

X10284

Variable AC Voltage Regulators | Modular Power Controller



TPSR-25

25A, 230v

Compact Phase Angle AC Regulator



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KEY FEATURES:

- ✓ **Solid-State Reliability:**
Ensures long-lasting performance and durability.
- ✓ **Simple Wiring:** Easy installation process.
- ✓ **Rugged and Compact:**
Designed for space-saving and robust usage.
- ✓ **High Current Capability:**
Can handle high current loads efficiently.
- ✓ **Internal Snubber:**
Provides protection and enhances the longevity of the device.

The TPSR series of Solid-State Temperature Controllers are expertly designed to regulate fan speeds in heating, ventilating, and air conditioning (HVAC) systems. By replacing the conventional thermostat with a thermistor, the TPSR controllers offer continuous proportional control of blower speed in response to temperature changes. Additionally, these controllers feature a set minimum fan speed to ensure gentle air circulation through the heat exchanger and to protect motor bearings.

Optimise your HVAC system with the TPSR series for reliable and efficient fan speed control.

TECHNICAL SPECIFICATIONS

AC line voltage	230V +/-10%
Thermistor	Refer X10308
Peak one cycle surge (10ms)	250A
I ² t for fusing (10ms)	250 A ² s
Isolation voltage (for 1min)	5000Vrms
Unit current rating	25A
Operation temperature	0-65°C
Line frequency	50/60 Hz
Triac limiting RMS current	26A
Max peak voltage	600V ac
Minimum operating current	200mA
Leakage current	5mA
Manual potentiometer (nominal)	250K 1W @ 230V ac
Storage temperature	-20°C to +85°C

APPLICATIONS:

Ideal for a diverse range of applications, including:

- Ovens
- Restaurant appliances.
- Hospitality systems.
- Moulding machines.
- Dryers.
- Inductive loads such as transformers and motors.



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TPSR-25

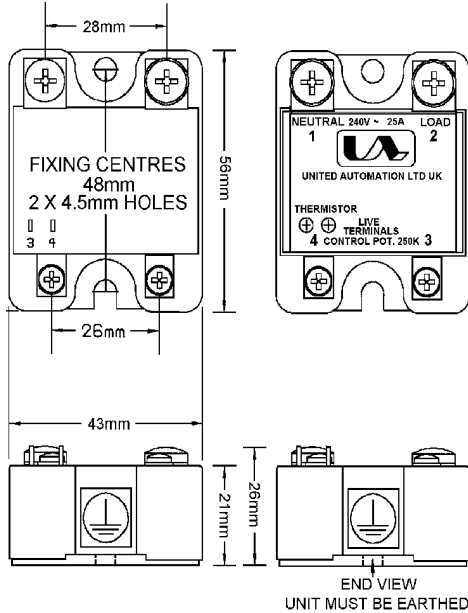
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INSTALLATION

DIMENSIONS & CONNECTIONS

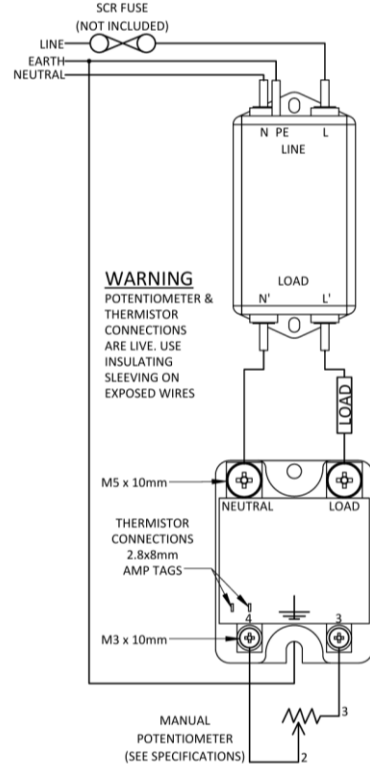
DIMENSIONS



FIXING REQUIREMENTS

FOR 25A OPERATION THE UNIT SHOULD BE FASTENED TO A HEATSINK RATED AT 1.3 °C PER WATT @ AMBIENT TEMPERATURE OF 35 C . A TYPICAL EXAMPLE IS A REDPOINT TYPE KA100-1 EARTHED HEATSINK USING A 4mm SCREW OR BOLT TOGETHER WITH A STAR WASHER, ENSURING THAT THERE IS A GOOD METAL TO METAL CONTACT BETWEEN THE BASE AND THE HEATSINK. HEATSINK PASTE IS ESSENTIAL (SEE COOLING REQUIREMENTS) ADDITIONAL HEATSINK SHOULD BE EARTHED.

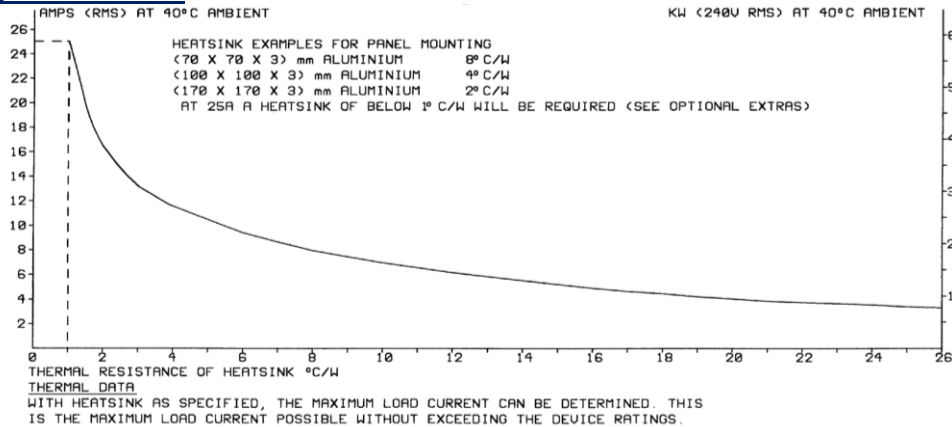
A SUITABLE FILTER WILL BE REQUIRED FOR THIS UNIT.
NOTE: MAXIMUM LOAD CURRENT SHOULD MATCH NEAREST SUITABLE FILTER e.g 25A FILTER SHOWN FOR 25A MAXIMUM LOAD.



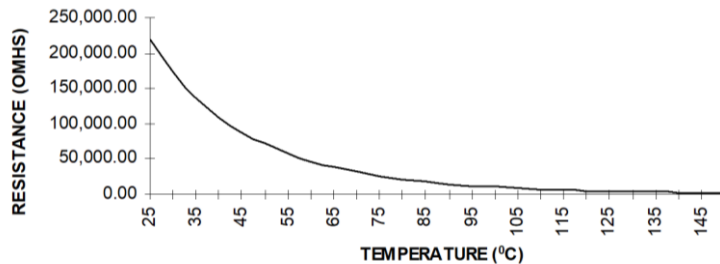
WARNING LIVE TERMINALS

(SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK)

Cooling Requirements



TPSR SENSOR ASSEMBLY RT CURVE



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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
X10308	TPSR	TPSR Thermistor Sensor Data Sheet
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
A403027	PSR/TPSR 250k Pot and Leads
Z01062	Heatsink Compound Syringe (Must be applied while fitting)
A80030	SSR Cover Kit
A-EN2010-30-S*	30A 10 series EMI Single phase Chassis Mount filter
A15217	KA100 Din Rail mount Heatsink up to 25A with thermal paste

*Note: When ordering a filter, the current at which the TPSR is to be used at will be required.

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A01825	TPSR-25 High Power Phase Angle AC Regulator



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