AX-MPR1-2-RL

2kW Single Phase Power Regulators with Raise/Lower Input

Product Overview

The AX-MPR1-2-RL DIN Rail Power Regulator operates from the output of a raise lower valve controller. The normal Raise/Lower (valve open/close) signal is converted to a pulse width modulated output for an electric heater. The AX-MPR1-2-RL is intended to operate with a variable time signal from fully closed to fully open; the output tracks the inputs in a linear fashion, automatically calibrating each time the minimum or maximum extremes are met. The output to the electric heater is controlled by solid-state switching with "zero crossing" technology to reduce RFI emissions and provide accurate switching control. The AX-MPR1-2-RL features LED indication of Output On.

Products Features

- 24Vac Raise/Lower input
- No additional heatsinks required
- Burst-fire control
- 230Vac input from load
- DIN rail (TS35) mounting
- LED indication

Product Specifications

Input:	24Vac Raise/Lower input
Power Supply:	230Vac (from load input)
Max Heater Duty:	2kW
Rated Load:	8.7Amps
Rated Supply:	220 - 255Vac / 50-60Hz
LED Indication:	ON when output is on
Dissipated Heat:	11Watts
Fusing:	10Amps
Terminals:	Rising clamp for 1.5mm^2 Stranded or 2.5mm^2 Solid Core cable
Ambient Temperature Range	0°C - 55°C Note: The units are rated at 40°C. If using at higher ambient temperature de-rate the units by 10% for every 5°C above 40°C
Over Temperature:	Load is disconnected when heatsink temperature exceeds 90˚C Load is reconnected when heatsink temperature falls below 85˚C
Dimensions & Weight	88 x 92.5 x 55mm, 300grams
Country of origin:	UK

Product Order Codes

AX-MPR1-2-RL	2kW Single Phase Power Regulator with Raise/Lower input

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Installation and Configuration

The AX-MPR1-2-RL Series Power Regulators mount on a TS35 Section DIN Rail and must be installed with their heatsink cooling fins in a vertical plane. Allow a minimum of 100mm between units mounted in a vertical plane.

Electrical Installation:

Installation must be carried out by a suitably trained electrician, and in accordance with the relevant statutory regulations.

Maximum Heating Load:

The power rating of the units are given as a guide. The maximum current (which is dependant on the actual supply voltage and heating load) as shown in the specification must not be exceeded.

Over Temperature Monitoring:

An electronic thermal cutout is fitted to the heatsink to protect against over temperature. The AX-MPR1-2-RL will switch off the load if the heatsink temperature exceeds approximately 90˚C and will reconnect the load once the heatsink temperature has dropped below 85˚C. Under normal operating conditions the heatsink temperature will not reach 90˚C but this might occur, for example, if the ambient temperature exceeds 40˚C.

Load Supply and Backup Protection

It is recommended that a load disconnect switch and a contactor or relay are installed in the load supply. The supply to the contactor or relay coil should be interrupted by an over temperature sensor in the heater. Fuses or Miniature Circuit Breakers are required to provide back up protection. A high speed “Semiconductor type” fuse will protect the solid-state switching device against a short circuited load.

For CE compliance, the AX-MPR1-2-RL must be housed in an auxiliary enclosure, with free air movement over the heatsink, and with a fused isolator.

Operation

The AX-MPR1-2-RL units control electric heating loads in linear proportion to a Raise/Lower control signal. Control is by a solid-state semiconductor device which controls the load using burst-fire control. These devices feature zero crossing point switching of the AC load which virtually eliminates RFI emissions.

CAUTION!

In normal operation the heatsink surface can exceed 90˚C. Dangerous voltages exist on the unit and particular care should be taken.

Ventilation:

The ambient temperature of the installation should not exceed 55˚C. If necessary, enclosures or control panels should be ventilated with a cooling fan. When using the AX-MPR1-2-RL running at full power, enclosures or control panels should provide forced cool air movement over the heatsink. See note in product specification for de-rating to be applied for ambient temperature above 40˚C.

