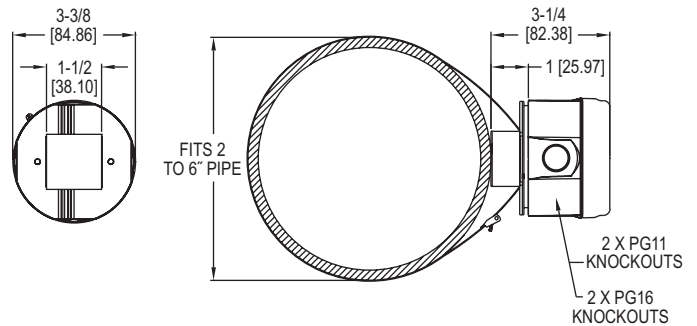




Series TE-SNW Weather Resistant Surface Temperature Sensor

Specifications - Installation and Operating Instructions



The **Series TE-SNW Surface Temperature Sensor** non-intrusively measures the process temperature in hot and cold water loops in buildings. An adjustable metal strap can tightly fit around 2 through 6" pipe sizes, allowing the surface area of the copper plate on the sensor to make good contact with the pipe surface. In order to work with most common building controllers, the output of the sensor can be chosen from 6 different RTD and Thermistor curves. Additional features include a quarter turn twist off cap that is chained to the housing to prevent it from getting lost, and multiple knockout locations and sizes to reduce installation time.

SPECIFICATIONS

Accuracy: Thermistor Temperature Sensor: $\pm 0.2^{\circ}\text{C}$ @ 25°C ($\pm 0.36^{\circ}\text{F}$ @ 77°F); RTD Temperature Sensor: DIN Class A $\pm 0.15^{\circ}\text{C}$ @ 0°C ($\pm 0.28^{\circ}\text{F}$ @ 32°F).
Temperature Limits: Operating: -32 to 240°F (-35.5 to 115.5°C).
Sensor Curves: See Resistance vs. Temperature Table.
Housing Material: Meets UL 94 V-0 polycarbonate plastic, NEMA 3R.
Weight: 7 oz.

INSTALLATION

1. Knock out the preferred conduit entrance and attach either a conduit fitting or cable gland.
 2. Remove the protective film from the copper plate and the stainless steel mounting plate.
 3. Uncoil strap by lifting the screw head up like shown in Figure 1 and pressing on the end of the strap.
 4. Slide the open end of the strap through the gap in the stainless steel mounting plate underneath the foam block opposite the copper plate, as shown in Figure 2.
 5. Add a small amount of thermal transfer paste to the copper plate.
 6. Wrap the strap around the pipe and insert the open end into the strap fastener.
 7. Pull the open end of the strap until the copper plate is flush against the pipe.
 8. Lower the screw head to lock the strap in place as shown in Figure 1.
 9. Use a flat head screw driver to tighten the strap.
- CAUTION** Do not over tighten the strap to the pipe as it could cause damage to the sensor.
10. Remove the cover.
 11. Connect wires to the terminal block.
 12. Close the lid tightly to protect against water ingress.

Make sure all connections are in accordance with the job wiring diagram and in accordance with national and local electrical codes. Use 18 to 20 AWG twisted pair or shielded copper conductors only.

