

IP67 SCP-X Extreme Environment Series

The SolaHD IP67 SCP-X power supplies provide the versatility and cost-efficiency to deliver reliable distributed and remote field power to machine controls. Mounts directly on the machine or production line eliminating the complexity and cost of unnecessary enclosures and excess wiring. Quick change connectors simplify connectivity for distributed I/O devices on industrial machinery. These Class II Listed, 24 Vdc power supplies are available in single and dual 100 Watt models and are perfect for automotive, packaging and automated distribution applications.

Control Output Models

Designed for Control Power applications where a grounded power supply output is required.

- Input connector: 3-PIN IP67 molded plug externally threaded with 7/8"-16 UN mounting thread.
- Output connector: 4-PIN IP67 molded receptacle internally threaded with 7/8"-16 UN mounting thread.

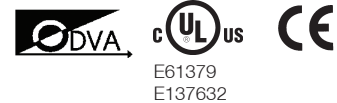
Isolated Output Models

Designed for application where an isolated output from ground is required such as DeviceNet™.

- Input connector: 3-PIN IP67 molded plug externally threaded with 7/8"-16 UN mounting thread.
- Output connector: 4-PIN IP67 molded receptacle internally threaded with 7/8"-16 UN mounting thread.

Features

- IP66/67 rated versatile enclosure
- 24 Vdc, 100-240 Vac, up to four outputs at 3.8A Nominal Current (per pair for dual models)
- Class II Listed power supply for stand alone applications
- Can be mounted in any orientation without limitation
- Safety approved for AC and DC universal input



- Reliable operation from -40°C to 60°C without derating
- DC OK Green LED
- Worldwide approvals
- Five year limited warranty

Certifications and Compliances

- **UL** US Listed, Ind. Control Equipment, E61379, ITE, E137632
 - UL 508, CSA C22.2 No. 107.1
 - UL 60950-1/CSA C22.2 No. 60950-1
 - UL 62368-1/CSA C22.2 No. 62368-1
- **CE** - Low Voltage Directive
 - IEC/EN62368-1, IEC/EN60950-1
- RoHS Compliant

Related Products

- SDN Series

Selection Table

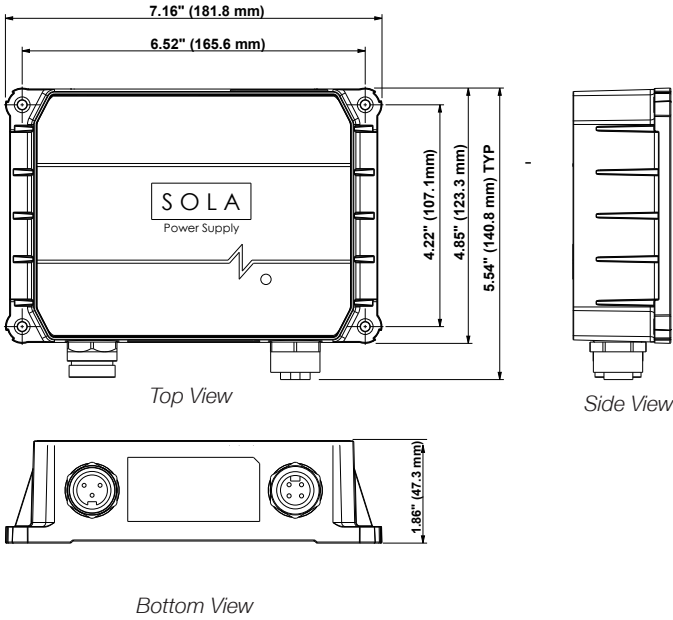
| Catalog Number | Output Current | Output Voltage | Output Power |
|------------------|-----------------------------------|----------------|--------------|
| SCP 100S24X-CP1 | 3.8 A | 24 Vdc | 100 W |
| SCP 100S24X-DVN1 | | | |
| SCP 102D24X-C02 | 7.6 A total (3.8 A max. per pair) | 24 Vdc | 2 x 100 W |
| SCP 102D24X-D02 | | | |

Recommended Cordsets (to be provided by user)

| Input Cordset | Output Cordset |
|--|---|
| Molex, 3-pin mini-change Part #: 113030K13MxxxE ⁽¹⁾ (or equivalent) | Molex, 4-pin mini-change Part #: 114030K12Mxxx ⁽¹⁾ (or equivalent) |

1. xxx is the length of the cordset in tenths of a meter.

