



SP36Q1R - SP50Q1R Series

36 - 50 Watt AC - DC Desktop Power Supply
UL/EN/IEC 62368-1 2nd Ed., DoE VI, CoC v5 Tier 2

Date: 10/02/18

Rev: 100218

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The SP36Q1R – SP50Q1R Series switch mode power supply offers 36 Watts to 50 Watts output power, with an output voltage range of 5 Vdc - 48 Vdc. Case style is a desktop enclosure with choice of C6, C8, 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.

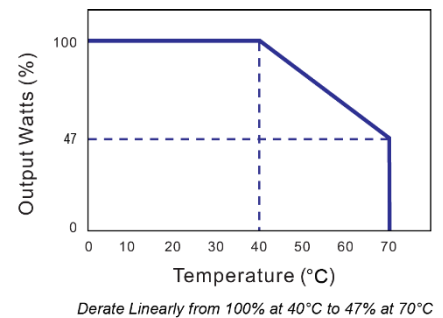


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	1.2 A Max.
Leakage Current	C14 and C6 Model: 3.5 mA Max. C8 Model: 0.25 mA Max.
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P)¹	2% Max.
Over-Voltage Protection	Unit is protected from over-voltage conditions
Over-Current Protection	Unit is protected from over-current conditions
Dynamic Load Regulation	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
Line Regulation	±1% Max. at Full Load
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
Industry Compliance	RoHS, DoE 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	9 - 48 Vdc: UL/cUL (UL/CSA 62368-1:2 nd Ed., 60950-1:2 nd Ed.), CE, GS (EN 60950-1:2 nd Ed.), CB (IEC/EN 62368-1:2 nd Ed.), PSE, BSMI, CCC, RCM, LPS
	5 Vdc: UL/cUL (UL/CSA 62368-1:2 nd Ed., 60950-1:2 nd Ed.), CE, GS (EN 60950-1:2 nd Ed.), CB (EN/IEC 62368-1:2 nd Ed.), PSE

Features:

- Universal Input 100 - 240 Vac
- Available with IEC 320 C14, C8, & C6 input
- Over-Voltage Protection
- Over-Current Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- Energy Efficiency Level: VI
- CoC v5 Tier 2

Derating Curve



Note:

1. Ripple & Noise are measured with a 0.1 µF multilayer capacitor & 47 µF low ESR 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	Output Power
* SP50Q1R _ 05R	5 Vdc	10.00 A	50 W
SP36Q1R _ 09R	9 Vdc	4.00 A	36 W
SP45Q1R _ 09R	9 Vdc	5.00 A	45 W
SP40Q1R _ 12R	12 Vdc	3.30 A	40 W
SP50Q1R _ 12R	12 Vdc	4.20 A	50 W
SP50Q1R _ 13R	13.5 Vdc	3.71 A	50 W
SP50Q1R _ 15R	15 Vdc	3.34 A	50 W
SP50Q1R _ 18R	18 Vdc	2.78 A	50 W
SP50Q1R _ 19R	19 Vdc	2.64 A	50 W
SP50Q1R _ 24R	24 Vdc	2.10 A	50 W
SP50Q1R _ 48R	48 Vdc	1.05 A	50 W

* Available with C14 and C6 Input Only

SP Q1R R

Output Voltage: See Table (Output Voltage)

Input Socket: 6 = C6 Socket
8 = C8 Socket
9 = C14 Socket

Output Power: See Table (Model Number)



