

High Power Density Convection Cooled

120 Watts SDS120 Series



THE XPERTS IN POWER

- Single Dual & Triple Outputs
- Small Size 3.2" x 5.0" x 1.54"
- Active PFC - Meets EN61000-3-2, -3
- Overvoltage & Overcurrent Protection
- Optional PFD Signal
- International Safety Approvals

Specification

Input

- Input Voltage* • 90-264 VAC
- Input Frequency* • 47-63 Hz
- Input Current* • 1.7 A max at 115 VAC, 1.0 A max at 230 VAC
- Inrush Current* • 15 A max at 115 VAC, 30 A max at 230 VAC
- Power Factor* • 0.97 typical, See Note 5
- Earth Leakage Current* • <0.30 mA at 115 VAC, <0.45 mA at 230 VAC
- Input Protection* • 3.15 A on board fuse

Output

- Output Voltage* • See Table
- Output Voltage Adjustment* • ±5%
- Output Power* • 120 Watts
- Minimum Load* • Multi output models only - See Table & when PFD option used
- Start Up Delay* • 2 s max
- Start Up Rise Time* • 2 ms
- Hold Up Time* • >16 ms minimum
- Initial Set Accuracy* • ±1% for single output models
±5% for multi output models
- Line Regulation* • ±1% maximum, 0.5% typical
- Load Regulation* • ±5% maximum, 3.0% typical
- Transient Response* • 4% max deviation, 500 µs recovery time for a 50% load change
- Ripple & Noise* • 1% pk-pk typical
- Overvoltage Protection* • 112% to 132% V1 only, recycle input to reset
- Overcurrent Protection* • On all outputs 110% to 150% with auto recovery
- Temperature Coefficient* • ±0.04%/°C

General

- Efficiency* • 80% typical, 85% max
- Isolation* • 3000 VAC Input to Output
1500 VAC Input to Ground
500 VAC Output to Ground
- Switching Frequency* • 80 kHz typically
- Power Density* • 6.25 W/in³
- Signals* • PFD - Fail = TTL low (option)
- MTBF* • >100,000 hours MIL STD-217F
- Size* • 5.00" x 3.20" x 1.54"
- Weight* • 450-550 grams

Environmental

- Operating Temperature* • 0° C to +70 °C
Derate linearly from 100% load at +50 °C to 50% load at +70°C
- Storage Temperature* • -40 °C to +85 °C
- Cooling* • Convection cooled
- Humidity* • 5% to 95% RH, non-condensing
- Vibration* • 2 G on 3 axis

EMC & Safety

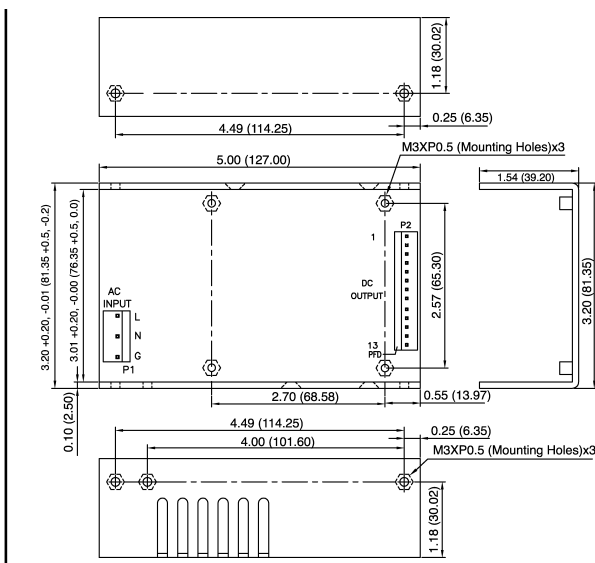
- EMI/EMC* • EN61000-3-2, -3, EN55022 CISPR22 Class B & FCC Level B conducted
- ESD Susceptibility* • EN61000-4-2 Level 2 Perf Criteria A
- Radiated Susceptibility* • EN61000-4-3 3 V/m Perf Criteria A
- EFT/Burst* • EN61000-4-4 Level 2 Perf Criteria A
- Surge* • EN61000-4-5 Level 3 Perf Criteria A
- Conducted Susceptibility* • EN61000-4-6 Level 2 Perf Criteria A
- Safety Approvals* • UL60950, CSA 60950 per cUL
EN60950, CE Mark LVD

