



SP100P Series

100 Watt AC - DC Desktop Power Supply
DoE Level VI, RoHS 2 Compliant

Date: 11/8/18

Rev: 070118

Page: 1 of 3

The SP100P Series switch mode power supply offers 100 Watts output power, with an output voltage range of 11 Vdc – 48 Vdc. Case style is a desktop enclosure with an IEC-320 C14 input socket, with UL/cUL, EN and IEC 60950-1 2nd Edition safety approvals, and DoE Level 6 efficiency.

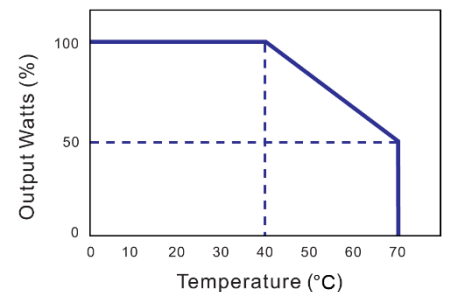


Input Voltage	90 to 260 Vac
Input Frequency	47 to 63 Hz
Power Factor Correction	0.95 - 1
Input Current (Low Line)	1.2 A Typ. @ 100 Vac, Full Load
Input Current (High Line)	0.5 A Typ. @ 240 Vac, Full Load
Safety Ground Leakage Current	0.75 mA Max. @ 240 Vac
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P)	See Table on Page 2
Over-Voltage Protection	112 – 132% Max.
Over-Load Protection	110 – 150% Max.
Temperature Coefficient	± 0.04 %/°C Max.
Transient Response	50% Load Change at 110 Vac Input: 4 ms Max.
Efficiency	88 – 89% Typ.
No Load Power Consumption	< 0.21 W
Line Regulation	± 1% Max. at Full Load
Load Regulation	± 3 - 5% @ 230 Vac, 10 – 90% Load Change
Start-Up Time	2 s Max., Full Load
Hold-Up Time	16 ms Typ.
Withstanding Voltage	Primary to Secondary: 4,242 Vdc Primary to Ground: 2,121 Vdc
Inrush Current	50 A @ 100 Vac Max., 25°C, Cold Start 120 A @ 240 Vac Max., 25°C, Cold Start
Mean Time Between Failure	100,000 Hours Min. (Full Load @ 25°C, MIL-HDBK-217F)
Operating Temperature	See Derating Curve
Storage Temperature	-40 to 85°C
Weight	490 - 670 g (Ref.)
Industry Compliance	Directive 2011/65/EU (RoHS 2), DoE VI
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 nd Ed.), TUV/GS (EN 60950-1:2 nd Ed.) CE, CB, RCM, PSE, CCC, BSMI, FCC

Features:

- Universal Input 100 - 240 Vac
- IEC 320 C14 Input
- Active Power Correction
- Over-Voltage Protection
- Over-Load Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- DoE Level VI

Derating Curve



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



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Page: 2 of 3

Output Voltage and Current Table

Model Number	Output Voltage	Output Current <i>Limited to Output Power</i> ¹	Ripple & Noise (mV P-P) ²	Output Power
SP100P9__R	11 – 13 Vdc	7.69 – 9.09 A	130	100 Watts
SP100P9__R	14 – 16 Vdc	6.25 – 7.14 A	150	100 Watts
SP100P9__R	17 – 21 Vdc	4.76 – 5.88 A	150	100 Watts
SP100P9__R	22 – 27 Vdc	3.70 – 4.55 A	150	100 Watts
SP100P9__R	28 – 33 Vdc	3.03 – 3.57 A	200	100 Watts
SP100P9__R	34 – 40 Vdc	2.50 – 2.94 A	250	100 Watts
SP100P9__R	41 – 48 Vdc	2.08 – 2.44 A	300	100 Watts

SP100P9 R

→ Output Voltage: See Table (Output Voltage)

Notes:

1. To find Output Current:

Output Current = Max Power ÷ Output Voltage

Example: Output Current for SP100P924R (24 Vdc Output, 100 Watts)

