

SCP-X Extreme Environment Series



UL US
9HA0
IND. CONT. EQ.
Also listed I.T.E.
Power Supply

RU US
E234790
Class 1 Zone 2
AEx nA IICT4
Ex nA IICT4 U

II 3G
DEMKO 06 ATEX 05
21715U
EEx nA IIC T4 U
-40°C ≤ Tam ≤ +60°C



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. Three models are currently offered based on application.

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
- Limited five-year warranty

Related Products

- SDN Series
- SCP Series

Accessory

Catalog Number	Description	Approx. Ship Weight lbs (kg)
SCP-DINBKT	Mounting bracket to secure SCP-X to DIN Rail (included)	1 (.45)

Selection Table

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

Chassis Mount (-CM) Applications

This extreme environment power supply is ideal for outdoor or wet chassis-mount applications (Figure 1).

- Input connector: 3-pole, male receptacle **externally** threaded with ½-14 NPT mounting thread.
- Output Connector: 4-pole, female receptacle **externally** threaded with ½-14 NPT mounting thread.

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 ½-14NPT mounting thread.
- Output connector: 4-pole, female receptacle **internally** threaded with ½-14 NPT 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 ½-14NPT mounting thread.
- Output connector: 4-pole, female receptacle **internally** threaded with ½-14 NPT mounting thread.

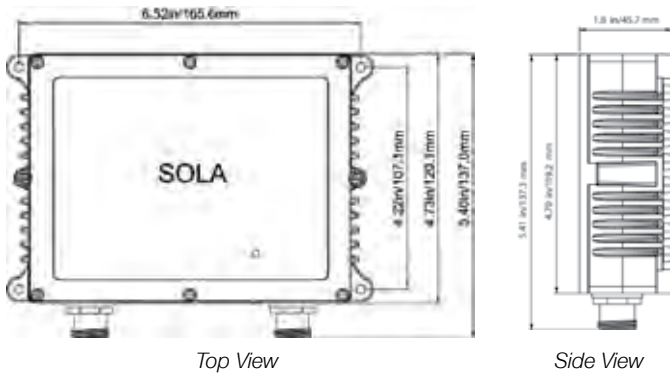
Recommended Electrical Connections⁽¹⁾

Catalog Number	Input 3-PIN Connections	Output 4-PIN Connections
SCP 100S24X-CM	Daniel Woodhead P/N 103000A01FXX0 ⁽²⁾	Daniel Woodhead P/N 104002A01FXX0 ⁽²⁾
SCP 100S24X-CP		Turck RSM46*M *length in meters
SCP 100S24X-DVN		

1. Connections to be provided by the user.

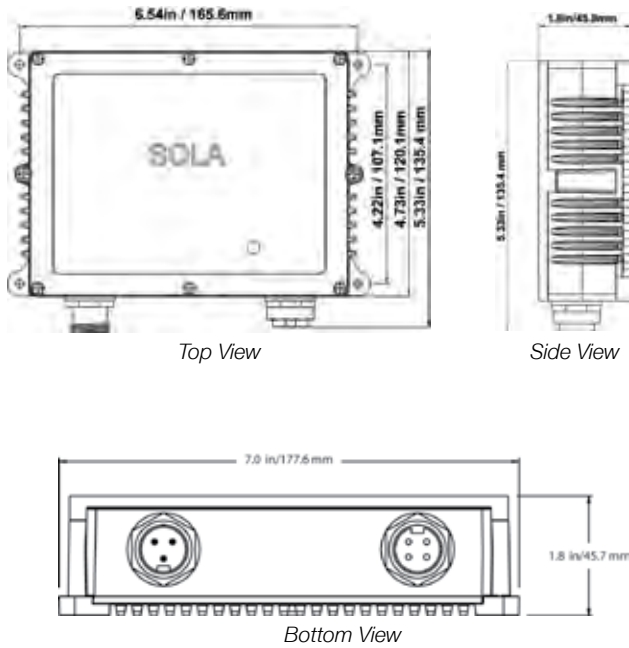
2. XX is the length of the cordset in foot.

SCP100S24X-CM Mechanical Diagrams



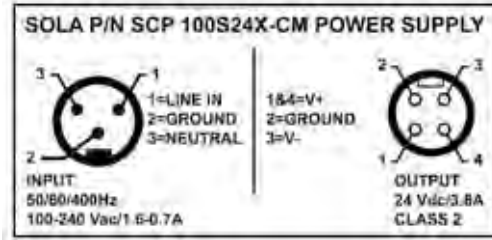
Bottom View
Figure 1

SCP100S24X-CP and SCP100S24X-DVN Mechanical Diagrams



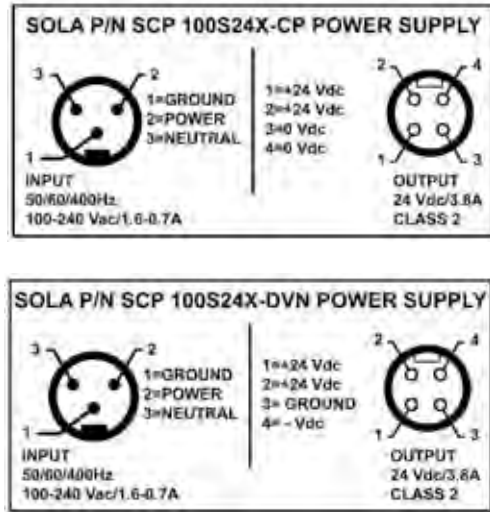
Bottom View
Figure 2

Electrical Connections



1. V- is isolated from ground. V- is a separately derived source so it is permissible to bond to ground if required in the application.

Electrical Connections



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°) to 95% output voltage
General	
Case	IP66/67 versatile ingress protection; also meets UL50 Type 4X enclosure.
Min. Required Free Space	1 in. (25 mm) all sides but mounted base (permissible to mount in any orientation)
H x W x D (inches/mm)	4.7 x 7 x 1.8 (119 x 178 x 46)
Weight – lbs (kg)	2.6 lbs (1.16 kg)
EMC	
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
Approvals	UL508, cULus; UL60950, cULus; UL60079-15 cRUus; IEC60950; CE (LVD 73/23 & 93/68/EEC). (EMC 89/336 & 93/68/EEC). EN61000-3-2, EN50021 (Class 1, Division 2 Hazardous Location, EEX nA IIC T4 U up to 60°C Ambient.) ⁴
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	0 to 3,000 meters (0 to 10,000 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 g peak, 22 milliseconds half-sine pulse, 3 times on 6 faces while energized and operating
Warranty	5 years
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	
–Input	Internally fused, fuses not replaceable
–Output	Inherently limited current to meet Class 2 requirements 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: 3 pin IP67 molded plug (quick disconnect). Output: 4 pin IP67 molded receptacle (quick disconnect).

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. Additional installation requirements apply when used in hazardous locations (refer to user manual).