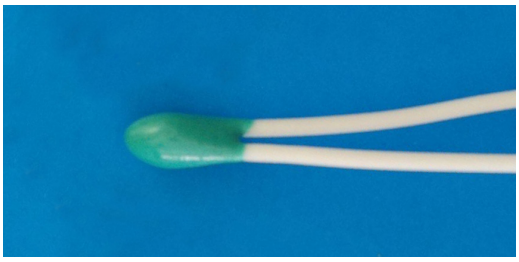
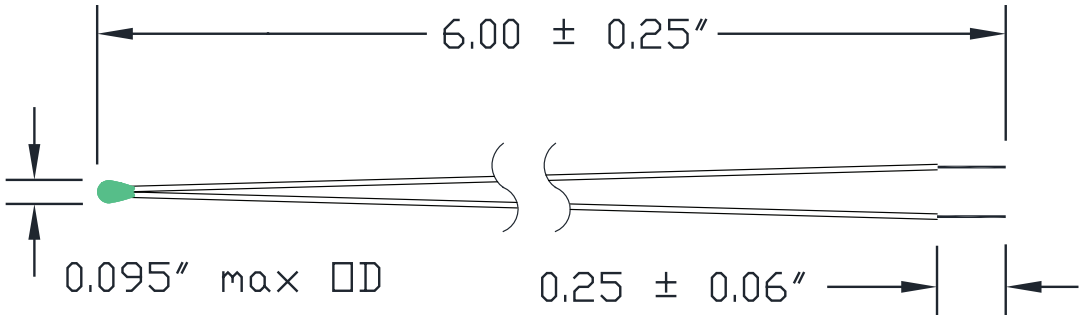
NORTH STAR SENSORS, LLC

HELPING YOU NAVIGATE THE WORLD OF SENSORS

# 2HE NTC Thermistor

**Description:**
Epoxy-coated NTC thermistor with Kynar-insulated 30 AWG solid silver-plated copper leads, radial configuration, 6 in (152.4 mm) overall length.






(Drawing dimensions are typical)

**Features:**

- **R25 values from 50 Ω to 100,000 Ω**
- **Available in point-matched and interchangeable temperature tolerances**
- **Available in all R/T Curves**

With Kynar-insulated leads, the 2HE thermistor series reduces labors cost when the sensors are potted in housings and the leads must be electrically insulated. The 2HE series facilitates the process of attaching extension leads. The 2HE series is also appropriate for applications where the thermistor is exposed directly to ambient room air. Contact us at info@northstarsensors.com for assistance with your unique application.

**Applications:**

- **Electronic thermometers**
- **Industrial controls**
- **Food processing**
- **Battery technology**
- **HVAC**
- **Cold junction compensation**

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# 2HE NTC Thermistor

## Typical Configurations:

| Part Number | Resistance at 25 °C | Temperature Tolerance | R/T Curve | 25 °C / 85 °C ß |
|---|---|---|---|---|
| 2HE103R44T1A | 10 kΩ | ± 0.1 °C from 0 °C to 70 °C | 44 | 3978 |
| 2HE222R44T1M | 2252 Ω | ± 0.1 °C from 35 °C to 40 °C | 44 | 3978 |
| 2HE351R38P2 | 350 Ω | ± 2% Ω at 25 °C | 38 | 3486 |
| 2HE303R43T2A | 30 kΩ | ± 0.2 °C from 0 °C to 70 °C | 43 | 3943 |
| 2HE104R47T5A | 100 kΩ | ± 0.5 °C from 0 °C to 70 °C | 47 | 4262 |

A wide variety of configurations are possible. Contact us at info@northstarsensors.com for assistance with your unique application.

## Other Specifications:

| | |
|---|---|
| Recommended Operating Temperature | -50 °C to 100 °C |
| Max Temperature | 125 °C |
| Recommended Measurement Current | < 50 µA |
| Time Constant | ~ 1 second in stirred liquid |
| Dissipation Constant | ~ 1 mW / °C in ambient air |
| RoHS and REACH | Compliant |

## Resistance vs Temperature Conversion Tables

| °C | CURVE 38 | | CURVE 43 | | CURVE 44 | |
|---|---|---|---|---|---|---|
| | Ω RATIO $R_T / R_{25}$ | NTC (%/°C) | Ω RATIO $R_T / R_{25}$ | NTC (%/°C) | Ω RATIO $R_T / R_{25}$ | NTC (%/°C) |
| 0 | 2.815 | -4.46 | 3.1660 | -4.94 | 3.2651 | -5.11 |
| 5 | 2.260 | -4.33 | 2.4815 | -4.80 | 2.5393 | -4.95 |
| 10 | 1.826 | -4.20 | 1.9583 | -4.67 | 1.9901 | -4.80 |
| 15 | 1.485 | -4.07 | 1.5556 | -4.54 | 1.5712 | -4.66 |
| 20 | 1.215 | -3.95 | 1.2434 | -4.42 | 1.2493 | -4.52 |
| 25 | 1.000 | -3.84 | 1.0000 | -4.30 | 1.0000 | -4.39 |
| 30 | 0.8276 | -3.73 | 0.80892 | -4.18 | 0.80567 | -4.26 |
| 35 | 0.6885 | -3.63 | 0.65804 | -4.07 | 0.65314 | -4.14 |
| 40 | 0.5758 | -3.53 | 0.53820 | -3.97 | 0.53266 | -4.02 |
| 45 | 0.4840 | -3.43 | 0.44249 | -3.87 | 0.43689 | -3.91 |
| 50 | 0.4087 | -3.33 | 0.36563 | -3.77 | 0.36031 | -3.81 |
| 55 | 0.3467 | -3.24 | 0.30357 | -3.67 | 0.29857 | -3.71 |
| 60 | 0.2954 | -3.16 | 0.25323 | -3.58 | 0.24869 | -3.61 |
| 65 | 0.2528 | -3.07 | 0.21219 | -3.49 | 0.20816 | -3.51 |
| 70 | 0.2172 | -2.99 | 0.17858 | -3.41 | 0.17508 | -3.42 |

Please visit northstarsensors.com/temperature-curves for additional tables

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