

Thank you for purchasing a BN Thermic product. Manufactured to a high standard, this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



IMPORTANT: PLEASE READ THESE INSTRUCTIONS, NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

1. SAFETY INSTRUCTIONS

1.1 ELECTRICAL SAFETY

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. A Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. If in any doubt consult a qualified electrician.

You must also read and understand the following instructions concerning electrical safety.

- The Health & Safety at Work Act 1974 makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. If in any doubt about electrical safety, contact a qualified electrician.
- Installation should always be carried out by a qualified electrician or a competent person in accordance with current electrical regulations.
- The Timer must not be used as an isolator and a separate isolator must be provided between the fuse board and the Timer.
- If using on Parasols the isolator connected to this Timer **MUST** be turned off and the heaters allowed to cool before closing the parasol. We also recommend using a padlock on the isolator once off to stop accidental turning on of the power whilst the parasol is closed.
- This Timer is IP65 rated and is suitable for indoor or outdoor use.
- Suitably rated cable glands must be used to maintain the IP65 rating.
- Important: Ensure that the voltage marked on the Timer matches the power supply to be used.
- The unit should be protected by a suitably rated isolator and type C (also known as type 3) MCB.

1.2 GENERAL SAFETY INSTRUCTIONS

- ✓ Remove all packaging and store it away from children, check the package and controller for visible damage or tampering.
- ✓ Familiarise yourself with the applications and limitations of the Timer.
- ✓ Isolate from mains before removing the cover to adjust the time on setting.
- ✓ **Do not use this Timer to control a contactor or electric motor.**

2. INTRODUCTION & SPECIFICATION

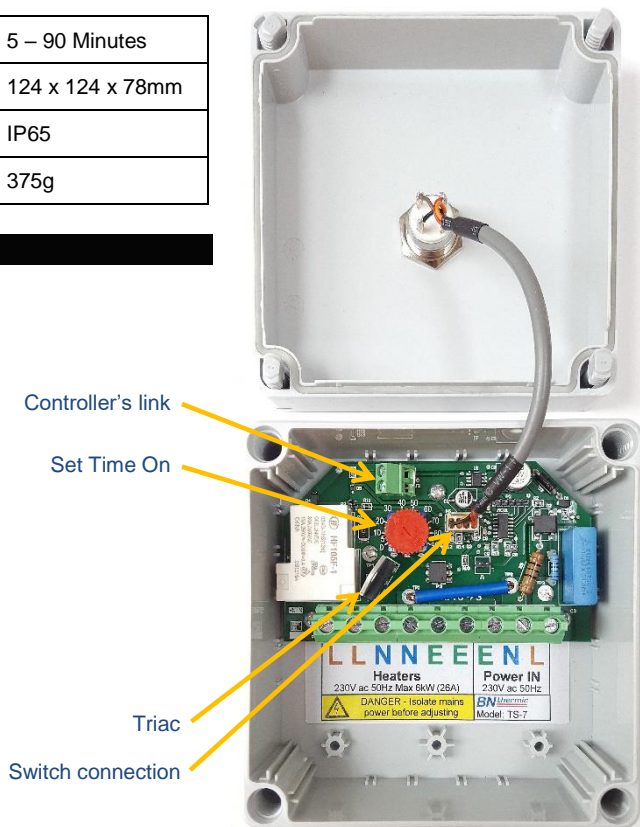
The TS-7 soft start electronic waterproof timer is designed to save energy by switching off the heater automatically when the area is unoccupied. "Soft starting" incorporated in the timer, prolongs the life of your infrared lamps it also reduces the stress on the mains supply and false tripping of MCB's due to inrush currents. This product needs a minimum total load of 250W to operate and it cannot be used to switch loads below this.

The timer must NOT be used as a safe way of isolating heaters from the mains supply and additional isolation must be used. If mounted on collapsible parasols ensure you isolate the power supply going to the timer and allow the heaters to cool before folding up the parasol.

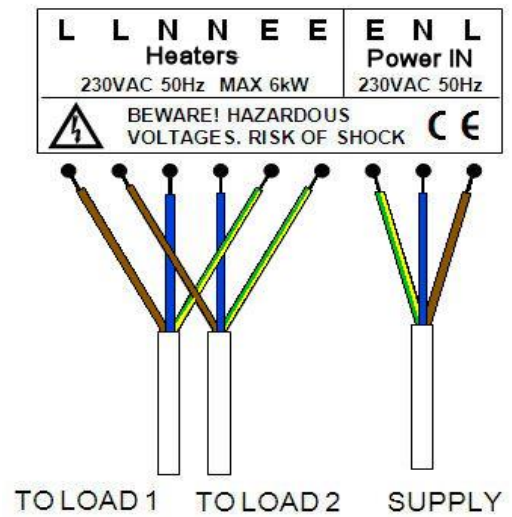
Model: -	TS-7	Time On Delay: -	5 – 90 Minutes
Power: -	6000W	Dimensions (W x H x D): -	124 x 124 x 78mm
Input supply: -	230V AC 50Hz 26A	IP Rating: -	IP65
Minimum Power Rating: -	250W	Weight: -	375g

