

SRL Series

Highest performance, very low temperature coefficient, highest stability sealed resistance standards.

- No oil bath required
- Very stable - 2 ppm/yr, typical
- Extremely low TC: <2 ppm total for 18-28°C range
- Optional values & combination units
- Very wide rang - 1 mΩ to 10 TΩ
- Optional transit case

Extremely high accuracy & stability, sealed, on site resistance standard requiring no oil or temperature bath.

SPECIFICATIONS

| Model* | Nominal Value | Adjustment Accuracy (±ppm) | Calibration Uncertainty (±ppm) | Stability 12 months (±ppm) | | Max Resistance Change from 23°C | Max Current | Max Voltage (V) | Current Limit for Accuracy † (mA) |
|------------|---------------|----------------------------|--------------------------------|----------------------------|------|---------------------------------|-------------|-----------------|-----------------------------------|
| | | | | max | typ. | | | | |
| SRL-0.001 | 1 mΩ | 50 | 50 | 50 | - | 20 ppm/°C | 10 A | 0.01 | - |
| SRL-0.0019 | 1.9 mΩ | 50 | 50 | 50 | - | 20 ppm/°C | 10 A | 0.02 | - |
| SRL-0.002 | 2 mΩ | 50 | 50 | 50 | - | 20 ppm/°C | 10 A | 0.02 | - |
| SRL-0.01 | 10 mΩ | 50 | 20 | 50 | - | 20 ppm/°C | 10 A | 0.1 | - |
| SRL-0.019 | 19 mΩ | 50 | 20 | 50 | - | 20 ppm/°C | 10 A | 0.2 | - |
| SRL-0.1 | 100 mΩ | 10 | 10 | 50 | - | 20 ppm/°C | 3 A | 0.3 | - |
| SRL-0.19 | 190 mΩ | 10 | 10 | 50 | - | 20 ppm/°C | 3 A | 0.6 | - |
| SRL-1 | 1 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 500 mA | 0.5 | 256 |
| SRL-1.9 | 1.9 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 200 mA | 0.38 | 186 |
| SRL-10 | 10 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 100 mA | 1 | 63 |
| SRL-19 | 19 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 74 mA | 1.4 | 45 |
| SRL-25 | 25 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 63 mA | 1.6 | 40 |
| SRL-30 | 30 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 57 mA | 1.7 | 36.5 |
| SRL-50 | 50 Ω | 2 | 1 | 8 | 2 | 3 ppm tot | 44 mA | 2.2 | 28 |
| SRL-100 | 100 Ω | 2 | 1 | 6 | 2 | 3 ppm tot | 32 mA | 3.2 | 20 |
| SRL-190 | 190 Ω | 2 | 1 | 6 | 2 | 3 ppm tot | 24 mA | 4.5 | 14.5 |
| SRL-350 | 350 Ω | 2 | 1 | 6 | 2 | 3 ppm tot | 17 mA | 5.95 | 10.7 |
| SRL-400 | 400 Ω | 2 | 1 | 6 | 2 | 3 ppm tot | 15.8 mA | 6.3 | 10 |
| SRL-1K | 1 kΩ | 2 | 1 | 6 | 1 | 3 ppm tot | 10 mA | 10 | 6 |
| SRL-1.9K | 1.9 kΩ | 2 | 1 | 6 | 1 | 2 ppm tot | 7.4 mA | 14 | 4.6 |
| SRL-10K | 10 kΩ | 2 | 1 | 4 | 1 | 1.5 ppm tot | 3 mA | 30 | 2 |
| SRL-19K | 19 kΩ | 2 | 1 | 4 | 1 | 2 ppm tot | 2.3 mA | 28 | 1.4 |
| SRL-100K | 100 kΩ | 2 | 1 | 6 | 1.5 | 2 ppm tot | 1 mA | 100 | 0.63 |
| SRL-190K | 190 kΩ | 2 | 1 | 8 | 2 | 2 ppm tot | 0.5 mA | 100 | 0.45 |
| SRL-1M | 1 MΩ | 2 | 2 | 8 | 2 | 2 ppm tot | 0.1 mA | 100 | - |
| SRL-1.9M | 1.9 MΩ | 2 | 2 | 9 | 2 | 3 ppm tot | 0.053 mA | 100 | - |
| SRL-10M | 10 MΩ | 2 | 2 | 9 | 2 | 3 ppm tot | 0.030 mA | 300 | - |
| SRL-19M | 19 MΩ | 2 | 9 | 10 | 2 | 4 ppm tot | 0.016 mA | 300 | - |
| SRL-100M | 100 MΩ | 10 | 9 | 20 | - | 2 ppm/°C | 10 μA | 1000 | - |
| SRL-1G | 1 GΩ | 0.1% | 100 | 200 | 100 | 10 ppm/°C | - | 5000 | - |
| SRL-10G | 10 GΩ | 0.1% | 200 | 500 | 300 | 25 ppm/°C | - | 5000 | - |
| SRL-100G | 100 GΩ | 0.2% | 900 | 500 | 300 | 25 ppm/°C | - | 5000 | - |
| SRL-1T | 1 TΩ | 0.5% | 0.25% | 500 | 300 | 50 ppm/°C | - | 5000 | - |
| SRL-1.9T | 1.9 TΩ | 0.7% | 0.7% | 1000 | 500 | 100 ppm/°C | - | 5000 | - |
| SRL-10T | 10 TΩ | 0.7% | 0.7% | 2000 | 1000 | 100 ppm/°C | - | 5000 | - |

† Add 1 ppm error when test current value exceeds Current Limit.

Retrace: Permanent shift in resistance value is <2 ppm for 23°C to 0°C to 23°C cycle, and 23°C to 40°C to 23°C cycle; applies for 1 Ω to 19 MΩ.

Calibration Report: Initial SI traceable calibration data provided in 0.5°C increments for temperature range of 18°C to 28°C.

Terminals: Four 5-way binding posts for 4-terminal measurement for 190 kΩ and under; two binding posts for 1 MΩ and over. The binding posts are constructed of tellurium copper for low thermal emf and low resistance. A case ground terminal is also provided. Guard terminal for

100 MΩ and over. DMM direct input compatibles available

Calibration Conditions: Four-wire Kelvin measurements, low power, at 23°C; two wire for 1 MΩ and over. Traceable to SI.

Temperature Range: 18°C to 28°C.

Storage Temperature: 0°C to 40°C.

Dimensions: 8.6 cm H x 10.5 cm W x 12.7 cm D (3.4" x 4.15" x 5").

Weight: 0.73 kg (1.6 lb).

Transit Case: Optional Model SRC-100 lightweight transit case with handle, suitable for transporting and storing two units. The case provides



SRL-1 High Accuracy Resistance Standard Requiring No Temperature Bath

Combination units in single housing available

Direct plug-in units for DMM calibration available

Optional Transit Case

Improved specifications for high resistors



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