

Programa*stat*

Battery Powered Electronic Programmable Room Thermostat

Cat. No. TRT035



Operating & Installation Instructions



A **theben** Group Company

What is a programmable room thermostat?

... an explanation for householders

A programmable room thermostat is both a programmer and a room thermostat. A programmer allows you to set 'On' and 'Off' time periods to suit your own lifestyle. A room thermostat 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.

So, a programmable room thermostat lets you choose what times you want the heating to be on, and what temperature it should reach while it is on. It will allow you to select different temperatures in your home at different times of the day (and days of the week) to meet your particular needs.

Turning a programmable 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 programmable room thermostat to a lower setting will result in the room being controlled at a lower temperature, and saves energy.

The way to set and use your programmable room thermostat is to find the lowest temperature settings that you are comfortable with at the different times you have chosen, and then leave it alone to do its job. The best way to do this is to set low temperatures first,

say 18°C, and then turn them up by one degree each day until you are comfortable with the temperatures. You won't have to adjust the thermostat further. Any adjustments above these settings will waste energy and cost you more money.

If your heating system is a boiler with radiators, there will usually be only one programmable 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 overheating in other rooms by adjusting the TRVs.

The time on the programmer must be correct. Some types have to be adjusted in spring and autumn at the changes between Greenwich Mean Time and British Summer Time.

You may be able to temporarily adjust the heating programme, for example, 'Override', 'Advance' or 'Boost'. These are explained in the manufacturer's instructions.

Programmable 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.



Certification mark

1. Introduction

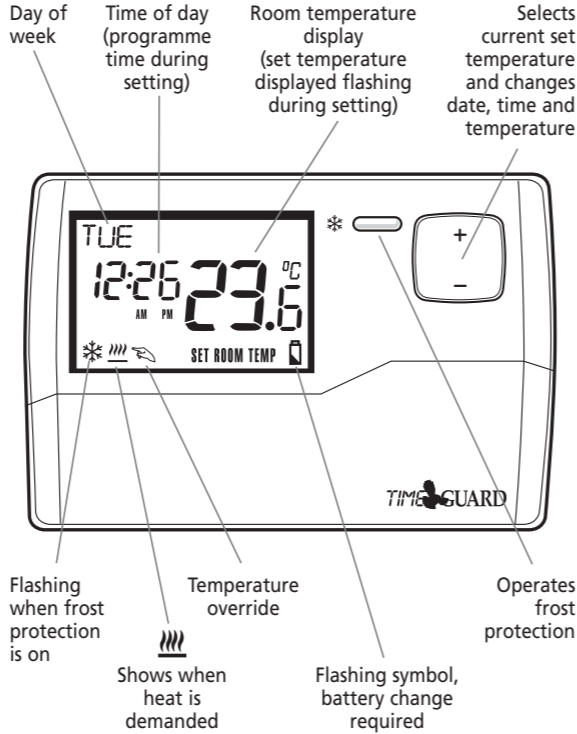
TRT products are a cost effective comprehensive range of thermostats and timers designed for internal use only.

The TRT035 is a battery powered electronic programmable room thermostat, with 6 different temperature periods per day, automatic summer/winter time changeover, weekday/weekend (5-2) or individual day (7) programming and a frost mode. It has optimum start turning on earlier for colder mornings and adjustable span (difference between on and off switching temperatures), from 1°C to 0.5°C.

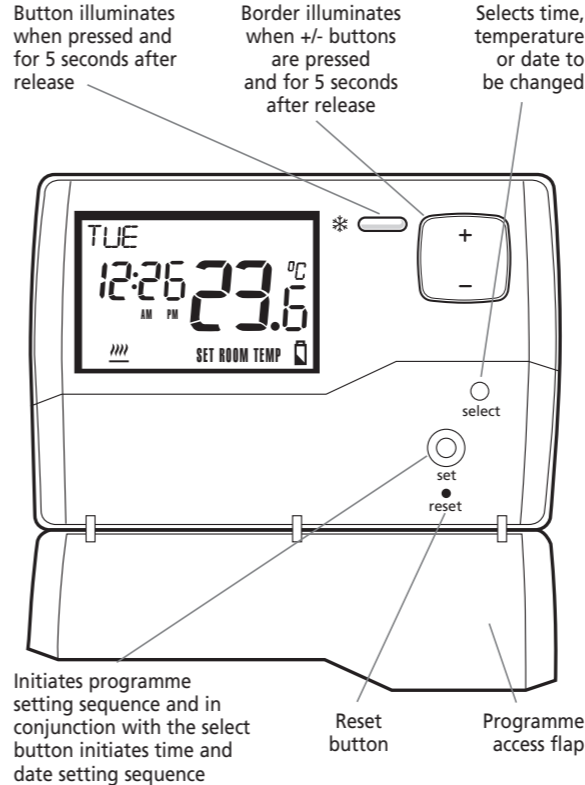
It is designed to be surface mounted on the wall plate supplied.

The electrical supply **must** be isolated before removing the thermostat from the wall plate.

