

High Accuracy, High Stability Resistance Standards

SRL Series

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

The SRL Series is available in a wide range of off the shelf values and in custom values or combinations

- Very high stability
- Very low temperature coefficient
- No need for stabilization in a temperature controlled bath
- Wide choice of values and custom values - 1 mΩ to 10 TΩ
- Combination units available
- Calibration report at 3 temperatures - Temperature chart and α and β provided
- Very low hysteresis
- Direct plug in unit for most DMM's - Fluke , Wavetek, Agilent, and others.

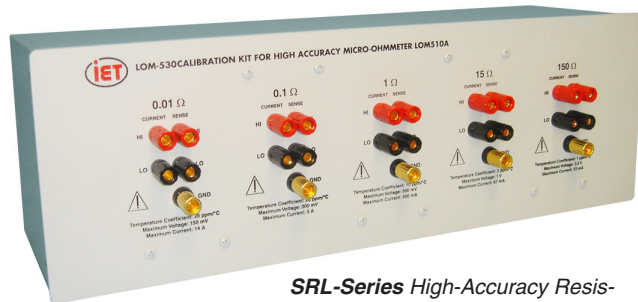
See also:

- SRX series for economy grade
- SRX1 series for High Performance
- SR-102 & SR-104 for Primary Standards
- VRS for multiple values
- SRR for high power

UNITS AVAILABLE



SRL-1 High-Accuracy Resistance Standard requiring no temperature bath



SRL-Series High-Accuracy Resistance Standard Combination Unit



SRL-DMM Version: Available in any value as a direct plug-in for most DMM's; this avoids external leads and noise pickup. (Part number SRL-XXX-DMM Model, e.g. SRL-10K-8508)

SPECIFICATIONS

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. Additional Guard terminal for 100 MΩ and over. **DMM direct input compatibles available; bnc, Triax, and custom connectors available.**

Calibration Conditions: Three of 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 mechanical protection and insulation from temperature changes during transportation or shipping.



