RFRP-HW-OT
Cylinder Thermostat Wireless

Operating Instructions

Contents

CAUTION!

The thermostat must not be left unsupervised when open. (Prevent non specialists and especially children from gaining access to it.)

Only qualified electricians or authorised service staff are permitted to open the thermostat.

If the thermostat is used in a way not specified by the manufacturer, its safety may be impaired.

Important: Keep this document

Prior to setting the thermostat, it is neccessary to complete all required settings described in this section.

How your cylinder thermostat works

When the thermostat is in the AUTO mode, it will operate according to the times that have been programmed. The user can select from 6 different programs per day - each with a time and a status of On or Off.

When a program is scheduled to be On it will remain on until the next Off program.

During this time the thermostat will remain on until the temperature setpoint is reached.

There is only one temperature setpoint which is applied to all programs. The default temperature setpoint is 60°C.

1. Factory default settings

Temperature indicator:	°C
Switching differential:	5°C
In built frost protection:	5°C - Not adjustable
Clock:	24 hours
Keypad lock:	Off
Operating mode:	5/2 day
Default temperature setpoint:	60˚C

2. Specifications

Power supply:	2 x AA Alkaline Battery
Power consumption:	2 mW
Battery replacement:	Once a year
Temp. control range:	6 ... 90°C
Ambient temperature:	0 ... 45°C
Dimensions:	130 x 99 x 25mm
Temperature sensor:	NTC 100K Ohm @ 25°C
Temperature indication:	˚C
Switching differential:	5˚C
Frost protection:	Only operational in OFF mode
Pollution degree:	Pollution degree 2

3a Mounting of temperature sensor

ON CYLINDER: To ensure accurate control of your cylinder, the temperature sensor should be mounted on the bottom 1/3 of the cylinder. It is essential that the sensing element is in direct contact with the cylinder and that there is no insulation between it and the cylinder. 60°C is the temperature level required in order to prevent the build up of legionella bacteria. The temperature sensor can be fixed to the cylinder using the provided foil tape.

ON PIPEWORK: To ensure accurate control, the temperature sensor should be mounted on the pipework as tightly as possible. It is essential that the sensing element is in direct contact with the pipework and that there is no insulation between it and the pipework. The temperature sensor can be fixed to the pipework using the provided foil tape.

3b Mounting of thermostat

The thermostat should be mounted in a position that will make reading the display convenient.

The thermostat can be fitted directly on walls

4. Installation

Lower the flap at the front of the thermostat.

There is a battery compartment located below the buttons.

Apply downward pressure to remove the cover.

Insert the 2 x AA batteries and the thermostat will turn on.

Close the battery compartment.

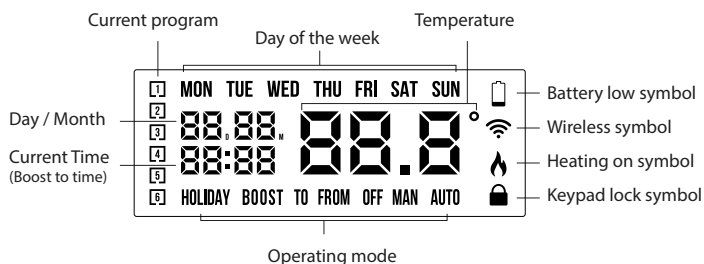## 5. Frost protection   5°C

Frost protection is built into this thermostat.

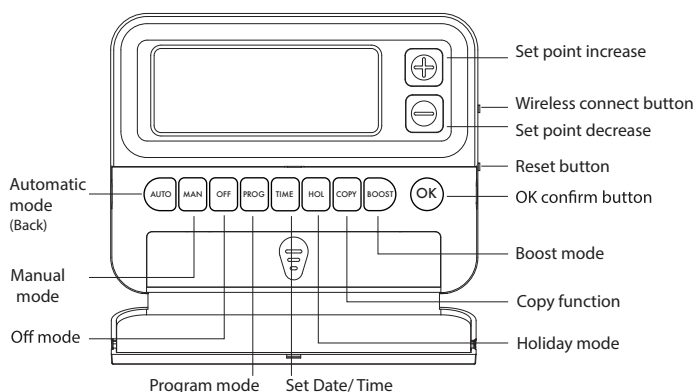It is pre fixed at 5°C and is not adjustable.

It will only be activated when the thermostat is in the OFF mode and the room temperature falls below 5°C.

6. LCD Symbol / button description

6.1 LCD Symbol description

Current program
Day of the week
Temperature
Day / Month
Current Time (Boost to time)
Battery low symbol
Wireless symbol
Heating on symbol
Keypad lock symbol
Operating mode

6.2 Button description

Set point increase
Wireless connect button
Set point decrease
Reset button
OK confirm button
Boost mode
Copy function
Holiday mode
Automatic mode (Back)
Manual mode
Off mode
Program mode
Set Date/ Time

7. Resetting the thermostat

Press the ■ RESET button on the side of the thermostat.

