw.

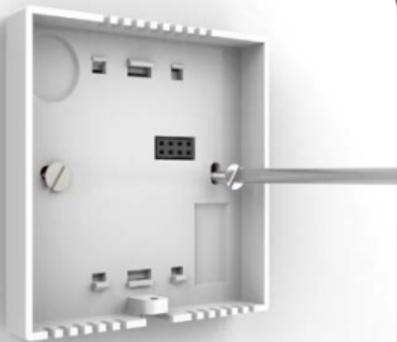
1



2



3



4





System Type

'System Type' makes sure that the thermostat operation and switched outputs are configured to the correct installation.

Key: NO = Normally Open Valve, NC = Normally Closed Valve

Hf = High Fan, Mf = Medium Fan, Lf = Low Fan speeds.

01 = 2 Pipe System Manual Select Heat or Cool

Heat, Cool & Ventilation modes both with 3 speed fan and Normally Open, Normally Closed valve connection method.

Heat = Auto & Manual fan.

Terminal Outputs

Fan: 'Hf''Mf''Lf'

Cool = Auto & Manual fan.

Valve: 'V1' = NO, 'V2' = NC.

Vent = Manual 3 speed selectable fan.

02 = 2 Pipe System Cool Only

Cool and Vent options only, with 3 speed fan and Normally Open, Normally Closed connection method.

Cool = Auto & Manual fan.

Terminal Outputs

Fan: 'Hf''Mf''Lf'

Vent = Manual 3 speed selectable fan.

Valve: 'V1' = NO, 'V2' = NC.

03 = 2 Pipe System Manual Select Heat or Cool (Twin Valve output)

Heat, Cool, & Ventilation modes with 3 speed fan (Cool & Vent only) and twin valve outputs.

Cool = Auto & Manual fan for cooling only! No fan output for heating.

Vent = Manual 3 speed selectable fan.

Terminal Outputs

Fan: 'Hf''Mf''Lf'

Valve: 'V1' for 'Cooling'.

Valve: 'V2' for 'Heating'.



System Type cont...

04 = 4 Pipe System Heat, Cool and Auto

Heat, Cool, Auto & Ventilation modes with 3 speed fan (all modes) and twin valve outputs.

Heat, Cool, Auto = Auto & Manual fan.

Vent = Manual 3 speed selectable fan.

Terminal Outputs

Fan: 'Hf''Mf''Lf'

Valve: 'V1' for 'Cooling'.

Valve: 'V2' for 'Heating'.

05 = 2 Pipe System Heat, Cool with 2 stage heating.

Heat, Cool & Ventilation modes with 3 speed fan (all modes) and 2 stage heating output.

1st stage Heat = No Fan

2nd stage Heat = Auto & Manual fan.

Cool = Auto & Manual fan.

Vent = Manual 3 speed selectable fan.

Terminal Outputs

Fan: 'Hf''Mf''Lf'

Valve: 'V1' for 'Cooling' &

2nd stage heating.

Valve: 'V2' for 'Heating'.

To select the desired 'System Type'...

• Use the 'Left/Right' arrow keys to highlight  then press and hold the  button for 3 seconds to turn off the display



• Tap the 'Up' key to select 'Setup' then press 



• Press the 'Down' key until you see '~~TYPE~~' displayed at the top of the screen then press 

