SDN-C Compact DIN Rail Series

The SDN-C DIN rail power supplies are the next generation of the popular SDN series. These models combine high efficiency and compact size with new visual diagnostic LEDs to offer the most performance available from SolaHD. Essential industrial features such as Sag Immunity, Power Factor Correction, and universal voltage input have been retained in this series. Wide temperature operating range and parallel operation capability make the new SDN-C units suitable to a variety of industrial applications.

Applications

- Industrial Machine Control and Process Control
- Conveying Equipment
- Material Handling
- Vending Machines
- Packaging Equipment and Amusement Park Equipment
- Semiconductor Fabrication Equipment
- DeviceNet™

Features

- · Compact packaging to save space on the DIN rail
- Visual diagnostic LEDs for input and output status at a glance
- High MTBF means high reliability and long life
- 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
- Active Power Factor Correction
- Patented DIN rail mounting clip
- User Adjustable output voltage accessible via front face
- Parallel capability standard
- · Large, rugged, accessible screw terminals
- Industrial grade design
 - -25°C to 60°C operation without derating
- Fully tested and burned-in at factory
- Highly efficient switching technology
- Five year limited warranty

Certifications and Compliances *

All Models

- c(UL)us Listed, Ind. Control Equipment, E61379
 - UL 508, CSA C22.2 No. 107.1



- c **N** us UL Recognized Component, ITE, E137632 - UL 60950-1/CSA C22.2 No. 60950-1, 2nd Edition
- (E Low Voltage Directive
 - IEC/EN60950-1, 2nd Edition
- Sag Immunity: SEMI F47
- RoHS Compliant

Models SDN 20-24-100C, SDN 20-24-480CC, SDN 40-24-480C

- c us UL Recognized Component, Haz. Loc., E234790
 - ISA 12.12.01, CSA C22.2 No. 213
 - Class I, Division 2, Groups A, B, C, D

Models SDN 5-24-100C, SDN 10-24-100C, SDN 40-24-100C, SDN 5-24-480C, SDN 10-24-480C

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

Related Products

- SDN-P series
- SDP™ series
- SCP series
- SDU UPS

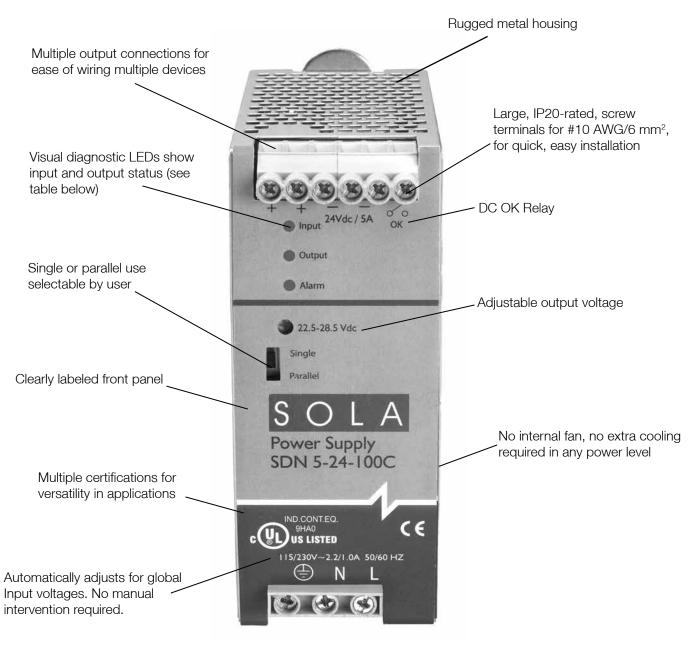
Accessories

• Chassis Mount Bracket (SDN-PMBRK2)

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



The SolaHD Difference



Narrow width saves panel space

LED Light Status Conditions

| | Normal | AC Power Loss | AC Input Low | 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 |



