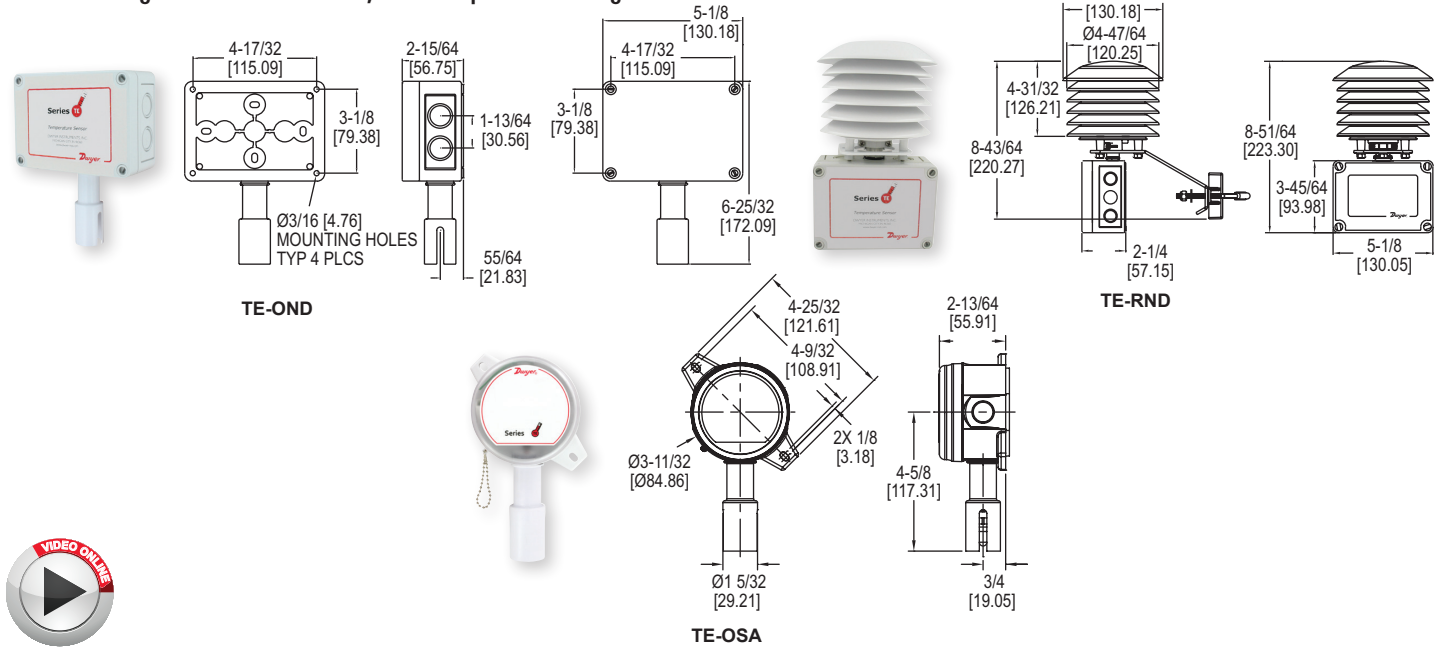




SERIES TE-OND/TE-RND/TE-OSA

OUTDOOR TEMPERATURE SENSORS

Protection Against Radiated Heat, Weatherproof Housing



The Series TE-OND/TE-RND/TE-OSA Outdoor Temperature Sensors are offered different configurations to increase measurement accuracy by reducing radiated heat effects. For applications where the north side of the building is accessible, the TE-OND/TE-OSA can be used to protect against low levels of radiated heat.

FEATURES/BENEFITS

- Weatherproof for outdoor installation
- Radiation shield available to eliminate heating effects following installation in direct sunlight
- Terminal connector eliminates need for wire nuts

