SNUG
UNDERFLOOR HEATING

SnugStat
Instruction Manual

WELCOME

SnugStat makes smart, high performance heating, easier than ever.

This guide tells you everything you need to know.

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INTRODUCTION

INTRODUCTION

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 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.

Mode Selection

SnugStat can either be used as a Thermostat or a Time-clock.

Thermostat Mode (Fully Programmable Mode) – Allows Time and Temperature Settings to be made. This allows the thermostat to be programmed to a specific temperature during a specific time.

Time-clock Mode – Allows for the Time ONLY setting to switch ON or OFF as desired. This Mode ignores any temperature.

To change between Thermostat and Time-clock Modes:

Follow these steps (Use your finger as the screen is Touch Sensitive).

01 Press the ⚙ icon and enter Feature Settings.

02 Use the ◁ ▷ icons to turn to page 4. Find 'Work Mode' Selection, press it and enter Selection Interface.

03 Select 'Heating Mode' or 'Timer Mode', the thermostat will re-set and enter the desired Mode.

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 Press 'Location Name' to add the property, for example, Home / Office etc.

05 Press ⊕ icon to confirm the property.

06 Press ← icon to go back to the main screen.

07 Press the ⊕ icon and select the device type, for example Heating Thermostat.

08 Add device location.

09 Select room name or manually type in.

10 Press 'Next'.

11 Enter the Wi-Fi password then press 'Next'.

12 On the SnugStat, press the ⚙ icon and enter Feature Settings.

13 Find 'App Matching' and press it.

14 Wait for the devices to pair. (This may take several minutes to activate).

15 The App will display 'Is Connected to the Wi-Fi' and will display 'App Matching Successful' on the controller.

LCD DISPLAY

01 Wi-Fi indicator-Displayed when connected to a Wi-Fi Network.

02 Temperature Hold / Boost.

03 Adjusting the optional settings.

04 Day indicator and clock.

05 'Away': Means the SnugStat is maintaining a lower temperature to improve efficiency whilst away. (Turn ON Status).

06 'OPT (Optimum)': Displayed ON ⊘ OFF ⊗ of the optimum start.

07 Air humidity.

08 Power ON/OFF.

09 'Holiday': Displayed when thermostat is in holiday mode.

10 'Schedule': Programming your ON/OFF heating cycles.

11 Setup button.

12 Adjusting the temperature setting.

13 or turning a page.

14 Target temperature.

15 Actual temperature display.

16 Temperature reading is in $^\circ$C or $^\circ$F.

17 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).

01

02 03

04

Wednesday / 16:40

05 — Away

Hold

06 — OPT Optimum

Holiday

07 — 45%

Schedule

17

16

23.5 °C
Room temperature

15

22.5 °C

14

08

09 10 11

12

13

OPERATION OF MAIN DISPLAY ICONS

OPERATION OF MAIN DISPLAY ICONS

Mode 1-Thermostat

Programing the SnugStat Thermostat

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

01 Press the 'Schedule' icon on the main screen.

02 On the Schedule page, select the days you wish to edit.

03 There are four time periods that can be selected:

Morning/Day/Evening/Night

(Each period has ON/OFF icon

Morning: ON

Press the first column and use the ◁ ▷ icons to set the desired hour.

Press the second column and use the ◁ ▷ icons to set the desired minute.

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

Press the third column of 'Temperature', use the ◁ ▷ icons to set the desired temperature.

For Example: The Setting Temperature is 20°C

Repeat these steps to set all periods.

Once all steps are complete press ⬅ icon.

Press 'Weekend', and input the time and temperature settings.

Once complete press ⬅ icon.

Your programming schedule is now complete.

Hold

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

01 Press the Hold icon.

02 Press the first column of 'Hold Temp', use 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 ◁ ▷ 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.

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.

Holiday

The SnugStat 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 Press the column of Day/Month/Year, use the ◁ ▷ icons to set the Day/Month/Year values under Holiday Start.

