

# SANGAMO

## CHOICE RSTAT3 RF Wireless Digital Room Thermostat (with Wall Mounted Receiver)



### Introduction

The Choice Rstat3-RF is a non-programmable wireless room thermostat designed to be simple to use whilst bringing you comfort and energy economy. Comprising of a battery powered thermostat (transmitter) and a separate relay unit (receiver). The transmitter is intended for wall mounting in the main living area in your house with the receiver being mounted close to the boiler.

In addition to OFF/ON control the unit provides the option to regulate your heating system at two temperature levels; Comfort and Economy.

### Features

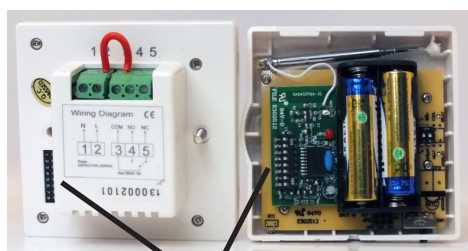
- LCD display shows room temperature
- OFF/ON mode selectable
- Comfort/Economy mode selectable
- Frost protection
- Battery low indication
- Large easy to adjust dial

### Receiver Installation

**This product must be installed by a competent person in line with the latest IEE regulations. Isolate mains before commencing installation of the product.**

#### Pre-Check RF Address Code Setting

Both the transmitter and the receiver each have an 8 position DIL switch for address code setting. The product is supplied with both DIL switches set to the same default address code - already paired for operation. Check & confirm they are set the same. If there is another application or user nearby using the product, then to avoid interference, you may need to change the address code so both DIL switches are set to an alternative address. You may also wish to do this just to avoid potential interference in the future



DIL Switch locations

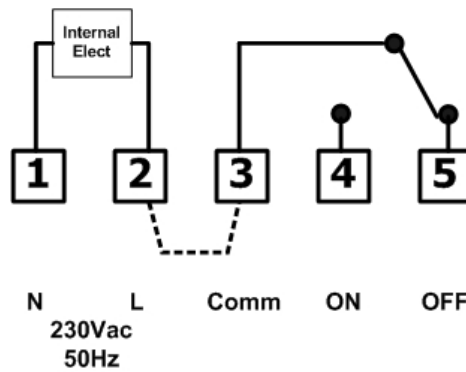
#### Receiver Location

Before securing the supplied receiver backbox into position ensure its location is in an open space away from any metal objects including the boiler housing. Consider also the building structure, i.e. walls and ceilings when positioning the receiver relative to the transmitter, as this may influence the performance of the RF system.

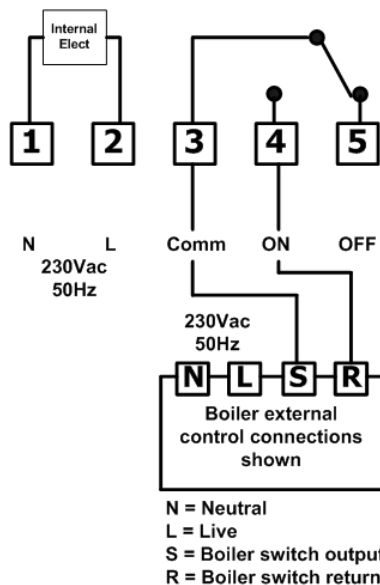
#### Receiver Wiring

Routes wires into the backbox and connect wiring in accordance with information printed on the receiver.

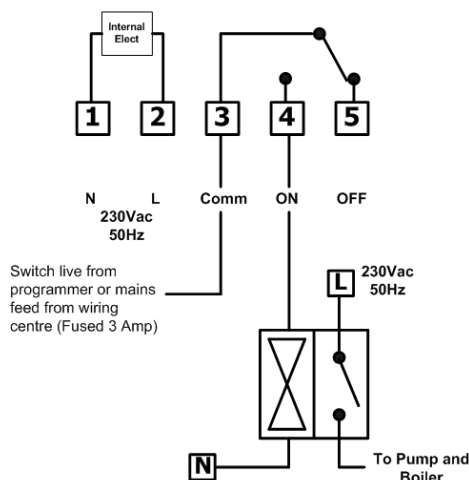
### Choice Rstat 3-RF Receiver internal wiring



Example circuit diagrams for typical installations are shown below. For reasons of space and clarity not every system can be shown



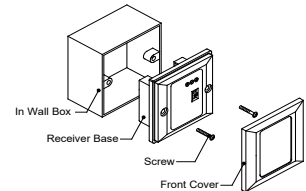
Choice Rstat3-RF receiver controlling a typical combination boiler installation where the external boiler control is connected via switching terminals (a link may need to be removed on the boiler switching control terminals). Consult boiler manufacturers handbook.



