# 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.

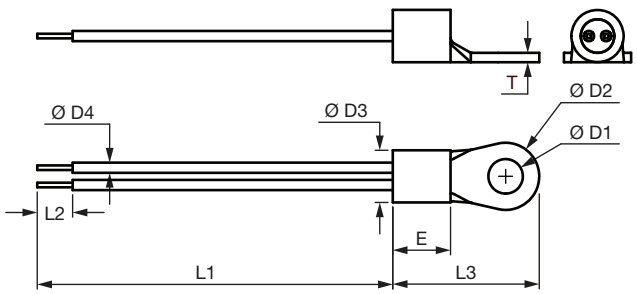
- By means of M3 (stud #3, #4) or M3,5 (stud #5, #6) screw. Leads to be soldered or crimped
- The device is suitable for screwing e.g. on metal surface
- The leads are suitable for soldering e.g. on PCB



For technical questions, contact: nlr@vishay.com

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## 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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