

HIGHLIGHTS

- ✓ Affordable reference probe
- ✓ Accuracy ± 0.015 °C at 0.01 °C
- ✓ Temperature range: -200 °C to 420 °C
- ✓ Customized dimensions available



OVERVIEW

AM1730 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 and short term stability of ± 0.007 °C. Two different lengths of PRTs are available at 9-inch and 12-inch.

To reach the best performance in stability and repeatability, the sensing element is specially designed to protect the platinum sensing wire from contamination at high temperature. A unique support structure and filling material provide the best balance among the hysteresis effect, mechanical shock and thermal shock performance. This high performance probe meets ITS-90 criteria of reference thermometer fully.

FEATURES

- Temperature range: -200 °C to 420 °C
- Accuracy: ± 0.015 °C
- Long term drift: ± 0.01 °C
- Short term stability: 0.007 °C
- Durable and shock resistance
- Temperature Coefficient $0.003925 \Omega / \Omega / ^\circ\text{C}$
- $W(\text{Ga}) \geq 1.11807$
- Inconel™ sheath
- Customized dimensions available

SPECIFICATIONS

Temperature Range	1730-12: -200 °C to 420 °C 1730-9: -60 °C to 300 °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
Drift	±0.01 °C at TPW after 100 hours at 420 °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	1730-12: 0.25 inch X 12 inch (6.35 mm X 305 mm) 1730-9: 0.187 inch X 9 inch (4.75 mm X 229 mm)
External Leads	Teflon™ – insulated copper wire, 4 leads, 2.5 meters
Handle Dimension	1730-12: 15 mm (OD) x 65 mm (L) 1730-9: 10 mm (OD) X 50 mm (L)
Handle Temperature Range*	-50 °C to 180 °C
Optional Calibration	NIST traceable calibration and data available per request: 1730-12: Ordering # 5014 1730-9: Ordering # 5015

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

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case