



HSVTRF WIRELESS CONTROLLER



Installation & Control Guide for HSVTRF Wireless Controller

All electrical appliances produced for the Company are guaranteed for one year against faulty material or workmanship. This applies only if the appliance has been used for purposes in accordance with the instructions provided and has not been connected to an unsuitable electricity supply, or subject to misuse, neglect, damage or modified or repaired by any person not authorised by us. This guarantee is offered to you as an extra benefit and does not affect your legal rights.

The correct electricity supply voltage is shown on the rating label attached to the appliance.

Reasonable care has been taken to ensure that this guide is accurate at the time of printing. In the interest of progress the Company reserve the right to vary specifications from time to time without notice.

Heatstore,
Unit 12, Access 18, Bristol BS11 8HT
Tel: 0117 9235375
Fax: 0117 9235374
Web: www.heatstore.co.uk

RF HSVTRF Wireless Controller

Installation and User Guide

1. Getting to know your HSVTRF wireless controller

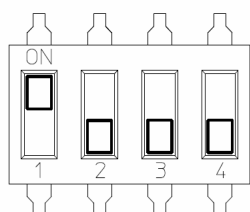
The HSVTRF controller can control unlimited number of heaters. The controller has 2 operating modes. It has to be set to the required mode prior to the installation by using the switches located at the back of the controller. These modes are:

- Temperature control
- Temperature and timer control

There are 4 light indicators located around the button showing the status of the controller.

2. Temperature Control Mode

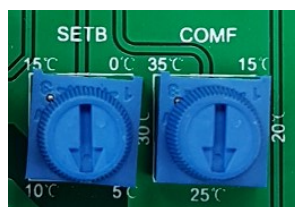
Temperature control for Comfort period



Switch 1 controls the display screen. If it is set to 'ON' the temperature is displayed as Fahrenheit. If it is set to 'OFF' the temperature is displayed as Celsius.
Prior to installation the maximum comfort temperature must be set by using the knob marked COMF located at the back of the controller as shown below. The range is 15°C to 35°C. The maximum comfort temperature limits the room temperature that can be set by users after installation. The required room temperature can be reduced by users by using the two adjustment buttons on the front of the controller after installation. These buttons allow the user to change the set room temperature up or down subject to not exceeding the maximum temperature set prior to installation.
After pressing the on button the heating will operate until the set room temperature is achieved, at this point the indicator lights around the on button will change from green to orange. When the room temperature drops the heating will become active again and the indicator lights will change back to green.
The display screen will show the actual room temperature, except briefly when either of the two adjustment buttons are pressed, the new target room temperature is then temporarily displayed.



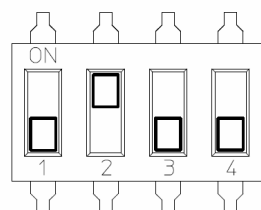
Set temperature achieved



Variable resistors to set maximum comfort and setback temperatures

Temperature control for Setback period

For this mode, the switches are set as shown below.



In this mode, the controller will set heating active when the room temperature drops below the set temperature. This feature can be used for frost protection or in situations where a minimum room temperature must be maintained. The setback temperature can be set using the knob marked SETB mounted on the back of the unit as shown above. This can be set from 0°C - 15°C.

If the heating is active in the setback mode, the indicators will illuminate red and green.

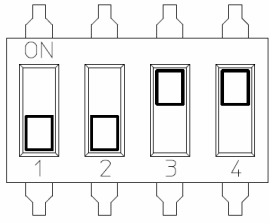


Room temperature below the set temperature. Heating is active.

Temperature control for comfort and setback periods can be used individually or together. This can also be used in conjunction with the timer mode options.

3. Temperature and Timer Mode

For timer mode, the switches are set as shown below.



In timer mode, switch 3 or 4 must be in the 'ON' position. This mode allows for 3 different settings which will alter the time period for each segment.

Switch 3 - Each time period represents 5 minutes.

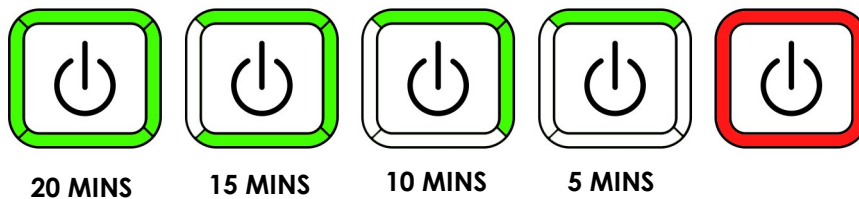
Switch 4 - Each time period represents 15 minutes

Switch 3 & 4 - Each time period represents 30 minutes

Controller functionality in timer mode:

In timer mode, the controller acts as a 4 stage run-back timer. When the controller is in stand-by mode and button is pressed, the first indicator segment will light up green and heating is activated. When pressed again the second segment will light up and so on. Each segment is representing a time period that is selected when setting the switches.

In the example below, the only switch in the 'ON' position would be number 3. The button would be pressed four times to activate four 15-minute segments resulting in the heater staying on for 1 hour. At the end of the last time period, the light indicators will be red for 4 seconds and then go off. The controller is now in stand-by mode.



If the timer mode is not selected, then the user will need to press the ON button again to deactivate the heating.

4. Changing temperature or timer settings after installation

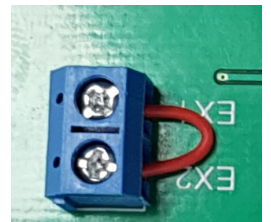
The temperature and/or timer settings can be changed after installation. It is important to switch the power off to the controller before the changes are made. After the changes are made and the power is restored the new settings will take effect.

