

DESCRIPTION

NTC Thermistor assembled with 22 AWG White PVC Jacketed 2 core Cable (UL2661). Thermistor encapsulated with a food grade plastic housing specially designed for refrigeration Industry.



SPECIFICATIONS

| SL NO | PARAMETER | VALUE | UNIT |
|-------|-----------------------|-------------|------|
| 1 | Resistance at 25°C | 1-100 | kΩ |
| 2 | Resistance Tolerance | 1-5 | % |
| 3 | Insulation Resistance | 100 | MΩ |
| 4 | Isolation Strength | 2500 | Vac |
| 5 | Response Time | 28 | Sec |
| 6 | Length (L1) | 100 to 3000 | mm |
| 7 | Length (L2) | 25-150 | mm |
| 8 | Storage Temperature | -40 to 85 | °C |
| 9 | Operating temperature | -40 to +85 | °C |

FEATURES

- High Stability & reliability
- Rugged construction
- Flame Resistant and Retardant
- High measuring accuracy
- Easy to install
- Complaint to RoHS Directive 2015/863/EU.

APPLICATIONS

- Refrigeration Appliances
- Cold storage
- Cooling Devices

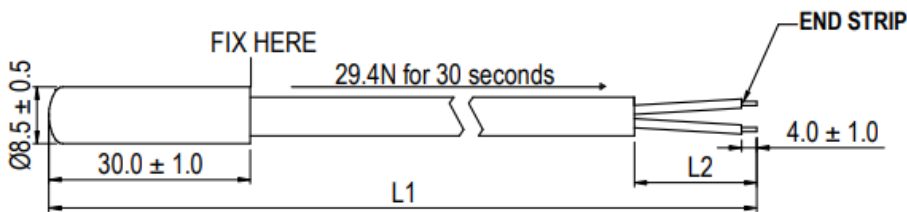
RELIABILITY SPECIFICATION

| Description | Test Conditions | Characteristics Drift |
|---------------------------|---|---|
| Dry Heat Test | Elements are placed in an oven of temp. at $100^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour. | ΔR after test are less than $\pm 3\%$. ΔB after test are less than $\pm 2\%$. |
| Cold Test | Elements are placed in an oil bath of temperature at $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour. | ΔR after test are less than $\pm 3\%$. ΔB after test are less than $\pm 2\%$. |
| Thermal Shock Test | -40°C Silicon Oil, 10 minutes) \rightarrow RT(Air, under 1min) \rightarrow 85°C Silicon Oil, 10 minutes) for 5000 cycle. After test the elements are stored in room temperature for one hour. | ΔR after test are less than $\pm 3\%$. ΔB after test are less than $\pm 2\%$. |
| Damp Heat Test | Elements are placed in a chamber of temp. at $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 85%RH for 500 (+48, -0)hr. After test the elements are stored in room temperature for one hour. | ΔR after test are less than $\pm 3\%$. ΔB after test are less than $\pm 2\%$. |

Mechanical Test

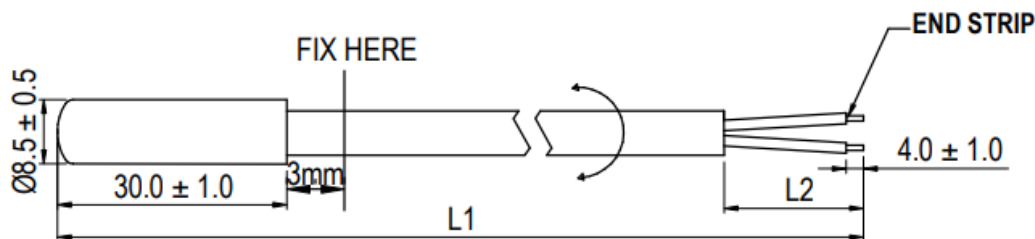
1. Terminal tensile strength test

Load tensile stress of 29.4N to axial direction slowly and keep it for 30 ± 5 sec. after the test characteristics, there should not be any physical damage or abnormalities in product characteristics.



