



SM150Q1R – SM160Q1R Series

150 - 160 Watt AC-DC Medical Desktop Power Supply
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, RoHS 2

Date: 10/3/18

Rev: 020218

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The SM150Q1R – SM160Q1R Series switch mode power supply offers 150 Watts to 160 Watts output power, with an output voltage range of 12 Vdc – 48 Vdc. Case style is a desktop enclosure with choice of IEC-320 C6 or C14 input socket, with ES, EN and IEC 60601-1 3.1 Edition safety approvals, IEC 60601-1-2 4th Edition EMC, IEC 60950-1 2nd Edition Safety approval, and DoE Level 6 efficiency.

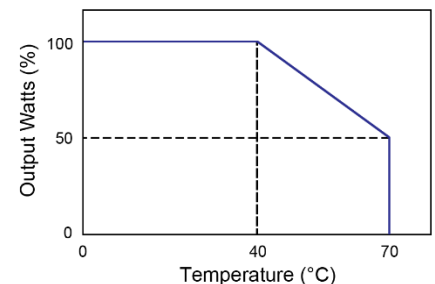


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	1.8 – 0.9 A
Leakage Current	< 100 μ A
Power Factor Correction	≥ 0.9 at Full Load
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) ¹	1% Max.
Over-Voltage Protection	150% Max.
Over-Current Protection	150% Max.
Over-Temperature Protection	125°C
Transient Response	50% Load Change: 0.5 ms Typ.
Efficiency	Meets DoE Level VI Criteria
No Load Power Consumption	< 0.15 Watts
Load Regulation	$\pm 5\%$ Typ.
Hold-Up Time	10 ms Min.
Withstanding Voltage	Primary to Secondary: 4,000 Vac Min. Primary to Frame Ground: 1,500 Vac 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	DoE VI, RoHS 2
Weight	820 g (Ref.)
EMC Requirements	IEC 60601-1-2: 2014 4 th Ed., EN 55024, EN 61000-3-2, -3-3
EMI Requirements	Meets Conduction and Radiation Limits of: CISPR-11 Class B, EN 55011 Class B, and FCC Part 18 Class B
Safety Compliance	Medical Approvals: UR/cUR (ES 60601-1:3.1 Ed.), CE, CB, TUV T- Mark (EN/IEC 60601-1:3.1 Ed.) ITE Approvals: PSE, CB (IEC 60950-1:2 nd Ed.)

Features:

- Dual ITE and Medical Approvals
- 2x MOPP Protection
- Touch Current: < 100 μ A
- Over-Voltage, Over-Current, Over-Temperature, and Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- DoE Level VI
- Meets IEC 60950-1 2nd Edition
- Meets IEC 60601-1-2: 2014 4th Edition EMC Requirements

Derating Curve



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

Note:

1. Ripple & Noise are measured with a 0.1 μ F multilayer capacitor & 0.10 μ F low ESR electrolytic capacitor in parallel and a 20 MHz bandwidth-limited scope



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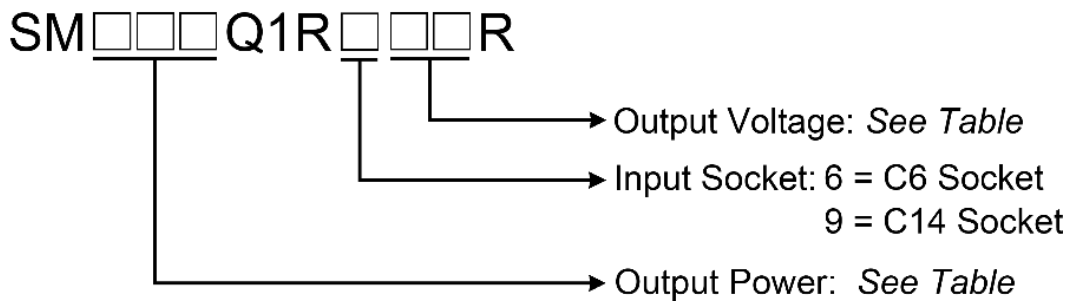
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Output Voltage and Current Table

