

# AccuMac AM1660 and AM1640 Precision Industrial PRTs

- Temperature Range: -200°C to 670°C
- Accuracy: <math><0.035^{\circ}\text{C}</math>
- Long Term Drift: <math><0.03^{\circ}\text{C}</math>
- Short-term Stability: <math><0.01^{\circ}\text{C}</math>
- Durable and Shock Resistant
- Temperature Coefficient 0.00385  $\Omega/\Omega/^{\circ}\text{C}$
- Inconel™ Sheath on AM1660/1640 Models



## OVERVIEW

The AM1660 and AM1640 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  $\pm 0.035^{\circ}\text{C}$  and a short term stability of  $\pm 0.01^{\circ}\text{C}$ .

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 and comes standard with an NIST-traceable certificate of calibration.

## SPECIFICATIONS

	AM1660-12	AM1640-12	AM1640-9
Temperature Range	-200°C to 670°C	-200°C to 420°C	
Nominal Resistance at 0°C	100 $\Omega$		
Temperature Coefficient	0.00385 $\Omega/\Omega/^{\circ}\text{C}$		
Accuracy	<math><0.035^{\circ}\text{C}</math> at 0°C		
Long Term Drift at 0.01°C*	<math><0.03^{\circ}\text{C}</math> at 0°C after 100 hours at maximum temperature		
Short Term Stability	<math><0.01^{\circ}\text{C}</math>		
Thermal Shock	<math><0.007^{\circ}\text{C}</math> after 10 thermal cycles from minimum to maximum temperatures		
Hysteresis	$\leq 0.01^{\circ}\text{C}$		
Self-heating	50 mW/°C		
Response Time**	5 seconds		
Measurement Current	0.5 mA or 1 mA		
Sensor Length	1.26 in (32 mm)		
Sensor Location	0.2 in (5 mm) from tip		
Insulation Resistance	>1000 M $\Omega$ at room temperature		
Sheath Material	Inconel™		
Sheath Dimensions	0.25 in (6.35 mm) (OD) x 12 in (305 mm) (L)	0.25 in (6.35 mm) (OD) x 12 in (305 mm) (L)	0.188 in (4.775 mm) (OD) x 9 in (228.6 mm) (L)
External Leads	Teflon™ insulated copper wire, 4 leads, 6.5 feet (2 meters)		
Handle Dimension	0.59 in (15 mm) (OD) x 2.56 in (65 mm) (L)	0.59 in (15 mm) (OD) x 2.56 in (65 mm) (L)	0.39 in (10 mm) (OD) x 1.97 in (50 mm) (L)
Handle Temperature Range	-50°C to 180°C		
Calibration	NIST-Traceable calibration with data***		

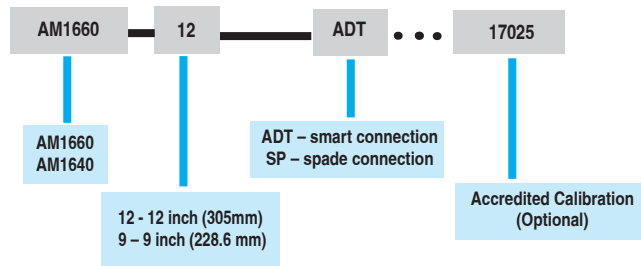
\*Long-term drift rate is for reference only. It could be affected by such facts as handling, application, and maintenance, etc.

\*\*For 63% response to step change in water moving at 1 meter per second



\*\*\* For 17025 accredited calibration, please contact Additel

## ORDERING INFORMATION

### Model Number



**Note:** AM1660 is only available in 12 inch (305 mm) long configuration  
Carrying case NOT included

Optional Accessories			
Model	Quantity	Description	Picture
9070	1 pc	Smart connector for reference PRT for use with Additel temperature products	
9071	1 pc	Connector adapter from Additel smart connector to 4-wire with gold plated spades	
9072	1 pc	Connector adapter from Additel smart connector to 4-wire with clamps	