SCP100S24X-CP1 and SCP100S24X-DVN1 Mechanical Diagrams



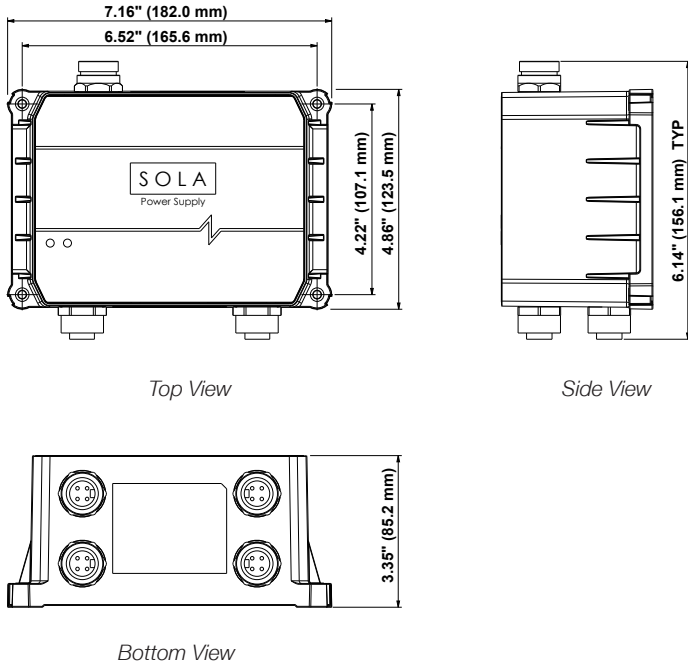
Electrical Connections

| Input | Output |
|---|--|
| 50/60/400 Hz 100-240 V ac 100-353 V dc, 0.7-1.6 A | 24 V dc, 3.8 A, Class II |
| SCP 100S24X-CP1 | |
| 1 = Ground 2 = Power 3 = Neutral | 1 = +24 V dc 2 = +24 V dc 3 = 0 V dc ⁽¹⁾ 4 = 0 V dc ⁽¹⁾ |
| SCP 100S24X-DVN1 | |
| 1 = Ground 2 = Power 3 = Neutral | 1 = +24 V dc 2 = +24 V dc 3 = Ground ⁽²⁾ 4 = -V dc ⁽³⁾ |

NOTES:

- 0 Vdc connections are internally bonded to ground.
- Ground is isolated from V-.
- Vdc is isolated from ground. -Vdc is a separately derived source, so it is permissible to bond to ground if required in the application.

SCP102D24X-C02 and SCP102D24X-D02 Mechanical Diagrams



Electrical Connections

| Input | Output |
|--|---|
| 50/60/400 Hz 100-240 Vac / 2.4 - 1.4A 100-353 Vdc / 2.4 - 0.7A | 24 Vdc, 3.8 A (x2), Class II |
| SCP 102D24X-C02 | |
| 1 = Ground 2 = Power 3 = Neutral | DC 1 DC 2 DC 11 DC 12 OUTPUT 24 Vdc 3.8 A (DC1 + DC2) 3.8 A (DC11 + DC12) CLASS 2 |
| SCP 102D24X-D02 | |
| 1 = Ground 2 = Power 3 = Neutral | DC 1 DC 2 DC 11 DC 12 OUTPUT 24 Vdc 3.8 A (DC1 + DC2) 3.8 A (DC11 + DC12) CLASS 2 |

