

“TRUSTED POWER SOLUTIONS.”

SOLA/HEVI-DUTY



THE INDUSTRY-LEADING POWER SUPPLY NOW HAS MORE STRENGTH AND DURABILITY IN A SMALLER PACKAGE.

The SDN-C has improved upon the superior reliability of the SDN Series of DC power supplies with increased Mean Time Between Failure (MTBF) by reducing the part count and strategic use of high quality components. In addition to being extremely reliable by design, the SDN-C has built-in protection from over temperature, overloads and short circuits. This ensures that reliability is not compromised by operation temporarily outside of normal conditions. Intuitive visual diagnostics help ensure easy troubleshooting when such conditions occur so that equipment downtime can be minimized.





SDN-C™ PERFORMANCE DIN RAIL SERIES

The compact single phase power supply just got smaller and tougher.

FEATURES

- Compact packaging to save space on the DIN rail
- New visual diagnostic LEDs for input and output status at a glance
- Higher efficiency saves energy and lowers amount of heat generated in panel
- PowerBoost™ overload capability to start high inrush loads
- Accepts Universal voltage 85-264 VAC, 50/60 Hz input
- Single phase models meet SEMI F47 Sag Immunity
- Power Factor Correction (meets EN61000-3-2)
- **Class 1 Zone 2 Hazardous Locations rating ATEX approval (pending)**
- User Adjustable output voltage accessible via front face
- Parallel capability standard
- Industrial grade design
- -10°C to 60°C operation without derating
- **High MTBF means high reliability and long life**
- RoHS compliant
- Available in 5 & 10 A Single Phase
- Highly efficient switching technology
- Five-year warranty

VERSATILE APPLICATIONS

- Industrial/Machine Control
- Process Control
- Conveying Equipment
- Material Handling
- Vending Machines
- Packaging Equipment
- Amusement Park Equipment
- Semi-Conductor Fabrication Equipment

EASE OF INSTALLATION

- Large screw terminals (16-10 AWG)
- User-friendly front panel
- LED for visual status
- Multiple connections
- Easy access to terminations
- No tool mounting on DIN rail



(A) POWERBOOST™

- Powers high inrush loads without shutdown or foldback
- Allows designers to size for peak loads which saves money

(B) INDUSTRIAL GRADE DESIGN

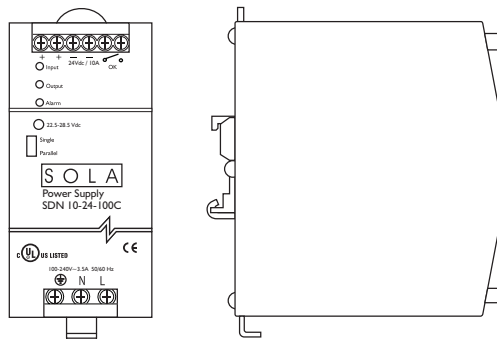
- Metal enclosure with small vents to keep small parts from falling in
- Patented durable metal mounting clip (designed to withstand 40G of shock without falling off rail)
- Wide temperature performance - guaranteed reliability at full load over a wide temperature range (-10°C to +70°C with no derating until after 60°C)

(C) DC OK SIGNAL

- Allows remote notification of DC power loss to the controller

(D) ADJUSTABLE VOLTAGE

- Flexibility to set DC voltage perfectly to customers' needs



(E) SINGLE OR PARALLEL USE SELECTABLE

- One model to stock for single or multiple applications
- Easily scalable for higher power applications
- Current sharing for maximum reliability
- External modules available for full redundancy

(F) 3 LED DIAGNOSTICS

- Shows status of input power, output power and alarm condition
- Valuable troubleshooting aid to reduce system downtime

(G) SAG IMMUNITY

- Easily handles sags to half of the line voltage with no disruption in output power - results in higher reliability and availability of the customer's equipment
- Models comply with SEMI F47 Standards for the Semiconductor Machine Builder Industry at all input line and output load conditions

(H) RATINGS

- Rated for Class 1, Zone 2 Hazardous Location
- Class 1, Div 2 permitted per NEC 501.1
- Can be used in applications where explosive vapors may be present under abnormal conditions

(I) WIDE RANGE INPUT

- No need to worry about different wiring or switch positions when applying different input voltages
- All single phase models can operate from 100, 110, 115, 120, 127, 200, 208, 220, 230 or 240VAC inputs with no jumper or switch changes

(J) COMPLIANCES

- EN60950 (cULus Recognized)
- UL508 (cULus Listed)
- CE for Low Voltage Directive
- EMC compliance and Power Factor Correction (low frequency emissions)
- Pending UL approvals per UL60079-15
 - Non-Incendinary
 - Temperature class T3, groups IIC (IIB and IIA included)



LED Light Status Conditions

	ALL IS OK	AC POWER LOSS	BROWNOUT	NO DC	HIGH LOAD	OVERLOAD	HOT	TOO HOT
INPUT	Green	—	Yellow	Green	Green	Green	Green	Green
OUTPUT	Green	—	Green	—	Yellow	Yellow	Green	—
ALARM	—	—	—	Red	Yellow	Red	Yellow	Yellow

Dimensions Chart

CATALOG NUMBER	DIMENSIONS - INCHES (MM)		
	H	W	D
SDN 5-24-100C	4.88 (124)	1.97 (50)	4.55 (116)
SDN 10-24-100C	4.88 (124)	2.36 (60)	4.55 (116)

