



# 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.

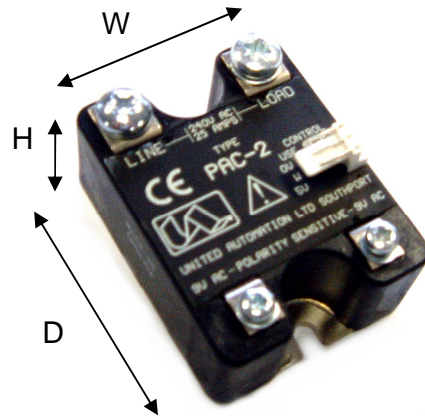
## APPLICATIONS

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



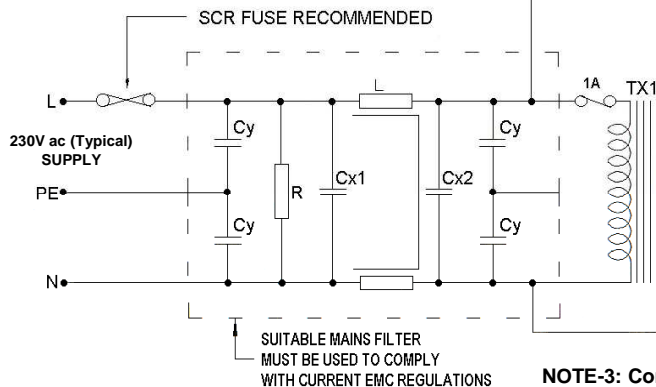
- Solid state reliability.
- Surface-mount technology.
- 50 - 250V ac supply range.
- Rugged and compact.
- 25A current capability (with use of additional heatsink)
- Internal snubber - eliminates "nuisance switching".



## 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)

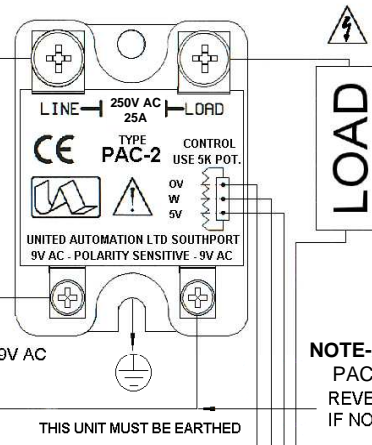


**WARNING**  
HAZARDOUS LIVE TERMINALS  
SWITCH OFF MAINS SUPPLY BEFORE  
COMMENCING ANY SERVICING WORK

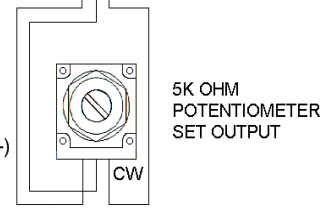
- NOTE-3: Control signal options:-**
- 0 to 5V dc signal
  - 5V dc Auxiliary output (for 5K, 1W Potentiometer)

- 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

HAZARDOUS LIVE TERMINALS

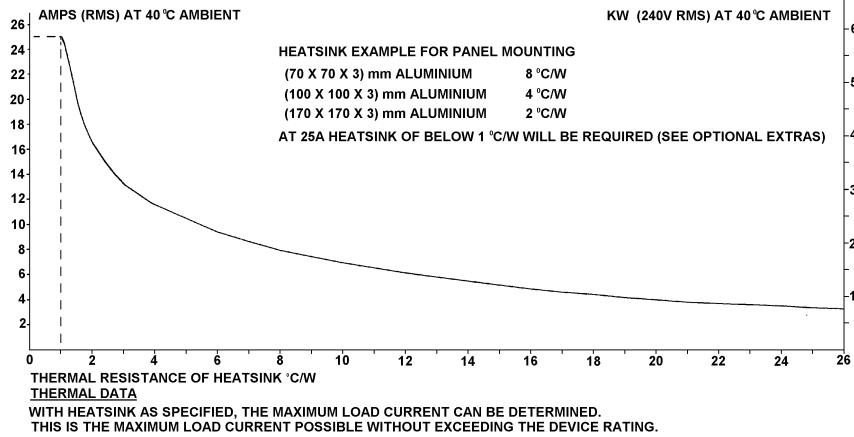


**NOTE-2: Transformer (TX1)**  
PAC2 is 'Phase sensitive'  
REVERSE THE 9V AC LEADS  
IF NO OUTPUT IS AVAILABLE



## INSTALLATION

### De-rating curve (to determine appropriate heatsink requirements)



## 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 <sup>2</sup> t for fusing	250A <sup>2</sup> 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.
P01.1	COS	UAL Conditions of sale.

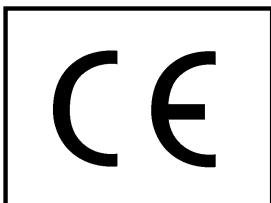
**NOTE:** It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and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

## ORDER CODE

State part number: **PAC2**

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

