

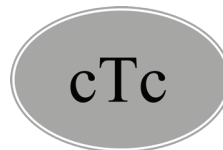
CTC RTERFW

Wireless Electronic Room Thermostat with Dial, LCD Display and Receiver



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Version 4.2



User and Installation
Instructions

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User and Installation Instructions

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User and Installation Instructions

Safety Notice

WARNING!

ALWAYS ISOLATE THE AC MAINS SUPPLY BEFORE INSTALLING.

THIS PRODUCT MUST BE FITTED BY A COMPETENT PERSON, AND INSTALLATION MUST COMPLY WITH THE GUIDANCE PROVIDED IN THE CURRENT EDITIONS OF BS767 (IEE WIRING REGULATIONS) AND PART “P” OF THE BUILDING REGULATIONS.

WARNING!

DO NOT FIT THE RECEIVER TO A BACK PLATE THAT IS LIVE.

SWITCH OFF MAINS BEFORE FITTING BACK PLATE AS LIVE AND NEUTRAL CONTACTS MAY TOUCH WHILE MOUNTING RECEIVER ON PLATE AND DAMAGE THE PRODUCT.

What is a room thermostat?...

An explanation for householders

A room thermostat simply switches the heating system on and off based on room temperature. 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 the 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 house insulation quality is a key factor in heating control.

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 until you are comfortable with the temperature (20°C is the usual preferred set point). 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 building regulations Part L require houses above a certain size to have more than 1 heating zone).

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. Also keep out of direct sunlight.

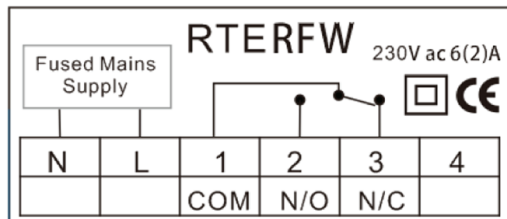
N.B!! Some thermostats can be used for cooling as well as heating (SPDT).

What is a Wireless Room Thermostat?

In some cases of refurbishment or retrofit it is not possible to fit fully wired room stats, as to do so could cause damage to wall etc. In this case a wireless room thermostat and receiver should be used.

Wireless thermostats simply make contact with their wired accessories (receiver) by use of radio signals. Once the receiver receives a command it opens up the electrical circuit to the boiler, depending on clock programme settings.

Receiver Wiring Diagram



N.B!! For mains voltage operated systems, link the live supply from the mains to terminal 1 (COM) if no clock being used.

If clock/timer is being used connect the clock/timer 'ON' output to terminal 1 (COM).

1, 2, and 3 are volt free contacts.

N.B!! N and L must have permanent and independent power supply. If the receiver has interrupted power supply it will experience delays in matching with thermostat (transmitter) when powered up again.

Changing Batteries

It is recommended to change the batteries every 12 months to ensure the efficient working of the wireless roomstat. Once batteries are removed they should be replaced as quickly as possible (usually within 1 minute) to avoid loss of contact with the receiver. Should this happen refer to commissioning instructions on P.9.

Receiver Manual Override

It is possible to operate the receiver manually.

This may be necessary where, for example, the batteries in the Thermostat (Transmitter) are depleted and the heating, therefore, cannot turn on or turn off.

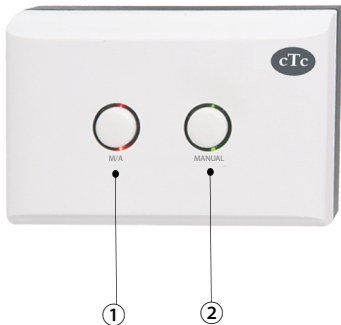
To engage manual override press the MANUAL button ② on the receiver, (see page 8), which will light up with a green background.

Then after 2-3 seconds press the M/A button ①, which may be ON (red background) or OFF, in order to manually override the status of the receiver. If on the heating will turn off (M/A red light goes off). If off, the heating will turn on (M/A red light comes on).

NB!! It is important to remember that the automatic control of the receiver is now off and that the receiver will only respond to manual operations.

To return to automatic mode press M/A button ①, with or without red light on, and then press MANUAL button ②.

The receiver should now be back in automatic mode, receiving commands from the thermostat.



What is chronoproportional control (TPI)?...

A chrono-proportional (or TPI) room thermostat makes boilers operate more efficiently and provide close accurate control.

Chrono-proportional control is a load compensator as it ensures that the boiler 'on' time is reduced to a minimum and matches the boiler heat output with the heat loss. This reduces the net temperature of the return water to the boiler. This is due to the TPI (Time Proportional and Integral) advanced energy saving feature. Rather than just a simple ON/OFF control, like other domestic room thermostats, room thermostats with TPI increases boiler efficiency by firing the boiler at regular intervals, adjusting firing duration with demand, to maintain set room temperatures, giving them a great advantage over other domestic room thermostats and achieving a constant ambient environment for the user: E.G. if a property only has a simple mechanical thermostat installed, then the energy saving benefits of a replacement high efficiency condensing boiler will not be realised as the boiler will rarely be running in condensing mode.