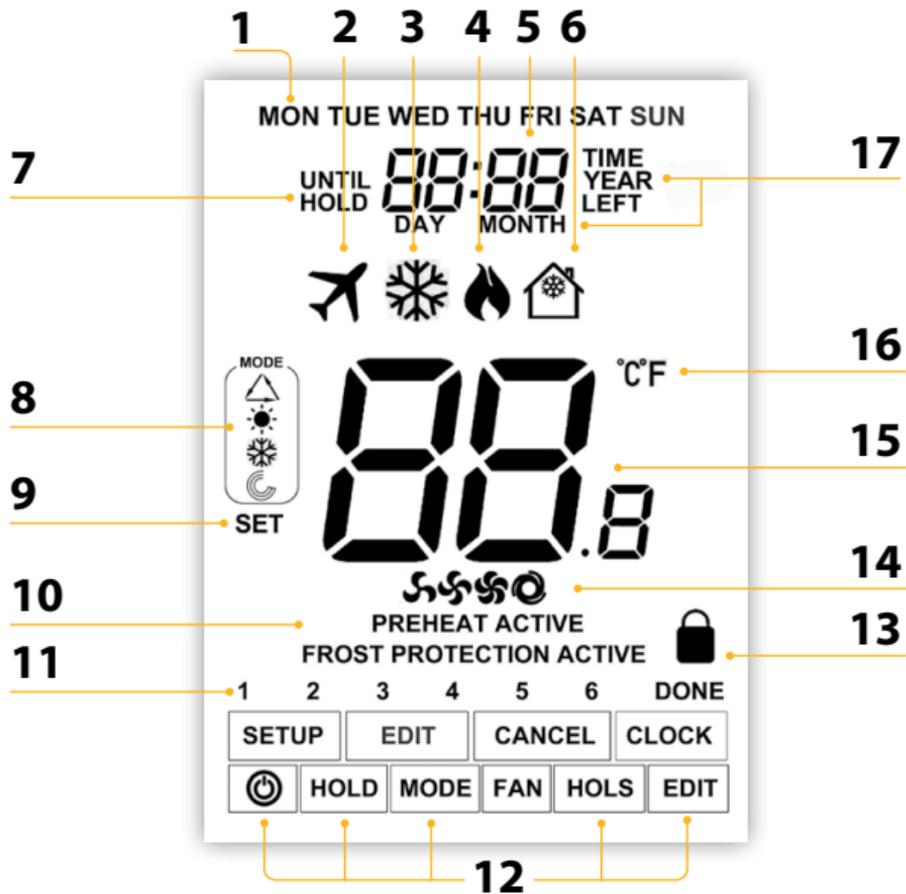


You will now see a large 2 digit number centre screen. This is the 'System Type' number.

• Use the 'Left/Right' arrow keys to select the desired type from the list above.

• Press  to confirm selection





LCD Display

1. Day Indicator - Displays the day of the week.
2. Holiday – Displayed when the thermostat is in holiday mode.
3. Cool Symbol – Displayed when cooling is active.
4. Flame Symbol – Displayed when the thermostat is calling for heat and flashes when optimum start is active.
5. Clock - Time displayed in 24 hour format.
6. Frost Protection/Standby – Displayed when frost protection is enabled.
7. Until/Hold - Displayed when the edge-HC has been manually overridden to the next programmed comfort level, or held to a certain temperature for a select period.
8. Mode Indicator – Displays current mode of operation (Auto, Heat, Cool, Ventilation).
9. Set – Displays when changes are being made to the configuration and current set temperature points.
10. Active Status - Indication for 'Preheat' and 'Frost Protection' modes.
11. Program Indicator - Displayed during programming to show which period is being altered.
12. Main Menu – Highlighted text indicates selected option.
13. Keypad Lock Indicator – Displayed when the keypad is locked.
14. Fan Icons – Static display icon when the fan is activated and flashes while selecting the desired fan speed.
15. Temperature – Displays the ambient room temperature.
16. Temperature Format - Degrees Celsius or Fahrenheit.
17. Time/Day/Month/Year - Displays when setting the Clock/Calendar or a Holiday period.



Power On/Off

When heating or cooling is in demand the flame or snowflake symbols will appear.

When the flame/snowflake icons are absent, there is no requirement for heating or cooling, but the 'edge-HC' remains active.

To turn the thermostat off completely, scroll to the Power Icon and hold the

✓ key for approximately 3 seconds until the display goes blank <> ✓

The display, plus heat, cool and fan outputs will be turned OFF.

To turn the edge-HC back ON, press the ✓ key once ✓

Thermostat completely OFF



Thermostat powered ON





Setting the Time and Date

To set the clock, follow these steps.

- Use the 'Left/Right' arrow keys to highlight  then press and **hold** the  button for 3 seconds 
At this point the screen will go blank showing only 'SETUP' and 'CLOCK'!
- Tap the 'Up' followed by 'Right' keys to highlight 'CLOCK' 
- Press  to confirm selection ('Hour' digits will now flash) 
- Use the 'Up/Down' arrow keys followed by  to set the 'Hours' 
- Use the 'Up/Down' arrow keys followed by  to set the 'Minutes' 
*Repeat the previous two steps to set the date ('Day, Month & Year').
 Display will go blank once completed.*
- Press the 'Down' arrow key followed by  to return to the main display 

Mode Select

'edge-HC' can be used as a heating/cooling thermostat and a fan ventilation controller, (mode options dependent on 'System *TYPE*' pages 5 & 6.

To select the mode:

- Use the 'Left/Right' keys to scroll to 'MODE' then press ✓ 
- Repeatedly press the 'Up' or 'Down' keys to select the mode 
The selected mode will now flash.
- Press ✓ to confirm ✓

Fan Speed

'edge-HC' allows for manual or automatic fan control for both heating and cooling. When set to manual there are 3 options, 'Low', 'Medium' & 'High'. In auto, the thermostat will choose the correct fan speed dependent on set temperature to actual temperature difference.

3°C/6°F = High Fan 2°C/4°F = Medium Fan 1°C/2°F = Low Fan

To select the fan speed:

- Use the 'Left/Right' keys to scroll to 'FAN' then press ✓ 
- Repeatedly press the 'Up' or 'Down' keys to select the speed 
The selected speed will now flash.
- Press ✓ to confirm ✓



Temperature Display

'edge-HC' will always show the ambient room temperature. To view the set temperature follow the instructions below.