APPLICATIONS

- Building automation
- Outdoor temperature reference

MODEL CHART							
Model	Sensor Type	°C	°F	A - 10k Ω type III thermistor Green/Green	B - 10k Ω type II thermistor Red/Green	C - 3k Ω thermistor Black/Black	D - PT100 Ω RTD Yellow/Yellow
TE-OND-A	10k Ω type III thermistor	-55	-67.0	607800.00	963849.00	289154.70	78.32
TE-OND-B	10k Ω type II thermistor	-50	-58.0	441200.00	670166.00	201049.80	80.31
TE-OND-C	3k Ω thermistor	-45	-49.0	323600.00	471985.00	141595.50	82.29
TE-OND-D	PT100 Ω RTD	-40	-40.0	239700.00	336479.00	100943.70	84.27
TE-OND-E	PT1000 Ω RTD	-35	-31.0	179200.00	242681.00	72804.30	86.25
TE-OND-F	20k Ω thermistor	-30	-22.0	135200.00	176974.00	53092.20	88.22
TE-OND-G	10k Ω type III thermistor with 11k Ω shunt	-25	-13.0	102900.00	130421.00	39126.30	90.19
TE-OND-H	10k Ω type II thermistor	-20	-4.0	78910.00	97081.00	29124.30	92.16
TE-OND-I	3k Ω thermistor	-15	5.0	61020.00	72957.00	21887.10	94.12
TE-OND-J	PT100 Ω RTD	-10	14.0	47540.00	55329.00	16598.70	96.09
TE-OND-K	PT1000 Ω RTD	-5	23.0	37310.00	42327.00	12698.10	98.04
TE-OND-L	20k Ω thermistor	0	32.0	29490.00	32650.00	9795.00	100.00
TE-OND-M	10k Ω type III thermistor with 11k Ω shunt	5	41.0	23460.00	25392.00	7617.60	101.95
TE-OND-N	10k Ω type II thermistor	10	50.0	18780.00	19901.00	5970.30	103.90
TE-OND-O	3k Ω thermistor	15	59.0	15130.00	15712.00	4713.60	105.85
TE-OND-P	PT100 Ω RTD	20	68.0	12260.00	12493.00	3747.90	107.79
TE-OND-Q	PT1000 Ω RTD	25	77.0	10000.00	10000.00	3000.00	109.74
TE-OND-R	20k Ω thermistor	30	86.0	8194.00	8057.00	2417.10	111.67
TE-OND-S	10k Ω type III thermistor with 11k Ω shunt	35	95.0	6752.00	6531.00	1959.30	113.61
TE-OND-T	10k Ω type II thermistor	40	104.0	5592.00	5326.00	1597.80	115.54
TE-OND-U	3k Ω thermistor	45	113.0	4655.00	4368.00	1310.40	117.47
TE-OND-V	PT100 Ω RTD	50	122.0	3893.00	3602.00	1080.60	119.40
TE-OND-W	PT1000 Ω RTD	55	131.0	3271.00	2986.00	895.80	121.32
TE-OND-X	20k Ω thermistor	60	140.0	2760.00	2488.00	746.40	123.24
TE-OND-Y	10k Ω type III thermistor with 11k Ω shunt	65	149.0	2339.00	2083.00	624.90	125.16
TE-OND-Z	10k Ω type II thermistor	70	158.0	1990.00	1752.00	525.60	127.08
TE-OSA-A	10k Ω type III thermistor	75	167.0	1700.00	1480.00	444.00	128.99
TE-OSA-B	10k Ω type II thermistor	80	176.0	1458.00	1255.00	376.50	130.90
TE-OSA-C	3k Ω thermistor	85	185.0	1255.00	1070.00	321.00	132.80
TE-OSA-D	PT100 Ω RTD	90	194.0	1084.00	915.50	274.65	134.71
TE-OSA-E	PT1000 Ω RTD	95	203.0	939.30	786.60	235.98	136.61
TE-OSA-F	20k Ω thermistor	100	212.0	816.80	678.60	203.58	138.51
TE-OSA-G	10k Ω type III thermistor with 11k Ω shunt	105	221.0	712.60	587.60	176.28	140.40
TE-OSA-H	10k Ω type II thermistor	110	230.0	623.60	510.60	153.18	142.29
TE-OSA-I	3k Ω thermistor	115	239.0	547.30	445.30	133.59	144.18
TE-OSA-J	PT100 Ω RTD	120	248.0	481.80	389.60	116.88	146.07
TE-OSA-K	PT1000 Ω RTD	125	257.0	425.30	341.90	102.57	147.95
TE-OSA-L	20k Ω thermistor	130	266.0	376.40	301.00	90.30	149.83
TE-OSA-M	10k Ω type III thermistor with 11k Ω shunt	135	275.0	334.00	265.80	79.74	151.71
TE-OSA-N	10k Ω type II thermistor	140	284.0	297.20	235.30	70.59	153.58
TE-OSA-O	3k Ω thermistor	145	293.0	265.10	208.90	62.67	155.46
TE-OSA-P	PT100 Ω RTD	150	302.0	237.00	186.10	55.83	157.33

SPECIFICATIONS

Accuracy: Thermistor temperature sensor: ±0.22°C @ 25°C (±0.4°F @ 77°F); RTD temperature sensor: DIN class A: ±0.15°C @ 0°C (±0.28°F @ 32°F).
Temperature Limits: Operating: -40 to 302°F (-40 to 150°C).
Sensor Curves: See Resistance vs. Temperature Table.
Housing Material: Polycarbonate.
Enclosure Rating: TE-OND/TE-RND: NEMA 4X (IP65); TE-OSA: NEMA 3R (IP54).
Weight: 0.65 lb (295 g).

