



# SP61P Series

60 Watt AC - DC Desktop Power Supply  
DoE Level VI, CoC v5 Tier 2, RoHS 2

Date: 11/2/18

Rev: 092717

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The SP61P Series switch mode power supply offers 60 Watts output power, with an output voltage range of 12 Vdc – 48 Vdc. Case style is a desktop enclosure with an IEC-320 C14 input socket, with UL/cUL, EN and IEC 60950-1 2<sup>nd</sup> Edition safety approvals, DoE Level 6 efficiency, and CoC v5 Tier 2.

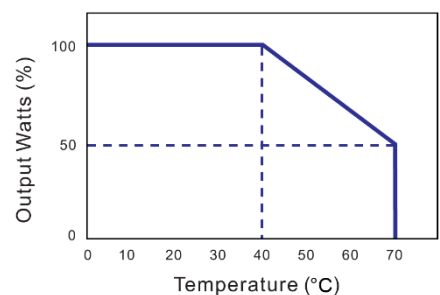


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current (Low Line)	1.4 A Typ. at 100 Vac, Full Load
Input Current (High Line)	0.8 A Typ. at 240 Vac, Full Load
Safety Ground Leakage Current	0.75 mA Max. at 240 Vac, Full Load
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) <sup>1</sup>	100 mV Typ.
Temperature Coefficient	± 0.04% / °C Max.
Transient Response	100% - 50% Load Change at 110 Vac Input: 4 ms Max.
Efficiency	89% Typ.
No Load Power Consumption	< 0.15 Watts
Line Regulation	± 1% Max. at 100 - 120 Vac, Full Load
Load Regulation	± 5% Max. at 230 Vac
Start-Up Time	3 s Max.
Hold-Up Time	10 ms Min.
Withstanding Voltage	Primary to Secondary: 4,242 Vdc Primary to Ground: 2,652 Vdc
Inrush Current	110 A Max. at 240Vac, 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
Weight	340 g Typ.
Industry Compliance	Directive 2011/65/EU (RoHS 2), DoE Level VI, CoC v5 Tier 2
EMI Requirements	Meets Conduction and Radiation Limits of: FCC Part 15 Class B, CISPR-32 Class B, and EN 55032 Class B
Safety Compliance	UL/cUL (UL 60950-1:2 <sup>nd</sup> Ed.), TUV/GS (EN 60950-1:2 <sup>nd</sup> Ed.), CE, CB, BIS (For 12-13 V and 27-33 V output only), CCC, PSE, RCM, LPS

### Features:

- Universal Input 100 - 240 Vac
- IEC 320 C14 Input Only
- 100% Burn-In
- RoHS 2 Compliant
- DoE Level VI
- CoC v5 Tier 2

### Derating Curve



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

### Notes:

1. Measured w/ 0.1 µF ceramic capacitor & 47 µF electrolytic capacitor in parallel and a 20 MHz Bandwidth-limited scope.



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## Output Voltage and Current Table

Model Number	Output Voltage	Output Current <i>Limited to Output Power<sup>1</sup></i>	Output Power
* SP61P9__ R	12 - 13 Vdc	4.61 – 5.00 A	60 W
SP61P9__ R	14 – 16 Vdc	3.75 – 4.29 A	60 W
SP61P9__ R	17 – 21 Vdc	2.86 – 3.53 A	60 W
SP61P9__ R	22 – 26 Vdc	2.30 – 2.73 A	60 W
* SP61P9__ R	27 – 33 Vdc	1.82 – 2.22 A	60 W
SP61P9__ R	34 – 40 Vdc	1.50 – 1.76 A	60 W
SP61P9__ R	41 – 48 Vdc	1.25 – 1.46 A	60 W

SP61 P9   R

→ Output Voltage: See Table (Output Voltage)

\* BIS Approval (12 – 13V, 27 – 33V)

