

HIGHLIGHTS

- ✓ Rtpw Drift: < 4 mK after 100 hours at 661 °C
- ✓ Accuracy: ± 0.006 °C at 0.01 °C
- ✓ Temperature range: -200 °C to 670 °C
- ✓ Customized dimensions available



OVERVIEW

AM1760 series Secondary SPRTs provide our customers reliable secondary standards that can be used daily in their labs. This SPRT features accuracy of ± 0.006 °C at 0.01 °C, short term stability of ± 0.002 °C and very low drift rate of less than 0.004 °C after 100 hours at 661 °C. 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: ± 0.006 °C at 0.01 °C
- Long term drift: <0.004 °C after 100 hours at 661 °C
- Short term stability: 0.002 °C
- Temperature Coefficient 0.003925 $\Omega/\Omega/^\circ\text{C}$
- $W(\text{Ga}) \geq 1.11807$
- Inconel™ sheath
- Customized dimensions available

SPECIFICATIONS

| | |
|----------------------------|--|
| Temperature Range | -200 °C to 670 °C |
| Resistance at 0 °C | 1760 – Nominal 100 Ω 1762 – Nominal 25 Ω |
| Temperature Coefficient | 0.003925 Ω/ Ω/°C |
| Accuracy | ±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 |
| Long Term Drift* | ±0.004 °C at TPW after 100 hours at 661 °C |
| Short Term Stability | ±0.002 °C |
| Thermal Shock | ±0.002 °C after 10 times thermal cycles from minimum to maximum temperatures |
| Self-heating | 0.0015 °C at 1 mA current |
| Response Time | 9 seconds for 63% response to step change in water moving at 3 feet per second |
| Measurement Current | 0.5 mA or 1 mA |
| Sensor Length | 42 mm |
| Sensor Location | 5 mm from tip |
| Insulation Resistance | >1000 MΩ at room temperature |
| Sheath Material | Inconel™ |
| Dimension | 1760/1762-12: 0.25 inch X 12 inch (6.35 mm X 305 mm) 1760/1762-20: 0.25 inch X 20 inch (6.35 mm X 500 mm) |
| External Leads | Teflon™ – insulated copper wire, 4 leads, 2.5 meters |
| Handle Dimension | 15 mm (OD) X 65 mm (L) |
| Handle Temperature Range** | -50 °C to 180 °C |
| Optional Calibration | NIST traceable calibration and data available per request: Ordering # 5007 |

*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.

ACCESSORIES

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