



SORENSEN

SRL Series Specifications

DC OUTPUT

CONSTANT VOLTAGE MODE

Voltage Regulation:

Line and load combined:
.01% or 2 mV, whichever is greater

Temperature Coefficient:

0.01% +0.2 mV/°C.

Resistance Programming:

200 ohms per volt standard;
(adjustable to 1000 ohms per volt through the use of externally added components).

Voltage Programming:

1 Volt per volt standard.

Stability:

0.025% +0.5 mV for 8 hours after 30 minute warm-up time with constant line, load and operating temperature.

Ripple: 200 to 700 μ V rms.

Remote Sensing:

1 V maximum drop per load lead (rear terminal connection).

Transient Response:

150 μ s (typical) to return to a bandwidth of ± 10 mV for step load change of 0 to 100% of full load.

CONSTANT CURRENT MODE

Current Programming:

1000 ohms programs full rated output.

Ripple: 0.5 to 10 mA rms.

Voltage Signal Programming:

Consult factory or operating manual.

Current Regulation:

0.02% +6 mA line or load.

Minimum Current:

Adjustable down to zero.

Temperature Coefficient:

0.01% +2 mA per °C.

Stability:

0.03% +10 mA (typical for 8 hours after 30 minute warm-up time with constant line, load, and ambient operating temperature).

AC INPUT

Voltage:

105-125 Vac single phase (SRL 40-50 and SRL 60-35, 190-230 Vac single phase).

Voltage Options:

See table; consult factory for price.

Frequency:

47-63 Hz without derating.

Model	Output Power				Constant Voltage Mode					Temp. Coeff., Voltage .01% \pm μ V (Δ /°C)	Voltage Drift, (Typ.) ³ .025% \pm μ V	Programming Constants Voltage Mode ⁴	
	Voltage (Vdc)	Current (Adc)			Regulation ¹ .01% or μ mV	Ripple (PARD), μ V		Resolution mV (Typ.)	Transient Response ² Time (Typ.) μ s			Ohms (\pm .5%) /V	V/V
		55°C	60°C	71°C		rms (10 Hz to 7 MHz)	P-P (7 Hz to 25 MHz)						
SRL 10-25	0-10	25	22	16.7	2	350	20	5	150	200	500	200	1
SRL 10-50	0-10	50	44	33.5	2	300	10	1	150	200	500	200	1
SRL 10-100	0-10	100	88	67	2	300	20	5	150	200	500	200	1
SRL 20-12	0-20	12	10.5	8	2	200	20	2	70	200	500	200	1
SRL 20-25	0-20	25	22	16.7	2	300	20	5	150	200	500	200	1
SRL 20-50	0-20	50	44	33.5	2	500	40	5	150	200	500	200	1
SRL 40-6	0-40	6	5.3	4	2	200	20	4	70	200	500	200	1
SRL 40-12	0-40	12	10.5	8	2	300	20	5	150	200	500	200	1
SRL 40-25	0-40	25	22	16.7	2	500	10	4	150	200	500	200	1
SRL 40-50	0-40	50	44	33.5	2	700	40	5	150	200	500	200	1
SRL 60-4	0-60	4	3.5	2.68	2	300	20	6	70	200	500	200	1
SRL 60-8	0-60	8	7	5.36	2	300	20	5	70	200	500	200	1
SRL 60-17	0-60	17	14.9	11.4	2	500	10	6	150	200	500	200	1
SRL 60-35	0-60	35	31	23.4	2	700	40	5	150	200	500	200	1

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OPERATING DATA

Ambient Operating Temperature Range:
0 to + 70°C.

Storage Temperature Range:
- 40°C to +85°C.

Series Operation:
200 Vdc maximum.

Parallel Operation:
Master-slave or straight parallel; 3 units maximum in master slave.

RFI:
MIL-I-6181D.

Automatic Crossover:
Automatic between voltage and current modes.

Overvoltage Protection:

Built-in adjustable crowbar, 10 μ s operation. May be checked or adjusted from front panel without removing ac power or load.

