



Honeywell part number

ES120-0024

Resistance (Ro) 2000
Temperature (Tref) 25

Tolerance at 25°C
1.00%

Coefficient Constants				
A	B	C under 100°C	D	Ti °C
0.007874	0.00001874	0.0	3.0	100
		C over 100°C		
		0.000001096		

$$R_t = R_o * (1 + A(T - T_{ref}) + B(T - T_{ref})^2 - C(T - T_i)^D)$$

Temp °C (T)	Nim. Resistance	Nom. Resistance	Max. Resistance	*+/- Tolerance
-50.0	951.2	1029.73	1108.3	7.63%
-49.0	965.7	1039.89	1114.0	7.13%
-48.0	980.5	1050.13	1119.8	6.63%
-47.0	995.4	1060.44	1125.4	6.13%
-46.0	1010.5	1070.83	1131.1	5.63%
-45.0	1025.8	1081.29	1136.8	5.13%
-44.0	1041.3	1091.83	1142.4	4.63%
-43.0	1056.9	1102.44	1148.0	4.13%
-42.0	1072.7	1113.13	1153.5	3.63%
-41.0	1088.7	1123.89	1159.1	3.13%
-40.0	1104.9	1134.73	1164.6	2.63%
-39.0	1115.9	1145.65	1175.4	2.60%
-38.0	1126.9	1156.63	1186.4	2.58%
-37.0	1137.9	1167.70	1197.5	2.55%
-36.0	1149.1	1178.84	1208.6	2.53%
-35.0	1160.3	1190.05	1219.8	2.50%
-34.0	1171.6	1201.34	1231.1	2.48%
-33.0	1183.0	1212.70	1242.4	2.45%
-32.0	1194.5	1224.14	1253.8	2.43%
-31.0	1206.0	1235.65	1265.3	2.40%
-30.0	1217.6	1247.24	1276.9	2.38%
-29.0	1229.3	1258.90	1288.5	2.35%
-28.0	1241.1	1270.64	1300.2	2.33%
-27.0	1253.0	1282.45	1311.9	2.30%
-26.0	1264.9	1294.34	1323.8	2.28%
-25.0	1276.9	1306.30	1335.7	2.25%
-24.0	1289.0	1318.34	1347.7	2.23%
-23.0	1301.2	1330.45	1359.7	2.20%
-22.0	1313.4	1342.64	1371.8	2.18%
-21.0	1325.8	1354.90	1384.0	2.15%
-20.0	1338.2	1367.24	1396.3	2.13%
-19.0	1350.7	1379.65	1408.6	2.10%
-18.0	1363.2	1392.14	1421.0	2.08%
-17.0	1375.9	1404.70	1433.5	2.05%
-16.0	1388.6	1417.34	1446.0	2.03%
-15.0	1401.4	1430.05	1458.6	2.00%
-14.0	1414.3	1442.84	1471.3	1.98%
-13.0	1427.3	1455.70	1484.1	1.95%
-12.0	1440.4	1468.63	1496.9	1.93%
-11.0	1453.5	1481.65	1509.8	1.90%
-10.0	1466.7	1494.73	1522.8	1.88%
-9.0	1480.0	1507.89	1535.8	1.85%
-8.0	1493.4	1521.13	1548.9	1.83%
-7.0	1506.8	1534.44	1562.1	1.80%
-6.0	1520.4	1547.83	1575.3	1.78%
-5.0	1534.0	1561.29	1588.6	1.75%
-4.0	1547.7	1574.83	1602.0	1.73%
-3.0	1561.4	1588.44	1615.4	1.70%
-2.0	1575.3	1602.13	1629.0	1.68%
-1.0	1589.2	1615.89	1642.6	1.65%
0.0	1603.2	1629.73	1656.2	1.63%
1.0	1617.3	1643.64	1669.9	1.60%
2.0	1631.5	1657.62	1683.7	1.58%
3.0	1645.8	1671.68	1697.6	1.55%
4.0	1660.1	1685.82	1711.5	1.53%
5.0	1674.5	1700.03	1725.5	1.50%
6.0	1689.0	1714.32	1739.6	1.48%
7.0	1703.6	1728.68	1753.7	1.45%
8.0	1718.3	1743.12	1768.0	1.43%
9.0	1733.0	1757.63	1782.2	1.40%
10.0	1747.8	1772.21	1796.6	1.38%
11.0	1762.8	1786.87	1811.0	1.35%
12.0	1777.7	1801.61	1825.5	1.33%
13.0	1792.8	1816.42	1840.0	1.30%
14.0	1808.0	1831.31	1854.7	1.28%
15.0	1823.2	1846.27	1869.3	1.25%
16.0	1838.5	1861.30	1884.1	1.23%
17.0	1853.9	1876.41	1898.9	1.20%
18.0	1869.4	1891.60	1913.8	1.18%
19.0	1884.9	1906.86	1928.8	1.15%
20.0	1900.6	1922.20	1943.8	1.13%
21.0	1916.3	1937.61	1958.9	1.10%
22.0	1932.1	1953.09	1974.1	1.08%
23.0	1948.0	1968.65	1989.3	1.05%
24.0	1964.0	1984.29	2004.6	1.03%
25.0	1980.0	2000.00	2020.0	1.00%
26.0	1995.4	2015.79	2036.1	1.01%
27.0	2010.9	2031.65	2052.4	1.02%
28.0	2026.5	2047.58	2068.7	1.03%
29.0	2042.1	2063.59	2085.1	1.04%
30.0	2057.8	2079.68	2101.5	1.05%
31.0	2073.6	2095.84	2118.1	1.06%
32.0	2089.5	2112.07	2134.7	1.07%
33.0	2105.4	2128.38	2151.4	1.08%
34.0	2121.4	2144.77	2168.1	1.09%
35.0	2137.5	2161.23	2185.0	1.10%
36.0	2153.6	2177.76	2201.9	1.11%

