

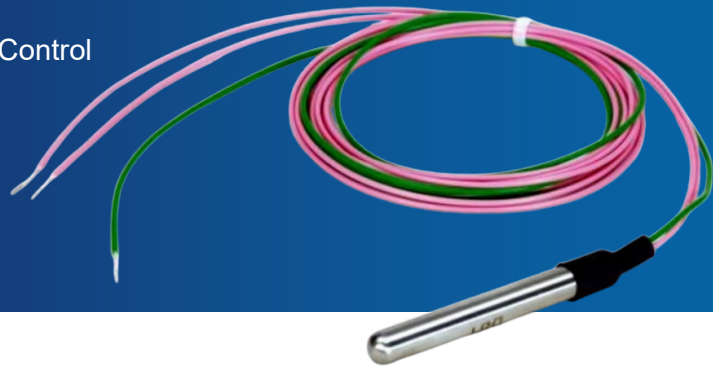
X10612

Temperature Controllers | Sensors

ZVT-E-IF-10K3A1

Up to 65°C

Thermistor – High-Precision Temperature Control



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KEY FEATURES:

- ✓ NTC thermistor for precision temperature control
- ✓ Stainless steel probe for durability
- ✓ PTFE insulated leads for superior heat resistance
- ✓ Operates in temperatures from 0°C to 65°C
- ✓ Designed for use with ZVT-16-IF and ZVT-25-IF controllers

The **ZVT-E-IF-10K3A1** is a robust NTC thermistor designed for high-accuracy temperature measurement and control. Encased in a stainless steel probe with 1 meter of white PTFE sensor connections, this thermistor ensures long-lasting performance and reliable integration with **ZVT-16-IF** and **ZVT-25-IF** flicker-inhibited power controllers.

This thermistor is ideal for precise temperature control in industrial environments, ensuring optimal performance in various applications like heating systems, motor control, and flicker-inhibited power controllers.

TECHNICAL SPECIFICATIONS

| | |
|--------------------------------------|--------------------|
| Thermocouple Type | NTC |
| Operating Temperature | 0°C to 65°C |
| Max. Current Without Heatsink | 5A to 10A |
| Max. Current With Heatsink | Up to 16A |
| Mounting Type | Insertion |
| Material | Stainless Steel |
| Cable | 7/0.2 PTFE, BSG210 |
| Probe Length | 50mm |
| Probe Diameter | 6.4mm |
| Liquid Time Constant | 14 Seconds |

APPLICATIONS:

Ideal for a diverse range of applications, including:

- DC motor control
- Industrial heating systems
- Power controllers and temperature regulation systems



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ZVT-E-IF-10K3A1

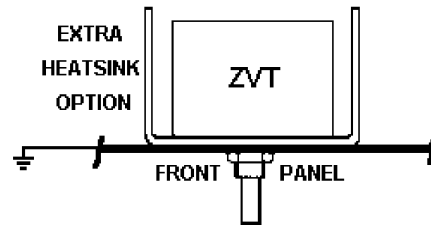
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INSTALLATION INSTRUCTIONS

1. Peel adhesive back off dial and fit over 10mm panel hole.
2. See the table below for heatsink requirements & expected ambient temperature, to calculate the maximum current rating.
3. Check that the voltage rating and sensor type are correct.
4. For ZVT-16-IF only: Apply a 'thin smear' of heatsink paste for good thermal coupling and Insert unit through 10mm panel hole. Affix dial and extra heatsink as appropriate, ensuring equipotential bonding (earth bonding) and tighten front nut.
5. Before fitting control knob, turn temperature control fully anti-clockwise to the mechanical stop.
6. Fit and align control knob to coincide with the dial mark below 0°C
7. Make wire connections to rear terminals. To monitor supply and load conditions fit neons across the relevant terminals.
- 8.

| MAXIMUM OUTPUT rms CURRENT (A) | | | |
|--------------------------------|------|------|------|
| Max unit temperature | 20°C | 50°C | 65°C |
| Without extra heatsink | 10 | 7 | 5 |
| + heatsink 100 x 100 x 3mm | 14 | 12 | 10 |
| + heatsink 170 x 170 x 3mm | 16 | 16 | 15 |



OPERATION

9. Note that unit will not operate or indicate correctly and triac will not latch on with loads of less than 200W.
10. Set Prop. Band (internally [25-IF] or via rear panel [16-IF]) fully anti-clockwise.
11. Switch and turn dial to required temperature and allow system to heat up to a steady state. If temperature is unstable turn prop. band clockwise in small steps over several minutes until stable conditions are obtained, characterised by a steady output On/Off ratio.
12. If output remains off, check for open or short circuit in sensor circuit, and if output stays on, check position of sensor relative to heated zone. The correct sensor temperature set points for resistance are:
 - a. 0°C @ 32.6kΩ
 - b. 25°C @ 10kΩ
 - c. 100°C @ 680Ω
13. Do not use a megger or other high voltage equipment as the voltage rating may be exceeded and damage the internal components.

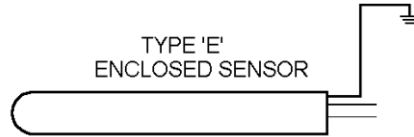
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DIMENSIONS AND SPECIFICATIONS

THIS UNIT MUST BE EARTHED



| | |
|----------------------|--------------------|
| PROBE LENGTH | 50 mm |
| PROBE DIAMETER | 6.4mm |
| OVERALL LENGTH | 1METRE |
| LIQUID TIME CONSTANT | 14 SECONDS |
| PROBE CASE | STAINLESS STEEL |
| CABLE | 7/0.2 PTFE, BSG210 |

NOTE: Good thermal bonding of the sensor is required, where appropriate, to ensure controller performance reaction time, i.e. for thermal bonding of sensor to metal heatsink, it is recommended that heatsink paste is used.

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 |
|--------|-----------|---|
| 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 |
| X10511 | ZVT1/2-16 | 16A Zero voltage temperature controller |
| X10542 | ZVT1/2-25 | 25A Zero voltage temperature controller |
| P01.1 | COS | UAL Conditions of Sale |

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.

PRODUCT CODE AND RELATED PRODUCT CODE

| Product Code | Product Description |
|--------------|--|
| A26036 | ZVT-E-IF-10K3A1 Enclosed, inhibited flicker sensor |



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