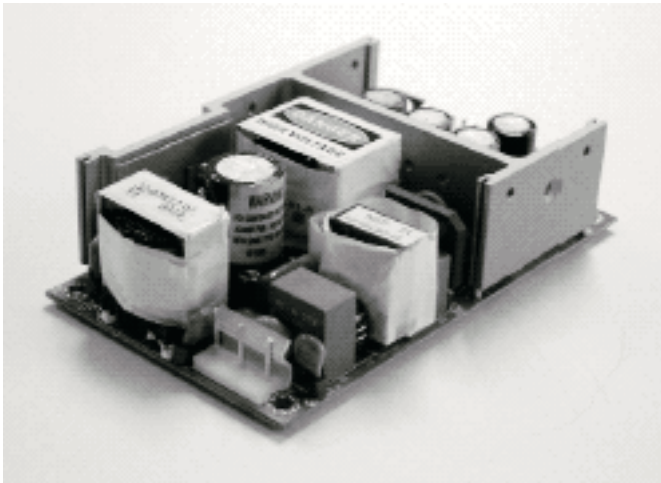


# SDS120 Series

120W AC/DC Open Frame Power Supply - Chassis mount

CoolPower  
Solutions



- Single Dual & Triple Outputs
- Small Size 3.0" x 5.0" x 1.32"
- 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
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/in <sup>3</sup>
Signals	• PFD - Fail = TTL low (option)
MTBF	• >100,000 hours MIL STD-217F
Size	• 5.00" x 3.00" x 1.32"
Weight	• 360 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

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OUTPUT VOLTAGE & CURRENT RATINGS													SDS120	
Max Power	Output #1				Output #2				Output #3				Model Number	
	Vnom	Imin	I <sub>max</sub>	Tol.	Vnom	Imin	I <sub>max</sub>	Tol.	Vnom	Imin	I <sub>max</sub>	Tol.		
100 W	3.3 V	0.00 A	22.00 A	5%									SDS120PS03	
110 W	5.0 V	0.00 A	22.00 A	5%									SDS120PS05	
115 W	7.0 V	0.00 A	16.42 A	5%									SDS120PS07	
120 W	9.0 V	0.00 A	13.33 A	4%									SDS120PS09	
120 W	12.0 V	0.00 A	10.00 A	3%									SDS120PS12	
120 W	15.0 V	0.00 A	8.00 A	3%									SDS120PS15	
120 W	18.0 V	0.00 A	6.66 A	3%									SDS120PS18	
120 W	24.0 V	0.00 A	5.00 A	2%									SDS120PS24	
120 W	28.0 V	0.00 A	4.28 A	2%									SDS120PS28	
120 W	36.0 V	0.00 A	3.33 A	2%									SDS120PS36	
120 W	48.0 V	0.00 A	2.50 A	2%									SDS120PS48	
120 W	3.3 V	1.50 A	15.00 A	5%	12.0 V	0.20 A	6.0 A	5%					SDS120PD01	
120 W	5.0 V	1.50 A	15.00 A	5%	12.0 V	0.20 A	6.0 A	5%					SDS120PD02	
120 W	5.0 V	1.50 A	15.00 A	5%	15.0 V	0.20 A	6.0 A	5%					SDS120PD03	
120 W	5.0 V	1.50 A	15.00 A	5%	24.0 V	0.10 A	3.5 A	5%					SDS120PD04	
79.5 W	3.3 V	1.50 A	15.00 A	5%	5.0 V	0.40 A	6.0 A	5%					SDS120PD00	
120 W	5.0 V	1.50 A	15.00 A	5%	-24.0 V	0.20 A	2.0 A	5%					SDS120PD05	
120 W	28.0 V	0.39 A	3.92 A	5%	5.0 V	0.20 A	2.0 A	5%					SDS120PD06	
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%	SDS120PT00	
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%	SDS120PT01	
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%	SDS120PT02	
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%	SDS120PT03	
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%	SDS120PT04	
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%	SDS120PT05	
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%	SDS120PT06	
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%	SDS120PT07	
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%	SDS120PT08	
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%	SDS120PT09	
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%	SDS120PT10	
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%	SDS120PT11	
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%	SDS120PT12	
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%	SDS120PT13	
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%	SDS120PT14	
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%	SDS120PT15	
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%	SDS120PT16	
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%	SDS120PT17	

Notes

- Total regulation includes toleration, line regulation and load regulation.
- For non-standard voltages contact sales office.

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

- Dimensions are shown in inches (mm).
- Weight 360g approx.
- Input connector P1 mates with Molex housing 09-50-3051 and Molex 2878 series crimp terminal.
- Output connector P2 mates with Molex housing 09-50-3131 and Molex 2878 series crimp terminal.
- For mating connector kit order part number SDS120 CON KIT.
- For loom kit order part number SDS120S LOOM for single output models and SDS120M LOOM for multi output models.