'**rst no**' will appear on the screen.

Press the ⊕ button.

'**rst yes**' will appear on the screen.

Press the '**OK**' button to reset the thermostat.

8. Keypad lock and unlock 🔆 OFF

To lock the keypad, press and hold the ⊕ and ⊖ buttons for 10 seconds.

🔒 will appear on the screen. The keypad is now locked.

To unlock the keypad, press and hold the ⊕ and ⊖ buttons for 10 seconds.

🔒 will disappear from the screen. The keypad is now unlocked.

9. Setting the date, time and operating mode

Press the '**TIME**' button once, the year will begin flashing.

Press the ⊕ or ⊖ buttons to adjust the year.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to adjust the month.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to adjust the day.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to adjust the hour.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to adjust the minute.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to adjust from 5/2d to 7d or 24h mode.

Press the ⊕ or ⊖ buttons to turn DST (Day Light Saving time) On or Off.

Press the '**AUTO**' button or wait 5 seconds and the thermostat will return to normal operation.

10. Factory program settings 🔆 5/2d

🔆	5/2D					
	P1	P2	P3	P4	P5	P6
Mon-Fri	06:30	08:00	12:00	14:00	17:30	19:00
	ON	OFF	OFF	OFF	ON	OFF
Sat-Sun	08:00	10:00	12:00	14:00	17:30	19:00
	ON	OFF	OFF	OFF	ON	OFF

	7D					
	P1	P2	P3	P4	P5	P6
Mon-Fri	06:30	08:00	12:00	14:00	17:30	19:00
	ON	OFF	OFF	OFF	ON	OFF
Sat-Sun	08:00	10:00	12:00	14:00	17:30	19:00
	ON	OFF	OFF	OFF	ON	OFF

	24H					
Everyday	P1	P2	P3	P4	P5	P6
	06:30	08:00	12:00	14:00	17:30	19:00
	ON	OFF	OFF	OFF	ON	OFF

11. Adjusting the program settings for 5/2d

Press the '**PROG**' button once.

Programming for Monday to Friday is now selected.

Press the ⊕ or ⊖ buttons to adjust the P1 time. Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to set ON or OFF status for P1.

Press the '**OK**' button.

Repeat this process to adjust P2 to P6 times and status.

Press the '**OK**' button.

Programming for Saturday to Sunday is now selected.

Press the ⊕ or ⊖ buttons to adjust the P1 time.   Press the '**OK**' button.

Press the ⊕ or ⊖ buttons to to set On or Off for P1.

Press the '**OK**' button.

Repeat this process to adjust P2 to P6 times and status.

Press the '**AUTO**' button to return to automatic mode.

While in PROG Mode pressing the '**PROG**' button will jump from P1-P2 etc without changing the status.

While in PROG Mode pressing the '**TIME**' button will jump to the next Day (block of days).

If 7 D mode is selected, you can program each day of the week with 6 individual times and statuses.

If 24H mode is selected, you can only program each day of the week with the same 6 times and statuses.

12. Copy function

Copy function may only be used if the thermostat is in the 7d mode.

Set the times and temperatures for the day that you wish to copy from in PROG Mode.

When still on the day press the '**COPY**' button.

The day of the week that you have selected will be shown with '**COPY**' below it.

The next day will begin to flash on the top of the screen.

Press the ⊕ button to copy the times and temperatures to that day.

Press the ⊖ button to skip a day.

You can copy to multiple days using the ⊕ button.

Press the '**OK**' button when copying has been completed.

13. Adjusting the temperature setpoint

When in Auto or Man mode, press the ⊞ or ⊟ buttons to adjust the temperature setpoint.

The temperature will flash on the LCD screen.

Press Ok or after 5 seconds the thermostat will operate to this temperature.

14. Permanent override

Press the '**MAN**' button to enter Manual Mode (Permanent Override).

'**MAN**' will appear on the screen.

Press the ⊞ or ⊟ buttons to adjust the temperature setpoint.

Press '**OK**' to confirm the temperature selection or after 5 seconds the thermostat will operate in this permanent override.

The thermostat will operate in MAN mode until the mode is changed.

To cancel permanent override, press the '**OFF**' button or press the '**AUTO**' button.

15. Boost function

The thermostat can be boosted for 1, 2 or 3 hours while the thermostat is operating in all modes except for holiday mode.

Press the '**BOOST**' button 1, 2 or 3 times, the time that the boost will be activated to will flash on the screen.

If you do not press any other button the boost will activate to the time on the screen after 5 seconds.

Press the '**OK**' button or wait for 5 seconds to enter BOOST Mode.

'**BOOST TO**' will now be displayed on the screen with the time that it is activated to displayed above this text.

Press the '**BOOST**' button again to deactivate the boost.

16. Holiday function

This will switch your heating system off between the start and end times you select .
Press the '**HOL**' button, '**HOLIDAY FROM**' will appear on screen.

Press the ⊞ or ⊟ buttons to adjust the day. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the month. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the year. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the hour. Press the '**OK**' button.