Specifications Chart

DESCRIPTION	CATALOG NUMBER	
	SDN 5-24-100C	SDN 10-24-100C
INPUT		
Nominal Voltage	115/230 Vac	
-AC Range	85 - 264 Vac	
-DC Range ¹	90 - 375 Vdc	
-Frequency	43-67 Hz, 400 Hz	
Nominal Current ²	1.65 - 0.55 A	3.2 - 1.0 A
-Inrush current max.	Typ. < 15A	Typ. < 30A
Efficiency (Losses ³)	> 90% typ. (12 W)	> 90% typ. (24 W)
Power Factor Correction	Active power factor correction to better than 0.92	
OUTPUT		
Nominal Voltage	24V (22.5-28.5 Vdc Adj.)	
-Tolerance	< ±2 % overall (combination Line, load, time and temperature related changes)	
Initial Voltage Setting	24.5V ± 1%	
-Ripple ⁴	< 50 mVpp	
PARD	PARD (Periodic and Random Deviation) = 100mV peak-peak max	
Overvoltage Protection	> 30.5 but < 33 Vdc, auto recovery	
Power Back Immunity	< 35V	
Nominal Current	5A (120W)	10A (240W)
-Peak Current ⁵	1.5 × Nominal Current for 2 seconds minimum while holding voltage > 20Vdc	
-Short Circuit Current	1.50 X Nominal current at near zero volts at short circuit condition	
-Current Limit	PowerBoost™	
Parallel Operation	Switch selectable single unit or parallel unit operation. Units will not be damaged by parallel operation (regardless of switch position setting)	
Holdup Time	>20 ms (Full load, 100Vac Input @ T _{amb} =+25°C) to 95% output voltage	
Voltage Fall Time	<150 mS from 95% to 10% rated voltage @ full load (T _{amb} =+25°C)	
Line and Load Regulation	< 0.5%	
GENERAL		
EMC: -Emissions	EN61000-6-2:2001, EN61000-6-3:2001, Class B EN55011, EN55022 Radiated and Conducted including Annex. A, EN61000-3-2	
-Immunity	EN61000-6-1:2001, EN61000-6-2:2001, 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, IEC 61000-4-34 voltage dip immunity standard	
Approvals	UL508 Listed, cULus; UL 60950-1, cURus; IEC60950-1; UL60079-15 (pending) and IEC60079-15 (pending) CE (LVD 73/23 & 2004/108/EC), (EMC 89/336 & 93/68/EEC); EN61000-3-2	
Temperature	Storage : -25 to + 85oC, Operation -10 to +60oC full power, with linear derating to half power from 60 to 70oC (Convection cooling, no forced air required). Operation up to 50% load permissible with sideways or front side up mounting orientation.	
MTBF Standard ⁶	> 650,000 hrs	> 550,000 hrs
Warranty	5 Years	
General Protection/Safety	Protected against continuous short -circuit, continuous overload, continuous open circuit. Protection Class 1 (IEC536), degree of protection IP20 (IEC60529) Safe low voltage: SELV (acc. IEC60950-1)	
Status Indicators	Visual: 3 status LEDs (Input, Output, Alarm) Relay: N.O. contact rated 200ma/50 Vdc	
INSTALLATION		
Fusing -Input	Internally fused	
-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 to DIN TS35/7.5 or TS35/15 rail system.	
Connections	Input: Screw terminals, connector size range: 16-10 AWG (1.5-6 mm ²) for solid conductors. Output: Two terminals 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	15 mm in front, 25 mm above and below, 10 mm left and right.	
H x W x D (inches/mm)	4.88 in. x 1.97 in. x 4.55 in. (124 mm x 50 mm x 116 mm)	4.88 in. x 2.36 in. x 4.55 in. (124 mm x 60 mm x 116 mm)
Weight (lbs/g)	1.5 lbs (620g)	2.2 lbs (1100g)

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. Peak current is calculated at 24 Volt levels.
6. MTBF 115 Vac (@ 120 watts & 240 watts) at 40°C ambient per Telecordia Issue 1.



Sola/Hevi-Duty has been providing power conversion and power quality solutions for over 90 years. Our full line of premium products feature proven technologies that protect operations throughout your facility for improved efficiency, productivity and longevity.

Emerson Industrial Automation brings integrated manufacturing solutions to diverse industries worldwide. Our comprehensive product line, extensive experience, world-class engineering and global presence enable us to implement solutions that give our customers the competitive edge.

For over 150 years, our electrical product brands have been providing a rich tradition of long-term, practical, high quality solutions with applications ranging from the construction and safe operation of petrochemical and process plants to providing quality power that precisely controls automotive robotic production.

Engineers, distributors, contractors, electricians and site maintenance professionals around the world trust Emerson Industrial Automation brands to make electrical installations safer, more productive and more reliable.

EGS is organized into three focused businesses that provide distributors and end-users expert knowledge and excellent service.

Electrical Construction Materials

This group manufactures a broad range of electrical products including conduit and cable fittings, plugs and receptacles, enclosures and controls, conduit bodies, and industrial lighting. Whether the application is hazardous location, industrial, or commercial, the ECM group has the products to meet your needs.

Power Quality Solutions

This group offers the broadest power quality line including UPS, power conditioners, voltage regulators, shielded transformers, surge suppression devices and power supplies.

Heating Cable Systems

This group offers a broad range of electrical heating cable products for residential, commercial, and industrial applications.

Electrical Construction Materials

 **Appleton**[®]

O-Z/GEDNEY

 **A.T.X.**[®]

Power Quality Solutions

SOLA

HEVI-DUTY

Heating Cable Systems

EASYHEAT[®]

NELSON