Room Temperature



Set Temperature

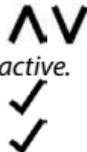
To view the set temperature (Heat or Cool modes only):

- Press either the 'Up' or 'Down' arrow key once
- Press tick to return to main screen



To view the set temperatures for (Auto Heat/Cooling):

- Use either the 'Up' or 'Down' arrow key once to view 'HEAT/COOL' set temp
- Press tick to view the next set temperature
- Press tick a second time to return to main screen



The 'SET' screen will timeout after 10 seconds if the tick button is not pressed.



Manual Temperature Control

The 'Up/Down' keys allow you to adjust the current set temperature. When you press either key, you will see the word 'SET' and the desired temperature value.

- Use the 'Up/Down' keys to adjust the 'SET' value 
- Press  to confirm settings and return to the main display 

Indicates whether Heat or Cool is being set.



Until next programmed 'Comfort Level' time.

Set Temperature

In 'Auto' mode you are required to set both 'Heat' and 'Cool' temperatures!

Note: This new temperature is maintained only until the next programmed comfort level. At this time, the thermostat will revert back to the programmed schedule.



Edit Comfort Levels

The 'edge-HC' offers three program mode options; Weekday/Weekend, 7 Day and 24 Hour programming. There is also the option to use the 'edge-HC' as a manual thermostat.

The thermostat is supplied with comfort levels already factory programmed, but these can be changed easily. The default times and temperature settings are;

Heating defaults

07:00 - 21°C (Level 1) 09:00 - 16°C (Level 2) 16:00 - 21°C (Level 3) 22:00 - 16°C (Level 4)

Cooling defaults

07:00 - 23°C (Level 1) 09:00 - 26°C (Level 2) 16:00 - 23°C (Level 3) 22:00 - 26°C (Level 4)

Time for unused levels must be set to --:-- so that the 'edge-HC' will skip these and continue on to the next programmed time.

Auto Mode

In 'Auto' mode you will set both 'HEAT' and 'COOL' set points for each level.

To disable cooling for a particular level, adjust the 'COOL' set point by a continual press of the 'Up' key until the display shows --.-

To disable heating for a particular level, adjust the 'HEAT' set point by a continual press of the 'Down' key until the display shows --.-

Note: For Weekday/Weekend programming, the four comfort levels are the same for Mon-Fri, but can be different for Sat-Sun. For 7 Day programming each day of the week can have four different comfort levels. In 24 Hour mode all days are programmed with the same comfort levels.

- To program the 'Comfort Levels, use the 'Left/Right' keys to scroll to 'EDIT' < >
 - Press ✓ to confirm <
 - Use the 'Left/Right' keys to select day/period of week (the selection will flash) .. < >
 - Press ✓ to confirm selection <
- 'Level 1' will now flash and the current time and temperature setting will be shown.*
- Press ✓ to alter 'Level 1' settings <
 - Use the 'Up/Down' keys to set the 'Hours' then ✓ to confirm < > <
 - Use the 'Up/Down' keys to set the 'Minutes' then ✓ to confirm < > <
 - Use the 'Up/Down' keys to set the temperature < > <
 - Press ✓ to confirm the settings ✓

Note: At this stage in 'Auto' you will be prompted to enter the 'COOL' temperature immediately following the 'HEAT' input, or vice versa depending on the current active mode.

- Press ✓ to confirm the settings <
 - Press the 'Right' arrow key >
- 'Level 2' will now flash and the current settings will be displayed.*
- Tip:** In 'Auto' mode you can quickly glance at both 'HEAT' & 'COOL' temperatures by pressing the 'Up/Down' keys while the selected level number is flashing.
- Press ✓ to alter 'Level 2' settings ✓

Repeat these steps to set all comfort levels. For any unused periods set time to --:--

- Use the 'Left/Right' keys to scroll to 'DONE' and press ✓ < > ✓

You can set up to a maximum of 6 levels by enabling these in the feature menu (see page 23)



Temperature Hold

The temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period.

- Use the 'Left/Right' keys to scroll to 'Hold' and press ✓ <> ✓
- Repeatedly tap the 'Up/Down' keys to set the desired 'Hold' time (Hours) then press ✓ ^v ✓
Minutes will now flash.
- Repeatedly tap the 'Up/Down' keys to set the desired 'Hold' time (Minutes) then press ✓ ^v ✓
- Use the 'Up/Down' keys to set the desired 'Hold' temperature ^v ✓
- Press ✓ to confirm selection ✓

You will see the 'HOLD LEFT' indication is displayed on screen.

The time will countdown the set duration and then revert to the normal program.

Auto Mode

In 'Auto' mode both 'HEAT' and 'COOL' set points are required for the duration.

Cancel/Edit Temperature Hold

- Use the 'Left/Right' keys to scroll to 'Hold' and press ✓ <> ✓
- While 'CANCEL' is highlighted press ✓ to cancel 'Hold' and return to normal operation ✓
- Alternatively, press the 'Left' arrow key to highlight 'EDIT' them press ✓ to adjust current 'Hold' settings <> ✓

To edit 'Hold' settings follow the same procedure as indicated in the steps at the top of this page.



