

# X10205 – Phase Angle Power 25A AC Control Module



## INTRODUCTION

The PSR-25 power control module is a high-power, full-wave AC phase-angle controller in a compact package. It is capable of regulating up to 6kW (25A) 230V AC. The PSR-25 regulator governs the amount of power supplied to the load, by controlling the phase-angle of the ac supply. The low thermal impedance and high electrical isolation provide the equipment designer with a greater flexibility in a wide variety of applications. Optional extras are available on request, including a plastic terminal cover and an additional heatsink for use at full power.

## APPLICATIONS

Suitable for quartz lamps, conventional resistive heating elements, ovens, moulders and dryers and some inductive loads (e.g. transformers and motors).

## FEATURES

- Simple wiring.
- Rugged and compact.
- 25A current capability.
- Internal snubber.



## INSTALLATION



## UNITED AUTOMATION LTD

Southport Business Park  
Wight Moss Way  
Southport, PR8 4HQ  
ENGLAND

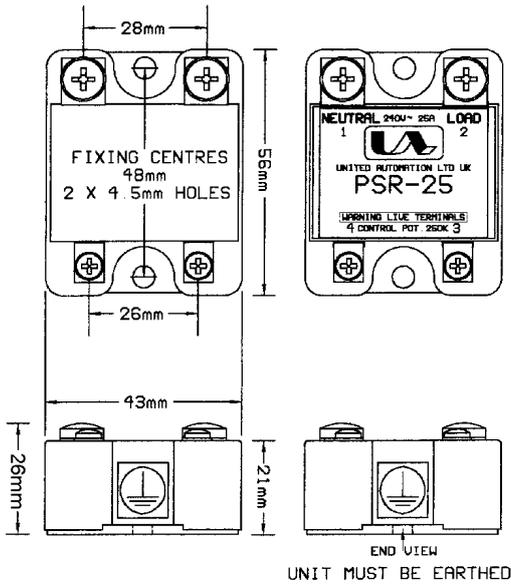
Tel: 0044 (0) 1704 – 516500  
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## DIMENSIONS



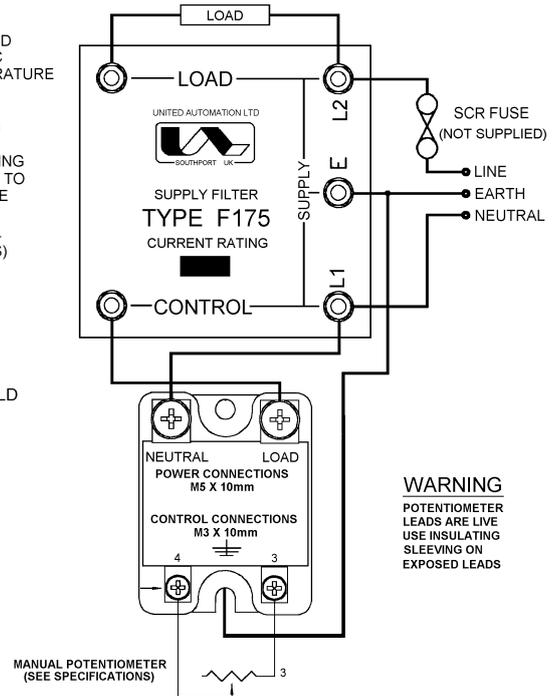
**WARNING – LIVE TERMINALS**  
(SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK)

## FIXING REQUIREMENTS

FOR 25A OPERATION THE UNIT SHOULD BE FASTENED TO A HEATSINK RATED AT 1.3°C PER WATT @ AMBIENT TEMPERATURE OF 35°C. A TYPICAL EXAMPLE IS A REDPOINT TYPE KA100-1 EARTH HEATSINK USING A 4mm SCREW OR BOLT TOGETHER WITH A STAR WASHER, ENSURING THAT THERE IS A GOOD METAL TO METAL CONTACT BETWEEN THE BASE AND THE HEATSINK HEATSINK PASTE IS ESSENTIAL (SEE COOLING REQUIREMENTS)

A SUITABLE FILTER WILL BE REQUIRED FOR THIS UNIT  
NOTE:  
MAX. LOAD CURRENT SHOULD MATCH NEAREST SUITABLE FILTER e.g 25A FILTER SHOWN FOR 25A MAX LOAD

## CONNECTIONS



**WARNING**  
POTENTIOMETER LEADS ARE LIVE USE INSULATING SLEEVING ON EXPOSED LEADS

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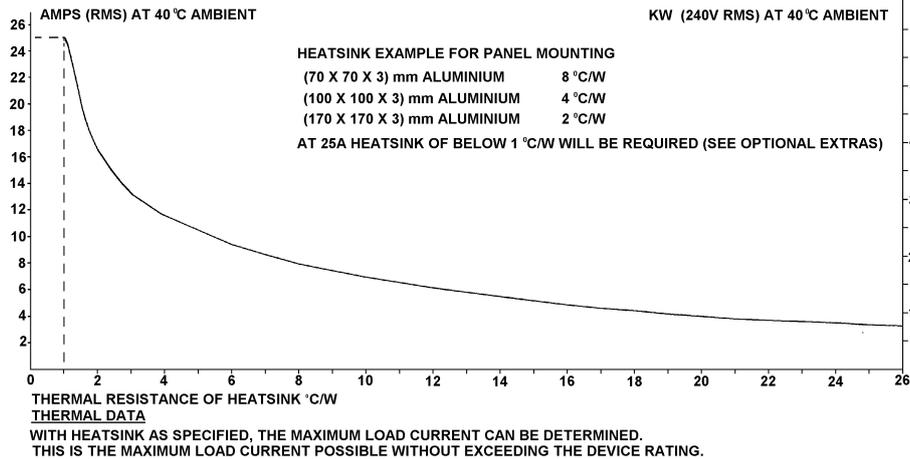
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**INSTALLATION Cont.** Stainless steel typically 15 times less thermally conductive and mild Steel is typically 5 times less thermally conductive.



## SPECIFICATIONS

ac line voltage	110/230V +/- 10% @ 50/60 Hz	Unit limiting rms current	25A
Peak one cycle surge (10ms)	250A	Max. peak voltage	600V ac
I <sup>2</sup> t for fusing	250 A <sup>2</sup> s	Minimum operating current	200mA
Isolation voltage	5000V rms	Leakage Current	5mA
Max. operating temperature	65°C	Manual potentiometer (nominal)	250kΩ @ 230V ac
Storage temperature	-20°C to +85°C	Manual potentiometer (nominal)	100kΩ @ 110V ac

## FUSING

It is recommended that semiconductor, fast acting type fuses or circuit breakers (Semiconductor - MCB) be used for unit protection. On initial operation some loads may need an increased factor of safety for unit and/or device protection. See SRA datasheet for further information.

## CE MARKING

This product family carries a “CE” marking. These phase angle controllers need a suitable remote filter. For information see recommendation section and contact our sales desk (see Declaration of Conformity).

## RECOMMENDATIONS

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

<u>CODE</u>	<u>IDENTITY</u>	<u>DESCRIPTION</u>
X10229	RFI	Filter 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, Earth 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.



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## ORDER CODE

State part number: **PSR 25**

**Optional extras include:** potentiometer, filter, heatsink, heatsink paste, SSR cover.

Note: when ordering a filter, the current at which the PSR is to be used at will be required.



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Page 4 of 4

