

# Fast Response PRTs



- Time constants as fast as 0.4 seconds
- Available as DIN/IEC Class A PRTs or with NVLAP-accredited calibration, lab code 200348-0
- Small probe diameters ranging from 0.5 mm to 3.2 mm

For special temperature measurement applications requiring fast response or short immersion over a wide temperature range, Hart's new 5622 series PRTs are the perfect solution.

Made by Netsushin, one of the world's leading PRT manufacturers, this series includes four models with stainless steel sheaths ranging from 0.5 to 3.2 mm (0.02 to 0.125 in) in diameter. Because these high-quality wire-wound sensors come in small packages, heat transfer to the sensors occurs quickly. Time constants from 0 °C to 100 °C are as fast as 0.4 seconds.

Immersion requirements for these probes is also a plus, ranging from just 10 mm to 64 mm (0.4 to 2.5 inch), depending on the model. Getting into shallow or tight places is not a problem. And because these probes can handle temperatures from -200 °C to 350 °C, they're more versatile than most thermistors.

5622 PRTs come with two calibration options. Uncalibrated, each of these probes conforms to DIN/IEC Class A requirements with accuracy of  $\pm 0.15$  °C at 0 °C and  $\pm 0.55$  °C at 200 °C and -200 °C. Alternatively, any 5622 PRT may be purchased with a 1923-4-N ITS-90 NVLAP-accredited comparison calibration (lab code 200348-0) that includes seven points from -197 °C to 300 °C. With

calibration, short-term accuracies are achieved as good as  $\pm 0.04$  °C at 0 °C.

Readout options for the Model 5622 PRTs include Hart's Little Lord Kelvin and Little Lord Logger Handheld Thermometers (page 54) as well as the 1502A Tweener Thermometer (page 52). Each of these readouts will read your PRT as a standard DIN/IEC probe or as an individually calibrated PRT.

Whatever your thermometry requirements are, come to Hart. No one else offers a wider range of standards-quality reference thermometers than Hart.

## Specifications

<b>Temperature Range</b>	-200 °C to 350 °C
<b>Nominal <math>R_{TPW}</math></b>	100 $\Omega$
<b>Sensor</b>	Four "385" platinum wires
<b>Calibrated Probe Accuracy (includes calibration uncertainty and short-term stability)</b>	<b>5622-05 and 5622-10:</b> $\pm 0.04$ °C at -200 °C $\pm 0.04$ °C at 0 °C $\pm 0.09$ °C at 200 °C $\pm 0.09$ °C at 300 °C <b>5622-16 and 5622-32:</b> $\pm 0.04$ °C at -200 °C $\pm 0.04$ °C at 0 °C $\pm 0.045$ °C at 200 °C $\pm 0.055$ °C at 300 °C
<b>Uncalibrated DIN/IEC Conformity</b>	DIN/IEC Class A; $\pm 0.15$ °C at 0 °C
<b>Time Constant (63.2 %)</b>	From 0 °C to 100 °C: <b>5622-05:</b> 0.4 seconds <b>5622-10:</b> 1.5 seconds <b>5622-16:</b> 3.0 seconds <b>5622-32:</b> 10 seconds (90 %)
<b>Immersion Depth</b>	<b>5622-05:</b> 10 mm (0.4 in) <b>5622-10:</b> 20 mm (0.8 in) <b>5622-16:</b> 32 mm (1.25 in) <b>5622-32:</b> 64 mm (2.5 in)
<b>Thermal EMF</b>	20 mV at 350 °C
<b>Sheath</b>	316 SST <b>5622-05:</b> 100 x 0.5 mm (4 x 0.02 in) <b>5622-10:</b> 100 x 1.0 mm (4 x 0.04 in) <b>5622-16:</b> 200 x 1.6 mm (8 x 0.06 in) <b>5622-32:</b> 200 x 3.2 mm (8 x 0.13 in)
<b>Cable</b>	PVC, 4-wire cable, 2 meters long, 90 °C max temp

## Ordering Information

<b>5622-05-X</b>	Fast Response PRT, 0.5 mm (0.02 in)
<b>5622-10-X</b>	Fast Response PRT, 1.0 mm (0.04 in)
<b>5622-16-X</b>	Fast Response PRT, 1.6 mm (0.06 in)
<b>5622-32-X</b>	Fast Response PRT, 3.2 mm (0.13 in)
<i>(All models come without calibration unless calibration purchased separately.)</i>	
<b>1923-4-N</b>	NVLAP-accredited Calibration, PRT Comparison, -196 °C to 300 °C, lab code 200348-0
<b>2601</b>	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).*