

Introduction

The heater controller is part of a family of controllers designed to provide energy saving when used with Quartz Infrared Halogen Lamps. The heater controller has a built in PIR sensor allowing the lamps to automatically switch on only when people are present. In addition to the heater controller, a temperature sensor monitors the temperature and inhibits the lamps when the temperature exceeds a pre-determined set point of between 18°C and 24°C. The microcontroller-based system incorporates zero-voltage switching and a soft-start function to eliminate the lamps' initial high inrush current – potentially increasing lamp life by as much as 30%. The lamps are switched on for a fixed time period of 5 minutes. This period is reset each time the heater controller detects any further movement. Installation of the unit is simple and once installed is relatively maintenance-free.

Product Features

- Energy saving – only provides heat when people are present.
- Extends lamp Life.
- Temperature Sensor – lamps inhibited when ambient temperature exceeds set point.
- Soft-start/zero-voltage switch-off.
- Low-cost.
- Easy to install.

Applications: Under table, under desks.

Installation

Important: Read carefully the following information before installing the unit. The passive infrared sensor (PIR) fitted in this unit detects changes of infrared energy through the Fresnel lens on the front face of the unit. The detection area and range depend significantly on its mounting position.

The PIR not only detects movement of the human body, but also other heat sources similar to the human body. To prevent false activation, the unit must not be located directly facing or in close proximity to the heater lamps. Avoid locating the unit near to heating flues/exhausts, air conditioning units, moving trees/bushes and reflective surfaces.

Note: The BPIR4 cannot detect the presence of a human body that is not moving. To prevent malfunction of the BPIR4 sensor, avoid subjecting it to rapidly-changing temperatures, strong shock or vibration or high humidity and temperature.

Troubleshooting

Problem: Lamps do not switch on.

Solution:

- Check the LINE and LOAD wiring connections to the unit and ensure the mains supply is switched on.
- The ambient temperature may have exceeded the maximum temperature of 24°C.
- Check the lamps/Lamp fittings.
- Contact your supplier.

Problem: Lamps do not switch off.

Solution:

- Ensure nobody enters the detection area for 5 minutes. This will allow the 5 minute on-time to expire.
- The heater controller might be continually being re-triggered due to false activations. Mask the heater controller lens and wait 5 minutes. If the lamps switch off after 5 minutes, the heater controller is receiving false activations. See section '**Installation**'.
- Contact your supplier.

