

X10461

Variable AC Voltage Regulators | Stand Alone Power Controller



PAC2

25A, 230v

Phase Angle Power Control Module



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KEY FEATURES:

- ✓ Solid-state reliability for long-lasting performance
- ✓ Surface-mount technology for compact design
- ✓ Wide supply range: 50 - 250V AC
- ✓ Rugged and compact construction
- ✓ 25A current capability with additional heatsink
- ✓ Internal snubber to eliminate nuisance switching

The **PAC2 Phase Angle Firing Module** is a robust, high-power, full-wave AC phase angle controller, designed to deliver precise power regulation in a compact form factor. Capable of managing up to 6KW (25A) at 230Vac, this module controls the phase angle of the AC supply to modulate the power delivered to your load. With its low thermal impedance and high electrical isolation, the PAC2 offers exceptional flexibility for equipment designers across various applications.

Optimise your power regulation with the PAC2 Phase Angle Firing Module—reliable, versatile, and built to meet the demanding needs of modern industrial applications.

APPLICATIONS:

Ideal for a diverse range of applications, including:

- Ovens
- Commercial kitchens (e.g., Fish & Chips, Restaurants, Hospitality)
- Quartz and Heat Lamps
- Moulders
- Dryers
- Inductive loads, such as transformers and motors

TECHNICAL SPECIFICATIONS

AC Line Voltage Range	50 – 250V @ 50/60Hz	
Unit Limiting RMS Current	25A	
Peak One-cycle Surge (10ms)	250A	
Minimum Operating Current	50mA	
Isolation Voltage	3.5kV RMS	
Recommended Potentiometer	5kΩ	
Storage Temperature	0 – 65°C	
AC Aux Input Supply	10V AC ±2V @ 50mA	
I²t for Fusing	250A ² s	
Max. Peak Voltage	600V AC	
Leakage Current	5mA	
Control Signal (3-way 0.1" header)	0-5V or 5V Aux O/P (for pot.)	
Power Consumption	1.2W	
Max. Operating Temperature	65°C	
Weight	63g	
Further Dimensions		
Dimensions	57mm (D) x 44mm (W) x 28mm(H)	
Fixing Centre's	48mm pitch with 2@ 4.5mm Ø (M4 clearance) holes	
Connections	AC AUX Input Supply Terminals	(2x) M3 x 10mm pozi set screws (for use with spade or eyelet crimp connectors)
	AC Line Voltage Terminals	(2x) M5 x 10mm pozi set screws (for use with spade or eyelet crimp connectors)



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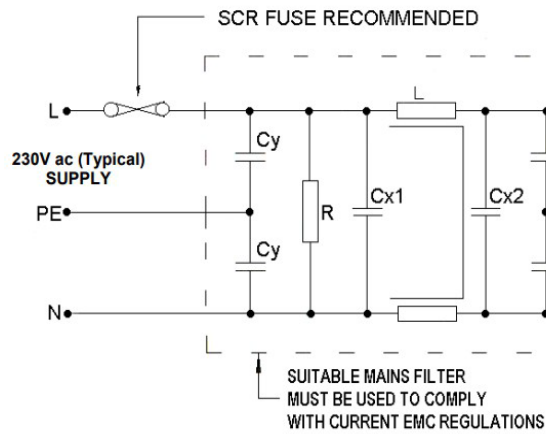
Phase Angle Power Control Module

INSTALLATION

DIMENSIONS & CONNECTIONS

NOTE-1: Mains Filter

A typical filter network is shown (inside dotted lines)
The F-Series filter range may be used for the PAC2
(see F-Series Filters Datasheet – X10229)



