

T H E R M O M E T R I C S
A C O M M I T M E N T T O E X C E L L E N C E

Battery Pack Temperature Sensor



The ring terminal temperature sensor measures surface temperature. It is important to monitor the temperature on Hybrid Batteries for over charging protection and also for optimization of the batteries' performance.

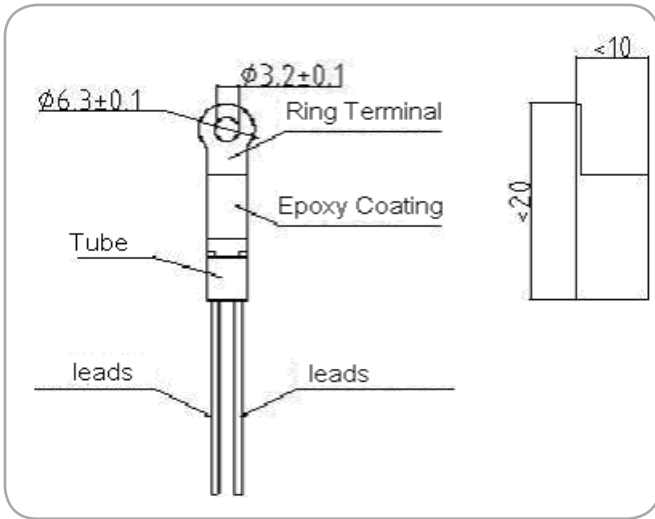
Applications

- EV/ HEV Battery pack surface temperature

Features

- High reliability and stability over battery lifetime
- Compact thermistor design potted into a ring terminal connector
- Very high insulation resistance,
- Low-mass thermistor with PTFE-coated nickel wires for fast time response and accuracy
- Alternate RvT curves available
- Standard and custom ring terminal sizes are available

Amphenol
Advanced Sensors



Specifications

R @ 25°C

10,000 ohms $\pm 1\%$

B (25/85)

3435

Operating Temperature Range

-40°C to 150°C

Storage Temperature Range:

-40°C to 150°C

Response Time

< 15 seconds

Temperature Accuracy

$\pm 0.2^\circ\text{C}$ from 0 to 70°C

Housing Material

Tyco Ring Terminal # 322447, #4 stud ring tongue terminal

Wire

#22 (7x30) 600 V Belden 83005 wire, PTFE
Length: 1000mm

NTC part number

NK103C4R1

Weight

4 grams

Resistance vs. Temperature Data

Resistance = 10,000.0 Ohms at 25°C Rtol. @ 25°C
1.00%

Temp. (°C)	Rnominal (ohms)	Res. Tol. $\pm\%$	Rmin. (Ohms)	Rmax. (Ohms)
-30	112,460	2.9%	109190	115730
-25	87,912	2.7%	85522	90302
-20	68,498	2.5%	66765	70232
-15	53,584	2.3%	52328	54840
-10	42,256	2.2%	41345	43167
-5	33,652	2.0%	32990	34315
0	27,068	1.9%	26556	27581
5	21,968	1.7%	21593	22343
10	17,958	1.5%	17684	18231
15	14,752	1.3%	14553	14950
20	12,147	1.2%	12005	12289
25	10,000	1.0%	9900	10100
30	8,310	1.1%	8216	8404
35	6,963	1.3%	6875	7050
40	5,871	1.4%	5790	5953
45	4,974	1.5%	4899	5050
50	4,231	1.6%	4161	4300
55	3,609	1.8%	3545	3673
60	3,086	1.9%	3027	3145
65	2,645	2.0%	2591	2699
70	2,271	2.2%	2222	2320
75	1,954	2.3%	1909	1999
80	1,684	2.4%	1643	1725
85	1,455	2.6%	1418	1492
90	1,259	2.7%	1226	1293
95	1,093	2.8%	1062	1124
100	950.5	2.9%	922.6	978.5
105	829.1	3.1%	803.7	854.6
110	725.3	3.2%	702.1	748.5
115	636.6	3.3%	615.4	657.8
120	560.5	3.4%	541.1	579.8
125	495.2	3.6%	477.4	513.0
130	439.1	3.7%	422.8	455.5