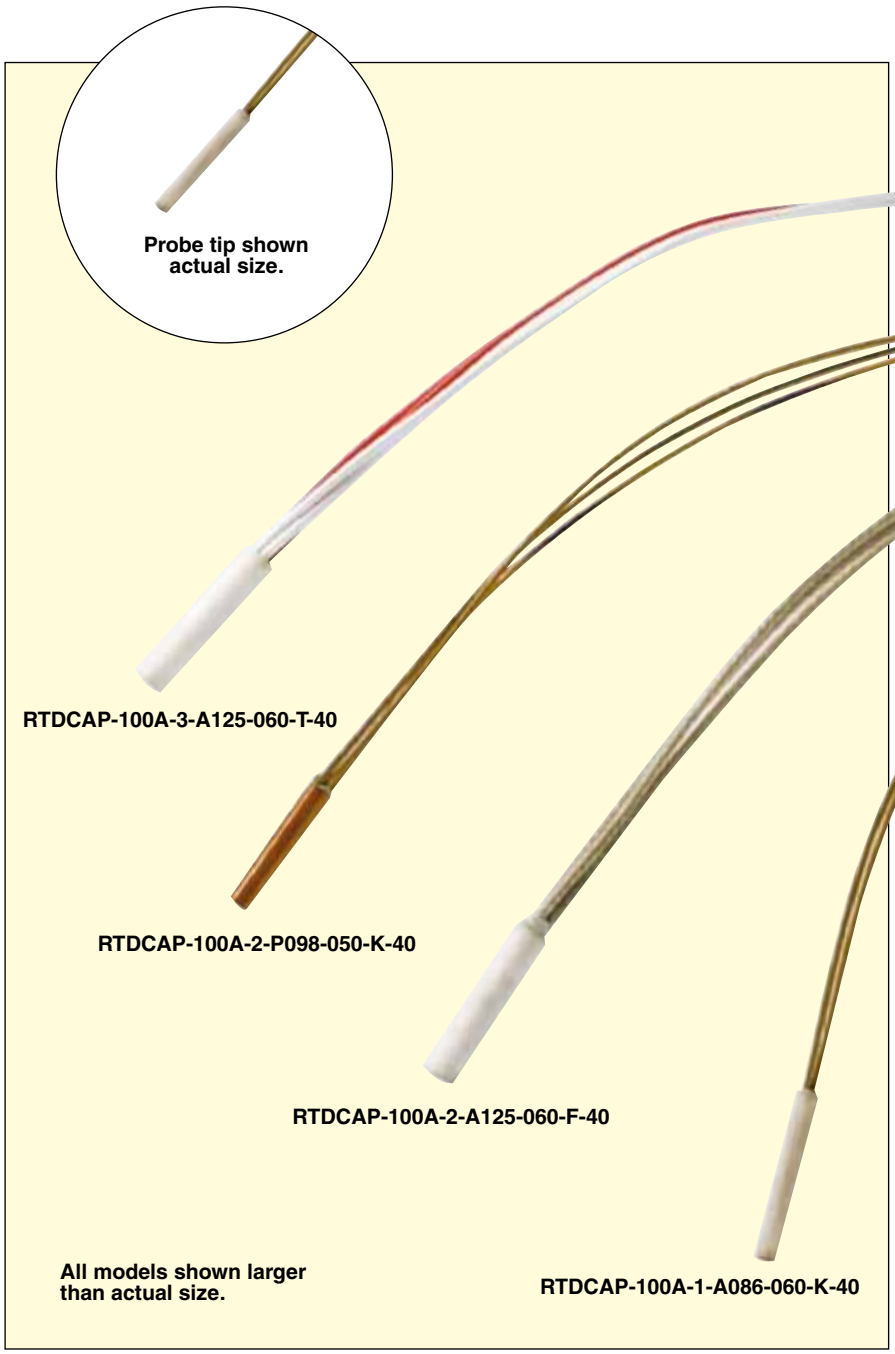
Platinum RTD Capsules

RTDCAP Series

- 4 Temperature Ranges Available
- 100 or 1 KΩ Available
- 2-, 3- and 4-Wire Configurations as Noted
- Moisture Resistant Available in Some Models

Ready to use platinum RTD capsules have insulated lead wires welded and anchored internally. No splicing to fragile elements is required. This construction assures reliable rugged embedment, insertion or probe assembly. Tip diameters from 0.086 to 0.125". Standard sensors and encapsulation materials rated up to 540°C (1000°F). Choose the moisture resistant version for condensing conditions.



