

TA SERIES

High Accuracy Averaging Sensors



The TA Series is a flexible TA sensor which averages the temperature read across the entire length of the copper tubing, making it ideal for duct temperature measurements.

TA Series sensors average the measured temperature across the duct in 6', 12', or 24' (1.8 m, 3.6 m, or 7.3 m) lengths for the flexible probe and 12", 18", 24", 30", 36", or 48" (0.3 m, 0.5 m, 0.6 m, 0.8 m, 0.9 m, or 1.2 m) for the rigid probe. This allows you to cover all your averaging applications with one line.

SPECIFICATIONS

Wiring	22 AWG; 2-wire: RTD/Thermistor
Operating Temp	-25 to 105 °C (-13 to 221 °F)*

LINITEMP OPTION

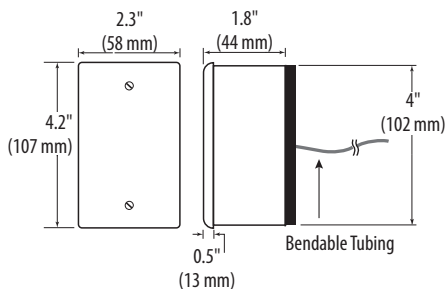
Input Power	Class 2; 5 to 30 Vdc
Output	10mV/°C
Operating Temp	-25 to 105 °C (-13 to 221 °F)
Calibration Error	1.5 °C (2.7 °F) typical; 2.5 °C (4.5 °F) max. at 25 °C (77 °F)*
Error over Temp	1.8 °C (3.24 °F) typical; 3.0 °C (5.4 °F) max. over 0 to 70 °C (32 to 158 °F) range; 2.0 °C (3.6 °F) typical, 3.5 °C (6.3 °F) max. over -25 to 105 °C (-13 to 221 °F) range

WARRANTY

Limited Warranty	5 years
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* Room temperature offset documented on each unit.

DIMENSIONAL DRAWING



APPLICATIONS

- Heat exchangers
- Chillers

ORDERING INFORMATION

	Flexible Probe Length	Sensor Type	Calibration Certificate
TA	<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, Linitemp R = 10k US, Thermistor	0 = None 1 = 1-point cal validation 2 = 2-point cal validation
Example:			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TA	H	C
			2
* Available with sensor types J, N, P.			

THERMISTOR TABLE

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

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

STANDARD RTD AND THERMISTOR VALUES (Ohms Ω)

°C	°F	100 Ohm	1000 Ohm	1000 Ohm	10k Type 2	10k Type 3	10k Dale	10k "G" US	20k NTC
-50	-58	80.306	803.06	740.46	692,700	454,910	672,300	441,200	1,267,600
-40	-40	84.271	842.71	773.99	344,700	245,089	337,200	239,700	643,800
-30	-22	88.222	882.22	806.02	180,100	137,307	177,200	135,300	342,000
-20	-4	92.160	921.60	841.00	98,320	79,729	97,130	78,910	189,080
-10	14	96.086	960.86	877.46	55,790	47,843	55,340	47,540	108,380
0	32	100.000	1,000.00	913.66	32,770	29,588	32,660	29,490	64,160
10	50	103.903	1,039.03	952.25	19,930	18,813	19,900	18,780	39,440
20	68	107.794	1,077.94	991.82	12,500	12,272	12,490	12,260	24,920
25	77	109.735	1,097.35	1,013.50	10,000	10,000	10,000	10,000	20,000
30	86	111.673	1,116.73	1,035.18	8,055	8,195	8,056	8,194	16,144
40	104	115.541	1,155.41	1,077.68	5,323	5,593	5,326	5,592	10,696
50	122	119.397	1,193.97	1,120.52	3,599	3,894	3,602	3,893	7,234
60	140	123.242	1,232.42	1,166.13	2,486	2,763	2,489	2,760	4,992
70	158	127.075	1,270.75	1,210.75	1,753	1,994	1,753	1,990	3,512
80	176	130.897	1,308.97	1,254.55	1,258	1,462	1,258	1,458	2,516
90	194	134.707	1,347.07	1,301.17	919	1,088	917	1,084	1,833
100	212	138.506	1,385.06	1,348.38	682	821	679	816.8	1,356
110	230	142.293	1,422.93	1,397.13	513	628	511	623.6	1,016
120	248	146.068	1,460.68	1,447.44	392	486	389	481.8	770
130	266	149.832	1,498.32	1,496.28	303	380	301	376.4	591
Sensor Codes		B	C	I	D	H	J	R	M

To compute Linitemp Temperature
 mV reading/10 - 273.15 = Temperature in °C

