



Averaging Temperature Sensors

TA Series



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 30VDC
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

* Room temperature error documented on each unit.

High Accuracy Specialty Sensors

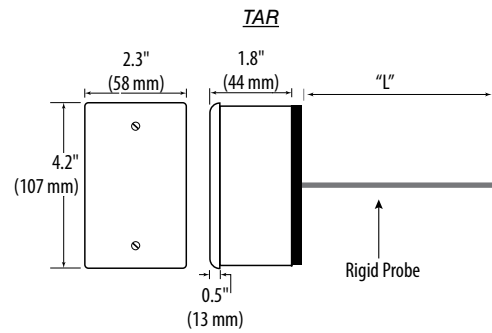
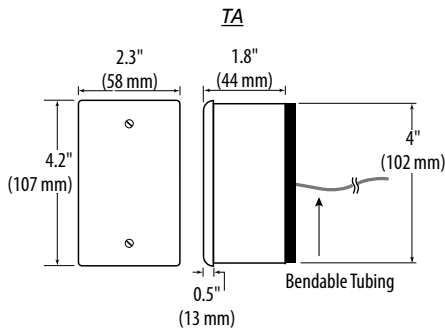
FEATURES

- Temperature averaging 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...cover all your averaging applications with one line
- Copper tubing enhances response time

DESCRIPTION

The **TA Series** offers two styles of sensors, the flexible TA and the rigid TAR. These sensors average the temperature read across the entire length of the copper tubing, making them ideal for duct temperature measurements.

DIMENSIONAL DRAWINGS



Class	Pt RTD		Balco RTD					
Type	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	1000.00	913.66	32,770	29,588	32,660	29,490	64,160
10	50	103.903	1039.03	952.25	19,930	18,813	19,900	18,780	39,440
20	68	107.794	1077.94	991.82	12,500	12,272	12,490	12,260	24,920
25	77	109.735	1097.35	1,013.50	10,000	10,000	10,000	10,000	20,000
30	86	111.673	1116.73	1,035.18	8,055	8,195	8,056	8,194	16,144
40	104	115.541	1155.41	1,077.68	5,323	5,593	5,326	5,592	10,696
50	122	119.397	1193.97	1,120.52	3,599	3,894	3,602	3,893	7,234
60	140	123.242	1232.42	1,166.13	2,486	2,763	2,489	2,760	4,992
70	158	127.075	1270.75	1,210.75	1,753	1,994	1,753	1,990	3,512
80	176	130.897	1308.97	1,254.55	1,258	1,462	1,258	1,458	2,516
90	194	134.707	1347.07	1,301.17	919	1,088	917	1,084	1,833
100	212	138.506	1385.06	1,348.38	682	821	679	816.8	1,356
110	230	142.293	1422.93	1,397.13	513	628	511	623.6	1,016
120	248	146.068	1460.68	1,447.44	392	486	389	481.8	770
130	266	149.832	1498.32	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

ORDERING INFORMATION

<p>TA</p> <p><u>Flexible Probe Length</u></p> <p>*M = 6' (1.8m) H = 12' (3.6m) J = 24' (7.3m)</p>	<p><u>Sensor Type</u></p> <p>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</p>	<p><u>Cal Certificate</u></p> <p>0 = None 1 = 1 point Cal validation 2 = 2 point Cal validation</p>	<p>TAR</p> <p><u>Rigid Probe Length "L"</u></p> <p>E = 12" (0.3m) F = 18" (0.5m) G = 24" (0.6m) K = 36" (0.9m) P = 48" (1.2m)</p>	<p><u>Sensor Type</u></p> <p>B = 100R platinum, RTD C = 1k platinum, RTD D = 10k, T2, Thermistor H = 10k, T3, Thermistor J = 10k, Dale, Thermistor M = 20k, NTC N = 1800 ohm, Thermistor P = 10mV/C, Linitemp R = 10k US, Thermistor</p>	<p><u>Cal Certificate</u></p> <p>0 = None 1 = 1 point Cal validation** 2 = 2 point Cal validation***</p>
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Examples:

TA	H	C	2
TAR	F	N	1

* Available with sensor types J,N,P
 ** The 18", 24", 30", 36", and 48" Rigid probes are calibrated to 22.5°C only.
 *** Not available for Rigid probes longer than 12".

ACCESSORIES

Klipet mounting clip for TA probe (AA64)
 Temperature range converter, resistive to 4-20mA (AA10xxxx)

