X20022

Infrared Heating | Heater Controller

Infresco P 6kW Controller

6000W, 240v
Energy-Saving Heating and Lighting Solutions with PIR and Temperature Sensor

CONTACT US:
0044 (0) 1704-516 501
enquiries@united-automation.com
www.united-automation.com

KEY FEATURES:

- ✓ **Energy Saving:** Activates heating only when people are present.
- ✓ **Extended Lamp Life:** Reduces high inrush current for a longer lamp lifespan.
- ✓ **Temperature Sensor:** Inhibits lamps when temperatures exceed set thresholds.
- ✓ **High Capacity:** Controls up to 4 x 1500W lamps.
- ✓ **Soft-Start/Zero-Voltage Switch-Off:** Enhances efficiency and durability.
- ✓ **Cost-Effective:** Affordable and reliable.
- ✓ **Easy Installation:** Simple setup and low maintenance

APPLICATIONS:

- ➢ **Outdoor Heating:** Perfect for patios, terraces, and outdoor dining areas, ensuring comfortable warmth for guests.
- ➢ **Commercial Use:** Suitable for restaurants, hospitality areas, and other commercial spaces.
- ➢ **Industrial Environments:** Can be used in warehouses, workshops, and other industrial applications.
- ➢ **Smoking Shelters:** Provides controlled heating to maintain a comfortable environment for smoking areas.
- ➢ **Garden Lighting:** Enhances outdoor aesthetics with reliable lighting control.
- ➢ **Livery Stables:** Ideal for maintaining appropriate temperatures in stable environments.

The Infresco-P 6kW controller is a cutting-edge solution for enhancing energy efficiency in heating and lighting systems, especially when paired with quartz infrared halogen lamps. This advanced controller features a built-in PIR sensor, which activates the lamps only when people are present, ensuring optimal energy savings. Additionally, a temperature sensor inhibits lamp operation when ambient temperatures exceed a set point between 5°C and 25°C.

The microcontroller-based design incorporates zero-voltage switching and a soft-start function, eliminating high inrush currents and potentially extending lamp life by up to 30%. The lamps can be set to stay on for 1 to 60 minutes, with the timer resetting upon detecting further movement. Installation is straightforward, and the unit requires minimal maintenance.

TECHNICAL SPECIFICATIONS

Supply Voltage	230V AC ±10% @ 50/60Hz
Switching Capacity	6kW Max.
Detection Range	5 metres
Detection Angle	100°
Temperature Set Point	5 to 25°C
Lamp On-time	1 to 60 Minutes
Current Consumption (control circuit)	20mA
Terminals	6.0mm^2 Rising Clamp
Operating Temperature	-20°C to +40°C
Protection Rating	IP65
Gland Diameter	Max. Cable Entry 2.5mm^2
Enclosure Dimensions (W x L x H) (mm)	130 x 130 x 75

BMF House - Wight Moss Way,
Southport Business Park
Southport PR8 4HQ
ENGLAND

united automation unitedautomationltd UA_Limited

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 heating flues/exhausts, air conditioning units, moving trees/bushes and reflective surfaces.

Note: The PIR cannot detect the presence of a human body that is not moving.

To prevent malfunction of the PIR sensor, avoid subjecting it to rapidly-changing temperatures, strong shock or vibration or high humidity and temperature.

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.

Cable Connections

1. The unit is fitted with three cable glands. Only one cable should be fitted per gland to maintain the unit's IP rating.
2. To connect four lamps, refer to the **Wiring Diagram** on the next page for an alternative configuration using two junction boxes.

Mains Supply Connection

- Connect the mains supply to the terminal block marked **'LINE'**:
  - Connect the supply **LIVE** to the 'L' terminal.
  - Connect the supply **NEUTRAL** to the **'N'** terminal.
  - Connect the supply **EARTH** to the **'E'** terminal.

Lamp Connection

- Connect the lamps to the terminal block marked **'LOAD'**:
  - Connect the load **LIVE** to the **'L'** terminal.
  - Connect the load **NEUTRAL** to the **'N'** terminal.
  - Connect the load **EARTH** to the **'E'** terminal.

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

PIR Sensor Connection

1. Ensure the 3-way plug is connected to the socket marked ‘PIR SENSOR’ (CN4 or CN6).

Final Checks

1. Check all wiring connections thoroughly.
2. Ensure the cable glands are tightened to maintain the unit’s IP rating.

By following these instructions carefully, you can ensure the safe and efficient wiring of your unit.

