

# AccuMac AM1612

## Full Immersion PRT



- Temperature Range: -200°C to 160°C
- Accuracy: <0.05°C
- Short-term Stability: <0.02°C
- Transition Junction and Lead Wires Can Withstand the Full Range of the PRT's
- Widely Used in Climate/Humidity Chambers and Freezers for Validation/Calibration



### OVERVIEW

The AM1612 full immersion PRT is uniquely designed to provide users an excellent temperature probe that can expose the transition junction and the lead wires to an environment that covers the full PRT temperature range. The seal of the probe prevents the ingress of moisture so that the probe can work in humid conditions or even under full immersion in common heat transfer fluid such as ethanol, silicone oil and mineral oil. It has a wide application in freezers, temperature/humidity chambers and sterilizers.

The AM1612 is small in size with a probe length of 1.97 in (50 mm) and diameter of 0.12 in (3 mm). A unique assembly procedure provides the best balance among the hysteresis effect, mechanical shock and thermal shock performance. Each probe comes standard with an NIST-traceable certificate of calibration.

### SPECIFICATIONS

	AM1612-2	AM1612-1
Temperature Range	-200°C to 160°C	-40°C to 160°C
Nominal Resistance at 0°C	100 Ω	
Temperature Coefficient	0.00385 Ω/Ω/°C	
Accuracy	±0.072°C at -200°C ±0.05°C at -40°C ±0.05°C at 0°C ±0.05°C at 160°C	±0.05°C at -40°C ±0.05°C at 0°C ±0.05°C at 160°C
Long Term Drift at 0.01°C*	<0.04°C at TPW after 100 hours at 160°C	
Short Term Stability	<0.02°C	
Thermal Shock	<0.02°C after 10 thermal cycles from minimum to maximum temperatures	
Hysteresis	≤0.01°C	
Self-heating	75 mW/°C	
Response Time**	4 seconds	
Measurement Current	1 mA	
Sensor Length	1.18 in (30 mm)	0.59 in (15 mm)
Sensor Location	0.12 in (3 mm) from tip	
Insulation Resistance	>1000 MΩ at room temperature	
Sheath Material	Stainless Steel	
Sheath Dimensions	0.12 in (3 mm) (OD) x 1.97 in (50 mm) (L)	0.12 in (3 mm) (OD) x 0.98 in (25 mm) (L)
External Leads	AM1612-2 = 8.20 feet (2.5 meters)	AM1612-1 = 2.50 feet (0.8 meters)
Calibration	NIST-traceable calibration with data***	
Lead Composition	Enameled copper wire protected by high temperature heat shrink tubing, 4 leads	

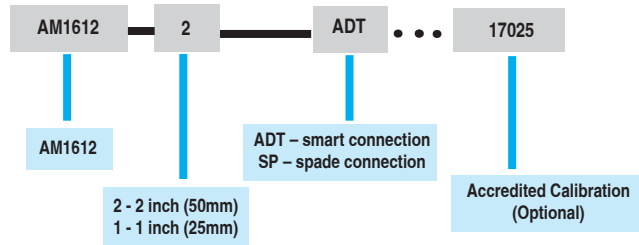
\*Long-term drift rate is for reference only. It could be affected by such facts as handling, application, and maintenance, etc.

\*\*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: 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	