Specifications

Standard Lead Length: 1 m (40")

Operating Temperature Range:
TFE Leads: -200 to 260°C (-320 to 500°F)
Polyimide Leads: -200 to 350°C (-320 to 660°F)
Fiberglass Leads: -75 to 510°C (-100 to 950°F)
Moisture Resistant: -50 to 200°C (-60 to 390°F)

Sensing Element: International grade thin film platinum, a = 0.00385 Ω/Ω/°C per IEC 60751

Ice Point Resistance: 100.00±0.06Ω or 1000.0±0.6Ω at 0°C

Time Constant (Water at 3'/Second):
0.086 Diameter = 0.5 seconds
0.098 Diameter = 0.6 seconds
0.125 Diameter = 0.8 seconds
0.187 Diameter = 1.5 seconds

Self-Heating: Greater than 15 mW/°C

Interchangeability/Accuracy: Class A (±0.15+.002*|t|°C [where |t|= absolute value of temperature in °C]) between -50 and 300°C, Class B above and below these temperatures

Long Term Stability: Better than 0.05°C (0.02% of resistance) per 5 years, -50 to 300°C (-58 to 572°F), 0.25°C per year to 540°C (1004°F)

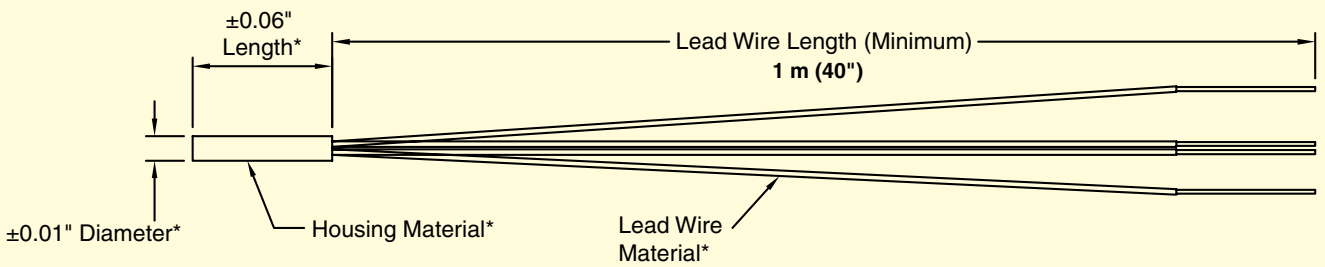
Insulation Resistance: Greater than 50 Megohms at 50 Vdc at 25°C (77°F)

Maximum Current: 100 Ω = 5 mA, 1000 Ω = 2 mA for limited self-heating; also suitable as self-heated sensors

Recommended Current: 1 mA maximum for temperature sensing

Case Materials: Alumina on 0.125 and 0.086 diameter, Polyimide [350°C (662°F)] on 0.098 diameter

Lead Materials, Nickel-Coated Copper-Insulated:
28 AWG Fiberglass: Rated to 510°C (950°F)
28 AWG TFE: Rated to 260°C (500°F)
28 AWG Polyimide: Rated to 350°C (660°F)



***Refer to the To Order chart below for dimensions and lead materials.**

To Order

Model No.	Description
RTDCAP-100A-1-A086-060-K-40	100 Ω RTD, 0.086" diameter x 0.6" long alumina with 28 AWG polyimide leads, 350°C (660°F), 2-wire only
RTDCAP-100A-2-P098-050-K-40	100 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG polyimide leads, 350°C (660°F), 3-wire only**
RTDCAP-100A-2-P098-050-T-40	100 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG TFE leads, 260°C (500°F), 3-wire only**
RTDCAP-100A-3-A125-060-T-40	100 Ω RTD, 0.125" diameter x 0.6" long alumina with 28 AWG TFE leads, 260°C (500°F), 4-wire only**
RTDCAP-100A-2-A125-060-T-40-M	100 Ω RTD, 0.125" diameter x 0.6" long alumina with 28 AWG PFTE leads, 200°C (390°F), 300 psi seal, moisture resistant, 3-wire only**
RTDCAP-100A-2-A125-060-F-40	100 Ω RTD, 0.125" diameter x 0.6" long alumina with 28 AWG fiberglass leads, 510°C (950°F), 3-wire only**
RTDCAP-1KA-1-A086-060-K-40	1000 Ω RTD, 0.086" diameter x 0.6" long alumina with 28 AWG polyimide leads, 350°C (660°F), 2-wire only
RTDCAP-1KA-2-P098-050-K-40	1000 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG polyimide leads, 350°C (660°F), 3-wire only**
RTDCAP-1KA-2-P098-050-T-40	1000 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG TFE leads, 260°C (500°F), 3-wire only**
RTDCAP-1KA-3-A125-060-T-40	1000 Ω RTD, 0.125" diameter x 0.6" long alumina with 28 AWG TFE leads, 260°C (500°F), 4-wire only**
RTDCAP-1KA-2-A125-060-F-40	1000 Ω RTD, 0.125" diameter x 0.6" long alumina with 28 AWG fiberglass leads, 510°C (950°F), 3-wire only**

***** Note:** 3- and 4-wire sensors can be modified by the customer for 2- and 3-wire applications by cutting off unneeded lead wires.*

***Ordering Example: RTDCAP-100A-2-P098-050-K-40,** 100 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG Kapton® (polyimide) leads, 350°C (660°F), 3-wire maximum.*

***RTDCAP-1KA-2-P098-050-K-40,** 1000 Ω RTD, 0.098" diameter x 0.5" long polyimide with 28 AWG polyimide leads, 350°C (660°F), 3-wire.*