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

QUICK REFERENCE DATA		
PARAMETER	VALUE	UNIT
Resistance value at 25 °C (1)	4.7K to 100K	Ω
Tolerance on R_{25}-value (1)	± 1 to ± 5	%
$B_{25/85}$-value (1)	3435 to 4190	K
Tolerance on $B_{25/85}$-value	± 0.5 to ± 1.5	%
Operating temperature range at: Zero dissipation	-40 to +150	°C
Dissipation factor (2)	≈ 23	mW/K
Thermal time constant (2)	≈ 7.5	s
Min. dielectric withstanding voltage between terminals and lug	1500	V_{AC}
Min. insulation resistance between terminals and lug at 500 V_{DC}	100	MΩ
Climatic category (LCT / UCT / days)	40 / 150 / 56	
Weight	1.6	g

Notes

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

(2) Measured with screw mounted on an aluminum heatsink of 100 cm^2, thickness 1.5 mm, in still air at T_{amb} = +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_{RMS} (1)
- 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

RoHS COMPLIANT

Note

(1) Formerly MIL-W-16878/4, type E

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 copper leads with PTFE 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 and tinned.

PACKAGING

The thermistors are packed in cardboard boxes; the smallest packaging quantity is 500 units.

MOUNTING

- By means of M3 (Stud 3-4) 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

For technical questions, contact: nlr@vishay.com

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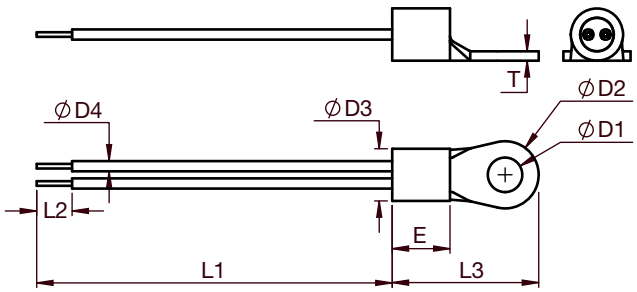
DIMENSIONS in millimeters



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	5.5 +0.3 / -0.2	1.0	15.70 ± 0.3	6.2 ± 0.2	1.12 ± 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	SAP MATERIAL AND ORDERING NUMBER	UL RECOGNIZED (Y / N)
4700	3	3984	0.5	38.1 ± 3.8	NTC Lug01 4.7K 3 % 3984K PTFE AWG#24 38 mm	NTCALUG01A472H	N
10 000	1	3435	1	38.1 ± 3.8	NTC Lug01 10K 1 % 3435K PTFE AWG#24 38 mm	NTCALUG01A103FL	Y
10 000	1	3984	0.5	38.1 ± 3.8	NTC Lug01 10K 1 % 3984K PTFE AWG#24 38 mm	NTCALUG01A103F	Y
10 000	1	3984	0.5	80 ± 5	NTC Lug01 10K 1 % 3984K PTFE AWG#24 80 mm	NTCALUG01A103F800	Y
10 000	1	3435	1	80 ± 5	NTC Lug01 10K 1 % 3435K PTFE AWG#24 80 mm	NTCALUG01A103F800L	Y
10 000	1	3984	0.5	160 +10 / -5	NTC Lug01 10K 1 % 3984K PTFE AWG#24 160 mm	NTCALUG01A103F161	Y
10 000	1	3435	1	160 +10 / -5	NTC Lug01 10K 1 % 3435K PTFE AWG#24 160 mm	NTCALUG01A103F161L	Y
10 000	2	3984	0.5	38.1 ± 3.8	NTC Lug01 10K 2 % 3984K PTFE AWG#24 38 mm	NTCALUG01A103G	Y
10 000	3	3984	0.5	38.1 ± 3.8	NTC Lug01 10K 3 % 3984K PTFE AWG#24 38 mm	NTCALUG01A103H	Y
10 000	5	3984	0.5	38.1 ± 3.8	NTC Lug01 10K 5 % 3984K PTFE AWG#24 38 mm	NTCALUG01A103J (1)	Y
47 000	3	4090	1.5	38.1 ± 3.8	NTC Lug01 47K 3 % 4090K PTFE AWG#24 38 mm	NTCALUG01A473H	N
100 000	1	4190	1.5	38.1 ± 3.8	NTC Lug01 100K 1 % 4190K PTFE AWG#24 38 mm	NTCALUG01A104F	N
100 000	2	4190	1.5	38.1 ± 3.8	NTC Lug01 100K 2 % 4190K PTFE AWG#24 38 mm	NTCALUG01A104G	N

Note

(1) NTCALUG01A103J identical to NTCALUGE2C90169 = 2381 645 90169

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