Additel
Metrology Made Simple

AccuMac AM1751
Secondary Reference PRT

- Affordable Reference Probe
- Temperature Range: -200°C to 670°C
- Accuracy: <0.012°C at 0.01°C
- Short-term Stability: <0.007°C
- Temperature Coefficient 0.003925 Ω/Ω/°C
- Fully Meets the ITS-90 Criteria for Reference Thermometers
- Inconel™ Sheath to Withstand Harsh Environments
- ISO 17025 Accredited Calibration Included

OVERVIEW

The AM1751 series of Secondary Reference PRTs offers affordable reference probes for precision temperature measurement and calibration both in the lab and in the field. These PRTs feature an accuracy of <0.012°C and a short term stability of <0.007°C.
To reach the best performance in stability and repeatability, the sensing element has been specially designed to protect the platinum sensing wire from contamination at high temperatures. A unique supporting structure and filling material provide the best balance among the hysteresis effect, mechanical shock and thermal shock performance. This high-performance probe fully meets the ITS-90 criteria for reference thermometers. Each probe comes standard with an ISO 17025 accredited calibration.

SPECIFICATIONS

	AM1751-12	AM1751-BEND
Temperature Range	-200°C to 670°C	
Nominal Resistance at 0.01°C	100 Ω	
Temperature Coefficient	0.003925 Ω/Ω/°C	
Calibrated Accuracy (k=2)[1][2]	±0.025°C at -40°C ±0.015°C at 0.01°C ±0.035°C at 420°C ±0.05°C at 661°C	
Long Term Drift at 0.01°C[3]	<0.01°C at TPW after 100 hours at 661°C	
Short Term Stability	<0.007°C	
Thermal Shock	<0.005°C after 10 thermal cycles from minimum to maximum temperatures	
Hysteresis	≤0.005°C	
Self-heating	50 mW/°C	
Response Time[4]	9 seconds	
Measurement Current	0.5 mA or 1 mA	
Sensor Length	1.26 in (32 mm)	
Sensor Location	0.12 in (3 mm) from tip	
Insulation Resistance	>1000 MΩ at room temperature	
Sheath Material	Inconel™	
Sheath Dimensions	0.25 in (6.35 mm) (OD) x 12 in (305 mm) (L)	0.25 in (6.35 mm) (OD) x 9.75 in (247.65 mm) vertical x 4.5 in (114.3 mm) horizontal
External Leads	Teflon™ insulated copper wire, 4 leads, 6.5 feet (2 meters)	
Handle Dimension	0.59 in (15 mm) (OD) x 2.56 in (65 mm) (L)	
Handle Temperature Range	-50°C to 180°C	
Calibration	ISO 17025 accredited calibration	

[1] Includes calibration and 100 hour drift.
[2] Probe calibration ranges may differ from probe temperature ranges (see Calibrated Accuracy for calibration ranges).
[3] Long-term drift rate is for reference only. It could be affected by such facts as handling, application, and maintenance, etc.
[4] For 63% response to step change in water moving at 1 meter per second.

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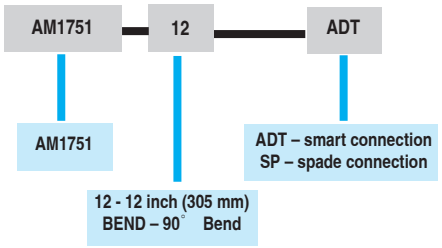
ORDERING INFORMATION

Model Number



Optional Accessories			
Model	***Quantity***	***Description***	***Picture***
9070	1 pc	Smart connector for reference PRT for use with Additel temperature products	
9071	1 pc	Connector adapter from Additel smart connector to 4-wire with gold plated spades	
9072	1 pc	Connector adapter from Additel smart connector to 4-wire with clamps	

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