SDN-C Specifications (Single Phase)

| | Catalog Number | | | | |
|---|--|---|--|--|--|
| Description | SDN 5-24-100C | SDN 10-24-100C | | | |
| | Input | | | | |
| Nominal Voltage | · | 5 - 230 Vac | | | |
| -AC Range | 85 | 5 - 264 Vac | | | |
| -DC Range ¹ | 90 | - 375 Vdc | | | |
| -Frequency | 4 | 3 - 67 Hz | | | |
| Nominal Current ² | 1.65 - 0.55 A | 3.2 - 1.0 A | | | |
| -Inrush current max. | Typ. < 15 A | Typ.< 30 A | | | |
| Efficiency (Losses 3) | > 88% typ. (14 W) | > 90% typ. (24 W) | | | |
| Power Factor Correction | 71 \ 1 | correction to better than 0.92 | | | |
| Tower ractor correction | Output | Solitotton to Botton than 0.02 | | | |
| Naminal Valtage 4 | | .5~28.5 Vdc Adj.) | | | |
| Nominal Voltage ⁴ -Tolerance | · | pad, time and temperature related changes) | | | |
| Initial Voltage Setting | 1 | 1.5 V ± 1% | | | |
| | | 50 mVpp | | | |
| -Ripple ⁵ PARD | | Deviation) = 100 mV peak-peak max | | | |
| | ` | 33 Vdc, auto recovery | | | |
| Overvoltage Protection Power Back Immunity | > 00.0 But \ \ | < 35 V | | | |
| Nominal Current | 5 A (120 W) | 10 A (240 W) | | | |
| -Peak Current ⁶ | | ds minimum while holding voltage > 20 Vdc | | | |
| -Short Circuit Current | | ar zero volts at short circuit condition | | | |
| -Current Limit | 1.5 x Norminal Current at riear zero volts at short circuit condition 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, 100 Vac 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, I | EN55022 Radiated and Conducted including Annex. A, EN61000-3-2 | | | |
| -Immunity | | N61000-4-3 Level 3, EN61000-4-6 Level 3, EN61000-4-4 Level 4 input and 1000-4-11, IEC 61000-4-34 voltage dip immunity standard | | | |
| Temperature ⁷ | forced | with linear derating to half power from 60 to 70°C (Convection cooling, no dair required). | | | |
| _ | | th sideways or front side up mounting orientation. | | | |
| MTBF 8 | | 550,000 hrs | | | |
| Warranty | | imited Warranty | | | |
| General Protection/ Safety | Protection Class 1 (IEC536), degree of protection I | uit, continuous overload, continuous open circuit. P20 (IEC60529) Safe low voltage: SELV (acc. IEC60950-1) | | | |
| Status Indicators | | EDs (Input, Output, Alarm) act rated 200ma/50 Vdc | | | |
| | Installation | | | | |
| Fusing —Input | | ernally fused | | | |
| -Output | wire/loads if 2x Nominal O/P current rating cannot be toler | of time for inductive load startup or switching. Fusing may be required for rated. Continuous current overload allows for reliable fuse tripping. | | | |
| Mounting | | S35/7.5 or TS35/15 rail system. 5-6 mm²) for solid conductors. Screw torque: 4.4 lb-inch (~ 50 N-cm) | | | |
| Connections Case | Input: Screw terminals, connector size range: 16-10 AWG (1.5-6 mm²) for solid conductors. Screw torque: 4.4 lb-inch (~ 50 N-cm). Output: Two terminals per output, connector size range: 16-10 AWG (1.5-6 mm²) for solid conductors. Screw torque: 7 lb-inch (~ 80 N-cm). Fully enclosed metal housing with fine ventilation grid to keep out small parts. | | | | |
| -Free Space | , | 10 mm left and right, 15 mm in front | | | |
| H x W x D inches in (mm) | 4.85 × 1.97 × 4.36 (123.0 × 50.0 × 110.0) | 4.85 × 2.36 × 4.36 (123.0 × 60.0 × 110.0) | | | |
| Waight lhe (kg) | 1.1 (0.50) | 1.7 (0.80) | | | |
| Weight Ibs (kg) | 1.1 (0.00) | 1.7 (0.00) | | | |

- 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. 24-28 Vdc adjustable guaranteed at full load.

- 5. Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.
- 6. Peak current is calculated at 24 Volt levels.
- 7. Contact tech support for operation at -25°C.
- 8. Demonstrated through extended life test.

