

## TECHNICAL DATA

# 5622 Fast Response Platinum Resistance Thermometers (PRTs)



## Key features

- Time constants as fast as 0.4 seconds.
- NVLAP-accredited calibration, lab code 200348-0.
- Small diameters ranging from 0.5 mm to 3.2 mm.
- Ideal special temperature measurement applications requiring fast response or short immersion over a wide temperature range.

## Product overview: 5622 Fast Response Platinum Resistance Thermometers (PRTs)

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  $\pm 0.04$  °C at 0 °C.

Readout options for the Model 5622 PRTs include Fluke Calibration's [1523 Handheld Thermometers](#), [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.

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

## Specifications: 5622 Fast Response Platinum Resistance Thermometers (PRTs)

Specifications	
Temperature Range	–200 °C to 350 °C
Nominal $R_{TPW}$	100 $\Omega$
Temperature Coefficient	0.00385 $\Omega / \Omega / ^\circ\text{C}$ nominal
Calibrated Probe Accuracy (includes calibration uncertainty and short-term stability)	<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
Time Constant (63.2 %)	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 %)
Immersion Depth	<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)
Thermal EMF	20 mV at 350 °C
Sheath	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)
Cable	PVC, 4-wire cable, 2 meters long, 90 °C max temp

## Ordering information



### 5622 Fast Response Platinum Resistance Thermometers (PRTs)

#### 1930-4-N

System Calibration by Comparison, -200 °C to 300 °C, NVLAP Accredited

#### 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

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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).

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