

SOD-T Outdoor Temperature Sensor

Features

- Outdoor temperature measurement
- Thermistor, NI and PT sensing elements to fit your system
- Simple and secure installation
- Wide range of temperature probes



Applications

- Outside air temperature measurements for summer winter compensation, energy optimization and economizer.
- Frost protection control of outside air dampers

Temperature Sensor

The sensor measures the temperature by use of a NTC, PT, or NI-sensing element. The sensing element is either a glass packed thermistor with a negative temperature coefficient, a platinum film or a nickel thin layer based probe. Its resistance changes according to the temperature. The change follows a specified curve. Contact our sales department for curves not yet listed below.

Ordering

Item Name	Item Code	Probe	Definition	Comments
SOD-Tn3	40-20 0058	NTC 3kΩ at 25°C	B _{25/50} 3935	
SOD-Tn10	40-20 0059	NTC 10kΩ at 25°C	B _{25/50} 3935	Vector Standard
SOD-Tn11	40-20 0060	NTC 10kΩ at 25°C	B _{25/50} 3630	
SOD-Tn20	40-20 0061	NTC 20kΩ at 25°C	B _{25/50} 4200	
SOD-Tn100	40-20 0062	NTC 100kΩ at 25°C	B _{25/50} 4200	
SOD-Tp1	40-20 0063	PT100	EN60751	
SOD-Tp2	40-20 0064	PT1000	EN60751	
SOD-Tk5	40-20 0065	NI1000	5000 ppm/K	

Accessories

Depending on installation requirement, add cable gland or conduit connector. SOD-T does not include cable glands or conduit connectors. They need to be ordered separately.

Item Name	Item Code	Description/Option
AMC-1	20-10 0035	Cable gland PG9 for cables Ø 4 – 8 mm (AWG 6 – 1)
AMC-2	20-10 0067	Conduit connector NPT 1/2

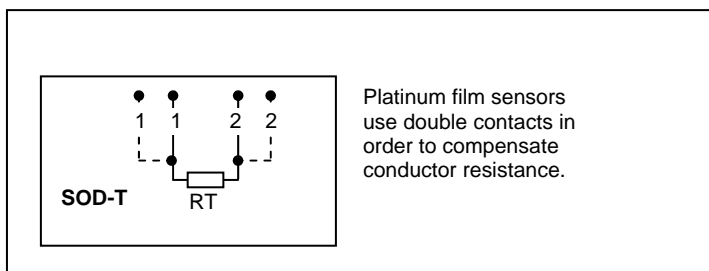
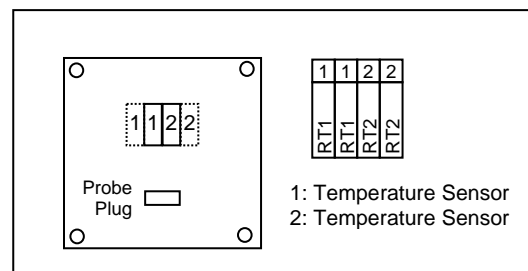
Installation

Outside air probes must be installed on a flat vertical surface protected from direct sunlight and rain.

- The cable gland must face downwards.
- To install the sensor, remove cover
- Place seal and washer below the long mounting screw. Securely fix it to wall.
- Thread wires through cable gland or conduit connector
- Connect the wires according to the wiring diagram to the measuring circuit in the cover:
 - The Thermistors require two conductors; normally 18ga unshielded twisted pair.
 - The PT1000 sensors come with each two terminal connectors in order to connect up to four conductors for compensating conductor resistance.
- Tighten cable gland
- Assemble the cover with the base plate. Make sure the seal in the seal groove of the cover is not damaged and in place.
- Tighten the four screws of the cover with moderate torque to complete the installation.

Technical Specification

Sensing Probe	Thermistor:	NTC
	Accuracy:	-40...0°C (-40...32°F): 0.5 K 0...50°C (32...122°F): 0.2 K 50...100°C (122...212°F): 0.5 K
	Platinum-Film:	PT according EN 60751
	Accuracy	EN 60751, Class B
	Nickel Thin Layer:	1000 Ω at 0°C, 5000 ppm/K
	Accuracy	DIN 43760
Connection	Terminal Connectors	For wire 0.34...2.5 mm ² (AWG 24...12)
Environment	Operation	To IEC 721-3-3
	Climatic Conditions	class 3 K5
	Temperature	-40...100°C (-40...212°F)
	Humidity	<95% R.H. non-condensing
	Transport & Storage	To IEC 721-3-2 and IEC 721-3-1
	Climatic Conditions	class 3 K3 and class 1 K3
	Temperature	-40...100°C (-40...212°F)
	Humidity	<95% R.H. non-condensing
	Mechanical Conditions	class 2M2
Standards	conform according to	EN 61 000-6-1/ EN 61 000-6-3
	EMC Standard 89/336/EEC	
	EMEI Standard 73/23/EEC	
	Product standards	
	Automatic electrical controls for household and similar use	EN 60 730 -1
	Special requirement on temperature dependent controls	EN 60 730 - 2 - 9
	Degree of Protection	IP65 to EN 60 529
	Safety Class	III (IEC 60536)
Housing	Material	Fire proof PC + ABS plastic
	Dimensions	Cover: (H x W x D) 33 x 60 x 50 mm (1.3 x 2.4 x 2 in)
	Weight (including package)	80 g (2.8 oz)

Wiring Diagram

Terminal Connections

Dimension
