



## FEATURES

- Affordable reference probe
- Temperature range: -200°C to 670°C
- Short term stability: <0.007°C
- Temperature Coefficient 0.003925  $\Omega/\Omega/^\circ\text{C}$
- W(Ga)  $\geq 1.11807$
- Inconel™ sheath to withstand harsh environments
- Fully meets the ITS-90 criteria for reference thermometers

## 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 <0.015°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.

## MULTIPLE SIZE OPTIONS AVAILABLE

Model	Length	OD	Bended
1751-20	20in	0.25in	
1751-12	12in	0.25in	
1751-BND	9.75in vertical x 4.5in horizontal	0.25in	✓

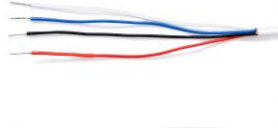
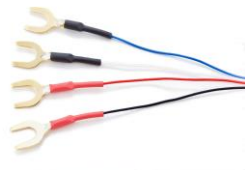

## SPECIFICATIONS

	1751-20	1751-12	1751-BND
Temperature Range	-200°C to 670°C		
Nominal Resistance at 0°C	100 Ω		
Temperature Coefficient	0.003925 Ω/Ω/°C		
Accuracy	<0.015°C at 0.01°C		
Long Term Drift at 0.01°C*	<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**	9 seconds		
Measurement Current	0.5 mA or 1 mA		
Sensor Length	32 mm		
Sensor Location	3 mm from tip		
Insulation Resistance	>1000 MΩ at room temperature		
Sheath Material	Inconel™		
Sheath Dimensions	0.25in (OD) x 20in (L)	0.25in (OD) x 12in (L)	0.25in (OD) x 9.75in vertical x 4.5in horizontal
External Leads	Teflon™ insulated copper wire, 4 leads, 2.5 meters		
Handle Dimension	15mm (OD) x 65mm (L)		
Handle Temperature Range	-50°C to 180°C		

\*Long-term drift rate is for reference only. It could be affected by such facts as handling, application, and maintenance, etc.

\*\*for 63% response to step change in water moving at 3 feet per second

## ORDERING OPTIONS

Model	Description			
9001	Wooden carrying case for 12" probe			
9002	Wooden carrying case for 20" probe			
5007	NIST traceable calibration			
5033	ISO 17025 accredited calibration			
Termination Options	Bare Wire (default) 	Spade 	8010 Connector 	ADT LEMO Connector 