

1 Introduction

This economical, energy saving, OEM temperature controller combines precision sensing to give powerful output in a compact, single hole fixing enclosure. It outperforms conventional thermostats by switching energy down to half mains cycle packets, at zero voltage, which minimises mains borne RFI interference and flicker. Proportional self-adjustment gives accurate temperature control of loads up to 16A, with appropriate installation and the use of an additional heatsink (see cooling requirements). The controller is supplied with a knob and ZVT scaled dial (0 to 40°C or 0 to 150°C). The NTC temperature sensor is ordered separately and is not included with the unit.

NOTE: It is important that the sensor is used with a bonded earth (see installation wiring).

2 Applications

Suitable for temperature control of single phase resistive heaters, ovens, dryers, hot plates and flexible heater mats.

3 Features

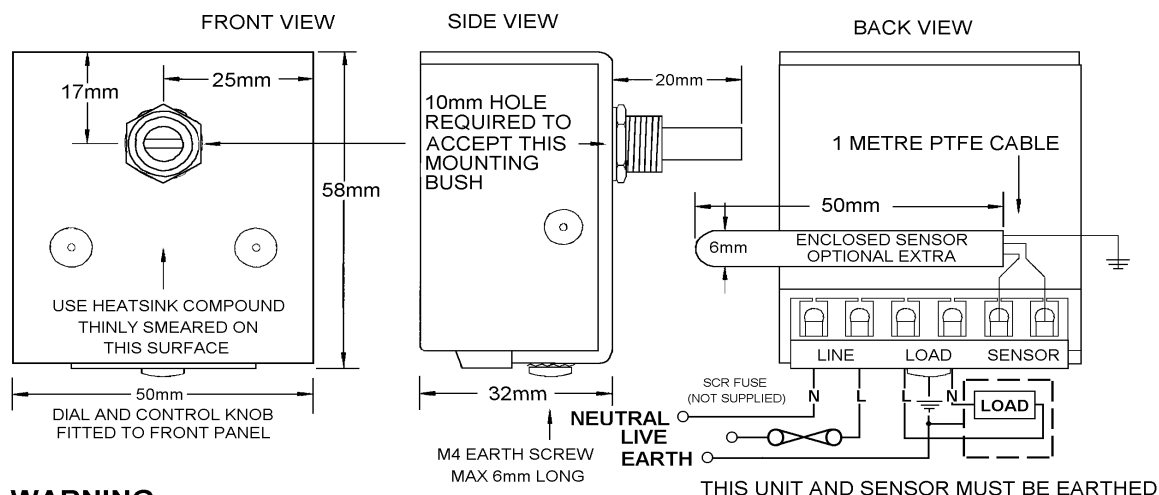
- Microprocessor based control
- Flicker inhibited
- Simple installation - with or without heatsink
- Two voltage and temperature ranges
- Discrete component giving high reliability
- Control knob and scaled dial supplied

RoHS Compliant
Directive
2002/95/EC



4 Installation

DIMENSIONS AND CONNECTION



WARNING

LIVE TERMINALS - SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK.

THE SENSOR IS NOT ISOLATED FROM THE MAINS SUPPLY. ADDITIONAL MEASURES SHOULD BE TAKEN TO ENSURE SAFETY IS MAINTAINED UPON INSTALLATION AND COMMISSIONING.

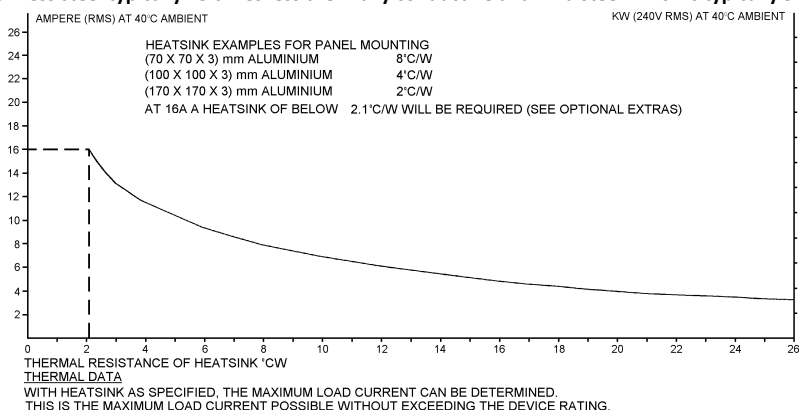
NOTE FOR HEATSINK MOUNTING.

A 10mm HOLE IS REQUIRED TO ACCEPT MOUNTING BUSH.

USE HEATSINK COMPOUND FOR EFFECTIVE THERMAL COUPLING.

5 Installation

COOLING REQUIREMENTS Stainless steel typically 15 times less thermally conductive and mild steel which is typically 5 times less thermally conductive



6 Specifications

Maximum RMS on-state current	16A	Operation temperature range	0 to 65°C
Peak single cycle surge current	200A	Storage temperature range	0 to 65°C
I ² t for fusing	128 A ² s	Control stability (typical)	1%
ZVT1 Maximum line voltage +/- 10% @ 50/60Hz	110V AC	Weight	125g
ZVT2 Maximum line voltage +/- 10% @ 50/60Hz	230V AC	NTC type sensor	Must be earthed
Maximum power consumption	6W		
Temperature control range	0-40°C/0-150°C	further dimensions	
Isolation voltage (typical)	2500V rms	Shaft diameter (1/4 inch)	6.3 mm
Proportional band (rear screw adjust, "typical")	1-15%	Shaft projection from bush	13.0 mm
Scale (54 x 46mm, linear & adhesive backed)	0-40°C/0-150°C	Bush length	7.0 mm
Maximum c.s.a. cable entry	2.5mm ²	Fixing hole diameter	10.0 mm

7 Fusing

It is recommended that semiconductor, fast acting type fuses or circuit breakers (semiconductor- MCB) are 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.

8 CE Marking

This product family carries a "CE" mark. For information, see recommendation section and contact our sales desk. See Declaration of Conformity.

9 Recommendations

Other documents available upon 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
X10612	ZVT E-10K3A1	ZVT enclosed flicker inhibited NTC sensor installation sheet
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. (formerly 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.

10 Order Code

	ZVT (110V/230V-16A-(Flicker Inhibited)-(temperature range-0-40°C/0-150°C)
Part Number	ZVT (1/2)-16-IF (0-40°C/0-150°C) – Please select required voltage and temperature range
Optional Extras	Potentiometer – for manual control; supply transformer