IET LABS, INC. in the **GenRad** Tradition

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SRL Series

SPECIFICATIONS

Nominal Value	Model Number	Adjustment to Nominal	Calibration Uncertainty	Stability 12 Months		Max Resistance Change 18-28°C from 23 °C	Max Applied Input		
				max	typ		0 ppm change*	<1 ppm change**	<3 ppm change**
1 mΩ	SRL-0.001	±50 ppm	±8 ppm	±50 ppm	-	20 ppm/°C	50 mW	100 mW	200 mW
1.9 mΩ	SRL-0.0019	±50 ppm	±8 ppm	±50 ppm	-	20 ppm/°C	50 mW	100 mW	200 mW
2 mΩ	SRL-0.002	±50 ppm	±8 ppm	±50 ppm	-	20 ppm/°C	50 mW	100 mW	200 mW
10 mΩ	SRL-0.01	±5 ppm	±6 ppm	±15 ppm	-	5 ppm/°C	25 mW	50 mW	200 mW
19 mΩ	SRL-0.019	±5 ppm	±6 ppm	±15 ppm	-	5 ppm/°C	25 mW	50 mW	200 mW
20 mΩ	SRL-0.02	±5 ppm	±6 ppm	±15 ppm	-	5 ppm/°C	25 mW	50 mW	200 mW
100 mΩ	SRL-0.1	±5 ppm	±2 ppm	±12 ppm	-	2 ppm/°C	50 mW	100 mW	250 mW
190 mΩ	SRL-0.19	±5 ppm	±2 ppm	±12 ppm	-	2 ppm/°C	50 mW	100 mW	250 mW
200 mΩ	SRL-0.19	±5 ppm	±2 ppm	±12 ppm	-	2 ppm/°C	50 mW	100 mW	250 mW
1 Ω	SRL-1	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	175 mW	350 mW	850 mW
1.9 Ω	SRL-1.9	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	175 mW	350 mW	850 mW
2 Ω	SRL-1.9	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	175 mW	350 mW	850 mW
10 Ω	SRL-10	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
19 Ω	SRL-19	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
20 Ω	SRL-19	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
25 Ω	SRL-25	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
30 Ω	SRL-30	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
50 Ω	SRL-50	±2 ppm	±1 ppm	±8 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
100 Ω	SRL-100	±2 ppm	±1 ppm	±6 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
190 Ω	SRL-190	±2 ppm	±1 ppm	±6 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
200 Ω	SRL-190	±2 ppm	±1 ppm	±6 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
350 Ω	SRL-350	±2 ppm	±1 ppm	±6 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
400 Ω	SRL-400	±2 ppm	±1 ppm	±6 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
1 kΩ	SRL-1K	±2 ppm	±1 ppm	±6 ppm	±1 ppm	3 ppm tot	100 mW	200 mW	500 mW
1.9 kΩ	SRL-1.9K	±2 ppm	±1 ppm	±6 ppm	±1 ppm	2 ppm tot	100 mW	200 mW	500 mW
2 kΩ	SRL-1.9K	±2 ppm	±1 ppm	±6 ppm	±1 ppm	2 ppm tot	100 mW	200 mW	500 mW
10 kΩ	SRL-10K	±2 ppm	±1 ppm	±4 ppm	±1 ppm	1.5 ppm tot	100 mW	200 mW	500 mW
19 kΩ	SRL-19K	±2 ppm	±1 ppm	±4 ppm	±1 ppm	2 ppm tot	100 mW	200 mW	500 mW
20 kΩ	SRL-100K	±2 ppm	±1 ppm	±6 ppm	±2 ppm	2 ppm tot	100 mW	200 mW	500 mW
100 kΩ	SRL-100K	±2 ppm	±1 ppm	±6 ppm	±2 ppm	2 ppm tot	100 mW	200 mW	500 mW
190 kΩ	SRL-190K	±2 ppm	±1 ppm	±8 ppm	±2 ppm	2 ppm tot	100 mW	200 mW	500 mW
200 kΩ	SRL-190K	±2 ppm	±1 ppm	±8 ppm	±2 ppm	2 ppm tot	100 mW	200 mW	500 mW
1 MΩ	SRL-1M	±2 ppm	±2 ppm	±8 ppm	±2 ppm	2 ppm tot	100 mW	200 mW	500 mW
1.9 MΩ	SRL-1.9M	±2 ppm	±2 ppm	±9 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
2 MΩ	SRL-1.9M	±2 ppm	±2 ppm	±9 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
10 MΩ	SRL-10M	±2 ppm	±2 ppm	±9 ppm	±2 ppm	3 ppm tot	100 mW	200 mW	500 mW
19 MΩ	SRL-19M	±2 ppm	±9 ppm	±10 ppm	±2 ppm	4 ppm tot	100 mW	200 mW	500 mW
20 MΩ	SRL-19M	±2 ppm	±9 ppm	±10 ppm	±2 ppm	4 ppm tot	100 mW	200 mW	500 mW
100 MΩ	SRL-100M	±10 ppm	±9 ppm	±20 ppm	-	5 ppm/°C	1000 V		
190 MΩ	SRL-100M	±10 ppm	±9 ppm	±20 ppm	-	5 ppm/°C	1000 V		
200 MΩ	SRL-100M	±10 ppm	±9 ppm	±20 ppm	-	5 ppm/°C	1000 V		
1 GΩ	SRL-1G	±0.1%	±100 ppm	±200 ppm	±100 ppm	20 ppm/°C	5000 V		
1.9 GΩ	SRL-1G	±0.1%	±100 ppm	±200 ppm	±100 ppm	20 ppm/°C	5000 V		
2 GΩ	SRL-1G	±0.1%	±100 ppm	±200 ppm	±100 ppm	20 ppm/°C	5000 V		
10 GΩ	SRL-10G	±0.1%	±200 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
19 GΩ	SRL-10G	±0.1%	±200 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
20 GΩ	SRL-10G	±0.1%	±200 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
100 GΩ	SRL-100G	±0.2%	±1000 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
190 GΩ	SRL-100G	±0.2%	±1000 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
200 GΩ	SRL-100G	±0.2%	±1000 ppm	±500 ppm	±300 ppm	25 ppm/°C	5000 V		
1 TΩ	SRL-1T	±0.5%	±0.25%	±500 ppm	±300 ppm	50 ppm/°C	5000 V		
1.9 TΩ	SRL-1.9T	±0.7%	±0.7%	±1000 ppm	±500 ppm	100 ppm/°C	5000 V		
2 TΩ	SRL-2T	±0.7%	±0.7%	±1000 ppm	±500 ppm	100 ppm/°C	5000 V		
10 TΩ	SRL-10T	±0.7%	±0.7%	±2000 ppm	±1000 ppm	100 ppm/°C	5000 V		
19 TΩ	SRL-19T	±0.7%	±0.7%	±2000 ppm	±1000 ppm	100 ppm/°C	5000 V		
20 TΩ	SRL-10T	±0.7%	±0.7%	±2000 ppm	±1000 ppm	100 ppm/°C	5000 V		

* negligible effect of self-heating;

** non- permanent self-heating change

ORDERING INFORMATION

Standard Model	Select from table above
Custom Value	SRL-XXX
DMM Direct Plug-in	Add DMM model number to standard part number
Transit case for two units	SRC-100



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