

## SVL Essential DIN Rail Series

SVL Series power supplies are perfect for high volume, controlled environment applications where essential features are the only requirement. When space inside an enclosure is at a premium, their small footprint makes these power supplies an excellent alternative to embedded open frame switchers. The DIN rail mounting capability provides quicker and easier installation while allowing for design flexibility. These power supplies range from 15 to 480 Watts in 5, 12, 24 and 48 Volt combinations.



### Applications

- Test and Measure Equipment
- Scanners
- Instrumentation
- Printers Peripheral
- ATM Machines
- Semiconductor Fabrication Equipment
- Vending Machines

### Features

- Universal Input
- Protection
  - Short Circuit
  - Over Voltage
  - Overload
  - Over Temperature
- Convection cooling
- DC OK LED
- DC OK Relay for >120 Watts models
- Two year warranty



### Certifications and Compliances

#### All Models

-  Listed, Ind. Control Equipment, E61379
  - UL 508, CSA C22.2 No. 107.1
-  Recognized Component, ITE, E137632
  - UL 60950-1/CSA C22.2 No. 60950-1, 2nd Edition
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  - IEC/EN60950-1, 2nd Edition
  - Model SVL 1-24-100, SVL 3-5-100, SVL 4-12-100, SVL 2-24-100 were evaluated for NEC Class 2 outputs.
- RoHS Compliant

## SVL Specifications &lt;120W

| Description                      | Catalog Number  |                                    |  |
|----------------------------------|---|------------------------------------|--|
|                                  | SVL 3-5-100   | SVL 1-24-100                       | SVL 6-5-100                                |
| <b>Input</b>                     |   |                                    |  |
| Input Voltage Range              | 85-264 Vac  |                                    |  |
| - AC Range                       | 100-240 Vac   |                                    |  |
| - DC Range <sup>1</sup>          | 120-375 Vdc   |                                    |  |
| - Frequency                      | 50/60 Hz  |                                    |  |
| Nominal Current                  | 0.5 A @ 115 Vac<br>0.3 A @ 230 Vac  | 0.8 A @ 115 Vac<br>0.4 A @ 230 Vac | 0.9 A @ 115 Vac<br>0.5 A @ 230 Vac         |
| - Inrush Current max,            | 35 A @ 115 Vac<br>65 A @ 230 Vac  | 35 A @ 115 Vac<br>60 A @ 230 Vac   |  |
| Efficiency                       | 79% typ   | 88% typ                            | 80% typ                                    |
| Leakage Current                  | <1 mA @ 240 Vac   |                                    |  |
| <b>Output</b>                    |   |                                    |  |
| Nominal Voltage                  | 5 V   | 24 V                               | 5 V  |
| - Tolerance                      | +/-2%   |                                    |  |
| Voltage Adjustable Range         | 5-5.5 V   | 24-28 V                            | 5-5.5 V                                    |
| - Ripple (25 °C)                 | <75 mVp-p   |                                    |  |
| PAR (25 °C)                      | <75 mVp-p   |                                    |  |
| Nominal Current                  | 3 A   | 1.25 A                             | 6 A  |
| Max. Power                       | 15 W  | 30 W                               |  |
| Holdup Time at full load (25 °C) | 20 ms typ. @ 115 Vac<br>100 ms typ. @ 230 Vac   |                                    |  |
