

Precision Industrial PRTs



- Vibration and shock resistant
- 19 mm (3/4-inch) bend radius for increased durability
- NVLAP-accredited calibration included

When buying a PRT, performance isn't the only criterion you need to look at. The real issues are price-to-accuracy and price-to-durability ratios.

The Model 5627A probes have a temperature range up to 420 °C and an accuracy as good as ± 0.05 °C. They come in three different lengths. (Both six- and nine-inch models cover -200 °C to 300 °C.) Each instrument is shipped with its ITS-90 coefficients and a calibration table in 1 °C increments.

One of the best features of this sensor is that it conforms to the standard 385 curve, letting you use your DIN/IEC RTD meters fully. Why use a 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 5627s are calibrated at -196 °C, -38 °C, 0 °C, 200 °C, and 300 °C. For 12-inch versions 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.

This probe is an excellent value. It has the price-to-accuracy and price-to-durability ratios you should demand in every PRT you buy!

Ordering Information

- 5627A-6-X** Secondary PRT, 152 mm x 4.7 mm (6 x 3/16 in), -200 °C to 300 °C
- 5627A-9-X** Secondary PRT, 229 mm x 4.7 mm (9 x 3/16 in), -200 °C to 300 °C
- 5627A-12-X** Secondary PRT, 305 mm x 6.35 mm (12 x 1/4 in), -200 °C to 420 °C

2601 Probe Carrying Case

X = termination. Specify "B" (bare wire), "D" (5-pin DIN for Tweener Thermometers), "G" (gold pins), "I" (INFO-CON for 1521 or 1522 Handheld Thermometers), "J" (banana plugs), "L" (mini spade lugs), "M" (mini banana plugs), or "S" (spade lugs).

Specifications

Resistance	Nominal 100 Ω
Temperature Coefficient	0.00385 Ω/Ω/ °C nominal
Temperature Range	-200 °C to 420 °C (5627-6 and 5627-9 to 300 °C; transition and cable temperature: 0 °C to 150 °C)
Drift Rate	± 0.13 °C at 0 °C after 1000 hours at 400 °C
Sheath Material	316 Stainless Steel
Leads	Teflon™-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. (Hart lab requires 20 cm [8 in] of unbent sheath to re-calibrate.)
Calibration	Includes manufacturer's NVLAP-accredited 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
Accuracy (includes calibration uncertainty and short-term stability)	± 0.050 °C at -196 °C ± 0.050 °C at 0 °C ± 0.051 °C at 200 °C ± 0.055 °C at 420 °C
Size	5627A-12: 12 in L x 1/4 in Dia. 5627A-9: 9 in L x 3/16 in Dia. 5627A-6: 6 in L x 3/16 in Dia.