



Curve 16 (Type L) Data

Honeywell Part Number

135-103LAG-J01

Resistance at 25°C

=

10000

Tolerance (in %) @ 25°C Only

=

10.00%

Temperature	Resistance in Ohms		
Degrees °C	Ro-MIN	Ro-NOM	Ro-MAX
-40	287034.5	336500.0	385965.5
-39	268931.3	314930.0	360928.7
-38	252087.0	294880.0	337673.0
-37	236397.6	276230.0	316062.4
-36	221779.1	258870.0	295960.9
-35	208161.5	242720.0	277278.5
-34	195459.2	227670.0	259880.8
-33	183602.2	213640.0	243677.8
-32	172546.4	200570.0	228593.6
-31	162221.6	188380.0	214538.4
-30	152574.0	177000.0	201426.0
-29	143542.4	166370.0	189197.6
-28	135108.7	156450.0	177791.3
-27	127219.4	147180.0	167140.6
-26	119844.7	138520.0	157195.3
-25	112941.1	130420.0	147898.9
-24	106473.5	122838.0	139202.5
-23	100421.8	115748.0	131074.2
-22	94750.9	109111.0	123471.1
-21	89435.5	102894.0	116352.5
-20	84450.9	97070.0	109689.1
-19	79779.4	91612.0	103444.6
-18	75394.2	86494.0	97593.8
-17	71275.5	81692.0	92108.5
-16	67406.5	77186.0	86965.5
-15	63769.8	72954.0	82138.2
-14	60351.3	68980.0	77608.7
-13	57135.3	65246.0	73356.7
-12	54109.8	61736.0	69362.2
-11	51261.5	58435.0	65608.5
-10	48579.7	55330.0	62080.3
-9	46048.1	52406.0	58763.9
-8	43664.2	49654.0	55643.8
-7	41418.3	47063.0	52707.7
-6	39301.7	44623.0	49944.3
-5	37305.6	42323.0	47340.4
-4	35424.0	40156.0	44888.0
-3	33648.4	38113.0	42577.6
-2	31972.0	36185.0	40398.0
-1	30390.4	34367.0	38343.6
0	28895.3	32650.0	36404.8
1	27482.1	31029.0	34575.9
2	26147.3	29499.0	32850.7
3	24884.4	28052.0	31219.6
4	23690.4	26685.0	29679.6
5	22560.5	25392.0	28223.5
6	21491.7	24170.0	26848.3
7	20479.3	23013.0	25546.7
8	19520.2	21918.0	24315.8
9	18612.1	20882.0	23151.9
10	17750.8	19900.0	22049.2
11	16930.2	18969.0	21007.8
12	16152.8	18087.0	20021.2
13	15416.9	17252.0	19087.1
14	14718.9	16460.0	18201.1
15	14056.0	15708.0	17360.0
16	13428.2	14996.0	16563.8
17	12832.0	14320.0	15808.0
18	12265.6	13678.0	15090.4
19	11727.9	13069.0	14410.1
20	11216.0	12490.0	13764.0
21	10724.7	11941.0	13157.3
22	10257.2	11418.0	12578.8
23	9815.1	10922.0	12028.9
24	9395.5	10449.0	11502.5
25	9000.0	10000.0	11000.0
26	8610.7	9572.0	10533.3
27	8237.8	9165.0	10092.2
28	7881.8	8778.0	9674.2
29	7542.4	8409.0	9275.6
30	7219.1	8057.0	8894.9
31	6914.3	7722.0	8529.7

