

# TA Series

## Averaging Temperature Sensors

### Product Overview

TA Series averaging temperature sensors include a junction box housing connected to a copper sensing probe. Temperature is read along the entire length of the copper probe, and the readings are averaged. All TA Series sensors are available with multiple probe lengths and a selection of sensor types for flexibility. The devices are warranted for five years.

### NOTICE

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- Read and understand the instructions before installing this product.
- Turn off all power supplying equipment before working on it.
- The installer is responsible for conformance to all applicable codes.

If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this material.

### Product Identification

	<i>Flexible</i>		
TA	<i>Probe Length</i>	<i>Sensor Type</i>	<i>Cal Certificate</i>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	M = 6' (1.8m)* H = 12' (3.6m) J = 24' (7.3m)	B = 100R platinum, RTD C = 1k platinum, RTD D = 10k, T2, Thermistor H = 10k, T3, Thermistor I = 1k Balco (Nickel-iron) RTD J = 10k, Dale, Thermistor M = 20k, NTC N = 1800 ohm, Thermistor P = 10mV/C R = 10k US, Thermistor	0 = None 2 = 3-point NIST calibration

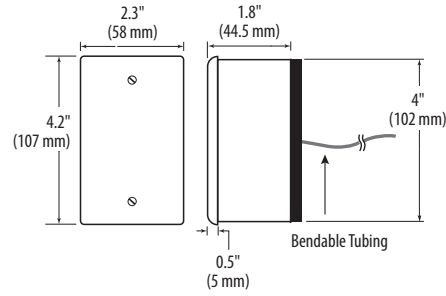
\* Available only with sensor types I, J, N, and P.

### Specifications

<b>Wiring</b>	22 AWG; 2-wire: RTD/thermistor
<b>Operating Temperature</b>	-25 to 105 °C (-13 to 221 °F)*
<b>WARRANTY</b>	
<b>Limited Warranty</b>	5 years

\*Room temperature offset documented on each unit.

## Dimensions



## Installation

1. Drill a 1/16" diameter hole in the duct for the sensor probe and lug.
2. Affix the foam gasket material to the probe side of the junction box.
3. Insert the probe into the duct.
4. Secure the junction box housing to the outer surface of the duct using self-tapping screws (not included).
5. Wire as described below.

Veris ID	Sensor Type	Value	Wire Color
B	RTD	100 Ω Platinum	Red
C	RTD	1000 Ω Platinum	Orange
I	RTD	1000 Ω Balco (nickel-iron)	Black
N	Thermistor	1800 Ω	Green
K	Thermistor	10k Ω with 11k Ω Shunt	Red/Yellow
J	Thermistor	10k Ω Dale Curve	Yellow/White
D	Thermistor	10k Ω Type T2	Yellow
H	Thermistor	10k Ω Type T3	Yellow/Red
P	Linitemp	+15 V	Orange
		Signal	White
		Common	Blue

# Thermistor Table

Class	Pt RTD		Balco RTD	THERMISTOR								10k Type 2	10k Type 3
	100 Ohm	1000 Ohm	1000 Ohm	2.2k	3k	10k Type 2	10k Type 3	10k Dale	20k	100k	10k Type 2		
<b>Accuracy</b>	±0.3°C 0.00385 curve	±0.3°C 0.00385 curve	±1% @70°C	±0.2°C 0/70°C	±0.2°C 0/70°C	±1.0°C -50/150°C	±0.2°C 0/70°C	±0.2°C -20/70°C	Consult Factory	Consult Factory	±0.1°C 20/70°C ±0.2°C 0/20°C	±0.1°C 0/70°C	
<b>Temp. Response*</b>	PTC	PTC	PTC	NTC	NTC	NTC	NTC	NTC	NTC	NTC	High Accuracy		

\*PTC: Positive Temperature Coefficient  
 \*NTC: Negative Temperature Coefficient

### STANDARD RTD AND THERMISTOR VALUES (Ohms Ω)

°C	°F	100 Ohm	1000 Ohm	1000 Ohm	2.2k	3k	10k Type 2	10k Type 3	10k Dale	20k NTC	100k	10k Type 2	10k Type 3
-50	-58	80.306	803.06	740.46	154,464	205,800	692,700	454,910	672,300	1,267,600	-	692,700	454,910
-40	-40	84.271	842.71	773.99	77,081	102,690	344,700	245,089	337,200	643,800	3,366,000	344,700	245,089
-30	-22	88.222	882.22	806.02	40,330	53,730	180,100	137,307	177,200	342,000	1,770,000	180,100	137,307
-20	-4	92.160	921.60	841.00	22,032	29,346	98,320	79,729	97,130	189,080	971,200	98,320	79,729
-10	14	96.086	960.86	877.46	12,519	16,674	55,790	47,843	55,340	108,380	553,400	55,790	47,843
0	32	100.000	1,000.00	913.66	7,373	9,822	32,770	29,588	32,660	64,160	326,600	32,770	29,588
10	50	103.903	1,039.03	952.25	4,487	5,976	19,930	18,813	19,900	39,440	199,000	19,930	18,813
20	68	107.794	1,077.94	991.82	2,814	3,750	12,500	12,272	12,490	24,920	124,900	12,500	12,272
25	77	109.735	1,097.35	1,013.50	2,252	3,000	10,000	10,000	10,000	20,000	100,000	10,000	10,000
30	86	111.673	1,116.73	1,035.18	1,814	2,417	8,055	8,195	8,056	16,144	80,580	8,055	8,195
40	104	115.541	1,155.41	1,077.68	1,199	1,598	5,323	5,593	5,326	10,696	53,260	5,323	5,593
50	122	119.397	1,193.97	1,120.52	811.5	1,081	3,599	3,894	3,602	7,234	36,020	3,599	3,894
60	140	123.242	1,232.42	1,166.13	561.0	747	2,486	2,763	2,489	4,992	24,880	2,486	2,763
70	158	127.075	1,270.75	1,210.75	395.5	527	1,753	1,994	1,753	3,512	17,510	1,753	1,994
80	176	130.897	1,308.97	1,254.55	284.0	378	1,258	1,462	1,258	2,516	12,560	1,258	1,462
90	194	134.707	1,347.07	1,301.17	207.4	-	919	1,088	917	1,833	9,164	919	1,088
100	212	138.506	1,385.06	1,348.38	153.8	-	682	821	679	1,356	6,792	682	821
110	230	142.293	1,422.93	1,397.13	115.8	-	513	628	511	1,016	5,108	513	628
120	248	146.068	1,460.68	1,447.44	88.3	-	392	486	389	770	3,894	392	486
130	266	149.832	1,498.32	1,496.28	68.3	-	303	380	301	591	3,006	303	380
<b>Sensor Codes</b>		<b>B</b>	<b>C</b>	<b>I</b>	<b>E</b>	<b>F</b>	<b>D</b>	<b>H</b>	<b>J</b>	<b>M</b>	<b>T</b>	<b>W</b>	<b>Y</b>

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