Note
For temperatures below 100°C. The value for Coefficient "C" is 0.00.

For units using a KTY 2000 ohms device, the slope of the Characteristic curve decreases slightly in the upper temperature ranges above a certain Temperature Ti (point of inflection). Therefore an additional term in the equation becomes necessary: For temperatures above 100°C. The value for Coefficient "C" is 0.000001096... See above.



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Temperature (Tref) 25

Tolerance at 25°C
1.00%

Coefficient Constants				
A	B	C under 100°C	D	Ti °C
0.007874	0.00001874	0.0	3.0	100
		C over 100°C		
		0.000001096		

$$R_t = R_o * (1 + A(T - T_{ref}) + B(T - T_{ref})^2 - C(T - T_i)^D)$$

Temp °C (T)	Nim. Resistance	Nom. Resistance	Max. Resistance	*+/- Tolerance
37.0	2169.8	2194.37	2219.0	1.12%
38.0	2186.1	2211.06	2236.0	1.13%
39.0	2202.4	2227.82	2253.2	1.14%
40.0	2218.8	2244.65	2270.5	1.15%
41.0	2235.1	2261.56	2288.0	1.17%
42.0	2251.5	2278.55	2305.6	1.19%
43.0	2268.0	2295.61	2323.2	1.20%
44.0	2284.5	2312.74	2341.0	1.22%
45.0	2301.1	2329.95	2358.8	1.24%
46.0	2317.7	2347.24	2376.8	1.26%
47.0	2334.4	2364.60	2394.8	1.28%
48.0	2351.2	2382.03	2412.9	1.29%
49.0	2368.1	2399.54	2431.0	1.31%
50.0	2385.0	2417.13	2449.3	1.33%
51.0	2402.0	2434.78	2467.6	1.35%
52.0	2419.2	2452.52	2485.8	1.36%
53.0	2436.5	2470.33	2504.1	1.37%
54.0	2453.5	2488.21	2522.9	1.39%
55.0	2470.6	2506.17	2541.7	1.42%
56.0	2487.7	2524.21	2560.7	1.45%
57.0	2504.9	2542.32	2579.7	1.47%
58.0	2522.2	2560.50	2598.8	1.50%
59.0	2539.5	2578.76	2618.0	1.52%
60.0	2556.9	2597.09	2637.3	1.55%
61.0	2574.3	2615.50	2656.7	1.58%
62.0	2591.8	2633.99	2676.2	1.60%
63.0	2609.4	2652.55	2695.7	1.63%
64.0	2627.0	2671.18	2715.3	1.65%
65.0	2644.7	2689.89	2735.1	1.68%
66.0	2662.5	2708.67	2754.9	1.71%
67.0	2680.3	2727.53	2774.8	1.73%
68.0	2698.2	2746.46	2794.7	1.76%
69.0	2716.2	2765.47	2814.8	1.78%
70.0	2734.2	2784.56	2834.9	1.81%
71.0	2752.3	2803.72	2855.2	1.84%
72.0	2770.4	2822.95	2875.5	1.86%
73.0	2788.6	2842.26	2895.9	1.89%
74.0	2806.9	2861.64	2916.4	1.91%
75.0	2825.2	2881.10	2937.0	1.94%
76.0	2843.6	2900.63	2957.6	1.97%
77.0	2862.1	2920.24	2978.4	1.99%
78.0	2880.6	2939.93	2999.2	2.02%
79.0	2899.2	2959.68	3020.2	2.04%
80.0	2917.9	2979.52	3041.2	2.07%
81.0	2936.6	2999.43	3062.3	2.10%
82.0	2955.4	3019.41	3083.5	2.12%
83.0	2974.2	3039.47	3104.7	2.15%
84.0	2993.1	3059.60	3126.1	2.17%
85.0	3012.1	3079.81	3147.5	2.20%
