SDN™ DeviceNet™ Series

As members of the Open DeviceNet™ Vendors Association (ODVA), SolaHD has designed two power supplies specifically for DeviceNet™ applications. SolaHD's SDN DeviceNet™ models meet ODVA specifications for power supplies for either thin or thick cable applications.

The SDN 4-24-100LP has the highest output current possible while still meeting the requirements for NEC Class 2 and UL 1310. This is necessary for installations to meet the National Electrical Code (NEC) or the Canadian Electric Code (CE code) without the need for secondary fusing.

The SDN 10-24-100C is designed for installations that utilize the full 8A capability of the Thick Cable system. Note – local codes may prohibit the use of the full capacity of the power supply.

Applications

- Industrial Control
- Process Control
- Building Automation
- DeviceNet™

Features (General)

- Power Factor Correction
- DC Okay Signal
- No derating from -10°C to 60°C, operation to 70°C possible with a linear derating to half power from 60°C to 70°C.
- Industrial Grade Design
  - Indefinite short-circuit, overvoltage and overtemperature protection
  - Rugged metal case and DIN connector
- Narrow width on rail for space critical applications
- User-friendly front panel
  - Large, rugged, accessible multiple connection screw terminations
  - Easy installation
- High efficiency for cooler operation and less heat losses
- High MTBF & reliability
- High grade and low stress design components
- No fans used or required
- Five year limited warranty

Features (SDN 4-24-100LP only)

- NEC Class 2

E61379 E137632 E234790

Certifications and Compliances *

All Models

- c UL us Listed, Ind. Control Equip., E61379
  - UL 508, CSA C22.2 No. 107.1
- c TÜV us Recognized Component, ITE, E137632
  - UL 60950-1/CSA C22.2 No. 60950-1, 2nd Edition
- CE - Low Voltage Directive
  - IEC/EN60950-1, 2nd Edition
- Sag Immunity: SEMI F47
- RoHS Compliant

Model SDN 4-24-100LP

- Class 2 per UL 1310, CSA C22.2 No. 223
- c TÜV us Recognized Component, Haz. Loc., E234790
  - ISA 12.12.01, CSA C22.2 No. 213
  - Class I, Division 2, Groups A, B, C, D
- Ex ATEX Directive
  - EN50021, Ex II 3 G, Ex nC IIC Gc

Model SDN 10-24-100C

- c TÜV us UL Recognized Component, Haz. Loc., E234790
  - UL 60079-15/CSA E60079-15
  - Class I, Zone 2, AEx nC IIC, Ex nC IIC
- Ex - ATEX Directive
  - EN60079-0, EN 60079-15
  - Ex II 3 G, Ex nC IIC Gc

Related Products

- SDP™ Series
- SCD Series
- SCP Series

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

SDN™ DeviceNet™ Specifications

Description	Catalog Number	
	SDN 4–24–100LP	SDN 10–24–100C
Input		
Nominal Voltage	115/230 Vac, Auto select	100 - 240 Vac
–AC Range	85 -132/176 - 264 Vac	85 - 264 Vac
–DC Range [1]	210 - 375 Vdc	90 - 375 Vdc
–Frequency	47 - 63 Hz	43 - 67 Hz
Nominal Current [2]	2.1 / 1.0 A	3.2 / 1.0 A
–Inrush current max.	typ. < 20 A	typ. < 40 A
Efficiency (Losses [3])	> 88% typ. (13.1 W)	> 90% typ. (24 W)
Power Factor Correction	Units fulfill EN61000-3-2	Active Power Factor Correction to better than 0.92
Output		
Nominal Voltage	24 Vdc (22.5 - 28.5 Vdc adj.)	
–Tolerance	< ±2% overall (combination Line, load, time and temperature related changes)	
–Ripple [4]	< 50 mVpp	
Overvoltage Protection	> 27 Vdc	> 30.5 Vdc, but < 33 Vdc, Auto recovery
Nominal Current	3.8 A (92 W)	
–Current Limit	Fall Forward (Current rises, voltage drops to maintain constant power during overload up to max peak current)	
Holdup Time [5]	> 20 ms @ full load to 95% output voltage	
Parallel Operation	Single or Parallel use is selectable via Front Panel Switch	
General		
EMC: –Emissions	EN61000-6-3, -4; Class B EN55011, EN55022 Radiated and Conducted including Annex A.	
–Immunity	EN61000-6-1, -2; EN61000-4-2 Level 4, EN61000-4-3 Level 3; EN61000-4-6 Level 3; EN61000-4-4 Level 4 input and Level 3 output; EN61000-4-5 Isolation Class 4, EN61000-4-11;	
Temperature	Storage: -25°C to +85°C Operation. -10° to -60°C full power with operation to 70°C possible with a linear derating to half power from 60°C to 70°C (Convection cooling, no forced air required). Operation up to 50% load permissible with sideways or front side up mounting orientation. The relative humidity is < 90% RH, noncondensing; IEC 68-2-2, 68-2-3.	
MTBF:	> 640,000 hours	> 600,000 hours
– Standard	Bellcore Issue 6 Method 1 Case 3 @ 40°C	
Warranty	5 Year Limited Warranty	
General Protection/Safety	Protected against continuous short-circuit, overload, open-circuit. Protection Class 1 (IEC536), degree of protection IP20 (IEC 529) Safe low voltage: SELV (acc. EN60950)	
Status Indicators	Green LED and DC OK signal (N.O. Solid State Contact rated 200 mA / 60 Vdc)	
Installation		
Fusing –Input	Internally fused. External 10 A slow acting fusing for the input is recommended to protect input wiring.	
–Output	Outputs are capable of providing high currents for short periods of time for inductive load startup or switching. Fusing may be required for wire/loads if 2x Nominal O/P current rating cannot be tolerated. Continuous current overload allows for reliable fuse tripping.	
Mounting	Simple snap-on system for DIN Rail TS35/7.5 or TS35/15 or chassis-mounted (optional screw mounting set SDN-PMBRK2 required).	
Connections	Input: IP20-rated screw terminals, connector size range: 16-10 AWG (1.5-6 mm^2) for solid conductors. 16-12 AWG (0.5-4 mm^2) for flexible conductors. Output: Two connectors per output, connector size range: 16-10 AWG (1.5 - 6 mm^2) for solid conductors.	
Case	Fully enclosed metal housing with fine ventilation grid to keep out small parts.	
–Free Space	25 mm above and below, 25 mm left and right, 15 mm in front	70 mm above and below, 25 mm left and right, 15 mm in front
H x W x D inches (mm)	4.88 x 2.56 x 4.55 (124.0 x 65.0 x 116.0)	4.85 x 2.36 x 4.36 (123.0 x 60.0 x 110.0)
Weight lbs (kg)	2.4 (1.1)	1.7 (0.8)

1. Not UL listed for DC input.
2. Input current ratings are conservatively specified with low input, worst case efficiency and power factor.
3. Losses are heat dissipation in watts at full load, nominal input line.
4. Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.
5. Full load, 100 Vac Input @ T_{amb} = +25°C