

SDN-C Specifications (Single Phase)

Description	Catalog Number				
	SDN 16–12–100C	SDN 5–24–100C	SDN 10–24–100C	SDN 20–24–100C	SDN 40–24–100C
Input					
Nominal AC Voltage (Range)	100 - 240 Vac (85-264 Vac)				
Nominal DC Voltage (range)	100-340 Vdc (90-375 Vdc)			100-250 Vdc (90-275 Vdc)	120-340 Vdc (108-375 Vdc)
Frequency	43 - 67 Hz				
Nominal Current ¹	1.77 – 0.9 A	1.65 - 0.55 A	3.2 - 1.0 A	6 - 3 A	12 - 4 A
–Inrush current	Typ. <5.8A at 120 Vac, <12.7A at 230 Vac, measured at 25°C	Typ. <3.7A at 120 Vac, <7.4A at 230 Vac, measured at 25°C	Typ. <12.7A at 120 Vac, <24.8A at 230 Vac, measured at 25°C	Typ. <5.8A at 120 Vac, <11.5A at 230 Vac, measured at 25°C	Typ. <5.8A at 120 Vac, <11.5A at 230 Vac, measured at 25°C
Efficiency (Losses ²)	> 86.5% typ. (24 W)	> 88% typ. (14 W)	> 90% typ. (24 W)	> 92% (38 W)	> 93 % (67 W)
Power Factor Correction	Active power factor correction typ. 0.98 @ 115Vac/ 0.92 @ 230Vac				
Output					
Nominal Voltage	12 V (12-15 Vdc Adj.)	24 V (23.5-28.5 Vdc Adj.)			
Initial Voltage Setting	12.5 V ± 1%	24.5 V ± 1%			
–Tolerance	< ±2 % overall (combination Line, load, time and temperature related changes)				
–Ripple ³	< 100 mVpp	< 50 mVpp		< 100 mVpp	
PARD (Periodic and Random Deviation)	100 mVpp max				
Nominal Current (Rated Power at +60°C)	16 A (192 W)	5 A (120 W)	10 A (240 W)	20 A (480 W)	40 A (960 W)
Parallel Operation ⁴	Single or Parallel operation selectable via front switch.				Active Paralleling.
Turn On Time	< 1 s after AC is applied to input at full resistive load (T _{amb} =+25°C). <1.5 ms with capacitive load 7000µF				
Holdup Time	>40ms (Full load, 100 Vac Input @ T _{amb} =+25°C) to 95% output voltage	>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)				
Protection					
–Short Circuit	Output automatically goes to near zero and output is protected from continuous short circuit. Auto-recovery.				
–Peak Current ⁵	1.5 × Nominal Current for > 4 seconds minimum while holding voltage > 20 Vdc (> 10 Vdc for SDN 16-12-100C)				
–Overcurrent Protection	PowerBoost™				
Back EMF Immunity	< 18 V No damage, auto-recovery	< 35 V No damage, auto-recovery			
Overvoltage Protection	> 18 but < 20 Vdc, auto-recovery	> 30.5 but < 33 Vdc, auto-recovery			
Overtemperature Protection	LED Alarm and Output shutdown , auto-recovery				
Environmental Data					
Emissions	EN61000-6-3, EN61000-6-4, Class B EN55011, EN61000-3-2 Class A, Class B EN 55032, EN 61326-1 Class B, EN 61000-3-3				
Immunity	EN 55024, EN 61000-6-1, EN 61000-6-2, EN 61326-1, SEMI F47				
General Protection/ Safety	Protected against continuous short circuit, continuous overload, continuous open circuit. IEC 60950-1: Class 1 Earthed, Output is SELV (Safety Extra Low Voltage), Environmental Rating: Pollution Degree 2 IEC 60529 Ingress Protection Rating: IP20				
Temperature ⁶	Storage: -40°C to +85°C, Operation -40°C to +60°C full power, with linear derating to 75% power from +60°C to 70°C (Convection cooling). Operation up to 50% load with sideways or front-side-up mounting orientation.				
Humidity	5 to 95 % RH Non-condensing; IEC 60068-2-2, IEC 60068-2-3				
Vibration	2.5g RMS, 10-2000 Hz (random); three axes for 20 minutes each - IEC 60068-2-6				
Shock	10g RMS, three axes, 11msec for each axis - IEC 60068-2-27				
Altitude	0 to 6000 meters (0 to 20,000 feet) per MIL-STD-810F				

