

X10250 – Variable AC Regulator With RFI Suppression

Issue 7



1 Interaction/Introduction

These variable phase-angle power regulators are robust and compact units for controlling single-phase mains driven loads. They give a fully-adjustable voltage output from 0-98% and the large TRIAC enables the unit to handle high inrush currents with ample safety margin on industrial installations. These units incorporate their own RFI filter which will aid product compliance when correctly installed.

2 Applications

These would be suitable for most quartz lamps and conventional resistive-heating elements. They may be connected in series or parallel configurations. Applications include ovens, moulders, dryers, and some inductive loads (e.g., transformers and motors).

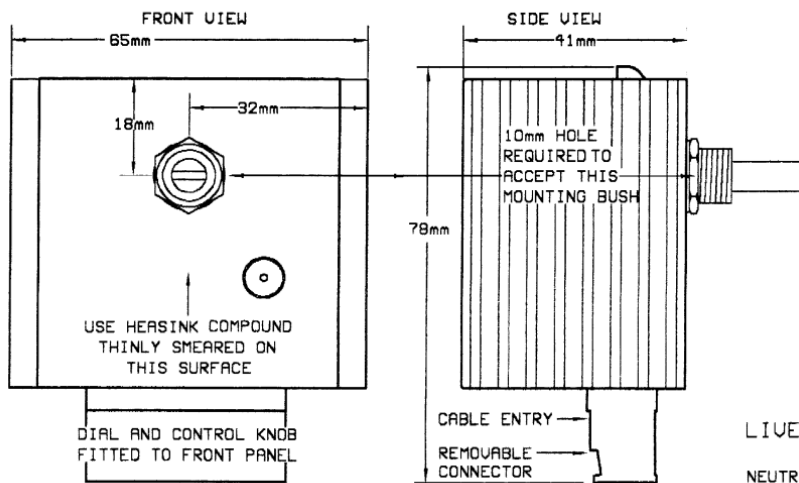
3 Features

- Integrated RFI network
- On/Off switched version (QVR/s)
- Plug-in power connector block
- Single-hole mounting
- Rugged and compact
- Designed to maximise thermal dissipation

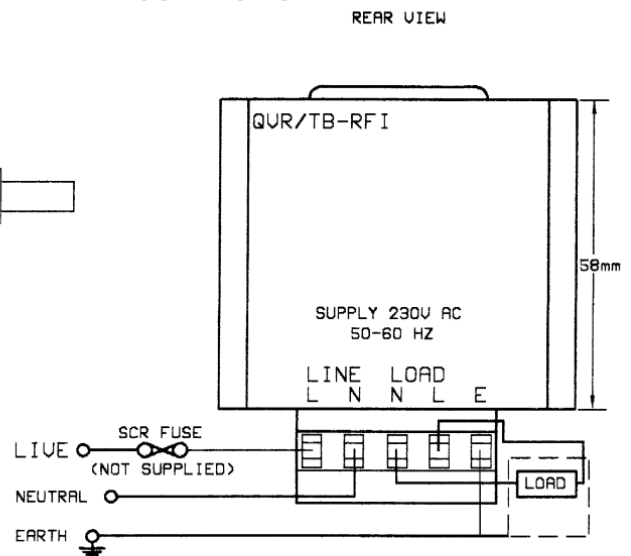


4 Installation

DIMENSIONS



CONNECTIONS



WARNING
LIVE TERMINALS - SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK

NOTE
FOR HEATSINK PANEL MOUNTING A 10MM HOLE IS REQUIRED TO ACCEPT MOUNTING BUSH.
HEATSINK COMPOUND MUST BE USED FOR EFFECTIVE THERMAL COUPLING.



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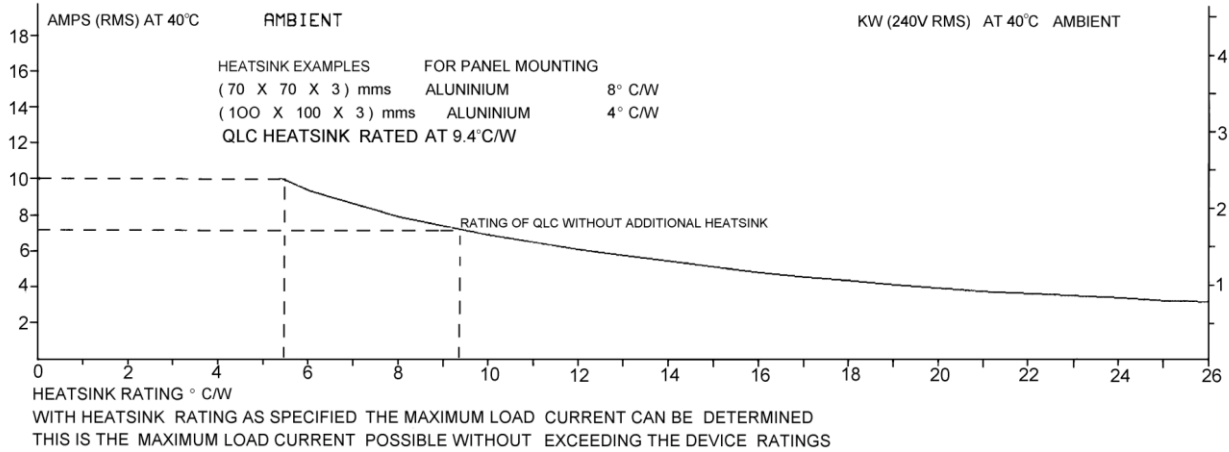


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Stainless Steel is typically 15 times less thermally conductive and mild steel is typically 5 times less thermally conductive.



5 Technical Specifications

TRIAC Limiting RMS. On-state cycle	25A	Isolation voltage	2500V RMS
Peak one cycle surge @ (10ms)	320A	I²t limiting value for fusing	112A ² s
Min. Operating current	200mA	Unit limiting RMS. On-state current	15A
Max. forward volts drop at 10A	1.5V	Mains supply tolerance, ± 10%	230 or 110V AC
Max. Load at 20°C ambient (without extra heatsink)	10A	Mains frequency	50/60Hz
Max. unit operating temperature	65°C	Unit storage temperature range	0 to +65°C
Further Dimensions			
Shaft diameter	6.3mm	Shaft projection from bush	12mm (QVR) & 8mm (QVR/s)
Bush length (QVR & QVR/s)	7mm	Fixing hole diameter	10mm

6 Fusing

It is recommended to use semiconductor (fast-acting) type fuses or circuit breakers (semiconductor - MCB) for protection. On initial power-up some loads may need an increased factor of safety for unit and/or device protection (see SRA data sheet for further information).

7 CE Marking

This product family carries a CE mark and incorporates a built-in filter. For information see recommendation section and contact our sales desk or see Declaration of Conformity.

8 Recommendations & Safety Requirements

Other documents available on request, which may be appropriate for your application:

Code	Identity	Description
X10229	RFI	Single phase filtering recommendations: Addressing the EMC Directive
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 and 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 done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

9 Order Code

State Part Number	Non-switched	QVR-RFI-TB + (supply voltage)
	Switched	QVR/s-RFI-TB + (supply voltage)
Optional Extras	Knob, Dial, Heatsink Compound	

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