| Rise Time at full load (25 °C)   | <100 ms   |                                    |  |
| Start Up at full load (25 °C)    | <3000 ms @ 115 Vac, <1500 ms @ 230 Vac  |                                    |  |
| Regulation                       | <0.5% Line and <1% Load   |                                    |  |
| <b>Environmental Data</b>        |   |                                    |  |
| Operating Temperature            | -20 °C to +70 °C  |                                    |  |
| Relative Humidity                | 5 to 95% RH Non-condensing  |                                    |  |
| Storage temp                     | -40 °C to +85 °C  |                                    |  |
| Power De-rating <sup>2</sup>     | >55 °C de-rate power by 3.33% / °C<br><-10 °C de-rate power by 2% / °C<br>de-rate to 80% load for operation at -20°C  |                                    |  |
| Shock                            | IEC60068-2-27: half sine wave 10 G, single axis for a duration of 11 ms operational and 50 G three axes for duration of 11 ms each non-operational  |                                    |  |
| Vibration                        | IEC60068-2-6: sine wave; 10 Hz to 500 Hz at 2 g, 0.35 mm displacement, three axes for 60 min each operational and 5 Hz to 500 Hz at 2.09 grms, three axes for 20 min each non-operational |                                    |  |
| <b>Protections</b>               |   |                                    |  |
| Overvoltage Protection           | 6.3-7.4 V, Latching   | 30-34.8 V, Latching                | 6.3-7.4 V, Latching                        |
| Overload Protection              | Hiccup  |                                    |  |
| Over Temperature Protection      | No Component Damage, Latch Mode   |                                    |  |
| Short Circuit                    | Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed)   |                                    |  |
| Power Factor Correction          | Meets EN61000-3-2 Class A   |                                    |  |
| <b>Reliability</b>               |   |                                    |  |
| MTBF                             | >350 khrs (115 Vac/230 Vac @ 25 °C) as per Telcordia SR-332 issue 3 Jan 2011.   |                                    |  |
| <b>EMC</b>                       |   |                                    |  |
| Galvanic Isolation               | I/P to O/P: 3 KVac; I/P to GND: 1.5 KVac; O/P to GND: 0.5 KVac  |                                    |  |
| Emissions                        | EN55022 (CISPR22) Class B, EN55011 Class B, EN61000-6-3, EN61000-6-4, EN61000-3-3, EN61204-3, EN61000-3-2 Class A   |                                    |  |
| Immunity                         | EN55024, EN61000-6-1, EN61000-6-2 (EN61000-4-2, 3, 4, 5, 6, 8, 11, 12) Level 3, Performance Criteria A  |                                    |  |
| <b>General</b>                   |   |                                    |  |
| H x W x D in (mm)                | 2.95 x 0.82 x 3.52<br>(75.0 x 21.0 x 89.5)  |                                    | 2.95 x 1.18 x 3.52<br>(75.0 x 30.0 x 89.5) |
| Unit Weight                      | 0.242 lb (110 g)  |                                    | 0.352 lb (160 g)                           |
| LED Signals                      | GREEN light = DC OK , OCP = blinking  |                                    |  |
| DC OK Relay Contact              | No  |                                    |  |
| Warranty                         | 2 year  |                                    |  |

