

# Precision industrial PRTs



- Vibration and shock resistant
- 19 mm (3/4-inch) bend radius for increased durability
- NVLAP-accredited calibration included, lab code 200706-0

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.

5627A probes have a temperature range up to 420 °C and an accuracy as good as  $\pm 0.025$  °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 5627As 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, lab code 200706-0.

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

|                   |                                                                  |
|-------------------|------------------------------------------------------------------|
| <b>5627A-6-X</b>  | Secondary PRT, 152 mm x 4.7 mm (6 x 3/16 in), -200 °C to 300 °C  |
| <b>5627A-9-X</b>  | Secondary PRT, 229 mm x 4.7 mm (9 x 3/16 in), -200 °C to 300 °C  |
| <b>5627A-12-X</b> | 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 "A" (INFO-CON for 914X), "B" (bare wire), "D" (5-pin DIN for Tweener Thermometers), "G" (gold pins), "I" (INFO-CON for 1521 or 1522), "J" (banana plugs), "L" (mini spade lugs), "M" (mini banana plugs), "P" (INFO-CON for 1523 or 1524), or "S" (spade lugs).*

## Specifications

|                                    |                                                                                                                                                                                                                     |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Resistance</b>                  | Nominal 100Ω                                                                                                                                                                                                        |
| <b>Temperature Coefficient</b>     | 0.00385 Ω/Ω/ °C nominal                                                                                                                                                                                             |
| <b>Temperature Range</b>           | -200 °C to 420 °C (5627A-6 and 5627A-9 to 300 °C; transition and cable temperature: 0 °C to 150 °C)                                                                                                                 |
| <b>Drift Rate (k=2)</b>            | $\pm 0.04$ °C at 0 °C after 100 hours at 420 °C                                                                                                                                                                     |
| <b>Sheath Material</b>             | 316 Stainless Steel                                                                                                                                                                                                 |
| <b>Leads</b>                       | Teflon™-insulated, nickel-plated stranded copper, 22 AWG                                                                                                                                                            |
| <b>Termination</b>                 | Specify. See Ordering Information.                                                                                                                                                                                  |
| <b>Time Constant</b>               | Four seconds maximum for 63.2 % response to step change in water moving at 3 fps.                                                                                                                                   |
| <b>Bending Radius</b>              | 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.)                         |
| <b>Calibration</b>                 | 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. |
| <b>Immersion</b>                   | At least 100 mm (4 in) recommended                                                                                                                                                                                  |
| <b>Calibrated Accuracy † (k=2)</b> | $\pm 0.026$ °C at -196 °C<br>$\pm 0.046$ °C at 0 °C<br>$\pm 0.077$ °C at 200 °C<br>$\pm 0.124$ °C at 420 °C                                                                                                         |
| <b>Size</b>                        | <b>5627A-12:</b> 305 mm x 6.35 mm (12 in x 1/4 in)<br><b>5627A-9:</b> 229 mm x 4.7 mm (9 in x 3/16 in)<br><b>5627A-6:</b> 152 mm x 4.7 mm (6 in x 3/16 in)                                                          |

†Includes calibration uncertainty and 100 hr drift.