

SNUG

UNDERFLOOR HEATING

SnugStat Duo

2 Channel Wi-Fi Thermostat

Instruction Manual





WELCOME

The Snugstat Duo 2 Channel Wi-Fi Thermostat makes smart, high performance heating, easier than ever.

This guide tells you everything you need to know.

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INTRODUCTION

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What is a Programmable Thermostat?

A programmable room thermostat is a device that combines the functions of both a room thermostat and timed heating controller into a single unit. The programmable thermostat is used to switch the heating system in your home on and off as needed. It works by controlling the temperature according to a series of programmed temperature settings that take effect at different times of your choosing.

It's important to note that adjusting a room thermostat to a higher setting will not make the room heat up more quickly. How quickly the room heats up depends on the design of the heating system and heat-loss of the building.

The way to set and use your programmable room / floor sensing thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen and then leave it alone to do its job. The best way to do this is to set a lower temperature first, for example 18°C, and then adjust the temperature gradually up or down by one degree each day until you are comfortable with the temperature. The higher a temperature setting required will result in more energy and fuel cost.

All types of thermostats need a free flow of air to sense the best temperature, so they must not be placed in a cupboard or covered by curtains or blocked by furniture. Radiant heat created by the sun, shining directly onto the thermostat through a window and heat from nearby electric fires, wall or lamps may prevent the thermostat from reading the correct temperature in the room.

Our SnugStat Duo model allows for the use of one thermostat when the situation normally requires two, for example – using this controller to use both an underfloor heating system and a towel rail. The thermostat has both a 13A and 5A relay, allowing for this multifunctional control of more power consuming items.

GETTING STARTED

Pairing the SnugStat Thermostat with the SnugStat App

Download the free SnugStat App from the Apple Store or the Google Play Store by searching SnugStat.



01 Open the SnugStat App and register your account.

02 Login to your account.

03 Press the  icon.

04 Select your preferred pairing mode from the list below:

Smart Configuration

01 On the SnugStat app, select 'Smart Config' and then 'Add Device Location'.

02 Select your Wi-Fi network and enter your Wi-Fi password, press next.

03 A countdown will then begin.

04 On your thermostat, press the  icon.

05 Go to Page 2 and select 'Pairing to App (Smart Config)' - this may take a few moments to pair.

06 On your app, select 'Heating Thermostat', then 'Add Device Location'.

07 Then select a pre-written room name or create your own.

08 Your thermostat is now connected – it may display 'fault' for a few seconds before connection is fully established.

09 The app will display 'Is Connected to the Wi-Fi' and the thermostat will read 'App Matching Successful'.

Scan QR Code

- 01 On the SnugStat app, select 'Scan QR Code' and then 'Add Device Location'.
- 02 Allow the SnugStat app camera access.
- 03 On the thermostat, press the  icon.
- 04 Go to Page 5 and select 'System Information'.
- 05 Align the QR code on the thermostat screen inside the square on the app – align correctly until it connects.
- 06 Select 'Heating Thermostat', then 'Add Device Location'.
- 07 Then select a pre-written room name or create your own.
- 08 Your thermostat is now connected – it may display 'fault' for a few seconds before connection is fully established.

- 09 The app will display 'Is Connected to the Wi-Fi' and the thermostat will read 'App Matching Successful'.

Manual Entry

- 01 On the SnugStat app, select 'Manual Entry' – a box should appear for you to enter your thermostats MAC address.
- 02 To find this, open your thermostat and press the  icon.
- 03 Go to Page 2 and select 'Network Setting'.
- 04 Select your Wi-Fi network and enter your Wi-Fi password, then select 'Join'.
- 05 Press and hold your connected Wi-Fi network, this will appear at the top of the list.
- 06 Your MAC address is on this screen, enter the number into the 'MAC Address' box on the SnugStat app.

Note: DO NOT enter the colons – enter as just the numerical digits with no spaces.

- 07** Select 'Add Device Location'.
- 08** Then select a pre-written room name or create your own.
- 09** Your thermostat is now connected – it may display 'fault' for a few seconds before connection is fully established.
- 10** The app will display 'Is Connected to the Wi-Fi' and the thermostat will read 'App Matching Successful'.