Tolerances	
in +/- %	in +/- °C
14.70%	2.19
14.61%	2.20
14.51%	2.20
14.42%	2.21
14.33%	2.21
14.24%	2.21
14.15%	2.22
14.06%	2.22
13.97%	2.22
13.89%	2.22
13.80%	2.23
13.72%	2.23
13.64%	2.23
13.56%	2.24
13.48%	2.24
13.40%	2.24
13.32%	2.24
13.24%	2.24
13.16%	2.24
13.08%	2.24
13.00%	2.24
12.92%	2.24
12.83%	2.23
12.75%	2.23
12.67%	2.23
12.59%	2.22
12.51%	2.22
12.43%	2.22
12.35%	2.22
12.28%	2.22
12.20%	2.22
12.13%	2.22
12.06%	2.23
11.99%	2.23
11.93%	2.24
11.86%	2.24
11.78%	2.25
11.71%	2.25
11.64%	2.25
11.57%	2.25
11.50%	2.25
11.43%	2.25
11.36%	2.25
11.29%	2.25
11.22%	2.25
11.15%	2.25
11.08%	2.25
11.01%	2.25
10.94%	2.25
10.87%	2.25
10.80%	2.25
10.75%	2.26
10.69%	2.26
10.64%	2.27
10.58%	2.27
10.52%	2.27
10.46%	2.27
10.39%	2.27
10.33%	2.27
10.26%	2.27
10.20%	2.27
10.19%	2.27
10.17%	2.28
10.14%	2.28
10.08%	2.28
10.00%	2.27
10.04%	2.29
10.12%	2.32
10.21%	2.35
10.31%	2.38
10.40%	2.42
10.46%	2.45

Curve 16 (Type L) Data

Honeywell Part Number

135-103LAG-J01

Resistance at 25°C

=

10000

Tolerance (in %) @ 25°C Only

=

10.00%

Temperature Degrees °C	Resistance in Ohms		
	Ro-MIN	Ro-NOM	Ro-MAX
32	6624.1	7403.0	8181.9
33	6347.7	7099.0	7850.3
34	6084.2	6809.0	7533.8
35	5832.7	6532.0	7231.3
36	5593.1	6268.0	6942.9
37	5364.7	6016.0	6667.3
38	5147.3	5776.0	6404.7
39	4939.1	5546.0	6152.9
40	4741.0	5327.0	5913.0
41	4552.5	5118.0	5683.5
42	4372.2	4918.0	5463.8
43	4200.0	4727.0	5254.0
44	4035.2	4544.0	5052.8
45	3877.6	4369.0	4860.4
46	3727.3	4202.0	4676.7
47	3583.3	4042.0	4500.7
48	3445.7	3889.0	4332.3
49	3314.4	3743.0	4171.6
50	3188.7	3603.0	4017.3
51	3068.4	3469.0	3869.6
52	2952.6	3340.0	3727.4
53	2842.3	3217.0	3591.7
54	2736.4	3099.0	3461.6
55	2635.2	2986.0	3336.8
56	2538.4	2878.0	3217.6
57	2445.3	2774.0	3102.7
58	2356.7	2675.0	2993.3
59	2271.7	2580.0	2888.3
60	2189.4	2488.0	2786.6
61	2110.8	2400.0	2689.2
62	2035.8	2316.0	2596.2
63	1963.5	2235.0	2506.5
64	1893.9	2157.0	2420.1
65	1827.9	2083.0	2338.1
66	1763.7	2011.0	2258.3
67	1702.2	1942.0	2181.8
68	1643.4	1876.0	2108.6
69	1587.3	1813.0	2038.7
70	1533.0	1752.0	1971.0
71	1481.4	1694.0	1906.6
72	1431.5	1638.0	1844.5
73	1383.4	1584.0	1784.6
74	1337.2	1532.0	1726.8
75	1292.8	1482.0	1671.2
76	1249.4	1433.0	1616.6
77	1208.6	1387.0	1565.4
78	1168.8	1342.0	1515.2
79	1130.7	1299.0	1467.3
80	1094.5	1258.0	1421.5
81	1059.2	1218.0	1376.8
82	1025.7	1180.0	1334.3
83	992.2	1142.0	1291.8

