Polypipe Underfloor Heating



SmartStat RF

Model: SmartStat RF



Smart Series



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What is a Programmable Room Thermostat?

A programmable room thermostat is both a programmer and a room thermostat.

A programmer allows you to set "On" and "Off" periods to suit your own lifestyle.

A room thermostat works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

So a programmable room thermostat lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs and preferences.

Setting a programmable room thermostat to a higher temperature will not make the room heat up any faster. How quickly the room heats up depends on the design and size of the heating system.

Similarly reducing the temperature setting does not affect how quickly the room cools down. Setting a programmable room thermostat to a lower temperature will result in the room being controlled at a lower temperature, and saves energy.

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 the room thermostat to a low temperature – say 18°C, and then turn it up by 1°C each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

You are able to temporarily adjust the heating program by overriding or using the temperature hold feature. These features are explained further on pages 23 to 25 of this manual.

Programmable room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may also prevent the thermostat from working properly.



Installation Procedure



Dο

Mount the thermostat at eye level. 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 push hard on the LCD screen as this may cause irreparable damage.

This wireless thermostat is designed to be surface mounted.

Step 1

Carefully separate the front half of the thermostat from the back plate by placing a small flat head terminal driver into the slots on the bottom face of the thermostat.

Step 2

Mark 2 hole positions on the wall using the back plate as a positioning template. Drill at the marked positions and insert a wall plug into each hole.

Step 3

Screw the thermostat back plate securely on the wall.

Step 4

Clip the front of the thermostat back onto the thermostat back plate.











Installing the Batteries

4 x AAA batteries have been supplied with this thermostat.

To access the battery holder, push and release the compartment door located on the bottom face of the thermostat. The thermostat will inform you when the batteries need to be replaced by displaying the battery icon on screen.

Do **not** use rechargeable batteries with this product!







Insert the batteries in the empty battery holder, ensuring that each battery is orientated for the correct polarity + / -.

Push the battery holder back inside the thermostat until it is secured in its closed position.



Mode Select/Factory Reset

The SmartStat RF can either be used as a Thermostat, standalone Time Clock, or combined Thermostat and Time clock.

To change between thermostat or time clock modes, follow these steps.

- Use the Left / Right keys to scroll to
- Press and hold the Tick key for 3 seconds
- SETUP will be highlighted, now press and hold the tick key for 10 seconds... •
- All of the icons on the display will appear for 2 seconds, then you will see the numbers 1, 2 or 3 flashing.
- Use the Left / Right keys to scroll between modes.......

Mode 1 = Thermostat

Mode 2 = Time Clock

 $Mode\ 3 = Combined\ Thermostat\ \&\ Time\ Clock$

Note: the selected option will flash.

Press the Tick key to confirm selection

Press the Tick Rey will revert to the main display care on for the selected model.

Press the Tick Rey will revert to the main display care on for the selected model.

The SmartStat RF will revert to the main display screen for the selected mode.

Note: Factory reset will cancel all parameters that were entered during the set-up and pairing operations. These processes must be repeated after factory reset is completed.



Receiver Type

The SmartStat RF will send a wireless signal to a receiver to switch on the heating or hot water. Select the receiver type you are using from the list shown here on pages 8 - 9 and follow the pairing instructions on the relevant page.



Pages 10 - 11



UFH8ZRFW Version 2 Page 12



UFHBSW Page 12



Pairing With the UFH8ZRFW Wiring Centre

Remove the cover from the UFH8ZRFW.

The current channel number is set inside on the two dials, these dials are at the top of the circuit board and look like this

To control heating only, configure the SmartStat RF in mode 1.

(You need to set a unique channel number for each UFH8ZRFW)



Example showing Channel No. 01

To control heating & hot water, configure the SmartStat RF in mode 3. (See page 9)

On the SmartStat RF:

•	The two large numbers in the centre will flash, use the up/down arrow keys to set this to the channel number of your UFH8ZRFW	۸۷
	Press ✓ once to confirm	✓
•	The two small numbers at the top will flash, this represents the zone number the SmartStat RF will be switching, use the up/down arrow keys to adjust	۸۷
•	Press ✓ once to confirm	✓
	The two small letters at the top will flash, this represents the zone type;	
	rA = Radiators UF = Underfloor Heating	
	Use the up/down arrow keys to adjust between the two types	۸۷
•	Press √once to confirm the settings, this will exit the setup menu and return to the main display	



Pairing With the UFH8ZRFW Wiring Centre Version 2

To control heating only, configure the SmartStat RF in mode 1.