LCD DISPLAY

- 01** Temperature Hold
- 02** Adjusting the optional settings.
- 03** Day indicator and clock.
- 04** 'Away': Means the thermostat is maintaining a lower temperature to improve efficiency whilst away. (Turn ON Status).
- 05** Boost Mode- Select to open the Boost menu
- 06** Air humidity.
- 07** Power ON/OFF.
- 08** 'Holiday': Displayed when thermostat is in holiday mode.
- 09** 'Schedule': Programming your ON/OFF heating cycles.
- 10** Setup button.
- 11** Adjusting the temperature setting.
- 12** or turning a page.
- 13** Target temperature.
- 14** Actual temperature display.
- 15** Temperature reading is in °C or °F.
- 16** Display shows 'Heating' flame symbol (A flame on the screen means the heating is ON. If there is no flame symbol, the thermostat is at its desired temperature).
- 17** Timer ON



OPERATION OF MAIN DISPLAY ICONS

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Schedule

Programming Heating Mode Schedule

The SnugStat Duo arrives preset to the weekday/weekend (5/2 day) setting. This is the default mode. If you would like to change this, turn to page **28**.

- 01** Press the 'Schedule' icon on the main screen.
- 02** Press the 'Heating' option.
- 03** On the schedule page, select the days you wish to edit.
- 04** There are four time periods that can be selected:

Morning/Day/Evening/Night

- 05** Each Period has ON/OFF icon / 
- 06** Morning:/ON 

- 07** Press the first column and use the scroll function or the  icons to set the hour.
- 08** Press the second column and use the scroll function or the  icons to set desired minute.

For Example: The Setting Time is 04 (Hour):00 (Minute)

- 09** Press the third column of 'Temperature', use the scroll function or the  icons to set desired temperature.

For Example: The Setting Temperature is 20°C

- 10** Repeat these steps for Day, Evening, Night.
- 11** Once all steps are complete press the  icon.
- 12** Press 'Day / Days' and input the time and temperature settings.
- 13** Once complete press the  icon.

Your programming schedule is now complete.

Programming Timer Mode Schedule

- 01** Press the schedule icon on the main screen.
- 02** Press the 'Timer' option.
- 03** On the schedule page, select the days you wish to edit.
- 04** There are 4 on and off time periods that can be selected.
- 05** You can use the scroll function or the   icons to select your desired times for the system to be 'on' and 'off'.

The 'on' times are selected in the left time section, while the 'off' is selected on the right. Select the time of day from the menus across the top, these are a guide, and can be set to any allotted time.

- 06** Once complete press the  icon.

If you would like to modify your schedule, visit page **28**.

Copy To

The 'Copy To' feature allows you to copy times and schedules across multiple days, without inputting the data again.

- 01** To use this, simply select your time and press 'Copy To'. Then select your day/sequence of days you wish to copy the same time to.

Hold

The temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period. This is useful for when you want the temperature to remain for a longer period of time.

- 01** Press the Hold icon.
- 02** Press the First column of 'Hold Temp', use the scroll function or the   icons to set the desired Hold Temperature. (Temperature Range 5°C-35°C).
- 03** Press the Second/Third columns of Hour/Minute, use the scroll function or the   icons to set the desired 'Hold Time'.
- 04** Press the  icon to save and return to main display, or click 'Cancel' to delete the setting and then back.

You will see the 'HOLD' time remaining: **: indication is displayed on screen. The time will count down for the set duration and then revert to the normal program setting.**

Boost

The boost function allows you to override the timer function of the thermostat outside of the programmed times.

This can be to override on or override off. To activate the Boost, follow these steps:

- 01** Press the 'Boost' icon
- 02** Select your desired 'Boost' mode ON or OFF.
- 03** Press 'Hour' and use the   icons to set the hours desired.
- 04** Press 'Minutes' and use the   icons to set the minutes desired.
- 05** Press the  icons to save and return to main screen.
- 06** The 'Boost' time remaining, will be displayed at the top of the screen.
- 07** To cancel 'Boost' press the 'Boost' main icon, press cancel and press the return icon.

Holiday

The SnugStat Duo Wi-Fi Thermostat will maintain the defrost preset temperature for the duration of the holiday and will then automatically return to the programmed mode on your return.

