



PAC2 POWER CONTROLLER

PAC2
X10461

INTRODUCTION

The PAC2 module is a 25A, 230V ac phase angle, full wave controller in a compact and easy to install package. The PAC2 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.

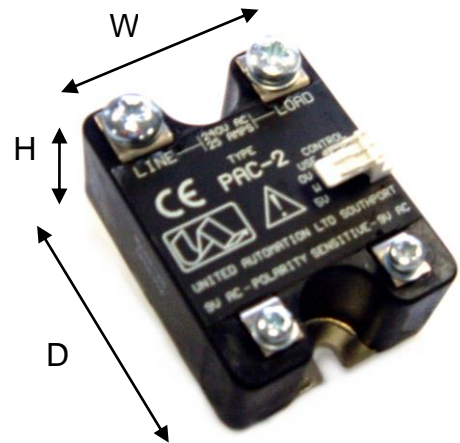
APPLICATIONS

Suitable for most power control applications such as infrared, quartz and ceramic heaters/lighting. It can also be used on inductive loads such as transformers and ac motors.

FEATURES

RoHS Compliant

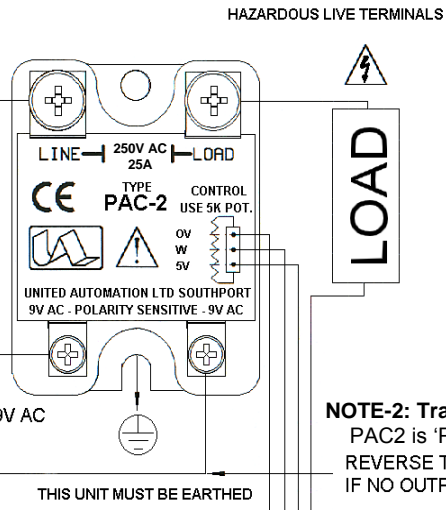
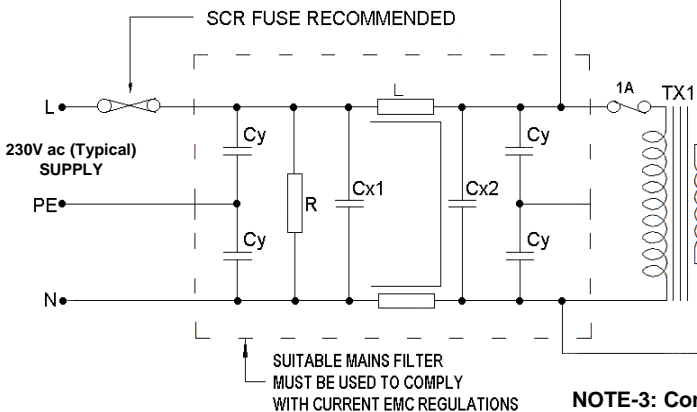
- Solid state reliability.
- Surface-mount technology.
- 50 - 250V ac supply range.
- Rugged and compact.
- 25A current capability (with use of additional heatsink)
- Internal snubber - eliminates "nuisance switching".



INSTALLATION Wiring and 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)

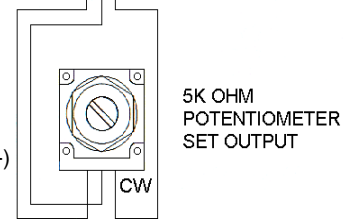


NOTE-2: Transformer (TX1)
PAC2 is 'Phase sensitive'
REVERSE THE 9V AC LEADS
IF NO OUTPUT IS AVAILABLE

- 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

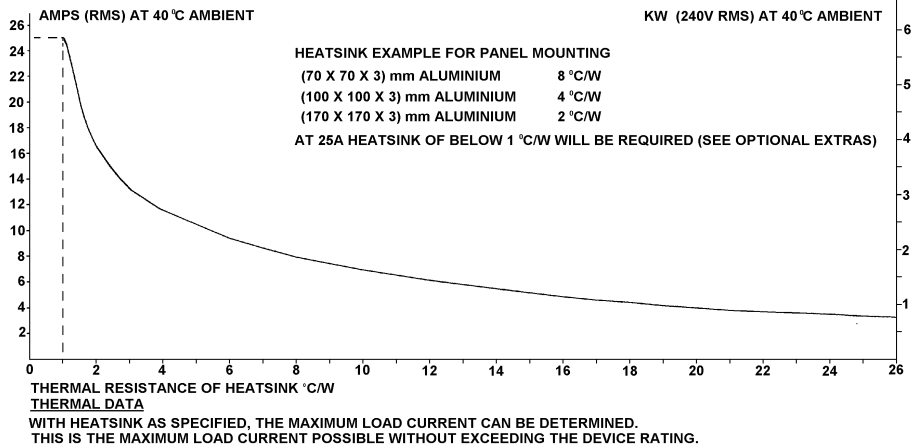
WARNING
HAZARDOUS LIVE TERMINALS
SWITCH OFF MAINS SUPPLY BEFORE
COMMENCING ANY SERVICING WORK



INSTALLATION

De-rating curve (to determine appropriate heatsink requirements)

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



SPECIFICATIONS

ac line voltage range (min./max.)	50 to 250V @ 50/60 Hz	ac aux input supply	10V ac (+/-2V) @ 50mA
Unit limiting rms current	25A	I ² t for fusing	250A ² s
Peak one cycle surge (10ms)	250A	Max peak voltage	600V ac
Minimum operating current	0.05A	Leakage current	5mA
Isolation voltage	3.5kV rms	Control signal (3-way 0.1" header)	0-5V or 5V aux O/P (for pot.)
Recommended potentiometer	5kΩ	Power consumption	1.2W
Storage temperature	0 to 65°C	Maximum operating temperature	65°C
		Weight	63g
Dimensions:	57mm (D) x 44mm (W) x 28mm (H)	Fixing centres:	48mm pitch with 2 @ 4.5mm Ø (M4 clearance) holes
Connections:	ac aux input supply terminals = 2-off M3 x 10mm pozi set screws (for use with spade or eyelet crimp connectors)		
	ac line voltage terminals = 2-off M5 x 10mm pozi set screws (for use with spade or eyelet crimp connectors)		

FUSING

It is recommended that semiconductor, fast acting type fuses or circuit breakers (semiconductor - MCB) be used for unit protection and an appropriate safety fuse for unit supply (F1A). On initial operation some loads may need an increased factor of safety (F of S) 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, which may be appropriate for your application, are available on request:

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 (LVD)	Safety requirements: Addressing the Low Voltage Directive 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.

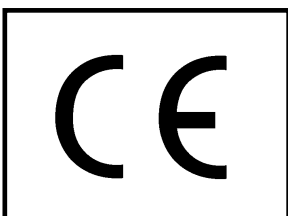
NOTE: It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

ORDER CODE

State part number: **PAC2 A72210**

(Supplied with 3-way control signal connectors [0.1" header each end] & lead [0.5m long] – Part ref.: J50109)

Optional extras includes: potentiometer, filter, transformer, heatsink paste and heatsink assembly



UNITED AUTOMATION LIMITED

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

Tel: 0044 (0) 1704 – 516500
Fax: 0044 (0) 1704 – 516501
enquiries@united-automation.com
www.united-automation.com

Page No. 2 of 2 Issue 6 Date 02/04/2019

