AX-TE-Ox
Outside Air Temperature Sensor

AXIO

Product overview

A range of Outside Air Temperature Sensors to interface with a wide variety of HVAC control equipment. Units are available with a high quality thermistor element or with an active linear output (refer to the AX-TE-OTX-W datasheet, available separately).

The Sensor housing offers IP65 protection against water and particulate ingress. The element is mounted within a thermally conductive button through the side of the housing, to ensure accurate measurement of external temperatures.

Features

- IP65 Housing
- Large range of sensor options
- Enclosure available in white
- Direct fixing, no extra brackets required
- Flame retardant ABS plastic
- Can be branded

Product specifications

Output:		Range of two wire thermistor and PTC platinum elements providing variable resistance
Accuracy:	Thermistor:	±0.2˚C between 0˚C and 70˚C
	Platinum:	±0.35˚C between 0˚C and 100˚C (PT100a and PT1000a and Nickel)
Enclosure Material:		Flame retardant ABS plastic
Ambient Temperature Range:		-40°C to 60°C
Terminals:		Rising Clamp for 0.5-1.5mm² Cable
Housing Dimensions:		92mm diameter x 52mm height
Fixing Holes:		2 off, 5mm holes on 92mm centres
Probe Dimensions:		150mm x 6mm standard
Protection:		IP65
Country of Origin:		United Kingdom

Part No	System Examples	Thermistor	Part No	System Examples	Thermistor
AX-TE-OT	Trend, Innotech, Priva, Trane	10K3A1 NTC	**AX-TE-O50K**	Priva	50K6A1 NTC
AX-TE-O3K	Alerton	3K3A1 NTC	**AX-TE-O2.2K**	Johnsons	2.2K NTC
AX-TE-OA	York, Alerton	10K4A1 NTC	**AX-TE-O100**	Serek	PT100a Platinum
AX-TE-OH	Honeywell	20K6A1 NTC	**AX-TE-O1K**	Cylon	PT1000a Platinum
AX-TE-OD	Drayton	30K6A1 NTC	**AX-TE-ON1K**	Siemens	Ni1000a Nickel (TCR)
AX-TE-OSAT	Satchwell (SAT1)	SAT1 NTC	**AX-TE-OTAC**	TAC	1K87A1 NTC

Installation

The AX-TE-Ox 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-Ox sensors are suitable for use with mains voltage.

The AX-TE-OT-E is designed to be fixed directly to an external wall using the lugs at the side of the housing. The type of fixing used will depend on the material that the sensor is being mounted to.

IMPORTANT NOTE: The AX-TE-Ox MUST be installed out of direct sunlight. Installation on a north facing wall will provide the best results.

Connection

These 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-Ox is to be connected to.

Trend sensor scaling

The following sensor scaling is for the AX-TE-OT passive sensor. If using SET to configure the controller, the AX-TE-OT has the same characteristics as a Trend Thermistor.

Prior to commissioning, ensure that the universal input jumper is set to T to accept a thermistor input. If the sensor is being scaled manually the following information should be used for IQ2xx controllers with firmwire v2.1 and above and IQ3 series controllers. For scaling on older controllers, please refer to the engineering data in the Axio catalogue.

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