TE10000 Series

Immersion NTC Temperature Sensors

Applications

The TE10000 Series NTC temperature sensors provide economical solutions for temperature sensing needs in immersion applications.

Features

- Highly sensitive thermistor sensing element
- Same characteristic for each sensor through calibration, no sensor/controller matching problems
- Very accurate, each sensor factory calibrated

General

A highly sensitive thermistor element provides accurate measurement of temperature. The sensor is watertight and its Ni-plated brass bulb is suitable for direct immersion into pipes with or without wells.

Mounting

The sensor is position sensitive. It only senses the temperature at the place where it is installed. Therefore, in order to achieve a good temperature measurement, it is extremely important to choose an ideal place for installing the sensor.

Specifications

Model Numbers	T10K-03	Immersion type with plastic electrical box and a male 1/2” (15 mm) BSP pipe connection, for direct immersion into a pipe with a thermal well through a threaded welding socket, provides a 8x120 mm probe. Add thermal compound before inserting the probe if the well does not include thermal compound.
Sensing Element	NTC thermistor, 10 kΩ@25ºC, See Table 1 for temperature/resistance characteristics	
Probe Material	Ni-plated brass	
Range	0-50ºC	
Protection Class	IP54	
Wire Connections	Screw-down terminals	
Ambient / Storage Temperature Limits	0 to 50ºC / -30 to 50ºC	
Maximum Temperature of Housing	70ºC	
Agency Approval	CE Mark compliant pending	
Dimensions	See Fig. 1: Dimensions in mm	
Shipping Weights	0.3 kg (0.6 lb.)	

The performance specifications above are nominal and subject to tolerances and application variables of generally acceptable industry standards. The Manufacturer shall not be liable for damages resulting from misapplication or misuse of its products.

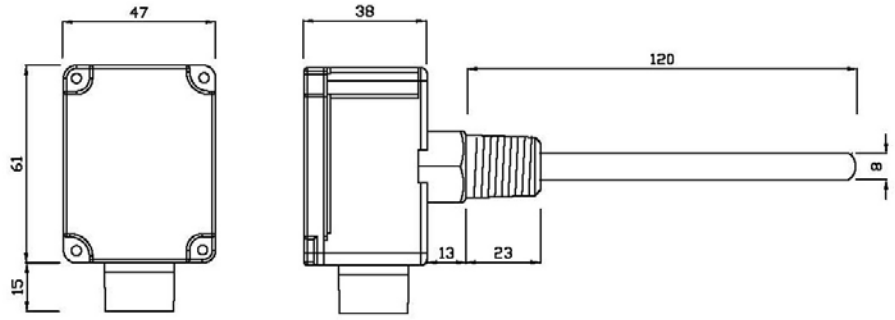
Table 1 - Resistance versus Temperature of TE10000 Series NTC Temperature Sensors

Temperature ℃	Resistance Ω	Temperature ℃	Resistance Ω	Temperature ℃	Resistance Ω
0	32600	17	14318	34	6810.5
1	30985	18	13676.9	35	6534
2	29459	19	13068.1	36	6270
3	28017	20	12489.8	37	6018
4	26654	21	11940.3	38	5778
5	25365	22	11418	39	5548.7
6	24145.2	23	10921.4	40	5330
7	22991.4	24	10449.2	41	5120
8	21899.2	25	10000	42	4920
9	20865.2	26	9572.6	43	4729
10	19885.8	27	9165.8	44	4547
11	18957.9	28	8778.5	45	4372
12	18078.6	29	8409.6	46	4205
13	17245	30	8058.3	47	4045
14	16454.5	31	7723.6	48	3893
15	15704.7	32	7404.6	49	3746.3
16	14993.2	33	7100.58	50	3606

Wiring Notes

1. All wiring to sensor is of low voltage. All sensors require only 2 leads to the control.
2. 22 AWG twisted shielded pair double-insulated cable is recommended as sensor wiring and its length must not exceed 50 m.
3. Do not bundle and run power wiring and sensor wiring in the same conduit.
4. Run the sensor wiring away from any electric motors or power wiring. Failure to do so may result in poor thermostat performance due to electrical noise.

Figure 1: Dimensions in mm



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