To control heating & hot water, configure the SmartStat RF in mode 3. (See page 9)

On the SmartStat RF:

Use the Left arrow key to highlight ⑤ on the menu...
 Press and hold ✓ for 3 seconds...
 SETUP is now highlighted, press ✓ once to access the setup menu...
 The display will show the number 01 in the top right hand corner.
 Press the Down arrow key once, P1 is displayed in the top right corner...
 Press ✓ once...
 The display will start counting down from 99, pairing mode is now active...

On the UFH8ZRFW:

- Press and hold the pairing button on the desired channel until the output indicator LED flashes. Pairing mode is now active on the UFH8ZRFW.
- Once the UFH8ZRFW detects the pairing signal from the thermostat, the output light will turn off.

On the SmartStat RF:

13

Smart Series



Pairing With the UFHBSW

To control heating only, configure the SmartStat RF in mode 1.

To control heating & hot water, configure the SmartStat RF in mode 3. (See page 9)

On the SmartStat RF:

On the UFHBSW:

- Press and hold the CH1 button for 5 seconds, the CH1 light will start flashing, pairing
 mode is now active on the UFHBSW.
- Once the UFHBSW detects the pairing signal from the SmartStat RF, the CH1 light will turn
 off.

On the SmartStat RF:

- Press

 to confirm pairing, this will exit the setup menu and return to the main display.
- Pairing complete.



Pairing the SmartHub

To pair the SmartHub with the Polypipe SmartApp, follow these steps.

- · Connect the power supply to the SmartHub.
- Connect the SmartHub to your router with the Ethernet cable provided. The router will automatically assign an IP address to the SmartHub, the Link LED will light up once the SmartHub has connected to your network.
- Connect your smartphone or tablet device to the same WiFi network as your router.
- Download the FREE Polypipe SmartApp from the Apple App Store, Google Play Store or Windows Phone App Store and register your account.
- Once you have registered your account, press Sian In. then press Add Location.
- Press the connect button on the SmartHub to add the location to your account.
- When successfully connected, enter a title for the location (e.g. Home).



Pairing the SmartStat RF

The next step is to join the SmartStat RF to the SmartHub. We recommend joining any wired SmartStat or SmartPlug (if used) to the SmartHub first. This will help to extend the wireless network for areas where radio signals are problematic.

To add a SmartStat, follow these steps;

- In the app, select ADD ZONE, enter a preset or custom title, then press NEXT.
- You now have two minutes to join the SmartStat RF to the SmartHub.
- On the SmartStat RF, use the Left / Right keys to select , press and hold Tick



- Feature 01 is displayed on screen.
- Press the Tick key once again to pair the SmartStat RF to the SmartHub

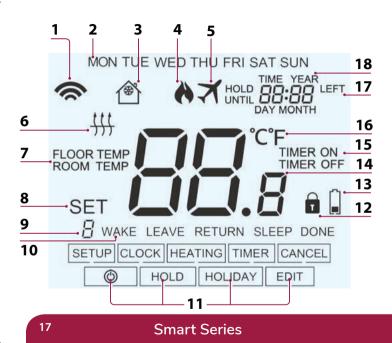


- · The COMMS symbol appears flashing on the display.
- Once the SmartStat has successfully paired to the SmartHub the COMMS symbol will remain permanently displayed.
- Press ADD ANOTHER for additional zones or press FINISH to complete setup.

Please note, you only have to pair the SmartHub to your account once. To pair any additional SmartStat's, using the app, select **edit** from the **home** menu, then ADD ZONE.

SmartStat RF and MESH

SmartStat RF is not capable of relaying signals from one thermostat to another (or MESH). To create an extension of the wireless mesh network you will need to add a SmartPlug to the system. The SmartStat can also communicate via **wired** (MESH capable) SmartStats.



LCD Display

- Comms Symbol Displayed when connected to the SmartHub.
- 2. Day Indicator Displays the day of the week.
- Frost Protection Displayed when frost protection mode is active.
- 4. Flame Symbol Displayed when the thermostat is calling for heat.
- Holiday Displayed when the thermostat is in holiday mode.
- 6. Floor Limit Displayed when remote floor probe has reached max temp limit.
- 7. Floor/Room Temp Indicates the current sensor mode.
- 8. Set Displayed when changes are being made to the program schedule or current set point.
- Program Indicator Displayed during programming (6 level mode) to show which period is being altered.
- Program Indicator Displayed during programming (4 level mode) to show which period is being altered.
- Main Menu Displays which option is currently selected.
- 12. Key Lock Indicator Displayed when the KeyLock is Locked.
- 13. Battery Indicator Shown when batteries need replacing.
- Temperature Displays the current sensor temperature.
- 15. Timer Status Displays the current state of the timed output.
- 16. Temperature Format Degrees Celsius or Fahrenheit.
- 17. Hold Left Displayed when a temperature hold is active, the remaining time will be shown.
- 18. Time/Day/Month/Year Displays when setting the Clock/Calendar or a Holiday Period.

