POWER CONTROLLER – X10461.

PAC2

The PAC module is a high power, full wave AC Phase Angle Controller in a compact package. It is capable of regulating up to 6KW (25A) 230Vac. 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

- Ovens
- Fish & Chips
- Restaurant's
- Hospitality
- Quartz Lamps / Heat Lamps
- Moulders
- Dryers and
- Some inductive loads,

for example transformers and 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".

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
I^2t for Fusing		250A2 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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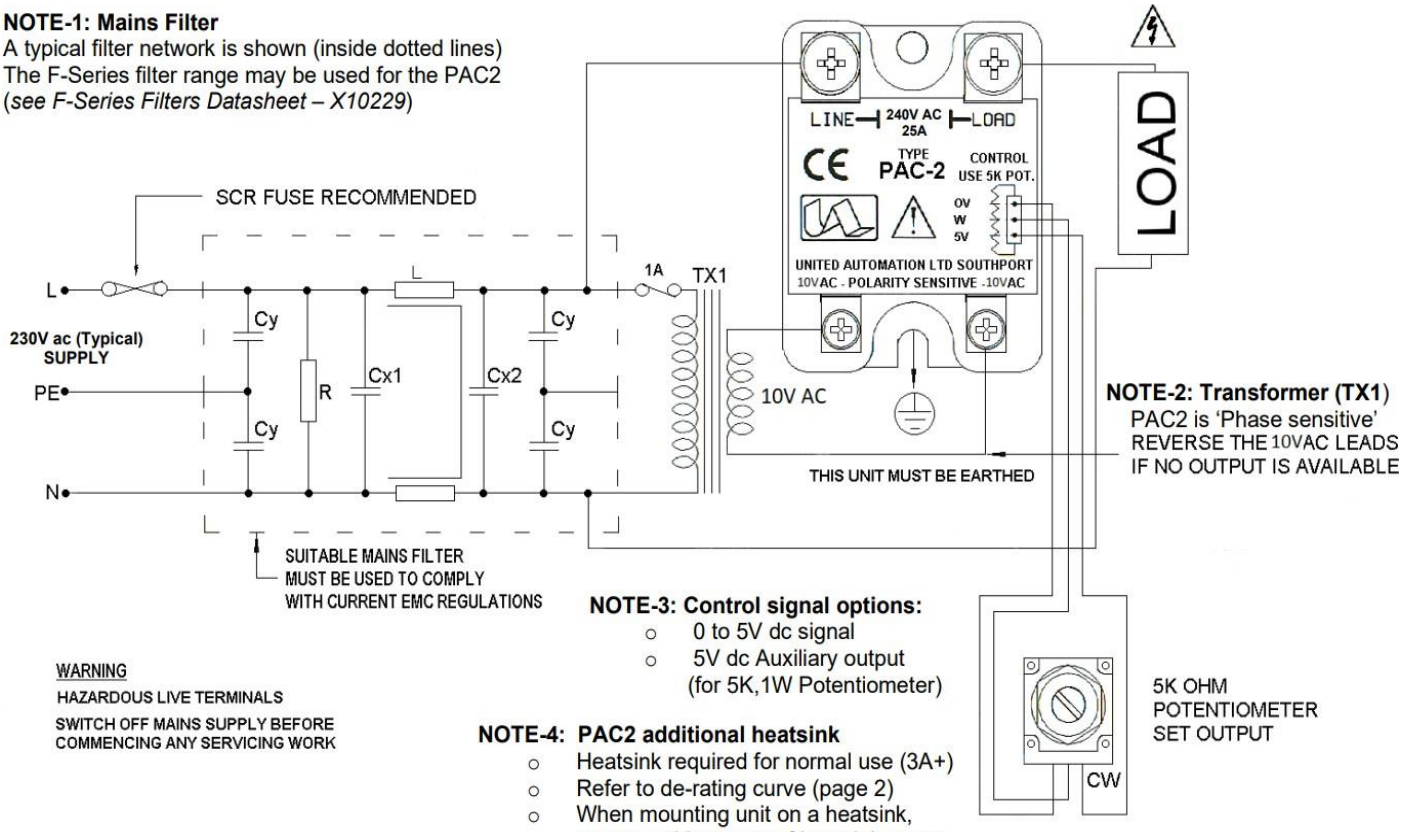
Installation

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 10VAC LEADS
IF NO OUTPUT IS AVAILABLE

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

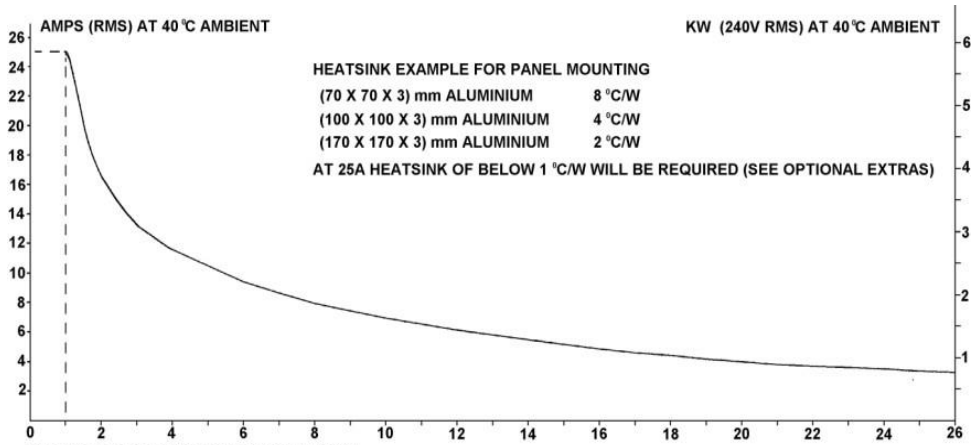
5K OHM POTENTIOMETER SET OUTPUT

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

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 stell is typically 5 times less thermally conductive.



THERMAL RESISTANCE OF HEATSINK °C/W

THERMAL DATA

WITH HEATSINK AS SPECIFIED, THE MAXIMUM LOAD CURRENT CAN BE DETERMINED.
THIS IS THE MAXIMUM LOAD CURRENT POSSIBLE WITHOUT EXCEEDING THE DEVICE RATING.

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.

Recommendations

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
A82271	Filter
A403001	5kΩ Potentiometer
T50201	Transformer
Z01062	Heatsink Compound Syringe **(Must be applied while fitting)**
A15216/A15217	Heatsink Assembly

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A72210	High Power Phase Angle AC Regulators