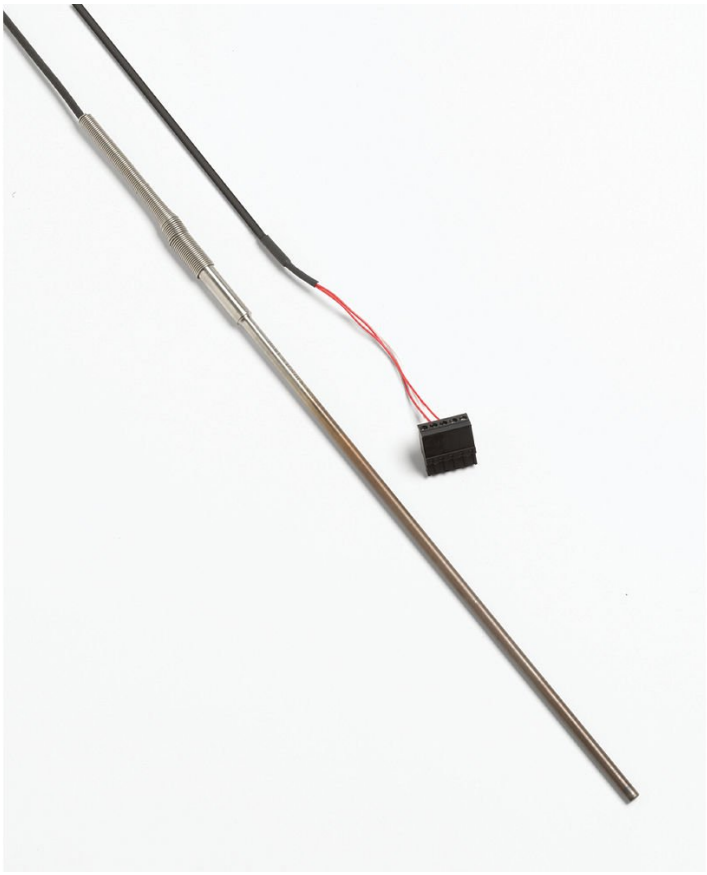
TECHNICAL DATA

5627A | Precision Thermometer, RTD Temperature Probe



Key features

- Temperature range up to 420 °C.
- Accuracy of up to ± 0.025 °C.
- NVLAP-accredited calibration.
- Three different length options, with both six- and nine-inch models covering a temperature range of -200 °C to 300 °C.

Product overview: 5627A | Precision Thermometer, RTD Temperature Probe

One of the best features of this RTD sensor is that it conforms to the standard 385 curve, letting you use your DIN/IEC RTD meters fully. Why use a precision thermometer or RTD temperature probe that's less accurate than your meter?

The 5627A is manufactured using a coil suspension element design for increased shock and vibration resistance. It has a mineral-insulated sheath with a minimum bend radius of 19 mm (3/4-inch) for flexibility and durability. (Bend, if any, should be specified at time of order.)

Six- and nine-inch 5627A precision thermometers are calibrated at –196 °C, –38 °C, 0 °C, 200 °C, and 300 °C. For 12-inch versions of these precision thermometers, the point at 300 °C is replaced by a calibration point at 420 °C.

Each probe is individually calibrated and includes a NVLAP-accredited report of calibration from the manufacturer, lab code 200706-0.

This RTD temperature probe is an excellent value for a precision thermometer. It has the price-to-accuracy and price-to-durability ratios you should demand in all of the precision thermometers you buy!

Specifications: 5627A | Precision Thermometer, RTD Temperature Probe

Specifications	
Resistance	Nominal 100 Ω
Temperature Coefficient	0.00385 Ω/Ω/ °C nominal
Temperature Range	−200 °C to 420 °C (5627A-6 and 5627A-9 to 300 °C; transition and cable temperature: 0 °C to 150 °C)
Drift Rate (k=2)	± 0.04 °C at 0 °C after 100 hours at 420 °C
Sheath Material	316 Stainless Steel
Leads	PTFE-insulated, nickel-plated stranded copper, 22 AWG
Termination	Specify. See Ordering Information.
Time Constant	Four seconds maximum for 63.2 % response to step change in water moving at 3 fps.
Bending Radius	Sheath may be ordered with a bend on a minimum radius of 19 mm (3/4 in) except for 50 mm (2 in) area of sheath near tip. (Fluke lab requires 20 cm [8 in] of unbent sheath to re-calibrate.)
Calibration	Includes manufacturer's NVLAP-accredited (lab code 200706-0) calibration and table with R vs. T values in 1 °C increments from -196 °C to 500 °C (to 300 °C for 5627A-6 and 5627A-9). ITS-90 coefficients included.
Immersion	At least 100 mm (4 in) recommended
Calibrated Accuracy† (k=2)	± 0.026 °C at -196 °C ± 0.046 °C at 0 °C ± 0.077 °C at 200 °C ± 0.124 °C at 420 °C
Size	**5627A-12:** 305 mm x 6.35 mm (12 in x 1/4 in) **5627A-9:** 229 mm x 4.7 mm (9 in x 3/16 in) **5627A-6:** 152 mm x 4.7 mm (6 in x 3/16 in)
†Includes calibration uncertainty and 100 hr drift.	

Ordering information

5627A Precision Thermometer, RTD Temperature Probe

Precision Thermometer, RTD Temperature Probe

5627A-6-X

Secondary PRT, 152 mm x 4.7 mm (6 x 3/16 in), –200 °C to 300 °C

(17025 accredited calibration included. Traceable to NIST standards.)

X = termination. Specify “A" (INFO-CON for 914X), “B" (bare wire), “D" (5-pin DIN for Tweener Thermometers), “G" (gold pins), “J" (banana plugs), “L" (mini spade lugs), “M" (mini banana plugs), “P" (INFO-CON for 1523 or 1524), or “S" (spade lugs).

5627A-9-X

Secondary PRT, 229 mm x 4.7 mm (9 x 3/16 in), –200 °C to 300 °C

(17025 accredited calibration included. Traceable to NIST standards.)

X = termination. Specify “A" (INFO-CON for 914X), “B" (bare wire), “D" (5-pin DIN for Tweener Thermometers), “G" (gold pins), “J" (banana plugs), “L" (mini spade lugs), “M" (mini banana plugs), “P" (INFO-CON for 1523 or 1524), or “S" (spade lugs).

5627A-12-X

Secondary PRT, 305 mm x 6.35 mm (12 x 1/4 in), –200 °C to 420 °C

(17025 accredited calibration included. Traceable to NIST standards.)

X = termination. Specify “A" (INFO-CON for 914X), “B" (bare wire), “D" (5-pin DIN for Tweener Thermometers), “G" (gold pins), “J" (banana plugs), “L" (mini spade lugs), “M" (mini banana plugs), “P" (INFO-CON for 1523 or 1524), or “S" (spade lugs).

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