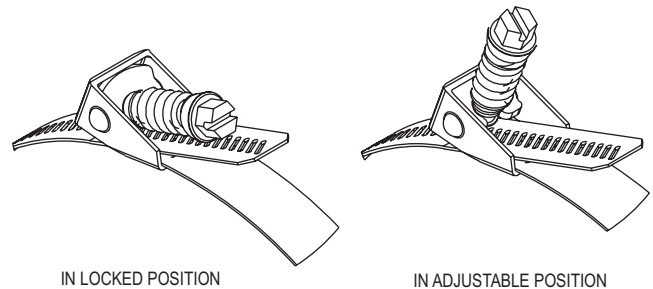


Figure 1

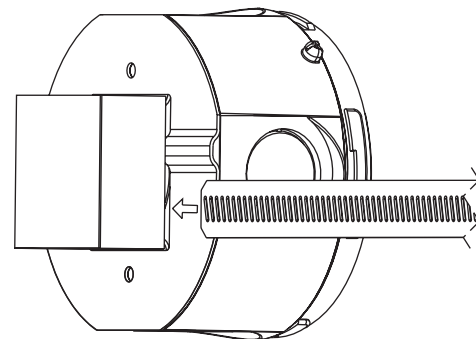


Figure 2

RESISTANCE VS. TEMPERATURE TABLE							
Temperature		Resistance Curves (Ω)					
$^{\circ}\text{C}$	$^{\circ}\text{F}$	A	B	C	D	E	F
-55	-67.0	607800.00	963849.00	289154.70	78.32	783.2	2394000.00
-50	-58.0	441200.00	670166.00	201049.80	80.31	803.1	1646200.00
-45	-49.0	323600.00	471985.00	141595.50	82.29	822.9	1145800.00
-40	-40.0	239700.00	336479.00	100943.70	84.27	842.7	806800.00
-35	-31.0	179200.00	242681.00	72804.30	86.25	862.5	574400.00
-30	-22.0	135200.00	176974.00	53092.20	88.22	882.2	413400.00
-25	-13.0	102900.00	130421.00	39126.30	90.19	901.9	300400.00
-20	-4.0	78910.00	97081.00	29124.30	92.16	921.6	220600.00
-15	5.0	61020.00	72957.00	21887.10	94.12	941.2	163500.00
-10	14.0	47540.00	55329.00	16598.70	96.09	960.9	122280.00
-5	23.0	37310.00	42327.00	12698.10	98.04	980.4	92240.00
0	32.0	29490.00	32650.00	9795.00	100.00	1000.0	70160.00
5	41.0	23460.00	25392.00	7617.60	101.95	1019.5	53780.00
10	50.0	18780.00	19901.00	5970.30	103.90	1039.0	41560.00
15	59.0	15130.00	15712.00	4713.60	105.85	1058.5	32340.00
20	68.0	12260.00	12493.00	3747.90	107.79	1077.9	25360.00
25	77.0	10000.00	10000.00	3000.00	109.74	1097.4	20000.00
30	86.0	8194.00	8057.00	2417.10	111.67	1116.7	15892.00
35	95.0	6752.00	6531.00	1959.30	113.61	1136.1	12704.00
40	104.0	5592.00	5326.00	1597.80	115.54	1155.4	10216.00
45	113.0	4655.00	4368.00	1310.40	117.47	1174.7	8264.00
50	122.0	3893.00	3602.00	1080.60	119.40	1194.0	6722.00
55	131.0	3271.00	2986.00	895.80	121.32	1213.2	5498.00
60	140.0	2760.00	2488.00	746.40	123.24	1232.4	4520.00
65	149.0	2339.00	2083.00	624.90	125.16	1251.6	3734.00
70	158.0	1990.00	1752.00	525.60	127.08	1270.8	3100.00
75	167.0	1700.00	1480.00	444.00	128.99	1289.9	2586.00
80	176.0	1458.00	1255.00	376.50	130.90	1309.0	2166.00
85	185.0	1255.00	1070.00	321.00	132.80	1328.0	1822.60
90	194.0	1084.00	915.50	274.65	134.71	1347.1	1540.00
95	203.0	939.30	786.60	235.98	136.61	1366.1	1306.40
100	212.0	816.80	678.60	203.58	138.51	1385.1	1112.60
105	221.0	712.60	587.60	176.28	140.40	1404.0	951.00
110	230.0	623.60	510.60	153.18	142.29	1422.9	815.80
115	239.0	547.30	445.30	133.59	144.18	1441.8	702.20
120	248.0	481.80	389.60	116.88	146.07	1460.7	606.40
125	257.0	425.30	341.90	102.57	147.95	1479.5	525.60
130	266.0	376.40	301.00	90.30	149.83	1498.3	N/A
135	275.0	334.00	265.80	79.74	151.71	1517.1	N/A
140	284.0	297.20	235.30	70.59	153.58	1535.8	N/A
145	293.0	265.10	208.90	62.67	155.46	1554.6	N/A
150	302.0	237.00	186.10	55.83	157.33	1573.3	N/A

MAINTENANCE/REPAIR

Upon final installation of the Series TE-SNW no routine maintenance is required. The Series TE-SNW is not field serviceable and should be returned if repair is needed. Field repair should not be attempted and may void warranty.

WARRANTY/RETURN

Refer to "Terms and Conditions of Sales" in our catalog and on our website. Contact customer service to receive a Return Goods Authorization number before shipping the product back for repair. Be sure to include a brief description of the problem plus any additional application notes.