Tolerances	
in +/- %	in +/- °C
10.52%	2.49
10.58%	2.52
10.65%	2.56
10.71%	2.59
10.77%	2.62
10.83%	2.66
10.89%	2.69
10.94%	2.72
11.00%	2.75
11.05%	2.78
11.10%	2.80
11.15%	2.83
11.20%	2.86
11.25%	2.88
11.30%	2.91
11.35%	2.94
11.40%	2.97
11.45%	3.00
11.50%	3.03
11.55%	3.06
11.60%	3.08
11.65%	3.11
11.70%	3.14
11.75%	3.18
11.80%	3.21
11.85%	3.24
11.90%	3.27
11.95%	3.30
12.00%	3.33
12.05%	3.37
12.10%	3.41
12.15%	3.45
12.20%	3.49
12.25%	3.52
12.30%	3.55
12.35%	3.59
12.40%	3.62
12.45%	3.65
12.50%	3.68
12.55%	3.70
12.61%	3.73
12.66%	3.75
12.71%	3.78
12.76%	3.80
12.81%	3.83
12.86%	3.86
12.91%	3.88
12.96%	3.91
13.00%	3.94
13.04%	3.98
13.08%	4.01
13.12%	4.05

Curve 16 (Type L) Data

Honeywell Part Number

135-103LAG-J01

Resistance at 25°C = 10000

Tolerance (in %) @ 25°C Only = 10.00%

Temperature Degrees °C	Resistance in Ohms		
	Ro-MIN	Ro-NOM	Ro-MAX
84	961.3	1107.0	1252.7
85	930.5	1072.0	1213.5
86	901.4	1039.0	1176.6
87	873.3	1007.0	1140.7
88	846.0	976.0	1106.0
89	819.6	946.0	1072.4
90	794.7	917.7	1040.7
91	770.4	890.0	1009.6
92	746.9	863.3	979.7
93	724.2	837.4	950.6
94	702.3	812.5	922.7
95	681.3	788.5	895.7
96	660.9	765.3	869.7
97	641.2	742.8	844.4
98	622.3	721.2	820.1
99	603.9	700.2	796.5
100	586.2	680.0	773.8
101	569.09	660.50	751.91
102	552.55	641.60	730.65
103	536.54	623.30	710.06
104	521.14	605.70	690.26
105	506.20	588.60	671.00
106	491.78	572.10	652.42
107	477.80	556.10	634.40
108	464.27	540.60	616.93
109	451.26	525.70	600.14
110	438.61	511.20	583.79
111	426.20	497.10	568.00
112	414.27	483.50	552.73
113	402.73	470.30	537.87
114	391.57	457.50	523.43
115	380.87	445.20	509.53
116	370.53	433.30	496.07
117	360.56	421.80	483.04
118	350.87	410.60	470.33
119	341.53	399.80	458.07
120	332.46	389.30	446.14
121	323.78	379.20	434.62
122	315.35	369.40	423.45
123	307.16	359.90	412.64
124	299.15	350.60	402.05
125	291.47	341.70	391.93
126	284.00	333.10	382.20
127	276.71	324.70	372.69
128	269.59	316.50	363.41
129	262.74	308.60	354.46
130	256.07	300.90	345.73
131	249.52	293.40	337.28
132	243.16	286.10	329.04
133	236.99	279.00	321.01
134	231.01	272.10	313.19
135	225.22	265.40	305.58
136	219.61	258.90	298.19
137	214.18	252.60	291.02
138	208.93	246.50	284.07
139	203.86	240.60	277.34
140	198.88	234.80	270.72
141	194.09	229.20	264.31
142	189.40	223.70	258.00
143	184.87	218.40	251.93
144	180.51	213.30	246.09
145	176.24	208.30	240.36
146	172.05	203.40	234.75
147	168.04	198.70	229.36
148	164.10	194.10	224.10
149	160.26	189.60	218.94
150	156.58	185.30	214.02
151	105.57	130.90	156.23
152	102.93	127.70	152.47
153	100.28	124.50	148.72
154	97.81	121.50	145.19
155	95.33	118.50	141.67
156	92.94	115.60	138.26
157	90.63	112.80	134.97

