

THERMOWATT

Website: www.thermowatt.com / Contact: thermowattservice@thermowatt.com /
Technical Instruction Sheet: <https://www.thermowatt.com/en/products/water-heating-elements/immersion-heater-with-stem-thermostat.html>

Smart Immersion Heater with Dual Safety Electronic Thermostat

INSTALLATION AND OPERATING INSTRUCTIONS

This immersion heater is approved to **EN 60335-2-73 BEAB**

WARNING – THIS UNIT MUST NOT BE MODIFIED IN ANY WAY. BEAB approval is dependent upon the fitting of the appropriate Bipolar Dual Safety Thermostat.

INSTALLATION

1. Check your mains power voltage matches the voltage rating indicated on the label of the plastic terminal cover.
2. The immersion heater must be fixed to the cylinder using the gasket/'O'ring provided. Please ensure that the unit is not over tightened into the tank boss. Silicon lubricant on the gasket is recommended.

WARNING – This heater should only be installed in systems where the element is always below THE water level, such as a cistern fed OR UNVENTED CYLINDER. ENSURE there is water in the CYLINDER before the immersion heater is first switched on. If the heater is allowed to run when the water level is not fully covering the heating element there may be serious damage incurred to the heater, property or persons.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

THERMOSTAT INFORMATION

The immersion heater is supplied with a T-MEC 2 Electronic Smart thermostat as defined by ErP regulation. To maintain safety, any thermostat replacement must be of the same type.

RECOMMENDATION: low water temperature is recommended to reduce limescale (CaCO_3) deposit (not lower than 60°C).

The thermostat in this unit is dual pole therefore it disconnects both supply conductors (live and neutral) by a single initiating action. It has a safety resettable cut out mechanism which prevents excessive temperatures. In case the normal sensing device fails, the over temperature safety device will act to limit the excess water temperature.

To reset the thermostat after an intervention of the safety device:

1. Switch off the heater by isolating the power supply
2. Allow the water in the cylinder to cool down sufficiently
3. Remove the cover and press the button on the top of the thermostat.

Note: This cut out is a safety device, if this is found to be operating frequently then we recommend to consult a qualified electrician to investigate the nature of the problem as the thermostat may need to be replaced. It may be helpful to lower the thermostat setting to avoid unnecessary cut offs.

Knob setting position:

The Thermowatt TMEC-2 Electronic Thermostat has 5 operating modes, and is supplied set to the maximum control temperature of 70°C. To select the alternative modes the adjustment knob is turned anticlockwise, until the slot in the adjustment knob is in line with the required mode:

ECO – Smart mode Factory Setting – This setting gives maximum energy efficiency and uses smart technology to learn the user's habits to control water temperature to suit demand. During the first week the thermostat will run at 70°C whilst recording hot water usage, then the following and each subsequent week it adjusts automatically to give the most efficient use of electricity. In the event of any power loss the thermostat will lose all recorded data, and will restart learning mode. Antibacterial mode will function. **NOTE:** Changing thermostat setting from the factory pre-set position may impact upon the efficiency rating of the cylinder in which it is fitted.




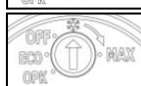
OPK – Basic Electronic Thermostat mode – With the control knob turned on this position the thermostat will control water temperature to maximum 60°C and is unaffected by any interruption of power supply. Use this position for manual switching or by timer such as economy 7/10 type installations. Antibacterial mode will function. Some Smart meter supplied installations may require this setting.



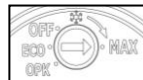
OFF – In this mode the thermostat will not operate, only the double pole safety cut out will function. Antibacterial mode will NOT function.



 **Antifreeze mode –** This setting will maintain a minimum water temperature of 20°C to prevent the cylinder heater from freezing. Antibacterial mode will function. This setting may be preferred for holiday periods.



MAX – Maximum temperature in Manual Mode – With the control knob turned clockwise to the MAX setting the thermostat will control water temperature to a maximum of 70°C. The water temperature can be adjusted to a lower setting by turning the adjustment knob anticlockwise up to 80° where the lowest setting is approximately 10°C. Antibacterial mode will function.



