

NORTH STAR SENSORS CURVE 38

R/T SPECIFICATIONS

°C	RESISTANCE RATIO Rt / R25	NTC (%/°C)	POINT MATCHED RESISTANCE MFG. TOL. ADDER (±%)	INTER-CHANGEABLE T5A CODE ±°C TOL
-50	38.99	-6.18	8.2	1.16
-45	28.77	-5.97	7.5	1.04
-40	21.45	-5.77	6.8	0.94
-35	16.15	-5.58	6.2	0.85
-30	12.27	-5.40	5.6	0.77
-25	9.411	-5.22	5.0	0.70
-20	7.278	-5.06	4.4	0.64
-15	5.674	-4.90	3.9	0.59
-10	4.459	-4.75	3.3	0.55
-5	3.530	-4.60	2.8	0.52
0	2.815	-4.46	2.3	0.50
5	2.260	-4.33	1.8	0.50
10	1.826	-4.20	1.2	0.50
15	1.485	-4.07	0.8	0.50
20	1.215	-3.95	0.4	0.50
25	1.000	-3.84	0.0	0.50
30	0.8276	-3.73	0.4	0.50
35	0.6885	-3.63	0.8	0.50
40	0.5758	-3.53	1.2	0.50
45	0.4840	-3.43	1.7	0.50
50	0.4087	-3.33	2.2	0.50
55	0.3467	-3.24	2.6	0.50
60	0.2954	-3.16	3.0	0.50
65	0.2528	-3.07	3.3	0.50
70	0.2172	-2.99	3.6	0.50
75	0.1874	-2.92	3.9	0.53
80	0.1622	-2.84	4.3	0.57
85	0.1410	-2.77	4.6	0.62
90	0.1230	-2.70	4.9	0.68
95	0.1076	-2.63	5.2	0.75
100	0.0945	-2.57	5.5	0.83
105	0.0832	-2.51	5.8	0.92
110	0.0735	-2.45	6.1	1.02
115	0.0652	-2.39	6.4	1.13
120	0.0579	-2.33	6.7	1.25
125	0.0516	-2.28	6.9	1.37

COLUMN HEADING DEFINITIONS:

RESISTANCE RATIO – The ratio of the resistance at temperature “t” to the resistance at 25 °C. To determine the resistance of a thermistor at a temperature point other than 25 °C, multiply the given resistance ratio by the resistance at 25 °C.

NTC - The Negative Temperature Coefficient of resistance is the % change in resistance per change in temperature, expressed in units of -%/ °C. To determine the approximate % resistance tolerance of a thermistor at a particular temperature, multiply the given NTC value by the temperature tolerance at that temperature.

POINT MATCHED - For thermistors with a specified tolerance at a single temperature point, the manufacturing tolerance is used to determine the tolerance at other temperature points. Typically, thermistors are specified at 25 °C. To determine the resistance tolerance at another temperature point, add the manufacturing tolerance to the specified point matched tolerance. For example, a thermistor with a ± 5% resistance tolerance at 25 °C has a ± 7.3 % tolerance at 0 °C. Point matched thermistors should typically not cycle or operate continuously above 105 °C.

INTERCHANGEABLE T5A CODE - An interchangeable tolerance means that a thermistor has a temperature tolerance specified over a temperature range. For example, a “T5A” code indicates a ± 0.5 °C temperature tolerance from 0 °C to 70 °C. Typically, interchangeable thermistors should not cycle or operate continuously above their specified temperature range.