UNITED AUTOMATION

COMPACT PHASE ANGLE 25A AC REGULATOR

TPSR-25

X10284

INTRODUCTION

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

Suitable for quartz lamps, conventional resistive heating elements, including ovens, moulders, dryers and some other inductive loads.

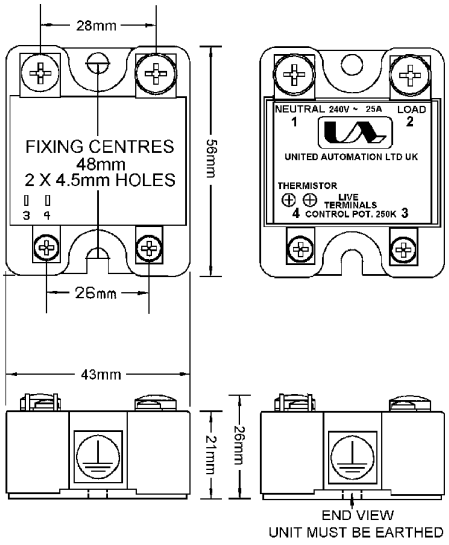
FEATURES

- Solid state reliability.
- Epoxy encapsulated.
- Simple Installation.
- Rugged and compact
- High current capability.
- Internal snubber

RoHS Compliant Directive 2002/95/EC

INSTALLATION

DIMENSIONS



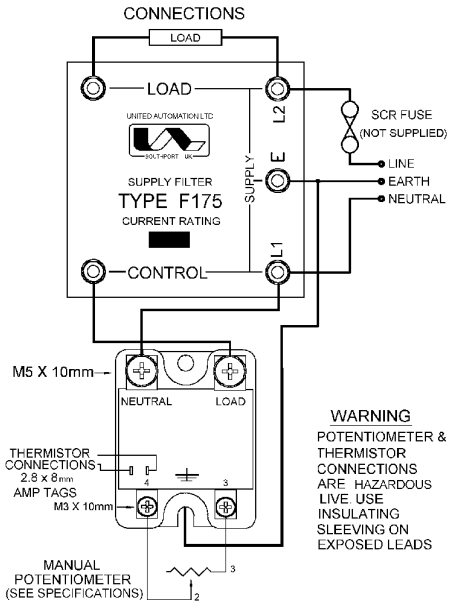
FIXING REQUIREMENTS

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.

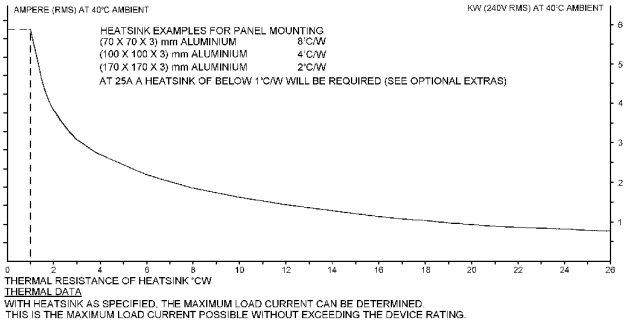
CONNECTIONS



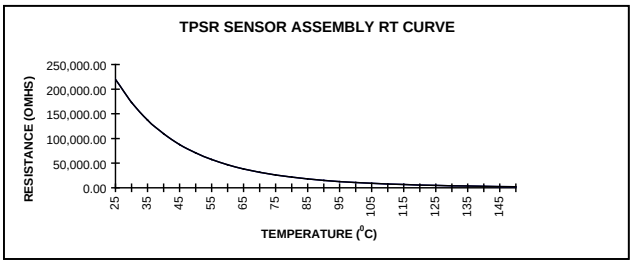
WARNING
POTENTIOMETER & THERMISTOR CONNECTIONS ARE HAZARDOUS LIVE. USE INSULATING SLEEVING ON EXPOSED LEADS

WARNING LIVE TERMINALS
(SWITCH OFF MAINS BEFORE COMMENCING ANY SERVICING WORK)

INSTALLATION COOLING REQUIREMENTS



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.



SPECIFICATIONS

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

FUSING

It is recommended that semiconductor, fast acting type fuses or circuit breakers (Semiconductor - MCB) be used for unit protection. On initial operation some loads may need an increased factor of safety (F of S) for unit and/or device protection. See SRA Data sheet 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 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 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, Earth requirements and fusing recommendations.
AP02/4	COS	UAL Conditions of sale.

NOTE: It is recommended that installation and maintenance of this equipment should be carried out by suitably qualified/trained personnel with reference to the current edition of the I.E.E. wiring regulations (BS7671). The regulations contain important requirements regarding the safety of electrical equipment. For International Standards refer to I.E.C. directive IEC 950.

ORDER CODE

State stock code and/or part number: A01825 - TPSR 25; A84018 – TPSR-sensor
Optional extras include: Potentiometer, Filter, Heatsink paste, Heatsink assembly

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

CE

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