



SP160D3R – SP250D3R Series

160 - 250 Watt AC - DC Power Supply
Energy Efficiency Level V & VI, RoHS 2 Compliant

Date: 2/11/14

Rev: 021116

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The SP160D3R – SP250D3R Series is a high-powered desktop switch mode power supply, with an output power range of 160 Watts to 250 Watts. It offers 12 Vdc – 56 Vdc single output voltages, with choice of IEC320-C6, C8, C14, or C18 input socket, and is tested to Energy Efficiency Level 5 & 6 to meet future applications.

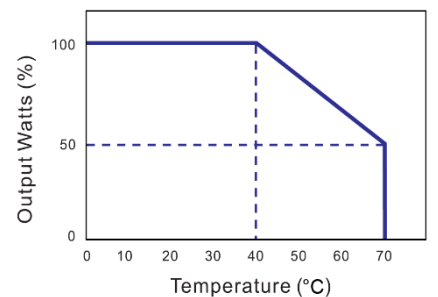


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current (Low Line)	3.5 A Max at 100 Vac
Input Current (High Line)	2.5 A Max at 240 Vac
Safety Ground Leakage Current	3.5 mA Max at 240 Vac, Full Load
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P)	2% Max., Full Load
Over-Voltage Protection	150%, Auto Recovery
Over-Current Protection	105 – 150%
Temperature Coefficient	± 0.04% / °C Max
Efficiency	Meets Energy Efficiency Level V & VI Criteria
No Load Power Consumption	≤ 0.21 Watts
Line Regulation	± 1% Max at Full Load
Load Regulation	± 5% Max at 230 Vac
Start-Up Time	3 s
Hold-Up Time	10 ms Min
Withstanding Voltage	Primary to Secondary: 4,242 Vdc
Insulation Resistance	100 MΩ Min
Inrush Current	15 A @ 115 Vac Max at 25°C Cold Start 30 A @ 230 Vac Max at 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	-40 to 85°C
Industry Compliance	Directive 2011/65/EU (RoHS 2)
EMI Requirements	Meets Conduction Limits of: CISPR-11 Class B and EN 55011 Class B
Safety Compliance	UL/cUL, TUV/GS, CE, CB, FCC, CCC

Features:

- Universal Input 100 - 240 Vac
- 12 - 56 Vdc, Single Output
- Active PFC Circuit
- IEC 320 C-6, C-8, C-14, and C-18
- 5 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 *	Max. Output Current Limited to Output Power †	Maximum Output Power
SP160D3R __ _R	12 - 18 Vdc	13.33 A	160 W
SP180D3R __ _R	12 - 18 Vdc	15.00 A	180 W
SP180D3R __ _R	19 - 28 Vdc	9.47 A	180 W
SP200D3R __ _R	12 - 18 Vdc	16.66 A	200 W
SP200D3R __ _R	19 - 28 Vdc	10.52 A	200 W
SP200D3R __ _R	32 - 42 Vdc	6.25 A	200 W
SP200D3R __ _R	44 - 56 Vdc	4.54 A	200 W
SP220D3R __ _R	12 - 18 Vdc	18.33 A	220 W
SP220D3R __ _R	19 - 28 Vdc	11.57 A	220 W
SP220D3R __ _R	32 - 42 Vdc	6.87 A	220 W
SP220D3R __ _R	44 - 56 Vdc	5.00 A	220 W
SP230D3R __ _R	19 - 28 Vdc	12.10 A	230 W
SP230D3R __ _R	32 - 42 Vdc	7.18 A	230 W
SP230D3R __ _R	44 - 56 Vdc	5.22 A	230 W
SP250D3R __ _R	19 - 28 Vdc	13.15 A	250 W
SP250D3R __ _R	32 - 42 Vdc	7.81 A	250 W
SP250D3R __ _R	44 - 56 Vdc	5.68 A	250 W

* Output Voltages between ranges are also available.

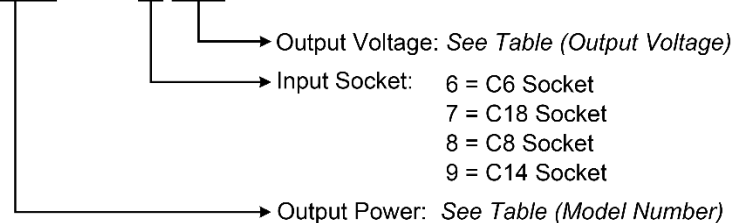
† To find Output Current:

Output Current = Max Power ÷ Output Voltage

Example: Output Current for 50 Vdc Output at 250 Watts

*Output Current = 250 W ÷ 50 V
Output Current = 5.00 A*

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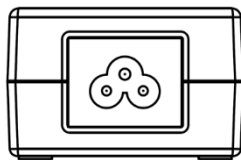
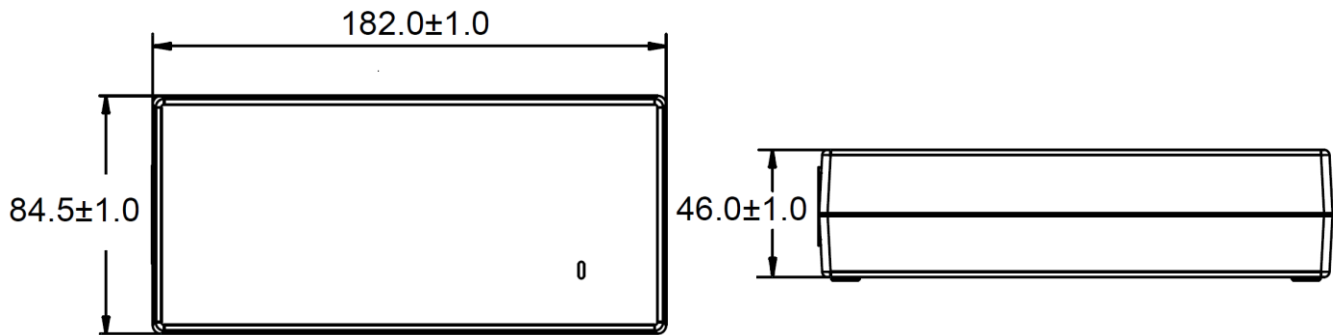
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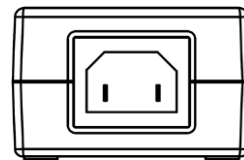
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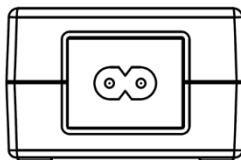
Mechanical Specification



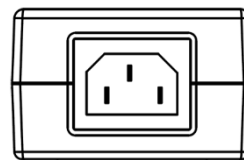
6 = C6 Socket



7 = C18 Socket



8 = C8 Socket



9 = C14 Socket

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



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