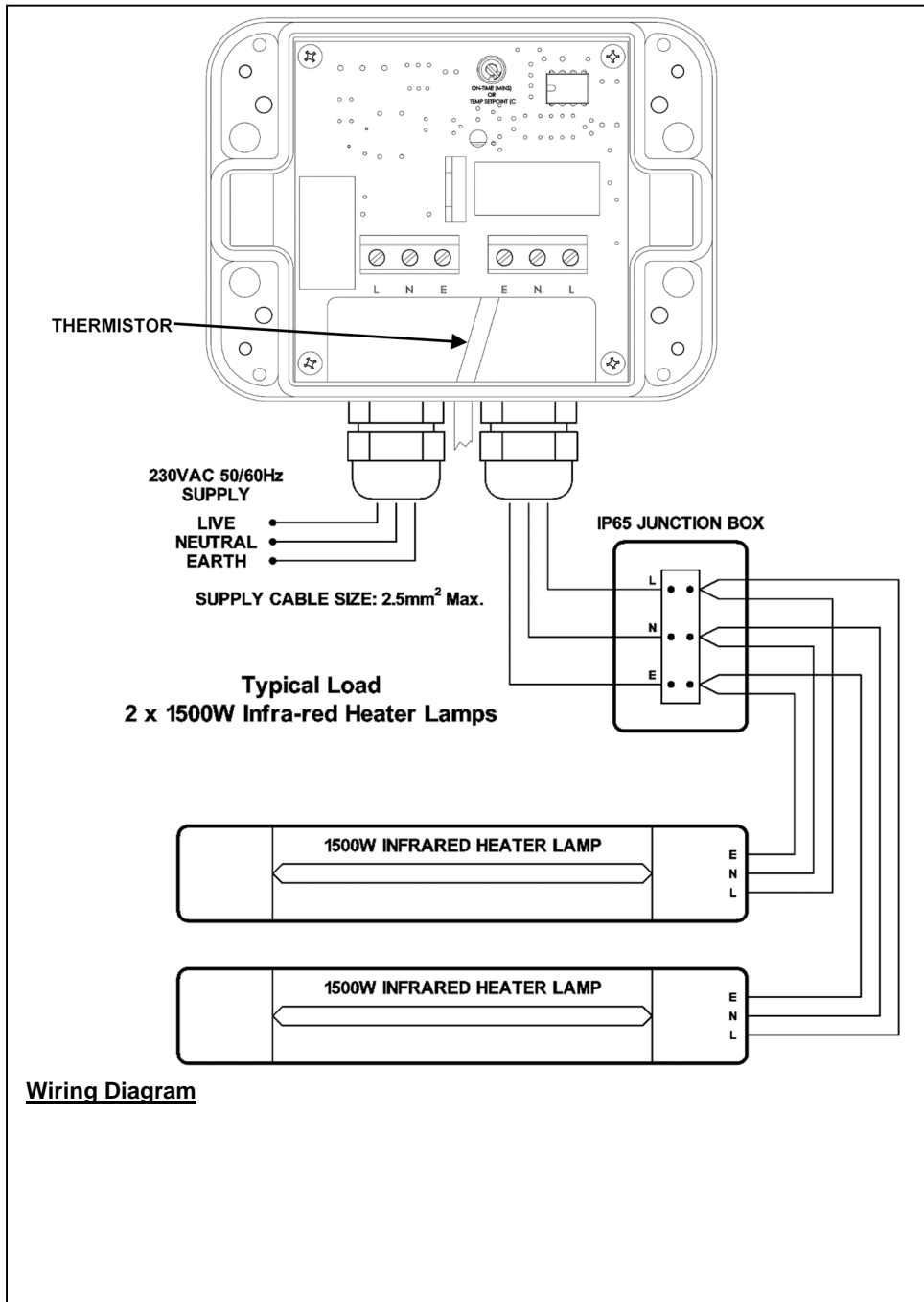
TECHNICAL SPECIFICATION

Supply Voltage	230VAC +/- 10% @ 50/60Hz
Switching Capacity	4kW Max.
Detection Range	5 metres
Tolerance	+/- 1°C
Settling Time	≤ 20 seconds
Detection Angle	100°
Temperature Set Point	18 to 24°C
Lamp On-Time	5 Minutes (fixed)
Current Consumption (control circuit)	50mA
Terminals	2.5mm² Rising Clamp
Operating Temperature	-20 to 40°C
Gland Diameter	Max Cable Entry 2.5mm²
Enclosure Dimensions (WxLxH)	100 x 112 x 55 (mm)

