



MATERIAL TYPE: D14.0

AVAILABLE PRODUCTS: RL

Data for material type : D14.0

Temp Range (°C)	Ratio	Beta
0 to 50	12.88	4511
0 to 70	29.75	4543
25 to 50	3.27	4569
25 to 85	13.37	4615
25 to 100	22.66	4629
25 to 125	50.28	4651
37.8 to 104.4	14.06	4655

To calculate Rt/R25 at temperatures other than those listed in the table, use the following equation:

$$Rt/R25 = \exp\{A + B/T + C/T^2 + D/T^3\}$$

where T = temperature in K

Temp Range (°C)	A	B	C	D
-50 to 0	-2.1159972 x 10 ⁰¹	8.4293418 x 10 ⁰³	-7.7725412 x 10 ⁰⁵	4.2541075 x 10 ⁰⁷
0 to 50	-1.8702016 x 10 ⁰¹	7.0546445 x 10 ⁰³	-5.6597660 x 10 ⁰⁵	3.7304883 x 10 ⁰⁷
50 to 100	-1.6993691 x 10 ⁰¹	5.8087185 x 10 ⁰³	-2.9718853 x 10 ⁰⁵	2.2905107 x 10 ⁰⁷
100 to 150	-1.6721946 x 10 ⁰¹	5.5839876 x 10 ⁰³	-2.4854696 x 10 ⁰⁵	2.1926961 x 10 ⁰⁷

To calculate the actual thermistor temperature as a function of the thermistor resistance, use the following equation:

$$1/T = a + b(\ln Rt/R25) + c(\ln Rt/R25)^2 + d(\ln Rt/R25)^3$$

Rt/R25 range	a	b	c	d
125.71 to 3.934	3.3600018 x 10 ⁻⁰³	2.1469204 x 10 ⁻⁰⁴	3.7335033 x 10 ⁻⁰⁶	3.3600018 x 10 ⁻⁰⁸
3.934 to 0.3056	3.3540174 x 10 ⁻⁰³	2.2138462 x 10 ⁻⁰⁴	2.0624152 x 10 ⁻⁰⁶	3.3540174 x 10 ⁻⁰⁸
0.3056 to 0.4414	3.3518831 x 10 ⁻⁰³	2.1797293 x 10 ⁻⁰⁴	7.1785786 x 10 ⁻⁰⁷	3.3518831 x 10 ⁻⁰⁸
0.4414 to 0.0098	3.3459735 x 10 ⁻⁰³	2.1487264 x 10 ⁻⁰⁴	3.3752977 x 10 ⁻⁰⁷	3.3459735 x 10 ⁻⁰⁸

†The deviation resulting from the tolerance on the material constant, Beta. The deviation must be added to the resistance tolerance of the part as specified at 25°C.

Temperature (°C)	Rt/R25 nominal	Temp Coef (%/°C)	β Deviation† (±%)
-50	125.700000	8.09	5.480388
-45	84.480000	7.82	5.1591328
-40	57.530000	7.56	4.82595
-35	39.660000	7.32	4.4822155
-30	27.660000	7.10	4.129168
-25	19.500000	6.88	3.7679236
-20	13.900000	6.68	3.3994893
-15	9.999000	6.49	3.0247744
-10	7.263000	6.31	2.6446006
-5	5.323000	6.13	2.2597113
0	3.934000	5.91	1.8707796
5	2.941000	5.73	1.5233398
10	2.218000	5.56	1.1612636
15	1.688000	5.39	0.7858823
20	1.294000	5.23	0.3984194
25	1.000000	5.08	0
30	0.778400	4.94	0.4083404
35	0.610200	4.80	0.8256482
40	0.481500	4.67	1.2510448
45	0.382400	4.55	1.68372
50	0.305600	4.43	2.1229265
55	0.245600	4.31	2.4976773
60	0.198700	4.18	2.8558535
65	0.161600	4.07	3.1983078
70	0.132300	3.96	3.528376
75	0.108800	3.85	3.8391894
80	0.089970	3.75	4.1390629
85	0.074770	3.65	4.4261141
90	0.062440	3.56	4.7009592
95	0.052380	3.47	4.9641772
100	0.044140	3.39	5.2163124
105	0.037330	3.31	5.6762285
110	0.031700	3.23	6.0983883
115	0.027040	3.15	6.4847392
120	0.023150	3.07	6.837103
125	0.019890	3.00	7.157185
130	0.017150	2.93	7.4465837
135	0.014840	2.86	7.7067987
140	0.012890	2.79	7.9392379
145	0.011230	2.73	8.1452245
150	0.009809	2.67	8.3260032

Crown Industrial Estate, Priorswood Road
 Taunton, Somerset TA2 8QY UK
 Tel +44 (0) 1823 335200
 Fax +44 (0) 1823 332637

808 US Highway 1
 Edison, New Jersey 08817-4695 USA
 Tel +1 (732) 287 2870
 Fax +1 (732) 287 8847

967 Windfall Road
 St. Marys, Pennsylvania 15857-3397 USA
 Tel +1 (814) 834 9140
 Fax +1 (814) 781 7969