2. Terminal bending test

The wire will be fixed at 3mm from its probe end. Apply load of 29.4N to the wire so that it makes 90 degree. Then put it back to original position. After two times of this action, characteristics, appearance of sensor shall not change.



RT CHART

Please refer to our website <https://www.thermosen.com/rt> for respective RT charts.

SOLDERING

1. Soldering Temperature: 320°C Max.
2. Soldering Duration: 6.0 Second Max.
3. Preheat Temperature: 160°C for 3.0 Sec.

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PART LIST

| Ordering Part Number | R ₂₅ | R(TOL) | B(0/50) | B(TOL) | Curve type |
|---------------------------|-----------------|-----------|---------|--------|------------|
| | kΩ | ± % | K | ± % | |
| TNA-P-32102RXBRL1XXXL2XXX | 1K | 1,2, 3, 5 | 3934 | 1 | R |
| TNA-P-32202RXBEL1XXXL2XXX | 2K | 1,2, 3, 5 | 3450 | 1 | E |
| TNA-P-3225RXBDL1XXXL2XXX | 2.25K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32472RXBDL1XXXL2XXX | 4.7K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32502RXBDL1XXXL2XXX | 5K | 1,2, 3, 5 | 3856 | 1 | D |
| TNA-P-32502RXBDL1XXXL2XXX | 5K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32103RXBDL1XXXL2XXX | 10K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32103RXB4L1XXXL2XXX | 10K | 1,2, 3, 5 | 3410 | 1 | 4 |
| TNA-P-32103RXBCL1XXXL2XXX | 10K | 1,2, 3, 5 | 3339 | 1 | C |
| TNA-P-32123RXB5L1XXXL2XXX | 12K | 1,2, 3, 5 | 3917 | 1 | 5 |
| TNA-P-32153RXBJL1XXXL2XXX | 15K | 1,2, 3, 5 | 3883 | 1 | J |
| TNA-P-32203RXBDL1XXXL2XXX | 20K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32303RXBDL1XXXL2XXX | 30K | 1,2, 3, 5 | 3892 | 1 | D |
| TNA-P-32503RXBJL1XXXL2XXX | 50K | 1,2, 3, 5 | 3883 | 1 | J |
| TNA-P-32503RXB2L1XXXL2XXX | 50K | 1,2, 3, 5 | 3990 | 1 | 2 |
| TNA-P-32104RXBJL1XXXL2XXX | 100K | 1,2, 3, 5 | 3883 | 1 | J |
| TNA-P-32104RXBSL1XXXL2XXX | 100K | 1,2, 3, 5 | 3917 | 1 | S |

PART NUMBER SYSTEM

T N A - P - 32 XXX RX BX L1XXX L2XXX CXX*

| | | | | | | | | | | |
|------------------|------------|-----------------|-----------------------------|--------------------|-------------------------|-----------------------------|-------------------|---|---|-----------------------|
| THERMOSEN | NTC | ASSEMBLY | PLASTIC HOUSING TYPE | SERIES CODE | RESISTANCE VALUE | RESISTANCE TOLERANCE | BETA VALUE | WIRE LENGTH-1 1 (Eg: 101 for 100mm (10x10 ¹), 102 for 1000mm (10x10 ²)) | WIRE LENGTH-2 Eg: 101 for 100mm (10x10 ¹), 102 for 1000mm (10x10 ²) | CONNECTOR TYPE |
|------------------|------------|-----------------|-----------------------------|--------------------|-------------------------|-----------------------------|-------------------|---|---|-----------------------|

*For connector options, Please contact us.

CUSTOM DESIGN & SUPPORT

- Other resistance curve & tolerance are available on request
- End wire stripped and Tinned or with connector assembly.
- Part can be supplied with customised connectors

PACKING

- Bulk layer packing
- 100 in poly bag
- Custom packing solution will be provided.

Consult Thermosen Technologies Pvt. Ltd. for custom product requirement

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