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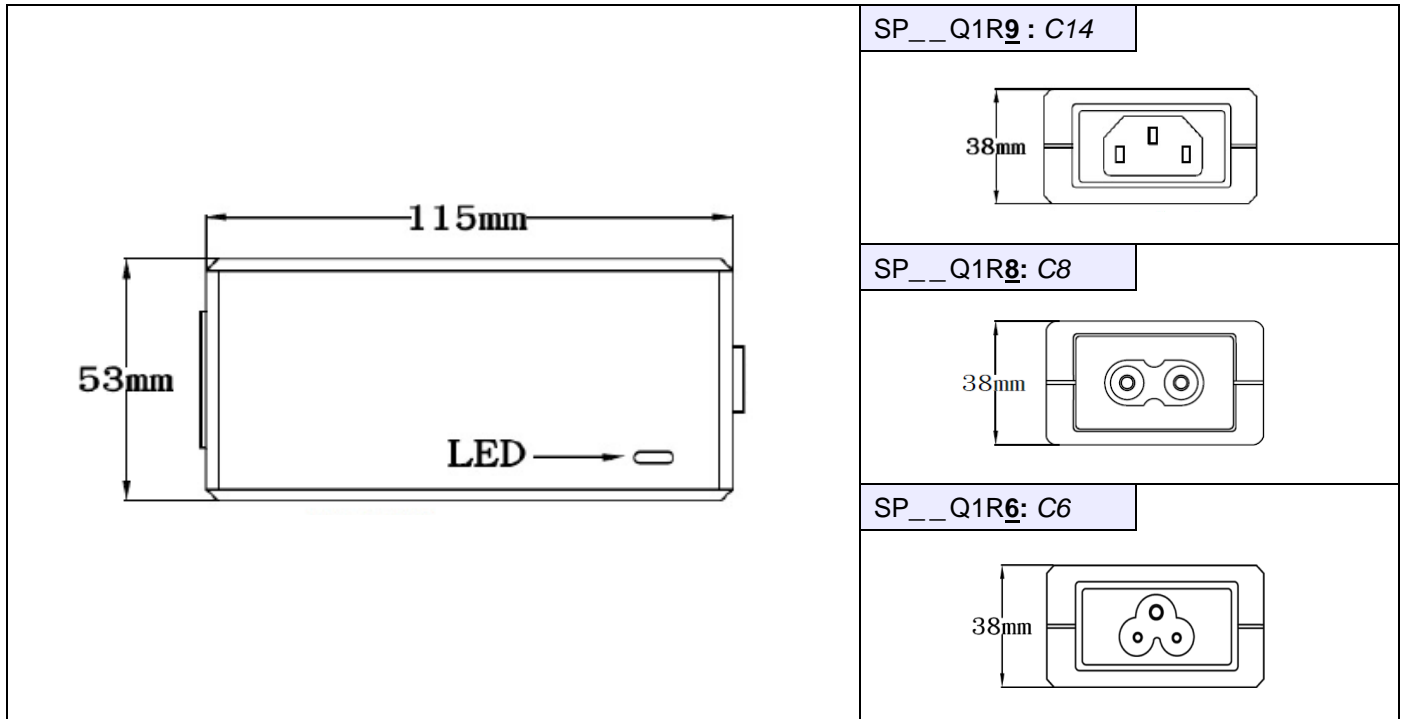
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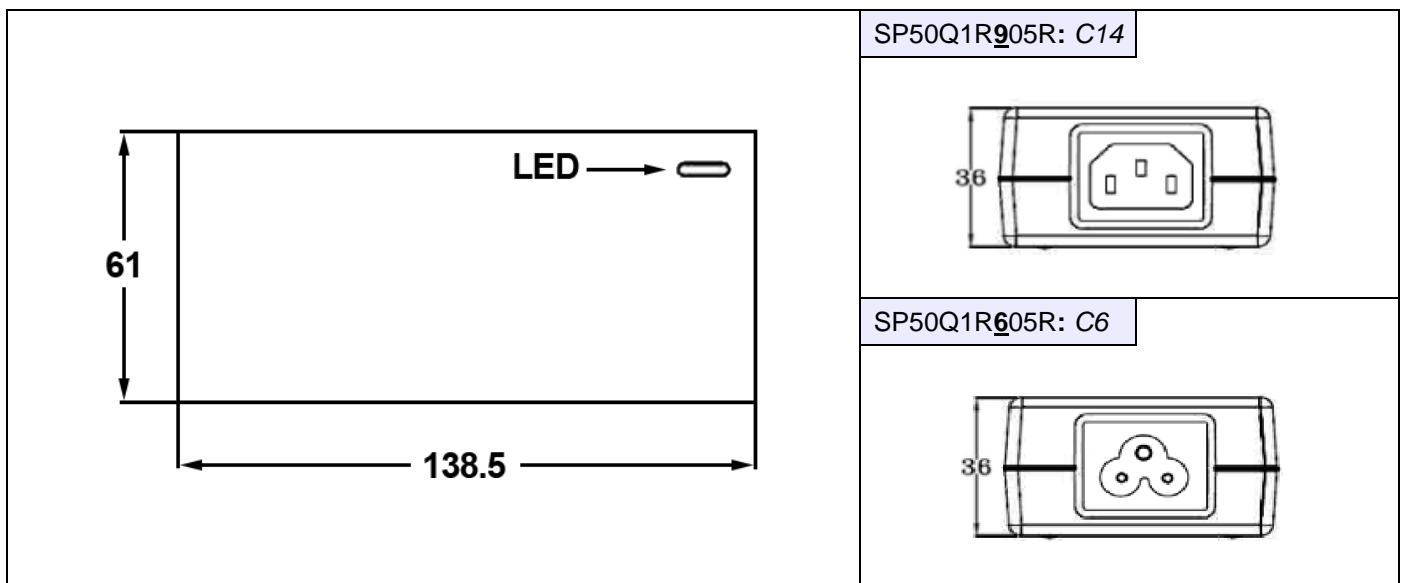
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Mechanical Specification (mm)



SP50Q1R_05R:



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.