Frost Protection (Heating Mode Only)

Use the 'Left/Right' keys to scroll to the 'Power Icon' < > ⏻

The frost icon will toggle ON/OFF each time ✓ is pressed ✓

In this mode, the edge-HC will display the frost icon and will only turn the heating 'ON' should the room temperature drop below the set frost temperature. If the heating is turned 'ON' whilst in frost mode, the flame symbol will be displayed.

To cancel the frost protect mode, navigate to the 'Power Icon' again, then press ✓ ✓

Note: In 'COOL' mode the thermostat will go into standby.



Frost Protection Symbol



Display showing 'Standby' in 'Auto' mode as current status = Cooling



Locking the edge-HC

The 'edge-HC' has a keypad lock facility. To activate the lock follow these steps.

- Use the 'Left/Right' keys to scroll to 'HOLD' & press ✓ for 7 seconds..... <>✓
The display will show 0000. At this point enter a four digit pin number.
- Use the 'Up/Down' keys to enter values ^v
- Use the 'Left/Right' keys to move between digits <>
- Press ✓ to confirm ✓

The display will return to the main screen and display the keypad lock indicator ...

Note: The keypad lock indicator is only displayed when the lock is active.



Unlocking the edge-HC

- To unlock the 'edge-HC' press ✓ once..... ✓
The display will show 0000. At this point enter the four digit pin number you set previously.
- Use the 'Up/Down' keys to enter values ^v
- Use the 'Left/Right' keys to move between digits <>
- Press ✓ to confirm ✓

The display will unlock and return to the main screen.



Holiday

The holiday function reduces the set temperature in your home to the frost mode temperature setting that is configured in the setup menu.

The 'edge-HC' will maintain this temperature if necessary for the duration of the holiday and will automatically return to the program mode on your return.

Caution! If left in 'COOL' mode the holiday function will place the thermostat into standby and therefore 'Frost Protection' will **not** be available.

In this instance the display will show ✈ but **not** 'Frost Protection Active'.

To set a 'Holiday'

- Use the 'Left/Right' keys to highlight 'HOLS' then press ✓ < > ✓
- Enter the return time (hours) by using the 'Up/Down' keys then press ✓ to confirm ^ v ✓
- Enter the return time (minutes) by using the 'Up/Down' keys then press ✓ to confirm ^ v ✓
- Repeat these steps to set 'Day', 'Month' & 'Year' ^ v ✓

The display will now show ✈ and indicate 'Frost Protection Active'

To view or change the 'Set' frost temperature while in 'Holiday' mode, press the 'Up/Down' keys followed by ✓ to confirm ^ v ✓

Note: A holiday cannot be set while the thermostat is in 'Ventilation' mode.



Feature Menu Settings Explained

These features allow you to set the correct parameters for initial setup.

System Type: Configures the thermostat settings and switched outputs to best suit the heat and cool sources installed.

Temperature Format: This function allows you to select between °C and °F.

Switching Differential: This function allows you to increase the switching differential of the thermostat. The default is 1°C which means that with a set temperature of 20°C, the thermostat will switch the heating on at 19°C and off at 20°C. With a 2°C differential, the heating will switch on at 18°C and off at 20°C. This setting applies to both heating and cooling.

Condition: Whilst "Optimum Start" is in effect the 'Switching Differential' shall default to 1°C/F

Output Delay: To prevent rapid switching, an output delay can be entered. This can be set from 00 - 15 minutes. The default is 00 which means there is no delay.

Condition: Output delay will not be in effect while 'Optimum Start' is running.

Temperature Up/Down Limit: This function allows you to limit the use of the up and down keys. This limit is also applicable when the thermostat is locked and so allows limited control of the heating/cooling system.

Deadband: Only selectable when 'Auto' (HEAT & COOL) mode is enabled. Deadband is the temperature difference between the 'HEAT' and 'COOL' set points. This is to prevent heating and cooling operating at the same time working against each other.

Example, 'HEAT' set point at 20°C with a Deadband of 2°C, the minimum allowed 'COOL' set point would be 23°C. This means that if 'COOL' was set to 22°C it would push the 'HEAT' set point to 19°C.



Feature Menu Settings Explained

Optimum Start: Optimum start will delay enabling of the heating system to the latest possible moment avoiding unnecessary heating and ensure the building has reached its desired temperature at the programmed time. The thermostat uses the rate of change information to calculate how long the heating needs to raise the building temperature 1°C.

Rate of Change: Number of minutes to raise the temperature by 1°C.

Note: The user cannot change this feature and is for information only.

Programming Mode: The following program modes are available;

- Non-Programmable – Basic up/down override temperature control.
- 5/2 Day Programming – 4 levels for the weekdays and 4 different levels for the weekend.
- 7 Day Programming – 4 levels for each day.
- 24 Hours – 4 levels over a 24 hour period.