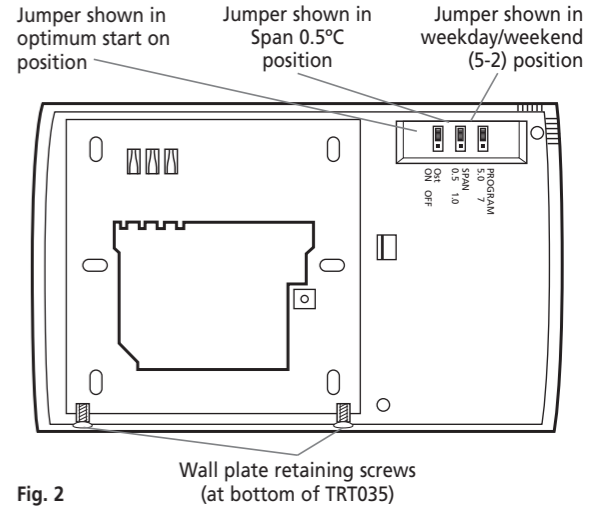
TRT035 Electronic Thermostat



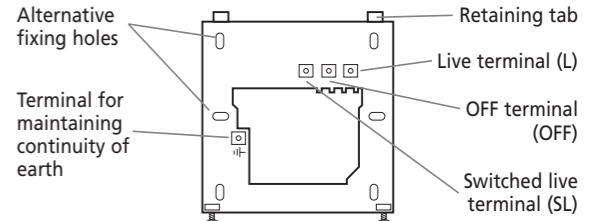
TRT035 Electronic Thermostat



Rear View of TRT035



Back Plate Removed



Mount the wall plate in this configuration only

Battery Holder Removal

Lever battery holder outwards using a large flat bladed screwdriver (shown) or a large coin.

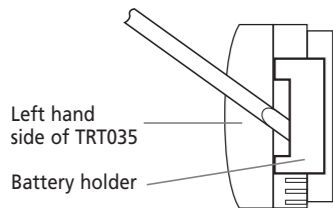


Fig. 4

Contents

TRT035 thermostat	2 x wall plugs
TRT035 wall plate	2 x screws
TRT035 instruction leaflet	2 x AA batteries

2. Siting

The TRT035 must be sited where it would not be influenced by heat sources, for example, above a radiator or television or refrigerator/freezer, or in direct sunlight or subject to draughts. The product requires air circulation, so do not position above or below shelving or other wall mounted obstacles.

It should be mounted approximately 1.5m above floor level.

3. Installation

This product must be installed in accordance with the appropriate building and wiring regulations.

In all cases if there is a doubt as to how to proceed with an installation consult a qualified electrician, your local authority's building control department or the Timeguard helpline (020 8450 0515).

The TRT035 is designed to be surface mounted on the supplied wall plate.

Always isolate the mains supply before removing the unit from its wall plate.

Lever the battery holder out using a large flat blade screwdriver or large coin (see Fig. 4) and then pull out fully.

Insert the 2 x AA alkaline batteries supplied into the battery holder maintaining the correct polarity as shown in the base of the battery holder.

Push the battery holder back into place until it clicks shut.

Isolate 230VAC mains supply.

Incoming and outgoing wires should be 1.5mm sq.

Remove wall plate from unit, by undoing retaining screws (see Fig. 2), and pivoting the bottom of the wall plate outwards. The TRT035 can then be lifted off.

Thread the incoming wires through the hole in the wall plate, and fix wall plate securely to the wall, using screws (and wall plugs if necessary) provided. The screws which secure the TRT033 to the wall plate should point downwards.

Allow sufficient excess cable to wire up the unit, but not too much to make it difficult to close the unit onto the wall plate.

Connect the conductors to the relevant terminal, according to the wiring diagram below. Ensure that the curved brass washers grip the conductors.

Wiring Diagram

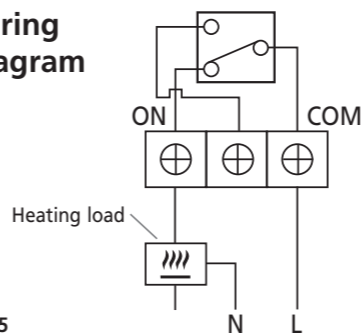


Fig. 5

This unit is double insulated, and hence does not need connection to earth. If earth continuity is required, please use earth terminal on wall plate, (see Fig. 3).

To reinstall the unit on the wall plate first ensure the wall plate retaining screws are loosened enough to clear the TRT035 body then engage the top of the TRT035 onto the wall plate retaining tabs (see Fig. 3), and push firmly downwards and then inwards. There will be some resistance from the terminals. Once in place, secure with the retaining screws.

Restore mains to the unit after checking all system wiring is complete.

4. Operation

Decide whether weekday/weekend (5-2) or individual (7) day programming is required and move the appropriate jumper on the rear of the product.

The temperature span (difference between on and off temperatures) can be adjusted between 1°C and 0.5°C using a jumper found on the rear of the unit.

Optimum start (switching on earlier on colder mornings) can also be turned on or off using a jumper on the rear of the unit.

It is important to make these decisions first, as after any change of jumper position, reset needs to be pressed, which will return the unit to default time and programme.

