

## AM1760/1762 Secondary Standard PRT

### HIGHLIGHTS

- ✓ Rtpw Drift < 19 mK after 500 hours
- ✓ Accuracy  $\pm 0.006$  °C at 0.01 °C
- ✓ Temperature range: -200 °C to 670 °C
- ✓ Customized dimensions available



### OVERVIEW

AM1760 series Secondary Standard PRT provides our customers an affordable SPRT alternative for precision temperature measurement and calibration in labs and fields. This SPRT features accuracy of  $\pm 0.006$  °C at 0.01 °C, short term stability of  $\pm 0.002$  °C and very low drift rate of less than 19 mK after 500 hours. Two different lengths of SPRTs are available at 12-inch and 20-inch.

The sensing element is designed to protect the platinum sensing wire from contamination at high temperatures, giving the device a high level of stability and repeatability in performance. A uniquely designed support structure and filling material provides excellent balance between the hysteresis effect, mechanical shock and thermal shock performance. This high performance probe fully meets ITS-90 criteria for reference thermometers.

### FEATURES

- Temperature range: -200 °C to 670 °C
- Accuracy:  $\pm 0.006$  °C at 0.01 °C
- Long term drift:  $\pm 0.019$  °C
- Short term stability: 0.002 °C
- Temperature Coefficient 0.003925
- $W(\text{Ga}) \geq 1.11807$
- Inconel™ sheath
- Customized dimensions available

## AM1760/1762 Secondary Standard PRT

### SPECIFICATIONS

<b>Temperature Range</b>	-200°C to 670°C
<b>Resistance at 0 °C</b>	1760 - Nominal 100 Ω 1762 – Nominal 25 Ω
<b>Temperature Coefficient</b>	0.003925 Ω/ Ω/°C
<b>Accuracy</b>	±0.007°C at -196 °C ±0.006°C at 0.01 °C ±0.015°C at 420 °C ±0.025°C at 660 °C
<b>Drift*</b>	±0.004°C at 0 °C after 100 hours at 660 °C
<b>Short Term Stability</b>	±0.002°C
<b>Thermal Shock</b>	±0.002°C after 10 times thermal cycles from minimum to maximum temperatures
<b>Self-heating</b>	0.0015 °C at 1 mA current
<b>Response Time</b>	9 seconds for 63% response to step change in water moving at 3 feet per second
<b>Measurement Current</b>	0.5 mA or 1 mA
<b>Sensor Length</b>	42 mm
<b>Sensor Location</b>	5 mm from tip
<b>Insulation Resistance</b>	>1000 MΩ at room temperature
<b>Sheath Material</b>	Inconel <sup>tm</sup>
<b>Dimension</b>	1760/1762-12: 0.25 inch X 12 inch (6.35 mm X 305 mm) 1760/1762-20: 0.25inch X 20 inch (6.35 mm X 500 mm)
<b>External Leads</b>	Teflon <sup>tm</sup> –insulated copper wire, 4 leads, 2.5 meters
<b>Handle Dimension</b>	15mm (OD) X 65 mm (L)
<b>Handle Temperature Range**</b>	-50°C to 180°C
<b>Calibration Options</b>	1760/1762-12-T, Secondary SPRT with NIST traceable calibration and data 1760/1762-20-T, Secondary SPRT with NIST traceable calibration and data

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

\*\*Handle temperature outside this range will cause damage to the probe.

### OPTIONAL ACCESSORIES

Model	Description
9001	Wooden Carrying Case for 1760/1762-12
9002	Wooden Carrying Case for 1760/1762-20