Choice Rstat3-RF receiver used in a conventional fully pumped system using a 2 port spring return valve with auxiliary switch to control the pump and boiler. Note : Hot water will need to be controlled by the use of a programmer or timeswitch.

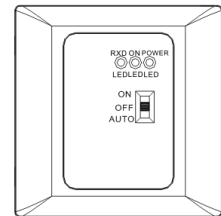
### Receiver Mounting

Secure the receiver into the backbox with 2off M3.5 screws and fit front bezel of the receiver.



Switch on the power to the receiver and set receiver switch to ON to confirm wiring of the receiver is correct and the connected boiler or system component is operating as expected. Once complete, set the receiver switch to AUTO.

### Receiver Operation



Switch

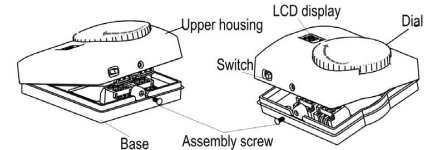
OFF = Receiver is permanently off  
ON = Receiver is permanently on  
AUTO = Receiver accepting signals and operating according to the thermostat

#### LED

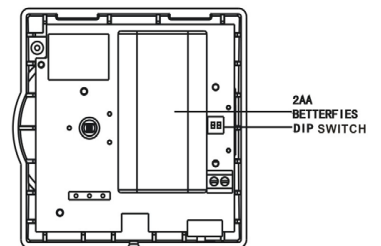
RED = Power to receiver on  
GREEN = Receiver output energised  
YELLOW = Flashes when signals received from thermostat

### Insert Batteries (Transmitter)

Loosen assembly screw at the base of the thermostat. Gently null the thermostat from its base.



Fit two fresh AA alkaline batteries in the battery compartment of the thermostat. Check LCD to confirm batteries correctly fitted.



### Test Communication

With the receiver switch set to AUTO and the batteries fitted into the thermostat, set the temperature on the thermostat to above & below room temperature several times with the receiver and thermostat both in their expected final locations to confirm you have a reliable RF communication.

### Transmitter Mounting

1. Secure the base directly to the wall or pattern box.
2. The ideal location is for the thermostat to be situated around 1.3m above the floor on an interior wall, away from direct sunlight, heat sources and drafts.
3. Now check configuration of the thermostat is what you want, see configuration.
4. Locate the thermostat back onto its base and secure the assembly screw.

## User Instructions

### What is a room thermostat?

...an explanation for householders.

A room thermostat simply switches the heating system on and off as necessary. It works by sensing the air temperature, switching on the heating when the air temperature falls below the thermostat setting, and switching it off once this set temperature has been reached.

Turning a room thermostat to a higher setting will not make the room heat up any faster. How quickly the room heats up depends on the design of the heating system, for example, the size of boiler and radiators.

Neither does the setting affect how quickly the room cools down. Turning a room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy. The heating system will not work if a time switch or programmer has switched it off.

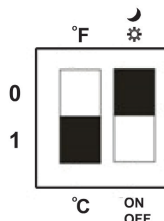
The way to set and use your room thermostat is to find the lowest temperature setting that you are comfortable with, and then leave it alone to do its job. The best way to do this is to set the room thermostat to a low temperature - say 18°C - and then turn it up by one degree each day until you are comfortable with the temperature. You won't have to adjust the thermostat further. Any adjustment above this setting will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one room thermostat to control the whole house. But you can have different temperatures in individual rooms by installing thermostatic radiator valves (TRVs) on individual radiators. If you don't have TRVs, you should choose a temperature that is reasonable for the whole house. If you do have TRVs, you can choose a slightly higher setting to make sure that even the coldest room is comfortable, then prevent any over-heating in other rooms by adjusting the TRVs.

