



TPSR - 25

The TPSR series of Solid-State temperature controllers are designed to regulate the fan speed in heating, ventilating and air conditioning systems. The thermistor replaces the conventional thermostat thus giving continuous proportional control of the blower speed in response to the temperature. The TPSR also incorporates a set minimum fan speed, for the gentle circulation of air through the heat exchanger and to provide protection of the motor bearing.

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.
- Epoxy encapsulated.
- Simple wiring.
- Rugged and compact.
- High current capability.
- Internal snubber.



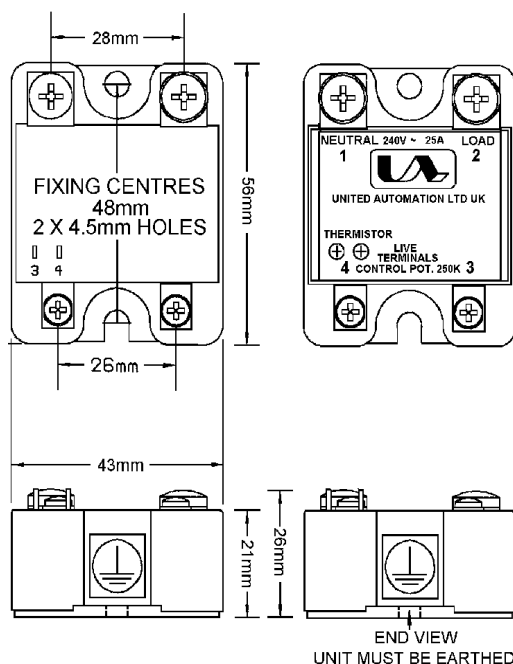
TECHNICAL SPECIFICATIONS

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



Installation

DIMENSIONS



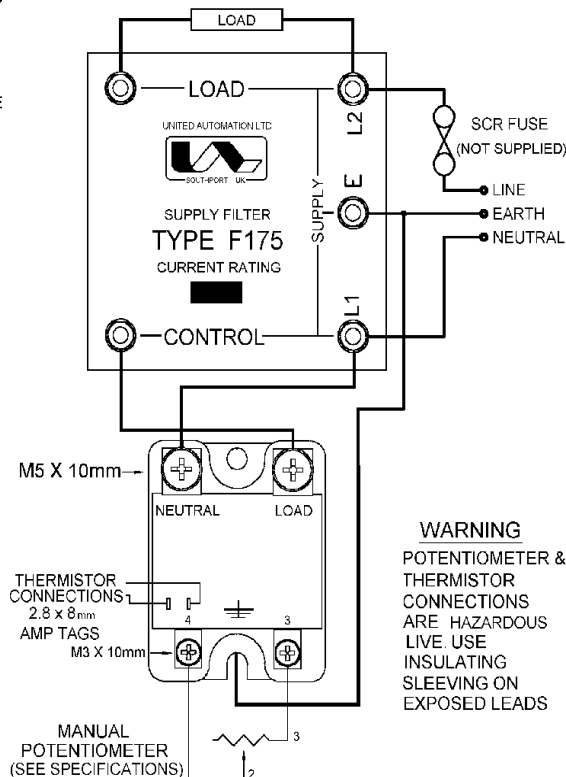
FIXING REQUIREMENTS

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.

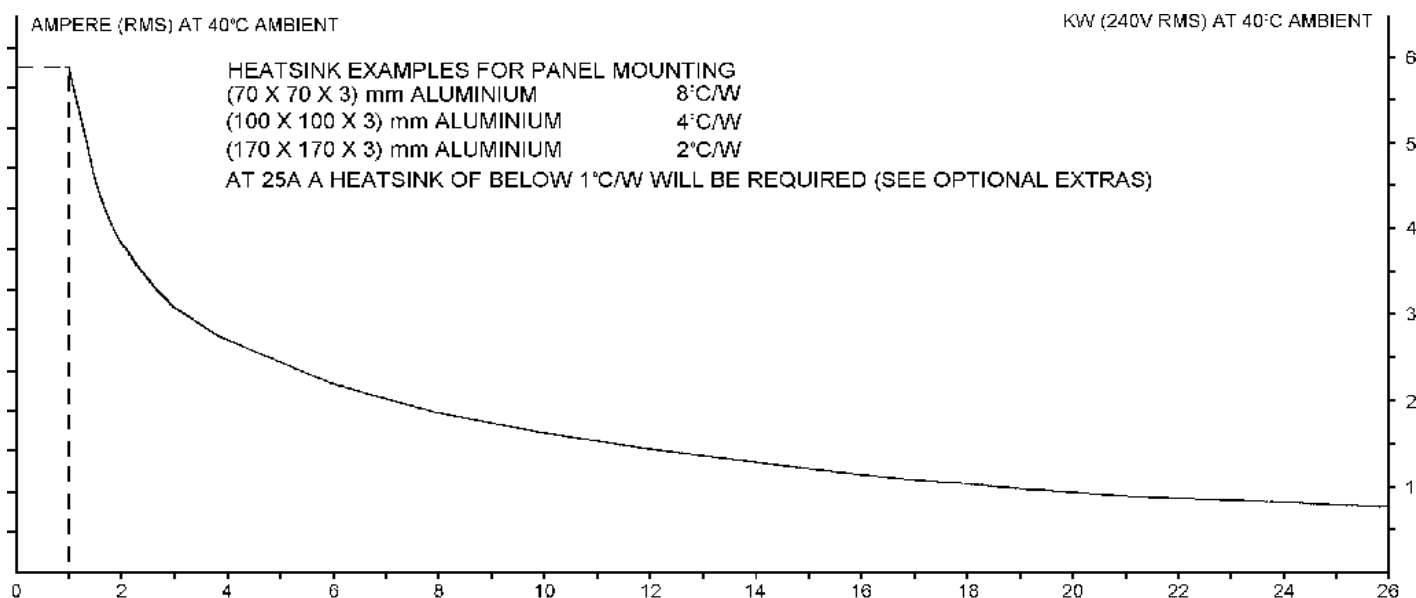
CONNECTIONS



WARNING
POTENTIOMETER & THERMISTOR CONNECTIONS ARE HAZARDOUS LIVE USE INSULATING SLEEVING ON EXPOSED LEADS

WARNING LIVE TERMINALS

(SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK)



THERMAL RESISTANCE OF HEATSINK °C/W

THERMAL DATA

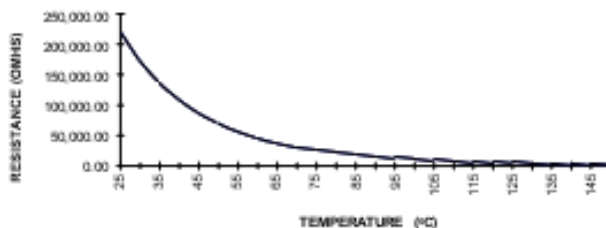
WITH HEATSINK AS SPECIFIED, THE MAXIMUM LOAD CURRENT CAN BE DETERMINED.

THIS IS THE MAXIMUM LOAD CURRENT POSSIBLE WITHOUT EXCEEDING THE DEVICE RATING.



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TPSR SENSOR ASSEMBLY RT CURVE



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
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
A-EN2010-30-S	30A 10 series EMI Single phase Chassis Mount filter
Z01062	Heatsink Compound Syringe (Must be applied while fitting)
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