TECHNICAL DATA

5698-25 Working Standard SPRT

Key features

- Conform to ITS-90 SPRT guidelines and have a typical drift rate of 0.003 °C.
- Calibration options by fixed point.
- 485-mm quartz sheath, this 25-ohm SPRT covers a temperature range from –200 °C to 670 °C.
- Long-term drift isless than 6 mK—typically less than 3 mK.

Product overview: 5698-25 Working Standard SPRT

The 5698 Working Standard SPRT is a true SPRT. It meets the ITS-90 ratio requirements for SPRTs and includes a Hart-designed, completely strain-free platinum sensor. With a 485-mm quartz sheath, this 25-ohm SPRT covers a temperature range from –200 °C to 670 °C. Long-term drift, which we define as the change in output resistance at the triple point of water after 100 hours at 670 °C, is (after converting to temperature) less than 6 mK—typically less than 3 mK.

The 5698 is the perfect companion to a Fluke 1595A Super-Thermometer, which reads 25-ohm SPRTs to within 0.015 mK at 0 °C and includes a number of convenient features for working with SPRTs. Requiring 1 mA of excitation current, the 5698 can also be used easily with a Fluke Black Stack, or even a Chub-E4 Thermometer.

If you need your SPRT calibrated by a reputable calibration lab, we offer appropriate calibration options by fixed-point in our NVLAP-accredited lab. Our calibration prices are as reasonable as our instrument prices, so you get maximum value from your SPRT.

Why buy critical temperature standards from companies unwilling to publish complete specifications? At Fluke Calibration, we not only provide excellent post-purchase support so you have the best possible ownership experience, we also provide you all the information we can before you purchase—including detailed performance specifications.

Maybe there is some art mixed with our science. But that doesn't mean we keep secrets. Trust your lab standards to Fluke Calibration.

Specifications: 5698-25 Working Standard SPRT

Specifications	
Temperature Range	–200 °C to 670 °C
Nominal R_{TPW}	25.5 Ω (± 0.5 Ω)
Current	1.0 mA
Resistance Ratios	W(234.315 K) □ 0.844235 W(302.9146 K) □ 1.11807
Sensitivity	0.1 Ω/°C
Drift Rate	< 0.006 °C/100 hours at max temperature (typically < 0.003 °C)
Self-heating at TPW	< 0.002 °C under 1 mA current
Reproducibility	± 0.0015 °C or beer
R_{TPW} Drift After Thermal Cycling	< 0.001 °C
Diameter of Pt Sensor Wire	0.07 mm (0.003 in)
Protective Sheath	Quartz Glass Diameter: 7 mm (0.28 in) Length: 485 mm (19.1 in)
Lead Wires	Four sensor wires

Ordering information

5698-25

25 Ω Working Standard SPRT with maple carrying case.
Calibration not included.Contact your Fluke Calibration representative for additional calibration options.

1912-4-7

PRT Calibration, –200 °C to 660 °C, NVLAP Accredited

Fluke. *Keeping your world up and running.®*

Fluke (UK) Ltd.
52 Hurricane Way
Norwich, Norfolk
NR6 6JB
United Kingdom
Tel.: +44 (0)20 7942 0708
E-mail: cs.uk@fluke.com
www.fluke.com