

## NTC Thermistors, Standard Lug Sensors



### DESIGN SUPPORT TOOLS

[click logo to get started](#)

**3D**  
Models  
Available

Design Tools  
Available

- SPICE models available: [www.vishay.com/doc?29178](http://www.vishay.com/doc?29178)
- NTC curve computation:  
[www.vishay.com/thermistors/ntc-curve-list/](http://www.vishay.com/thermistors/ntc-curve-list/)

QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C <sup>(1)</sup>	10K	Ω
Tolerance on $R_{25}$ -value <sup>(1)</sup>	± 2 to ± 3	%
$B_{25/85}$ -value <sup>(1)</sup>	3435 to 3984	K
Tolerance on $B_{25/85}$ -value	± 0.5 to ± 1	%
Operating temperature range at: Zero dissipation	-40 to +150	°C
Dissipation factor <sup>(2)</sup>	≈ 23	mW/K
Thermal time constant <sup>(2)</sup>	≈ 7.5	s
Min. dielectric withstanding voltage between terminals and lug	1500	V <sub>AC</sub>
Min. insulation resistance between terminals and lug at 500 V <sub>DC</sub>	100	MΩ
Climatic category (LCT / UCT / days)	40 / 150 / 56	
Weight	1.6 to 4.3	g

#### Notes

- <sup>(1)</sup> Other  $R_{25}$ -values,  $B_{25/85}$ -values, and tolerances are available upon request
- <sup>(2)</sup> Measured with screw mounted on an aluminum heatsink of 100 cm<sup>2</sup>, thickness 1.5 mm, in still air at  $T_{amb} = 25$  °C

### FEATURES

- Easy mounting using ring tongue terminal
- Rugged construction
- Cable of PTFE insulation according to NEMA HP-3, type E, rated 600 V<sub>RMS</sub> <sup>(1)</sup>
- AEC-Q200 qualified (grade 1)
- UL recognized, file E148885 (UL category XGPU2)
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

#### Note

<sup>(1)</sup> Formerly MIL-W-16878/4, type E, cable test voltage 3.4 kV

### APPLICATIONS

Suitable for surface sensing applications, especially when a good electrical insulation and a good thermal contact with the chassis is required.

### DESCRIPTION

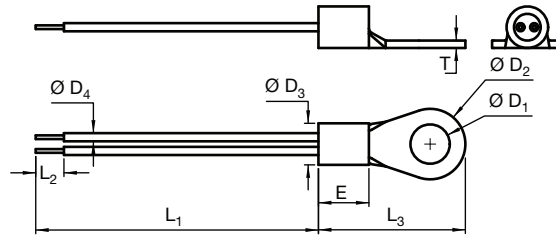
A NTC thermistor chip is soldered to AWG#24 stranded silver plated copper leads with PTFE insulation and insulated with epoxy coating. The insulated sensor is attached to a tin plated copper ring lug. The lead wires are stripped.

### PACKAGING

The thermistors are packed in cardboard boxes.

### MOUNTING

- By means of M5 (Stud #10) screw. Leads to be soldered or crimped
- The device is suitable for screwing e.g. on metal surface
- The leads are suitable for soldering e.g. on PCB
- Consult Vishay for other cable length, cable section, screw sizes, insulation, connector crimping, or other features

**DIMENSIONS** in millimeters


$L_1$	$L_2$	$\varnothing D_1$	$\varnothing D_2$	$\varnothing D_3$	T	$L_3$	E	$D_4$
Refer to the ordering table	$2.5 \pm 1$	$5.3 +0.2 / -0$	$9.5 \pm 0.2$	$5.6 +0.3 / -0.2$	1.0	$19.8 \pm 0.4$	$6.8 \pm 0.3$	$1.12 \pm 0.1$

**ELECTRICAL DATA AND ORDERING INFORMATION**

$R_{25}$ ( $\Omega$ )	$R_{25}$ -TOL. ( $\pm$ %)	$B_{25/85}$ (K)	$B_{25/85}$ -TOL. ( $\pm$ %)	$L_1$ (mm)	DESCRIPTION	SAP MATERIAL AND ORDERING NUMBER		UL REC. (Y / N)
						WITH RoHS EXEMPTION <sup>(1)</sup>	WITHOUT RoHS EXEMPTION <sup>(1)</sup>	
10 000	2	3984	0.5	$38.1 \pm 3.8$	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 38 mm	NTCALUG54A103G	NTCALUG54A103GA	Y
10 000	2	3435	1	$38.1 \pm 3.8$	NTC Lug54 M5 10K 2 % 3435 K PTFE AWG#24 38 mm	NTCALUG54A103GL	NTCALUG54A103GLA	Y
10 000	2	3984	0.5	$350 +10 / -5$	NTC Lug54 M5 10K 2 % 3984 K PTFE AWG#24 350 mm	NTCALUG54A103G351	NTCALUG54A103G351A	Y
10 000	3	3984	0.5	$150 +10 / -5$	NTC Lug54 M5 10K 3 % 3984 K PTFE AWG#24 150 mm	NTCALUG54A103H151	NTCALUG54A103H151A	Y

**Note**

<sup>(1)</sup> RoHS exemption 7(c)-I: electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezo-electronic devices, or in a glass or ceramic matrix compound



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