

5624 Platinum Resistance Thermometer to 1000°C



- Temperature range of 0°C to 1000°C
- Accuracy (includes short-term stability and calibration uncertainty) of $\pm 0.05^\circ\text{C}$ to 962°C
- Long-term drift of 0.01°C at 0°C after 100 hours at 1000°C
- Designed by Hart's primary standards design team

At Hart, we receive many requests for precision PRT accuracy at thermocouple temperatures. Until now metrologists have settled for expensive, high-temperature SPRTs or inaccurate thermocouples for high-temperature measurement.

We're pleased to introduce the world's finest high-temperature secondary PRT, our Model 5624.

Ideal for use as a reference thermometer in high-temperature furnaces, the 5624 can reach a temperature of 1000°C with long-term drift at 0°C of 10 mK and accuracy (including short-term stability and calibration uncertainty over the full range) of 55 mK! Due to Hart Scientific's proprietary sensor design, this PRT has short-term stability of 5 mK, and an immersion requirement of less than 153 mm (6") at 700°C.

The 5624 is assembled in an alumina sheath that is 508 mm (20") long and 6.35 mm (0.25") in diameter. Several termination configurations can be selected to match different thermometer readouts. Each 5624 comes with a NIST-traceable, NVLAP-accredited fixed-point calibration from 0°C to 962°C. That's a *fixed-point* calibration! The 5624 also comes in a protective carrying case.

Specifications

Range	0°C to 1000°C
Calibration Uncertainty	$\pm 0.05^\circ\text{C}$ at 962°C
Long-term Drift (R_{tpw})	<0.01°C at 0°C/100 hours at 1000°C <0.06°C at 0°C/1000 hours at 1000°C
Short-term Stability	$\pm 0.005^\circ\text{C}$
Immersion	<153 mm (6") at 700°C
R_{tpw}	10 ohm (± 1 ohm)
Hysteresis	<0.005°C from 0°C to 1000°C
Thermocycling	<0.01°C, 10 cycles from 0 to 1000°C
Current	1 mA
Size	6.35 mm (0.25") O.D.
Length	508 mm (20")
Sheath Material	Alumina
Weight	1 kg (2 lb.)
Calibration	Included 1913-6 fixed-point calibration

Ordering Information

5624-20-X Probe, 1000°C, 10 ohm PRT, 6.35 mm x 508 mm (0.25" x 20"), (includes 2608 case)

X = termination. Specify "B" (bare wire), "D" (5-pin DIN for 1502A), "G" (gold pins), "I" (infocon for 1521/1522), "J" (banana plugs), "L" (mini spade lugs), "M" (mini banana plugs, or "S" (spade lugs).

1913-6 Cal, SPRT by Fixed Point, 0°C to 962°C

2608 Case, SPRT, Plastic

TRANSCAT

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