WARNING

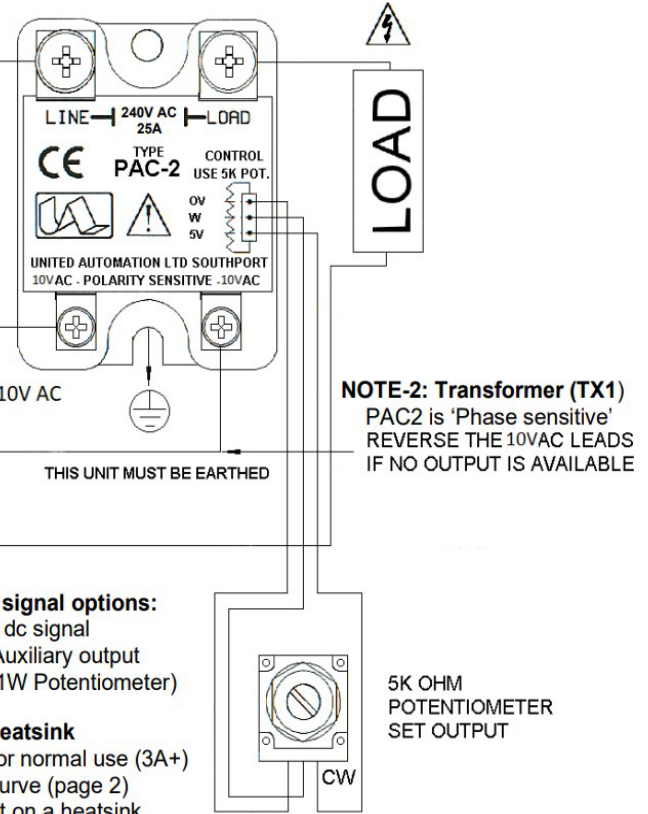
HAZARDOUS LIVE TERMINALS
SWITCH OFF MAINS SUPPLY BEFORE
COMMENCING ANY SERVICING WORK

NOTE-3: Control signal options:

- 0 to 5V dc signal
- 5V dc Auxiliary output (for 5K, 1W Potentiometer)

NOTE-4: PAC2 additional heatsink

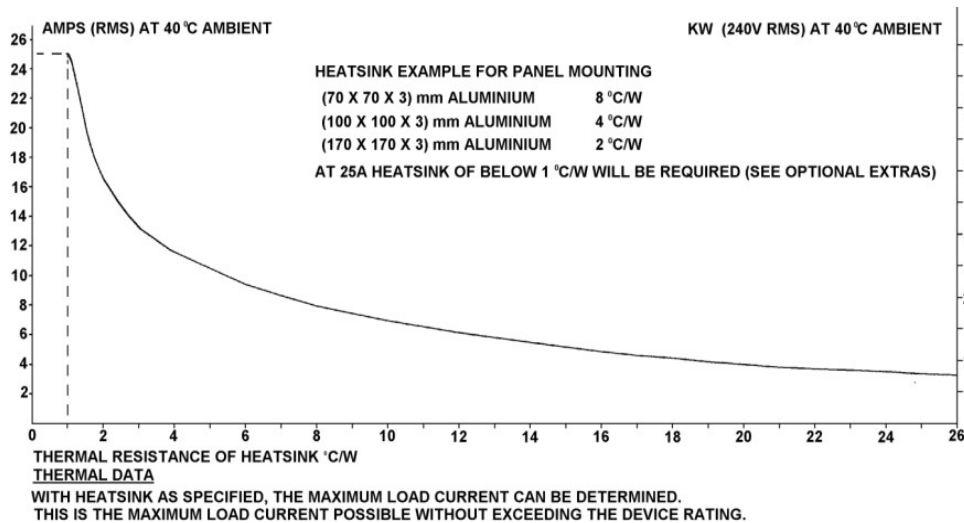
- Heatsink required for normal use (3A+)
- Refer to de-rating curve (page 2)
- When mounting unit on a heatsink, ensure a thin smear of heatsink paste is applied to mating surfaces



NOTE-2: Transformer (TX1)
PAC2 is 'Phase sensitive'
REVERSE THE 10VAC LEADS
IF NO OUTPUT IS AVAILABLE

De-rating Curve (to determine the heatsink requirements)

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



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RECOMMENDATIONS

FUSING

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

DOCUMENTS

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

Code	Identity	Description
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, Earthing Requirements and Fusing Recommendations

It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding the safety of electrical equipment. For International standards refer STANDARDS on D of C.

OPTIONAL EXTRAS

Product Code	Product Description
A403001	Manual (5K) Potentiometer Knob and Leads
Z01062	Heatsink Compound Syringe (Must be applied while fitting)
A15217	KA100 Din Rail mount Heatsink up to 25A with thermal paste
A80030	SSR Cover Kit
Available on request*	EMI Filter

*When ordering a filter match the current rating to the load size. Note: The filter must always be rated above the load rating.

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A72210	PAC2, 25A, 230v High Power Phase Angle AC Regulators



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