Commissioning

Turn the lamp on-time preset (VR2) fully anti-clockwise to select ‘walk test’ mode (see diagram opposite).

Check the PIR sensitivity preset (VR3) is set to approximately the half-way position (default). The temperature set point preset (VR1) is ignored in ‘walk west’ mode – adjust this later.

Replace the lid and switch on the mains supply to the unit. The controller will remain idle for 60 seconds to allow the PIR sensor to stabilise. After 60 seconds, the detection area should be walk tested to verify the PIR’s coverage. Each time the PIR detects sufficient movement, the lamps switch on for 5 seconds.

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

Once the detection area has been verified, adjust the on-time preset to between 1 and 60 minutes. This will automatically disable ‘walk test’ mode.

Finally, adjust the temperature set point preset (VR1). When the ambient temperature (measured by the sensor) exceeds the set point, the lamps will remain off until the ambient temperature drops below the set point.

For example, if the set point is 20°C the lamps will switch on when movement is detected as long as the ambient temperature is less than 20°C.

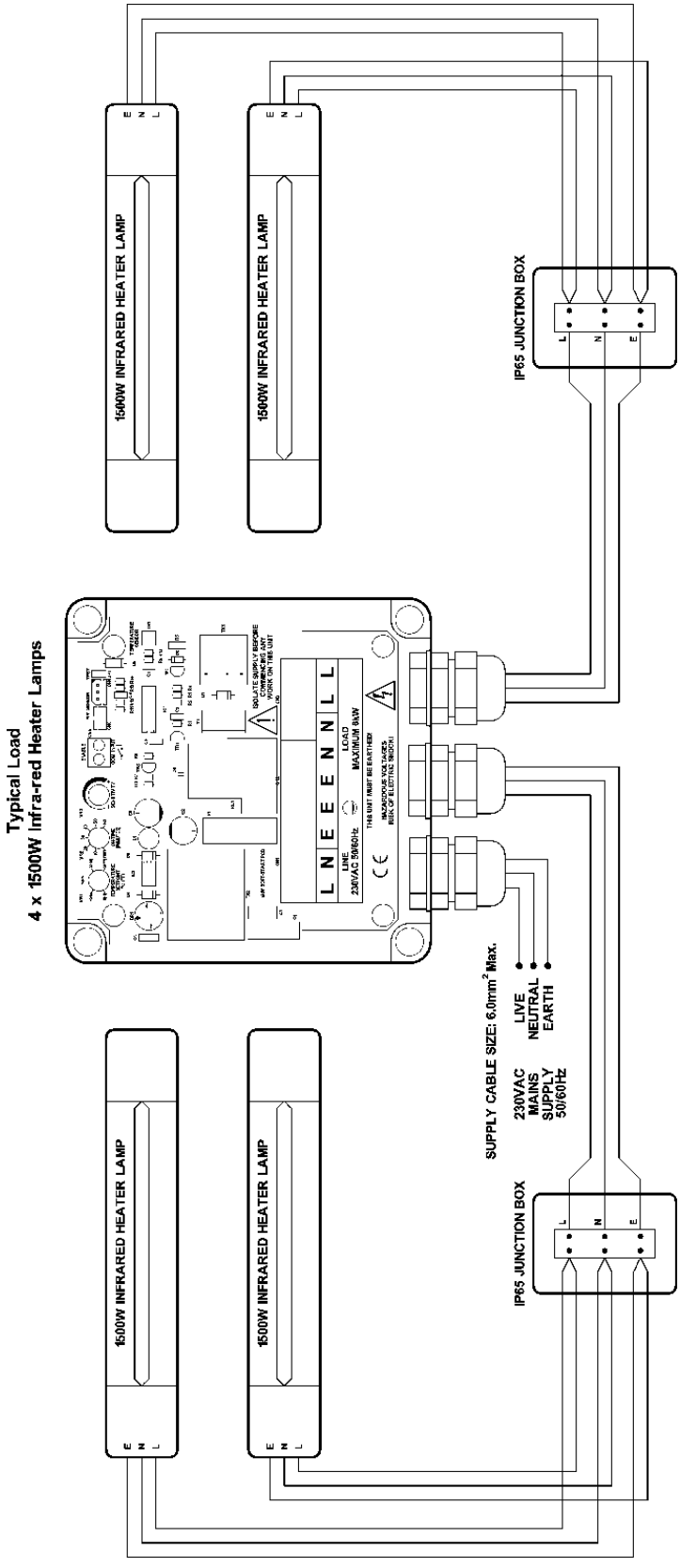
The PIR sensitivity preset can also be adjusted if necessary. Turning the preset clockwise increases the sensitivity.

