



## 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 resistant

Temperature Coefficient  $0.003925 \Omega/\Omega/^\circ\text{C}$

$W(\text{Ga}) \geq 1.11807$

Inconel™ sheath

## OVERVIEW

The AM1730 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
1730-12	12in	0.25in	
1730-9	9in	0.187in	
1730-BND	9.75in vertical x 4.5in horizontal	0.25in	✓
1730-12-30	12in	3mm	
1730-9-30	9in	3mm	


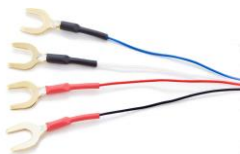

## SPECIFICATIONS

	1730-12	1730-9	1730-BND	1730-12-30	1730-9-30
Temperature Range	-200°C to 420°C	-200°C to 300°C	-200°C to 420°C	-200°C to 420°C	-200°C to 300°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 max temperature				
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	6 seconds	9 seconds	4 seconds	4 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 12in (L)	0.187in (OD) x 9in (L)	0.25in (OD) x 9.75in vertical x 4.5in horizontal	3mm (OD) x 12in (L)	3mm (OD) x 9in (L)
External Leads	Teflon™ insulated copper wire, 4 leads, 2.5 meters				
Handle Dimension	15mm (OD) x 65mm (L)	10mm (OD) x 50mm (L)	15mm (OD) x 65mm (L)	10mm (OD) x 50mm (L)	10mm (OD) x 50mm (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			
5007	NIST traceable calibration			
5033	ISO 17025 accredited calibration			
Termination Options	Bare Wire (default) 	Spade 	8010 Connector 	ADT LEMO Connector 