Vishay BCcomponents

# **NTC Thermistors, Steel Capped Sensors**



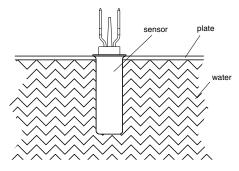
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QUICK REFERENCE DATA				
PARAMETER	VALUE	UNIT		
Resistance value at 25 °C	12K	Ω		
Tolerance on R <sub>25</sub> -value	± 4.0	%		
B <sub>25/85</sub> -value	3730	К		
Tolerance on B <sub>25/85</sub> -value	± 1.5	%		
Operating temperature range at zero dissipation	-25 to +110	°C		
Max. short term operation	130			
Resistance value at 0 °C	35 875 ± 7 %	Ω		
Resistance value at 85 °C	1475 ± 3 %			
Resistance value at 100 °C	963 ± 4.2 %			
Maximum power dissipation at 55 °C	250	mW		
Dissipation factor				
in still air (for information only)	7.5	mW/K		
in still water (for information only)	18			
Thermal time constant in still air $(\tau)$	285			
Response time <sup>(1)</sup>	13 to 16	s		
Temperature gradient <sup>(2)</sup>	≤ 0.02	K/K		
Minimum dielectric withstanding voltage between terminals and capsule during		V <sub>BMS</sub>		
1 min	1500	* NIVIO		
10 s	1650			
Minimum insulation resistance between terminals and capsule at 100 V <sub>DC</sub>	100M	Ω		
Weight	≈ 8	g		

#### Notes

- <sup>(1)</sup> The response time is the time necessary to change 63.2 % of the total difference between the initial and the final body temperature, when subjected to a step function change in ambient temperature from 25 °C air to boiling water at 100 °C
- (2) The temperature gradient is the difference per degree Celsius between the true temperature of the liquid (water) and the temperature measured by the sensor

# METHOD OF APPLICATION



Revision: 23-Aug-17

**FEATURES** 

- · High mechanical strength
- FASTON connectors for easy connection
- Accuracy of ± 1 °C between 25 °C and 85 °C
- Material categorization: RoHS for definitions of compliance please see COMPLIANT www.vishay.com/doc?99912

# **APPLICATIONS**

- Sensors for water temperature control in, for example: - Washing machines
  - Dish washers
  - Heat pumps
  - Electric boilers

### DESCRIPTION

These thermistors have a negative temperature coefficient. The device consists of a soldered ceramic chip which is mounted in a capsule of stainless steel SS304 and provided with two 6.3 mm tinned spade connectors.

### MOUNTING

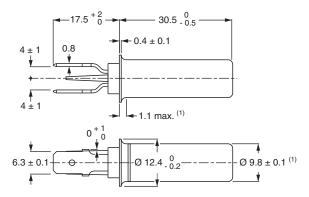
Connect to two FASTONS 6.3 x 0.8 (0.25" x 0.032") receptacle or equivalent and mounted with a watertight sealing.

# **DESIGN-IN SUPPORT**

For complete curve computation, visit: www.vishay.com/thermistors/ntc-curve-list/

# **DIMENSIONS** in millimeters

Component outline



ELECTRICAL DATA AND ORDERING					
<b>R</b> 25 (Ω)	R <sub>25</sub> -TOL. (± %)	B <sub>25/85</sub> (K)	B <sub>25/85</sub> -TOL. (± %)	SAP MATERIAL AND ORDERING NUMBER	
12 000	4	3730	1.5	NTCAIMME3C90042	

Document Number: 29066

1 For technical questions, contact: nlr@vishay.com

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