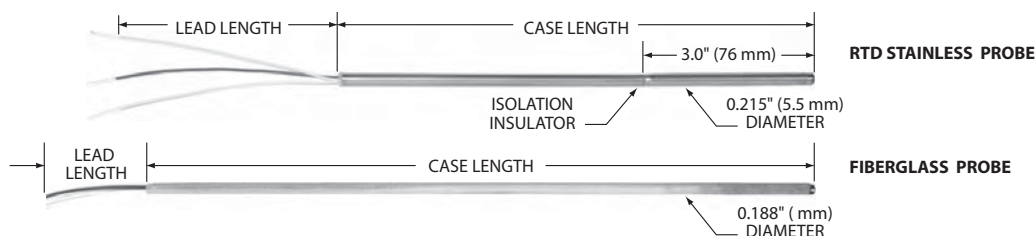


Electrically Isolated RTDs



Overview

- Electrically isolated sensing tip for "hot" bearings.
- Accurate sensing to 260°C (500°F), 155°C (311°F) for fiberglass probes.
- Copper alloy tip for fast time response and increased tip sensitivity.

Specifications

Dielectric strength of isolation insulator and fiberglass tubing: 1000 volts RMS at 60 Hz for 30 seconds, between case sections, 1 mA max. leakage current.

Pressure rating: 30 psi (2.1 bar).

Vibration: Withstands 10 to 2000 Hz at 20 G's minimum per MIL-STD-202, Method 204, Test Condition D.

Shock: Withstands 100 G's minimum sine wave shock of 8 milliseconds duration.

Fiberglass sheath RTDs

RTD sensing element	Model
Platinum (0.00392 TCR) 100 Ω \pm 0.5% at 0°C	S101659PA
Platinum (0.00385 TCR) 100 Ω \pm 0.1% at 0°C (Meets EN60751, Class B)	S101659PD
Platinum (0.00385 TCR) 100 Ω \pm 0.5% at 0°C	S101659PE
Copper (0.00427 TCR) 10 Ω \pm 0.2% at 25°C	S101659CA
Nickel (0.00672 TCR) 120 Ω \pm 0.5% at 0°C	S101659NA

Temperature Range: -50 to 155°C (-58 to 311°F).

Case: Filament braided glass/epoxy tubing with copper alloy tip.
Minimum case length: 3.0" (101.6 mm).
Maximum case length: 40" (1220 mm).

Leads: 2 (not available with CA element models), 3, or 4 leadwires, AWG 22, stranded copper with PTFE insulation.
For 2-lead RTDs add 0.03 Ω per foot of combined case and lead length to element tolerance.

Time constant: 2.5 seconds typical in moving water.

Insulation resistance: 1000 megohms min. at 500 VDC, leads to tip.

Isolated tip RTDs

RTD sensing element	Model
Platinum (0.00392 TCR) 100 Ω \pm 0.5% at 0°C	S52PA
Platinum (0.00385 TCR) 100 Ω \pm 0.1% at 0°C (Meets EN60751, Class B)	S852PD
Platinum (0.00385 TCR) 100 Ω \pm 0.5% at 0°C	S882PE
Copper (0.00427 TCR) 10 Ω \pm 0.2% at 25°C	S52CA
Nickel (0.00672 TCR) 120 Ω \pm 0.5% at 0°C	S52NA

Temp. Range: -50 to 260°C (-58 to 500°F).

Case: Stainless steel with copper alloy tip.
Minimum case length: 4.0" (101.6 mm).
Maximum case length: 48" (1220 mm), longer on special order.

Leads: 2, 3, or 4 leadwires, AWG 22, stranded copper with PTFE insulation. For 2-lead RTDs add 0.03 Ω per foot of combined case and lead length to element tolerance.

Time constant: 2 seconds typical in moving water.

Insulation resistance: 1000 megohms min. at 500 VDC, leads to case.

Specification and order options

S52CA	Model number from isolated tip or fiberglass sheath table
355	Case length: Specify in 0.1" increments (Ex: 355 = 35.5 inches)
Z	Number of leads: Y = 2 leads Z = 3 leads X = 4 leads (PD only)
36	Lead length in inches
S52CA355Z36 = Sample part number	

Specifications subject to change