- 01 Press the 'Holiday' icon on the main screen.
- 02 Select the holiday OFF/ON icon. 
- 03 Under Holiday Start, press the column of Day/Month/Year and use the scroll function or the   icons to set the Day/Month/Year values.'
- 04 Under Holiday End, press the column of Day/Month/Year and use the scroll function or the   icons to set the Day/Month/Year values.
- 05 Press the  icon twice to save and return to the screen or press  to cancel.
- 06 The screen shows; 'Holiday until' **/** **/**

Note: Set your thermostat to end the day before you come home, as the timer will end at 23:59 that night, ensuring you come home to a warm house.

Humidity Sensor

Selecting the Humidity Sensor option  on the main screen will show you a detailed gauge of your room's exact temperature and humidity.

Away

The 'Away Mode' should be used for short periods away from the property. This overrides any programmes and settings and will only turn the heating ON should the room temperature drop below the set Away temperature, this is preset to 7°C. (This is changed in the setup). Turn to page 38 for details.

FEATURE SETTINGS EXPLAINED

The following settings are optional and in most cases do not need adjusting.

Schedule: The SnugStat Duo thermostat provides three programming modes and can also be set to a non-programmable mode:

Weekday / Weekend (5 + 2) Programming - Allows you to edit the 4 time periods for the weekday and 4 time periods for the weekend. This is the preset setting. To change this, follow the below:

01 Press the  icon and enter Feature Settings.

02 Find 'Schedule' and press it.

There are four options:

7 day programming mode - Can be programmed each day for 4 time periods.

24 hours mode - Every day can be edited for 4 time periods.

Weekday/Weekend - One program can be set for Mon-Fri and another for Sat-Sun.

None Mode - The controller will maintain the set temperature continuously.

03 Press the icon to the left of the desired icon.

04 Press the  icon to save and return to the main screen.

Back Light - Ambient Light Dimming: If this function is enabled, the internal light sensor will detect when to dim the thermostat display as the ambient light levels drop. If you turn the room lights off, the display will dim so the SnugStat Duo Wi-Fi Thermostat does not light up the room.

Temperature Format: Selecting between °C and °F.

Switching Differential: This function allows you to increase the switching differential of the thermostat. The system defaults to 1°C, meaning that when the temperature is set to 20°C, the thermostat will initially heat to 20°C then drop to 19°C and go back up to 20°C. If the value is 2°C, it will drop to 18°C, and go back to 20°C.

Switching Time Delay: To prevent rapid switching, a switching delay can be entered. This function delays how often the thermostat can call for heat. This can be set from 0-15 minutes. (The default is 00, means no delay).

Output Delay: This setting is to stop rapid switching, if set to 15min, once the thermostat stops calling for heat it will not switch on for 15 minutes.

Away: This is the temperature maintained when the thermostat is turned ON. The range is 7-35°C. The default is 7°C.

Defrost: This is the temperature maintained when the thermostat is turned OFF. The range is 5-10°C. The default is 5°C and is suitable for most applications.

Sensor Selection: You can select which sensor should be used. You can select between air temperature only, remote floor temperature only, remote air sensor or air and floor sensor. When you enable both sensors you are programming the air temperature, the floor sensor is used as a floor limiting sensor and is designed to prevent the floor from overheating. The remote air sensor is only used in bathrooms and wet rooms because the thermostat is not IP rated. The remote air sensor can't be used in tandem with the remote floor probe.

Open Window Function: The thermostat turns the heat off for 15 minutes if it detects that the temperature drops by more than 3°C in less than 1 minute. Sensor selection should be set at built in or remote air to operate correctly.

Floor Temp Limit: The function is available when the floor sensor is enabled. You can set a floor temperature limit between 20-45°C (default is 27°C).

Note: The Air Sensing Only Mode must not be used for controlling electric underfloor heating under wood / vinyl floor coverings. The controller should only be in remote floor sensor or air and floor sensor.

Optimum Start: This function will calculate how much time the heated space needs, to ensure the required temperature you have set, at the time you have set, is achieved (assuming the heating system has been installed to meet the energy requirements of the building). For example if you require 21°C at 8am, the thermostat will calculate how much time in advance, the system needs to operate to achieve this setting. This time is calculated by the thermostat in minutes per 1°C room temperature rise.