Output Current = 100 W ÷ 24 V

Output Current = 4.17 A

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



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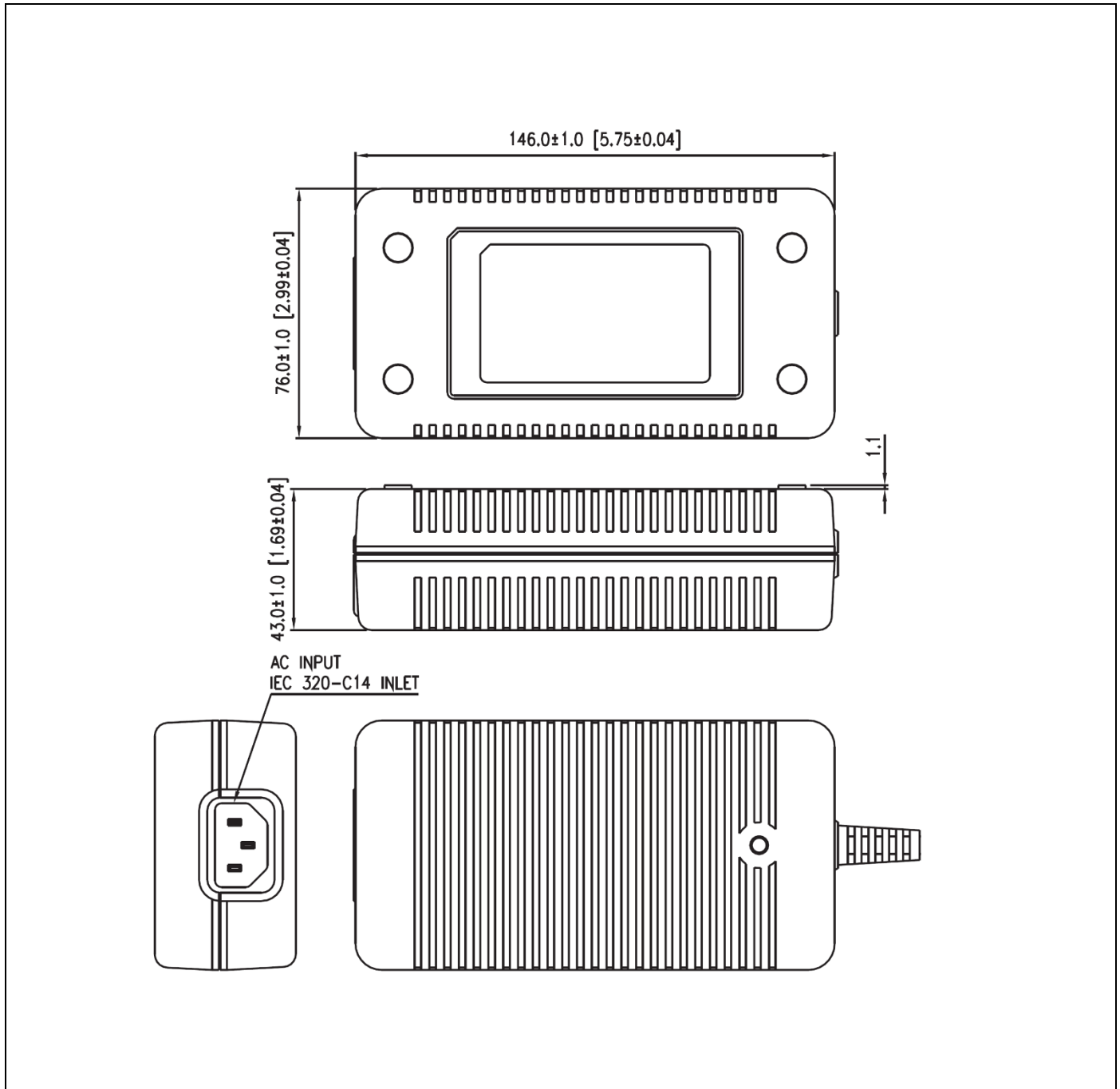
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Rev: 070118

Page: 3 of 3

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.