Infresco X20029 Issue 5 6kW Variable Controller

Infresco X20029 Issue 5 6kW Variable Controller User Manual

Contents

Infresco

Infresco X20029 Issue 5 6kW Variable Controller

Product Information

Specifications:

- PIR Movement Sensor (optional)
- Operating Voltage Direction Detect
- Outdoor Temperature Sensor (optional)
- **Dimensions:** W=115mm, D=110mm, H=55mm
- **Maximum Rating:** 6kW

Introduction:
The INFRESCO controller is designed to provide complete control over outdoor heating areas, focusing on people's comfort and energy-saving. It is suitable for use with infrared heaters, such as garden heating and lighting, as well as applications with high in-rush current issues. An optional remote control handset for VR models allows for remote variable power adjustment and switch off.

Product Usage Instructions

Installation:
NOTE: Failure to comply with installation rules may invalidate the warranty. Avoid subjecting the PIR sensor to rapidly-changing temperatures, strong shock or vibration, or high humidity and temperature.

Display Features:
The PIR input is waiting to be enabled when there is no movement detected. The unit is in standby mode, and pressing the remote control power button toggles the power on and off. The transmitting status of the remote control can be checked by observing the decimal point flashing rapidly.

PIR Sensor Use (Guidelines):
Commissioning:

- **NOTE 1:** The PIR sensor takes 60 seconds to activate before detection can occur.

- **NOTE 2:** The PIR sensor will reset to the set time every time it detects movement. Test the expected detection area by walking and crossing in various directions to ensure coverage.

1. If the enable link (SIG IN / COM) is missing on initial switch ON, the unit will operate normally for 30 seconds before switching OFF.
2. If the enable link is removed while the unit is operating, it will continue for 5 minutes before switching OFF. If not replaced, the unit will operate as in case A upon re-applying power.

FAQ

- **Q: Can I use the INFRESCO controller with any type of infrared heater?**
  A: The INFRESCO controller is specifically designed to work with infrared heaters, ensuring compatibility and optimal performance.
- **Q: How do I know if the PIR sensor is functioning correctly?**
  A: You can test the PIR sensor by walking or moving within its detection range and observing if it triggers the desired actions on the controller.

Key Features

- Soft-Start – up to 30% extended lamp life.
- Variable Control – allows the user to find the perfect comfort level.
- Simple Installation – able to be connected directly with a 13A plug, up to a 3kW load.
- Energy Saving – automated system, only heating when required.
- Temperature Monitoring – if the ambient is above the pre-set temperature then the controller remains switched off.

Applications
Any application where high in-rush current is an issue or control is required. Typical uses are infrared heating lamps e.g. garden lighting.

Technical Specification

Main Voltage	230VAC ±10% @ 50Hz
Max Load at 20°C Ambient	6kW
Power Consumption	50mA
PIR Set Time Period	5 minutes
Temperature Set Point	5 – 25°C
Factory Set Temperature Trip Point	20°C
Gland Diameter	Max Cable Entry 2.5mm^2
2 Lamp Installation	Must be fitted in parallel
Ambient Operating Temperature	20°C – 30°C
IP Rating	IP65
Unit's Max. Operating Temperature	65°C
Dimensions	W=280mm D=200mm H80mm
PIR Movement Sensor (optional)	
Operating Voltage	12V DC
Direction	90°Adjustable
Detect	18 Metres
Outdoor Temperature Sensor (optional)	
Dimensions	W=115mm D=110mm H=55mm

Introduction

The INFRESCO controller has been designed to offer a complete control solution to your outdoor heating area with people comfort and energy saving being the focal points. It has been designed specifically to work with infrared heaters (e.g. garden heating and lighting), or any application where high in-rush current is an issue (e.g. using its soft start feature) with a maximum rating of up to 6kW.

The controller has ten variable incremental settings, allowing you to find the optimum comfort level in your specific area. With the optional energy saving features, once the controller is switched on and set, it will automatically manage the heating system. The optional temperature sensor monitors the ambient temperature only allowing the heaters to switch on once the temperature has dropped below the set point. An optional Passive InfraRed sensor (PIR) will detect the movement required for the heater to switch on but only when needed saving energy. With the addition of a 'soft-start' function which gradually switches the heater load on, which can add up to an additional 30% life to your heater lamp and making installation easier.
An optional remote control handset (for VR models) allows remote variable power adjustment and switch off.

