



## 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  $0.003925 \Omega/\Omega/^\circ\text{C}$
- $W(\text{Ga}) \geq 1.11807$
- Stainless steel sheath
- ISO/IEC 17025 accredited calibration included

## MULTIPLE SIZE OPTIONS AVAILABLE

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

## 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. All AM1710 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.

# AM1710 Secondary Reference PRT

## SPECIFICATIONS

Model	AM1710-12	AM1710-9	AM1710-BEND	AM1710-12-30	AM1710-9-30
Temperature Range	-40°C to 160°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 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	5 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 Dimensions	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	-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" or 9" probes

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

**AM1710-12** 12" Secondary Reference PRT, bare wire terminations

**AM1710-12-30** 12" Secondary Reference PRT, 3mm OD, bare wire terminations

**AM1710-9** 9" Secondary Reference PRT, bare wire terminations

**AM1710-9-30** 9" Secondary Reference PRT, 3mm OD, bare wire terminations

**AM1710-BEND** Bended Secondary Reference PRT, bare wire terminations

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

<b>AM1710-12-</b>	<b>ADT</b>	ADT LEMO connector	12" Secondary Reference PRT
	<b>BJ</b>	Banana plugs	
	<b>SP</b>	Gold-plated spade lugs	
	<b>PIN</b>	5-PIN connector (for AM8010 readout)	
	<b>X</b>	any other customizations	
<b>AM1710-12-30-</b>	<b>ADT</b>	ADT LEMO connector	12" Secondary Reference PRT, 3mm OD
	<b>BJ</b>	Banana plugs	
	<b>SP</b>	Gold-plated spade lugs	
	<b>PIN</b>	5-PIN connector (for AM8010 readout)	
	<b>X</b>	any other customizations	
<b>AM1710-9-</b>	<b>ADT</b>	ADT LEMO connector	9" Secondary Reference PRT
	<b>BJ</b>	Banana plugs	
	<b>SP</b>	Gold-plated spade lugs	
	<b>PIN</b>	5-PIN connector (for AM8010 readout)	
	<b>X</b>	any other customizations	
<b>AM1710-9-30-</b>	<b>ADT</b>	ADT LEMO connector	9" Secondary Reference PRT, 3mm OD
	<b>BJ</b>	Banana plugs	
	<b>SP</b>	Gold-plated spade lugs	
	<b>PIN</b>	5-PIN connector (for AM8010 readout)	
	<b>X</b>	any other customizations	
<b>AM1710-BEND-</b>	<b>ADT</b>	ADT LEMO connector	Bended Secondary Reference PRT
	<b>BJ</b>	Banana plugs	
	<b>SP</b>	Gold-plated spade lugs	
	<b>PIN</b>	5-PIN connector (for AM8010 readout)	
	<b>X</b>	any other customizations	

Bare Wire (default)



ADT LEMO connector



Gold-plated spade lugs



5-PIN connector  
(for AM8010 readout)

