



4400RC SERIES

Precision Epoxy NTC Thermistors

Interchangeable Thermistors – TE Connectivity (TE) provides highly accurate and stable temperature sensing for measurement, control, indication and compensation. The tight interchangeability of our precision components allows precise measurement without calibration of circuitry to match individual components.

TE offers two interchangeability tolerances $\pm 0.2^{\circ}\text{C}$ and $\pm 0.1^{\circ}\text{C}$. Choose epoxy-encapsulated components for applications where cost, flexibility and a wide range of resistance values are important.

Specifications

Time Constant

1 sec max when suspended by their leads in a well-stirred oil bath. In still air, 10 sec max.

Dissipation Constant

8mW/ $^{\circ}\text{C}$ min when suspended by their leads in a well-stirred oil bath, or 1mW/ $^{\circ}\text{C}$ in still air.

Stability

TE thermistors are chemically stable and not significantly affected by aging or exposure to strong nuclear radiation.

Resistance/Temperature Data

A $^{\circ}\text{C}$ resistance vs temperature table in 1°C increments is available on www.te.com.

Interchangeability Tolerance Data

Tables on www.te.com show nominal resistance values, ohms per degree and tolerance at select temperatures over the operating range.

Maximum Power

30mW at 25°C de-rated to zero power at 125°C

Features

- ◆ High sensitivity to detect small temperature changes
- ◆ High density ceramic sensor provides:
 - Stability
 - $\pm 0.2^{\circ}$, $\pm 0.1^{\circ}$ interchangeability

Applications

- ◆ Temperature control for DNA replication/analysis and cytology equipment
- ◆ Temperature control in photocopy machines and in photo reproduction and enlargement machines
- ◆ Temperature monitoring for telecommunications battery backup systems
- ◆ Temperature monitoring and control in clean rooms/controlled environments
- ◆ Temperature monitoring on the ocean floor
- ◆ Heater monitor/control for outdoor pool/spa
- ◆ Temperature monitoring for fruit growers

Mechanical Details



Performance Specifications

| | Tolerance on Beta Value | Time Response in Air | Dissipation Constant in Air | Insulation Resistance (Min. of 100Mohms for 1 Sec.) | |
|----------------|-------------------------|----------------------|-----------------------------|---|-------|
| | % | Seconds | mW/°C | Volts | |
| 44001RC | 0.8 | < 10 | 1 | 500 | |
| 44002RC | 0.8 | < 10 | 1 | 500 | |
| 44003RC | 1.0 | < 10 | 1 | 500 | |
| 44004RC | 0.8 | < 10 | 1 | 500 | |
| 44005RC | 0.8 | < 10 | 1 | 500 | |
| 44007RC | 0.8 | < 10 | 1 | 500 | |
| 44016RC | 0.8 | < 10 | 1 | 1 | 500 1 |
| 44006RC | 0.8 | < 10 | 1 | 500 | |
| 44008RC | 0.8 | < 10 | 1 | 500 | |
| 44011RC | 0.8 | < 10 | 1 | 500 | |
| 44033RC | 0.4 | < 10 | 1 | 500 | |
| 44030RC | 0.4 | < 10 | 1 | 500 | |
| 44034RC | 0.4 | < 10 | 1 | 500 | |
| 44036RC | 0.4 | < 10 | 1 | 500 | |
| 44037RC | 0.4 | < 10 | 1 | 500 | |
| 44031RC | 0.4 | < 10 | 1 | 500 | |
| 44032RC | 0.4 | < 10 | 1 | 500 | |

Ordering Information

| Parameters | Ordering Part Number | Model Number | Zero Power Resistance | Beta 0-50(K) | Ratio 25/125° | Max Working Temp. | Best Storage & Working Temp. | Mix |
|--|----------------------|--------------|-----------------------|--------------|---------------|-------------------|------------------------------|-----|
| ±0.2°C Interchangeability Tolerance 0 to 70°C | 701001-M | 44001RC | 100 | 2854 | 11.49 | 100°C | -80°C to 50°C | L |
| | 701002 | 44002RC | 300 | 3118 | 15.15 | 100°C | -80°C to 50°C | L |
| | 701003-M | 44003RC | 1,000 | 3217 | 17.33 | 100°C | -80°C to 50°C | L |
| | 701004 | 44004RC | 2,252 | 3891 | 29.26 | 150°C | -80°C to 120°C | B |
| | 701005-M | 44005RC | 3,000 | 3891 | 29.26 | 150°C | -80°C to 120°C | B |
| | 701007-M | 44007RC | 5,000 | 3891 | 29.26 | 150°C | -80°C to 120°C | B |
| | 701016-M | 44016RC | 10,000 | 3891 | 29.26 | 150°C | -80°C to 120°C | B |
| | 701006 | 44006RC | 10,000 | 3574 | 23.51 | 150°C | -80°C to 120°C | B |
| | 701008-M | 44008RC | 30,000 | 3810 | 29.15 | 150°C | -80°C to 120°C | B |
| | 701011-M | 44011RC | 100,000 | 3988 | 34.82 | 150°C | -80°C to 120°C | B |
| ±0.1°C Interchangeability Tolerance 0 to 70°C | 701033 | 44033RC | 2,252 | 3891 | 29.26 | 75°C | -80°C to 75°C | B |
| | 701030-M | 44030RC | 3,000 | 3891 | 29.26 | 75°C | -80°C to 75°C | B |
| | 701034-M | 44034RC | 5,000 | 3891 | 29.26 | 75°C | -80°C to 75°C | B |
| | 701036-M | 44036RC | 10,000 | 3891 | 29.26 | 75°C | -80°C to 75°C | B |
| | 701037-M | 44037RC | 6,000 | 3891 | 29.26 | 75°C | -80°C to 75°C | B |
| | 701031-M | 44031RC | 10,000 | 3574 | 23.51 | 75°C | -80°C to 75°C | H |
| | 701032 | 44032RC | 30,000 | 3810 | 29.15 | 75°C | -80°C to 75°C | H |

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