Power Supplies



SDN-C Specifications (Single Phase)

| Description | | g Number | | | | |
|--------------------------------------|---|--|--|--|--|--|
| ' | SDN 20-24-100C Input | SDN 40-24-100C | | | | |
| Nominal Voltage | • | 230 Vac | | | | |
| -AC Range | 85 - 264 Vac | | | | | |
| | 90 - 375 Vdc | | | | | |
| -DC Range ¹ | | | | | | |
| -Frequency | | - 67 Hz | | | | |
| Nominal Current ² | 6 - 3 A | 12 - 4 A | | | | |
| -Inrush current max. | < 40 A | Typ. <60 A | | | | |
| Efficiency (Losses ³) | > 92% (38 W) | > 93 % (67 W) | | | | |
| Power Factor Correction | Active power factor con | rrection to better than 0.92 | | | | |
| | Output | | | | | |
| Nominal Voltage ⁴ | , | ~28.5 Vdc Adj.) | | | | |
| -Tolerance | | d, time and temperature related changes) | | | | |
| Initial Voltage Setting | | V ± 1% | | | | |
| -Ripple ⁵ | <100 mVpp | < 100 mVpp | | | | |
| PARD | , | eviation) = 100 mV peak-peak max | | | | |
| Overvoltage Protection | | Vdc, auto recovery 35 V | | | | |
| Power Back Immunity Nominal Current | 20 A (480 W) | 40 A (960 W) | | | | |
| -Peak Current ⁶ | , | minimum while holding voltage > 20 Vdc | | | | |
| -Short Circuit Current | 1.5 x Nominal Current at near zero volts at short circuit condition | 1.8 x Nominal Current at or near zero volts at short circuit condition | | | | |
| -Current Limit | | orBoost™ | | | | |
| | Switch selectable single unit or parallel unit operation. Units will not be | | | | | |
| Parallel Operation ⁷ | damaged by parallel operation (regardless of switch position setting). | Active Paralleling | | | | |
| Holdup Time | >20 mS (Full load, 100 Vac 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 | · · · · · · · · · · · · · · · · · · · | | | | | |
| | General Chickens a const. Ch. D. Eniferent Eniference | ENGLOSS OF ENGLOSS OF OF THE ENGLOSS | | | | |
| EMC: -Emissions | EN61000-6-2:2001, EN61000-6-3:2001, Class B EN55011, EN55022 Radiated and Conducted including Annex. A, EN61000-3-2 | EN61000-6-3, EN61000-6-4, Class B EN55011, EN55022 Radiated and Conducted including Annex A, EN61000-3-2, EN61000-3-3 | | | | |
| –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 | EN61000-6-1, EN61000-6-2, EN61000-4-2 Level 4, EN61000-4-3 Level 3, EN61000-4-4 Level 4 input and Level 3 output, EN61000-4-5 Installation Class 4, EN61000-4-6 Level 3, EN61000-4-8, EN61000-4-11, SEMI F47 Sag Immunity, Transient protection according to VDE 0160/W2 over entire load range. | | | | |
| Temperature ⁸ | | ith linear derating to half power from 60 to 70°C (Convection cooling, issible with sideways or front side up mounting orientation. | | | | |
| MTBF 9 | > 450,000 hrs | > 500,000 hours demonstrated | | | | |
| Warranty | 5 Year Lim | nited Warranty | | | | |
| General Protection/Safety | | nuous open circuit. Protection Class 1 (IEC536), degree of protection IP20 age: SELV (acc. IEC60950-1) | | | | |
| Status Indicators | | os (Input, Output, Alarm) ot rated 200ma/50 Vdc | | | | |
| | Installation | | | | | |
| Fusing —Input | | ally fused | | | | |
| -Output | if 2x Nominal O/P current rating cannot be tolerated. C | or inductive load startup or switching. Fusing may be required for wire/loads continuous current overload allows for reliable fuse tripping. | | | | |
| Mounting | · · · | 35/7.5 or TS35/15 rail system. | | | | |
| Connections ¹⁰ | Input: Screw terminals, connector size range: 16-10 AWG (1.5-6 mm²) for solid conductors. Screw Torque: 4.4 lb-in (~ 50 N-cm). Output: Two terminals per output, connector size range: 16-10 AWG (1.5-6 mm²) for solid conductors. Screw Torque: 7 lb-inch (~ 80 N-cm) | N-cm). (1.5-6 mm²) for solid conductors. Screw Torque: 4.4 lb-inch (~ 50 N-cm). Output: Two terminals per output, connector size range: 10-6 AWG | | | | |
| Case | Fully enclosed metal housing with fin- | e ventilation grid to keep out small parts. | | | | |
| -Free Space | 25 - 40 mm above and below, 1 | 0 mm left and right, 15 mm in front | | | | |
| H x W x D inches in (mm) | 4.85 x 3.42 x 4.98 (123.0 x 87.0 x 127.0) | 4.85 x 7.09 x 4.81 (123.0 x 180.0 x 122.0) | | | | |
| Weight lbs (kg) | 2.6 (1.20) | 6.0 (2.75) | | | | |