1. DC input range is not listed in safety file it is only to confirm product functional performance.

2. &gt;120 Watts models measured at 230 VAC input and 25 °C ambient temperature. See manual for further details.

**SVL Specifications <120W**

| Description                             | Catalog Number  |                                    |  |
|---|---|------------------------------------|--|
|   | SVL 4-12-100  | SVL 2-24-100                       | SVL 4-24-100                                 |
| <b>Input</b>                            |   |                                    |  |
| <b>Input Voltage Range</b>              | 85-264 Vac  |                                    |  |
| <b>- AC Range</b>                       | 100-240 Vac   |                                    |  |
| <b>- DC Range<sup>1</sup></b>           | 120-375 Vdc   |                                    |  |
| <b>- Frequency</b>                      | 50/60 Hz  |                                    |  |
| <b>Nominal Current</b>                  | 1.0 A @ 115 Vac<br>0.6 A @ 230 Vac  | 1.0 A @ 115 Vac<br>0.6 A @ 230 Vac | 1.2 A @ 115 Vac<br>0.6 A @ 230 Vac           |
| <b>- Inrush Current max.</b>            | 35 A @ 115 Vac<br>60 A @ 230 Vac  |                                    |  |
| <b>Efficiency</b>                       | 88% typ   |                                    | 89% typ                                      |
| <b>Leakage Current</b>                  | <1 mA @ 240 Vac   |                                    |  |
| <b>Output</b>                           |   |                                    |  |
| <b>Nominal Voltage</b>                  | 12 V  | 24 V                               | 24 V   |
| <b>- Tolerance</b>                      | +/-2%   |                                    |  |
| <b>Voltage Adjustable Range</b>         | 12-15 V   | 24-28 V                            |  |
| <b>- Ripple (25 °C)</b>                 | <75 mVp-p   |                                    |  |
| <b>PARD (25 °C)</b>                     | <75 mVp-p   |                                    |  |
| <b>Nominal Current</b>                  | 4 A   | 2.1 A                              | 4 A  |
| <b>Max. Power</b>                       | 48 W  | 50 W                               | 96 W   |
| <b>Holdup Time at full load (25 °C)</b> | 20 ms typ. @ 115 Vac<br>90 ms typ. @ 230 Vac  |                                    | 25 ms typ. @ 115 Vac<br>50 ms typ. @ 230 Vac |
| <b>Rise Time at full load (25 °C)</b>   | <100 ms   |                                    |  |
| <b>Start Up at full load (25 °C)</b>    | <3000 ms @ 115 Vac, <1500 ms @ 230 Vac  |                                    |  |
| <b>Regulation</b>                       | <0.5% Line and <1% Load   |                                    |  |
| <b>Environmental Data</b>               |   |                                    |  |
| <b>Operating Temperature</b>            | -20 °C to +70 °C  |                                    |  |
| <b>Relative Humidity</b>                | 5 to 95% RH Non-condensing  |                                    |  |
| <b>Storage temp</b>                     | -40 °C to +85 °C  |                                    |  |
| <b>Power De-rating<sup>2</sup></b>      | >55 °C de-rate power by 3.33% / °C<br><-10 °C de-rate power by 2% / °C<br>de-rate to 80% load for operation at -20°C  |                                    |  |
| <b>Shock</b>                            | IEC60068-2-27: half sine wave 10 G, single axis for a duration of 11 ms operational and 50 G three axes for duration of 11 ms each non-operational                            |                                    |  |
| <b>Vibration</b>                        | IEC60068-2-6: 10 Hz to 500 Hz at 2 g, 0.35mm displacement, three axes for 60 min each operational and 5 Hz to 500 Hz at 2.09 grms, three axes for 20 min each non-operational |                                    |  |
| <b>Protections</b>                      |   |                                    |  |
| <b>Overvoltage Protection</b>           | 16-18.7 V, Latching   | 30-34.8 V, Latching                |  |
| <b>Overload Protection</b>              | Current foldforward and then hiccup   |                                    |  |
| <b>Over Temperature Protection</b>      | No Component Damage, Latch Mode   |                                    |  |
| <b>Short Circuit</b>                    | Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed)   |                                    |  |
| <b>Power Factor Correction</b>          | Meets EN61000-3-2 Class A   |                                    |  |
| <b>Reliability</b>                      |   |                                    |  |
| <b>MTBF</b>                             | >350 khrs (115 Vac/230 Vac @ 25 °C) as per Telcordia SR-332 issue 3 Jan 2011.   |                                    |  |
| <b>EMC</b>                              |   |                                    |  |
| <b>Galvanic Isolation</b>               | I/P to O/P: 3 KVac; I/P to GND: 1.5 KVac; O/P to GND: 0.5 KVac  |                                    |  |
| <b>Emissions</b>                        | EN55022 (CISPR22) Class B, EN55011 Class B, EN61000-6-3, EN61000-6-4, EN61000-3-3, EN61204-3, EN61000-3-2 Class A   |                                    |  |
| <b>Immunity</b>                         | EN55024, EN61000-6-1, EN61000-6-2 (EN61000-4-2, 3, 4, 5, 6, 8, 11, 12) Level 3, Performance Criteria A  |                                    |  |
| <b>General</b>                          |   |                                    |  |
| <b>H x W x D in (mm)</b>                | 2.95 x 1.18 x 3.52<br>(75.0 x 30.0 x 89.5)  |                                    | 2.95 x 1.77 x 3.93<br>(75.0 x 45.0 x 100.0)  |
| <b>Unit Weight</b>                      | 0.397 lb (180 g)  |                                    | 0.716 lb (325 g)                             |
| <b>LED Signals</b>                      | GREEN light = DC OK , OCP = blinking  |                                    |  |
| <b>DC OK Relay Contact</b>              | No  |                                    |  |
| <b>Warranty</b>                         | 2 year  |                                    |  |

