

# AX-PPR3-150

150kW Three Phase Power Regulators

# AXIO



## Product overview

The AX-PPR3-150 Power Regulators provide continuously adjustable control of resistive electric heating loads from a BMS Controller or similar. Applications include electric heating coils, heating cables and electric furnaces. The AX-PPR3-150 uses solid-state switching with 'zero crossing technology' to minimize RFI and provide accurate switching control. The AX-PPR3-150 incorporates built-in cooling fans, and an over-temperature cut-out.

## Features

- 0-10Vdc Control Input
- 150kW Power rating
- No additional heatsinks required
- Integral Fans
- Over-temperature alarm output with auto reset
- Zero-crossing electronic switching

## Product specifications

Heater Duty:	150kW nominal. Resistive load only. Subject to a maximum current of 217 Amps per phase
Rated Supply:	380-440Vac, 50-60Hz
Control Input:	0-10Vdc (10K input impedance)
Fan and Control Supply:	220-255Vac, 50-60Hz
Dissipated Heat on full load:	735 Watts
Fuses:	3 x 250FM semiconductor fuses built in
Isolation	3600V
Terminals:	Input Power M8 Stud connections Load Power 6.5mm diameter hole Control signals Terminal blocks for 0.5-2.5mm <sup>2</sup> Cable
Over temperature cutout	Operates at 100°C. Normally closed. Switch up to 10 Amps at 230Vac
Ambient Temperature Range:	0-45°C
Dimensions:	400 x 240 x 198mm
Country of Origin:	United Kingdom

## Order codes

AX-PPR3-150 150kW Three Phase Power Controller

Order Online at:

[www.annicom.com](http://www.annicom.com)

Email orders and enquiries to:

[Sales@annicom.com](mailto:Sales@annicom.com)

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### Operation

The AX-PPR3-150 is designed to control electric heating loads in linear proportion to the incoming 0-10Vdc control signal. Control is by solid-state semiconductor devices which control the load using pulse width modulation (PWM) techniques. These devices feature “zero crossing point” switching of the AC load which minimise RFI emissions.

### Installation & configuration

The AX-PPR3-150 Power Regulators are designed for mounting on a vertical panel. It is important that free air movement around the unit is not restricted. Allow sufficient air space between adjacent units to allow optimum performance of the heatsink.

### Connections

Installation must be carried out by a suitably trained electrician, and in accordance with the relevant statutory regulations in place. These units **MUST** be earthed using the M6 stud provided. The load and supply terminals must be tightened sufficiently.

Dangerous voltages exist within the unit and particular care must be taken. The AX-PPR3-150 Power Regulators must be installed in accordance with the relevant statutory regulations and installation must be carried out by an experienced and fully qualified engineer.

As a minimum, a suitably rated MCB and contactor should be installed in the units supply. The coil of the contactor should be interlocked with a high limit thermostat installed in the heater battery and/or a fan proving switch (where fans are within the installation).

The heater can be connected as star or delta as required, provided the elements are rated for the appropriate connection.

### CAUTION!

In normal operation the heatsink surface can exceed 100°C.

### Load Supply and Back-up Protection

The AX-PPR3-50 Power Controllers feature internal quick acting semiconductor fuses to protect the switching devices. The Load Cables must be protected by external appropriate fuses or MCBs in the usual manner. Load cables must be sized such that they are rated in excess of the fuse ratings.

### Control Cables

Screened cable should be used for control input connections. Where possible the cable screen should be connected to a functional earth (not mains safety earth); normally the screen should be earthed at one end only to avoid earth loops.

### Cycle Time

The Cycle Time is preset. A 0-10Vdc Input Signal of 5V equates to the load being at 50% ON and likewise with an input of 2.5V the load will be 25% ON. A 10V input will equal 100% i.e. full ON.

### Ventilation

The AX-PPR3-150 are designed to operate in a maximum ambient temperature of 45°C. Which should not be exceeded. If necessary, enclosures or control panels should be ventilated with a cooling fan.

