

HIGHLIGHTS

- ✓ Affordable reference probe
- ✓ Accuracy ± 0.015 °C at 0.01 °C
- ✓ Temperature range: -200 °C to 670 °C
- ✓ Customized dimensions available



OVERVIEW

AM1750 series Secondary Reference PRT provides our customers an affordable reference probe for precision temperature measurement and calibration in labs and fields. The PRT features accuracy of ± 0.015 °C at 0.01°C ; short term stability of ± 0.007 °C. Two different lengths of PRTs are available at 12-inch and 20-inch.

The sensing element is designed to protect the platinum sensing wire from contamination at high temperatures, giving the device a high level of stability and repeatability in performance. A uniquely designed support structure and filling material provides excellent balance between the hysteresis effect, mechanical shock and thermal shock performance. This high performance probe fully meets ITS-90 criteria for reference thermometers.

FEATURES

- Temperature range: -200 °C to 670 °C
- Accuracy: ± 0.015 °C at 0.01°C
- Long term drift: ± 0.01 °C
- Short term stability: 0.007 °C
- Durable and shock resistance
- Temperature Coefficient 0.003925
- $W(Ga) \geq 1.11807$
- Inconel™ sheath
- Customized dimensions available

SPECIFICATIONS

Temperature Range	1750-12: -200°C to 670°C 1750-20: -200°C to 670°C
Resistance at 0 °C	Nominal 100 Ω
Temperature Coefficient	0.003925 Ω/ Ω/°C
Accuracy	±0.025°C at -196 °C ±0.015°C at 0.01 °C ±0.035°C at 420 °C ±0.05°C at 660 °C
Drift	±0.01°C at 0 °C after 100 hours at 660 °C
Short Term Stability	±0.007°C
Thermal Shock	±0.005°C after 10 times thermal cycles from minimum to maximum temperatures
Hysteresis	<=0.005°C
Self-heating	50 mW/°C
Response Time	9 seconds for 63% response to step change in water moving at 3 feet per second
Measurement Current	0.5 mA or 1 mA
Sensor Length	32 mm
Sensor Location	5 mm from tip
Insulation Resistance	>1000 MΩ at room temperature
Sheath Material	Inconel™
Dimension	1750-12: 0.25 inch X 12 inch (6.35 mm X 305 mm) 1750-20: 0.25inch X 20 inch (6.35 mm X 500 mm)
External Leads	Teflon™ –insulated copper wire, 4 leads, 2.5 meters
Handle Dimension	15mm (OD) X 65 mm (L)
Handle Temperature Range*	-50°C to 180°C
Calibration Options	1750-12-T, PRT with NIST traceable calibration and data 1750-20-T, PRT with NIST traceable calibration and data NVLAP - Accredited Calibrations available per request

*Handle temperature outside this range will cause damage to the probe.

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case for 1750-12
9002	Wooden Carrying Case for 1750-20