

SCP-X Extreme Environment Series

The SCP-X is a rugged power supply designed for use in extreme environments. The metal case reduces costs by eliminating separate enclosures. Quick change connectors simplify connectivity for distributed I/O devices on industrial machinery. This model provides 24 Vdc output with limited power to meet Class 2 requirements. Two models are currently offered based on application.



Control Power (-CP) Applications

The SCP100S24X-CP is designed for Control Power applications where a grounded power supply output is required (Figure 2). The output power is limited to approx 96 total watts.

- Input connector: 3-pole, male receptacle externally threaded with 7/8"-16 UN mounting thread.
- Output connector: 4-pole, female receptacle internally threaded with 7/8"-16 UN mounting thread.

DeviceNet™ (-DVN) Applications

The SCP100S24X-DVN is designed for DeviceNet™ application where an isolated output from ground is required (Figure 2).

- Input connector: 3-pole, male receptacle externally threaded with 7/8"-16 UN mounting thread.
- Output connector: 4-pole, female receptacle internally threaded with 7/8"-16 UN mounting thread.

Features

- IP66/67 Versatile/NEMA 4X Rated
- 24 Vdc, 115/230 Vac, 3.8A Nominal Current
- Listed power supply for stand alone applications
- Can be mounted in any orientation without limitation
- Universal input
- High ambient temperature up to 60°C without derating
- DC OK Green LED
- Worldwide approvals
- Five year limited warranty

Certifications and Compliances *

- UL 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
- UL Recognized Component, Haz. Loc., E234790



- UL 60079-15/CSA E60079-15
- Class I, Zone 2, AEx nA IIC, Ex nA IIC
- - Low Voltage Directive
 - IEC/EN60950-1, 2nd Edition
- - ATEX Directive
 - EN60079-15
 - II 3 G, EEx nA IIC
- RoHS Compliant

Related Products

- SDN Series

Selection Table

Catalog Number	Output Current	Output Voltage	Output Power
SCP 100S24X-CP	3.8 A	24 Vdc	95 W
SCP 100S24X-DVN			

Recommended Electrical Connections ¹

Catalog Number	Input 3-PIN Connections	Output 4-PIN Connections
SCP 100S24X-CP	Daniel Woodhead P/N 103000A01FXX0 ²	Turck RSM46 *M * length in meters
SCP 100S24X-DVN		

1. Connections to be provided by the user.
2. XX is the length of the cordset in foot.

* Refer to user manual for installation requirements when used in hazardous locations.

SCP100S24X-CP and SCP100S24X-DVN Mechanical Diagrams

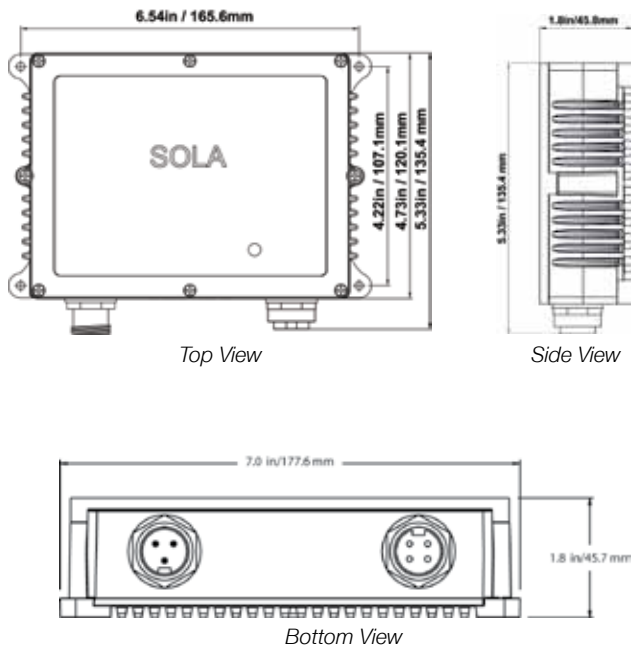
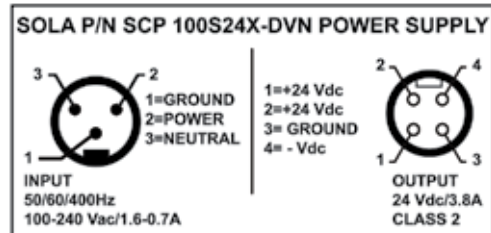
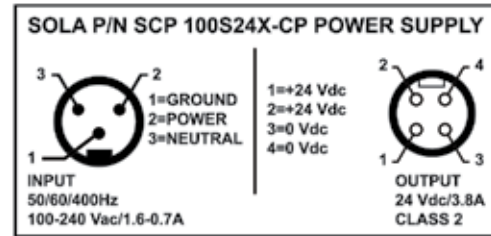


Figure 2

Electrical Connections



Notes:

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

SCP-X Specifications

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	1.6A / 0.7A
-Inrush current max.	Typ. <25A
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 (combination line, load, time and temperature related changes)
- Line Regulation	< 0.5%
- Load Regulation	< 0.5%
- Time & Temp. Drift	< 1%
Ripple ³	< 50 mVpp
Total Nominal Current	3.8A
Holdup Time	> 25 ms (Full load, 100 Vac Input @ T _{amb} =+25°C) to 95% output voltage
General	
Emissions	EN61000-6-3, EN61204-3, EN55022 Class B, EN61000-3-2, EN61000-3-3
Immunity	EN61000-6-2, EN61204-3, EN55024, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11
Temperature	Storage: -40° to +85°C, Operation: -40° to +60°C full power with linear derating to half power from 60° to 70°C (Convection cooling, 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	2,000 meters (6,600 feet)
Vibration	1.0 gravity (g) peak, 10-500 Hz (random wave). Passed random vibration test conditions for 3 axes for 60 minutes duration while energized and operating.
Shock	4 gravity peak, 22 milliseconds half-sine pulse, 3 times on 6 faces while energized and operating
Warranty	5 Year Limited Warranty
MTBF	>500,000 hours according to Telecordia/Bellcore SR-332 Issue 1, (V _{in} 120 Vac, T _{amb} =40°C)
General Protection/Safety	Protected against continuous short-circuit, continuous overload, continuous open circuit. Protection Class 1 (IEC536), degree of protection IP66/67 versatile (IEC 529). Safe low voltage: SELV (acc. IEC60950)
Status Indicators – Visual	DC OK LED
Installation	
Fusing	Internally fused, fuses not replaceable
-Input	
-Output	Electronically current limited to meet Class 2 per UL1310
Mounting	Chassis mounted via built in mounting tabs. Removal and replacement of the unit shall be possible from front of panel.
Connections	Input: One 3 pin IP67 molded plug (mini change), internally threaded. Output: Two 4 pin IP67 molded receptacle (mini change), externally threaded.
Case	IP66/67 versatile ingress protection; also meets UL50 Type 4X enclosure
Min. Required Free Space	1 in. (25 mm) all sides (permissible to mount in any orientation)
H x W x D inches (mm)	4.73 x 6.52 x 1.80 (120.0 x 166.0 x 46.0)
Weight – lbs (kg)	2.6 (1.16)

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.