SRL ACCESSORIES

Chassis Slides (Kit):

Available for convection-cooled models. See dimensional drawings.

OPTIONS

M50—LCD digital panel meters

INPUT VOLTAGE OPTIONS

Model	Option ¹	Input Power ²		Model	Option ¹	Input Power ²	
		Vac	Aac			Vac	Aac
SRL 10-25	M1	190-230	4.1	SRL 40-12	M1	190-230	7.3
	M2	210-250	3.75		M2	210-250	6.6
SRL 10-50	M1	190-230	8.0	SRL 40-25	M1	190-230	12.3
	M2	210-250	7.3		M2	210-250	11.0
SRL 10-100	M1	190-230	18.5	SRL 40-50	M2	210-250	23.0
	M2	210-250	16.3				
SRL 20-12	M1	190-230	4.3	SRL 60-4	M1	190-230	3.3
	M2	210-250	3.9		M2	210-250	3.0
SRL 20-25	M1	190-230	7.5	SRL 60-8	M1	190-230	6.9
	M2	210-250	6.8		M2	210-250	6.25
SRL 20-50	M1	190-230	15.4	SRL 60-17	M1	190-230	12.0
	M2	210-250	14.0		M2	210-250	11.0
SRL 40-6	M1	190-230	3.5	SRL 60-35	M2	210-250	24.0
	M2	210-250	3.2				

NOTES: 1. To specify optional power input, add option suffix to part number.

2. Single phase, 47-53/57-63 Hz.

Model	Constant Current Mode			Temp. Coeff., Current .01% \pm mA (Δ /°C)	Current Drift, (Typ.) ³ .03% \pm mA	Programming Constants Current Mode		Standard Input Power (single phase, 47-53/57-63 Hz)		Power Factor (Typ.)	Cooling	Case Size
	Regulation ¹ .02% + - mA	Ripple ⁵ (PARD) mA rms (10 Hz to 7 MHz)	Resolution mA (Typ.)			Ohms (\pm 10%)/A	mV/A	(Vac)	Aac (Max.)			
SRL 10-25	4	10	3.75	1	3	40	20	105-125	7.5	0.67	Convection	II
SRL 10-50	4	20	7.5	1	3	20	8	105-125	14.7	0.73	Fan	IV
SRL 10-100	6	30	15	2	10	10	2.5	105-125	32.5	0.66	Fan	III
SRL 20-12	4	3	1.8	1	3	80	80	105-125	7.8	0.65	Convection	I
SRL 20-25	4	10	3.75	1	3	40	20	105-125	13.6	0.64	Convection	II
SRL 20-50	4	10	7.5	1	3	20	8	105-125	28.0	0.64	Fan	V
SRL 40-6	1	0.5	0.9	0.5	3	150	150	105-125	6.3	0.58	Convection	I
SRL 40-12	4	1	1.8	1	3	80	80	105-125	13.2	0.56	Convection	II
SRL 40-25	4	10	3.75	1	3	40	20	105-125	22.0	0.675	Fan	IV
SRL 40-50	4	10	7.5	1	3	20	8	190-230	25.0	0.66	Fan	V
SRL 60-4	1	0.5	0.6	0.5	3	250	250	105-125	6.0	0.66	Convection	I
SRL 60-8	1	1	1.2	1	3	125	125	105-125	12.5	0.54	Convection	II
SRL 60-17	4	3	2.5	1	3	50	40	105-125	22.0	0.685	Fan	IV
SRL 60-35	4	10	5.25	1	3	25	15	190-230	26.0	0.6	Fan	V

NOTES: 1. With load change (NL to FL or FL to NL) and line voltage change (\pm 10% combined), whichever is greater. 2. To return to a bandwidth of \pm 10 mV for a step load change of NL to FL or FL to NL. 3. For 8 hours (after 20 min. warmup) with constant line, load and ambient temperature. 4. Voltage-mode constants are factory selected; they may be altered at rear terminal board. 5. At full compliance voltage. 6. Standard voltage inputs; see "Specifications" for input voltage options.