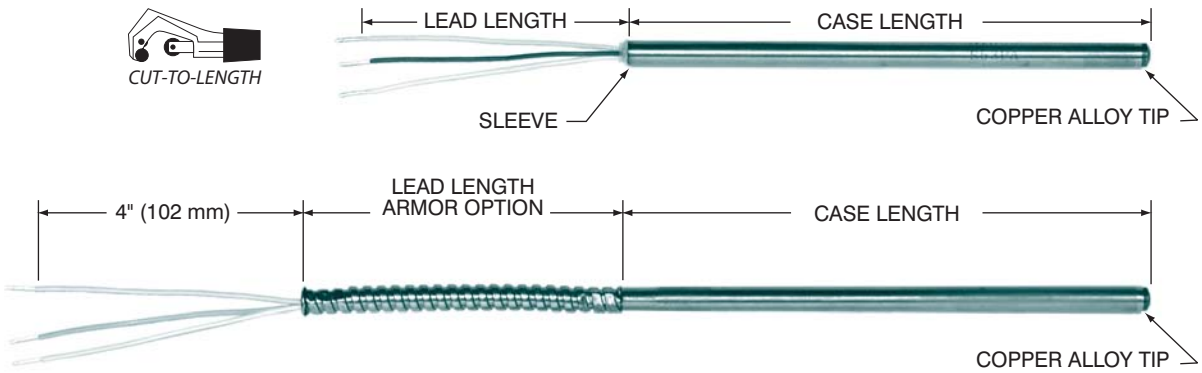
Tip-sensitive RTDs

Fast response, accurate sensing



Overview

The probe sensing tip is constructed of copper alloy which is twenty times more conductive than stainless steel. The sensors react more quickly to changes and indicate tip temperature instead of stem temperature. The result is better accuracy in thermowells, bearings, and other installations.

0.250" diameter is recommended for use in thermowells.

- Copper alloy tip for fast response
- Accurate sensing to 260°C (500°F)
- Non armor models can be user-shortened

Specifications

Temperature range: -50 to 260°C (-58 to 500°F).

Case: Stainless steel with copper alloy tip.
Minimum case length:
Single element probes: 2.8" (71.1 mm).
Dual element probes: 4.0" (101.6 mm).
Maximum case length:
48" (1220 mm), longer on special order.

Leads: 2, 3, or 4 leadwires, stranded copper with PTFE insulation. AWG 22, except 0.188" diameter dual probes AWG 24. For 2-lead RTDs add 0.03 Ω per foot (0.05 Ω per foot for 0.188" diameter dual probes) of combined case and lead length to element tolerance. Copper (CA, CC) models must have 3 leads.

Time constant: 2.0 seconds typical in moving water. 3.0 seconds for dual element models.

Pressure rating: 100 psi (6.9 bar).

Insulation resistance:
Single element probes: 1000 megohms min. at 500 VDC, leads to case.
Dual element probes: 100 megohms min. at 100 VDC, between elements and leads to case.

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

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

Specification options

S56NA	**Model number** (see table on next page)
125	Case length: Specify in 0.1" increments (Ex: 125 = 12.5 inches)
Y	Number of leads per sensing element: Y = 2 leads Z = 3 leads X = 4 leads (PD only)
36	Lead length in inches
S56NA125Y36 = Sample part number	

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Single element RTDs: No armor over leads

Element	Model for probe diameter:		
	0.188" (4.8 mm)	0.215" (5.5 mm)	0.250" (6.4 mm)
Platinum 392, 100 Ω ±0.5% at 0°C	S54PA	S51PA	S53PA
Platinum 385, 100 Ω ±0.06% at 0°C (Meets EN60751, Class A)	S554PM	S551PM	S553PM
Platinum 385, 100 Ω ±0.1% at 0°C (Meets EN60751, Class B)	S854PD	S851PD	S853PD
Platinum 385, 100 Ω ±0.5% at 0°C	S884PE	S881PE	S853PE
Copper 427, 10 Ω ±0.2% at 25°C	S54CA	S51CA	S53CA
Nickel 672, 120 Ω ±0.5% at 0°C	S54NA	S51NA	S53NA

Dual element RTDs: No armor over leads

Element	Model for probe diameter:		
	0.188" (4.8 mm)	0.215" (5.5 mm)	0.250" (6.4 mm)
Platinum 392, 100 Ω ±0.5% at 0°C	S59PA	S56PA	S57PA
Platinum 385, 100 Ω ±0.06% at 0°C (Meets EN60751, Class A)	S559PM	S556PM	S557PM
Platinum 385, 100 Ω ±0.1% at 0°C (Meets EN60751, Class B)	S859PD	S856PD	S857PD
Platinum 385, 100 Ω ±0.5% at 0°C	S889PE	S886PE	S887PE
Copper 427, 10 Ω ±0.5% at 25°C		S56CC	S57CC
Nickel 672, 120 Ω ±0.5% at 0°C	S59NA	S56NA	S57NA

Single element RTDs: With armor over leads

Element	Model for probe diameter:		
	0.188" (4.8 mm)	0.215" (5.5 mm)	0.250" (6.4 mm)
Add element code (Ex: S154__ = S154NA)	S154__	S151__	S153__

Dual element RTDs: With armor over leads

Element	Model for probe diameter:		
	0.188" (4.8 mm)	0.215" (5.5 mm)	0.250" (6.4 mm)
Add element code (Ex: S159__ = S159NA)	S159__	S156__	S157__

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