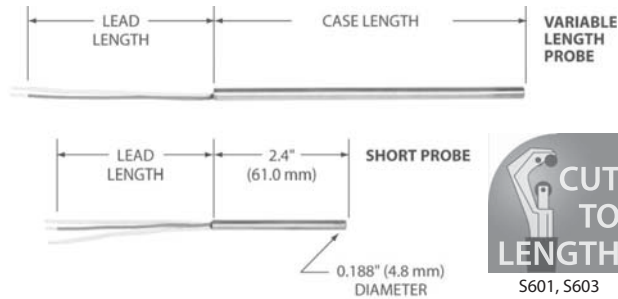


Fast Response RTDs



Overview

These probes have rugged stainless steel cases for use in high pressures or corrosive fluids. Yet their time constants are comparable to copper-tipped probes at 2 to 4 seconds, compared to 8 to 10 seconds for other all-stainless probes.

- Unique low-mass element reacts quickly to temperature changes
- Non-armor models can be user-shortened
- ATEX, IECEx and TR CU (EAC) Ex e and Ex ia options available

Specifications

Temperature range: -269 to 260°C (-452 to 500°F).

Case material:

S601, S603, S604: 316 stainless steel.
S602, S614: 304/305 stainless steel.

Case length:

Minimum case length:

S602, S604: 2.0" (50.8 mm) with PTFE insulated leads;
3.0" (76.2 mm) with SS braid over leads.

S601, S603: 3.0" (76.2 mm).

Maximum case length:

48" (1220 mm), longer on special order.

Time constant: Typical in moving water:

S602, S604, S614: 2 seconds.

S601: 3 seconds.

S603: 4 seconds.

Pressure rating: 1500 psi (103 bar).

Leads: 2, 3, or 4 leadwires, AWG 22, stranded copper with PTFE insulation, stainless steel braid, or stainless steel armor.

For 2-lead RTDs add 0.03 Ω per foot of combined case and lead length to element tolerance (model S602 has AWG 26; add 0.08 Ω per foot for 2-lead).

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

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.

Sensing elements

RTD sensing element		Code
Platinum (0.00392 TCR)	100 Ω ±0.5% at 0°C	▼PA
Platinum (0.00385 TCR) (Meets EN60751, Class B)	100 Ω ±0.1% at 0°C	▼PD
Platinum (0.00385 TCR)	100 Ω ±0.5% at 0°C	PE
Platinum (0.00385 TCR) (N/A for model S602)	1000 Ω ±0.1% at 0°C	▼PF
Copper (0.00427 TCR)	10 Ω ±0.2% at 25°C	CA
Nickel (0.00672 TCR)	120 Ω ±0.5% at 0°C	NA

Specification and order options:

Fast response probes

Specify 0.125" or 0.188" for fastest response, 0.250" or 0.215" for greater strength and cut-to-length capability (PTFE and SS braid models).

S604	Model number: ▼S601: Ø 0.215" (5.5 mm) Cut-to-length probe ▼S602: Ø 0.125" (3.2 mm) ▼S603: Ø 0.250" (6.4 mm) Cut-to-length probe ▼S604: Ø 0.188" (4.8 mm)
PD	Sensing element from table ▼: PA, PD, PF
240	Case length: Specify in 0.1" increments (Ex: 240 = 24.0 inches) ▼: 30, 40, 60, 90, 120, 240
X	Number of leadwires: Y = 2 leads ▼Z = 3 leads (required for copper elements) ▼X = 4 leads (PD only)
36	Lead length in inches ▼: 36, 120
T	Covering over leadwires: (S, A not available on S602) ▼T = PTFE only ▼S = Stainless steel braid A = Stainless steel armor
S604PD240X36T = Sample part number	