5. External Input

The controller can be switched off using any external device with voltage free contacts. For example, timers or a building management system.

If this function isn't used, a wire link across the external input connectors must be used.

When the external input connection is open, the indicators will light up red and the heating will be disabled. However, setback mode will still operate at low temperature.



6. Choosing a position in a room

The HSVTRF controller should be fixed to the wall. Avoid areas with draft or direct sun. Do not position the controller above or close to the heaters or other heat sources. Damp areas or areas where HSVTRF can be mechanically damaged should also be avoided. Avoid installing the controller in areas where there are metal objects between the heater and the controller. This will reduce the RF range. The RF range in ideal conditions can be up to 15m however this can be reduced when the signal is passing through the walls or other objects. The range can be also affected where the controller is mounted close to power cables, motors or equipment producing strong electromagnetic field. If the temperature control feature is used it is necessary to use one controller for each room or zone.

7. Installation

The controller is designed to fit onto most single gang back boxes. When a metal box is used this must be earthed. The controller can be powered by either mains 240VAC 50Hz or 12VDC. The power consumption is less than 1W. Do not connect mains voltage to 12V terminals, this will damage the controller. The maximum size wire that can be used is 1mm², this can be twin and earth or standard flex. Do not overtighten the connector screws. Take care not to damage the components when connecting the cables. damage the components when connecting the cables.

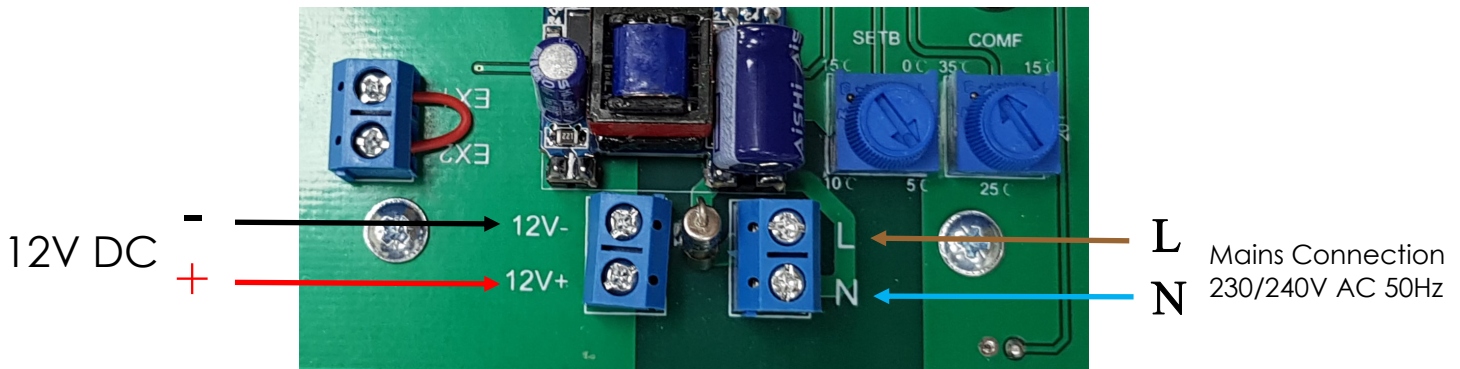
8. Connection to the Main Supply

For the mains power, connect L and N wires to the connectors marked as L and N. Electrical installation should be carried out by a competent installer, preferably registered with NICEIC (National Inspection Council for Electrical Installation Contracting) in accordance with the 17 edition of the IEE Wiring Regulations, (BS.7671), and any relevant Local Authority Bye-Laws. This heater is fitted with a 3-core mains supply cable and should be permanently connected to the electricity supply via a double pole switch having 3mm gap on each pole. A switched Fused Connection unit to BS.1363, Part 4 is a recommended mains supply connection accessory to ensure compliance with safety requirements applicable to fixed-wiring installation.

9. Connection to 12V DC

Powering the controller with 12Vdc allows the controller to be installed in a zone 2 area, however, the installation must comply with the Separated Extra Low Voltage (SELV) requirements. When powered by 12VDC, please ensure that the power supply is suitable for 12V 0.1A. For 12VDC power connect positive wire to terminal marked +12V and negative to terminal marked -12V.

Please note: A 12Vdc power supply does not come with this controller, however, a standard 12Vdc constant voltage LED driver could be used.



10. Self Diagnostic

The controller is equipped with a self diagnostic software that will check functionality of all main components. If there is a fault with any part of the controller or controller is operating outside of the temperature limits, the 4 indicators will flash red. If this happens, controller will not function in order to protect itself and the heaters.

11. Pairing with heaters

In order to pair your heater with the controller you must:

- The controller must be in OFF position (the light segments off or red)
- Turn power to the heater ON
- Within 20 seconds hold the ON button on the controller until the orange segments light up in a sequence
- After the pairing is finished, the light segments will change to green
- If the pairing was successful the heater should turn on. It can take up to 4 seconds
- Press the button to exit pairing and return to previous controller status

12. Warnings

- Do NOT handle the appliance with wet hands.
- Do NOT use the appliance in workshops or rooms where excessive dust is generated or present.
- Ensure that nothing is pushed into any aperture of this controller.
- Do NOT cover or restrict any aperture Do NOT use the appliance if damaged.
- Do NOT leave the appliance unattended where young children are present.
- If used in a bathroom, the heater is to be installed so that it cannot be touched by a person in the bath or shower.
- Operating temperature range -10 to +40°C.