

X10297 – PSR-40 Phase Angle Power Control Module

Issue 5



1 Introduction

The PSR-40 Power Control module is a high power, full wave AC phase angle controller in a compact package, capable of regulating up to 9KW (40A) 230Vac. The PSR-40 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 provides 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 additional heatsink for use at full power.

2 Applications

Air conditioning, Ovens, Energy Saving, Electroplating, Heating & Ventilation, Hot Wires and more.

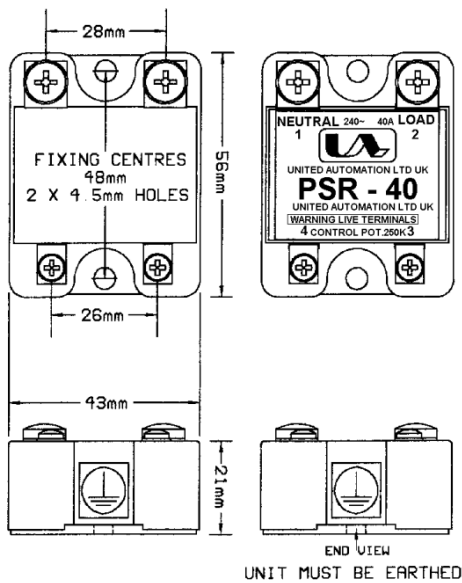
3 Features

- Solid state reliability
- Simple wiring
- Rugged and compact
- High current capacity
- Internal snubber



4 Installation

DIMENSIONS



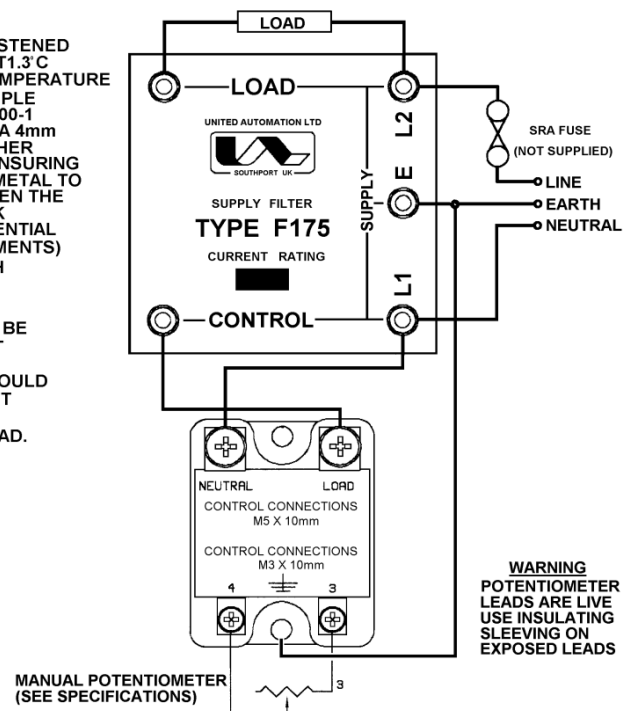
WARNING - LIVE TERMINALS
(SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK)

FIXING REQUIREMENTS

FOR 40A 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) FOR 40 AMPS SEE GRAPH

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

CONNECTIONS



UNITED AUTOMATION LTD



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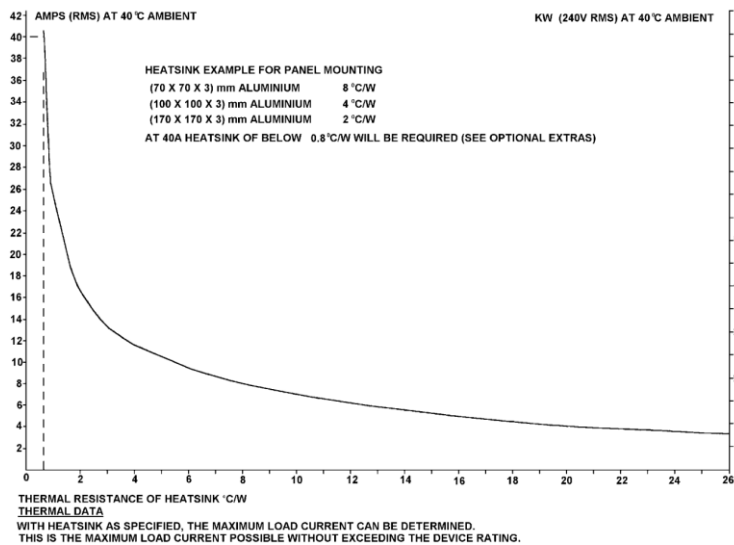
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5 Cooling Requirements



6 Technical Specifications

AC Line Voltage	110/230 ± 10% @ 50/60Hz		
AC Power Rating	40A	TRIAC Limiting RMS Current	41A
Peak One-cycle Surge (10ms)	300A	Max. Peak Voltage	600V AC
I ² t for Fusing (10ms)	400A ² s	Minimum Operating Current	200mA
Isolation Voltage	5000V RMS	Leakage Current	5mA
Max. Operating Temperature	65°C	Manual Potentiometer	250KΩ 1W @ 230V AC
Storage Temperature	0°C to 65°C		100KΩ 1W @ 110V AC

7 Fusing

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor-MCB) for protection. On 'initial switch on' some loads may need an increased Factor of Safety (F of S) for Unit and/or Device protection. See the SRA Data sheet for further information.

8 CE Marking

This family carries a "CE" marking. These phase angle controllers need a suitable remote filter. For more information see recommendations section and contact our sales desk. (See the Declaration of Conformity).

9 Recommendations & Safety Requirements

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

Code	Identity	Description
X10229	RFI	Filtering Recommendations: Addressing the EMC Directive
X01213	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
X10322	ASC	AC Stack specification sheet and application datasheet
AP02/4	COS	UAL Conditions of Sale

10 Order Code

State Part Number	PSR 40
Optional Extras	Potentiometer, Filter, Heatsink Paste, Heatsink Assembly, SSR Cover






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



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