Tolerances	
in +/- %	in +/- °C
13.16%	4.09
13.20%	4.13
13.24%	4.16
13.28%	4.20
13.32%	4.24
13.36%	4.28
13.40%	4.32
13.44%	4.38
13.48%	4.43
13.52%	4.47
13.56%	4.52
13.60%	4.56
13.64%	4.60
13.68%	4.65
13.72%	4.68
13.76%	4.72
13.80%	4.76
13.84%	4.79
13.88%	4.82
13.92%	4.85
13.96%	4.88
14.00%	4.91
14.04%	4.94
14.08%	4.98
14.12%	5.01
14.16%	5.04
14.20%	5.07
14.26%	5.11
14.32%	5.14
14.37%	5.17
14.41%	5.20
14.45%	5.24
14.49%	5.27
14.52%	5.30
14.55%	5.33
14.58%	5.37
14.60%	5.41
14.62%	5.45
14.63%	5.50
14.65%	5.55
14.68%	5.60
14.70%	5.65
14.74%	5.72
14.78%	5.79
14.82%	5.85
14.86%	5.91
14.90%	5.96
14.96%	6.01
15.01%	6.05
15.06%	6.10
15.10%	6.14
15.14%	6.18
15.18%	6.22
15.21%	6.26
15.24%	6.30
15.27%	6.34
15.30%	6.38
15.32%	6.41
15.33%	6.44
15.35%	6.48
15.37%	6.51
15.39%	6.55
15.41%	6.59
15.43%	6.62
15.45%	6.66
15.48%	6.70
15.50%	6.74
19.35%	7.78
19.40%	7.84
19.45%	7.89
19.50%	7.95
19.55%	8.00
19.60%	8.06
19.65%	8.11

Curve 16 (Type L) Data

Honeywell Part Number

135-103LAG-J01

Resistance at 25°C = 10000

Tolerance (in %) @ 25°C Only = 10.00%

Temperature Degrees °C	Resistance in Ohms		
	Ro-MIN	Ro-NOM	Ro-MAX
158	88.33	110.00	131.67
159	86.19	107.40	128.61
160	84.05	104.80	125.55
161	81.99	102.30	122.61
162	80.00	99.87	119.74
163	78.05	97.50	116.95
164	76.16	95.20	114.24
165	74.33	92.97	111.61
166	72.63	90.90	109.17
167	70.81	88.68	106.55
168	69.13	86.63	104.13
169	67.49	84.63	101.77
170	65.90	82.68	99.46
171	64.35	80.79	97.23
172	62.84	78.95	95.06
173	61.37	77.15	92.93
174	59.95	75.41	90.87
175	58.56	73.71	88.86
176	57.22	72.06	86.90
177	55.90	70.45	85.00
178	54.62	68.88	83.14
179	53.38	67.36	81.34
180	52.17	65.87	79.57
181	50.98	64.42	77.86
182	49.83	63.01	76.19
183	48.71	61.64	74.57
184	47.62	60.30	72.98
185	46.57	59.00	71.43
186	45.53	57.73	69.93
187	44.53	56.49	68.45
188	43.54	55.28	67.02
189	42.59	54.10	65.61
190	41.66	52.96	64.26
191	40.76	51.84	62.92
192	39.87	50.75	61.63
193	39.02	49.69	60.36
194	38.18	48.65	59.12
195	37.36	47.64	57.92
196	36.57	46.66	56.75
197	35.80	45.70	55.60
198	35.04	44.76	54.48
199	34.30	43.84	53.38
200	33.59	42.95	52.31
201	32.89	42.08	51.27
202	32.21	41.23	50.25
203	31.54	40.40	49.26
204	30.90	39.59	48.28
205	30.26	38.80	47.34
206	29.65	38.03	46.41
207	29.04	37.27	45.50
208	28.46	36.54	44.62
209	27.88	35.82	43.76
210	27.32	35.12	42.92
211	26.77	34.43	42.09
212	26.25	33.77	41.29
213	25.72	33.11	40.50
214	25.21	32.47	39.73
215	24.72	31.85	38.98
216	24.23	31.24	38.25
217	23.76	30.65	37.54
218	23.29	30.06	36.83
219	22.84	29.50	36.16
220	22.40	28.94	35.48
221	21.97	28.40	34.83
222	21.55	27.87	34.19
223	21.13	27.35	33.57
224	20.73	26.84	32.95
225	20.33	26.34	32.35
226	19.95	25.86	31.77
227	19.57	25.38	31.19
228	19.21	24.92	30.63
229	18.85	24.47	30.09
230	18.49	24.02	29.55
231	18.15	23.59	29.03

