AM1642 Full Immersion PRT

AccuMac

HIGHLIGHTS

- ✓ **Transition junction and lead wire can withstand high temperature up to 420°C**
- ✓ **Accuracy ±0.04°C at 0°C**
- ✓ **Temperature range: 0°C to 420°C**
- ✓ **Customized dimensions available**

OVERVIEW

AM1642 full immersion PRT features a unique design that allows for the users to apply the probe together with its lead wire in a high temperature environment such as ovens or furnaces etc. It covers a wide range of temperature from 0 °C to 420 °C with amazing accuracy of ±0.04°C at 0 °C, short term stability of ±0.02°C and fast respond time of 5 seconds. The standard length is 4-inch but customized dimensions are available per request. Customized length can range from 2 inches to 12 inches.

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

FEATURES

- Temperature range: 0 °C to 420 °C
- Accuracy: ±0.04 °C at 0 °C
- Long term drift: ±0.04 °C
- Short term stability: 0.02 °C
- Transition junction and lead wire can withstand the full temperature range of the PRT
- Temperature Coefficient 0.00385
- Follow DIN/IEC-751 precisely
- Inconel^{tm} sheath
- Quick response time
- Customized dimensions available

SPECIFICATIONS

Temperature Range	0°C to 420°C
Resistance at 0 °C	Nominal 100 Ω
Temperature Coefficient	0.00385 Ω/ Ω/°C
Accuracy*	±0.04°C at 0°C ±0.05°C at 200°C ±0.07°C at 420°C
Drift	±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 times thermal cycles from minimum to maximum temperatures
Hysteresis	<=0.01°C
Self-heating	50 mW/°C
Response Time	5 seconds for 63% response to step change in water moving at 3 feet per second
Measurement Current	1 mA
Minimum immersion depth	50 mm
Maximum immersion depth	Dry medium: full immersion Liquid medium: use protective tube if immersion depth reaches transition junction
Sensor Length	30 mm
Insulation Resistance	>500 MΩ at room temperature
Sheath Material	Inconel^{tm}
Dimension	0.125 inch X 4 inch (3 mm X 100 mm) (length of the probes can be customized per request, range from 2 inches to 12 inches)
External Leads	Four fiberglass insulation Ni-plated copper wires, 2.5 meters (longer lead wires are available per request)
Handle Dimension	6.4mm (OD) X 25 mm (L)

*With optional calibration.

OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case