04 Press the column of Day/Month/Year, use the ◁ ▷ icons to set the Day/Month/Year values under Holiday End.

05 Press the ↰ icon to save and return to the main screen OR press 'Cancel' to delete the setting.

06 The screen shows; 'Holiday until' **/** **/**

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).

FEATURE SETTINGS EXPLAINED

The following settings are optional and in most cases, need not be adjusted.

Schedule: The SnugStat 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:

Weekday/Weekend, 7Days, 24Hours, None

03 Press the icon in the front of **Weekday/Weekend.**

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

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.

Temperature Format: Selecting between ^{o}C and ^{o}F.

Switching Differential: This function allows you to increase the switching differential of the thermostat. The system defaults to $1^{o}C$, meaning that when the temperature is set to $20^{o}C$, the thermostat will start heating at $19^{o}C$ and stop at $20^{o}C$. If the default value is $2^{o}C$, it will start heating at $18^{o}C$, and stop at $20^{o}C$.

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).

Away: This is the temperature maintained when the thermostat is turned ON. The range is 7-$35^{o}C$. The default is $7^{o}C$.

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

Sensor Selection: You can select which sensor should be used. You can select between air temperature only, floor temperature, or both. When you enable both sensors, the floor sensor is used as a floor limiting sensor and is designed to prevent the floor from overheating.

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. Only floor sensors are available or both (Remote Air and Floor Sensor) should be used.

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.

Rate of Change: Number of minutes for 1°C of temperature rise.

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 does not light up the room.

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 to save 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 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 Year/Month/Day, use the ◁ ▷ icons to set the Year/Month/Day values.

04 Press the column of 'Time', use the ◁ ▷ icons to set Hours/ Minutes.

05 Press the ↰ icon 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 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 in front of the '10 Min'.

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

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 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 in the front of ⁰C or ⁰F.

05   Press the ⬅ icon 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 ◁ ▷ icons to adjust Minimum Temperature to 5-34⁰C.

04   Press the second column, use the ◁ ▷ icons to adjust Maximum Temperature to 6-35⁰C.

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 ◁ ▷ 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.

01 Press the ⚙ icon and enter Feature Settings.

02 Find 'Defrost' and press it.

03 Use the ◁ ▷ icons to adjust the temperature.

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

Sensor Selection

01 Press the ⚙ icon and enter Feature Settings.

02 Find 'Sensor Selection', and press it.

03 Press the circle for the sensor that you require.

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

Floor Temperature Limit

01 Press the ⚙ icon and enter Feature Settings.

02 Find 'Temperature Limit' and press it.

03 Use the ◁ ▷ icons to set the temperature.

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

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 in front of either EU / US & CAN / AUS & NZ.

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

MODE 2-TIME CLOCK

Setting the Time Clock

To program the time clock times, when in time clock only mode, follow these steps.

01 Press 'Schedule' on the main screen.

02 Press Weekday and enter setting interface.

Four time periods can be selected to program. (Each period has ON/OFF Icon ⬭ ⬭ Options)

03 Press the 'Hour' of the ON time and use the ◁ ▷ icons to adjust to the desired hour.

04 Press the 'Minute' of the ON time and use the ◁ ▷ icons to adjust to the desired minutes.

05 Press the 'Hour' of the OFF time and use the ◁ ▷ icons to adjust to the desired hour.

06 Press the 'Minute' of the OFF time and use the ◁ ▷ icons to adjust to the desired minutes.

Repeat these steps to set all periods.

Boost

The Boost function allows you to override the thermostat outside of the programmed times and manually turn on for your desired time period.

This function overrides the thermostat for a desired length of time. This can be to override on or override off. To activate the Boost, follow these steps.'

01 Press '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 'Minute' and use the ◁ ▷ icons to set the minutes desired.