Cycle Time Jumper Positions

(not applicable to the AX-MPR1-2-RL-S)

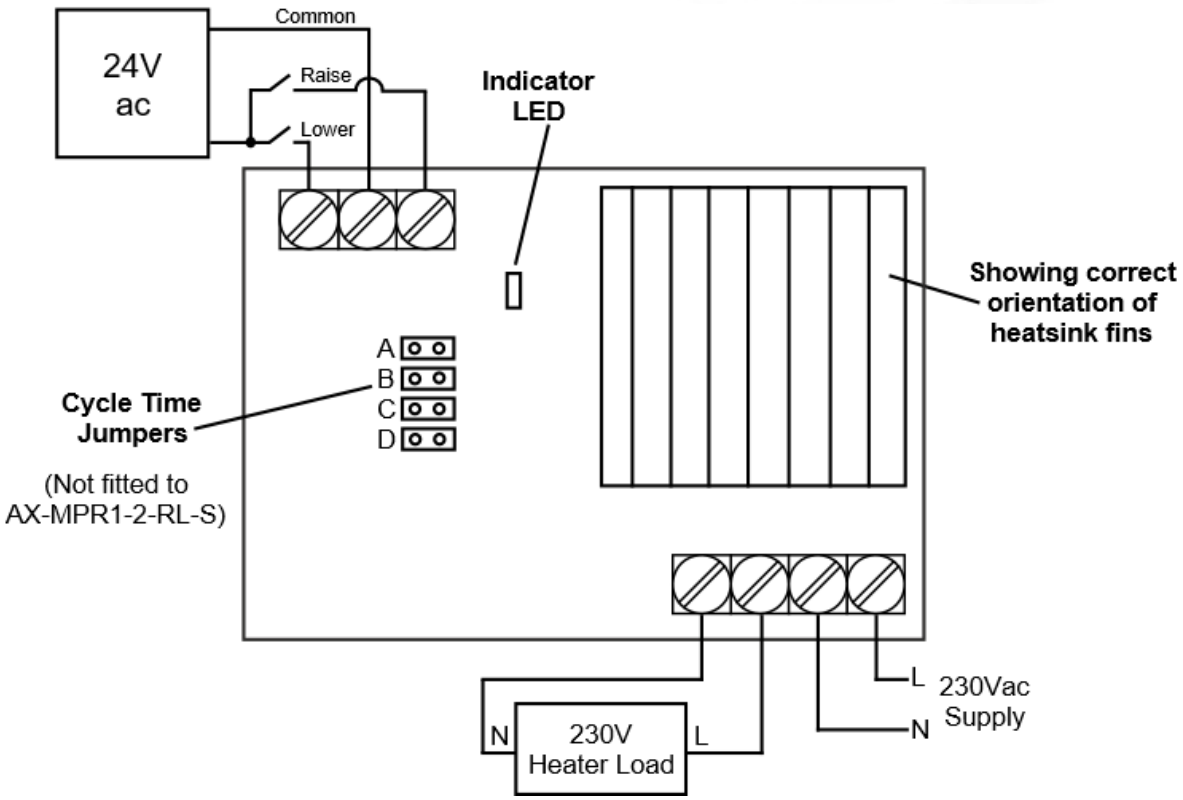
Cycle Time Jumper				Cycle Time
A	B	C	D	(Seconds)
0	0	0	0	30
0	0	0	X	35
0	0	X	0	60
0	0	X	X	70
0	X	0	0	80
0	X	0	X	90
0	X	X	0	95
0	X	X	X	100
X	0	0	0	105
X	0	0	X	120
X	0	X	0	125
X	0	X	X	140
X	X	0	0	150
X	X	0	X	180
X	X	X	0	200
X	X	X	X	300

X - Jumper fitted

0 - Jumper not fitted

Other cycle times available upon request

Connections



Datasheet Contents

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