Precision Industrial PRTs — Model 5627

- Vibration and shock resistant
- 3/4-inch bend radius for increased durability
- NIST-traceable 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 5627 probes have a temperature range up to 420°C and an accuracy as good as ±0.05°C. They come in three different lengths. (The six-inch model covers –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 5627 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 3/4-inch for flexibility and durability. (Bend, if any, should be specified at time of order.)

Six-inch 5627s are calibrated at –196°C, –38°C, 0°C, 200°C, and 300°C. For 9-inch and 12-inch versions, an additional point is added at 420°C.

Each probe is individually calibrated and includes a report of calibration from the manufacturer. Contact Hart for calibration in Hart's NVLAP-accredited lab.

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!

Specifications

Resistance	Nominal 100Ω
Temperature Coefficient	0.00385Ω/Ω/°C nominal
Temperature Range	–200°C to 420°C (5627-6 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 3/4" except for 2" area of sheath near tip. (Hart lab requires 8" [20 cm] of unbent sheath to re-calibrate.)
Calibration	Includes manufacturer's NIST-traceable calibration and table with R vs. T values in 1°C increments from –196°C to 500°C (to 300°C for Model 5627-6). ITS-90 coefficients included. *Optional accredited calibration available from Hart.*
Immersion	At least 4" 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	**5627-12:** 12" L x 1/4" Dia. **5627-9:** 9" L x 3/16" Dia. **5627-6:** 6" L x 3/16" Dia.

Ordering Information

5627-6-X	Secondary PRT, 6" x 3/16", –200°C to 300°C
5627-9-X	Secondary PRT, 9" x 3/16", –200°C to 420°C
5627-12-X	Secondary PRT, 12" x 1/4", –200°C to 420°C
2601	Protective 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).

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