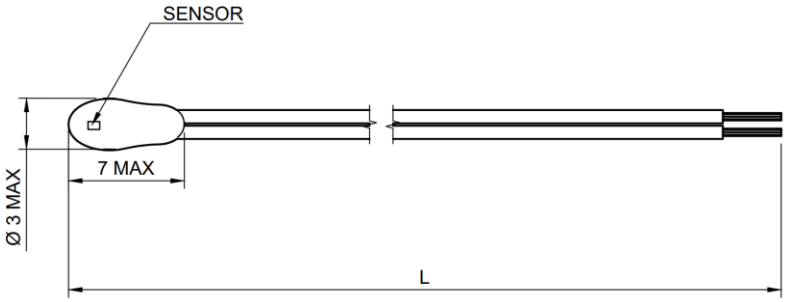
DESCRIPTION

NTC Thermistor assembled with 28 AWG PFA INSULATED WIRE (UL10503). Thermistor encapsulated with special epoxy for moisture protection.



SPECIFICATIONS

SL NO	PARAMETER	VALUE	UNIT
1	Resistance at 25°C	10	KΩ
2	Resistance Tolerance	±1	%
3	Beta Value (25/85)°C	3977	K
4	Beta Tolerance	±1	%
5	Insulation Resistance	100	MΩ
6	Isolation Strength	1500	Vac
7	Response Time	6	Sec
8	Length	25 to 3000	mm
9	Storage Temperature	-40 to 85	°C
10	Operating temperature	-40 to +125	°C

FEATURES

- High Stability &reliability
- Rugged construction
- Flame Resistant and Retardant
- Fast response
- High measuring accuracy
- Easy to install
- Complaint to RoHS Directive 2015/863/EU.

APPLICATIONS

- Temperature sensing in motor windings
- HVAC applications
- Power Electronics
- EV Battery Pack Temperature Sensing
- Heating / Cooling Devices
- Boiler Systems Appliances.
- Monitor and control blade temperatures to allow turbines automated on/off controls to respond quickly.

THERMOSEN TECHNOLOGIES PVT. LTD.
NO 199/1, 9 TH WARD, 7TH MAIN, GARVEBHAVIPALYA,
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PHONE:+91-80-41106383
EMAIL: info@thermosen.com **WEBSITE**: www.thermosen.com

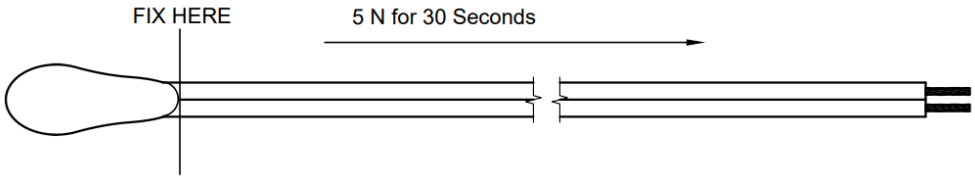
RELIABILITY SPECIFICATION

Description	Test Conditions	Characteristics Drift
Dry Heat Test	Elements are placed in a oven of temp. at 200℃± 5℃ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Cold Test	Elements are placed in an oil bath of temperature at -30℃± 5℃ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Thermal Shock Test	-30℃Air Chamber,3 minute) -> RT(Air, under 1min) -> 90℃Air Chamber, 3 minute) for 1000 cycle. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Damp Heat Test	Elements are placed in a chamber of temp. at 60℃± 2℃ and 90~95%RH for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.

Mechanical Test

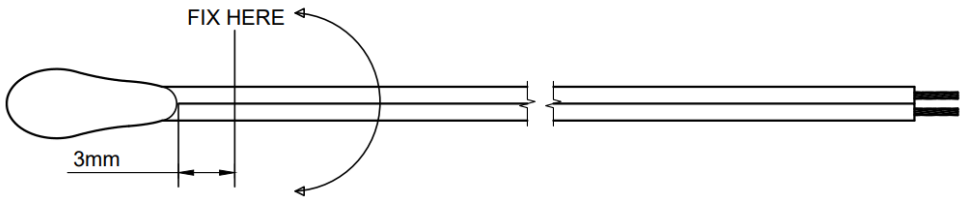
1.Terminal tensile strength test

Load tensile stress of 5N to axial direction slowly and keep it for 30±5 sec. after the test characteristics, appearance and shape shall not change.



2.Terminal bending test

Lead wire will be fixed at 3mm from its probe end. Apply load of 5N to lead wire so that is makes 90 degree. Then put it back to original position. After two times of this action, characteristics, appearance of sensor shall not change.



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PART LIST

Ordering Part Number	R_{25}		B25/85		Curve Type	Wire Length (mm)
	kΩ	± %	K	± %		
TNA-E-B-103R1BD L250	10	1	3977	1	D	25±10
TNA-E-B-103R1BD L400	10	1	3977	1	D	40±10
TNA-E-B-103R1BD L101	10	1	3977	1	D	100±10

PART NUMBER SYSTEM

T	N	A	E	B	103	R1	BD	LXXX
THERMOSEN	NTC	ASSEMBLY	EPOXY TYPE	CONSTRUCTION TYPE	RESISTANCE VALUE (Eg: 103 for 10kΩ ($10x10^3$), 104 for 100kΩ ($10x10^4$))	RESISTANCE TOLERANCE	B VALUE CODE (Eg: BA-3645, BB-3802, BC-3435, BD-3977, etc.)	LENGHTH (Eg: 101for 100mm ($10x10^1$), 102 for 1000mm ($10x10^2$))

RT CHART

T (°C)	R (kΩ)	T (°C)	R (kΩ)	T (°C)	R (kΩ)
-40	333.562	**10**	19.902	**60**	2.487
-35	241.072	**15**	15.713	**65**	2.082
-30	176.082	**20**	12.493	**70**	1.751
-25	129.925	**25**	10.000	**75**	1.480
-20	96.807	**30**	8.056	**80**	1.256
-15	72.809	**35**	6.530	**85**	1.070
-10	55.253	**40**	5.325	**90**	0.916
-5	42.292	**45**	4.367	**95**	0.786
0	32.640	**50**	3.601	**100**	0.678
5	25.391	**55**	2.985	**105**	0.587

SOLDERING

1. Soldering Temperature: 320°C Max.
2. Soldering Duration: 6.0 Second Max.
3. Preheat Temperature: 160°C for 3.0 Sec.

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CUSTOM DESIGN & SUPPORT

- **Other resistance curve & tolerance are available on request**
- **End wire stripped and Tinned or with connector assembly.**
- **Part can be supplied with customised connectors**

PACKING

- **Bulk layer packing**
- **100 in poly bag**
- **Custom packing solution will be provided.**

Consult Thermosen Technologies Pvt. Ltd. for custom product requirement

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