Short probes

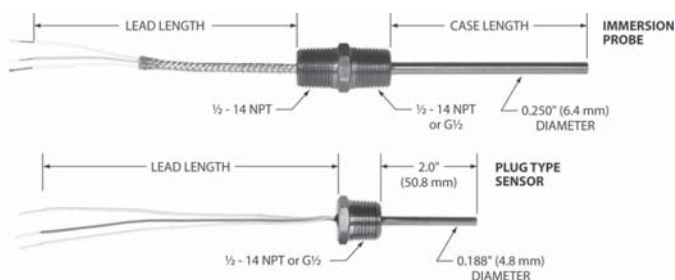
▼S614	Model number (case with fixed length of 2.4" (61 mm))
PA	Sensing element from table ▼: PA, PD, PF
Z	Number of leadwires: Y = 2 leads ▼Z = 3 leads (required for copper elements) X = 4 leads (PD only)
36	Lead length in inches ▼36
T	Covering over leadwires: ▼T = PTFE only S = Stainless steel braid
S614PAZ36T = Sample part number	



STOCKED PARTS AVAILABLE

Specifications subject to change

Fast Response Immersion RTDs



Overview

You can mount these probes directly in fluid streams for accurate, reliable sensing. Time constant is just 2 seconds, compared to 10 seconds for an ordinary stainless probe or up to 50 seconds for a thermowell. The result is more accurate monitoring of dynamic processes.

- Pressure rating 1500 psi (103 bar)
- Quick reaction to changing fluid and gas temperatures
- NPT (U.S.) or metric threads
- ATEX, IECEx and TR CU (EAC) Ex e and Ex ia options available

Specifications

Temperature range: -269 to 260°C (-452 to 500°F).

Case material:

S623, S628: 316 stainless steel.
S634, S639: 304/305 stainless steel.

Case length:

Minimum case length: 1.5" (38.1 mm).
Maximum case length: 48" (1220 mm), longer on special order.

Time constant:

Typical value in moving water:
S623, S628: 4 seconds.
S634, S639: 2 seconds.

Pressure rating:

1500 psi (103 bar).

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

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

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.

Sensing elements

RTD sensing element		Code
Platinum (0.00392 TCR)	100 Ω ±0.5% at 0°C	PA
Platinum (0.00385 TCR)	100 Ω ±0.1% at 0°C (Meets EN60751, Class B)	▼PD
Platinum (0.00385 TCR)	100 Ω ±0.5% at 0°C	PE
Platinum (0.00385 TCR)	1000 Ω ±0.1% at 0°C (N/A for model S602)	▼PF
Copper (0.00427 TCR)	10 Ω ±0.2% at 25°C	CA
Nickel (0.00672 TCR)	120 Ω ±0.5% at 0°C	NA

Specification and order options:

Immersion probes

These probes have welded fittings to mount directly into fluid vessels. Add a connection head for termination of extension leads.

S623	Model number: ▼S623: 1/2 - 14 NPT thread [2] S628: ISO 228/1-G1/2 process thread (1/2 - 14 NPT on leads end)
PF	Sensing element from table ▼: PD, PF
60	Case length: Specify in 0.1" increments (Ex: 60 = 6.0 inches) ▼: 20, 60, 120
Z	Number of leads: Y = 2 leads X = 4 leads (PD only) ▼Z = 3 leads (required for copper elements)
72	Lead length in inches ▼: 72
T	Covering over leadwires: ▼T = PTFE only A = Stainless steel armor S = Stainless steel braid
S623PF60Z72T = Sample part number	

Plug type sensors

Save space and get accurate readings with this compact, easy-to-install probe.

S634	Model number: S634: 1/2 - 14 NPT thread S639: ISO 228/1-G1/2 thread
NA	Sensing element from table
Y	Number of leads: Y = 2 leads X = 4 leads (PD only) Z = 3 leads (required for copper elements)
24	Lead length in inches
T	Covering over leadwires: T = PTFE only S = Stainless steel braid
S634NAY24T = Sample part number	



STOCKED PARTS AVAILABLE

Specifications subject to change