Feature Menu Settings Explained

Daylight Saving Time (DST): is where the thermostat sets the clocks forward one hour from 'Standard Time' during the summer months, and back again in autumn, in order to make better use of natural daylight.

Program Type: You can select between 4 or 6 program/comfort levels.

Constant Fan: Fan will automatically run between 'Low', 'Med' & 'High' while there is a demand for heat or cool. When demand has stopped, the fan will continually run but in 'Low' speed only. If 'Constant Fan' is disabled, the fan will go off completely when heat or cool demand has ended.

Note: this feature is disabled in heating mode when 'System Type' is set to 03 = '2 Pipe System Heat or Cool Only'.

Cool Air Proof: To avoid blowing the cold air from fan coil when the thermostat requires heating, the coil valve will open for the set duration before fan starts blowing. Set range in seconds: 0, 5, 10, 15, 30, 60, 90. Default value=0 (disabled).

Operating conditions for this function:

1. When Feature 13 Constant Fan is set to = 0
2. System Types = 1, 4 or 5 are active
3. Heating mode operation only.



Feature Menu

FEATURE

DESCRIPTION

SETTING

Type

System Type

01 = 2 Pipe System, Selectable Heat or Cool only.

02 = 2 Pipe System, Cool only.

03 = 2 Pipe System Heat & Cool (fans for Cool only).

04 = 4 Pipe System Heat, Cool & Auto.

05 = 2 Pipe System Cooling & 2 Stage Heating.

01

Temperature Format

00 = °C, 01 = °F (00 = Default)

Menu Entry Point

02

Switching Differential

00 = 0.5°C, 01 = 1.0°C (Default) 02 = 2.0°C, 03 = 3.0°C

03

Output Delay

00 - 15 Minutes (00 = Default)

04

Up/Down Temperature Limit

00° - 10°C (00° = Default)

05

Sensor Selection

Not used on this model.

06

Deadband

2°C (3°F) (Default) 3°C (5°F)

4°C (7°F) 5°C (9°F)

6°C (11°F) 7°C (13°F)

8°C (15°F) 9°C (17°F)

10°C (19°F)

07

Optimum Start

00 = Disabled (Default) 01 = 1 Hour 02 = 2 Hours

03 = 3 Hours 04 = 4 Hours 05 = 5 Hours

08

Rate of Change

Information Only



Feature Menu cont...

FEATURE	DESCRIPTION	SETTING
09	Program Mode	00 = 5/2 (Default) 01 = 7 Day 02 = 24 Hour 03 = None programmable
10	(DST) Daylight Saving	00 = Disabled (Default) 01 = Enabled
11	Communications ID (Modbus)	Not used on this model.
12	Program Type	00 = 4 Comfort Levels (Default) 01 = 6 Comfort Levels
13	Constant Fan	00 = Off (Default) 01 = On
14	Cool Air Proof	00 = Disabled (Default) 05, 10, 15, 30, 60, 90 seconds



Adjusting the Feature Menu Settings

- Use the 'Left/Right' arrow keys to highlight  then press and **hold** the  button for 3 seconds   
- The display will go blank showing only  'Setup' and 'Clock'*
- Press the 'Up' key followed by  twice to access main feature menu   



- Use the 'Up/Down' keys to scroll through features  
- Use the 'Left/Right' keys to change feature setting  
- When all required changes have been made press  to confirm settings and return to the blank display 
- Use the 'Down' key to select  then press  **once** to power on  



Door Contact Switch

Door Contact switch connections (pages 28 to 32) can be used for electronic door sensors to detect when a door has been opened or when a room is occupied using a key card entry system. Once a door has been opened or a room becomes unoccupied thermostat will enable frost protection during heating or standby for cooling and ventilation.

Heating



Frost Protection Symbol

Cooling and Ventilation



Display showing 'Standby' in 'Auto' mode as current status = Cooling



Re-calibrating the edge-HC

This thermostat is factory set and need not re-calibrating under normal operation!

To calibrate, follow the step below.

- Use the 'Left/Right' keys to scroll to the Power Icon <> ⏻
- Press and hold ✓ to turn the display 'OFF' ✓
- Press and hold the ✓ and 'Down' keys together for 10 seconds ✓ ▾

The current temperature will appear on the display.