OPERATION OF FEATURE SETTINGS

OPERATION OF FEATURE SETTINGS

Language

- 01 Press the  icon and enter Feature Settings.
- 02 Press 'Language' to enter the setting interface.
- 03 Select your desired language.
- 04 Press the  icon twice and return to the main screen.

Time Zone Selection

- 01 Press the  icon and enter Feature Settings.
- 02 Press 'Time Zone Selection' to enter the setting interface.
- 03 Select your desired time zone.
- 04 Press the  icon twice to save and return to the main screen.

Clock Setting

To set the clock, follow these steps.

- 01 Press the  icon and enter Feature Settings.
- 02 Press 'Clock' Setting.
- 03 Press the column of Day/Month/Year, use the   icons to set the Day/Month/Year values.
- 04 Press the column of 'Time', use the   icons to set Hours/ Minutes.
- 05 Press the  icon twice to save and return to the main screen.

Backlight

- 01 Press the  icon and enter Feature Settings.
- 02 Press 'Backlight' and enter Backlight setting.
- 03 When Ambient Light Dimming is in  mode, this automatically adjusts the backlight brightness.

04 When Ambient Light Dimming is in  mode, you can manually adjust the backlight brightness.

05 Use the   icons to adjust to the desired brightness..

06 Press the  icon twice to save and return to the main screen.

Standby Screen

01 Press the  icon and enter Feature Settings.

02 Press 'Standby Screen' and enter setting interface.

03 There are four options (3Min,10Min, Just Night, Never) to control the standby screen time.

04 For example, setting the standby time for 10 minutes, press the circle to the left of the '10 Min'.

05 Press the  icon twice to save and return to the main screen.

06 For complete darkness after standby, set 'After Standby, Black Screen?' to . If you would still like a dimmer version of the screen, set it to .

Screen Lock

01 Touch the  icon and enter Feature Settings.

02 Press 'Screen Lock' and enter setting interface.

Lock Pin ON/OFF Icon /   options

03 For example, setting the Lock Pin is 5209.

04 Press the  icon twice to save and return to the main screen.

05 The screen will only lock once it goes into standby mode.

06 The screen will stay in lock mode until the lock function is disabled.

Master key is 8657

Temperature Format

01 Press the  icon and enter Feature Settings.

02 Find 'Temperature Format' option and press.

03 There are two options °C and °F.

- 04 Press the icon to the left of °C or °F.
- 05 Press the  icon twice to save and return to the main screen.

Temperature Limit

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Temperature Limit', press it and enter setting interface.
- 03 Press the first column, use the scroll function or the   icons to adjust Minimum Temperature to 5-34°C.
- 04 Press the second column, use the scroll function or the   icons to adjust Maximum Temperature to 6-35°C.
- 05 Press the  icon twice to save and return to the main screen.

Away

The Away function is activated when the Away icon on the main screen is pressed. The thermostat will automatically drop to preset Away temperature, when activated. To adjust this see below:

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Away' option and press it.
- 03 Use the scroll function   icons to adjust the temperature.
- 04 Press the  icon twice to save and return to the main screen.

Defrost

The 'Defrost' function will be activated when the thermostat is turned off. The thermostat will automatically enter the 'Defrost' mode when the room temperature drops below the preset temperature when set to 

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Defrost' and press it.
- 03 Use the scroll function or   icons to adjust the temperature.
- 04 Press the  icon twice to save and return to the main screen.
- 05 **Note:** Should you wish to turn off this setting, set the toggle to  although this is **NOT RECOMMENDED**

Sensor Selection

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Sensor Selection', and press it.
- 03 Press the name of the sensor that you require.
- 04 Press the  icon twice to save and return to the main screen.

Note: For wood and vinyl flooring select either 'Remote Floor Sensor' or 'Air and Floor Sensor' and ensure floor temperature limit does not exceed 27°C. To calibrate the sensors, press the circle of the desired sensor and adjust accordingly.

Floor Temperature Limit

Do not exceed 27°C if your floor is made of wood or vinyl.