- 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. 24-28 Vdc adjustable guaranteed at full load.
- Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.
- 6. Peak current is calculated at 24 Volt levels.
- All models except the 40amp unit are capable of parallel operation by use of a jumper pin, accessible by the end user. 40 amp unit will have active current sharing signal.
- 8. Contact tech support for operation at -25°C.
- 9. Demonstrated through extended life test.
- SDN 40-24-100C only = Output signaling terminal block features (Shut down, Power Good, Current Monitor, Current Balance, signal GND).



SDN-C Specifications (Three Phase)

| | | Catal | log Number | | | |
|---------------------------------|--|--------------------------------------|--|--|--|--|
| Description | SDN 5-24-480C | SDN 10-24-480C | SDN 20-24-480CC | SDN 40-24-480C | | |
| | | | Input | | | |
| Nominal Voltage | | | - 480 Vac | | | |
| Two – phase input | Yes ¹ | | | | | |
| -AC Range ² | 320 - 540 Vac | | | | | |
| -DC Range | 450 - 760 Vdc | 450 - 760 Vdc | 450 - 760 Vdc ¹⁰ | N/A | | |
| -Frequency | | 50 | 0/60 Hz | | | |
| Nominal Current ³ | 3 x 0.5 or 2 x 0.7 A | 3 x 0.8 or 2 x 1.2 A | 3 x 0.9 or 2 x 1.3 A | 3 x 1.6 A | | |
| -Inrush current max. | Typ. « | <25 A | Negligible | Negligible | | |
| Efficiency (Losses 4) | > 85% (18 W) | 91.2% (23.6 W) | 93% (42 W) | 94% (78 W) | | |
| Power Factor Correction | Power factor correction to r | meet EN61000-3-2 Class A | Active Power F | actor Correction | | |
| | | | Output | | | |
| Turn on time | | | Typ. 1s | | | |
| Voltage Rise Time | ca. 5- | 20 ms | <100 ms full resistiv | ve load (T _{amb} =+25°C) | | |
| Power Back Immunity | | | <35 V | | | |
| Overvoltage Protection | | >30.5 but <30 | 3 Vdc auto recovery | | | |
| Nominal Voltage ⁵ | | 24 V (23.5 | i~28.5 Vdc Adj.) | | | |
| Voltage Regulation | | < ±2 | 2 % overall | | | |
| Initial Voltage Setting | | 24. | 5 V ± 1% | | | |
| -Ripple ⁶ | | <10 | 00 mVpp | | | |
| PARD | PARD = 100 mV | peak-peak max | PARD = 200 m | nV peak-peak max | | |
| Nominal Current | 5 A (120 W) | 10 A (240 W) | 20 A (480 W) (constant power, not constant current) | 40 A (960 W) | | |
| -Peak Current ⁷ | 6A, 2×Nominal Current <2sec | nimum while holding voltage > 20Vdc | | | | |
| -Current Limit | 6A, 2×Nominal Current <2sec 12A, 2×Nominal Current <2sec 1.5×Nominal Current for 4 sec mini | | | | | |
| Derating | typ. 6 W/°C | | | typ. 48 W/°C | | |
| Holdup Time | | >20 ms | | >15 ms | | |
| Voltage Fall Time | <150 ms from 95% to 10% rated voltage @ full load (T _{anb} =+25°C) <50 ms from 95% to 10% rated voltage @ full load (T _{anb} =+25°C) | | | | | |
| Parallel Operation 8 | Single or Paralle | el operation selectable via front sw | tch. For redundant | Active Paralleling | | |
| raiallei operation | operation, use of external diode module is preferred | | | | | |
| | General Fully enclosed metal housing with fine ventilation grid to keep out small parts. | | | | | |
| Case | F | ully enclosed metal nousing with ill | le ventilation grid to keep out small pan | is. | | |
| Min. Required | 25mm above and below or | 25mm above and below or | 70mm above and below or | 70mm above and below, 15mm in | | |
| Free Space | 15mm in front | 10mm in front | 25mm in front and 25mm left & righ | | | |
| H×W×D inches (mm) | 4.85 × 1.97 × 4.36 | 4.85 × 2.36 × 4.36 | 4.85 x 3.35 x 4.68 | 4.85 x 7.09 x 4.66 | | |
| Mainht Iba (ka) | (123.0 × 50.0 × 111.0) 1.2 (.52) | (123.0 × 60.0 × 111.0) 1.5 (0.70) | (123.0 x 85.0 x 119.0) 2.9 (1.30) | (123.0 x 180.0 x 119.0) 5.3 (2.40) | | |
| Weight lbs (kg) EMC: –Emissions | | | adiated and Conducted including Annex | | | |
| LINIOLIIIISSIOIIS | | | 4-2 Level 4, EN61000-4-3 Level 3, EN6 | | | |
| -Immunity | | • | ut. EN61000-4-5 Isolation class 4, EN6 | • | | |
| Temperature | | | ar derating to half power from 60 to 70°C with sideways or front side up mounting | | | |
| Humidity | | < 90% RH, nonconden | sing; IEC 60068-2-2, 68-2-3 | | | |
| Altitude | | 0 to 3000 mete | ers (0 to 10,000 feet) | | | |
| Vibration | 2.5(g |) RMS, 10-2000 Hz (random); thre | ee axes for 20 minutes each - IEC 6006 | 8-2-6 | | |
| Shock | | 3(g) peak, three axes, 11msec | onds for each axis - IEC 60068-2-27 | | | |
| Warranty | 5 Year Limited Warranty | | | | | |
| MTBF | | >500,000 hrs MTBF (Nomi | nal voltage, full load, T _{amb} = 25°C) | | | |
| General Protection/Safety | Protected against short -circuit, overload, open circuit. Protection class 1 (IEC536), degree of protection IP20 (IEC 529) Safe low voltage: SELV (acc. EN60950) | | | | | |
| Over-temperature protection | | LED Alarm, Output shi | utdown with automatic restart | | | |
| Status Indicators | Visual: 3 status LEDs (I | nput, Output, Alarm) Relay: SSR c | or dry relay contact, signal active when \ | $V_{\text{out}} = 18.5 \text{Vdc} = +/-5\%$ | | |
| | Installation | | | | | |
| Fusing: -Input | | | nally fused | | | |
| -Output | Not fused | | igh currents (PowerBoost) for motor loa | d startup. | | |
| _ | | Simple snap-on to DIN TS | S35/7.5 or TS35/15 rail system. | · | | |
| Mounting | Unit should handle normal shock and vibration of industrial use and transportation without falling off the rail. | | | | | |