- Use the 'Up/Down' keys to configure the new temperature value ▲ ▾
- Press the ✓ key to confirm the change and the display will go blank ✓
- Press the ✓ key once to turn the thermostat 'ON' ✓



Error Codes

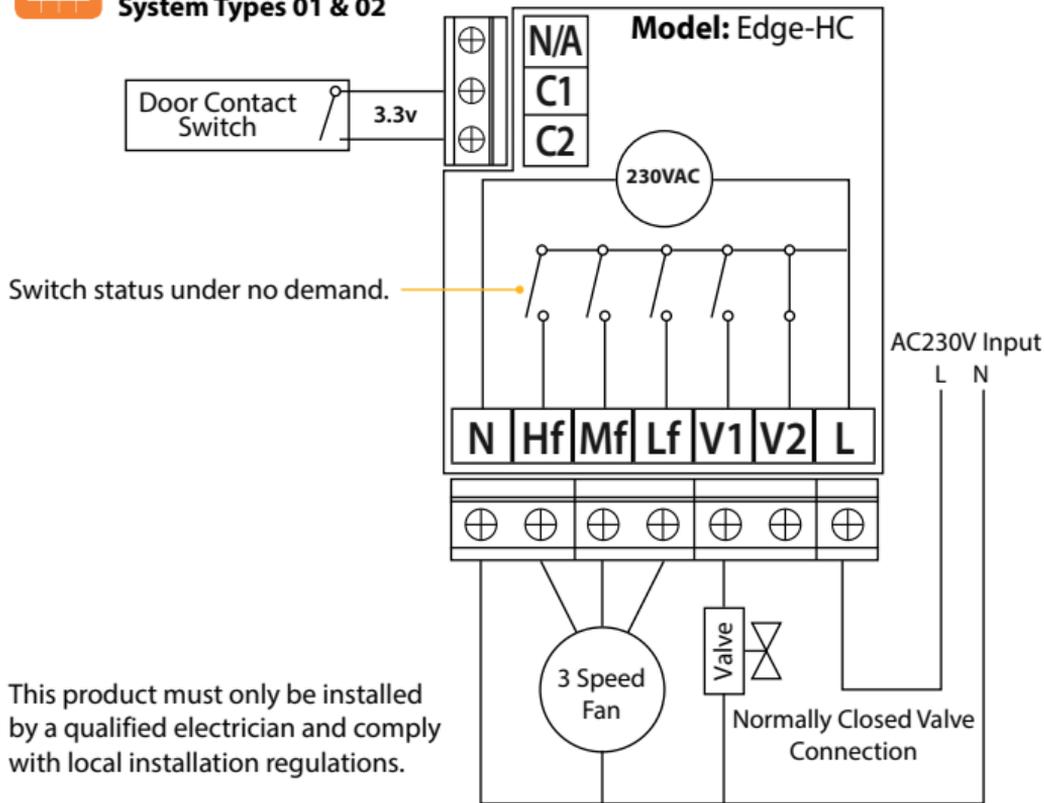
The edge will display an error code if there is a fault with the temperature sensor.

E0 = The internal sensor has developed a fault.



Wiring Diagram - Normally Closed Valve

System Types 01 & 02

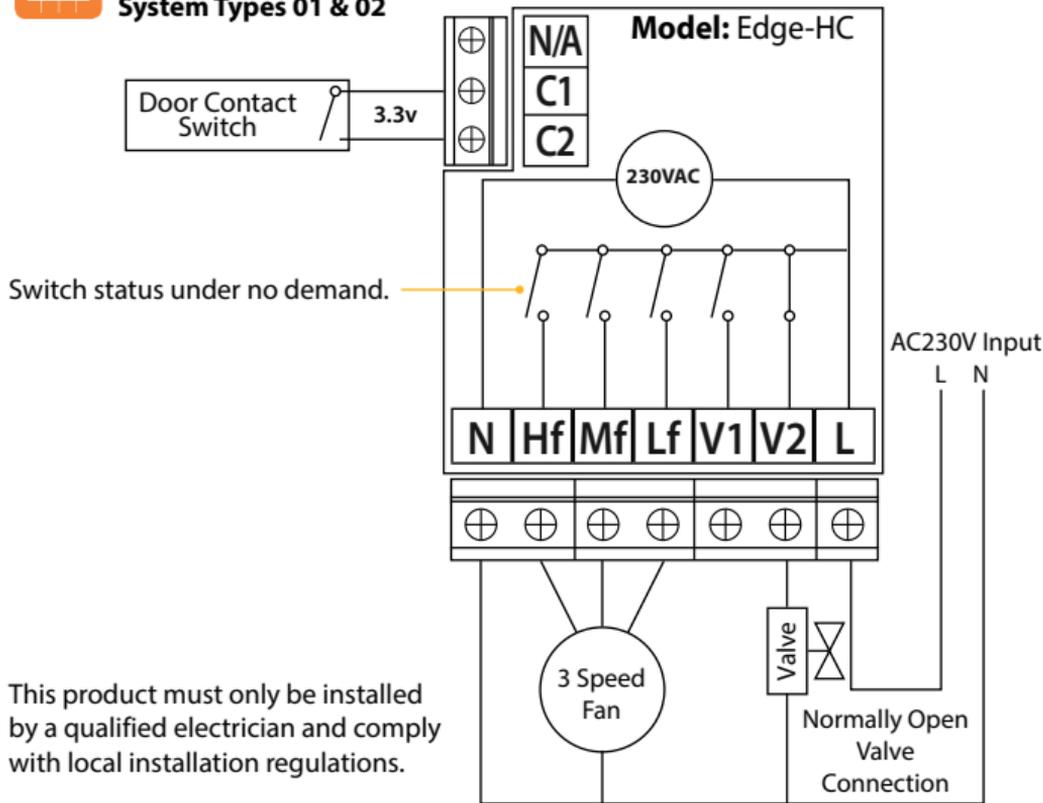


This product must only be installed by a qualified electrician and comply with local installation regulations.