RESISTANCE VS TEMPERATURE TABLE

Temperature Resistance Curves (Ω)

°C	°F	A - 10k Ω type III thermistor	B - 10k Ω type II thermistor	C - 3k Ω thermistor	D - PT100 Ω RTD	E - PT1000 Ω RTD	F - 20k Ω thermistor	Q - 10k Ω type III thermistor with 11k Ω shunt
		Green/Green	Red/Green	Black/Black	Yellow/Yellow	Red/Red	Green/Blue	Red/White
-55	-67.0	607800.00	963849.00	289154.70	78.32	783.2	2394000.00	10804
-50	-58.0	441200.00	670166.00	201049.80	80.31	803.1	1646200.00	10732
-45	-49.0	323600.00	471985.00	141595.50	82.29	822.9	1145800.00	10638
-40	-40.0	239700.00	336479.00	100943.70	84.27	842.7	806800.00	10517
-35	-31.0	179200.00	242681.00	72804.30	86.25	862.5	574400.00	10364
-30	-22.0	135200.00	176974.00	53092.20	88.22	882.2	413400.00	10172
-25	-13.0	102900.00	130421.00	39126.30	90.19	901.9	300400.00	9938
-20	-4.0	78910.00	97081.00	29124.30	92.16	921.6	220600.00	9654
-15	5.0	61020.00	72957.00	21887.10	94.12	941.2	163500.00	9320
-10	14.0	47540.00	55329.00	16598.70	96.09	960.9	122280.00	8933
-5	23.0	37310.00	42327.00	12698.10	98.04	980.4	92240.00	8495
0	32.0	29490.00	32650.00	9795.00	100.00	1000.0	70160.00	8012
5	41.0	23460.00	25392.00	7617.60	101.95	1019.5	53780.00	7489
10	50.0	18780.00	19901.00	5970.30	103.90	1039.0	41560.00	6937
15	59.0	15130.00	15712.00	4713.60	105.85	1058.5	32340.00	6369
20	68.0	12260.00	12493.00	3747.90	107.79	1077.9	25360.00	5798
25	77.0	10000.00	10000.00	3000.00	109.74	1097.4	20000.00	5238
30	86.0	8194.00	8057.00	2417.10	111.67	1116.7	15892.00	4696
35	95.0	6752.00	6531.00	1959.30	113.61	1136.1	12704.00	4184
40	104.0	5592.00	5326.00	1597.80	115.54	1155.4	10216.00	3707
45	113.0	4655.00	4368.00	1310.40	117.47	1174.7	8264.00	3271
50	122.0	3893.00	3602.00	1080.60	119.40	1194.0	6722.00	2875
55	131.0	3271.00	2986.00	895.80	121.32	1213.2	5498.00	2521
60	140.0	2760.00	2488.00	746.40	123.24	1232.4	4520.00	2206
65	149.0	2339.00	2083.00	624.90	125.16	1251.6	3734.00	1929
70	158.0	1990.00	1752.00	525.60	127.08	1270.8	3100.00	1685
75	167.0	1700.00	1480.00	444.00	128.99	1289.9	2586.00	1472
80	176.0	1458.00	1255.00	376.50	130.90	1309.0	2166.00	1287
85	185.0	1255.00	1070.00	321.00	132.80	1328.0	1822.60	1126
90	194.0	1084.00	915.50	274.65	134.71	1347.1	1540.00	986.8
95	203.0	939.30	786.60	235.98	136.61	1366.1	1306.40	865.4
100	212.0	816.80	678.60	203.58	138.51	1385.1	1112.60	760.3
105	221.0	712.60	587.60	176.28	140.40	1404.0	951.00	669.2
110	230.0	623.60	510.60	153.18	142.29	1422.9	815.80	590.1
115	239.0	547.30	445.30	133.59	144.18	1441.8	702.20	521.4
120	248.0	481.80	389.60	116.88	146.07	1460.7	606.40	461.6
125	257.0	425.30	341.90	102.57	147.95	1479.5	525.60	409.5
130	266.0	376.40	301.00	90.30	149.83	1498.3	N/A	363.9
135	275.0	334.00	265.80	79.74	151.71	1517.1	N/A	324.2
140	284.0	297.20	235.30	70.59	153.58	1535.8	N/A	289.4
145	293.0	265.10	208.90	62.67	155.46	1554.6	N/A	258.9
150	302.0	237.00	186.10	55.83	157.33	1573.3	N/A	232.0