Modes 1 & 3 – Thermostat/ Thermostat with Hot Water





Setting the Clock

To set the clock, follow these steps.

- Use the Left / Right keys to scroll to 🛡
- Press and hold Tick to turn off the display

- Repeat the steps to set the Month, Date & Time

Day _____ MON

- Use the down arrow to scroll to 🔘

™:08 •——

`Time

SET

CLOCK



Comfort Levels Explained

The SmartStat RF offers three program mode options; Weekday/Weekend programming, 7 Day programming and 24 Hour programming. There is also the option to use the thermostat as a Non-Programmable thermostat.

When thermostats are connected to a network, the program mode for the system is configured by using the App.

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

07:00 - 21°C (Wake) 09:00 - 16°C (Leave) 16:00 - 21°C (Return) 22:00 - 16°C (Sleep)

If you only want to use 2 levels, you should program the unused levels to --:--

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.

- WAKE will now flash and the current time and temperature setting will be shown.
- Press Tick to alter WAKE settings



Use the Up / Down keys to set the hours	N V
Press Tick to confirm	
Use the Up / Down keys to set the minutes	^ V
Press Tick to confirm	✓
Use the Up / Down keys to set the temperature	^ V
Press Tick to confirm the settings	✓
Press the right arrow key	>
LEAVE will now flash and the current settings will be displayed.	
Press Tick to alter LEAVE 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 Tick	_<>✓





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



Temperature Hold (Mode 01 Heating only)

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	<	>
	Press Tick to confirm selection		
•	Use the Up / Down keys to set the desired Hold period	Λ	V
•	Press Tick to confirm selection		1
•	Use the Up / Down keys to set the desired Hold temperature	۸	V
	Press Tick 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.



To cancel a temperature hold, with hold selected on the main menu, press the tick key and then press tick again while Cancel is highlighted.



Temperature Hold (Mode 03 Heating and Hot Water)

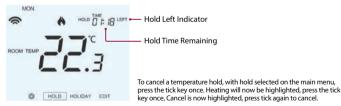
The temperature hold function allows you to manually override the current operating program and set a different temperature for a desired period.

- The word "Heating" is highlighted, press Tick to confirm

- Use the Up / Down keys to set the desired Hold temperature

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.





Hot Water Boost (Mode 03 Heating and Hot Water)

To boost the hot water output on, follow these steps.

- Use the Up / Down keys to set the boost duration e.g. 02:00 hours
- Press Tick to confirm settings and return to main display.....



To cancel a timer boost, with hold selected on the main menu, press the tick key once. Heating will now be highlighted, use the left/right arrow keys to select Timer, then press the tick key once. Cancel is now highlighted, press tick again to cancel.



Locking the SmartStat RF

The thermostat has a keypad lock facility. To activate the lock follow these steps.

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



Unlocking the SmartStat RF

To unlock the SmartStat press Tick once. The display will show 00:00 and you will need to enter the four digit pin number you set previously.

The display will unlock and return to the main screen.







Power On/Off

The heating is indicated ON when the flame icon is displayed.

When the flame icon is absent, there is no requirement for heating to achieve the set temperature but the SmartStat RF remains active.

The display and heating output will be turned OFF.

Thermostat completely OFF



Thermostat powered ON





In thermostat mode, the holiday function reduces the set temperature in your home to the frost protection temperature setting (see page 28).

The thermostat will maintain this temperature for the duration of the holiday and will then automatically return to the program mode on your return.

In time clock mode, the holiday function maintains the timed output as OFF. Set a date & time for the holiday period to end, using the steps below;

• Use the Left / Right keys to scroll to HOLIDAY and press Tick	<>/
- Ose the Ecre / Hight keys to seron to hocio/it and press fick	ÃV
Use the Up / Down keys to set the year	
Press Tick	√
Use the Up / Down keys to set the month	
Press Tick	 ✓
Repeat the steps to set the Date & Time	
Pressing Tick to confirm selection	 ✓
Note: The holiday period will start immediately, and will return to the no at the time & date you have configured.	
Use the Left / Right keys to scroll to HOLIDAY and press Tick	<>
CANCEL will be highlighted, Press Tick to cancel	······································



Optional Features Explained

THE FOLLOWING SETTINGS ARE OPTIONAL AND IN MOST CASES NEED NOT BE ADJUSTED.

