

CHPRSTATDPRF

Wireless Digital Programmable Thermostat Installation Instructions

The latest ESP product manuals can be found on-line:



1 / Specifications:

1.1 Transmitter:

- Power supply: 4XAAA 1.5V Alkaline batteries
- Battery lifespan: 1 year
- Temperature display range: 0-50°C (increment 0.1)
- Temperature control range: 5-35°C (increment 0.5)
- Temperature accuracy: +/-1°C
- Switching differential: +/-0.5°C or +/-1.0°C selectable
- Operating temperature: 0 - 50°C
- Clock accuracy: <1sec / day
- Protection rating: IP30
- Dimensions: 140*88.6*32.1mm
- Transmission frequency: 868 Mhz
- Transmission distance: 80m open, 30m indoors
- Mounting: Wall or free standing using table stand.

1.2 Receiver:

- Complies with: EN60730-1, EN60730-2-7, EN60730-2-11
- Power supply: 230Vac, 50Hz
- Contact rating: 16A, 250Vac(Volt Free contact)
- Insulation class: 2
- Operating temperature: -10 - 60°C
- Flexible wire size: 0.5-1.5mm²
- Rigid wire size: 0.5-2.5mm²
- Dimensions: 88 x 88 x 39.4mm
- Wall mounting: Surface mounting box

2 / Wiring Diagram:

- ① Neutral
- ② Live
- ③ Output(Call for heat) -Normally open
- ④ Input(Switching circuit)

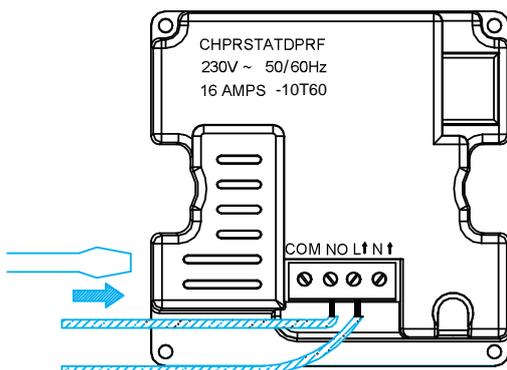


fig.1 Wiring Diagram

EXAMPLE CIRCUIT DIAGRAMS:

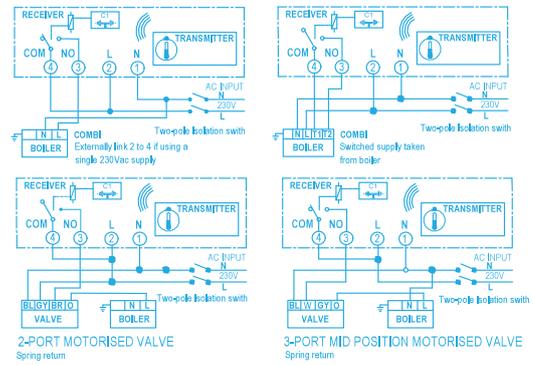


Fig.2 Wiring Diagram

NB: For reasons of space & clarity some system components are not shown.

Warning: Please make sure power is turned off before starting installation!

3 / Pre-Installation Set Up:

There are one 4 DIP switch on the back of the receiver and one 4 DIP switch + one 3 DIP switch on the back of the thermostat. Before installation, the installer needs to set the DIP switches first.

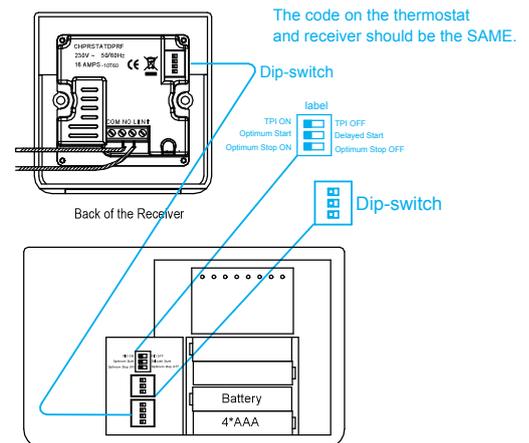
The 4 DIP switches are used for RF code setting. The thermostat and receiver are automatically paired when you receive them, however, if there is another unit nearby(e.g. in a neighbours home) the thermostat may tigger their receiver.

To avoid this you can change the RF address code on both the thermostat and receiver as per Fig.3.