Note: Increasing the PIR sensitivity may also increase the likelihood of false activations.

Infresco-P 6kW Controller

6000W, 240v | **Energy-Saving Heating and Lighting Solutions with PIR and Temperature Sensor**

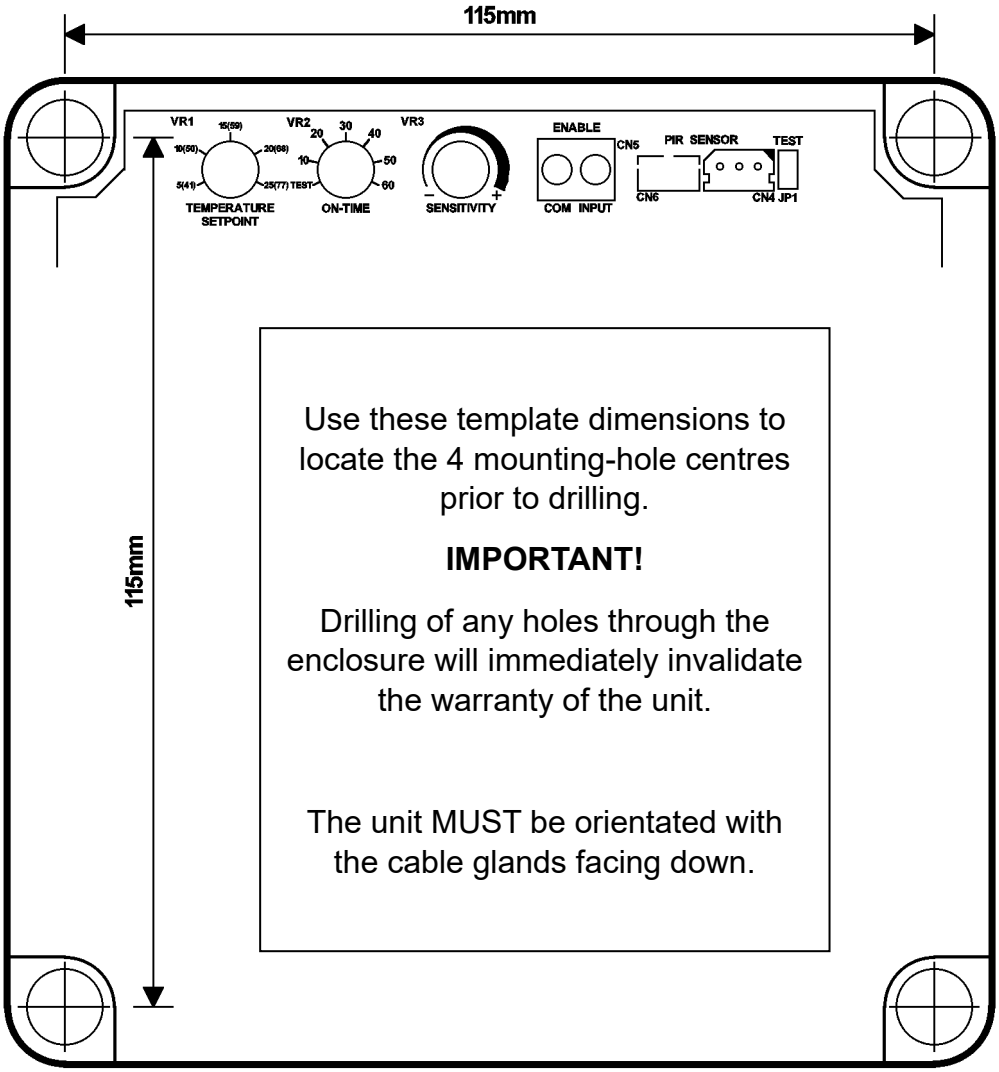
WIRING DIAGRAM



Infresco-P 6kW Controller

6000W, 240v | Energy-Saving Heating and Lighting Solutions with PIR and Temperature Sensor