Tolerances	
in +/- %	in +/- °C
19.70%	8.15
19.75%	8.20
19.80%	8.25
19.85%	8.28
19.90%	8.32
19.95%	8.35
20.00%	8.39
20.05%	8.42
20.10%	8.46
20.15%	8.50
20.20%	8.53
20.25%	8.57
20.30%	8.61
20.35%	8.65
20.40%	8.69
20.45%	8.73
20.50%	8.78
20.55%	8.82
20.60%	8.86
20.65%	8.90
20.70%	8.95
20.75%	8.99
20.80%	9.04
20.86%	9.11
20.91%	9.17
20.97%	9.24
21.02%	9.30
21.07%	9.36
21.13%	9.43
21.18%	9.50
21.23%	9.56
21.28%	9.63
21.33%	9.70
21.38%	9.76
21.43%	9.83
21.48%	9.90
21.52%	9.96
21.57%	10.03
21.62%	10.10
21.66%	10.17
21.71%	10.24
21.76%	10.31
21.80%	10.38
21.84%	10.47
21.88%	10.56
21.92%	10.65
21.96%	10.74
22.00%	10.82
22.04%	10.90
22.08%	10.98
22.12%	11.06
22.16%	11.14
22.20%	11.21
22.24%	11.28
22.28%	11.36
22.32%	11.43
22.36%	11.50
22.40%	11.57
22.44%	11.63
22.48%	11.70
22.52%	11.77
22.56%	11.83
22.60%	11.89
22.64%	11.95
22.69%	12.01
22.73%	12.06
22.77%	12.11
22.81%	12.17
22.85%	12.22
22.89%	12.27
22.93%	12.33
22.97%	12.38
23.01%	12.44
23.05%	12.49

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Resistance at 25°C

=

10000

Tolerance (in %) @ 25°C Only

=

10.00%

Temperature Degrees °C	Resistance in Ohms		
	Ro-MIN	Ro-NOM	Ro-MAX
232	17.81	23.16	28.51
233	17.49	22.75	28.01
234	17.16	22.34	27.52
235	16.86	21.95	27.04
236	16.55	21.56	26.57
237	16.24	21.17	26.10
238	15.95	20.80	25.65
239	15.67	20.44	25.21
240	15.38	20.08	24.78
241	15.11	19.73	24.35
242	14.84	19.39	23.94
243	14.57	19.05	23.53
244	14.31	18.72	23.13
245	14.06	18.40	22.74
246	13.82	18.09	22.36
247	13.58	17.78	21.98
248	13.34	17.48	21.62
249	13.11	17.18	21.25
250	12.88	16.89	20.90

Tolerances	
in +/- %	in +/- °C
23.09%	12.55
23.13%	12.60
23.17%	12.66
23.21%	12.72
23.25%	12.77
23.29%	12.83
23.32%	12.88
23.36%	12.94
23.40%	13.00
23.43%	13.05
23.47%	13.11
23.50%	13.17
23.54%	13.22
23.57%	13.28
23.61%	13.34
23.64%	13.39
23.68%	13.45
23.71%	13.51
23.75%	13.57

FINDING RESISTANCE AND TEMPERATURE USING STEINHART & HART EQUATION

$$1/T = a + b(\ln R) + c(\ln R)^3, \text{ T in degrees Kelvin}$$

Coefficients

a= 0.001125308852122
b= 0.000234711863267
c= 0.000000085663516