1. DC input range is not listed in safety file it is only to confirm product functional performance.  
2. >120 Watts models measured at 230 VAC input and 25 °C ambient temperature. See manual for further details.

## SVL Specifications &gt;120W

| Description                      | Catalog Number  |                       |  |  |
|----------------------------------|---|-----------------------|--|--|
|                                  | SVL 2-48-100  | SVL 5-24-100          | SVL 10-24-100                                | SVL 20-24-100                                |
| <b>Input</b>                     |   |                       |  |  |
| Input Voltage Range              | 85-264 Vac  |                       |  |  |
| - AC Range                       | 100-240 Vac   |                       |  |  |
| - DC Range <sup>1</sup>          | 120-375 Vdc   |                       |  |  |
| - Frequency                      | 50/60 Hz  |                       |  |  |
| Nominal Current                  | 2.20 A @ 115 Vac<br>1.20 A @ 230 Vac  |                       | 2.8 A @ 115 Vac<br>1.4 A @ 230 Vac           | 5.4 A @ 115 Vac<br>2.7 A @ 230 Vac           |
| - Inrush Current max.            | 20 A typ.@ 115 Vac<br>40 A typ.@ 230 Vac  |                       |  | 40A typ.@ 115 Vac<br>80A typ.@ 230 Vac       |
| Efficiency                       | 88% typ   |                       |  |  |
| Leakage Current                  | <1 mA @ 240 Vac   |                       |  |  |
| <b>Output</b>                    |   |                       |  |  |
| Nominal Voltage                  | 48V   | 24V                   |  |  |
| - Tolerance                      | +/-2%   |                       |  |  |
| Voltage Adjustable Range         | 44-56 V   | 22-28 V               |  |  |
| - Ripple (25 °C)                 | <120 mVp-p  | <100 mVp-p            |  |  |
| PARD (25 °C)                     | <150 mVp-p  | <120 mVp-p            |  |  |
| Nominal Current                  | 2.5 A   | 5 A                   | 10 A   | 20 A   |
| Max. Power                       | 120 W   | 120 W                 | 240 W  | 480 W  |
| Holdup Time at full load (25 °C) | 10 ms typ.@ 115 Vac<br>16 ms typ @ 230 Vac  |                       |  |  |
| Rise Time at full load (25 °C)   | <100 ms   |                       |  |  |
| Start Up at full load (25 °C)    | <1000 ms @ 115 Vac & 230 Vac  |                       |  |  |
| Regulation                       | <0.5% Line and <1% Load   |                       |  |  |
| <b>Environmental Data</b>        |   |                       |  |  |
| Operating Temperature            | -20 °C to +70 °C  |                       |  |  |
| Relative Humidity                | 5 to 95% RH Non-condensing  |                       |  |  |
| Storage temp                     | -40 °C to +85 °C  |                       |  |  |
| Power De-rating <sup>2</sup>     | >50 °C de-rate power by 2.5% / °C<br><-10 °C de-rate power by 2% / °C<br><100 Vac de-rate power by 1% / Vac   |                       |  |  |
| Shock                            | IEC60068-2-27: half sine wave 10 G, single axis for a duration of 11 ms operational and 50 G three axes for duration of 11 ms each non-operational  |                       |  |  |
| Vibration                        | IEC60068-2-6: sine wave; 10 Hz to 500 Hz at 2 g, 0.35 mm displacement, three axes for 60 min each operational and 5 Hz to 500 Hz at 2.09 grms, three axes for 20 min each non-operational |                       |  |  |
| <b>Protections</b>               |   |                       |  |  |
| Overvoltage Protection           | 56-67.2 V, Latching   | 28.8-35.2 V, Latching |  |  |
| Overload Protection              | 105-150% of rated load; constant current at >20 V output and hiccup at <20 V output.<br><b>SVL 2-48-100:</b> constant current at >40 V output and hiccup at <40 V output.                 |                       |  |  |
| Over Temperature Protection      | No Component Damage, Latch Mode   |                       |  |  |
| Short Circuit                    | Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed)   |                       |  |  |
| Power Factor Correction          | Meets EN61000-3-2 Class A   |                       |  |  |
| <b>Reliability</b>               |   |                       |  |  |
| MTBF                             | >700 khrs (115 Vac & 230 Vac @ 25 °C) as per Telcordia SR-332 issue 3 Jan 2011.   |                       |  |  |
| <b>EMC</b>                       |   |                       |  |  |
| Galvanic Isolation               | I/P to O/P: 3 kVac; I/P to GND: 2 kVac; O/P to GND: 0.5 kVac  |                       |  |  |
| Emissions                        | EN55022 (CISPR22) Class B, EN55011 Class B, EN61000-6-3, EN61000-6-4, EN61000-3-3, EN61204-3, EN61000-3-2 Class A   |                       |  |  |
| Immunity                         | EN55024, EN61000-6-1, EN61000-6-2 (EN61000-4-2, 3, 4, 5, 6, 8, 11, 12) Level 3, Performance Criteria A, SEMI F47 @ 200 Vac  |                       |  |  |
| <b>General</b>                   |   |                       |  |  |
| H x W x D in (mm)                | 4.84 x 1.57 x 4.63<br>(123.6 x 40.0 x 117.6)  |                       | 4.87 x 2.36 x 4.63<br>(123.6 x 60.0 x 117.6) | 4.87 x 3.37 x 5.06<br>(123.6 x 85.5 x 128.5) |
| Unit Weight                      | 540 g (1.19 lb)   |                       | 660 g (1.45 lb)                              | 1150 g (2.53 lb)                             |
| LED Signals                      | GREEN light = DC OK , OCP = blinking  |                       |  |  |
| DC OK Relay Contact              | Yes   |                       |  |  |
| Warranty                         | 2 year  |                       |  |  |

