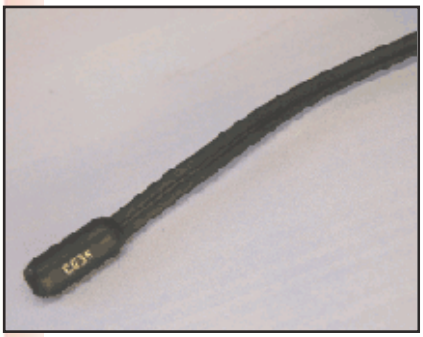
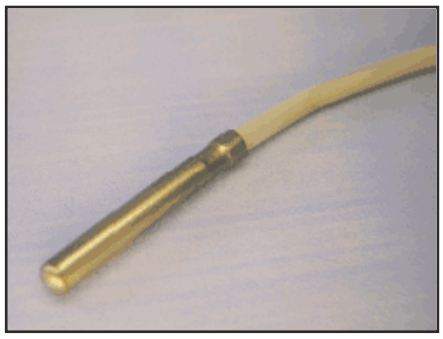
TEMPATRON

NTC & PTC THERMISTORS



PLASTIC SHEATHED NTC SENSOR

STAINLESS STEEL SHEATHED NTC



IP65 STAINLESS STEEL SHEATHED NTC

Thermistors are low-cost temperature sensors based on the principle that electrical resistance changes with a change in temperature. These devices are based on a semiconductor material whose resistance shows a large change with a comparatively small temperature change.

Thermistors either have a negative temperature coefficient (NTC - resistance decreases with increased temperature) or a positive temperature coefficient (PTC - resistance increases with increased temperature).

NTC thermistors have an effective operating range of -50 to +110ºC, whilst PTC thermistors will operate from -50 to +150ºC

Our standard NTC probes are based on a 10K ±1% @ 25ºC sensor - i.e the resistance at 25ºC is 10K , and our PTC probes use a 1K ±1% @ 25ºC sensor. Other, non-standard sensors are also available for special applications.

STANDARD THERMISTOR RESISTANCE CHARACTERISTICS

Temperature	NTC sensor Resistance K		PTC sensor Resistance	
ºC	Min	Max	Min	Max
-50	314.70	344.40	500.9	536.2
-40	181.10	195.90	545.1	579.4
-30	107.50	115.10	597.4	630.6
-20	65.80	69.74	656.9	688.7
-10	41.43	43.50	720.4	750.4
0	26.74	27.83	788.1	815.7
10	17.67	18.24	859.8	884.7
20	11.95	12.23	935.8	957.1
25	9.90	10.10	975.0	995.0
30	8.21	8.41	1012.9	1035.2
40	5.73	5.92	1091.4	1118.5
50	4.08	4.24	1173.5	1205.8
60	2.95	3.09	1259.2	1297.1
70	2.17	2.28	1348.5	1392.2
80	1.62	1.71	1441.4	1491.3
90	1.22	1.30	1537.9	1594.4
100	0.94	1.00	1638.0	1701.4
110	0.72	0.78	1741.0	1813.0
120	-	-	1847.4	1928.8
130	-	-	1957.4	2048.6
140	-	-	2046.1	2146.4
150	-	-	2146.0	2256.1

NTC and PTC probes are normally supplied with plastic or stainless steel sheaths and Tefzel cable, rated for use between -75 and +155ºC. These probes can be supplied with other cable types or with special fittings and terminations. Please contact our sales office for further details.