



SM07Q1RY - SM15Q1RY Series

Date: 7/17/18

7 - 15 Watt AC-DC Medical Wall Plug-In Power Supply
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, CoC v5 Tier 2

Rev: 071718

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The SM07Q1RY – SM15Q1RY Series switch mode power supply offers 7 Watts to 15 Watts output power, with an output voltage range of 3.3 Vdc – 24 Vdc. Case style is a wall plug-in with choice of fixed U.S./Japan, Euro, U.K., Australia, Korea, and China prongs. Meets IEC 60601-1-2 4th Edition EMC, ES/EN/IEC 60601-1 3.1 Edition, UL/EN/IEC 60950-1 2nd Edition, UL/EN/IEC 62368-1 Safety approvals, DoE Level 6 and CoC v5 Tier 2 Efficiency.

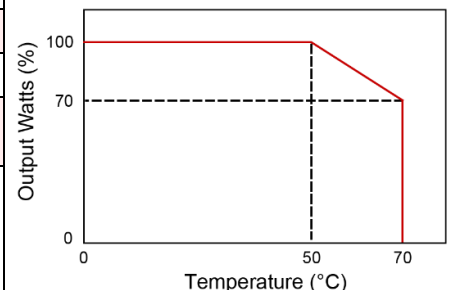


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	0.32 – 0.19 A
Leakage Current	< 100 μ A
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) ¹	2% Max.
Over-Voltage Protection	Protected from over-voltage conditions
Over-Current Protection	Protected from over-current conditions
Transient Response	50% Load Change: 0.5 ms Typ.
Efficiency	Meets DoE Level VI and CoC v5 Tier 2
No Load Power Consumption	\leq 0.075 Watts
Load Regulation	\pm 5% Typ.
Hold-Up Time	10 ms Min.
Withstanding Voltage	Primary to Secondary: 4,000 Vac Min.
Mean Time Between Failure	300,000 Hours Min. (Telcordia, Full Load at 25°C)
Operating Temperature	See Derating Curve
Storage Temperature	-20 to 80°C
Industry Compliance	RoHS 2, DoE Level VI, and CoC v5 Tier 2
Weight	140 – 148 g (Ref.)
EMC Requirements	IEC 60601-1-2:2014 4 th Edition
EMI Requirements	Meets Conduction and Radiation Limits of: FCC Part 15 Class B, CISPR-11 Class B, and EN 55011 Class B
Safety Compliance	US: UR/cUR (ES 60601-1:3.1 Ed.), UL/cUL (UL 60950-1:2 nd Ed.), CB (UL 62368-1:2 nd Ed.), PSE, BSMI
	EU & UK: TUV T- Mark (EN 60601-1: 3.1 Ed.), CE, CB (EN 62368-1:2 nd Ed.)
	AU: RCM (GEMS Registration Required), CB (IEC 62368-1:2 nd Ed.)
	KR: KC
	CN: CCC, CB (IEC 62368-1:2 nd Ed.)

Features:

- Dual ITE and Medical Approvals
- Fixed U.S./Japan, Euro, U.K., Australian, Korea, and China AC Prongs
- 2x MOPP Protection
- Touch Current: < 100 μ A
- Over-Voltage, Over-Current, and Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- Meets DoE Level VI and CoC Tier 2
- Meets UL/EN/IEC 60950-1 2nd Edition and UL/EN/IEC 62368-1 2nd Edition
- Meets IEC 60601-1-2:2014 4th Edition EMC Requirements

Derating Curve



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

Notes:

1. Ripple & Noise are measured with a 0.1 μ F multilayer capacitor & 47 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	Maximum Output Power
SM07Q1R_03R	3.3 Vdc	2.00 A	6.6 W
SM10Q1R_05R	5 Vdc	2.00 A	10.0 W
SM15Q1R_05R	5 Vdc	3.00 A	15.0 W
SM12Q1R_06R	5.9 Vdc	2.00 A	11.8 W
SM11Q1R_09R	9 Vdc	1.20 A	10.8 W
SM12Q1R_12R	12 Vdc	1.00 A	12.0 W
SM12Q1R_15R	15 Vdc	0.80 A	12.0 W
SM12Q1R_18R	18 Vdc	0.67 A	12.0 W
SM12Q1R_24R	24 Vdc	0.50 A	12.0 W