IP67 SCP-X Specifications

| Descriptions | Catalog Number | |
|--------------------------------------|--|--|
| | SCP 100S24X-CP1 | SCP 102D24X-C02 |
| | SCP 100S24X-DVN1 | SCP 102D24X-D02 |
| Input | | |
| Nominal Voltage | Any voltage from 100 to 240 Vac Input | |
| –AC Range | 85 - 264 Vac Universal Input | |
| –DC Range | 100 - 353 Vdc | |
| Nominal Current ¹ | 1.6 A / 0.7 A | 2.4 - 1.4 A / 2.4 - 0.7 A |
| –Inrush current max. | Typ. <30 A | |
| Power Factor Correction ² | 0.95 | |
| Frequency | 50/60/400 Hz | |
| Output | | |
| Power Back Immunity | 35 V | |
| Overvoltage Protection | 25-25.5 Vdc, autorecovery | |
| Nominal Voltage | 24 Vdc | |
| Tolerance | < +/-2% overall | |
| – Line Regulation | < 0.5% | |
| – Load Regulation | < 0.5% | |
| – Time & Temp. Drift | < 1% | |
| Input Voltage Setting | 24.5 V +/-1% | |
| Ripple ³ | < 50 mVpp | |
| Total Nominal Current | 3.8 A | 7.6 A Total (3.8 A max. per pair) |
| Holdup Time | > 50 ms (Full load, 100 Vac Input @ T _{amb} = +25°C) to 95% output voltage | |
| General | | |
| Emissions ⁴ | EN61000-6-3, EN61000-6-4, EN55011 Group 1, Class B, EN55022 Class B, EN61000-3-2, EN61000-3-3 | |
| Immunity ⁴ | EN61000-6-1, EN61000-6-2, EN55024, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11, SEMI F47 Sag Immunity | |
| Temperature | Storage: -40° to +85°C, Operation: -40° to +60°C full power with linear derating to half power from +60° to +70°C. No forced air required. Operation up to 100% load permissible with sideways or front-side-up mounting orientation. | Storage: -40° to +85°C, Operation: -25° to +60°C full power with linear derating to half power from +60° to +70°C. No forced air required. Operation up to 100% load permissible with sideways or front-side-up mounting orientation. |
| Humidity | Up to 100% RH with condensation | |
| Altitude | 0 to 3,000 m (0 to 10,000 ft.) | |
| Vibration | 1 g non-operating swept sine over 10–500 Hz (IEC 60068-2-6). Non-operating random vibration test: 1.87 g over 10–500 Hz (IEC 60068-2-64). Operating random vibration test: 0.15 g over 5–100 Hz (IEC 60068-2-64) | |
| Shock | Non-operating: 30 g peak, 18 ms half-sine pulse (IEC 68-2-27). Operating: 4 g peak, 22 ms half-sine pulse (IEC 68-2-27) | |
| Warranty | 5 Year Limited Warranty | |
| MTBF | >800,000 hours according to Telcordia/Bellcore SR-332 Issue 1, (Vin 120 Vac, Tamb = 40°C) | >800,000 hr. according to Telcordia/Bellcore SR-332 Issue 3, (Vin 120 Vac, ambient temp. = 40°C) |
| General Protection/Safety | Protected against continuous short-circuit, continuous overload, and continuous open circuit. Protection NEC Class II (IEC536), degree of protection IP66/IP67 versatile (IEC60529). Safety extra low voltage circuits: SELV (acc. EN60950-1). | Protected against continuous short-circuit, continuous overload, continuous open circuit. Protection Class I. Safety extra low voltage circuits: SELV (acc. EN60950). |
| Status Indicators – Visual | DC OK LED | |
| Installation | | |
| Fusing –Input | Internally fused, fuses not replaceable | |
| –Output | Electronically current limited to meet NEC Class II per UL1310 | |
| Mounting | Chassis mounted using integral mounting tabs. Recommended Screw Size: M4 x 0.7. Tightening Torque: 1N-m | |
| Connections | An accessible disconnect device shall be installed external to the equipment. Input: 3-PIN IP67 molded plug (quick disconnect). Output: 4-PIN IP67 molded receptacle (quick disconnect). Use UL 758 wire rated min. 24 V, VW-1/FT-1, max. 3.05 m. | |
| Case | IP66/67 versatile ingress protection; also meets UL50 Type 4X enclosure | |
| Min. Required Free Space | 0.39 in. (10 mm) all sides but base | 1 in. (25 mm) all sides but base |
| H x W x D – in (mm) | 4.73 x 7.00 x 1.80 (120.1 x 177.8 x 45.7) | 4.73 x 7.00 x 3.27 (120.1 x 177.8 x 83.0) |
| Weight – lbs (kg) | 2.2 (1.0) | 3.3 (1.5) |

1. Input current ratings are specified with low input, line conditions, worst case efficiency values and power factor.
2. Power Factor Correction at 50/60 Hz only.
3. Ripple/noise is stated as typical AC values when measured with a 20 MHz bandwidth scope and 50 Ohm termination.
4. Emissions and immunity are met by individual power supply modules.