1. DC input range is not listed in safety file it is only to confirm product functional performance.

2. &gt;120 Watts models measured at 230V AC input and 25°C ambient temperature. See manual for further details.

SVL Series Dimensions



| Catalog Number       | Dimensions – inches (mm) |             |              |
|----------------------|--------------------------|-------------|--------------|
|                      | H                        | W           | D            |
| <b>SVL 3-5-100</b>   | 2.95 (75.0)              | 0.82 (21.0) | 3.52 (89.5)  |
| <b>SVL 1-24-100</b>  | 2.95 (75.0)              | 0.82 (21.0) | 3.52 (89.5)  |
| <b>SVL 6-5-100</b>   | 2.95 (75.0)              | 1.18 (30.0) | 3.52 (89.5)  |
| <b>SVL 4-12-100</b>  | 2.95 (75.0)              | 1.18 (30.0) | 3.52 (89.5)  |
| <b>SVL 2-24-100</b>  | 2.95 (75.0)              | 1.18 (30.0) | 3.52 (89.5)  |
| <b>SVL 4-24-100</b>  | 2.95 (75.0)              | 1.77 (45.0) | 3.93 (100.0) |
| <b>SVL 2-48-100</b>  | 4.84 (123.6)             | 1.57 (40.0) | 4.63 (117.6) |
| <b>SVL 5-24-100</b>  | 4.84 (123.6)             | 1.57 (40.0) | 4.63 (117.6) |
| <b>SVL 10-24-100</b> | 4.87 (123.6)             | 2.36 (60.0) | 4.63 (117.6) |
| <b>SVL 20-24-100</b> | 4.87 (123.6)             | 3.37 (85.5) | 5.06 (128.5) |