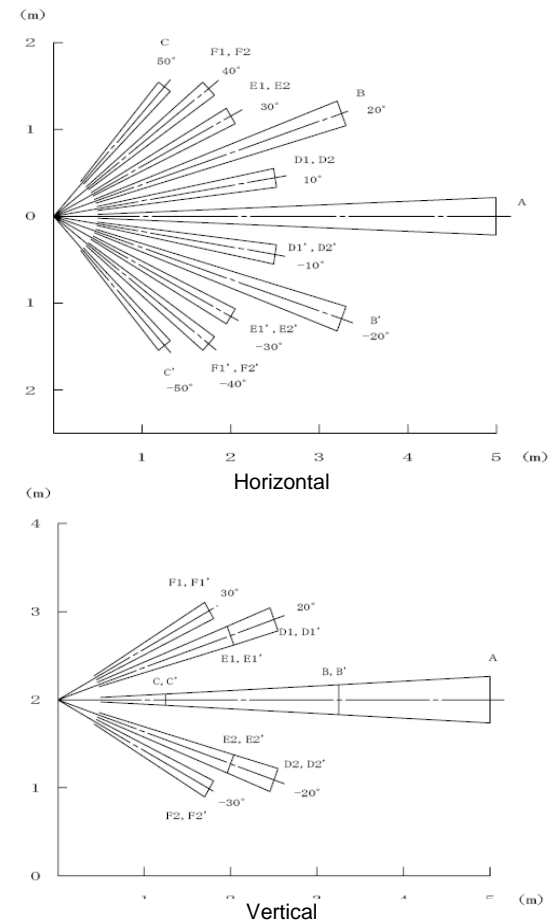


Not for general waste

ROHS
COMPLIANT



Heater Controller Detection Area

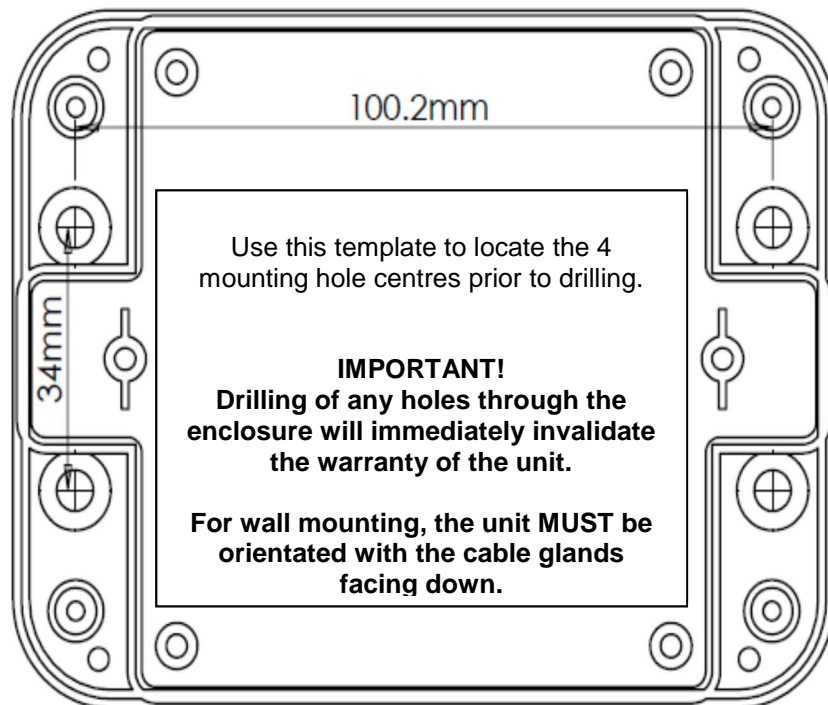


Positioning

The heater controller can be under desk mounted. The diagram above shows the heater controller's detection area. The unit should be fixed securely using the four mounting holes accessible from the front of the unit. Remove the lid to access the mounting holes. To ease installation, a mounting template is provided on the next page to locate the 4 mounting hole centres.

IMPORTANT! When mounting, the unit must be orientated with the cable glands facing down.

Mounting Template



Wiring

It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.E. wiring regulations (BS7671) by suitably qualified/trained personnel. These regulations contain important requirements regarding safety of electrical equipment (for International Standards refer to I.E.C/ directive IEC950).

Warning! Isolate the mains supply before commencing any work on the unit. Failure to do so could result in serious injury or fatality.

The unit is fitted with two cable glands. Only one cable should be fitted per gland to prevent degrading the unit's IP rating. See 'Wiring Diagram' on the next page for an alternative wiring configuration using a junction box.

The mains supply connects to the terminal block marked '**LINE**'. Connect the supply **LIVE** to the '**L**' terminal, **NEUTRAL** to the '**N**' terminal and **EARTH** to the '**E**' terminal.

The lamps connect to the terminal block marked '**LOAD**'. Connect the load **LIVE** to the '**L**' terminal, **NEUTRAL** to the '**N**' terminal and **EARTH** to the '**E**' terminal. If two lamps are to be fitted they must be wired in parallel.

Warning! Ensure all earth wires are connected to maintain earth continuity to the lamp fittings.

Check all wiring and make sure the cable glands are tightened.

Commissioning

- After 60 seconds, the detection area can be tested to verify the heaters coverage. Each time the heater detects sufficient movement, the lamps switch on for 5 minutes.

Note: Each time the lamps switch off, the heater controller is inhibited for 5 seconds to prevent changes in infrared energy, given off by the lamps, from causing a false activation.

Once the detection area has been verified, adjust the set point temperature as required by turning the control on the lid to select the temperature. The lamp on-time is fixed at 5 minutes.

Note: If the ambient temperature exceeds the set point temperature, the lamps are inhibited.



Heater Controller BPIR4T Users & Installation Manual



Subject to errors and technical changes!

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