Wiring Diagram - Normally Open Valve

System Types 01 & 02

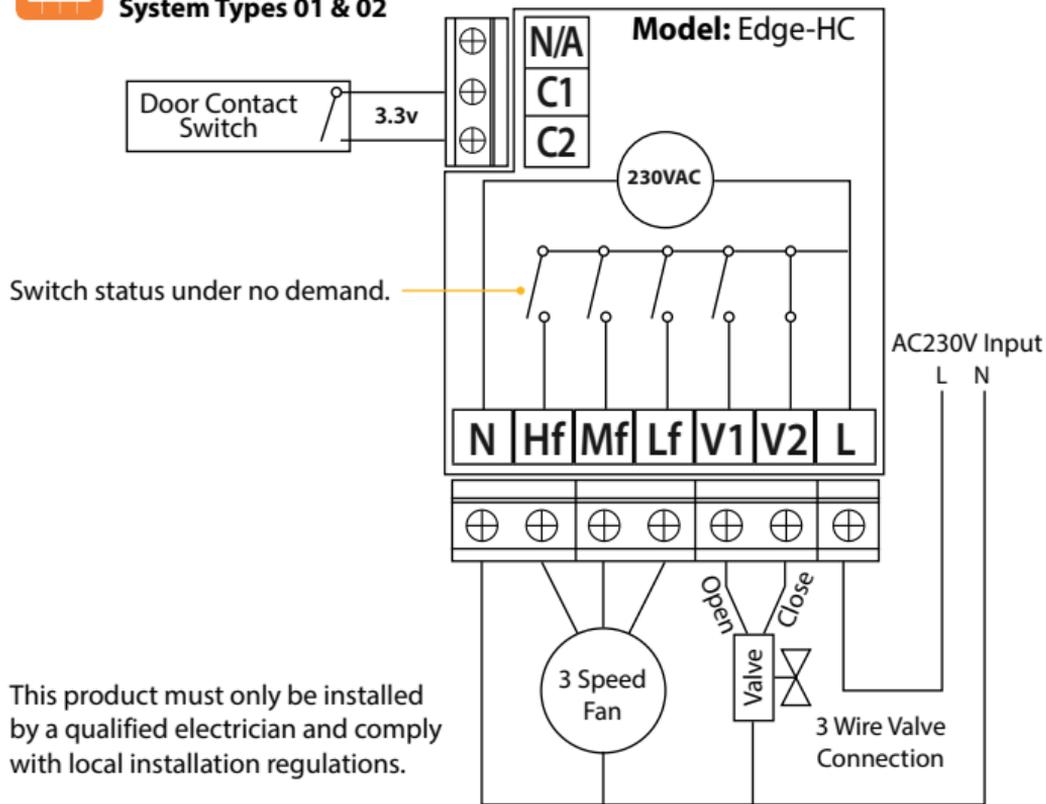


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Wiring Diagram - 3 Wire Valve Connection