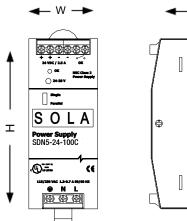
- 1. SDN 20 will operate at 75% load; SDN 40 will operate at 50% load under loss of 1 phase; SDN 5 and SDN 10 will operate with single phase input power at 100% of load. Unit will shut down if thermal threshold is exceeded $\,$ under this condition.
- 2. Unit passed input voltage overstress test at 600 Vac without failure.
- 3. Input current ratings are specified with low input, line conditions, worst case efficiency values and power factor spikes. Input current at nominal input settings will typically be half these values.
- 4. Losses are heat dissipation in watts at full load, nominal line.
- 5. 24-28 Vdc adjustable guaranteed at full load.
- 6. Ripple/noise is stated as typical values when measured with a 20 MHZ, bandwidth

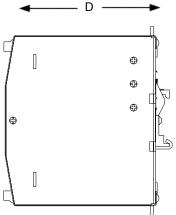
scope and 50 Ohm resistor.

- 7. SDN 20 and 40 unit will go to HICCUP mode. SDN 5 and 10 will maintain min 4 secs to deliver 150% load then drops to almost zero $V_{\rm cut}$. The output voltage will immediately drop to almost zero when load rises above 150%.
- 8. All models except the 40amp unit are capable of parallel operation by use of a jumper pin, accessible by the end user. 40 amp unit will have active current sharing signal
- 9. SDN 40-24-100C only = Output signaling terminal block features (Shut down, Power Good, Current Monitor, Current Balance, signal GND).
- 10. 70% maximum rated load.