CHOICE OF THE CORRECT HEATER

Copper Immersion Heaters are designed for Copper cylinder only and for operation in areas of soft and neutral water conditions or where a water softener is in use. Alloy 800 Immersion Heaters are recommended in areas of Soft to hard water conditions.

Titanium is suitable for hard and aggressive water conditions.

If a copper element is fitted in an area of hard water and fails due to the calcification, then the guarantee will become void.

It is important to choose an immersion heater with the proper length, to obtain the maximum efficiency in terms of hot water production.

We recommend the following heaters:

- Heaters 14" and below are for Horizontal fitting (side entry)
- Heaters 18" and above are for Vertical fitting (top entry)

Before fitting please ensure that the unit is not too long and does not interfere with the inside surface of the tank. It is recommended that there is a minimum of 15mm between the end of the element and the inside of the tank.

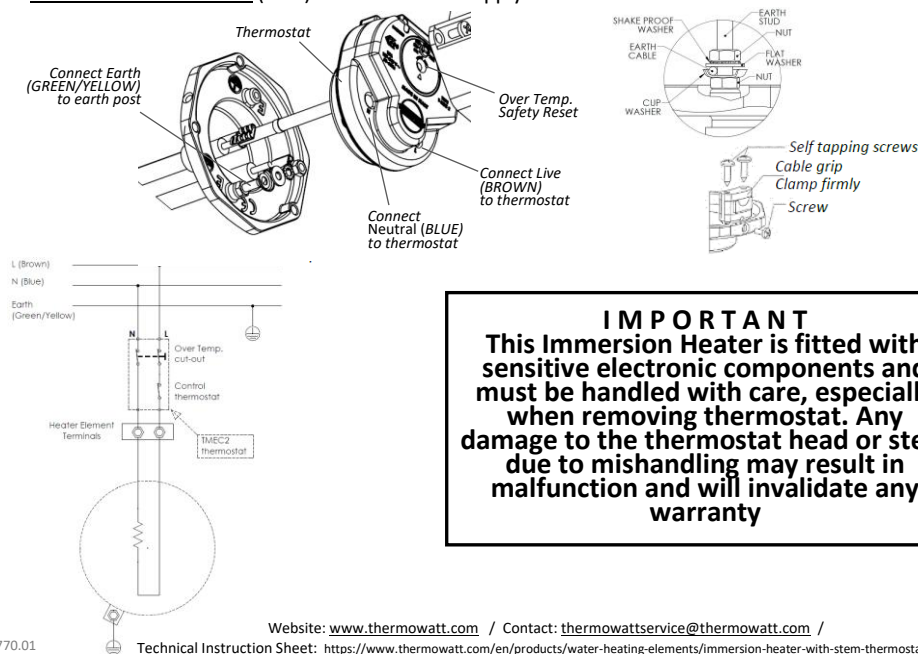
ELECTRICAL CONNECTIONS

1. This unit should be connected by a suitably qualified electrician in accordance with the latest I.E.E. regulations.
2. Ensure the electrical supply is switched off before making any connection to the unit.
3. The immersion heater must be wired through a double pole isolating switch with contact separation of at least 3mm in both poles.
4. The immersion heater must be wired with a heat resistant flexible cord with a minimum T rating of "T-80" and with a minimum cross-section area of 1.5mm².
5. Ensure that the terminal screws are not over tightened as this could result in the terminations being broken off.

WARNING: THIS DEVICE MUST BE EARTHED

WIRING:

1. **Earth connection** (green & yellow) should be made firmly to the earth post (marked "E") using the terminals attachments provided.
2. **The Live Supply** (brown) from the mains supply cable to the thermostat terminal marked "L"
3. **The Neutral connection** (blue) from the mains supply cable to the thermostat terminal marked "N"



IMPORTANT
This Immersion Heater is fitted with sensitive electronic components and must be handled with care, especially when removing thermostat. Any damage to the thermostat head or stem due to mishandling may result in malfunction and will invalidate any warranty

