



## 6. Installing the Electric Heating


The Genius system can control a wide variety of electric heating systems, from electric Towel Rails and Infra-Red panels to wall-mounted Convection Heaters.

### General Information

The Electric Relay is rated to 11A maximum. The Electric Switch & Smart Plug are rated to 13A maximum. The Powered Room Thermostat is rated to 16A maximum. Devices must not control a more powerful heater, or a number of heaters which together go above this limit.


 Standard wiring diagrams are provided with the system. To download a copy of the wiring diagrams, visit: <https://www.geniushub.co.uk/wiring>  
Using the appropriate wiring, as in accordance with BS7671 (or newer if such exists).

 Do not attempt to wire in any item if you are not 100% sure that you know what you are doing. Danger of electric shock! All wiring should conform to IEE regulations. The Electric Heater and wiring for the controls must be electrically isolated before you commence work on wiring the controls!

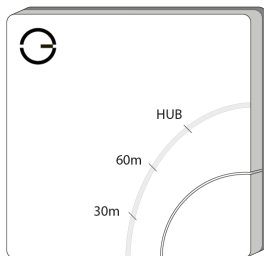
 None of the devices in this chapter can be used to **directly** control Electric Underfloor heating. Attempting to use any of these to control electric underfloor heating may damage the device, the underfloor heating or the floor itself.

If the electric heating is also being controlled with a Room Sensor or Room Thermostat, any controls on the heater should be set to constant and the highest temperature to ensure that there are no conflicts between the control provided by the Genius Hub system and the built in controls.

If the electric heating is only being controlled by an Electric Switch, Electric Relay or Smart Plug (i.e. on/off control, not temperature control from the app), then disable any timer functions on the heater, but leave any temperature settings enabled.

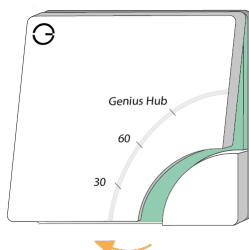
 All devices which control the heating in individual rooms and are purchased as part of a system direct from Genius Hub, such as Electric Switches, Genius Radiator Valves or Room Sensors, are labelled with the room they control and are pre-linked to zones on the app.

### Wired-in Electric Heating (Electric Switch)



Many Electric Heaters are wired into a Fused Switch Spur, for electrical safety. These can be controlled by the Genius Hub system by fitting the Electric Switch between the wiring of Unswitched Fused Spur and the Electric Heater.

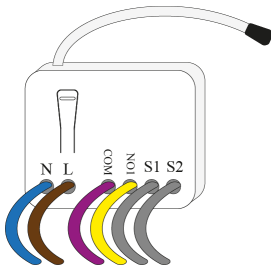
1. Always ensure that the electric heater and wiring for the Electric Switch is electrically isolated before you commence work on any wiring.
2. Break out the relevant section of a 1-gang pattress for the wiring and fix the pattress to the wall. It is recommended that a 40mm pattress is used.
3. Pull through the relevant wiring, allowing plenty of spare.
4. Wire in the Electric Switch as per the wiring diagrams provided, checking this is suitable as per the electric heating installation manual.
5. Remove the front cover of the Electric Switch to expose the screw holes. The cover can be removed by levering a flat bladed screwdriver into the gap underneath the Electric Switch.



6. Fit the Electric Switch into the pattress, ensuring there are no trapped wires. Screw in using standard pattress screws, and check the unit is securely and safely attached to the wall.

In normal operation there will be no lights when the unit is not heating and one or more **red** lights near the button when heating.

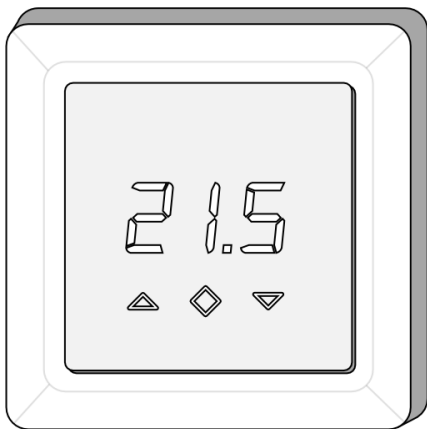
## Wired-in Electric Heating (Electric Relay)



Many Electric Heaters are wired into a Fused Switch Spur, for electrical safety. These can be controlled by the Genius Hub system by fitting the Electric Relay between the wiring of Unswitched Fused Spur and the Electric Heater.