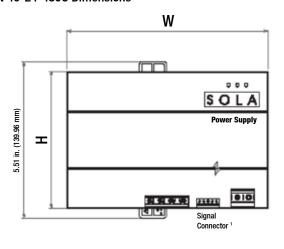
SDN-C Series Dimensions

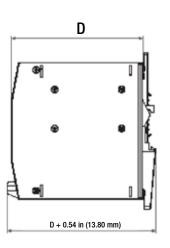




| Catalog | Dimensions – inches (mm) | | | | | |
|-----------------|--------------------------|-------------|--------------|--|--|--|
| Number | Н | W | D | | | |
| SDN 5-24-100C | 4.85 (123.0) | 1.97 (50.0) | 4.36 (111.0) | | | |
| SDN 10-24-100C | 4.85 (123.0) | 2.36 (60.0) | 4.36 (111.0) | | | |
| SDN 20-24-100C | 4.85 (123.0) | 3.42 (87.0) | 4.98 (127.0) | | | |
| SDN 5-24-480C | 4.85 (123.0) | 1.97 (50.0) | 4.36 (111.0) | | | |
| SDN 10-24-480C | 4.85 (123.0) | 2.36 (60.0) | 4.36 (111.0) | | | |
| SDN 20-24-480CC | 4.85 (123.0) | 3.35 (85.0) | 4.68 (119.0) | | | |

SDN 40-24-100C and SDN 40-24-480C Dimensions





| Catalog | Dimensions – inches (mm) | | | | |
|----------------|--------------------------|--------------|--------------|--|--|
| Number | Н | W | D | | |
| SDN 40-24-100C | 4.85 (123.0) | 7.09 (180.0) | 4.66 (118.0) | | |
| SDN 40-24-480C | 4.85 (123.0) | 7.09 (180.0) | 4.81 (122.0) | | |

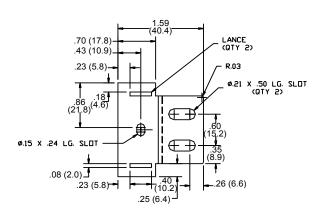
^{1.} SDN 40-24-100C and SDN 40-24-480C output signaling terminal block features: Shut Down, Power Good, Current Monitor, Current Balance, GND, and active current sharing through I_SHARE connectors (See Signals Manual for connection information).

SDN-C Series Mounting

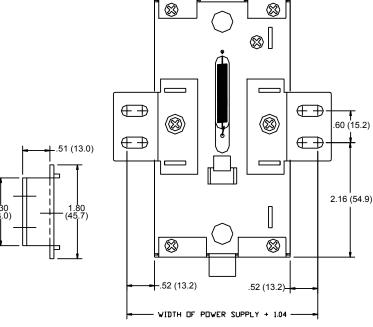
Chassis Mounting

Instead of snapping a SolaHD SDN™ unit on the DIN Rail, you can also attach it using the screw mounting set SDN-PMBRK2.

This set consists of two metal brackets, which replace the existing two aluminum profiles.



Dimensional Diagram - in (mm)

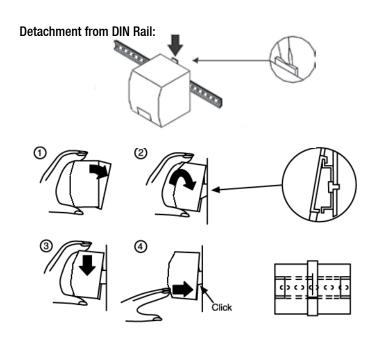


DIN Rail Mounting

Snap on the DIN Rail:

- 1. Tilt unit slightly backwards
- 2. Put it onto the DIN Rail
- 3. Push downwards until stopped
- 4. Push at the lower front edge to lock
- 5. Shake the unit slightly to ensure that the retainer has locked

Alternative Panel Mount: Using the optional SDN-PMBRK2 accessory, the unit can be screw mounted to a panel.