3. MOUNTING / ELECTRICAL CONNECTIONS

1. Remove front cover by undoing four corner screws. Remove lid with care as there is a flexible cable link between the switch and circuit board.
2. Do not hang the lid by the flexible cable. To remove the lid from the back box disconnect the plug from the circuit board by gently pulling the white plug towards you.
3. Use the 4 holes in the corners to attach the controller to a suitable surface as these will maintain the IP65 rating.
4. Drill box to accept cable glands. We supply 2 x M20 cable glands with each controller these require a 20mm hole to be drilled for them. If you have to drill additional holes remember to waterproof these holes or use suitable IP rated cable glands to maintain the IP65 waterproof rating.



5. Connect wiring as shown in diagram.
6. Do NOT use power tools to tighten up the terminal screws but ensure the screws are correctly tightened before replacing the lid.
7. Supply and output are 230V 50Hz and output is rated 6 kW maximum.
8. Adjust the time knob to give required on time.
Please note:- On this model minimum "ON" time is 5 minutes so if timer is turned fully down "ON" period will still be 5 minutes.
9. If flexible cable from lid needs re-connecting, ensure plug is the correct way around and push into the socket on the circuit board.
10. Fit cover securely ensuring flexible cable from lid does not sit on triac (metal topped component on printed circuit board in base) as this can get hot. (See picture on previous page)



4. OPERATION

To Turn on

Unit is activated by pressing the button in the centre of the front cover. The disc around the button will be illuminated while the heater is switched on.

The time on period can only be reset by re-pressing the button during the last minute of operation shown by the button flashing on and off.

The time period cannot be reset or increased at any other time during operation.

To Turn off

Unit can be turned off while operating by holding the switch in for 3 seconds.

Adjusting time "ON" – Only to be performed by qualified electrician

1. Isolate Timer from the mains supply.
2. Remove the front cover and rotate potentiometer to the required time.
3. Replace the front cover.

Warning - Do not remove cover unless the unit is completely isolated from the mains supply.

5. ADDING A 7 DAY TIME SWITCH OR / AND THERMOSTAT

You can add a 24 hour time switch, 7 day time switch and / or a thermostat to the soft start timer.

Typical use of thermostat could be to disable the heater from working if ambient temperature was above the set point.

7 day timer could be used to stop the heater being used "out of hours".

Warning: - If adding other controllers that will be positioned outside, please make sure they are suitably IP rated for their application.

Warning: - These added controllers **HAVE** to be zero-volt timers or thermostat (also known as volt free, meaning that the relays or switch inside the added controllers must not give out 230v). Please check in controller's instructions as you are not covered by the guarantee should you connect 230V to the soft start timer control circuit.

To connect the controllers, remove the link wire between the two internal green terminals (located just above the time "ON" set wheel). Add the controllers in series. There is only 5V DC on this link and no current.

Once the additional controllers are connected a complete circuit must be allowed for the soft start timers on/off switch to operate.

Please note that should the remote 7 day timer or thermostat send a "switch off" signal to the soft start timer while the heaters are energised, the soft start timer will continue to time down to zero but once the heaters go off they will not be able to restart until the remote 7 day timer or thermostat allow it.

6. SAFETY / FAULT CONDITIONS

There are two safety features built into the soft start timer.

- 1) If the front switch is held in when the mains power is turned on the timer goes into a safety fault function mode and will not operate. This mode is indicated by the indicator around the switch flashing on and off. Whilst the light is flashing the timer will not start. To reset this safety feature, turn the mains power off, release the on / off button and then turn the mains power on again.
- 2) If the timer is turned on and off 5 times in quick succession the light will start flashing and a time delay of 30 seconds will be applied until the timer can be turned on again. This should not occur with normal use but is built in to protect the PCB.



This product conforms to EU Directive 2002/96/EC.

This appliance bears the symbol of the crossed waste bin. This indicates that, at the end of its useful life, it must not be disposed of as domestic waste, but must be taken to a collection centre for waste electrical and electronic equipment. It is the user's responsibility to dispose of this appliance through the appropriate channels. Failure to do so may incur penalties established by laws governing waste disposal.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Your BN Thermic product is guaranteed for one year from date of purchase. We will repair or replace at our discretion any part found to be defective. We cannot assume any consequential liability. This guarantee in no way prejudices your rights under common law and is offered as an addition to consumer liability rights.

BN Thermic Ltd,
34 Stephenson Way,
Crawley, RH10 1TN
Tel: +44 (0) 1293 547361
Web: www.bnthermic.co.uk