Installation

The unit is designed to be wall mounted with the cable glands facing downwards. Fixing centres are provided to pre-drill mounting holes to suit. No additional holes should be drilled into the enclosure. It may be necessary to use ‘stand-off’ pillars to aid cooling – see SAFETY FIRST section. The PCB must not be removed from the heatsink/enclosure.
NOTE: Not complying with any of these rules may invalid warranty
To prevent malfunction of the PIR sensor, avoid subjecting it to rapidly-changing temperatures, strong shock or vibration or high humidity and temperature.

1. **Push button operation (see also INSTALLATION CIRCUIT section – Front panel)**

   To adjust the power output levels from power up:-

   - Sustained pressure on the ‘UP’ arrow will result in the power output stepping through the power levels from ‘0 to 9’ then ‘F’ (fully on).
   - Sustained pressure on the ‘DOWN’ arrow will result in the power output stepping through the power levels from ‘F’ to ‘0’ (zero).
   - A momentary press of the ‘UP’ arrow will result in the output going immediately to ‘F’ (fully on)
   - A momentary press of the ‘DOWN’ arrow will result in the output going immediately to ‘0’ (zero)

2. **Display Features**

   - Display shows ‘t’: The controller is turned off as the ambient temperature is above the trip level set by TEMP. SET.
   - Display shows ‘F’: The controller is set to full output.
   - Display ‘decimal point’ pulses: The PIR input is waiting to be enabled i.e. no movement.
   - If you are seeing this and DO NOT HAVE A PIR please ensure that the wire link is fitted between ‘sig in’ and ‘com’ at the PIR terminal
   - Display decimal point fully on: The unit is in standby mode. Pressing the remote control power button will toggle the power on and off.

     You can check to see if the remote control is transmitting by observing the decimal point flashing rapidly.

3. **PIR Sensor Use (Guidelines)**

   Commissioning (Only applicable if you are using a Temperature sensor or PIR when installing controller)

   NOTE 1: The PIR takes 60 seconds to activate before detection can occur.

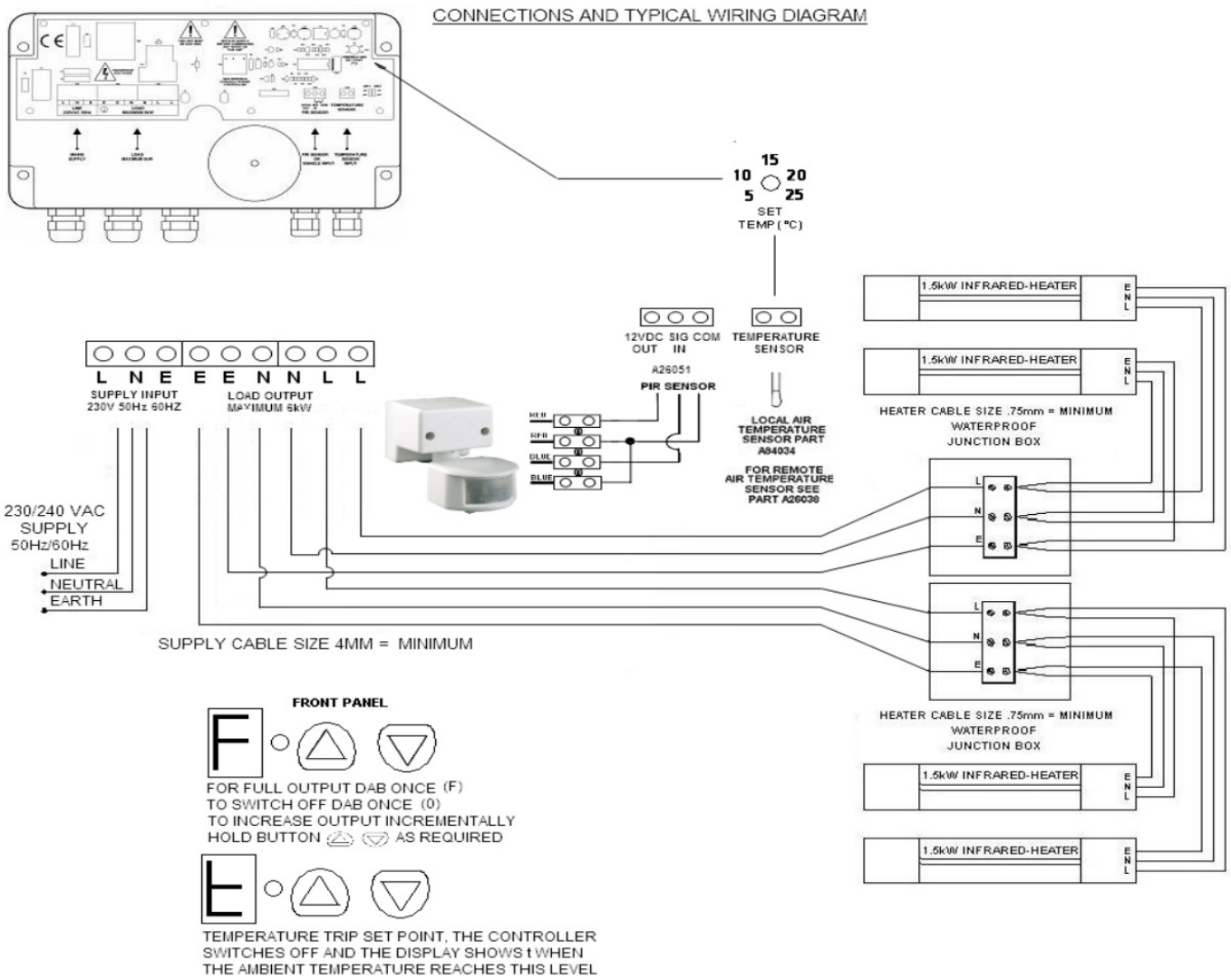
   NOTE 2: The PIR continues to monitor the area and will reset to the set time every time it detects movement.