SolaHD

SDN 40-24-100C

Siemens

C

PULS

| Part Number | SDN 40-24-100C | QUINT-PS/ 1AC/24DC/40 | 6EP1 337-3BA00 | QS40.241 |
|------------------------------------|--|--|---|--|
| # of Conditions | 8 | 4 | 3 | 3 |
| Diagnostics | Normal, AC Power Loss, AC Input Law, No DC, High Load, Overload, Hot, Too Hot | IOUT < IN, IOUT > IN, VOUT < 0.9x VN, VOUT >0.9x VN | Normal, Yellow LED, for Overload, RED LED for latching shutdown | Normal, Overload, No output |
| Nominal Input Voltage | 100-240Vac | 100-240Vac | 0-240Vac set by jumpers 85-132V/ 176-264V | |
| AC Input Range | 85-264Vac | 85-264Vac | 90-264Vac | 90-264Vac |
| Output Voltage | 24 Vdc | 24 Vdc | 24 Vdc | 24Vdc |
| Ouptut Current | @ 40amps | @ 40amps | @ 40amps | @ 40Amps |
| Output Voltage Adjustment Range | 23.5-28.5 Vdc adjustable | 18-29.5 Vdc (> 24V constant capacity) | 24-28.8 Vdc adjustable | 24-28 Vdc adjustabl |
| Efficiency | > 93% (67 W) | >92 % (for 230Vac and nominal values) | approx 88% (131 W) | > 93.2% |
| Mains Frequency | 50 – 60 Hz | 45 – 65 Hz | 47 – 63 Hz | 50 – 60 Hz +/-6% |
| Reliability (MTBF) | > 500,000 hrs | > 500 000 h in acc. with IEC 61709 (SN 29500) | Not published | > 274,000 hr acc. to 9 29500, IEC 61709 at full current and 40°C |
| Size (cm3) | 2712.1 | 5050.8 | 3750.3 | 1968.5 |
| Width along the DIN rail inch (mm) | 7.09in (180mm) | 7.09 in (180mm) | 9.45 in (240mm) | 4.92 in (125mm) |
| Installation Clearance Required | 25 mm above and below, 25 mm left and right, 15 mm in front. Do not obstruct air flow | 50 mm verticaly to ensure sufficient convection; 15 mm laterally required when installed next to other active compoents. | 50 mm above and below | 40mm on top, 20mm or bottom, 15 mm left a right, Do not obstruct flow |
| Full Power Ambient | -25°C to +60°C | -25°C to + 60°C | 0°C to + 70°C | -25°C to + 70°C |
| Hazardous Location Rating | Class I, Division 2 Class I, Zone 2 | No rating | No rating | Class 1, Div 2 Pendin |
| ATEX Rating | Yes | No rating | Yes | Pending |
| Weight lb/kg | 6.0lb (2.75kg) | 7.2lb (3.3kg) | 6.33lb (2.9kg) | 4.2lb (1.9kg) |
| Warranty | 5 years | 5 years | Not published | 3 years |

Phoenix

www.solahd.com

solahd.technicalservices@emerson.com



SDN-C SERIES: SINGLE- AND THREE-PHASE POWER SUPPLIES

Maximize uptime and lower energy costs.

The SolaHD SDN-C Series delivers:

Higher efficiency.

Improved visual diagnostics.

Greater reliability.

Compact size.

Meet all your bulk power supply needs with a complete product line:

24 Vdc, DIN rail-mounted power supplies.

Single- and three-phase models.

New 40 Amp single-phase model.



HIGHER EFFICIENCY

Advanced SolaHD technology eliminates the need for an input inductor and provides more efficient AC/DC conversion.

Lower energy consumption. A more efficient design helps reduce energy

Lower cooling costs. With no input inductor, less energy is wasted in the dissipated heat – with no need for additional cooling fans in the panel.

Longer life. Less heat inside the panel enclosure means SDN-C power sup and other components perform longer and more reliably.



IMPROVED VISUAL DIAGNOSTICS

Multicolored LEDs show the status of input power, output power and alarm conditions at a glance.

| | Normal | AC Power Loss | AC Input Loss | NO DC | High Load | Overload | Hot* | |
|--------|--------|---------------|---------------|-------|-----------|----------|--------|--|
| Input | Green | | Yellow | Green | Green | Green | Green | |
| Output | Green | | Green | | Yellow | Yellow | Green | |
| Alarm | | | | Red | Yellow | Red | Yellow | |

^{*} Hot and Too Hot indicate the unit is about to shut down due to high temperature or has shut down. Not intended to be used as a ther to monitor temperature.

- Reduce downtime. Troubleshoot power supply problems quickly and confidently.
- Diagonstic key. Affix the included sticker to the power supply or panel door to prove handy diagnostic reference.







Count on an improved design and SolaHD manufacturing quality for dependable performance.