Room thermostats need a free flow of air to sense the temperature, so they must not be covered by curtains or blocked by furniture. Nearby electric fires, televisions, wall or table lamps may prevent the thermostat from working properly.

## Configuration

Slide the smaller DIL switch to the right of the battery compartment on the transmitter to the setting required.



## Specification

### Transmitter

Power Supply: 2xAA 1.5V batteries  
Battery Lifespan: 1 year  
Temperature Adjustment Range: 5-30°C  
Temperature Display Range, Scale: 3-51°C, 1°C  
Temperature Frost Protection: 5°C (non adjustable)

### Receiver

Power supply: 230Vac, 50Hz  
Contact Rating: 16A, 250Vac (Volt Free contact)  
Insulation class: 2  
Flexible wire Size: 1.5mm<sup>2</sup>

### Transmitter and Receiver

Operating Temperature: 0-50°C  
Storage Temperature: 10-60°C  
Protection Rating: IP21

### Select °C and °F readout (default °C)

Set the switch to °C temperature in the display will be shown in Celsius.

Set the switch to °F temperature in the display will be shown in Fahrenheit.

### Select On/Off or Comfort/Economy switch function (default On/Off)

When On/Off is selected the switch at the base of the thermostat is used as an On/Off switch.

When the sun and moon icons are selected the switch at the base of the thermostat is used to switch between Comfort mode (sun icon) and Economy mode (moon icon).

## User Instructions

### Display

The LCD displays actual room temperature until the setting dial is moved.

### Setting the temperature



Turn the setting dial to required temperature. The selected temperature will 'flash' in the LCD to signify it is showing the set temperature. After a short period the display stops flashing and shows actual room temperature.

### Thermostat status



A flame symbol will be lit whenever the thermostat is calling for heat.

### Low battery indication

A battery symbol will flash in the display when batteries require replacement.

  Batteries should be replaced within 15 days, after which the thermostat will turn off the load it is controlling. When this happens "OF" will be displayed.

### Switch function

  The function of the switch at the base of the thermostat has 2 mode options. See 'Configuration' section for DIL switch setting.

### Comfort/Economy setting

When the switch is set to the sun icon, the thermostat controls at the temperature set by the dial. When the

switch is set to the moon icon, the thermostat controls at 4°C below the temperature set by the dial.

## ON | OFF Setting

The switch is used as ON/OFF control. When the switch is set to 'ON', the thermostat controls at the temperature set by the setting dial.

When set to 'OFF', the thermostat output and therefore the heating system is turned off and 'OF' is displayed.

### Error Code

E1 flashing in the display: Room sensor short circuit. Thermostat shuts down its output.

E2 flashing in the display: Room sensor is broken. Thermostat shuts down all its output.

### Temperature Notes

If the room temperature is higher than 30°C the heating will stop working.

If the room temperature is lower than 5°C the heating will start working (Frost Protection)

## Approval Standards

EN60730-1  
EN60730-2-7  
EN60730-2-9

If you have a problem or require any further information please contact us on:  
**01475 745131**

### SERVICE AND WARRANTY

Your product is not user serviceable. **PLEASE DO NOT TRY TO DISMANTLE THE UNIT.**

This product is guaranteed by your supplier for 5 years from the date of manufacture. If it should become defective please contact your installer or supplier for a replacement unit or visit [www.sangamo.co.uk/returns](http://www.sangamo.co.uk/returns)

This product must meet Waste Electronic and Electrical Equipment Regulations (WEEE) for suitable environmental recycling, recovery and/or disposal. End of life products should be handled in line with local regulations. Alternatively return end of life product to Sangamo for correct disposal.

### CUSTOMER CARE POLICY

As part of Sangamo's continuous improvement program, the company operates a Customer Care policy. This means we welcome your comments and complaints, as it can help us to improve our services to you, our customer.

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

**Sangamo Limited**  
Industrial Estate, Port Glasgow,  
Renfrewshire, PA14 5XG

Tel 01475 745131  
Email: [enquiries@sangamo.co.uk](mailto:enquiries@sangamo.co.uk)  
Web: [www.sangamo.co.uk](http://www.sangamo.co.uk)

