

OVERVIEW

The AM1660/1640/1620 series Precision Industrial PRTs (IPRTs) are rugged probes with excellent accuracy and stability. These IPRTs cover a wide range of temperatures from -200°C to 670°C, with an amazing accuracy of ±0.035°C and a short term stability of ±0.01°C. All of these models include an ISO/IEC 17025 accredited calibration.

To reach the best performance in stability and repeatability, the wire-wound 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 probe conforms to the standard 385 curve so the resistance ratio of the PRT follows the DIN/IEC-751 curve precisely.



FEATURES

- Temperature range: -200°C to 670°C
- Accuracy: <0.035°C
- Long term drift: <0.03°C
- Short term stability: <0.01°C
- Durable and shock resistant
- Temperature Coefficient 0.00385 Ω/Ω/°C
- Follows DIN/IEC-751 curve precisely
- Inconel™ sheath on AM1660/1640 models
- ISO/IEC 17025 accredited calibration included

MULTIPLE SIZE OPTIONS AVAILABLE

Model	Length	OD	Inconel™
1660	12in	0.25in	✓
1640-12	12in	0.25in	✓
1640-9	9in	0.187in	✓
1620-12	12in	0.25in	
1620-9	9in	0.187in	

AM1660/1640/1620 Precision Industrial PRTs *AccuMac* Technology Inc

SPECIFICATIONS

Model	AM1660	AM1640	AM1620
Temperature Range	-200°C to 670°C	-200°C to 420°C	-40°C to 231°C
Nominal Resistance at 0°C	100 Ω		
Temperature Coefficient	0.00385 $\Omega/\Omega/^{\circ}\text{C}$		
Calibration	ISO/IEC 17025 accredited calibration included		
Accuracy	<0.035°C at 0°C		
Long Term Drift at 0.01°C*	<0.03°C at 0°C after 100 hours at maximum temperature		
Short Term Stability	<0.01°C		
Thermal Shock	<0.007°C after 10 thermal cycles from minimum to maximum temperatures		
Hysteresis	$\leq 0.01^{\circ}\text{C}$		
Self-heating	50 mW/ $^{\circ}\text{C}$		
Response Time**	5 seconds		
Measurement Current	0.5 mA or 1 mA		
Sensor Length	32mm		
Sensor Location	5mm from tip		
Insulation Resistance	>1000 M Ω at room temperature		
Sheath Material	Inconel™	Inconel™	Stainless Steel
Sheath Dimensions	0.25in (OD) x 12in (L)	1640-12: 0.25in (OD) x 12in (L) 1640-9: 0.187 (OD)x 9in (L)	1620-12: 0.25in (OD) x 12in (L) 1620-9: 0.187 (OD)x 9in (L)
External Leads	Teflon™ insulated copper wire, 4 leads, 2 meters		
Handle Dimension	12in models: 15mm (OD) x 65mm (L) 9in models: 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

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

- AM1660-12 12" Precision Industrial PRT, bare wire terminations (-200°C to 670°C)
- AM1640-12 12" Precision Industrial PRT, bare wire terminations (-200°C to 420°C)
- AM1640-9 9" Precision Industrial PRT, bare wire terminations (-200°C to 420°C)
- AM1620-12 12" Precision Industrial PRT, bare wire terminations (-40°C to 231°C)
- AM1620-9 9" Precision Industrial PRT, bare wire terminations (-40°C to 231°C)

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

AM1660-12-	ADT	ADT LEMO connector	12" Precision Industrial PRT (-200°C to 670°C)
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1640-12-	ADT	ADT LEMO connector	12" Precision Industrial PRT (-200°C to 420°C)
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1640-9-	ADT	ADT LEMO connector	9" Precision Industrial PRT (-200°C to 420°C)
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1620-12-	ADT	ADT LEMO connector	12" Precision Industrial PRT (-40°C to 231°C)
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	
AM1620-9-	ADT	ADT LEMO connector	9" Precision Industrial PRT (-40°C to 231°C)
	BJ	Banana plugs	
	SP	Gold-plated spade lugs	
	PIN	5-PIN connector (for AM8010 readout)	
	X	any other customizations	