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Floor Temperature Limit' and press it.
- 03 Use the scroll function or the   icons to set the temperature.

- 05 Press the  icon twice to save and return to the main screen.

Humidity Sensor Calibration

This feature is to recalibrate your humidity sensor, if you have one at home and the readings are mismatched, simply:

- 01 Press the  and enter Feature Settings.
- 02 Find 'Humidity Sensor' and press it.
- 03 Use the scroll function or the   icons to adjust the humidity amount above or below the thermostats reading.
- 04 Press the  icon twice to save and return to the main screen.

Open Window Function

The thermostat will turn off heat supply for 20 minutes if the temperature drops by more than 2°C in less than 1 minute. To use this feature:

- 01 Press the  and enter Feature Settings.
- 02 Find 'Open Window Function' and press it.

- 03 Set the toggle to 
- 04 Press the  icon twice to save and return to the main screen.

Optimum Start

- 01 Press the  icon and enter Feature Settings.
- 02 Find 'Optimum Start' and press it.
- 03 Set the toggle to 
- 04 Press the  icon twice to save and return to the main screen.

Note: The rate of change is impossible to change on the thermostat, as the SnugStat Duo is self-learning it will adjust to your home the more it is used. The default is '15 minutes' but this will likely change.

Daylight Saving Time

- 01 Press the  icon and enter Feature Settings.
- 02 Find and press 'Daylight Saving Time'

- 03 Set Auto DST ON/OFF using the   icons.
- 04 Press the circle to the left of either EU / US & CAN / AUS & NZ.
- 05 Press the  icon twice to save and return to the main screen.

System Information

Here you will find your QR Code for network setup, Version Number and Product ID.

- 01 Press the  icon and enter Feature Settings.
- 02 Press 'System Information' and enter system interface.
- 03 Press the  icon twice to exit.

Reset to Factory Settings

Warning: reset will clear current settings and return to the factory settings.

- 01** Press the  icon and enter Feature Settings.
- 02** Find 'Reset to Factory Settings' and press it.
- 03** Press 'Reset'.
- 04** The SnugStat Duo will now restart, this may take a few moments.
Once this is complete the SnugStat Duo has reset to factory settings.

Installation

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

Step 1

Using a pozi screwdriver, loosen the screw from the bottom of the thermostat, and then separate the front panel from the back plate.

Step 2

First place the front panel of the thermostat in a safe place.

Follow the wiring diagram suited to your application on pages 48 to 52 of this manual.

Step 3

Screw the thermostat back plate onto the electrical recessed box in the wall.

Step 4

Once the back plate is secure, re-fit the thermostat front panel to the back plate and gently tighten the bottom retaining screw.

TECHNICAL SPECIFICATION

Power supply: 230V, 50/60Hz

Setting temp range: 5-35°C

Working temp range: -10°C to +45°C

Power consumption: 1W

Floor Temperature Limit: 20-45°C

Max Switch Current:

