



SM60Q1R – SM65Q1R Series

60 - 65 Watt AC-DC Medical Desktop Power Supply
IEC 60601-1-2 4th Ed. EMC, DoE Level VI

Date: 10/3/18

Rev: 061418

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The SM60Q1R – SM65Q1R Series switch mode power supply offers 60 Watts to 65 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, C8, C14, or C18 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 Energy Efficiency Level 6.

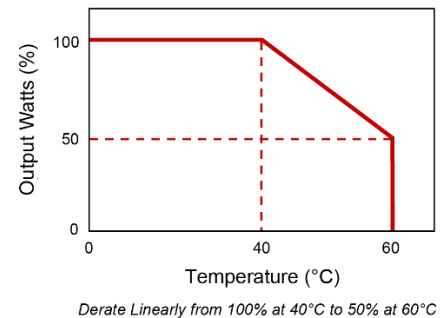


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	1.6 Max.
Leakage Current	For Models with C14 and C6 Input Socket: < 300 μ A For Models with C18 and C8 Input Socket: < 100 μ A
Output Voltage & Current	See Table on Page 2
Ripple & Noise ¹ (P-P)	1% Max. for output voltage @ full load
Over-Voltage Protection	150% Max.
Over-Current Protection	170% Max.
Transient Response	50% Load Change Input: 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 for 1 minute
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	Directive 2011/65/EU (RoHS 2), DoE VI
Weight	350 g (Ref.)
EMC Requirements	IEC 60601-1-2: 2014 4 th Edition, 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	UR/cUR (ES60601-1: 3.1 Ed.), TUV T- Mark (EN 60601-1: 3.1 Ed.), CB (IEC 60601-1: 3.1 Ed., IEC 60950-1: 2 nd Ed.), CE, PSE

Features:

- Dual ITE and Medical Approvals
- 2x MOPP Protection
- Touch Current < 100 μ A
- Over-Voltage, Over-Current, 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



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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Output Voltage and Current Table

Model Number	Output Voltage	Output Current	Output Power
SM60Q1R_12R	12 Vdc	5.00 A	60 W
SM65Q1R_15R	15 Vdc	4.34 A	65 W
SM65Q1R_18R	18 Vdc	3.62 A	65 W
SM65Q1R_19R	19 Vdc	3.43 A	65 W
SM65Q1R_24R	24 Vdc	2.71 A	65 W
SM65Q1R_30R	30 Vdc	2.17 A	65 W
SM65Q1R_36R	36 Vdc	1.81 A	65 W
SM65Q1R_48R	48 Vdc	1.36 A	65 W

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Output Voltage: See Table

Input Plug: 6 = C6 Socket
7 = C18 Socket
8 = C8 Socket
9 = C14 Socket

Output Power: See Table



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Specification subject to
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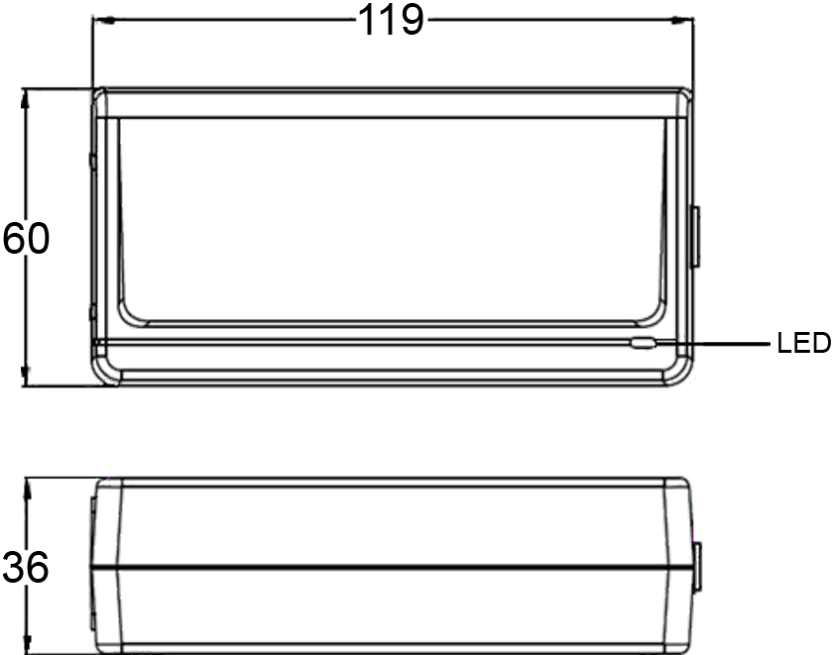
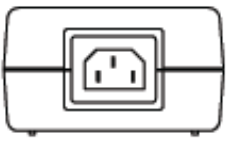
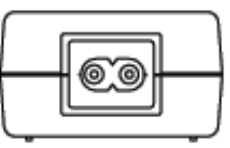
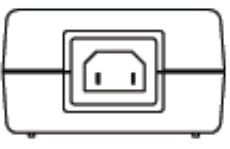
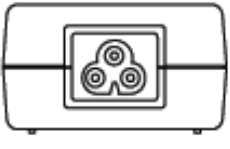
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Mechanical Specification (mm)

	SM__Q1R <u>9</u> (C14 Input)
	
	SM__Q1R <u>8</u> (C8 Input)
	
	SM__Q1R <u>7</u> (C18 Input)
	
SM__Q1R <u>6</u> (C6 Input)	
	
<p>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.</p>	



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