



FEATURES

- Affordable reference probe
- Temperature range: -200°C to 670°C
- Short term stability: <0.007°C
- Temperature Coefficient 0.003925 $\Omega/\Omega/^\circ\text{C}$
- $W(\text{Ga}) \geq 1.11807$
- Inconel™ sheath to withstand harsh environments
- Fully meets the ITS-90 criteria for reference thermometers
- ISO/IEC 17025 accredited calibration included

MULTIPLE SIZE OPTIONS AVAILABLE

Model	Length	OD	Bended
AM1751-20	20in	0.25in	
AM1751-500	500mm	6mm	
AM1751-12	12in	0.25in	
AM1751-300	300mm	6mm	
1751-BEND	9.75in vertical x 4.5in horizontal	0.25in	✓

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. All AM1751 series PRTs include an ISO/IEC 17025 accredited calibration.

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.

AM1751 Secondary Reference PRT



SPECIFICATIONS

Model	AM1751-20	AM1751-500	AM1751-12	AM1751-300	AM1751-BEND
Temperature Range	-200°C to 670°C				
Nominal Resistance at 0°C	100 Ω				
Temperature Coefficient	0.003925 Ω/Ω/°C				
Calibration	ISO/IEC 17025 accredited calibration included				
Accuracy	<0.012°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)	6mm (OD) x 500mm (L)	0.25in (OD) x 12in (L)	6mm (OD) x 300mm (L)	0.25in (OD) x 9.75in vertical x 4.5in horizontal
External Leads	Teflon™ insulated copper wire, 4 leads, 2 meters				
Handle Dimensions	15mm (OD) x 65mm (L)				
Handle Temperature Range	-30°C to 100°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

ACCESSORY OPTIONS

Model	Description
9001	Wooden carrying case for 12" probe
9002	Wooden carrying case for 20" probe

STANDARD ORDERING OPTIONS (All Include ISO/IEC 17025 accredited calibration)

AM1751-20 20" Secondary Reference PRT, bare wire terminations

AM1751-500 500mm Secondary Reference PRT, bare wire terminations

AM1751-12 12" Secondary Reference PRT, bare wire terminations

AM1751-300 300mm Secondary Reference PRT, bare wire terminations

AM1751-BEND Bended Secondary Reference PRT, bare wire terminations

CUSTOM ORDERING OPTIONS (All Include ISO/IEC 17025 accredited calibration)

AM1751-20-	ADT	ADT LEMO connector	20" Secondary Reference PRT
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1751-500-	ADT	ADT LEMO connector	500mm Secondary Reference PRT
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1751-12-	ADT	ADT LEMO connector	12" Secondary Reference PRT
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1751-300-	ADT	ADT LEMO connector	300mm Secondary Reference PRT
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1751-BEND-	ADT	ADT LEMO connector	Bended Secondary Reference PRT
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	

Bare Wire (default)



ADT LEMO connector



Gold-plated spade lugs



5-PIN connector
(for AM8010 readout)