MOUNTING TEMPLATE



PIR DETECTION AREA

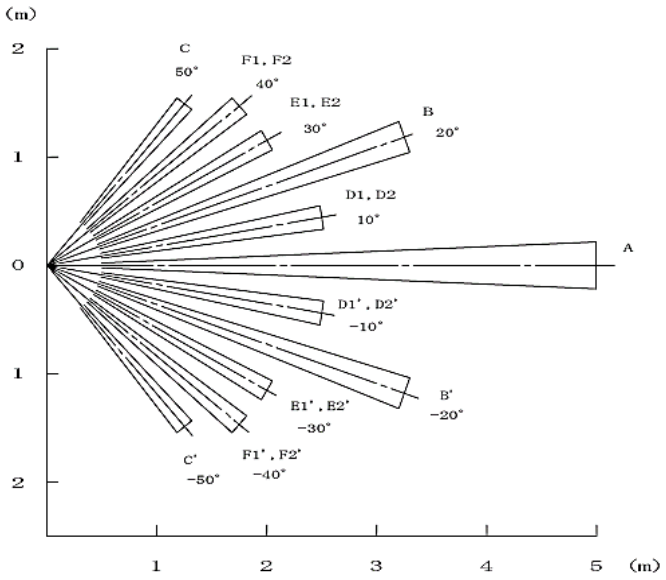


Figure 1: Horizontal Detection

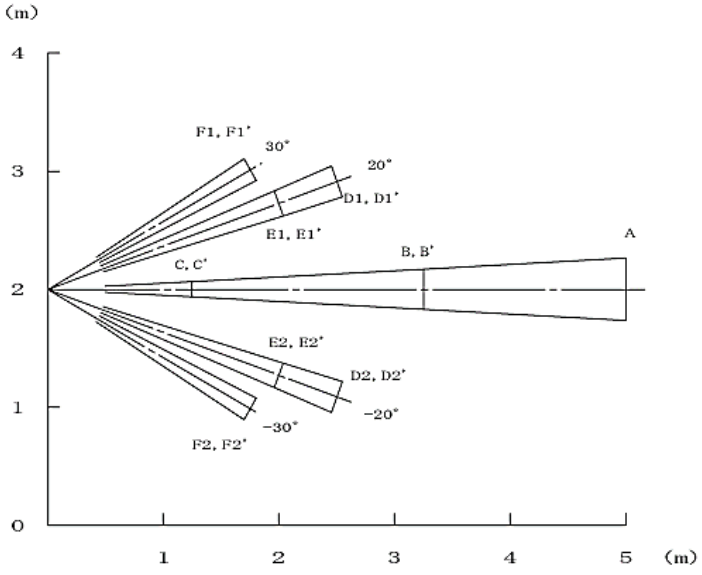


Figure 2: Vertical Detection

POSITIONING

The Infresco-P 4kW can be wall or ceiling-mounted. For wall mounting, the unit should be positioned 1-3 metres high. The diagram above shows the PIR'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 wall mounting, the unit must be orientated with the cable glands facing down.

TROUBLESHOOTING

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

Problem	Solution
Lamps do not switch ON	Check the mains supply to the unit is switched on.
	The ambient temperature may be higher than the set point temperature. Either increase the set point temperature (VR1) or, to test the lamps, put the unit into 'walk test' mode.
	Check the LINE and LOAD wiring connections to the unit and lamps. Fit a lamp that you know is in working order.
	Contact your supplier.
Lamps do not switch OFF	Check the on-time preset (VR2) is set correctly and ensure no movement occurs within the detection area. Allow the on-time to expire.
	The PIR may be receiving false activations. Either mask the PIR lens on the front of the unit or carefully unplug the 3-way PIR lead from the PCB inside the unit (CN4 or CN6) to disable the PIR. Allow the on-time to expire. If the lamps now switch off, the PIR is receiving false activations. See section 'Installation'.
	Contact your supplier.

RECOMMENDATION

DOCUMENTS

Code	Identity	Description
X10255	**SRA**	Safety requirements: Addressing the Low Voltage Directive (LVD) including Thermal data/Cooling, Live parts warning, Earthing requirements & Fusing recommendations
P01.1	**COS**	UAL Conditions of Sale

NOTE: It is recommended that installation and maintenance of this equipment should be carried out by suitably qualified personnel, with reference to the current edition of the I.E.E. Wiring Regulations BS7671. The regulations contain important requirements regarding the safety of electrical equipment.

OPTIONAL EXTRAS

Product Code	Product Description
A-HL-E72C-1	Wall Mounted Patio Heater 1.5kW (no remote)

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A86391	Infresco-P 6kW Energy-Saving Heating Controller with PIR and Temperature Sensor