Model Number	Output Voltage	Output Current	Output Power
SM150Q1R_12R	12 Vdc	12.5 A	150 W
SM160Q1R_19R	19 Vdc	8.4 A	160 W
SM160Q1R_24R	24 Vdc	6.6 A	160 W
SM160Q1R_48R	48 Vdc	3.3 A	160 W



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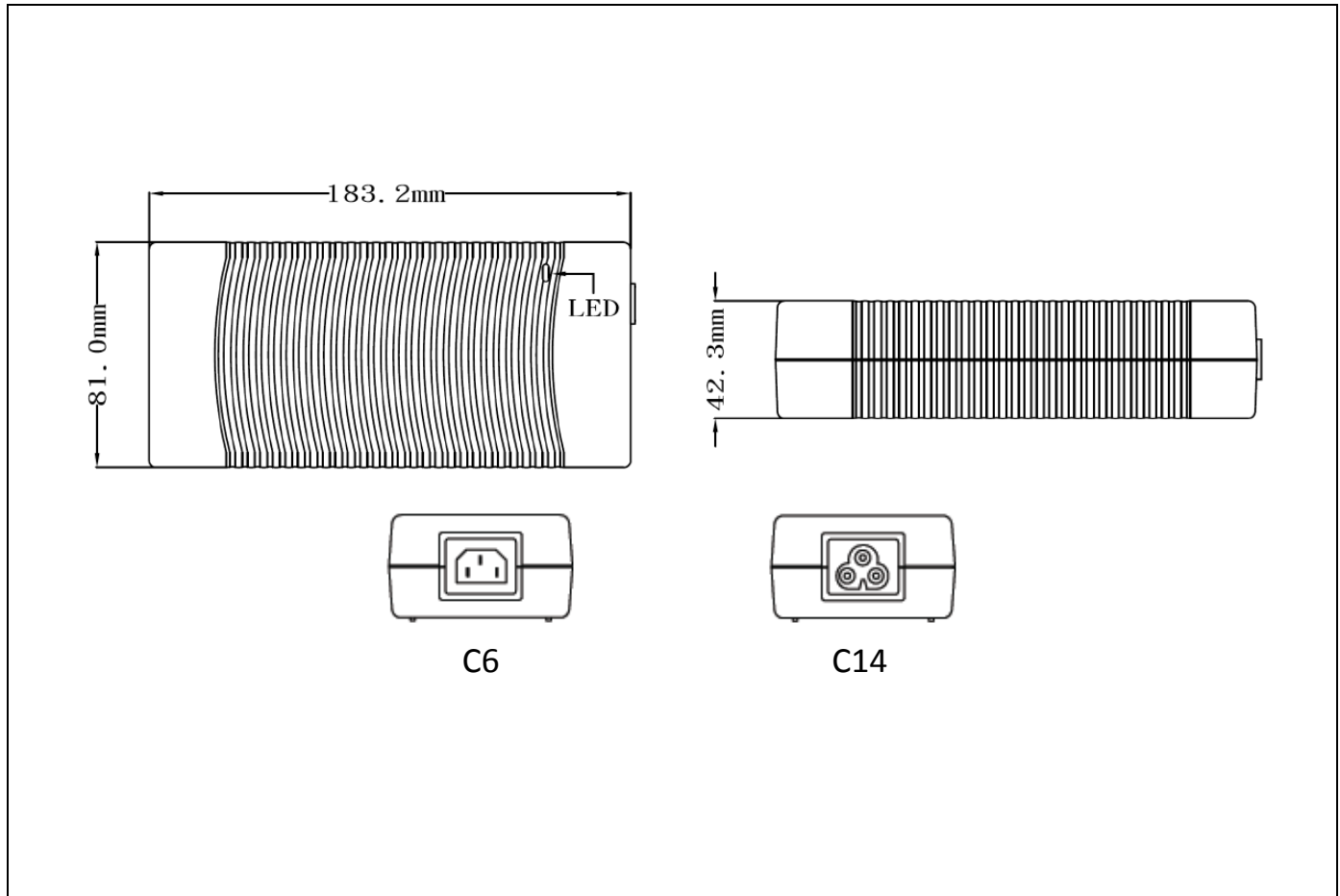
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Mechanical Specification (mm)



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.



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