

# High Accuracy Standard Resistance

## 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.



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*

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