1. Input current ratings are conservatively specified with low AC input, worst case efficiency and power factor.
2. Losses are heat dissipation in watts at full load, nominal AC input line.
3. Ripple/noise is stated as typical values when measured with a 20 MHz, bandwidth scope and 50 Ohm resistor.
4. All models are capable of paralleling. For redundant operation, please use external Redundancy module. Only the 40A uses Active paralleling scheme. Please refer to user manual for details.
5. Peak current is calculated at nominal voltage levels.
6. Contact tech support for operation at -40°C.

SDN-C Specifications (Single Phase) continued

Description		Catalog Number					
		SDN 16-12-100C	SDN 5-24-100C	SDN 10-24-100C	SDN 20-24-100C	SDN 40-24-100C	
Reliability							
MTBF	Telcordia SR-332 Issue 2 Method 1 Case 3 @ 25 °C	>2,088,000 hours @ 115 Vac >2,133,000 hours @ 230 Vac	>1,800,000 hours @ 115 Vac >2,100,000 hours @ 230 Vac	> 550,000 hours @ 115 Vac >650,000 hours @ 230 Vac	>800,000 hours @ 115 Vac >850,000 hours @ 230 Vac	>550,000 hours @ 115 Vac >570,000 hours @ 230 Vac	
	Telcordia SR-332 Issue 2 Method 1 Case 3 @ 40 °C	>1,112,000 hours @ 115 Vac >1,170,000 hours @ 230 Vac	>1,000,000 hours @ 115 Vac >1,100,000 hours @ 230 Vac	>300,000 hours @ 115 Vac >400,000 hours @ 230 Vac	>500,000 hours @ 115 Vac >570,000 hours @ 230 Vac	>360,000 hours @ 115 Vac >370,000 hours @ 230 Vac	
Installation							
Fusing –Input		Input Branch fuse or circuit breaker should be provided by customer. See manual for details.					
–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 ^{7,8} (Screw Type)	Input	16–10 AWG (1.5–6 mm ²) solid or stranded conductors. Screw torque: 4.4-6.5 lb-inch (50-73 N-cm).			13-10 AWG (3-6 mm ²) solid/stranded conductors. Screw Torque: 4.4 lb-inch (50 N-cm).		
	Output (dual output terminals)	16–10 AWG (1.5–6 mm ²) for solid or stranded conductors. Screw torque: 4.4-6.5 lb-inch (50-73 N-cm).			7–6 AWG (10.6–13 mm ²) solid/stranded conductors. Screw Torque: 15.6 lb-inch (176 N-cm)		
–Free Space	Above & Below	0.98 in (25 mm)		1.6 in (40 mm)	0.98in (25mm)		
	Left & Right	0.39 in. (10mm)				0.59in (15mm)	
	Front	0.59 in. (15 mm)					
H x W x D inches in (mm)		4.85 x 2.36 x 4.36 (123.0 x 60.0 x 110.0)	4.85 x 1.97 x 4.36 (123.0 x 50.0 x 110.0)	4.85 x 2.36 x 4.36 (123.0 x 60.0 x 110.0)	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)		1.76 (0.80)	1.3 (0.6)	1.7 (0.8)	3.0 (1.4)	6.0 (2.8)	
General							
Case		Fully enclosed metal housing with fine ventilation grid to keep out small parts. IP 20 touch proof					
Status Indicators		Visual: 3 status LEDs (Input, Output, Alarm) Relay: N.O. contact rated 200mA/50 Vdc Signal Active when Vout > 18.5 Vdc +/-5% (Vout > 10.8 Vdc for SDN 16-12-100C)					
Warranty		5 Year Limited Warranty					

7. Screw terminals. Use only one copper wire per terminal. Non-ratcheting torque driver recommended.

8. SDN 40-24-100C only — Provided with Signal Mode terminal block which includes the following features: DC OK, Ground signal, PS ON, I_share connection. Refer to Signals Manual for terminal connection details..