1. Always ensure that the electric heater and wiring for the Electric Relay is electrically isolated before you commence work on any wiring.
2. Break out the relevant section of a 1-gang pattress for the wiring and fix the pattress to the wall. It is recommended that a 40mm pattress is used.
3. Pull through the relevant wiring, allowing plenty of spare.
4. Wire in the Electric Relay as per the wiring diagrams provided, checking this is suitable as per the electric heating installation manual.
5. Fit the Electric Relay into the pattress, ensuring there are no trapped wires, fit the blanking plate to the front of the pattress. Screw in using standard pattress screws, and check the unit is securely and safely attached to the wall.

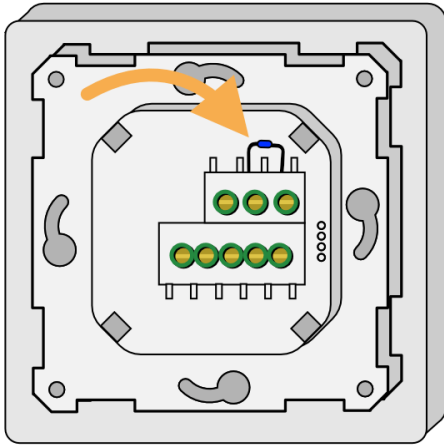
## Wired-in Electric Heating (Powered Room Thermostat)



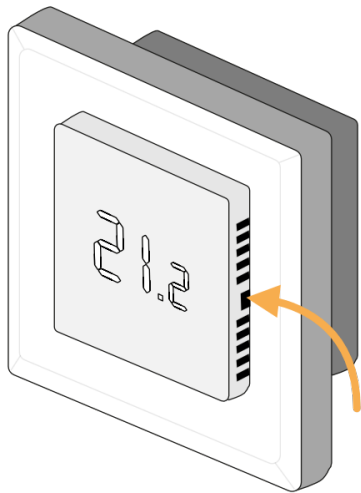
Many Electric Heaters are wired into a Fused Switch Spur, for electrical safety. These can be controlled by the Genius Hub system by fitting the Powered Room Thermostat between the wiring of Unswitched Fused Spur and the Electric Heater.

1. Always ensure that the electric heater and wiring for the Powered Room Thermostat is electrically isolated before you commence work on any wiring.
2. The Powered Room Thermostat fits into a standard 1-gang pattress, we recommend approximately 40mm deep.
  - a. If you are using a flush mount pattress it should screw in without any problems.
  - b. If you are using a surface mount pattress, you may need to use the 2 spacers to bring the Powered Room Thermostat closer to the edge of the pattress.

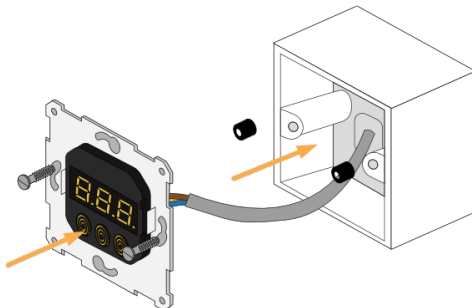
3. Wire in the link into the 'Floor Sensor' terminals.



4. Install the pattress into the room the Powered Room Thermostat is going to control.  
5. Wire in the mains power and the heating load to the Powered Room Thermostat.  
6. To screw the Powered Room Thermostat to the pattress, first remove the screen by pushing a small flat-bladed screwdriver into the flat gap on each side of the screen. This will release the 2 spring clamps, and the screen and frame will become loose.



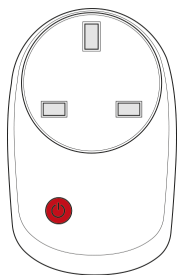
7. Screw the Powered Room Thermostat to the pattress. Due to the cutouts to the side of the screen of the PRT, it can either be screwed directly to the pattress, or the screws can be mostly screwed in first and the Powered Room Thermostat placed over the screwheads and rotated.  
a. See 2.b if using a surface mount pattress, taking care to place the spacers between the device and the pattress.



8. Place the frame on the Powered Room Thermostat and push the screen in place to secure the two parts to the main unit, ensuring the logo is at the bottom-left of the screen.

In normal operation there will be no lights when the unit is off (but the temperature will be displayed on the screen) and one **red** light to the bottom-right of the display when heating.

## Plug-in Electric Heating



Smart Plugs can be used for 2 different purposes. They can be controlled via the app to switch devices plugged into them, via a schedule like a heating room; and they will boost the signal around the property improving reliability of the system and battery life.

Plug-in heaters which are to be controlled with the Genius system should be plugged into Smart Plugs, which can be used to switch the Electric Heater on and off. Each Smart Plug can control up to 2.4kw of heating.

First plug the Smart Plug into a nearby socket, then plug the heater into the Smart Plug.