'**HOLIDAY TO**' will appear on screen.

Press the ⊞ or ⊟ buttons to adjust the day. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the month. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the year. Press the '**OK**' button.
Press the ⊞ or ⊟ buttons to adjust the hour. Press the '**OK**' button.

The thermostat will now return to the mode it was in before the Holiday settings were entered.

To cancel Holiday mode, press the '**HOL**' button.

17. To connect the RFRP-HW-OT thermostat to an RF1A-OT receiver

Please note, If you are installing a CP4-HW-OT, the RFRP-HW-OT thermostat and the RF1A-OT receiver will have a pre-established RF connection so it is not necessary to carry out the RF connection process below.

On the RF1A-OT receiver:

Press the ⬡ button on the RF1A-OT receiver.
The red light will begin to flash.

On the RFRP-HW-OT thermostat:

Press the ▮ ▽ Connect button.

The thermostat will show "nOE" followed by "---"

Once an RF connection has been established the thermostat will show '**r01**' on the LCD screen.

Press the '**OK**' button to finish the process.

The thermostat is now connected to the RF1A-OT receiver.

18. To disconnect the RFRP-HW-OT thermostat from an RF1A-OT receiver

This can be done from either the thermostat or the receiver.

18.1 On the RFRP-HW-OT thermostat:

Press the ▮ ▽ Connect button.

The thermostat will begin to search through the RF channels.

Press and hold the '**Copy**' button for 10 seconds.

'**Adr**' will appear on the screen of the thermostat.

Press the '**OK**' button twice to complete the unpairing process.

The thermostat RFRP-HW-OT is now disconnected from the receiver RF1A-OT.

18.1 On the RF1A-OT receiver:

Press the ⬡ button, the red light will flash.

Red & green lights if using as a hub receiver.

Press and hold connect for about 10 seconds, the receiver will then stop flashing.

The RF connection is now cleared.

19. Backlight mode selection   AUTO

There are two settings for selection. The factory default setting is **AUTO**.
OFF   The backlight is permanently OFF.
AUTO   On pressing any button the backlight stays on for 5 seconds.

To adjust the backlight setting, lower the cover on the front of the unit.

Press the '**OK**' button for 5 seconds.

Press either the ⊞ or ⊟ buttons to select the **OFF** or **AUTO** mode.
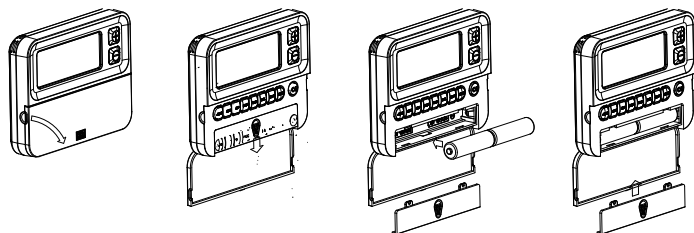
Press the '**OK**' button.

20. Battery low warning

When the batteries are almost empty, the ▯ symbol will appear on the screen.

The batteries must now be replaced or the unit will shut down.

21. Replacing the batteries

Lower the flap at the front of the thermostat.

There is a battery compartment located below the buttons.

Apply downward pressure to remove the cover.

Insert the 2 x AA batteries and the thermostat will turn on.

Close the battery compartment.

22. Installer menu (without OpenTherm® connected)

To access the installer menu, you must hold Prog and OK for 5 seconds.

When in the installer menu, press + - and OK to navigate and select. Use AUTO, MAN or OFF to go back a step.

P0 1:   Mode (Normal)
P0 3:   Hysteresis (differential)
P0 4:   Calibration
P0 5:   Frost Protection
          Exit

P0 1:   Mode (Normal)

■ **Normal Mode (Nor)**

When the thermostat is in Normal mode, the thermostat will try to reach the target temperature after the program changes.

Example: Program 1 on the thermostat is set to ON for 06:30am, the temperature set point is 60˚C and the cylinder temperature is 30˚C. The thermostat will start heating the cylinder at 06:30am and the cylinder temperature will start to increase then. Until the setpoint is reached or the on status end.

P0 3:   Hysteresis HOn and HOFF

This menu allows the installer to change the switching differential of the thermostat when the temperature is rising and falling.

HOn is the fall in temperature – Default – 5°C. This will allow a fall of 5°C from the setpoint before the thermostat turns on again.

HOFF is the rise in temperature – Default – 0.0°C. This will allow the temperature to rise 0°C above its setpoint.

P0 4:   Calibration

This menu allows the installer to re-calibrate the thermostat. The current temperature will be displayed on the screen and can be adjusted by pressing the up and down buttons.

P0 5:   Frost Protection   ON

This menu allows the installer to activate or de-activate frost protection. When frost protection is activated the thermostat will switch on the boiler when the temperature drops below 5˚C.

Exit

This menu allows the installer to return to the main interface. It is also possible to exit the installer menu by pressing AUTO, MAN or OFF whilst in the installer menu.