Heating and hot water can account for over 80% of total household energy usage. Chrono-proportional (TPI) thermostats can provide great cost savings. It can be used on any boiler, with underfloor and radiator systems, zoned heating and electric heating systems. The use of an electronic thermostat with chrono-proportional capability provides closer temperature control plus possible reductions of 10% in both fuel cost and carbon emissions.

This thermostat has the option of standard setting or TPI. It can also be set up to operate in cooling mode. (A/C)

Technical Data

THERMOSTAT	
Temperature Setting Range	5°C to 30°C (41°F to 86°F) (in 1°C increments)
Temperature Measurement Accuracy	±0.5°C
Switch Type	RF Signal, Electronic
Power Consumption	0.09mW
Battery Voltage	2 x AA/1.5V Alkaline (LR6) Batteries
Battery Lifetime	1-2 years Depending on Switching Activity
Operating Frequency	868.35MHz. +/- 200KHZ
Dimension	L85mm x H85mm x D35mm
Weight	110g
RECEIVER	
Fixing	Standard Industry Back Plate
Power Supply Voltage	230V AC. 5Hz
Power Consumption	6W
Switchable Voltage	Volt Free Contacts
Switchable Current	6A (2A inductive load)
Transmission Distance	Approx. 30m in open terrain
Dimension	L135mm x H90mm x D33mm
Weight	163g
Complies with	EN60730-1, EN60730-2.7, EMC Directive 2004/108/EC, LVD Directive 2006/95/EC

Commissioning

The receiver and thermostat are supplied as a kit. The units have been paired during manufacturing, so normally no pairing is needed. However, in the unlikely event that the Receiver and thermostat are not paired, follow the instructions below:

1. Power up the receiver, press M/A button (Manual/Auto) ① button for approximately 10 seconds until the MANUAL light ② begins to flash.
2. Power up the transmitter and remove the dial, press the black button for 3 seconds.
3. When the light on the receiver stops flashing the two units should be paired. If this fails to pair the devices, carry out 1 and 2 above again.

WARNING:

Interference with sealed parts renders the guarantee void.

Receiver Image

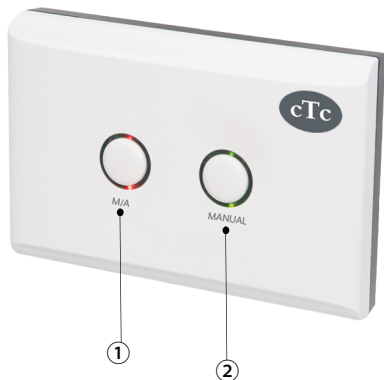


Figure 3 (Facade)

Thermostat/ Transmitter Images



Figure 1 (Facade)

Mounting The Receiver

1. Loosen the screws on the back-plate and remove from the Unit.
2. Fix the back-plate, terminals at the top, either direct onto a flat wall using wall plugs and screws or on a flush mounting single conduit box.
Route the wires through the back of the wall plate and fit the wires to the wall-plate in accordance with the relevant diagram shown page 11, and in accordance with I.E.E. regulations.
3. Fit the Unit onto back-plate, and tighten the screws.
4. Ensure an appropriate fuse is fitted to the circuit before reconnecting to the mains supply.

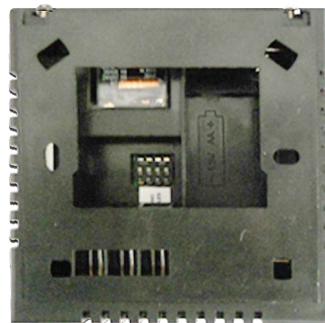


Figure 2 (Rear)

Mounting The Thermostat

1. Loosen the screws on the back-plate and remove from the thermostat.
2. Fix the back-plate, cursor at the top, either directly onto a flat wall using wall plugs and screws. Install the supplied AA 1.5 Volt batteries into the battery compartment at the rear of the unit.
3. Select personal options by referring to Dip switch (See P.7)
4. Fit the thermostat onto back-plate, and tighten the screws.

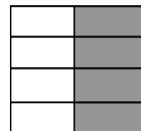
Positioning the Thermostat



Fix at a height of approximately 1.5m from the floor, away from draughts or heat sources (including direct sunlight)

DIP Switch Settings (Heating)

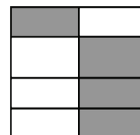
COOL
CHRONO OFF
6 CYCLES
°F



HEAT
CHRONO ON
3 CYCLES
°C

DIP Switch Settings (Cooling)

COOL
COMP DELAY OFF
4 MINS
°F



HEAT
COMP DELAY ON
2 MINS
°C

Heating Mode

Option to switch to

1. Chronoproportional (Chrono).
2. 3 or 6 Cycles (Chrono on, only).
3. Fahrenheit or Celsius setting.

Cooling Mode

Option to switch to

1. Compressor (Comp) delay on or off.
2. 2 or 4 mins delay. Comp delay on, only.
3. Fahrenheit or Celsius setting.

Setting The Temperature

To set the temperature, turn the dial until the desired temperature is shown in the LCD display. The LCD display will flash the desired temperature for (approximately) 5 seconds before returning to display the current room temperature.