



THREADED BOLT NTC TEMPERATURE SENSOR

Features

- Long term stability
- High precision NTC thermistor
- Temperature range -40°C to +125°C
- Leads stripped and tin dipped for electrical contact

Applications

- Heatsink temperature
- Transformer temperature monitoring
- Thermal well temperature sensing
- Heat exchanger equipment
- Hot plate temperature sensing

Description

NTC thermistor sensor potted in a stainless-steel threaded housing using thermally conductive epoxy resin for improved time response.

Cost-effective solution for temperature monitoring applications where good thermal coupling is essential.

Customized configurations available on request for volume applications. Options include:

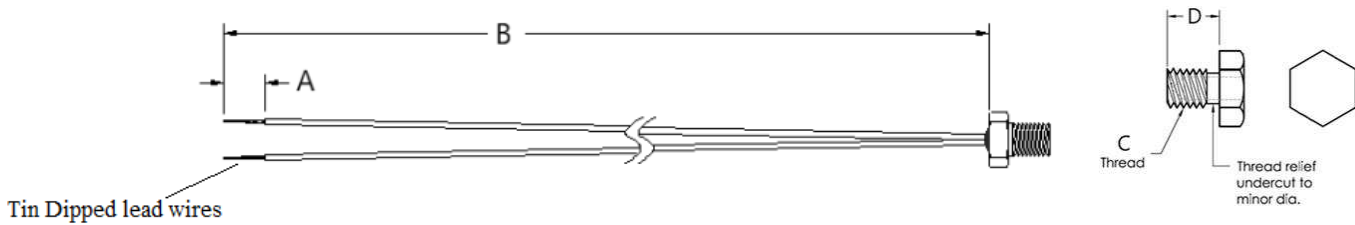
- Resistance temperature characteristics
- Wire type and length
- Connector type
- Threaded bolt size & material selection

Performance Specifications

Parameters	Value	
Resistance and corresponding Beta options	Nominal resistance at +25°C	Beta value (25/85)
	5K Ohm	3976 K
	10K Ohm*	3976 K
	10K Ohm	3694 K
	30K Ohm	3942 K
	100K Ohm	4261 K
Resistance tolerance	± 0.2°C from 0°C to +70°C	
Beta tolerance	± 0.5%	
Time response (63.2% of temperature span) in liquid	<5 s	
Insulation resistance	100 MΩ @ 500 VDC	
Temperature range	-40°C to +125°C	
Resistance drift after storage at 70°C for 1000h	<1%	
Cable	28 AWG Stranded (7/36) SPC with white PTFE Insulation	
Probe head	Stainless steel hex bolt housing	

Note* UL rated 10K (3976) sensor component available if required.

Dimensional Information



	A	B	C	D
Dimensions	5	Refer to Page 4	M5 x 0.8	10
Tolerance	± 1	± 5		± 1

All dimensions in millimeters

Resistance v Temperature Table

Temp (°C)	5K ohms Beta ^{25/85} = 3976	10K ohms Beta ^{25/85} = 3976	10K ohms Beta ^{25/85} = 3694	30K ohms Beta ^{25/85} = 3942	100K ohms Beta ^{25/85} = 4261
-40	167862	336098	239828	884198	4071186
-35	121114	242427	179282	648790	2892930
-30	88349	176803	135233	480620	2078448
-25	65127	130306	102889	359305	1509065
-20	48490	97006	78930	270969	1106727
-15	36450	72911	61031	206069	819493
-10	27649	55304	47549	157975	612407
-5	21158	42317	37316	122041	461695
-0	16325	32651	29490	94980	351017
5	12698	25395	23462	74445	269034
10	9952	19903	18787	58749	207801
15	7857	15714	15136	46667	161700
20	6247	12493	12268	37303	126727
25	5000	10000	10000	30000	100000
30	4028	8056	8196	24268	79430
35	3265	6530	6754	19741	63491
40	2662	5325	5594	16146	51060
45	2183	4367	4656	13274	41303
50	1800	3601	3893	10968	33599
55	1493	2985	3271	9107	27481
60	1227	2487	2760	7597	22594
65	1041	2082	2339	6366	18670
70	876	1752	1990	5358	15502
75	740	1480	1700	4528	12932
80	628	1256	1458	3843	10837
85	535	1070	1255	3274	9121
90	458	916	1084	2800	7708
95	394	787	940	2403	6541
100	339	678	817	2070	5573
105	294	587	713	1789	5573
110	255	510	624	1552	4090
115	216	444	548	1350	3523
120	194	388	482	1178	3045
125	170	341	426	1031	2640

Ordering Information

Part Number	Resistance at +25°C	Beta Value (25/85)	Length (mm) (Dimension B)
20026616-01	5000 Ω	3976	50
20026616-02			100
20026616-03			200
20026616-11	10000 Ω	3976	50
20026616-12			100
20026616-13			200
20026616-21	10000 Ω	3694	50
20026616-22			100
20026616-23			200
20026616-31	30000 Ω	3942	50
20026616-32			100
20026616-33			200
20026616-41	100000 Ω	4261	50
20026616-42			100
20026616-43			200

Example of customization options available for high volume enquiries:

- Various nominal resistance values and material systems available
- ± 0.1°C resistance tolerance (over a specified temperature range) for high precision applications
- PVC wire insulation, typically for low temperature or cost-effective applications (maximum operating temperature: +105°C)
- Various bolt sizes, materials, thread types and lengths available
- Variety of compatible connectors

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