

TS-XX-R Room Temperature Sensor

Features

- Indoor temperature measurement.
- Variable Thermistors. PT or NI sensing elements to fit your system
- Simple and secure installation

Applications

- Indoor air temperature sensor for comfort control
- Frost protection sensor

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 or a platinum film sensor or a thin nickel layer on a ceramic substrate. Its resistance changes according to the temperature. The change follows a specified curve. Below is a list of available sensor elements, curves and accuracies:



Item name	Sensing element	Curve	Compatible with
N18	Thermistor 1.8k at 25 °C	Curve 5	TAC, CSI
N3	Thermistor 3k at 25 °C	Curve 6	Alerton
N10	Thermistor 10k at 25 °C	Curve 24	Hysine, Alerton,ALC, Delta,Trane, CSI
N11	Thermistor 10k at 25 °C	Curve 7	Andover, Invensys, Carrier, KMC
N20	Thermistor 20k at 25 °C	Curve 20	Honeywell
N100	Thermistor 100k at 25 °C	Curve 9	Siemens SBT
Tp1	PT100	0.3851ohm/K	Honeywell
Tp2	PT1000	3.851ohm/K	Johnson Control
TK5	NI1000	5000ppm/k	Siemens SBT

Ordering

Ordering number:TS-XX-R

XX indicates the sensor element optional, see table above.

For example:TS-N10-R

-N10 indicates the sensor element is Thermistor 10k .

Construction

This sensor is constructed to high quality standards. The housing is available in different colors with RAL9003 as the standard. It is made of fire proof ABS plastic and the unobtrusive design and size will blend into any interior decoration. A metal mounting plate that fits on most commercially available recessed conduit boxes guarantees a save installation.

Installation

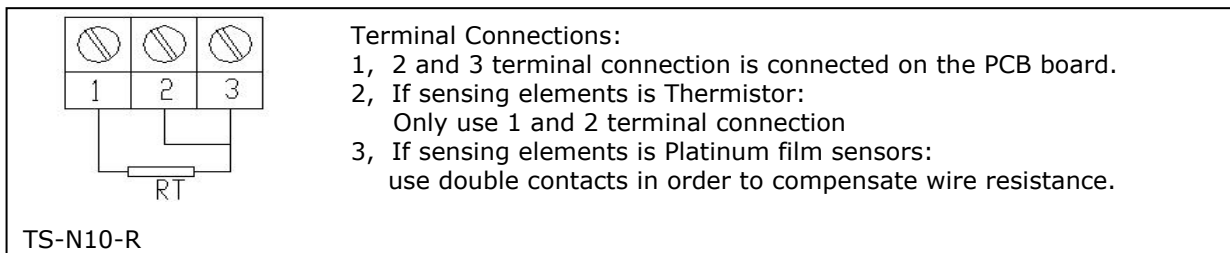
Mount the temperature sensor on a flat interior wall of the room to be controlled. Do avoid obstructions such as shelves, curtains and recesses. Do not place near heat sources, draft channels. Do not expose to direct sunlight.

- When installing the unit, fix the base plate first, connect the electrical connections then hook on the cover and secure it.
- The end of the conduit at the sensor must be sealed to prevent false measurements due to draughts through the conduit.
- 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 PT100, PT1000 and NI1000 sensors come with each two terminal connectors in order to connect up to four conductors for compensating conductor resistance.

Technical Specification

Sensing Element	Thermistor: Range Accuracy	NTC -30----70°C ±0.5k
	Platinum-Film: Range Accuracy	PT, 0.3851ohm/k -30----70°C ±0.3k
	Nickel Thin Layer Range Accuracy	NI, 5000 ppm/k -30----70°C ±1k
Connection	Connection Terminals	2.5 mm ²
Environment	Operation Climatic Conditions Temperature Humidity	To IEC 721-3-3 class 3 K5 -40...70°C <95% r.h.
	Transport & Storage Climatic Conditions Temperature Humidity Mechanical Conditions	To IEC 721-3-2 and IEC 721-3-1 class 3 K3 and class 1 K3 -40...80°C <95% r.h. class 2M2
Standards	CE conform according to EMC Standard 89/336/EEC EMEI Standard 73/23/EEC	EN 61 000-6-1/ EN 61 000-6-3
	Automatic electrical controls for household and similar use	EN 60 730 -1
	Special requirement on temperature dependent controls	EN 60 730 - 2 - 9
	Pollution Class	Normal acc. To EN 60 730,RoHS compliant
	Degree of Protection	IP56 to EN 60 529
Housing Materials	Cover & Mounting Plate	Fire proof ABS plastic
General	Dimensions [mm]	Cover: 42 x 112 x 88 (H x W x D)
	Weight (including package)	135g

Wiring Diagram



Dimension [mm]