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

06 The 'Boost' time remaining, will be displayed at the top of the screen.

07 To cancel 'Boost' press 'Boost' main icon and press cancel.

System Information

01 Press the {🞖} icon and enter Feature Settings.

02 Press 'System Information' and enter system interface.

03 Press the ⬅ icon 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 Use the ◁ ▷ icons to turn to page 5.

03 Press 'Reset to factory settings'.

04 Press 'Reset'.

05 The SnugStat will now restart, this may take a few moments. Once this is complete the SnugStat has reset to factory setting.

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 42, 43, 44 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: 110-260VAC, 50/60 Hz

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: 16A - 3500W

LCD screen size: 3.5 Inch

Touch: Capacitive touch

Hole Pitch: 60mm

Grade of protection: IP 40

Sensor type: NTC10k

Installation type: Flush

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

WIRING DIAGRAM

Electric underfloor heating wiring

MAINS SUPPLY

230V

L   N

-   RT2   RT1   N   N   L   SL

REMOTE AIR PROBE

REMOTE FLOOR PROBE

ELECTIC UFH
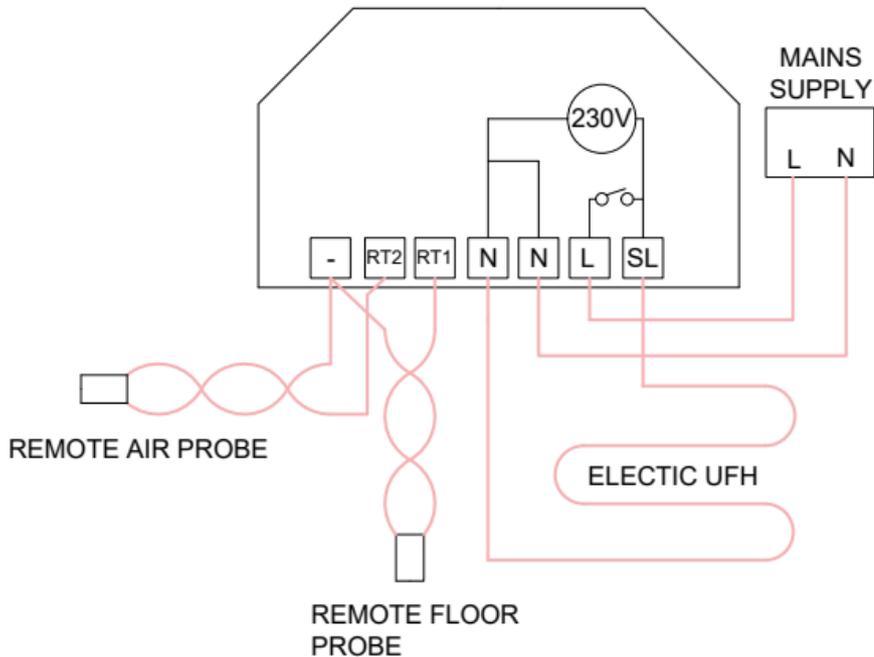
Wet underfloor heating wiring for single zone

