

X10812

Components and Spares | Sensors

Space Temperature Sensor

AX-TE-RT, 10K3A1 NTC Thermistor



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KEY FEATURES:

- ✓ Compatible with most HVAC systems
- ✓ High accuracy NTC thermistor element ($\pm 0.2^{\circ}\text{C}$ from 0°C to 70°C)
- ✓ Surface or conduit box mounting – no additional brackets required
- ✓ Flame-retardant ABS enclosure (VO rated)
- ✓ Optional setpoint version available (1–11k Ω range)
- ✓ Fast temperature response with ventilated housing

APPLICATIONS:

- Room temperature monitoring
- HVAC control systems
- Building automation
- Smart energy management

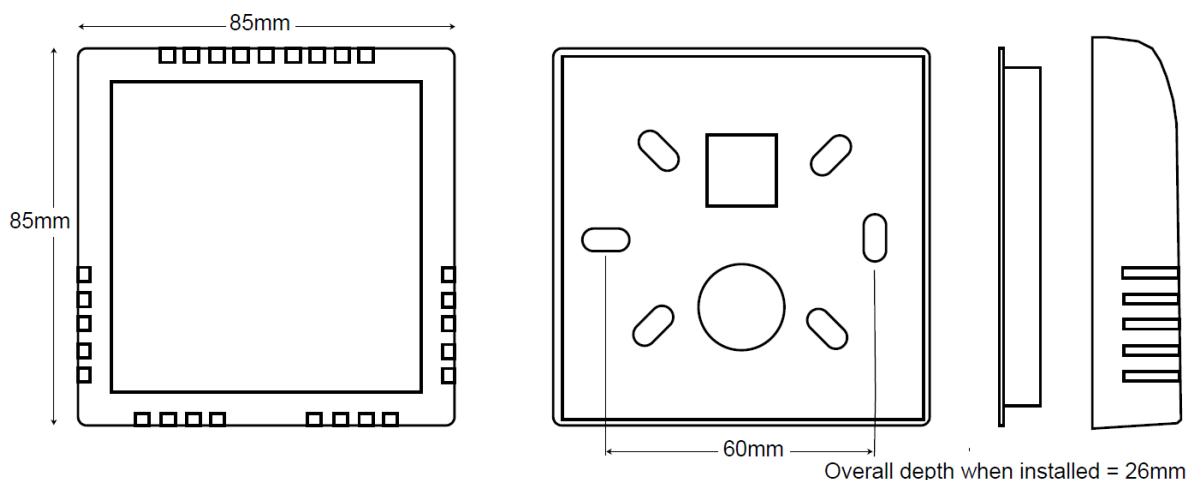
The **AX-TE-RT 10K3A1 NTC Thermistor** is a high-performance room temperature sensor, specifically engineered for compatibility with a wide range of HVAC control systems.

Designed for fast response and accuracy, it features a compact yet durable housing with integrated ventilation slots to ensure optimal airflow and temperature monitoring. Its high-quality NTC thermistor ensures precision readings, making it ideal for commercial and industrial applications where reliable environmental control is essential.


TECHNICAL SPECIFICATIONS

Sensor Type	NTC Thermistor (10K3A1)
Output	2-wire thermistor and PTC platinum variants available
Accuracy	Thermistor: $\pm 0.2^{\circ}\text{C}$ (0°C to 70°C) Platinum: $\pm 0.35^{\circ}\text{C}$ (0°C to 100°C)
Setpoint Output (Optional)	1 to 11k Ω
Material	VO Rated Flame-Retardant ABS
Terminals	Rising clamp, suitable for 0.5–1.5mm ² cable
Ambient Temperature Range	-10°C to $+60^{\circ}\text{C}$
Dimensions	85 x 85 x 26mm
Mounting	Direct surface or conduit box fixing
Country of Origin	United Kingdom

DIMENSIONS



YOU MUST READ THIS BEFORE INSTALLATION

 ELECTRICAL SAFETY WARNING: RISK OF ELECTRIC SHOCK Always consult the Installation & Maintenance Instructions before connecting this product to the power supply. WARNING: Disconnect Power Before Servicing Ensure the electrical supply is safely disconnected before connecting to any supply, load, or control terminals.	 INSTALLATION REQUIREMENTS WARNING: Installation by Qualified Personnel Only This product must only be installed or fitted by a competent, qualified installer familiar with the relevant electrical standards and installation practices.	 USER RESTRICTIONS WARNING: Not for Use by Vulnerable Individuals This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or instructed by a person responsible for their safety.	 USAGE ENVIRONMENT WARNING: Industrial Use Only This is an industrial-grade product and is not intended for household use.	 HOT SURFACE WARNING WARNING: Hot Surfaces On certain models, surfaces marked with this symbol become hot during use. Avoid direct contact and follow all thermal safety precautions.
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INSTALLATION

The AX-TE-RT sensor should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment which it is to be connected to. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the sensor is being connected to. As a general rule, screened cable should be used to connect the sensor to a BMS or other controller. Please note that none of the AX-TE-RT sensors are suitable for use with mains voltage. The AX-TE-RT is designed to be fixed directly to an internal wall using the lugs at the base of the housing. The type of fixing used will depend on the material that the sensor is being mounted on.

CONNECTIONS

Passive Sensors:

Passive sensors are polarity independent. Wires should be stripped and screwed into the two way terminal block in the main body of the sensor housing. Do not over-tighten the terminal screws as excessive force can cause damage to the terminal block and housing.

If screened cable is used, the shortest possible section of outer sheath should be removed to effect wiring. As there is no earth connection in the sensor, the screen must be connected to a functional earth elsewhere (often provided at the BMS or HVAC controller) in accordance with the instructions for the equipment that the AX-TE-RT is to be connected to.

Connections

- 1 Thermistor
- 1 Thermistor
- 3 Setpoint CW (-SP Version)
- 4 Setpoint wiper (-SP Version)
- 5 Setpoint CCW (-SP Version)

Trend sensor scaling

The following sensor scaling is for the AX-TE-RT passive sensor. If using SET to configure the controller, the AX-TE-RT has the same characteristics as a Trend Thermistor. If the sensor is being scaled manually the following information should be used for IQ2xx controllers with firmware v2.1 and above and IQ3 series controllers.

Sensor Type Module Settings

Set the sensor type scaling mode to 5 – characterise

Y = 1	11=2.641	O1=50
E=3	12=3.47	O2 = 40
U = 50	13=4.46	O3 = 30
L = - 5	14=6.66	O4 = 10
P = 6	15=7.668	O5=0
	16=8.102	O6=5

DOCUMENTS

Other documents available on request, which may be appropriate for your application:

Code	Identity	Description
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
A26037	Space Temperature Sensor - 10K3A1 NTC Thermistor