



FEATURES

Temperature range: 0°C to 420°C

Accuracy: <0.04°C

Short term stability: <0.02°C

Transition junction and lead wires can withstand high temperatures up to 420°C

OVERVIEW

The AM1643 full immersion PRT features a unique design that allows users to apply the probe, together with its lead wires, in high temperature environments such as ovens or furnaces. It covers a wide range of temperatures from 0°C to 420°C with an amazing accuracy of <0.04°C at 0°C, a short term stability of <0.02°C, and a fast response time of 5 seconds.

To reach the best performance in stability and repeatability, the wire-wound sensing element is specially designed to protect the platinum sensing wire from contamination at high temperatures. A unique support structure and filling material provide the best balance among the hysteresis effect, mechanical shock and thermal shock performance. This probe conforms to the DIN/IEC-751 curve precisely.

Model	Sheath Length	OD	Dry Full Immersion
1643	2in	0.125in	✓


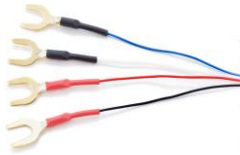

SPECIFICATIONS

	1643
Temperature Range	0°C to 420°C
Nominal Resistance at 0°C	100 Ω
Temperature Coefficient	0.00385 Ω/Ω/°C
Accuracy	<0.04°C at 0°C
Long Term Drift at 0.01°C*	<0.04°C at 0°C after 100 hours at 420°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	50 mW/°C
Response Time**	5 seconds
Measurement Current	1 mA
Sensor Length	30 mm
Minimum Immersion Depth	50 mm
Maximum Immersion Depth	Dry medium: full immersion Liquid medium: use protective tube if immersion depth reaches transition junction
Insulation Resistance	>1000 MΩ at room temperature
Sheath Material	Inconel™
Sheath Dimensions	0.125in (OD) x 2in (L)
External Leads	Four fiberglass insulation Ni-plated copper wires, 2.5 meters (longer leads available per request)
Handle Dimension	7mm (OD) x 30mm (L)

*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			
5007	NIST traceable calibration			
5033	ISO 17025 accredited calibration			
Termination Options	Bare Wire (default) 	Spade 	8010 Connector 	ADT LEMO Connector 