

Infresco-P 4kW

The infresco-P 4kW is part of a family of controllers designed to provide energy saving when used with Quartz Infrared Halogen Lamps. The unit has a built in PIR sensor allowing the lamps to automatically switch on only when people are present. In addition to the PIR, a temperature sensor monitors the outside temperature and inhibits the lamps when the temperature exceeds a pre-determined set point of between 1 and 40 degrees Celsius.

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 PIR detects any further movement. Installation is simple and once installed is relatively maintenance free.

Product Features

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

Typical applications are Pub Patio areas, Smoking Shelters, Restaurants, Warehouses, Work shops. Garden Lighting

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.

To prevent malfunction of the PIR 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:

- 1) Check the LINE and LOAD wiring connections to the unit and ensure the mains supply is switched on.
- 2) The ambient temperature may have exceeded the current set point temperature.
If necessary, increase the set point temperature (VR1).
- 3) Check the lamps/Lamp fittings.

Problem: Lamps do not switch off.

Solution:

- 1) The PIR may be continually being re-triggered due to false activations. Mask the PIR lens to effectively inhibit the PIR. If the lamps switch off approximately 5 minutes, the PIR is receiving false activations. See section 'Installation' for information.



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INFRESCO-PT™

Users & Installation Manual for Infresco P 4kW

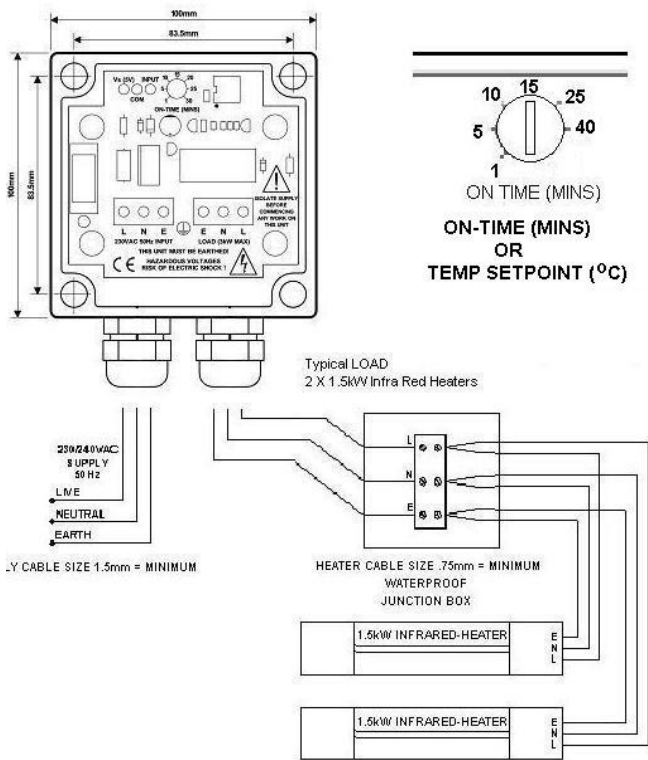


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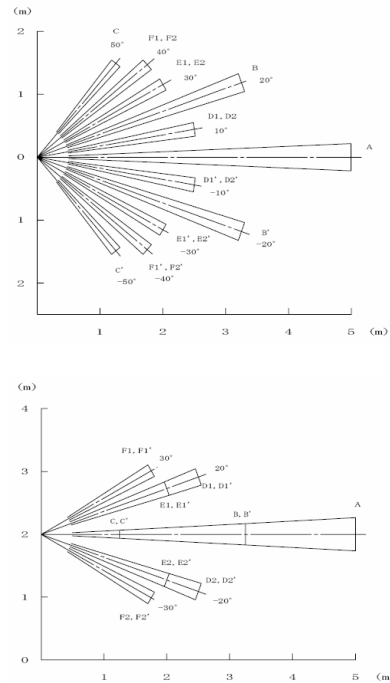
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WIRING OPTION



PIR DETECTION ZONE

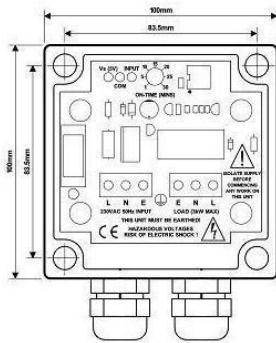


POSITIONING

The Infresco-P 4kW can be wall or ceiling-mounted. For wall-mounting, the unit should be positioned 2-3 metres high with the cable glands facing down. Refer to the PIR detection patterns shown in Figure 1 when deciding where to position the unit.

The unit should be fixed securely using the four mounting holes accessible from the front of the unit or by the alternative rear mounting holes underneath the PCB. For the latter option, remove the four screws securing the PCB and carefully remove the PCB to allow access to the rear mounting holes. Cover any holes used with caps supplied with this unit.

DIMENSIONS



COMMISSIONING

Turn the set point temperature preset (VR1) fully clockwise to select 'walk test' mode.

Switch on the mains supply to the unit. The controller waits 60 seconds to allow the PIR sensor to stabilise. The detection area can then be walk tested to verify the PIR's coverage. Each time the PIR detects sufficient movement, the lamps will switch on for 5 seconds.

Note: Each time the lamps switch off, the PIR 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 and range have been verified, adjust the set point temperature as required. This will automatically disable 'Walk test' mode.

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

Wiring

Warning! Ensure the mains supply has been isolated before wiring this unit.

The unit is fitted with two cable glands. Only one cable should be fitted per gland to maintain the unit's IP rating. See Wiring diagram for alternative wiring configuration using 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.

Important: Ensure all earth wires are connected to maintain earth continuity to the lamp fittings.

Connect the 3-way plug to the socket marked 'PIR SENSOR' (CN4).

Check all wiring - particularly the line and load connections and make sure the cable glands are tightened.

WARNING: THIS UNIT MUST BE EARTHED

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).

TECHNICAL SPECIFICATIONS

Mains Voltage	230Vac +/- 10% 50 Hz
Operation Current	Max 16.6A
Switching Capacity	4 kW Max
Power Consumption	50mA
Terminals	Rising Clamp
Detection Angle	100°
Detection Range	7 metres maximum
PIR Set Time Period	5 to 30 Minutes
Factory Set Temperature trip point	20°C
Max load at 20°C ambient	4.0 kW
Operating Temperature	-20 to 40°C
IP Rating	65
Gland Diameter (Fitted)	Max Cable Entry 2.5mm ²