



THERMISTOR ELEMENT POTTED
IN BARREL OF SPADE-LUG HOUSING

REV	DESCRIPTION	DATE	APP
0	INITIAL RELEASE	07/16/2019	DD
REVISION HISTORY			

EI SENSOR TECHNOLOGIES www.ei-sensor.com © COPYRIGHT	NTC THERMISTOR PROBE	
	DRAWN BY: DAN DANKERT	
P/N ETP10178	SCALE: NONE	LAYER: 0 OF 2
	REV: 0	DATE: 07/16/2019

RESISTANCE @ +25°C = 10,000 Ω ± 1%
 RESISTANCE/TEMPERATURE CURVE = "30"
 BETA "β" (0 TO +50°C) = 3,892°K NOMINAL
 BETA "β" (+25 TO +85°C) = 3,977°K NOMINAL
 TEMPERATURE COEFFICIENT @ +25°C = -4.39%/°C NOMINAL
 MAXIMUM TEMPERATURE RATING = +150°C

ROHS COMPLIANT

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El Sensor Technologies

Resistance Versus Temperature Table

P/N ETP10178 Revision "0"

Resistance @ +25°C = 10,000 Ω

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C/R@+25°C)	Resistance (Ω Nominal)
-55	-67.0	95.9640	959,640
-54	-65.2	89.1579	891,579
-53	-63.4	82.8783	828,783
-52	-61.6	77.0814	770,814
-51	-59.8	71.7271	717,271
-50	-58.0	66.7790	667,790
-49	-56.2	62.2034	622,034
-48	-54.4	57.9704	579,704
-47	-52.6	54.0522	540,522
-46	-50.8	50.4235	504,235
-45	-49.0	47.0614	470,614
-44	-47.2	43.9446	439,446
-43	-45.4	41.0538	410,538
-42	-43.6	38.3713	383,713
-41	-41.8	35.8808	358,808
-40	-40.0	33.5676	335,676
-39	-38.2	31.4180	314,180
-38	-36.4	29.4194	294,194
-37	-34.6	27.5603	275,603
-36	-32.8	25.8303	258,303
-35	-31.0	24.2196	242,196
-34	-29.2	22.7193	227,193
-33	-27.4	21.3212	213,212
-32	-25.6	20.0177	200,177
-31	-23.8	18.8020	188,020
-30	-22.0	17.6675	176,675

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
-29	-20.2	16.6084	166,084
-28	-18.4	15.6193	156,193
-27	-16.6	14.6952	146,952
-26	-14.8	13.8314	138,314
-25	-13.0	13.0235	130,235
-24	-11.2	12.2678	122,678
-23	-9.4	11.5605	115,605
-22	-7.6	10.8983	108,983
-21	-5.8	10.2780	102,780
-20	-4.0	9.6967	96,967
-19	-2.2	9.1518	91,518
-18	-0.4	8.6408	86,408
-17	1.4	8.1614	81,614
-16	3.2	7.7115	77,115
-15	5.0	7.2890	72,890
-14	6.8	6.8922	68,922
-13	8.6	6.5194	65,194
-12	10.4	6.1689	61,689
-11	12.2	5.8394	58,394
-10	14.0	5.5294	55,294
-9	15.8	5.2377	52,377
-8	17.6	4.9631	49,631
-7	19.4	4.7045	47,045
-6	21.2	4.4609	44,609
-5	23.0	4.2313	42,313
-4	24.8	4.0149	40,149
-3	26.6	3.8108	38,108
-2	28.4	3.6183	36,183
-1	30.2	3.4366	34,366
0	32.0	3.2651	32,651
1	33.8	3.1031	31,031
2	35.6	2.9501	29,501
3	37.4	2.8055	28,055
4	39.2	2.6688	26,688
5	41.0	2.5396	25,396
6	42.8	2.4173	24,173
7	44.6	2.3017	23,017
8	46.4	2.1922	21,922
9	48.2	2.0885	20,885
10	50.0	1.9904	19,904

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+ 25°C)	Resistance (Ω Nominal)
11	51.8	1.8974	18,974
12	53.6	1.8093	18,093
13	55.4	1.7257	17,257
14	57.2	1.6465	16,465
15	59.0	1.5714	15,714
16	60.8	1.5001	15,001
17	62.6	1.4325	14,325
18	64.4	1.3683	13,683
19	66.2	1.3073	13,073
20	68.0	1.2494	12,494
21	69.8	1.1943	11,943
22	71.6	1.1420	11,420
23	73.4	1.0923	10,923
24	75.2	1.0450	10,450
25	77.0	1.0000	10,000
26	78.8	0.95720	9,572.0
27	80.6	0.91647	9,164.7
28	82.4	0.87769	8,776.9
29	84.2	0.84077	8,407.7
30	86.0	0.80560	8,056.0
31	87.8	0.77209	7,720.9
32	89.6	0.74016	7,401.6
33	91.4	0.70972	7,097.2
34	93.2	0.68069	6,806.9
35	95.0	0.65302	6,530.2
36	96.8	0.62661	6,266.1
37	98.6	0.60141	6,014.1
38	100.4	0.57737	5,773.7
39	102.2	0.55441	5,544.1
40	104.0	0.53249	5,324.9
41	105.8	0.51155	5,115.5
42	107.6	0.49155	4,915.5
43	109.4	0.47243	4,724.3
44	111.2	0.45416	4,541.6
45	113.0	0.43669	4,366.9
46	114.8	0.41999	4,199.9
47	116.6	0.40401	4,040.1
48	118.4	0.38873	3,887.3
49	120.2	0.37410	3,741.0
50	122.0	0.36010	3,601.0

