



SP108Q1R - SP120Q1R Series

108 - 120 Watt AC - DC Desktop Power Supply
UL/EN/IEC 62368-1 2nd Ed., DoE VI, CoC v5 Tier 2

Date: 9/28/18

Rev: 122217

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The SP108Q1R - SP120Q1R Series switch mode power supply offers 108 - 120 Watts output power, with an output voltage range of 12 Vdc - 56 Vdc. Case style is a desktop enclosure with choice of IEC-320 C6 and C14 input socket, with UL/EN/IEC 62368-1 2nd Edition and 60950-1 2nd Edition safety approvals, DoE Level 6, and CoC v5 Tier 2 efficiency.

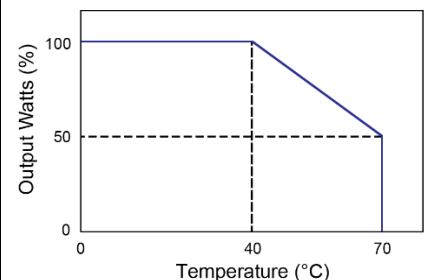


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	1.6 A Max.
Leakage Current	3.5 mA Max.
Withstanding Voltage	Primary to Secondary: 3000 Vac
Output Voltage & Current	See Table on Page 2
Ripple & Noise ¹ (P-P)	2% Max.
Over-Voltage Protection	Unit is protected from over-voltage conditions
Over-Current Protection	Unit is protected from over-current conditions
Over-Temperature Protection	Unit is protected from over-temperature conditions
Temperature Coefficient	± 0.04% / °C Max.
Transient Response Time	50% Load Change: 0.5 ms
Efficiency	Meets DoE Level VI and CoC v5 Tier 2 Criteria
No Load Power Consumption	Meets DoE Level VI and CoC v5 Tier 2 Criteria
Load Regulation	± 5% Typ.
Hold-Up Time	10 ms Min.
Mean Time Between Failure	Full Load at 25°C Ambient: 300,000 Hours Min. (Telcordia)
Operating Temperature	See Derating Curve
Storage Temperature	-20 to 80°C
Weight	590 g (Ref.)
Industry Compliance	RoHS 2, DoE VI, CoC v5 Tier 2
EMC Requirements	EN 55024, EN 61000-3-2, -3-3
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/CSA 62368-1:2 nd Ed., 60950-1:2 nd Ed.), GS (EN 60950-1:2 nd Ed.), CB (EN/IEC 62368-1:2 nd Ed.), CE, PSE, BSMI

Features:

- Universal Input 100 - 240 Vac
- IEC 320 C14 and C6 Input
- Over-Voltage Protection
- Over-Current Protection
- Over-Temperature Protection
- Short Circuit Protection
- 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

Note:

1. Ripple & Noise are measured w/ 0.1 µF ceramic capacitor & 47 µF electrolytic capacitor in parallel and a 20 MHz bandwidth-limited scope.



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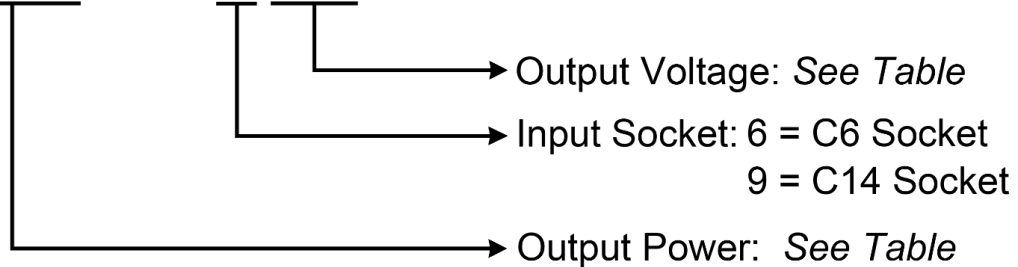
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Output Voltage and Current Table

Model Number	Output Voltage	Output Current	Output Power
SP108Q1R_12R	12 Vdc	9.00 A	108 W
SP120Q1R_15R	15 Vdc	8.00 A	120 W
SP120Q1R_16R	16 Vdc	7.50 A	120 W
SP120Q1R_18R	18 Vdc	6.60 A	120 W
SP120Q1R_19R	19 Vdc	6.30 A	120 W
SP120Q1R_20R	20 Vdc	6.00 A	120 W
SP120Q1R_24R	24 Vdc	5.00 A	120 W
SP120Q1R_30R	30 Vdc	4.00 A	120 W
SP120Q1R_48R	48 Vdc	2.50 A	120 W
SP120Q1R_56R	56 Vdc	2.14 A	120 W

SP Q1R R





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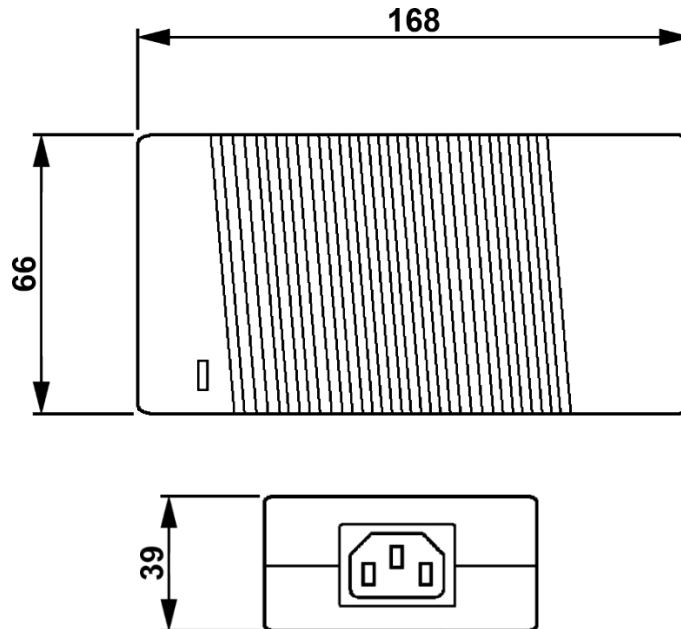
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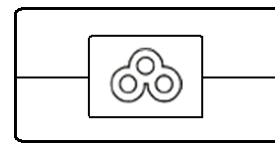
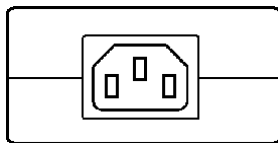
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Mechanical Specification (mm)



SP___Q1R9: C14 Input

SP___Q1R6: C6 Input



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.