   Before testing ensure the wiring is correct, the temperature trip point SET TEMP cermet is set to 20°C (default factory setting). The PIR time-on is fixed to 5 minutes (nonadjustable).

   The expected detection area can now be tested by walking, crossing in various directions to ensure coverage is as expected.

   - **A.** On initial switch ‘ON’ if the enable link (SIG IN / COM) is missing the unit will operate normally for a period of 30 seconds before the output switches ‘OFF’.
   - **B.** If the unit is operating and the enable link (SIG IN /COM) is removed the unit will continue to operate for 5 minutes before the output switches ‘OFF’. If the link is not replaced then on re-applying the power then the controller will operate as in ‘A’ above.

Installation Circuit



Recommendation & Safety Requirements

Supporting Datasheets for Products & Applications

Other documents, which may be appropriate for your applications, are available on request.

Code	Identity	Description
X10726	ILS	Local Temperature Sensor
X10727	IRS	Outdoor Temperature Sensor
X10728	PIR	12V PIR
X10729	VR-H	Remote Handset
X10213	ITA	Interaction: Uses for phase angle and for burst fire control.
X10255	SRA	Safety requirements: Addressing the Low Voltage Directive (LVD) including Thermal data/Cooling, Live parts warning, Earthing requirements & Fusing recommendations
X10378	ILR	Inductive loads remedy sheet for use with Phase angle controllers.
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, concerning the current edition of the I.E.T. Wiring Regulations BS7671. The regulations contain important requirements regarding the safety of electrical equipment.

WARNING

- It is important that the Infresco controller is not mounted directly to any flammable material i.e. wood.
- It is recommended that the heatsink be spaced off the mounting wall using pillars to aid in heat dissipation.

UNITED AUTOMATION LTD
Southport Business Park Tel: 0044 (0) 1704 – 516500
Wight Moss Way **enquiries@united-automation.com**
Southport, PR8 4HQ **www.united-automation.com**
ENGLAND unitedautomationltd UA_Limited

Documents / Resources

 Infresco 6kW Variable Controller User Manual X20029 Issue 5 united automation	**Infresco X20029 Issue 5 6kW Variable Controller** [pdf] User Manual X20029 Issue 5 6kW Variable Controller, X20029, Issue 5 6kW Variable Controller, Variable Controller

References

- **Automation.com - News & Resources for Industrial Automation**
- **User Manual**