

NTC Thermistors, Standard Lug Sensors, 150 °C


RoHS
COMPLIANT

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_{RMS}, 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

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

DESIGN SUPPORT TOOLS

[click logo to get started](#)
3D
Models
Available


Design Tools
Available

- NTC curve computation:
www.vishay.com/thermistors/ntc-curve-list/

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

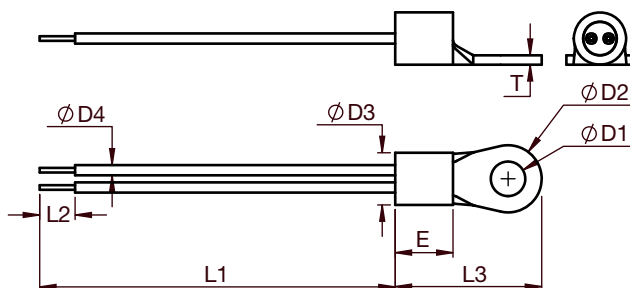
Note

⁽¹⁾ Other R₂₅-values, B_{25/85}-values, and tolerances are available upon request

ELECTRICAL DATA AND ORDERING INFORMATION							
R ₂₅ (Ω)	R ₂₅ -TOL. (± %)	B _{25/85} (K)	B _{25/85} -TOL. (± %)	L ₁ (mm)	DESCRIPTION	SAP MATERIAL AND ORDERING NUMBER	
						with RoHS exemption ⁽¹⁾	without RoHS exemption ⁽¹⁾
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

⁽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

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 ± 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



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.