



SP230D - SP310D Series

230 - 310 Watt AC - DC Desk-Top Power Supply
Energy Efficiency Level V & VI, RoHS 2 Compliant

Date: 12/5/14

Rev: 120514

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The SP230D – SP310D Series is a high-powered desktop switch mode power supply, with an output power range of 230 Watts to 310 Watts. It offers 12 Vdc – 56 Vdc single output voltages, with IEC320-C14 input socket, and is tested to Energy Efficiency Level 5 & 6 to meet future applications.

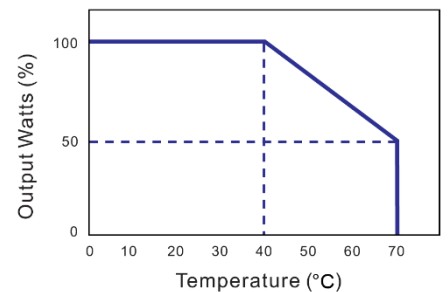


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current (Low Line)	5 A Max at 115 Vac
Input Current (High Line)	2 A Max at 230 Vac
Power Factor Correction	0.9 Min Meets EN61000-3-2 Class D Limits
Safety Ground Leakage Current	3.5 mA Max at 240 Vac
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P)	1.5% Max Measured w/ 0.1 μ F ceramic capacitor & 47 μ F electrolytic capacitor in parallel
Over-Voltage Protection	150% Max Latch-off circuit with manual AC reset
Over-Current Protection	105 - 150% Max Auto-Recover when fault is removed
Over-Temperature Protection	117°C \pm 10°C Latch-off circuit with manual AC reset
Temperature Coefficient	\pm 0.04% / °C Max
Dynamic Load Regulation	Load Change from 100% - 50%: \pm 5%
Efficiency	Meets Energy Efficiency Level V & VI Criteria
No Load Power Consumption	Meets Energy Efficiency Level V & VI Criteria
Line Regulation	\pm 1% Max at Full Load
Load Regulation	\pm 5% Max
Start-Up Time	3 s Max
Hold-Up Time	10 ms Min
Inrush Current	100 A Max at 110 Vac with a 25°C Cold Start 200 A Max at 220 Vac with a 25°C Cold Start
Mean Time Between Failure	Full Load at 25°C Ambient: 100,000 Hours Min
Operating Temperature	See Derating Curve
Storage Temperature	-20 to 85 °C
Industry Compliance	RoHS, Energy Efficiency Level V & VI
EMI Requirements	Meets Conduction Limits of: FCC Part 15 Class B, CISPR-22 Class B, and EN 55022 Class B
Safety Compliance	UL/c-UL (UL 60950-1:2nd Edition), TUV/GS (EN 60950-1:2nd Edition), CE, CB, FCC, CCC

Features:

- Universal Input 100 - 240 Vac
- 12 - 56 Vdc, Single Output
- Active PFC Circuit
- IEC 320 C-14
- 6.3 A, 250 V Input Fuse
- Over-Voltage Protection
- Over-Current Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant

Derating Curve



Derate Linearly from 100% at 40°C to 50% at 70°C



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Output Voltage and Current Table

Model Number	Output Voltage Range *	Output Current <i>Limited to Output Power †</i>	Maximum Output Power
SP230D9 __ R	12 - 16 Vdc	19.16 - 14.37 A	230 W
SP240D9 __ R	12 - 16 Vdc	20.00 - 15.00 A	240 W
SP250D9 __ R	12 - 16 Vdc	20.83 - 15.62 A	250 W
SP260D9 __ R	19 - 24 Vdc	13.68 - 6.66 A	260 W
SP270D9 __ R	19 - 24 Vdc	14.21 - 11.25 A	270W
SP270D9 __ R	32 - 42 Vdc	8.43 - 6.42 A	270 W
SP270D9 __ R	44 - 56 Vdc	6.13 - 4.82 A	270 W
SP280D9 __ R	19 - 24 Vdc	14.73 - 11.66 A	280 W
SP290D9 __ R	19 - 24 Vdc	15.26 - 12.08 A	290 W
SP300D9 __ R	19 - 24 Vdc	15.78 - 12.50 A	300 W
SP310D9 __ R	32 - 42 Vdc	9.68 - 7.38 A	310 W
SP310D9 __ R	44 - 56 Vdc	7.04 - 5.53 A	310 W

