

### NTC Thermistors, Standard Lug Sensors



#### DESIGN SUPPORT TOOLS

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**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 <sub>25</sub> -value <sup>(1)</sup>	± 2	%
B <sub>25/85</sub> -value <sup>(1)</sup>	3435 to 3984	K
Tolerance on B <sub>25/85</sub> -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<sub>25</sub>-values, B<sub>25/85</sub>-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<sub>amb</sub> = 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 M6 (Stud #1/4) 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 <sub>1</sub>	L <sub>2</sub>	Ø D <sub>1</sub>	Ø D <sub>2</sub>	Ø D <sub>3</sub>	T	L <sub>3</sub>	E	D <sub>4</sub>
Refer to the ordering table	3.8 ± 1	6.4 +0.4 / -0	13.2 ± 0.3	5.6 +0.3 / -0.2	1.0	22.4 ± 0.4	6.8 ± 0.3	1.12 ± 0.1

ELECTRICAL DATA AND ORDERING INFORMATION								
R <sub>25</sub> (Ω)	R <sub>25</sub> -TOL. (± %)	B <sub>25/85</sub> (K)	B <sub>25/85</sub> -TOL. (± %)	L <sub>1</sub> (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 ± 3.8	NTC Lug85 M6 10K 2 % 3984 K PTFE AWG#24 38 mm	NTCALUG85A103G	NTCALUG85A103GA	Y
10 000	2	3435	1	38.1 ± 3.8	NTC Lug85 M6 10K 2 % 3435 K PTFE AWG#24 38 mm	NTCALUG85A103GL	NTCALUG85A103GLA	Y
10 000	2	3984	0.5	150 +10 / -5	NTC Lug85 M6 10K 2 % 3984 K PTFE AWG#24 150 mm	NTCALUG85A103G151	NTCALUG85A103G151A	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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