86.0	3031.1	3100.09	3169.1	2.23%
87.0	3050.2	3120.45	3190.7	2.25%
88.0	3069.3	3140.88	3212.4	2.28%
89.0	3088.6	3161.39	3234.2	2.30%
90.0	3107.8	3181.97	3256.1	2.33%
91.0	3127.2	3202.63	3278.1	2.36%
92.0	3146.6	3223.36	3300.1	2.38%
93.0	3166.1	3244.17	3322.3	2.41%
94.0	3185.6	3265.05	3344.5	2.43%
95.0	3205.2	3286.01	3366.8	2.46%
96.0	3224.8	3307.04	3389.2	2.49%
97.0	3244.6	3328.15	3411.7	2.51%
98.0	3264.3	3349.33	3434.3	2.54%
99.0	3284.2	3370.59	3457.0	2.56%
100.0	3317.3	3391.93	3466.5	2.20%
101.0	3337.9	3413.33	3488.8	2.21%
102.0	3358.5	3434.80	3511.0	2.22%
103.0	3379.2	3456.31	3533.4	2.23%
104.0	3400.0	3477.86	3555.8	2.24%
105.0	3420.7	3499.44	3578.2	2.25%
106.0	3441.4	3521.02	3600.6	2.26%
107.0	3462.2	3542.60	3623.0	2.27%
108.0	3482.9	3564.16	3645.4	2.28%
109.0	3503.6	3585.69	3667.8	2.29%
110.0	3524.2	3607.18	3690.1	2.30%
111.0	3544.4	3628.61	3712.8	2.32%
112.0	3564.6	3649.97	3735.4	2.34%
113.0	3584.6	3671.25	3757.9	2.36%
114.0	3604.6	3692.44	3780.3	2.38%
115.0	3624.4	3713.51	3802.6	2.40%
116.0	3644.1	3734.46	3824.8	2.42%
117.0	3663.6	3755.28	3846.9	2.44%
118.0	3683.1	3775.94	3868.8	2.46%
119.0	3702.3	3796.45	3890.6	2.48%
120.0	3721.4	3816.78	3912.2	2.50%
121.0	3741.0	3836.92	3932.8	2.50%
122.0	3760.4	3856.86	3953.3	2.50%
123.0	3779.7	3876.59	3973.5	2.50%

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$$R_t = R_o * (1 + A(T - T_{ref}) + B(T - T_{ref})^2 - C(T - T_i)^D)$$

Temp °C (T)	Nim. Resistance	Nom. Resistance	Max. Resistance	*+/- Tolerance
124.0	3798.7	3896.09	3993.5	2.50%
125.0	3817.5	3915.35	4013.2	2.50%
126.0	3834.8	3934.35	4033.9	2.53%
127.0	3851.9	3953.09	4054.3	2.56%
128.0	3868.7	3971.55	4074.4	2.59%
129.0	3885.2	3989.71	4094.2	2.62%
130.0	3901.4	4007.57	4113.8	2.65%
131.0	3918.0	4025.11	4132.2	2.66%
132.0	3934.4	4042.32	4150.2	2.67%
133.0	3950.4	4059.18	4168.0	2.68%
134.0	3966.0	4075.68	4185.3	2.69%
135.0	3981.3	4091.81	4202.3	2.70%
136.0	3996.2	4107.55	4218.9	2.71%
137.0	4010.8	4122.89	4235.0	2.72%
138.0	4024.9	4137.83	4250.8	2.73%
139.0	4038.6	4152.33	4266.1	2.74%
140.0	4049.7	4166.41	4283.1	2.80%
141.0	4062.6	4180.02	4297.5	2.81%
142.0	4074.9	4193.18	4311.4	2.82%
143.0	4086.8	4205.86	4324.9	2.83%
144.0	4098.3	4218.04	4337.8	2.84%
145.0	4109.2	4229.73	4350.3	2.85%
146.0	4119.6	4240.89	4362.2	2.86%
147.0	4129.5	4251.53	4373.5	2.87%
148.0	4138.9	4261.62	4384.4	2.88%
149.0	4147.7	4271.16	4394.6	2.89%
150.0	4151.7	4280.13	4408.5	3.00%