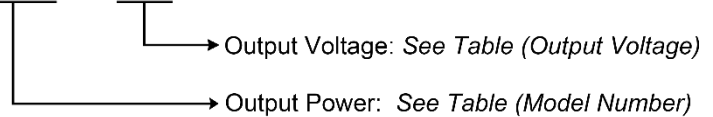
* Output Voltages between ranges are also available

† To find Output Current:
Output Current = Max Power ÷ Output Voltage

Example: Output Current for SP240D912R
(12 Vdc Output)

Output Current = 240 W ÷ 12 V
Output Current = 20 A

SP □ □ □ D9 □ □ R





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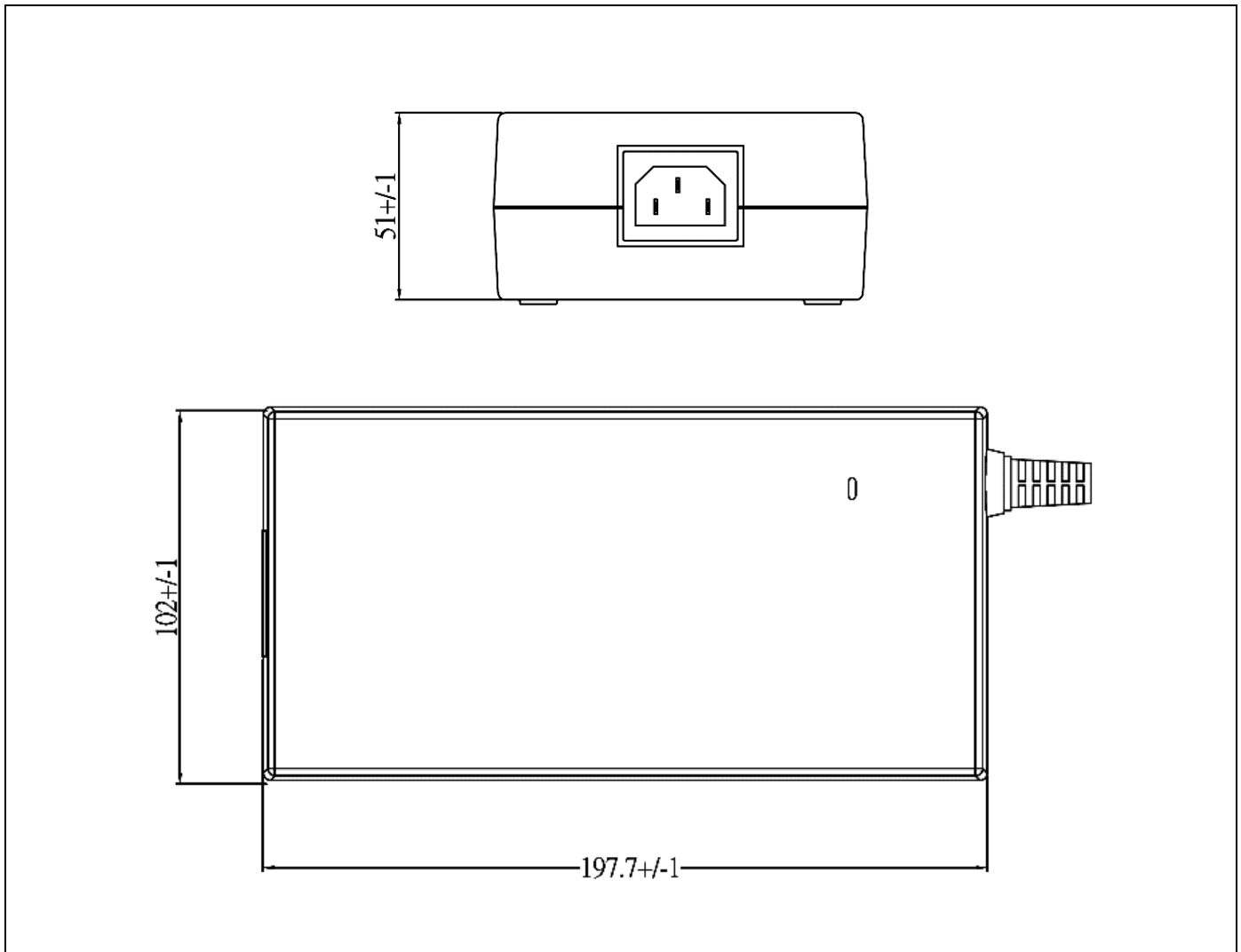
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Mechanical Specification (mm)



Note: Output connector to be specified.
The cable length and wire gauge will be dependent on Energy Efficiency requirements for each current level.