Feature 01 – Pairing To SmartHub: This function is used to connect the thermostat to the SmartHub

Feature 02 - 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.

Feature 03 - Frost Protect Temperature: This is the temperature maintained when the thermostat is in Frost Mode. The range is 07 - 17°C. The default is 12°C and is suitable for most applications.

Feature 04 – 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.

Feature 05 – Temperature Up/Down Limit: This function allows you to limit the use of the up and down temperature arrow keys. This limit is also applicable when the thermostat is locked and so allows you to give others limited control over the heating system.

Feature 06 – Sensor Selection: On this SmartStat RF, 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.

Feature 07 – Floor Temp Limit: This function is available when feature 06 is set to 03. You can set a floor limiting temperature between 20-45°C (28°C is the default setting). Note: SmartStat RF MUST NOT be used to control electric under-floor heating.

Feature 08 – Optimum Start: Optimum start will delay the start-up of the heating system to the latest possible moment to avoid unnecessary heating and ensure the building is warm 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 (with a rate of change of 20, the thermostat has calculated the heating needs 20 minutes to raise the building temperature 1°C) and starts the heating accordingly.

Feature 09 - Rate of Change: Number of minutes for 1°C temperature rise.

Feature 10 - Not used on this model.

Feature 11 - Not used on this model.

Feature 12 – Program Mode: Non-Programmable, Weekday/Weekend (5/2), 7 Day Programming or 24 Hour. The thermostat offers three programming modes and the option of configuring it to work as a non-programmable thermostat.

Weekday/ Weekend - allows you to program 4 comfort levels for the weekday and 4 different comfort levels for the weekend.

7 Day Program Mode - Each day has 4 comfort levels that can be programmed independently.

24 Hour Mode - All days are programmed the same and repeat continuously.

Feature 13 - Temperature Format: This function allows you to select between °C and °F.

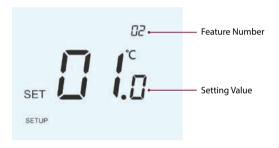
Feature P1 - Pairing: to the UFHBSW & UFH8ZRFW Version 2 (Only).

Feature P2 - Setting the UFH8ZRFW address: This is the number set on the rotary dials inside the UFH8ZRFW unit.

Feature P3 - Failsafe: If the UFHBSW or UFH8ZRFW fails to receive a signal from the thermostat within 40 minute period, it will activate to output for 12 minutes every hour. The UFHBSW/UFH8ZRFW will continue to do this until it receives a new signal from the thermostat.



Adjusting the Optional Settings



- Press Tick to confirm settings



Optional Settings - Feature Table

FEATURE	DESCRIPTION	SETTING
Р3	Failsafe	00 = Disabled 01 = Enabled (Default)
P2	Pairing to UFH8ZRFW	00 - 99 = Receiver address
P1	Pairing to UFHBSW/UFH8ZRFW V2	Commences countdown from 99 – 00 seconds.
01	Pairing to Hub	Used to add zone to the SmartHub
Menu Entry Point		
02	Switching Differential	00.5 = 0.5°C 01 = 1.0°C (Default) 02 = 2.0°C 03 = 3.0°C
03	Frost Protection Temperature	07° - 17°C (12°C = Default)
04	Output Delay	00 - 15 Minutes (00 = Default)
05	Up/Down Temperature Limit	00° - 10°C (00 = Default)
06	Sensor Selection	00 = Built in Sensor (Default) 01 = Remote Air Sensor 02 = Remote Floor Sensor 03 = Built in Sensor & Remote Floor
07	Floor Temperature Limit	20°C - 45°C (28°C = Default)
08	Optimum Start	00 - 05 Hours (00 = Default)
09	Rate of Change	Minutes to raise by 1°C
10	Not used on this model	
11	Not used on this model	
12	Program Mode	00 = Non - Programmable 01 = Weekday/Weekend (Default) 02 = 7 Day Programming 03 = 24 Hour Mode
13	Temperature Format	00 = °C, 01 = °F (00 = Default)



Re-calibrating the Thermostat



Error Codes

When terminated for thermostat operation the screen will display an error code if a fault is detected.

