

# NTC Thermistors, Standard Lug Sensors, 150 °C



## DESIGN SUPPORT TOOLS

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- 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>                          | ± 1 to ± 2   | %               |
| B <sub>25/85</sub> -value <sup>(1)</sup>                                    | 3435, 3984   | K               |
| Tolerance on B <sub>25/85</sub> -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 <sub>AC</sub> |
| Min. insulation resistance between terminals and lug at 500 V <sub>DC</sub> | 100          | MΩ              |
| Weight                                                                      | 2.0 to 3.2   | g               |

### Note

<sup>(1)</sup> Other R<sub>25</sub>-values, B<sub>25/85</sub>-values, and tolerances are available upon request

## FEATURES

- 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<sub>RMS</sub>, cable test voltage 3.4 kV
- 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

## 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.

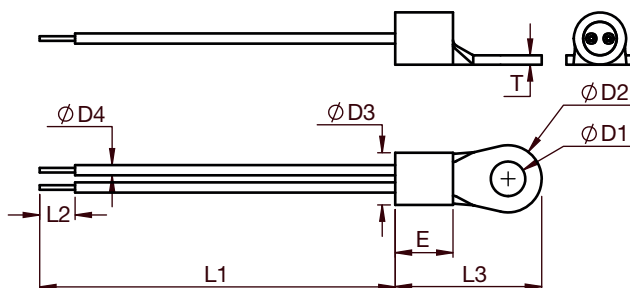
## MOUNTING

- 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
- Consult Vishay for other cable length, cable section, screw sizes, insulation, connector crimping or other features

| ELECTRICAL DATA AND ORDERING INFORMATION |                                |                           |                                   |                        |                                                    |                                    |                                       |
|------------------------------------------|--------------------------------|---------------------------|-----------------------------------|------------------------|----------------------------------------------------|------------------------------------|---------------------------------------|
| R <sub>25</sub><br>(Ω)                   | R <sub>25</sub> -TOL.<br>(± %) | B <sub>25/85</sub><br>(K) | B <sub>25/85</sub> -TOL.<br>(± %) | L <sub>1</sub><br>(mm) | DESCRIPTION                                        | SAP MATERIAL AND ORDERING NUMBER   |                                       |
|                                          |                                |                           |                                   |                        |                                                    | with RoHS exemption <sup>(1)</sup> | without RoHS exemption <sup>(1)</sup> |
| 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                               | 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                    |

### 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

**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 | $3.8 \pm 1$ | $3.7 +0.2 / -0$   | $7.2 \pm 0.2$     | $5.6 +0.3 / -0.2$ | 1.0 | $15.70 \pm 0.3$ | $6.2 \pm 0.2$ | $0.93 \pm 0.1$ |



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