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
51	123.8	0.34670	3,467.0
52	125.6	0.33386	3,338.6
53	127.4	0.32157	3,215.7
54	129.2	0.30979	3,097.9
55	131.0	0.29851	2,985.1
56	132.8	0.28770	2,877.0
57	134.6	0.27733	2,773.3
58	136.4	0.26739	2,673.9
59	138.2	0.25786	2,578.6
60	140.0	0.24871	2,487.1
61	141.8	0.23994	2,399.4
62	143.6	0.23152	2,315.2
63	145.4	0.22344	2,234.4
64	147.2	0.21568	2,156.8
65	149.0	0.20823	2,082.3
66	150.8	0.20108	2,010.8
67	152.6	0.19421	1,942.1
68	154.4	0.18761	1,876.1
69	156.2	0.18126	1,812.6
70	158.0	0.17516	1,751.6
71	159.8	0.16930	1,693.0
72	161.6	0.16366	1,636.6
73	163.4	0.15824	1,582.4
74	165.2	0.15303	1,530.3
75	167.0	0.14801	1,480.1
76	168.8	0.14320	1,432.0
77	170.6	0.13856	1,385.6
78	172.4	0.13410	1,341.0
79	174.2	0.12980	1,298.0
80	176.0	0.12566	1,256.6
81	177.8	0.12167	1,216.7
82	179.6	0.11783	1,178.3
83	181.4	0.11412	1,141.2
84	183.2	0.11055	1,105.5
85	185.0	0.10711	1,071.1
86	186.8	0.10379	1,037.9
87	188.6	0.10059	1,005.9
88	190.4	0.097500	975.00
89	192.2	0.094522	945.22
90	194.0	0.091648	916.48

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
91	195.8	0.088876	888.76
92	197.6	0.086200	862.00
93	199.4	0.083618	836.18
94	201.2	0.081125	811.25
95	203.0	0.078718	787.18
96	204.8	0.076394	763.94
97	206.6	0.074150	741.50
98	208.4	0.071982	719.82
99	210.2	0.069888	698.88
100	212.0	0.067865	678.65
101	213.8	0.065910	659.10
102	215.6	0.064021	640.21
103	217.4	0.062194	621.94
104	219.2	0.060429	604.29
105	221.0	0.058722	587.22
106	222.8	0.057071	570.71
107	224.6	0.055475	554.75
108	226.4	0.053931	539.31
109	228.2	0.052438	524.38
110	230.0	0.050992	509.92
111	231.8	0.049594	495.94
112	233.6	0.048241	482.41
113	235.4	0.046931	469.31
114	237.2	0.045662	456.62
115	239.0	0.044435	444.35
116	240.8	0.043246	432.46
117	242.6	0.042094	420.94
118	244.4	0.040979	409.79
119	246.2	0.039899	398.99
120	248.0	0.038852	388.52
121	249.8	0.037838	378.38
122	251.6	0.036855	368.55
123	253.4	0.035902	359.02
124	255.2	0.034978	349.78
125	257.0	0.034083	340.83
126	258.8	0.033215	332.15
127	260.6	0.032373	323.73
128	262.4	0.031556	315.56
129	264.2	0.030764	307.64
130	266.0	0.029996	299.96

Temperature (°C)	Temperature (°F)	Resistance Ratio (R@x°C / R@+25°C)	Resistance (Ω Nominal)
131	267.8	0.029250	292.50
132	269.6	0.028527	285.27
133	271.4	0.027824	278.24
134	273.2	0.027143	271.43
135	275.0	0.026481	264.81
136	276.8	0.025839	258.39
137	278.6	0.025215	252.15
138	280.4	0.024610	246.10
139	282.2	0.024021	240.21
140	284.0	0.023450	234.50
141	285.8	0.022895	228.95
142	287.6	0.022355	223.55
143	289.4	0.021831	218.31
144	291.2	0.021322	213.22
145	293.0	0.020827	208.27
146	294.8	0.020345	203.45
147	296.6	0.019878	198.78
148	298.4	0.019423	194.23
149	300.2	0.018980	189.80
150	302.0	0.018550	185.50