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.

E61379
E137632

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

- c 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, 2nd Edition
- CE - Low Voltage Directive
  - IEC/EN60950-1, 2nd Edition
- 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)		2 x 100 W
SCP 102D24X–D02			

Recommended Electrical Connections/Cordsets [1]

Input 3–PIN Connections	Output 4–PIN Connections
Daniel Woodhead P/N 103000A01FXX0 [2] *or* Harting P/N 21 04 516 23XX [4]	Turck P/N RSM46*M [3] *or* Harting P/N 21 04 516 14XX [4]

1. Connections to be provided by the user.
2. XX is the length of the cordset in feet.
3. * is the length of the cordset in meters
4. XX is the length of the cordset in meters.

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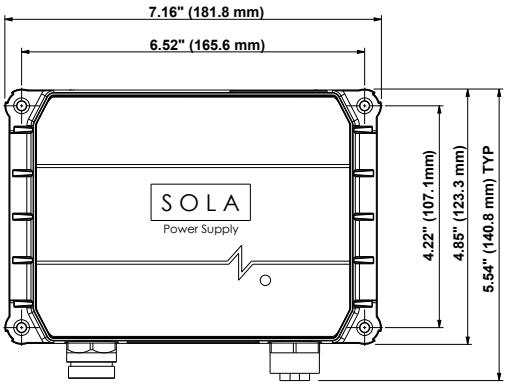
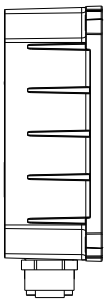
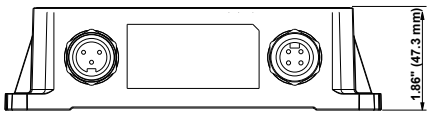
SCP100S24X-CP1 and SCP100S24X-DVN1 Mechanical Diagrams



Top View

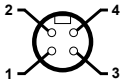
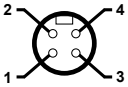


Side View



Bottom View

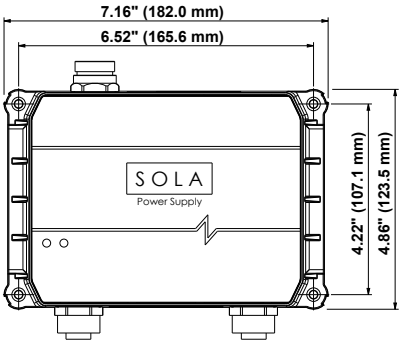
Electrical Connections

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)** 

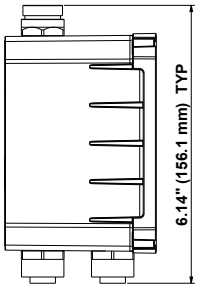
NOTES:

1. 0 Vdc connections are internally bonded to ground.
2. Ground is isolated from V-.
3. Vdc is isolated from ground. -Vdc is a separately derived source, so it is permissible to bond to ground if required in the application.

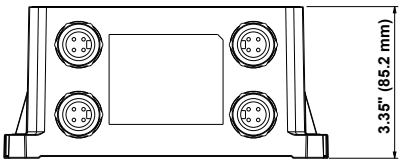
SCP102D24X-C02 and SCP102D24X-D02 Mechanical Diagrams



Top View

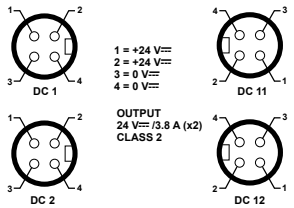
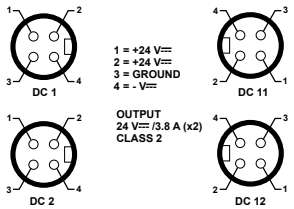


Side View



Bottom View

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**	
SCP 102D24X-D02	
1 = Ground **2 = Power** **3 = Neutral**	

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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 Telcoredia/Bellcore SR-332 Issue 1, (Vin 120 Vac, Tamb = 40°C)	>800,000 hr. according to Telcoredia/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.

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