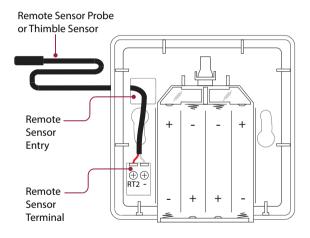
E0 = The internal sensor has developed a fault.

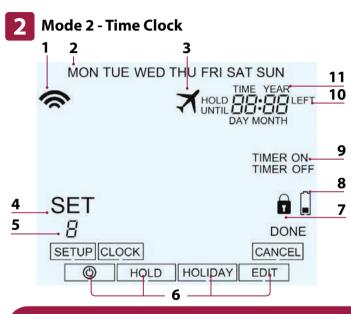
E2 = The remote probe has not been connected.

The remote probe has not been wired correctly.

The remote probe is faulty.







LCD Display

- 1. Comms Symbol Displayed when connected to the SmartHub.
- 2. Day Indicator Displays the day of the week.
- 3. Holiday Displayed when the time clock is in holiday mode.
- 4. Set Displayed when changes are being made to the current set point.
- Program Indicator Displayed during programming to show which level is being altered.
- 6. Main Menu Displays which option is currently selected.
- 7. Keypad Lock Indicator Displayed when the keypad is locked.
- 8. Battery Indicator Shown when batteries need replacing.
- 9. Timer Status Displays the current state of the timed output.
- Hold Left Displayed when a timer hold is active, the remaining time will be shown.
- Time/Day/Month/Year Displays when setting the Clock/Calendar or a Holiday Period.



Setting the Switching Times

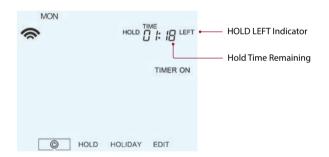
ogram the switching times, follow these steps.	
Use the Left / Right keys to scroll to EDIT and press Tick	> /
Use the Left / Right keys to select day/period of the week	<>
Press Tick to confirm selection	
1 will now flash and the current ON time will be displayed.	
The OFF time can be viewed by pressing the Down key	/
Select a switching time and press the Tick key	•
Use the Up / Down keys to select the ON time HOURS and press Tick	\V
Use the Up / Down keys to select the ON time MINUTES	١V
Press Tick to confirm selection	/
Use the Up / Down keys to select the OFF time HOURS and press Tick	VV
Use the Up / Down keys to select the OFF time MINUTES	ĺν
Press Tick to confirm selection	
Press the Right arrow key	>
2 will now flash and the current ON time will be displayed.	
Repeat the steps above to set all periods. For any unused periods enter	:-
When complete, use the Left / Right keys to scroll to DONE and press	
Tick to confirm all changes	> /
	Use the Left / Right keys to scroll to EDIT and press Tick



To override the timed output on, follow these steps.

- Use the Up / Down keys to set the override duration e.g. 02:00 hours ΛV
- Press Tick to confirm settings and return to main display

Hold Left and the remaining time will now be displayed.





Optional Features Explained

Feature 01 – Pairing To SmartHub: This function is used to connect the thermostat to the SmartHub.

Feature 02 - Program Mode: The time clock offers three programming modes.

Weekday/ Weekend - 4 Switching times for Monday - Friday.

4 different switching times for Saturday - Sunday.

7 Day Program - Each day of the week has 4 switching times that can be

programmed independently.

24 Hour program - All days of the week are programmed with the switching times.

Feature P1 - Pairing: to the UFHBSW & UFH8ZRFW Version 2 (Only).

Feature P2 - Setting the UFH8ZRFW address: This is the number set on the rotary dials inside the UFH8ZRFW unit.

Feature P3 - Failsafe: If the UFHBSW or UFH8ZRFW fails to receive a signal from the thermostat within 40 minute period, it will activate to output for 12 minutes every hour. The UFHBSW/UFH8ZRFW will continue to do this until it receives a new signal from the thermostat.



Optional Settings - Feature Table

FEATURE	DESCRIPTION	SETTING
Р3	Failsafe	00 = Disabled 01 = Enabled (Default)
P2	Pairing to UFH8ZRFW	00 – 99 = Receiver address, zone no. & type
P1	Pairing to UFHBSW & UFH8ZRFW Version 2	Commences countdown from 99 – 00 seconds.
01 Menu Entry Point	Pairing to Hub	Used to add zone to the SmartHub
02	Program Mode	01 = Weekday/Weekend (Default) 02 = 7 Day Programming 03 = 24 Hour Mode

Want More Information?

Call our telephone support team on: 01709 772200

Or view technical specifications directly on our website: www.polypipeufh.com

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