



SM18Q1RY – SM20Q1RY Series

18 - 20 Watt AC - DC Medical Wall Plug-in Power Supply
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, RoHS 2

Date: 10/5/18

Rev: 062718

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The SM18Q1RY – SM20Q1RY Series switch mode power supply offers 18 Watts to 20 Watts output power, with an output voltage range of 5 Vdc – 48 Vdc. Case style is a wall plug-in with choice of fixed US, Euro, and UK prongs, with ES, EN and IEC 60601-1 3.1 Edition safety approvals, IEC 60601-1-2 4th Edition (EMC), and DoE Level 6.

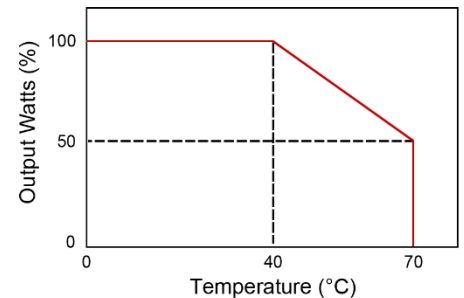


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	0.45 – 0.3 A
Leakage Current	< 100 μ A
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) ¹	2% Max.
Over-Voltage Protection	250% Max.
Over-Current Protection	300% Max., Auto-Recovery
Transient Response	50% Load Change: 0.5 ms Typ.
Efficiency	Meets DoE Level VI
No Load Power Consumption	< 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	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	US Model: 148 g (Ref.) EU Model: 143 g (Ref.) UK Model: 158 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	U.S. Model: UL/cUL (ANSI/AAMI ES60601-1:3.1 Ed.), PSE, CB (UL/IEC 60950-1 2 nd Ed.) British & European Model: TUV T-Mark (EN 60601-1:3.1 Ed.), CE CB (EN/IEC 60950-1 2 nd Ed.)

Features:

- Universal Input 100 - 240 Vac
- Fixed US, Euro, and UK Prongs
- 2x MOPP Protection
- Touch Current: < 100 μ A
- Over-Voltage Protection
- Over-Current Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- Energy Efficiency Level: DoE VI

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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Output Voltage and Current Table

Model Number	Output Voltage	Output Current	Output Power
SM18Q1R_05R	5.0 Vdc	3.50 A	17.5 W
SM18Q1R_06R	5.9 Vdc	3.00 A	17.7 W
SM20Q1R_09R	9.0 Vdc	2.22 A	20.0 W
SM20Q1R_12R	12.0 Vdc	1.67 A	20.0 W
SM20Q1R_15R	15.0 Vdc	1.33 A	20.0 W
SM20Q1R_18R	18.0 Vdc	1.11 A	20.0 W
SM20Q1R_24R	24.0 Vdc	0.83 A	20.0 W
SM20Q1R_48R	48.0 Vdc	0.42 A	20.0 W

SM Q1R R

Output Voltage: See Table

Input Plug: U = U.S. Plug (US)
E = European Plug (EU)
B = British Plug (UK)

Output Power: See Table



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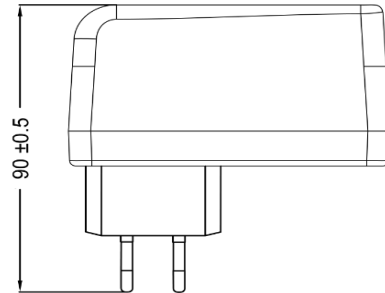
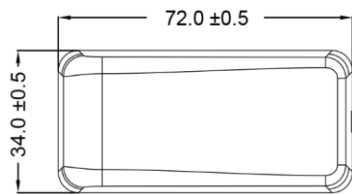
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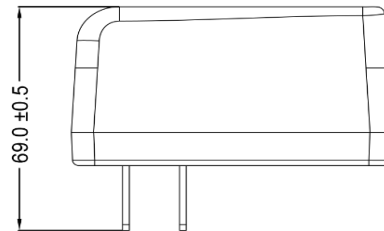
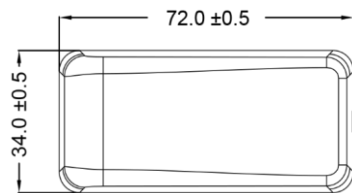
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Mechanical Specification (mm)

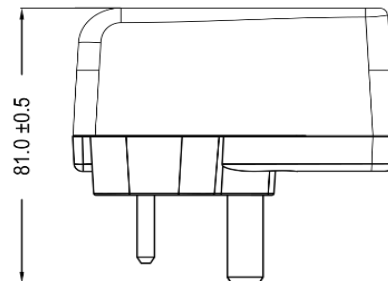
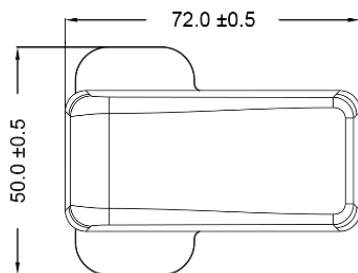
SM__Q1RE: European Plug



SM__Q1RU: US Plug



SM__Q1RB: British Plug



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.