

X10461

Variable AC Voltage Regulators | Stand Alone Power Controller

# PAC2

25A, 230V

Phase Angle Power Control Module

## CONTACT US:

☎ 0044 (0) 1704-516 501

✉ [enquiries@united-automation.com](mailto:enquiries@united-automation.com)

🌐 [www.united-automation.com](http://www.united-automation.com)



## 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 230V, 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.

## TECHNICAL SPECIFICATIONS

<b>AC Line Voltage Range</b>		<b>50 – 250V @ 50/60Hz</b>
<b>Unit Limiting RMS Current</b>		25A
<b>Peak One-cycle Surge (10ms)</b>		250A
<b>Minimum Operating Current</b>		50mA
<b>Isolation Voltage</b>		3.5kV RMS
<b>Recommended Potentiometer</b>		5kΩ
<b>Storage Temperature</b>		0 – 65°C
<b>AC Aux Input Supply</b>		10V AC ±2V @ 50mA
<b>I<sup>2</sup>t for Fusing</b>		250A <sup>2</sup> s
<b>Max. Peak Voltage</b>		600V AC
<b>Leakage Current</b>		5mA
<b>Control Signal (3-way 0.1" header)</b>		0-5V or 5V Aux O/P (for pot.)
<b>Power Consumption</b>		1.2W
<b>Max. Operating Temperature</b>		65°C
<b>Weight</b>		63g
<b>Further Dimensions</b>		
<b>Dimensions</b>		57mm (D) x 44mm (W) x 28mm(H)
<b>Fixing Centre's</b>		48mm pitch with 2@ 4.5mm Ø (M4 clearance) holes
<b>Connections</b>	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)

## 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

## YOU MUST READ THIS BEFORE INSTALLATION

 <b>ELECTRICAL SAFETY</b> <b>WARNING: RISK OF ELECTRIC SHOCK</b> Always consult the Installation & Maintenance Instructions before connecting this product to the power supply. <b>WARNING: Disconnect Power Before Servicing</b> Ensure the electrical supply is safely disconnected before connecting to any supply, load, or control terminals.	 <b>INSTALLATION REQUIREMENTS</b> <b>WARNING: Installation by Qualified Personnel Only</b> This product must only be installed or fitted by a competent, qualified installer familiar with the relevant electrical standards and installation practices.	 <b>USER RESTRICTIONS</b> <b>WARNING: Not for Use by Vulnerable Individuals</b> This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or instructed by a person responsible for their safety.	 <b>USAGE ENVIRONMENT</b> <b>WARNING: Industrial Use Only</b> This is an industrial-grade product and is not intended for household use.	 <b>HOT SURFACE WARNING</b> <b>WARNING: Hot Surfaces</b> On certain models, surfaces marked with this symbol become hot during use. Avoid direct contact and follow all thermal safety precautions.
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# PAC2

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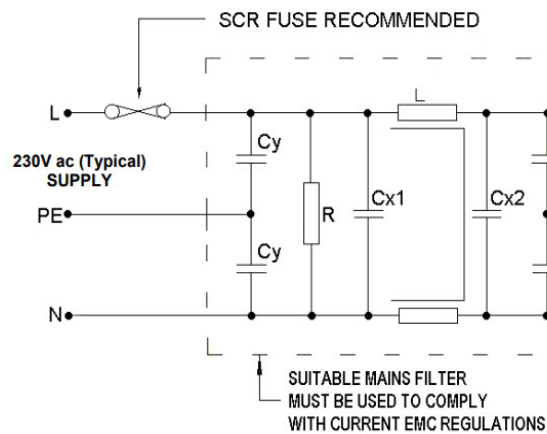
Phase Angle Power Control Module