230V

MAINS SUPPLY
L   N

BOILER
SL   PL

-   RT2   RT1   N   N   L   SL

REMOTE AIR PROBE

REMOTE FLOOR PROBE

UFH 2 port valve
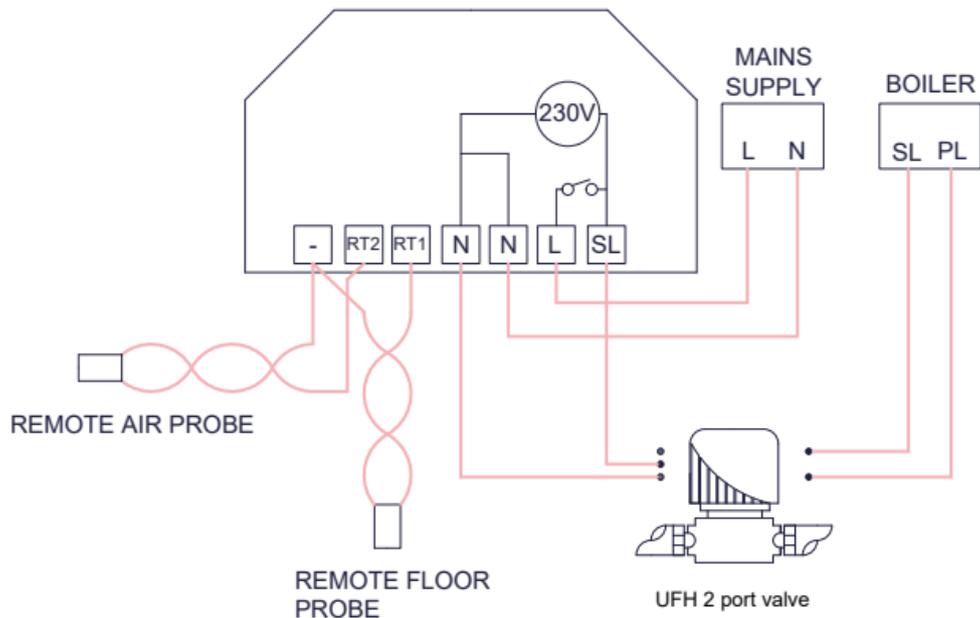
Hot water / timer mode wiring

MAINS SUPPLY
L   N

BOILER
SL   PL

230V

-   RT2   RT1   N   N   L   SL

H/W Cylinder Thermostat

H/W 2 port valve
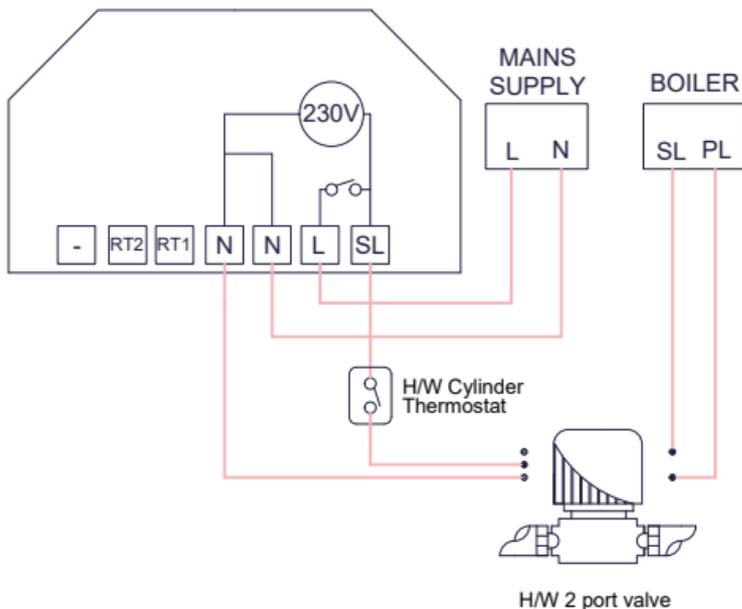
Recalibration

Your thermostat has been fully calibrated and tested. Should this need to be changed, please follow the below.

01 Press the ⚙ icon to enter the Feature Settings.

02 Press the ◁ ▷ icons to turn to page 3 and press Sensor Selection.

03 Press on the name of the sensor you wish to recalibrate. (Please note: Please press on the sensor name, not on the circle to the left of the name.)

04 Using the ◁ ▷ icons, change the calibration + or - by the variation you wish to change it by. The thermostat is preset to -2.

05 Press the ↩ icon to go back to the main screen.

CAN WE HELP?

Your SnugStat comes with a 2 year warranty from date of purchase.

If you have any problems installing or programming your SnugStat, call our dedicated technical support team on **01772 761333**, who will be more than happy to help.