Heating Mode: 13A – 2990W

Timer Mode: 5A - 1150W

LCD screen size: 3.5 Inch

Touch: Capacitive touch

Screw hole CC: 60mm

Grade of protection: IP 20

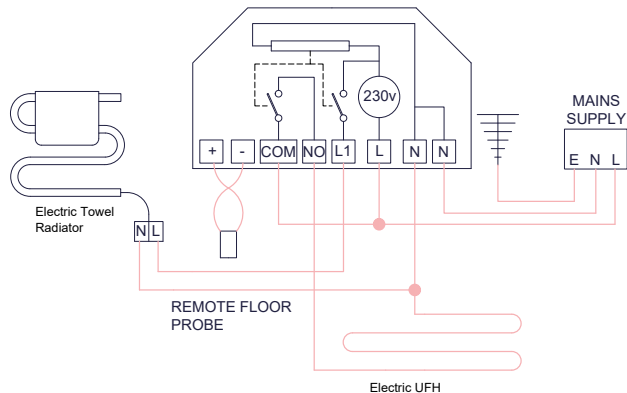
Sensor type: NTC10k

Installation type: Flush

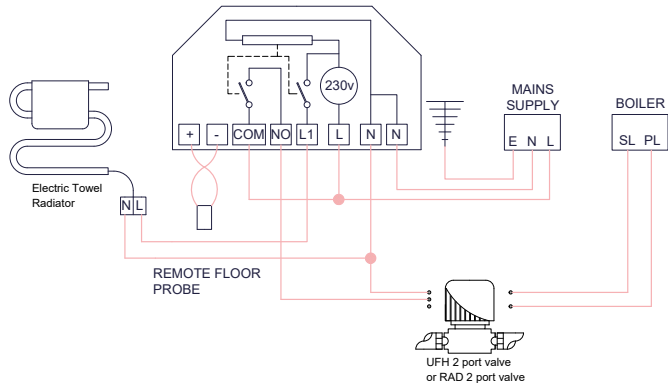
Dimension: 96 * 86 * 42.5 (W*H*D) mm

WIRING DIAGRAM

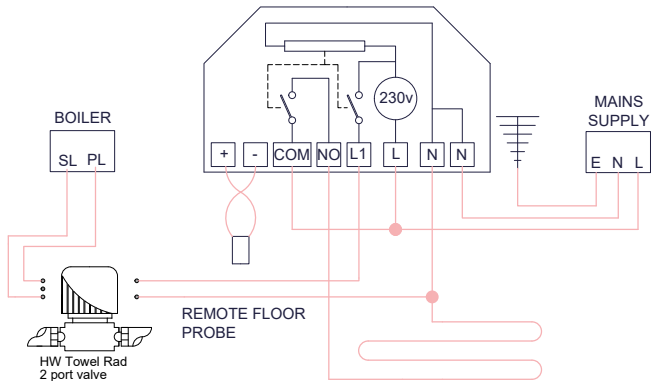
Electric Radiator and Electric Underfloor Heating



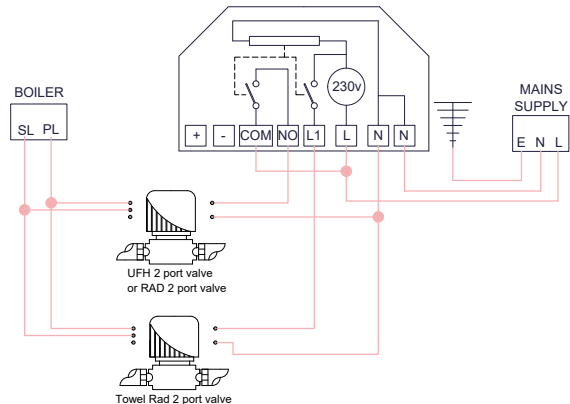
Electric Radiator and Wet Underfloor Heating



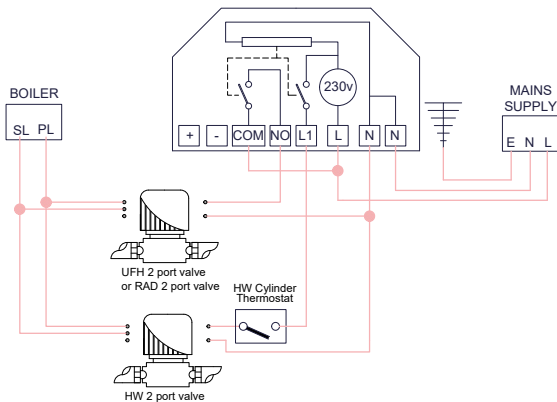
Electric Underfloor Heating and Hot Water Towel Radiator



Wet Underfloor Heating and Hot Water Towel Radiator



Wet Underfloor Heating and Radiators



Recalibration

Your thermostat has been fully calibrated and tested. Should this need changing.

- 01** Press the  icon to enter the Feature Settings.
- 02** Press the   icons to turn to page 4 and press 'Sensor Selection'
- 03** Press on the name of the sensor you wish to recalibrate.
- 04** Using the scroll function or the   icons select the temperature you wish to edit the thermostat to.
- 05** Press the  icon to go back to the main screen.

Notes



CAN WE HELP?

Your SnugStat Duo 2 Channel Wi-Fi Thermostat comes with a two year warranty from date of purchase.

If you have any problems installing or programming your Snugstat Duo 2 Channel Wi-Fi Thermostat, call our dedicated technical support team on **01772 761333**, who will be more than happy to help.

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