SM□□Q1R□□□R

→ Output Voltage: See Table

→ Input Plug:

U = U.S. Plug (US)

E = Europe Plug (EU)

B = British Plug (UK)

A = Australia Plug (AU)

KC = Korea Plug (KR)

C = China Plug (CN)

→ Output Power: See Table



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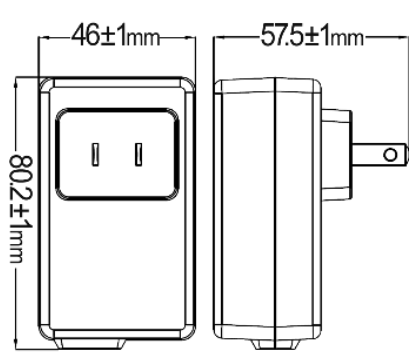
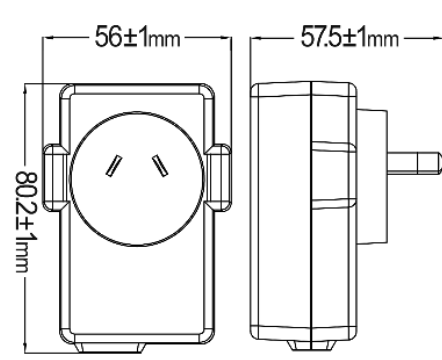
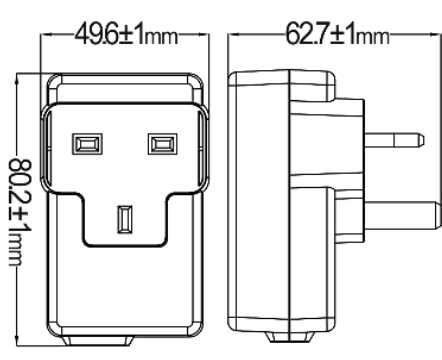
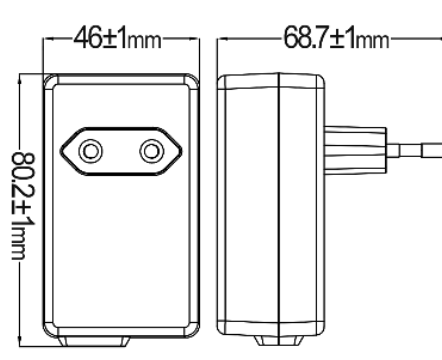
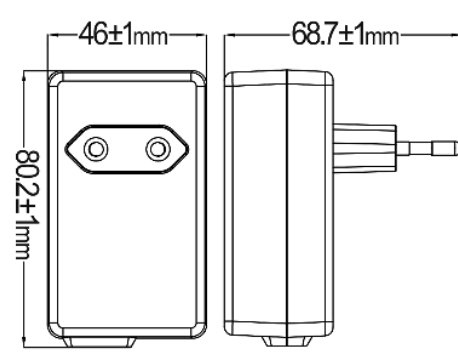
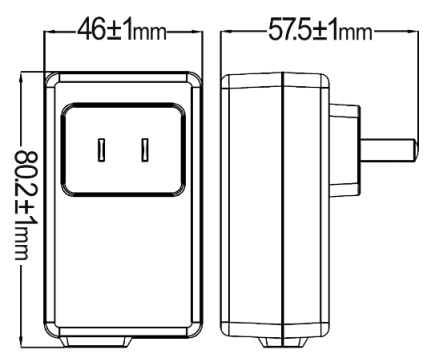
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Mechanical Specification (mm)

<p>SM_ _ Q1RU: <i>US/Japan Plug</i></p> 	<p>SM_ _ Q1RA: <i>Australia Plug</i></p> 
<p>SM_ _ Q1RB: <i>British Plug</i></p> 	<p>SM_ _ Q1RE: <i>Europe Plug</i></p> 
<p>SM_ _ Q1RKC: <i>Korea Plug</i></p> 	<p>SM_ _ Q1RC: <i>China Plug</i></p> 
<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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