### Over Temperature Monitoring

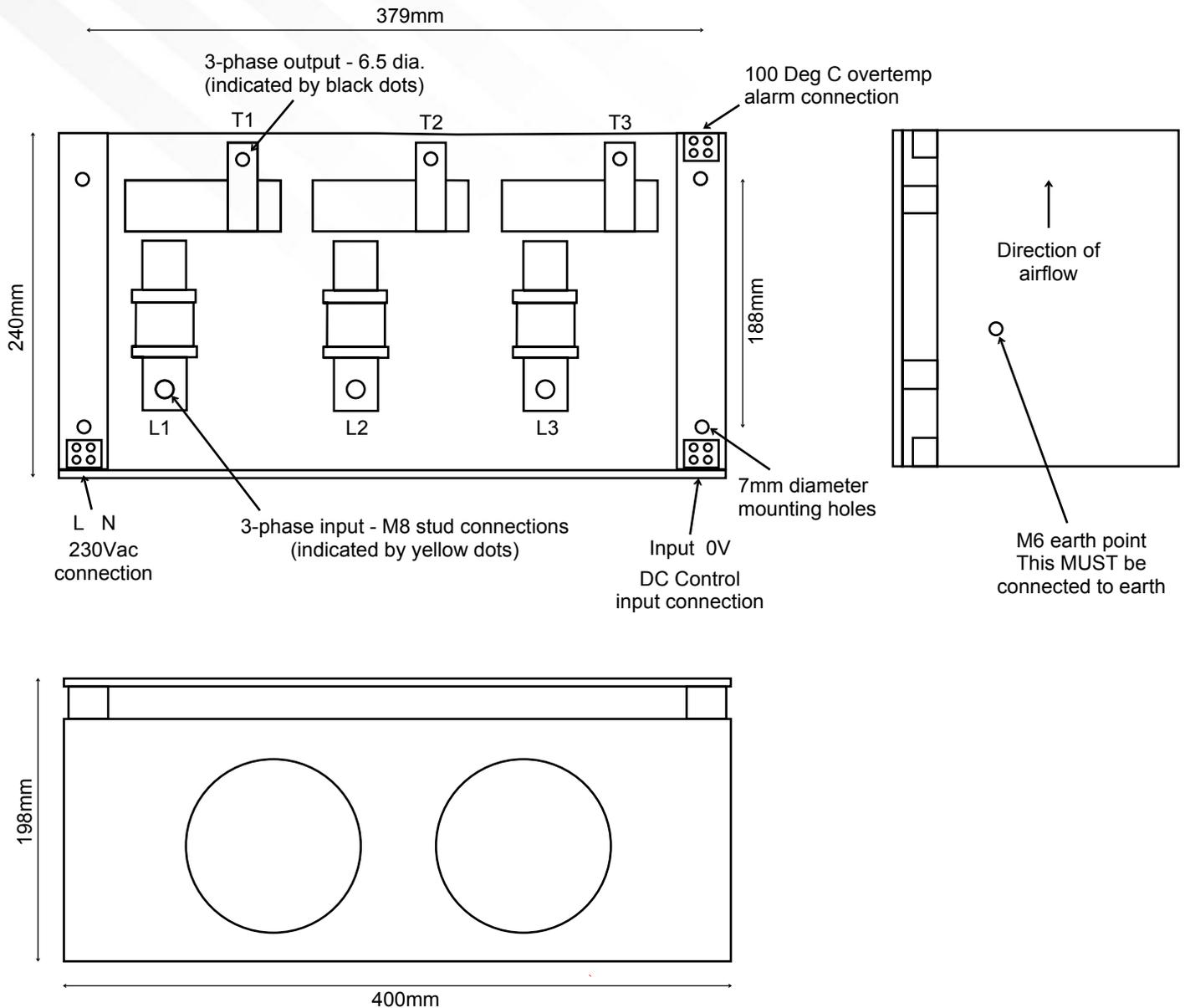
A thermostat is fitted to the unit to protect against over temperature. This will cut off the control in the event of too high an operating temperature. Additionally, if the temperature of the unit reaches 100°C, the independent over-temperature connection will go open-circuit. Both of these switches self reset when the unit has cooled sufficiently.

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## Dimensions and Connections



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