## 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

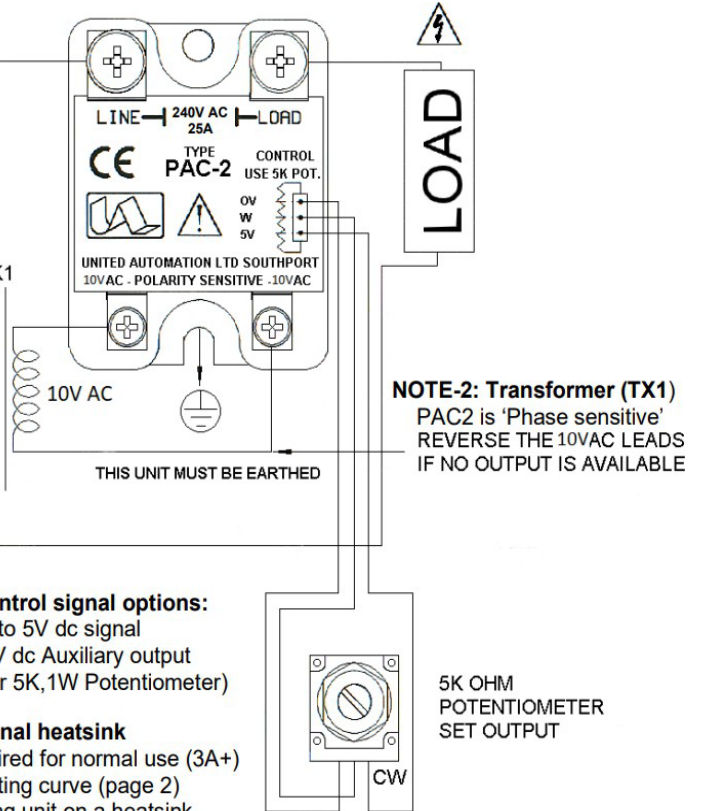
HAZARDOUS LIVE TERMINALS  
SWITCH OFF MAINS SUPPLY BEFORE  
COMMENCING ANY SERVICING WORK

### NOTE-3: Control signal options:

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

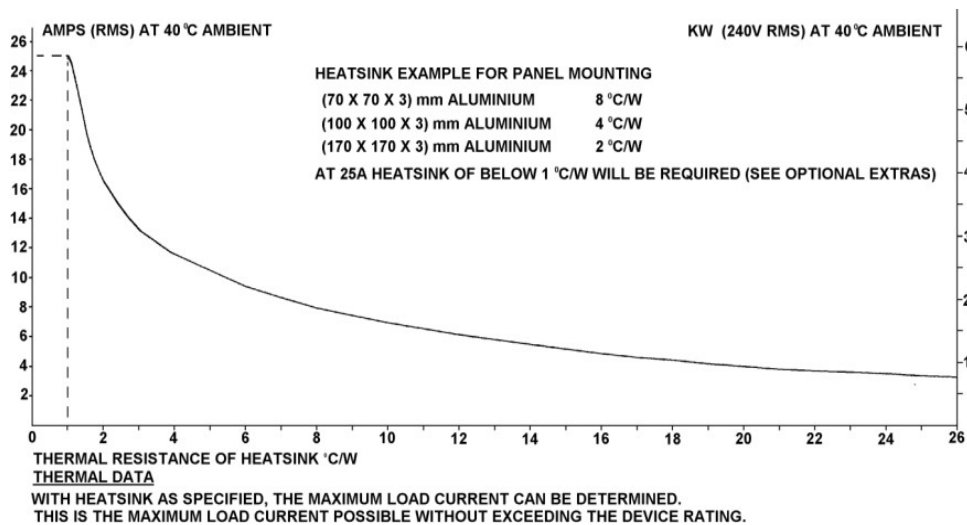
### NOTE-4: PAC2 additional heatsink

- 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



## 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
<b>X10229</b>	RFI	Filter recommendations: Addressing the EMC Directive
<b>X10213</b>	ITA	Interaction: Uses for phase angle and for burst fire control
<b>X10255</b>	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
<b>A403001</b>	Manual (5K) Potentiometer Knob and Leads
<b>Z01062</b>	Heatsink Compound Syringe (Must be applied while fitting)
<b>A15217</b>	KA100 Din Rail mount Heatsink up to 25A with thermal paste
<b>A80030</b>	SSR Cover Kit
<b>Available on request*</b>	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
<b>A72210</b>	PAC2, 25A, 230V High Power Phase Angle AC Regulators



BMF House - Wight Moss Way,  
Southport Business Park  
Southport PR8 4HQ  
ENGLAND, UNITED KINGDOM

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