NTC Thermistors, Standard Lug Sensors, 150 °C

LINKS TO ADDITIONAL RESOURCES

3D Models | Design Tools | SPICE Models | Related Documents

QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C (1)	10K	Ω
Tolerance on R_{25}-value (1)	± 1 to ± 2	%
$B_{25/85}$-value (1)	3435, 3984	K
Tolerance on $B_{25/85}$-value	± 0.5 to ± 1	%
Operating temperature range at zero dissipation	-40 to +150	°C
Min. dielectric withstanding voltage between terminals and lug	2700	V_{AC}
Min. insulation resistance between terminals and lug at 500 V_{DC}	100	MΩ
Weight	2.0 to 3.2	g

Note

(1) Other R_{25}-values, $B_{25/85}$-values, and tolerances are available upon request

AGENCY APPROVALS

- cUL certificate XGPU8.E148885
- ULus certificate XGPU2.E148885

Note

- Agency approval documents, please see: www.vishay.com/ppg?29164&documents

DESIGN-IN SUPPORT

- Other resistance curves and tolerances are available on request
- Consult Vishay for other lead length, other connector crimping, or other features https://info.vishay.com/vishay-ntc-modification-request
- 3D solid models: www.vishay.com/doc?29179
- NTC curve computation: www.vishay.com/thermistors/ntc-rt-calculator/

FEATURES

Pb-free Available

e4 RoHS COMPLIANT

- **150 °C long term stability** (5000 h dry heat)
- Easy mounting using ring tongue terminal
- Rugged construction
- Cable with ETFE insulation according to NEMA HP-3, type Z, rated 600 V_{RMS}, cable test voltage **3.4 kV**
- AEC-Q200 qualified (grade 1)
- cULus recognized, file E148885 (UL category XGPU2/XGPU8)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

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

- Automotive equipment
- EV and battery management
- Power electronics, heat sink
- Consumer appliances

DESCRIPTION

A NTC thermistor chip is soldered to AWG#26 multi-stranded silver plated copper leads with ETFE insulation and insulated with epoxy coating. The insulated sensor is attached to a tin plated copper ring lug via a middle buffer layer. The lead wires are twisted.

PACKAGING

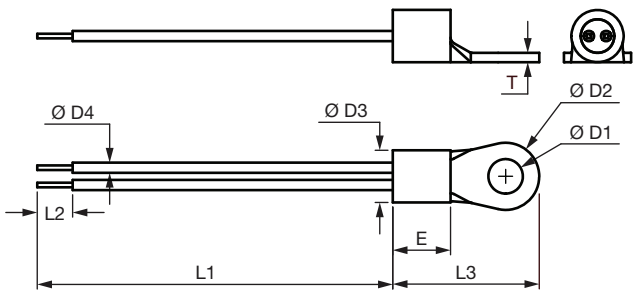
The thermistors are packed in cardboard boxes; the smallest packaging quantity is 200 units.

CAUTIONS AND WARNINGS ON MOUNTING AND HANDLING

Please read the special instructions:
see www.vishay.com/doc?29221.

- By means of M3 (stud #3, #4) or M3,5 (stud #5, #6) 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

DIMENSIONS in millimeters



L_1	L_2	Ø D_1	Ø D_2	Ø D_3	T	L_3	E	D_4
Refer to the ordering table	3.8 ± 1	3.7 +0.2 / -0	7.2 ± 0.2	5.6 +0.3 / -0.2	1.0	15.70 ± 0.3	6.2 ± 0.2	0.93 ± 0.1

ELECTRICAL DATA AND ORDERING INFORMATION

R_{25} (Ω)	R_{25}-TOL. (± %)	$B_{25/85}$ (K)	$B_{25/85}$-TOL. (± %)	L_1 (mm)	DESCRIPTION	UL RECOG.	SAP MATERIAL AND ORDERING NUMBER	
							RoHS-COMPLIANT WITH EXEMPTION (1)	RoHS-COMPLIANT (2)
10 000	1	3984	0.5	150 ± 10	NTC Lug01T 10K 1 % 3984 K 150 °C ETFE AWG26 150 mm	✓	NTCALUG01T103F	NTCALUG01T103FA
10 000	1	3435	1.0	150 ± 10	NTC Lug01T 10K 1 % 3435 K 150 °C ETFE AWG26 150 mm	✓	NTCALUG01T103FL	NTCALUG01T103FLA
10 000	2	3984	0.5	40 ± 5	NTC Lug01T 10K 2 % 3984 K 150 °C ETFE AWG26 40 mm	✓	NTCALUG01T103G400	NTCALUG01T103G400A
10 000	2	3984	0.5	150 ± 10	NTC Lug01T 10K 2 % 3984 K 150 °C ETFE AWG26 150 mm	✓	**NTCALUG01T103G**	**NTCALUG01T103GA**
10 000	2	3984	0.5	200 ± 10	NTC Lug01T 10K 2 % 3984 K 150 °C ETFE AWG26 200 mm	✓	NTCALUG01T103G201	NTCALUG01T103G201A
10 000	2	3984	0.5	500 ± 10	NTC Lug01T 10K 2 % 3984 K 150 °C ETFE AWG26 500 mm	✓	NTCALUG01T103G501	NTCALUG01T103G501A

Notes

Preferred versions for new designs

(1) 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.
(e2) The end conductor is dipped in tin-silver alloy solder

(2) RoHS I, RoHS II, RoHS III, without exemption, and lead (Pb)-free.
(e4) The end conductor is multistranded silver plated copper

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