5622 Fast Response Platinum Resistance Thermometers (PRTs)

Highlights

Designed for temperature measurements requiring fast response or short immersion over a wide range

- Time constants as fast as 0.4 seconds
- 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, Fluke Calibration's 5622 series PRTs are the perfect solution.

Description

The Fluke Calibration series of fast response PRTs 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 a Model 1923-4-N ITS-90 Comparison Calibration, which includes seven points from –197 °C to 300 °C. Short-term accuracies are achieved as good as ±0.04 °C at 0 °C.

Readout options for the Model 5622 PRTs include Fluke Calibration's 1523/1524 Handheld Thermometers or the 1529 Benchtop Thermometer. 5622's purchased with a 1523/1524 will have the calibration coefficients programmed into the probe's smart connector.

Specifications

Temperature Range	–200 °C to 350 °C
Nominal R_{TPW}	100 Ω
Temperature Coefficient	0.00385 Ω /Ω/°C nominal
Calibrated Probe Accuracy (includes calibration uncertainty and short-term stability)	**5622-05 and 5622-10:** ± 0.04 °C at –200 °C ± 0.04 °C at 0 °C ± 0.09 °C at 200 °C ± 0.09 °C at 300 °C **5622-16 and 5622-32:** ± 0.04 °C at –200 °C ± 0.04 °C at 0 °C ± 0.045 °C at 200 °C ± 0.055 °C at 300 °C
Time Constant (63.2 %)	From 0 °C to 100 °C: **5622-05:** 0.4 seconds **5622-10:** 1.5 seconds **5622-16:** 3.0 seconds **5622-32:** 10 seconds (90 %)
Immersion Depth	**5622-05:** 10 mm (0.4 in) **5622-10:** 20 mm (0.8 in) **5622-16:** 32 mm (1.25 in) **5622-32:** 64 mm (2.5 in)
Thermal EMF	20 mV at 350 °C
Sheath	316 SST **5622-05:** 100 x 0.5 mm (4 x 0.02 in) **5622-10:** 100 x 1.0 mm (4 x 0.04 in) **5622-16:** 200 x 1.6 mm (8 x 0.06 in) **5622-32:** 200 x 3.2 mm (8 x 0.13 in)
Cable	PVC, 4-wire cable, 2 meters long, 90 °C max temp

Models and Accessories

Model Name	Description
5622-05-X	Fast Response PRT, 0.5 mm (0.02 in), lead wire (cable) 6 ft 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).
5622-10-X	Fast Response PRT, 1.0 mm (0.04 in), lead wire (cable) 6 ft 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).
5622-16-X	Fast Response PRT, 1.6 mm (0.06 in), lead wire (cable) 6 ft 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).
5622-32-X	Fast Response PRT, 3.2 mm (0.13 in), lead wire (cable) 6 ft 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).

Accessories common to all models:

Accessory	Description
2601	Probe Carrying Case, Plastic
2609	Probe Carrying Case, Plastic (for probes 635 mm [25 in] in length)
1930-4-N	System Calibration by Comparison, –200 °C to 300 °C, NVLAP Accredited