OUTPUT VOLTAGE & CURRENT RATINGS													SDS120
Max Power	Output #1				Output #2				Output #3				Model Number ^(3, 4)
	Vnom	Imin ^(4,5)	Imax	Tol. ⁽¹⁾	Vnom	Imin	Imax	Tol. ⁽¹⁾	Vnom	Imin	Imax	Tol. ⁽¹⁾	
100 W	3.3 V	0.00 A	22.00 A	5%									SDS120PS03B
110 W	5.0 V	0.00 A	22.00 A	5%									SDS120PS05B
115 W	7.0 V	0.00 A	16.42 A	5%									SDS120PS07B
120 W	9.0 V	0.00 A	13.33 A	4%									SDS120PS09B
120 W	12.0 V	0.00 A	10.00 A	3%									SDS120PS12B
120 W	15.0 V	0.00 A	8.00 A	3%									SDS120PS15B
120 W	18.0 V	0.00 A	6.66 A	3%									SDS120PS18B
120 W	24.0 V	0.00 A	5.00 A	2%									SDS120PS24B
120 W	28.0 V	0.00 A	4.28 A	2%									SDS120PS28B
120 W	36.0 V	0.00 A	3.33 A	2%									SDS120PS36B
120 W	48.0 V	0.00 A	2.50 A	2%									SDS120PS48B
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.20 A	6.0 A	5%					SDS120PD01B
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.20 A	6.0 A	5%					SDS120PD02B
120 W	5.0 V	1.50 A	15.00 A	5%	15.0 V	0.20 A	6.0 A	5%					SDS120PD03B
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.10 A	3.5 A	5%					SDS120PD04B
79.5 W	3.3 V	1.50 A	15.00 A	5%	5.0 V	0.40 A	6.0 A	5%					SDS120PD00B
120 W	5.0 V	1.50 A	15.00 A	5%	-24.0 V	0.20 A	2.0 A	5%					SDS120PD05B
120 W	28.0 V	0.39 A	3.92 A	5%	5.0 V	0.20 A	2.0 A	5%					SDS120PD06B
91.5 W	3.3 V	1.50 A	15.00 A	5%	5.0 V	0.60 A	6.0 A	5%	12.0 V	0.0 A	1.0 A	5%	SDS120PT00B
91.5 W	3.3 V	1.50 A	15.00 A	5%	5.0 V	0.60 A	6.0 A	5%	-12.0 V	0.0 A	1.0 A	5%	SDS120PT01B
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	5.0 V	0.0 A	0.8 A	5%	SDS120PT02B
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	-5.0 V	0.0 A	0.8 A	5%	SDS120PT03B
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	-12.0 V	0.0 A	0.8 A	5%	SDS120PT04B
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	12.0 V	0.0 A	0.8 A	5%	SDS120PT05B
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	5.0 V	0.0 A	0.8 A	5%	SDS120PT06B
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	-5.0 V	0.0 A	0.8 A	5%	SDS120PT07B
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	-12.0 V	0.0 A	0.8 A	5%	SDS120PT08B
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.60 A	6.0 A	5%	12.0 V	0.0 A	0.8 A	5%	SDS120PT09B
120 W	5.0 V	1.50 A	15.00 A	5%	15.0 V	0.60 A	6.0 A	5%	-15.0 V	0.0 A	0.8 A	5%	SDS120PT10B
120 W	5.0 V	1.50 A	15.00 A	5%	15.0 V	0.60 A	6.0 A	5%	15.0 V	0.0 A	0.8 A	5%	SDS120PT11B
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.35 A	3.5 A	5%	-24.0 V	0.0 A	0.8 A	5%	SDS120PT12B
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.35 A	3.5 A	5%	24.0 V	0.0 A	0.8 A	5%	SDS120PT13B
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.35 A	3.5 A	5%	-12.0 V	0.0 A	0.8 A	5%	SDS120PT14B
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.35 A	3.5 A	5%	12.0 V	0.0 A	0.8 A	5%	SDS120PT15B
120 W	5.0 V	1.50 A	15.00 A	5%	10.0 V	0.60 A	6.0 A	5%	-10.0 V	0.0 A	1.0 A	5%	SDS120PT16B
120 W	5.0 V	1.50 A	15.00 A	5%	10.0 V	0.60 A	6.0 A	5%	10.0 V	0.0 A	1.0 A	5%	SDS120PT17B

Notes

1. Total regulation includes initial set accuracy, line regulation and load regulation.
2. For optional open frame, delete suffix 'B' from model number. Example SDS120PS03.
3. For non-standard voltages contact sales office.
4. For optional PFD circuit, add suffix 'P' to model number requires a minimum 10% load to operate correctly due to active PFC stage turning off.
5. Below 10% load, active PFC stage turns off to save power.

Mechanical Details



Pin	Single	Dual	Triple
1	V1	V2	V2
2	V1	V2	V2
3	V1	V1	V1
4	V1	V1	V1
5	V1	V1	V1
6	V1	V1	V1
7	Return	Return	Return
8	Return	Return	Return
9	Return	Return	Return
10	Return	N/C	V3
11	Return	Return	Return
12	Return	Return	Return
13	PFD	PFD	PFD

Notes:

1. Dimensions are shown in inches (mm).
2. Weight 450-550g approx.
3. Input connector P1 mates with Molex housing 09-50-3051 and Molex 2878 series crimp terminal.
4. Output connector P2 mates with Molex housing 09-50-3131 and Molex 2878 series crimp terminal.
5. For optional cover kit order part number SDS120 COVER, to receive unit with cover fitted add suffix 'C' to model number.
6. For mating connector kit order part number SDS120 CON KIT.
7. For loom kit order part number SDS120S LOOM for single output models and SDS120M LOOM for multi output models.
8. DIN clips are available for alternate mounting order 2 x 'DIN CLIP'.