HWPRS

Programmable thermostat

User instruction manual

Programmable Thermostat type HWPRS

Introduction
This thermostat can replace any standard room thermostat, and is designed for use with gas or oil heating systems. If you wish to control electric heating note that the current rating is 3A resistive.

The thermostat is battery-powered and designed for wall mounting, using the backplate supplied. The HWPRS provides a volt-free contact to switch any load up to 3A @ 230V 50Hz and can be positioned wherever you would normally fit a room thermostat.

Set time and weekday:
Insert the batteries into the thermostat; make sure that the batteries are inserted with polarity as indicated in the battery compartment. Press and hold the select and set buttons for 3 seconds. The hour will flash—adjust with the up or down arrow button, confirm with select button. Adjust the minute and the weekday in the same way. Press the Set button to return to normal running mode.

Function and wiring of the receiver
1. All wiring should be carried out by a skilled person. Disconnect power before wiring. Fit a 3 Amp fuse to the receiver supply.
2. The default temperature display shows the current room temperature. Press the up button until the set temperature is 2 degrees higher than the current room temperature.
3. Wait for a few seconds. The animated flame symbol should be seen in the bottom left-hand corner of the display.
4. The heating system should now be running.
5. Press the down button on the transmitter to reduce the temperature below the current room temperature. Wait for a few seconds. The animated flame symbol should disappear, and the heating should switch off.
6. If responses do not occur as expected during steps 1—4 above, press the reset button on the thermostat and repeat steps 1 – 4.

Wiring information:
Using the crimp connectors and insulating boots provided, connect wiring to the receiver as shown below.   For conventional heating installations, connections will be required to terminals L, SL & Earth.

Wiring:

L	Live In
SL	Switched Live Output
Earth	Earth Park

Push button function

Key	Function
∧	Increase setpoint temperature
∨	Decrease setpoint temperature
☀ / ❄	Turn on backlight for 5 seconds. Activate / deactivate Frost Protection
SET	Key for confirming and program setting
SELECT	Key for program setting
RESET	System reset

FUNCTION SETTING:

You can adjust the way the transmitter works, by accessing the function menu:

Access the function menu by pressing and holding the Select and Set buttons for 3 seconds. The hour will flash. Press Select until you see the required function number flashing in the display. **The function can be adjusted by pressing the up or down arrow, then confirm with the Select button.** Available functions are noted below.

Note that the device will 'time-out' to normal running mode if no key is pressed for 15 seconds.

F2 = Day group or individual day selection

Day group selections are 5 — 2, or 7 — 0. If you select 5 — 2, you can programme 5 time / temperature steps throughout each day, applicable to weekdays, and 5 further time / temperature steps applicable to Saturday and Sunday. If you select 7 — 0, you can programme 5 time / temperature steps for each **individual** day. Confirm your choice with the Select button.
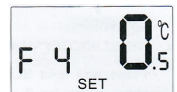
F3 = Calibration

The default calibration (accuracy of thermostatic control), is 0.5^0C. You can change this to 1.0^0C if you wish. Confirm with Select button.

F4 = Displayed Temperature Calibration

You can adjust the displayed temperature in the range + or — 4.0^0C. Confirm your choice with the Select button.

F5 = Real-time Clock Calibration

You can adjust the accuracy of the real-time clock in the range — 35 to + 35 seconds per week. E.g. if the clock displays a time which is slow or fast by 10 seconds over a period of one week, you can adjust this function setting by + or — 10 in order to correct the time-keeping in subsequent weeks. *Press the "SET" button to return to normal running mode.*
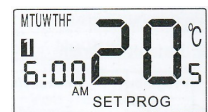
Pre-set program:

The HWPRS incorporates a factory pre-set program. You can view and amend any of the times or temperatures within the pre-set program, which is shown in the table below. **Note that, if no key is pressed for 15 seconds, the device will time-out to normal running mode:**