**<sup>1</sup>To find Output Current:**

Output Current = Output Power ÷ Output Voltage

Example: Output Current for SP61P945R (45 Vdc Output, 60 Watts)

Output Current = 60 W ÷ 45 V

Output Current = 1.33 A



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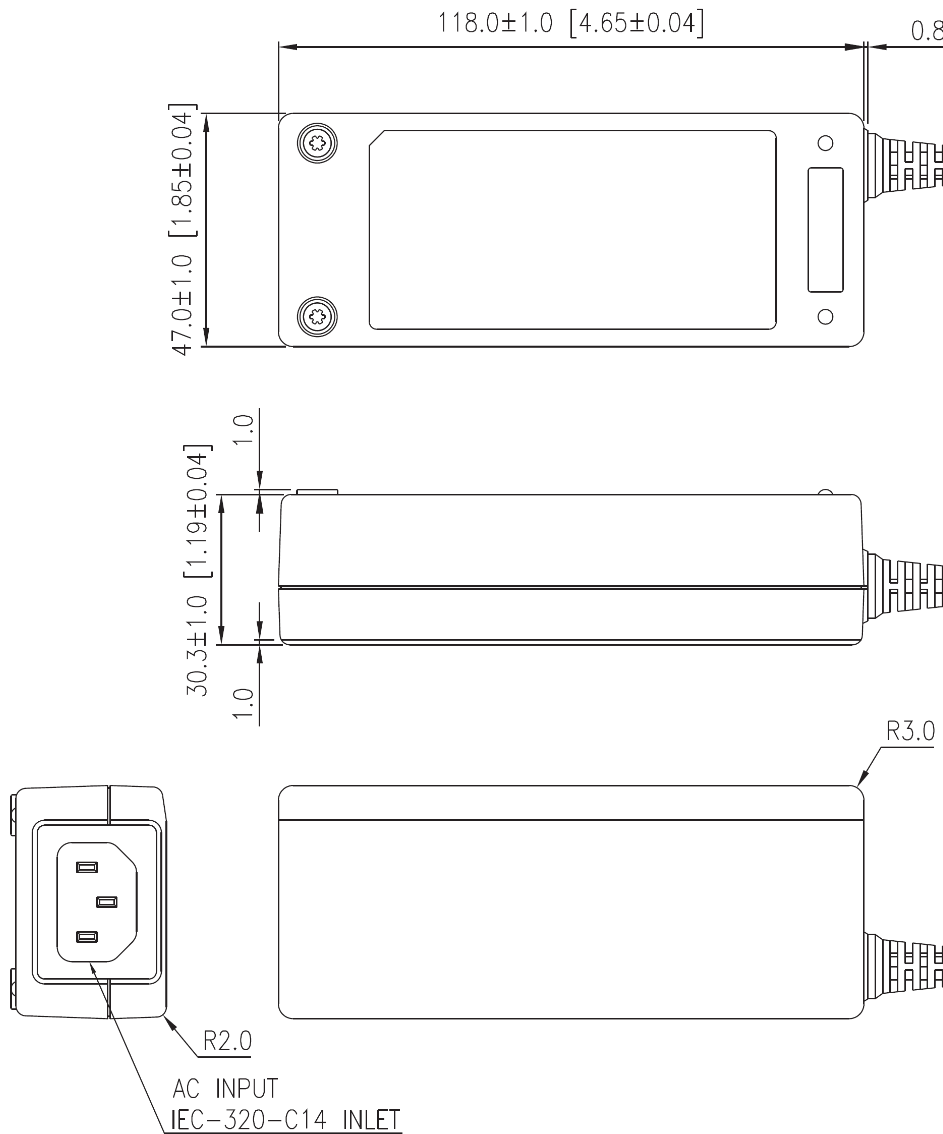
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## Mechanical Specification (mm)



Note: Output connector to be specified by customer.  
APX will be happy to recommend the appropriate connector for your application needs.  
The cable length and wire gauge will be dependent on the Energy Efficiency level requirements.