Pressing any button illuminates the screen automatically.

During time/date and programme setting if a button is not pressed within 15 seconds the display will revert to the start of the sequence.

Setting date and time of day

Open programme access flap and press reset, using a pen or similar object. All of the screen segments will show briefly, and then the current room temperature will be displayed.

To programme the date and time of day, open programme access flap, and simultaneously press and hold both the select and set buttons for 3 seconds. The year will flash.

Use the + and - button to set the correct year. Press select to move on to programming the month (shown to the left), and then again to programme the day. Press select again to programme the hours (am/pm), and again to programme the minutes (each time using the +/- button to make the change). Press set to return to operating mode.

If at any time a button is not pressed for 15 seconds, the unit will return to operating mode.

Programming temperature periods for 7 days option

Notes

1) There are no off periods with this controller. The programming sequence is:-

Start time, temperature, second start time, second temperature and so on. Setting temperature to 10°C is as close to off as can be achieved (and for most situations will be off unless the weather is very cold).

2) If you do not want a higher temperature period in the middle of the day adjust the temperature for this period downward to match those of the preceding and subsequent period temperatures.

3) The TRT035 comes with a factory installed (default) programme for both 5-2 and 7 day options which you use or modify as you wish. Just pressing the reset button brings this programme into operation.

The default programme for every day is as follows:-

6:00 AM	21°C
8:00 AM	17°C
12:00 PM	21°C
2:00 PM	17°C
4:00 PM	21°C
10:00 PM	17°C

For both 5-2 and 7 day options.

To programme the temperature periods, press the set button. Mon will flash. To programme Mondays time/temperature periods press select button. Alternatively use the + and - buttons to change the day, and then select to continue. The time will then flash. This is the start time for the first period. Press + or - to set the hour for the start time for period 1. Press select to move to the minutes. Use the + and - to set the minutes. Press select to set the temperature for this period. Use the + or - keys to set the desired temperature. Press select again to programme the next time period. There are 6 time periods per day.

Once the 6 periods for Monday are programmed, Press set button, and Monday will start to flash. Use the + and - button to change the day to Tuesday, and then use select to program Tuesdays time periods and temperatures. For 7 day programming, this will need to be done for all 7 days. If set is pressed twice, the unit will return to operating mode.

Omitting Days

Omitting a day can be achieved by selecting 10°C for every time period for that day (all times and temperatures must be entered). The heating will not turn on unless the room temperature falls below 10°C (50°F).


Programming temperature periods for 5-2 days option

For 5-2 day mode, time periods and temperatures will need to be programmed for M-F and then for S-S. ie: only 2 sets of times need to be programmed, not 7 (individual) sets of times.

Temperature override

In operating mode, the temperature set for the current period can be overridden. To adjust the set temperature, press the + or - button once.

The screen will illuminate blue while button is pressed. Use + and - buttons to set desired temperature. If the + or - button is held down, the display will advance rapidly. Once the desired temperature is set, the unit should revert to displaying the current room temperature 5 seconds after the last button press. The illumination will also turn off after 5 seconds. In manual mode, there will be a hand symbol displayed on the screen. The new temperature will remain valid until the next programmed period starts.


A burner symbol  is displayed when temperature is below desired value, indicating that the thermostat is calling for heat from the boiler.

Review set temperature


The set temperature can be reviewed at any time, by a single press of the + or - button. 5 seconds after this single button push, the unit will show the current room temperature, and the screen illumination will turn off.

Frost protection

Frost protection reduces the set temperature to 5°C. Frost protection is activated by holding down the frost protection button for 3 seconds.

When in frost mode, the frost symbol  will flash on the display. The set temperature buttons remain non-functional during frost mode. The unit will remain in frost mode until the frost button is held down for a further 3 seconds.

Battery replacement

When the battery needs replacing, a battery symbol  will flash on the display.

Sleep mode

The unit can be put into sleep mode by simultaneously holding down the + and - buttons for 3 seconds. Pressing any button will exit sleep mode. In sleep mode, all outputs are suspended and the screen is blank (useful for longer periods when the house is unoccupied and frost protection is not required).

To clean use a dry cloth only. Do not use any liquid cleaners.

5. Specifications

Current rating:	3(1)A
Voltage:	230V, 50Hz
Switch type:	Single pole, change-over (SPCO)
Operating temperature range:	0°C to 50°C
Set temperature range:	10°C to 30°C adjustable in 0.5°C steps
Complies with:	BS EN 60730
Conforms to directives:	73-23-EEC, 89-336-EEC
Span:	1°C or 0.5°C
Micro disconnection:	Type 1.B control action
Batteries:	2 x AA alkaline

For assistance with the product please contact:-

HELPLINE

020-8450-0515

or email helpline@timeguard.com



3 Year Guarantee

In the unlikely event of this product becoming faulty due to defective material or manufacture within 3 years of the date of purchase, please return it to your supplier in the first year with proof of purchase and it will be replaced free of charge. For years 2 and 3 or any difficulty in the first year telephone the helpline on **020 8450 0515**.

For a product brochure please contact:

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or email csc@timeguard.com

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