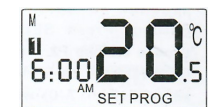| Program	Weekday (Mon—Fri)	Weekend (Sat, Sun)
1	Time: 6:00 a.m.	Time: 6:00 a.m.
	Temperature: 21^0C	Temperature: 21^0C
2	Time: 8:00 a.m.	Time: 8:00 a.m.
	Temperature 17^0C	Temperature 17^0C
3	Time: 4:00 p.m.	Time: 4:00 p.m.
	Temperature: 21^0C	Temperature: 21^0C
4	Time: 6:00 p.m.	Time: 6:00 p.m.
	Temperature: 21^0C	Temperature: 21^0C
5	Time: 10:00 p.m.	Time: 10:00 p.m.
	Temperature: 17^0C	Temperature: 17^0C

REVIEW AND/OR AMEND PROGRAMME SETTINGS:

Press the Set button, the day or day group (as determined by function F2 described above), will flash. While the day or day group is flashing, you can change to another day or day group if you wish, by pressing the up arrow button. Confirm your choice with the Select button. You will now be viewing the pre-set program number 1. The hour will flash, change this if required with the up or down arrow buttons. Confirm your choice with the Select button. The minutes will flash; change this if required with the up or down arrow buttons. Confirm your choice with the Select button. You will now be viewing the pre-set program number 2, and you can continue programming in the same way: the flashing element in the display can be changed with the up or down arrow buttons, and the new value can be confirmed with the Select button.

If you selected day group 5 — 2, you can review (and amend) programs 1 — 5 above for weekdays, and separately, programs 1 — 5 for weekends.
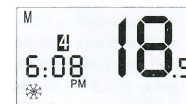
If you selected day group 7 — 0, you can review (and amend) programs 1 — 5 for every day of the week, giving a total of 35 program settings for the whole week.

Additional functions:

Frost protection: Whilst in the normal running mode, press and hold the ☼/❄ button for 3 seconds to activate Frost Protection. The frost protection indicator shown in the illustration will flash. While frost protection is activated, the temperature set-point is 5^0C. In frost protection mode it is not possible to override the 5^0C temperature setting. To turn frost protection off, press and hold the ☼/❄ button for 3 seconds. The frost protection indicator will disappear from the display, and normal running mode is restored.

Review temperature setting: Briefly press the up or down arrow button. The blue backlight will operate, and the current temperature setting will be displayed (flashing). In frost protection mode, the LCD will show 5^0C. If the device is in temporary override mode (see next function), the LCD will show the temporary set-point temperature.

Temporary override (temperature adjustment): Press the up or down arrow buttons to temporarily adjust the temperature setting: press and hold the up or down arrow button for 2 seconds. The display will show the existing temperature setting (flashing), and then the temperature value will scroll up or down. Keep the button pressed to scroll rapidly, or press the button repeatedly to adjust the temperature 0.5^0C at a time. Release the button when the new temperature is reached. The display will continue flashing for 3 — 4 seconds, and then time-out to once again show the existing room temperature. Temporary override remains active until the next timed program is reached.

LCD backlight: The blue backlight is activated when any button is pressed, and will automatically turn off after 5 seconds. The LCD backlight will not operate when the battery is low.

Low battery warning: When the battery voltage drops below a critical level, the low-battery warning indicator will be displayed. **You should renew the batteries as soon as possible.** If low batteries are left in the device, it will eventually be unable to switch the heating on or off. The transmitter has a capacitive memory which maintains the time and all other settings for up to one minute. If the batteries are not replaced within one minute, the transmitter will have to be re-programmed.

Sleep mode: Press and hold the up and down arrow buttons simultaneously for 3 seconds to activate sleep mode. All functions will be paused, saving battery power. The output will be turned off immediately. The clock will continue running. The display will show just time and weekday. Press any key to de-activate sleep mode, and restore normal running mode.

Specification:
   Battery powered 2 x AA (LR6) alkaline
   LCD display
   Blue backlight
   Time display 12 hour am / pm
   Time accuracy: ± 1 min / month
   Operating Control range: 10—35^{0}C in 0.5^{0}C steps.
   Temperature control differential: 0.5^{0}C
   Frost protection temperature: 5.0^{0}C
   Relay output: Volt-free 3A (resistive)