- Reduced parts count. Fewer components provide lower failure rates compared to more complex power supplies.
- Less heat. With no input inductor, the SDN-C Series is less prone to heat buildup that can damage components.
- Smarter component layout.
 Heat-sensitive components are placed near cool air intakes and away from heat-producing components.

COMPACT SIZE

SDN-C Series power supplies are smaller and more compact, so they are easier to work with and let you do more in the available space.

- More room to work. SDN-C power supplies save space on the DIN rail and in the electrical enclosure, so it's easier to terminate wires and configure components.
- Better heat dissipation. With more space around individual components, air circulates more freely.
- Increased enclosure capacity. Add more components to increase the capacity and efficiency of your operations, while avoiding the need to add a new enclosure.



NEW: 40 AMP POWER SUPPLY WITH SINGLE-PHASE INPUT

For industries located in buildings with single-phase power, there is need to let power supply capacity limit what you can do.

Our newest single-phase SDN-C model delivers the same 40 Amp c as our largest three-phase model.

The power you need today.

Run large industrial loads – such as sorting, conveying and packaging equipment, using the single-phase power available in any commercial building.

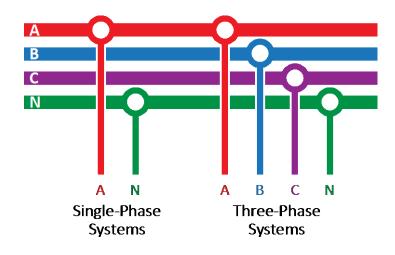
The power you need tomorro

Add new equipment to you operation and get the power you need within your existing power structure — with little no retrofitting required.

NEW: 40 AMP POWER SUPPLY WITH SINGLE-PHASE INPUT

Single-phase power is by far the most commonly available. Even w industries require three-phase service to run large industrial motor branch circuits are likely to be on a single phase.

Our new 40 Amp, single-phase SDN-C transformer is a perfect fit for powering large DC loads on a standard, single-phase AC circuit.



SPECIFICATIONS/CERTIFICATIONS

Listed, Industrial Control Equipment, E61379

• UL508, CSA C22.2 No. 107.1

CALLUS UL Recognized Component, ITE, E137632

• UL 60950-1/CSA C22.2 No. 60950-1, 2nd Edition

CALUS UL Recognized Component, Haz. Loc., E234790

- UL 60079-15/CSA E60079-15
- Class I, Zone 2, AEx nC IIC, Ex nC IIC

(€ Low Voltage Directive

• IEC/ EN60950-1, 2nd Edition

Ex Directive

- EN60079-0, EN60079-15
- II 3 G, Ex nC IIC Gc

Sag Immunity: SEMI F47

SOLA+HD

CATALOG INFORMATION

Product offering

| Single-Phase | | | | | | |
|----------------|-------|------|--|--|--|--|
| Catalog Number | Watts | Amps | | | | |
| SDN 5-24-100C | 120 | 5 | | | | |
| SDN 10-24-100C | 240 | 10 | | | | |
| SDN 20-24-100C | 480 | 20 | | | | |
| SDN 40-24-100C | 960 | 40 | | | | |

| Three-Phase | | | | | | |
|-----------------|-------|------|--|--|--|--|
| Catalog Number | Watts | Amps | | | | |
| SDN 5-24-480C | 120 | 5 | | | | |
| SDN 10-24-480C | 240 | 10 | | | | |
| SDN 20-24-480CC | 480 | 20 | | | | |
| SDN 40-24-480C | 960 | 40 | | | | |

For more information and to order your SDN-C power supply, contact your SolaHD representative.



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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1PM-C ADNB034-12-1PM-C SS14011524 PS-UPS40 PSC-6024 PSD-A60W12 96PS-A120WDIN PSD-A60W48 PSD-A40W12 PSD-A40W24 SMP21-L20-DC24V-5A PSD-A40W48 S8T-DCBU-02 PS-S4024 NTPS-24-1.3 ZI-20 PST-96024 S82YVSC4P PS-S4005 PS-10024 PS-S10024 PS-C12024 PSP-480S24 PS-C48024 PSC-2024 PSC-4012 PSC-4048 PSC-9615 PSC-15124 PSC-15148 PSC-24148 PSC-48148 TRIO-PS-2G/1AC/12DC/5/C2LP