



## FEATURES

- Temperature range: -40°C to 160°C
- Accuracy: <0.012°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(Ga)  $\geq 1.11807$
- Stainless steel sheath

## OVERVIEW

The AM1710 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.

## MULTIPLE SIZE OPTIONS AVAILABLE

Model	Length	OD	Bended
1710-12	12in	0.25in	
1710-9	9in	0.187in	
1710-BND	7in vertical x 4in horizontal	0.25in	✓
1710-12-30	12in	3mm	
1710-9-30	9in	3mm	

# AM1710 Secondary Reference PRT

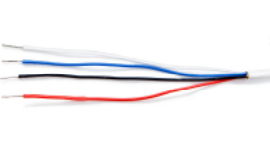
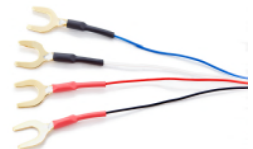

## SPECIFICATIONS

	1710-12	1710-9	1710-BND	1710-12-30	1710-9-30
Temperature Range	-40°C to 160°C				
Nominal Resistance at 0°C	100 Ω				
Temperature Coefficient	0.003925 Ω/Ω/°C				
Accuracy	<0.012°C at 0.01°C				
Long Term Drift at 0.01°C*	<0.01°C at TPW after 100 hours at 160°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	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	Stainless steel				
Sheath Dimensions	0.25in (OD) x 12in (L)	0.187in (OD) x 9in (L)	0.25in (OD) x 7in vertical x 4in horizontal	3mm (OD) x 12in (L)	3mm (OD) x 9in (L)
External Leads	Teflon™ insulated copper wire, 4 leads, 2 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	-40°C to 160°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" and 9" probe			
5035	ISO 17025 accredited calibration			
Termination Options	Bare Wire (default) 	Spade 	8010 Connector 	ADT LEMO Connector 