System Types 01 & 02

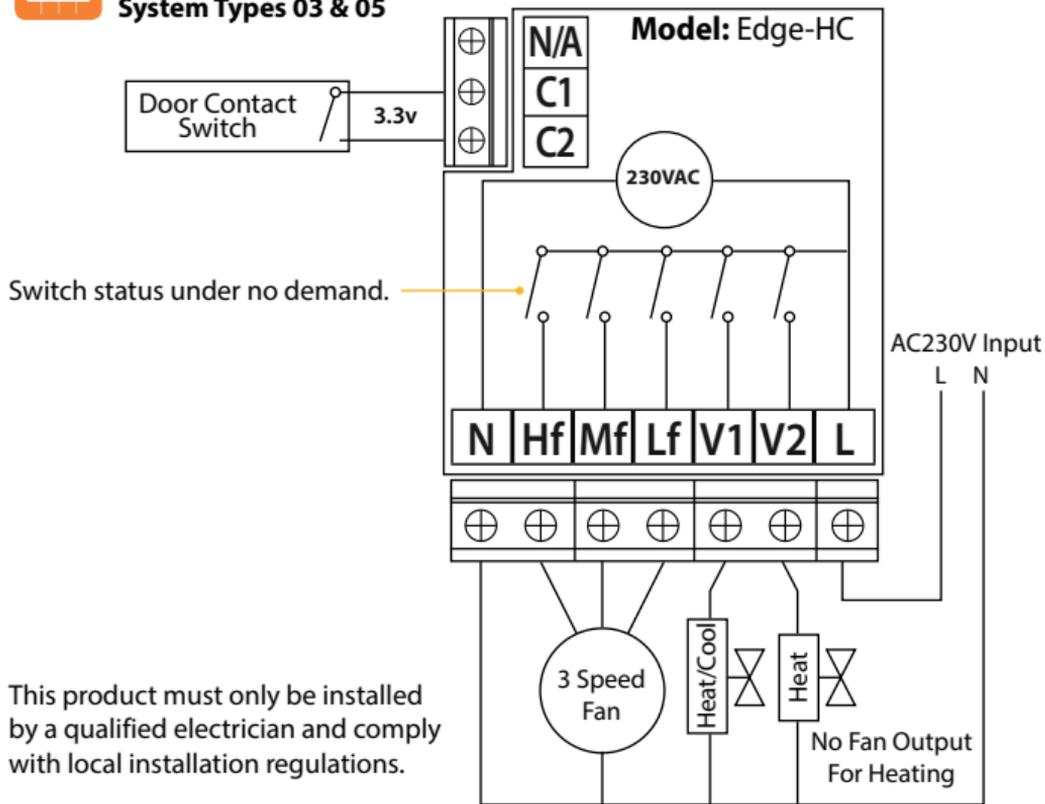


This product must only be installed by a qualified electrician and comply with local installation regulations.



Wiring Diagram - Fan Coil & Wet Systems

System Types 03 & 05

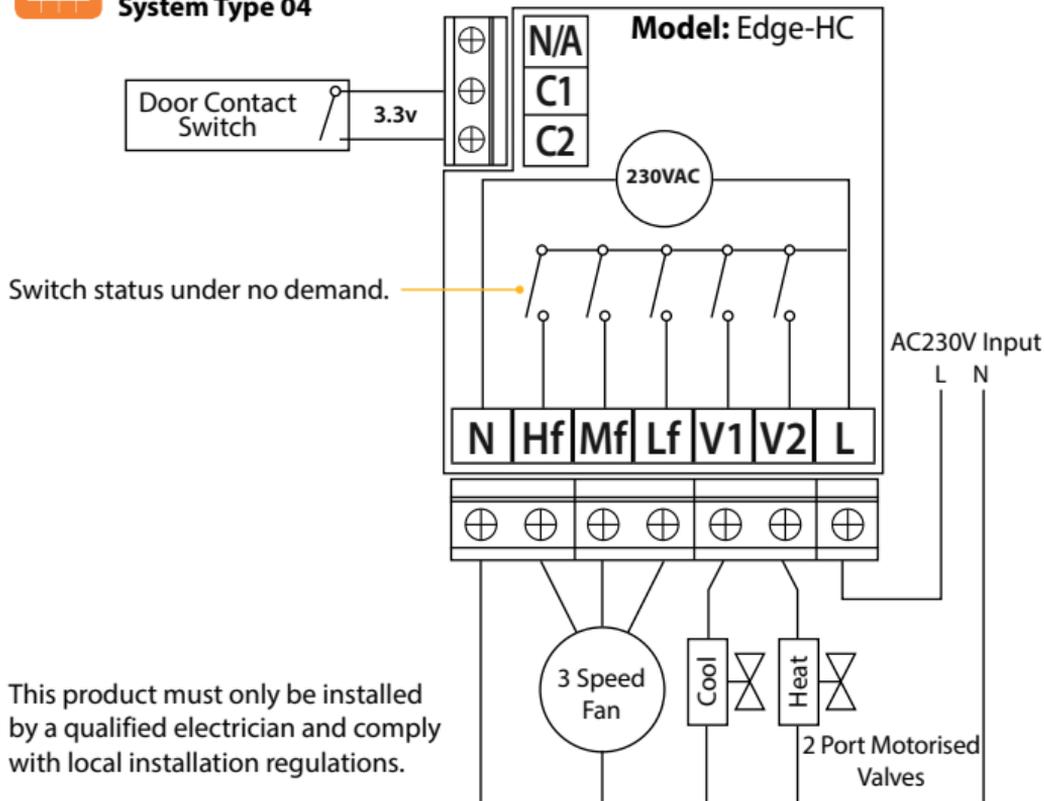


This product must only be installed by a qualified electrician and comply with local installation regulations.



Wiring Diagram - Heat & Cool Valves

System Type 04



This product must only be installed by a qualified electrician and comply with local installation regulations.



Replacing the Battery

In most cases the 3 volt lithium battery does not need replacing if the thermostat has a continual power supply. Its sole purpose is to ensure correct time keeping during a power loss to the thermostat.

To remove the battery use a small flat head screw driver or fingertip to push back the brass retaining bracket. This will automatically release the battery.

Insert the new battery (positive side up!) by locating one end underneath the holding clips then pushing down on the opposite end against the brass holding bracket.



We advise that replacement of the lithium battery be carried out by a qualified professional.



Notes

A series of horizontal dotted lines for writing notes, spanning the width of the page.



Want More Information?

Call our support team on: +44 (0)1254 669090

Or view technical specifications directly on our website:
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