The 3 DIP switch on the thermostat is used to set below control modes. Please set the position of the DIP switch as per the DIP switch label(see Fig.3)

• TPI ON/TPI OFF: The default setting is TPI off. When TPI is set to off, the thermostat will work based on hysteresis algorithm. With this algorithm, when the difference between the room and the setpoint temperatures is less than the sensitivity threshold(0.5°C and 1.0°C optional, please refer to the operation guide for setting the sensitivity threshold/switching differential), the thermostat considers it has reached the setpoint temperature.

When TPI is set to on, initially only hysteresis algorithm is available. After your thermostat has been in use for a short duration, the thermostat will have learned your home characteristics, such as your thermal inertia and your heating insulation. then the thermostat will switch to work as per TPI control automatically for a better temperature regulation. if the location of the thermostat is changed from one room to another room, the user needs to set the DIP switch to OFF position first and then reset to ON position again, so that the thermostat can relearn your room characteristics for best TPI performance.



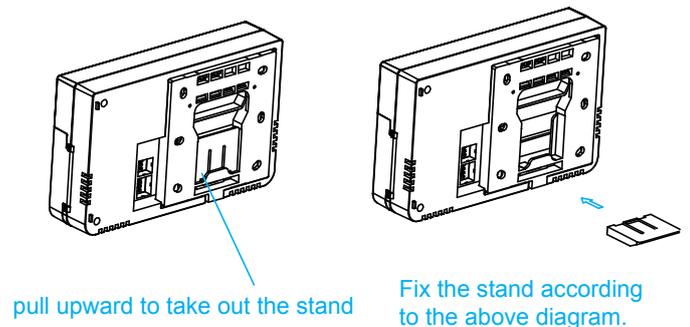
back of the thermostat Fig.3

- Optimum Start/Delayed Start: The default setting is optimum start. When this mode is selected, you set the time you want to be warm and Optimum Start will do the rest. On warmer days it will start later. Optimum Start ensures that you are warm when you want to be (and not before), reducing wasted energy and saving money.

When delayed start has been selected, You set the earliest start time, based on an estimate and Delayed Start will do the rest. Delayed Start will delay the boiler firing time on warmer days, when it is possible to save energy.

- Delayed Stop ON/ Delayed Stop OFF: The default setting is Delayed stop OFF. When Delayed Stop is OFF, the thermostat will turn off the heater as per hysteresis algorithm or TPI control normally. When Delayed Stop is ON, the thermostat will calculate how long the house will take to cool down , then turns off the boiler at the earliest possible moment, when it calculates that the temperature will not decay by more than 1/2 °C

4.2 There are two easy steps to fix the stand.



4 / Installation Guide:

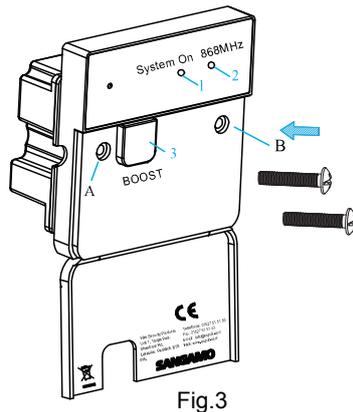
4.1 There are three easy steps for installation of the receiver:

Step one: Flip down the front plate;

Step two: Wiring according to the diagram and the labelled ports of the switch; and

Step three: Install the switch in the wall or mounting box with screws (as shown in Fig.3)

When cutting the aperture for the output flexible cord, ensure no sharp edges remain.



| Date Issued | Issue No | Description |
|-------------|-----------------------|-------------|
| J20 | A30-CHPRSTATDPRF-01-2 | Rev.1 |

1. This LED indicates if a signal is being sent to the boiler to turn on. Blue light indicates the boiler should be firing.

2. If LED is permanently lit, no RF signal is being found. Heating will turn off after 10 minutes, if no RF transmission resumes. After the RF signal is recognized the heating schedule will continue.

3. Manual button. If RF signal fails, for example if the batteries in the thermostat are flat, this button can turn the heating on and off.

Health & Safety

This unit must be installed by a suitably qualified person in accordance with the latest IEE Wiring Regulations.

Isolate mains supply before commencing installation. Please read all installation instructions before proceeding.

Example circuit diagrams for typical installations are shown. These diagrams are schematic and should be used as a guide only. Please ensure that all installations comply with the current IEE regulations. For reasons of space and clarity not every system has been included and the diagrams have been simplified, for instance some Earth connections have been omitted. Other control components shown in the diagrams i.e. Valves, Room Stats etc. are general representations only. However, the wiring detail can be applied to the corresponding models of most manufacturers.

Your product is not user serviceable. Do not dismantle this product.

Due to our policy of continuous product improvement and development, the specifications in this guide may be subject to change without prior notice.

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