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[NTCALUG01A103J](#)

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www.vishay.com

## NTCALUG01A Series

Vishay BCcomponents

### NTC Thermistors, Standard Lug Sensors



| QUICK REFERENCE DATA   |                |                 |
|--|----------------|-----------------|
| PARAMETER  | VALUE          | UNIT            |
| Resistance value at 25 °C <sup>(2)</sup>                               | 4.7K to 100K   | Ω               |
| Tolerance on R <sub>25</sub> -value <sup>(2)</sup>                     | ± 1 to ± 5     | %               |
| B <sub>25/85</sub> -value  | 3435 to 4190   | K               |
| Tolerance on B <sub>25/85</sub> -value                                 | ± 0.5 to ± 1.5 | %               |
| Operating temperature range at:<br>Zero dissipation                    | -40 to +150    | °C              |
| Maximum dissipation  | 0 to +55       |                 |
| Dissipation factor <sup>(3)</sup>                                      | ≈ 23           | mW/K            |
| Thermal time constant <sup>(3)</sup>                                   | ≈ 7.5          | s               |
| Min. dielectric withstanding voltage between terminals and lug         | 1500 (1 s)     | V <sub>AC</sub> |
| Insulation resistance between terminals and lug at 500 V <sub>DC</sub> | min. 100       | MΩ              |
| Climatic category (LCT / UCT / days)                                   | 40 / 150 / 56  |                 |
| Weight   | 1.6            | g               |

**Notes**

- <sup>(2)</sup> Other R<sub>25</sub>-values and tolerances are available upon request.
- <sup>(3)</sup> Measured with screw mounted on an aluminum heatsink of 100 cm<sup>2</sup>, thickness 1.5 mm, in still air at T<sub>amb</sub> = +25 °C.

**PACKAGING**

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

**MOUNTING**

- By means of M3 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
- Other screw sizes are available on request

**FEATURES**

- Easy mounting using ring tongue terminal
- Rugged construction
- Cable of PTFE insulation according to NEMA HP-3, type E, rated 600 V<sub>RMS</sub> <sup>(1)</sup>
- 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

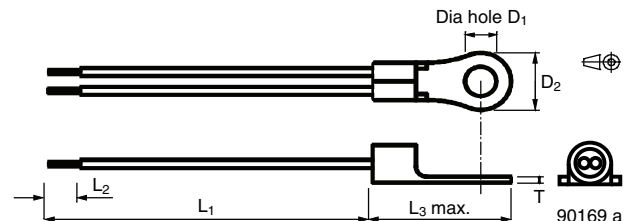
**Note**

<sup>(1)</sup> 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.
- Thermistor with negative temperature coefficient and two stranded PTFE insulated copper leads.
- The device is mounted inside the barrel of the ring tongue terminal.

**DIMENSIONS**



L<sub>1</sub> = 38.1 mm ± 3.8 mm  
 L<sub>2</sub> = 3.81 mm ± 0.64 mm  
 For info: D<sub>1</sub> = 3.68 mm, D<sub>2</sub> = 7.14 mm, L<sub>3</sub> = 16.26 mm, T = 1.016 mm

**Notes**

- The thermistor chip NTC is epoxy coated and attached to the metal lug via a middle buffer layer.
- Metal ring lug is tinned copper.
- Insulated leads: AWG#24 stranded, PTFE insulation, Ø 1.12 mm.
- Lead wire end twisted and tinned, other lead length and insulation, available on request.

**DESIGNERS TOOL**

- Other resistance curves and tolerances are available on request
- Consult Vishay for other lead length, other connector crimping or other features
- 3D solid models: [www.vishay.com/doc?29106](http://www.vishay.com/doc?29106)
- NTC curve computation: [www.vishay.com/thermistors/curve-computation-list/](http://www.vishay.com/thermistors/curve-computation-list/)



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| ELECTRICAL DATA AND ORDERING INFORMATION |                            |                            |                               |                               |  |                  |
|--|----------------------------|----------------------------|-------------------------------|-------------------------------|--|------------------|
| VISHAY SAP ORDERING NUMBER               | R <sub>25</sub> -VALUE (Ω) | R <sub>25</sub> TOL. (± %) | B <sub>25/85</sub> -VALUE (K) | B <sub>25/85</sub> TOL. (± %) | DESCRIPTION                                | UL CERTIFICATION |
| NTCALUG01A472H                           | 4700                       | 3                          | 3984                          | 0.5                           | NTC Lug01 4.7K 3 % 3984K PTFE AWG#24 38 mm | -                |
| NTCALUG01A103FL                          | 10 000                     | 1                          | 3435                          | 1                             | NTC Lug01 10K 1 % 3435K PTFE AWG#24 38 mm  | UL               |
| NTCALUG01A103F                           | 10 000                     | 1                          | 3984                          | 0.5                           | NTC Lug01 10K 1 % 3984K PTFE AWG#24 38 mm  | UL               |
| NTCALUG01A103G                           | 10 000                     | 2                          | 3984                          | 0.5                           | NTC Lug01 10K 2 % 3984K PTFE AWG#24 38 mm  | UL               |
| NTCALUG01A103H                           | 10 000                     | 3                          | 3984                          | 0.5                           | NTC Lug01 10K 3 % 3984K PTFE AWG#24 38 mm  | UL               |
| NTCALUG01A103J <sup>(1)</sup>            | 10 000                     | 5                          | 3984                          | 0.5                           | NTC Lug01 10K 5 % 3984K PTFE AWG#24 38 mm  | UL               |
| NTCALUG01A473H                           | 47 000                     | 3                          | 4090                          | 1.5                           | NTC Lug01 47K 3 % 4090K PTFE AWG#24 38 mm  | -                |
| NTCALUG01A104F                           | 100 000                    | 1                          | 4190                          | 1.5                           | NTC Lug01 100K 1 % 4190K PTFE AWG#24 38 mm | -                |
| NTCALUG01A104G                           | 100 000                    | 2                          | 4190                          | 1.5                           | NTC Lug01 100K 2 % 4190K PTFE AWG#24 38 mm | -                |

**Note**

<sup>(1)</sup> NTCALUG01A103J identical to NTCALUGE2C90169 = 2381 645 90169.



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