



# SM108Q1R – SM120Q1R Series

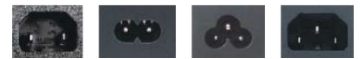
108 - 120 Watt AC-DC Medical Desktop Power Supply  
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, RoHS 2

Date: 10/3/18

Rev: 011918

Page: 1 of 3

The SM108Q1R – SM120Q1R Series switch mode power supply offers 108 Watts to 120 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 and IEC 60950-1 2nd Edition Safety approval, and DoE Level 6.

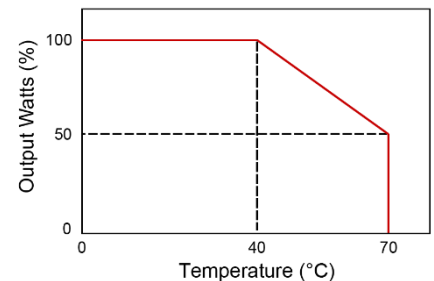


Input Voltage	90 to 264 Vac
Input Frequency	47 to 63 Hz
Input Current	1.5 – 0.7 A
Leakage Current	< 100 $\mu$ A
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) <sup>1</sup>	1% Max.
Over-Voltage Protection	150% Max.
Over-Current Protection	170% Max.
Over-Temperature Protection	120°C Max.
Transient Response	50% Load Change: 0.5 ms Typ.
Efficiency	Meets DoE Level VI
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	300,000 Hrs. Min. (Full Load at 25°C, Telcordia)
Operating Temperature	See Derating Curve
Storage Temperature	-20 to 80°C
Industry Compliance	Directive 2011/65/EU (RoHS 2), DoE Level VI
Weight	590 g (Ref.)
EMC Requirements	IEC 60601-1-2: 2014 4 <sup>th</sup> Edition
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/c-UR (ES60601-1: 3.1 Edition), TUV T- Mark (EN/IEC 60601-1: 3.1 Edition), CE, PSE, CB (IEC 60601-1: 3.1 Edition, IEC 60950-1: 2nd Edition)

## Features:

- Universal Input 100 - 240 Vac
- IEC 320 C18, C14, C8, and C6 Input
- Over-Voltage Protection
- Over-Current Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- DoE Level VI
- Meets IEC 60950-1 2<sup>nd</sup> Edition
- Meets IEC 60601-1-2: 2014 4<sup>th</sup> Edition EMC Requirements

## Derating Curve



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

### Notes:

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



# SM108Q1R – SM120Q1R Series

108 - 120 Watt AC-DC Medical Desktop Power Supply  
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, RoHS 2

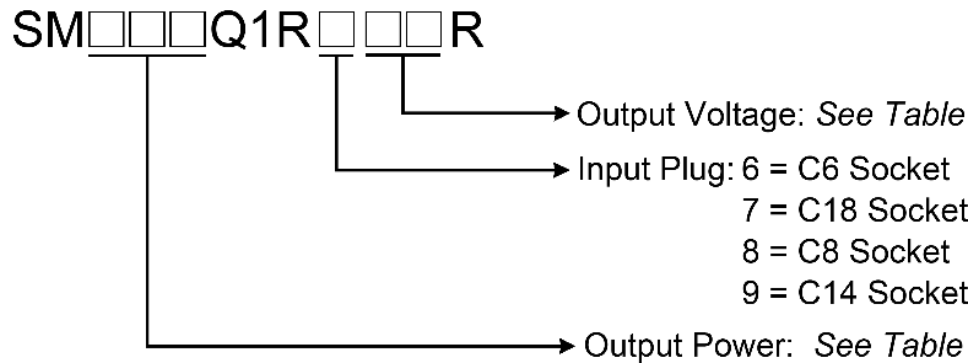
Date: 10/3/18

Rev: 011918

Page: 2 of 3

## Output Voltage and Current Table

Model Number	Output Voltage	Output Current	Output Power
SM108Q1R_12R	12 Vdc	9.00 A	108 W
SM120Q1R_15R	15 Vdc	8.00 A	120 W
SM120Q1R_18R	18 Vdc	6.67 A	120 W
SM120Q1R_19R	19 Vdc	6.32 A	120 W
SM120Q1R_20R	20 Vdc	6.00 A	120 W
SM120Q1R_24R	24 Vdc	5.00 A	120 W
SM120Q1R_48R	48 Vdc	2.50 A	120 W



TECHNOLOGIES INC.  
HICKSVILLE, NEW YORK

264 Duffy Avenue  
Hicksville, NY 11801

Tel: (516) 433-1313  
Fax: (516) 433-1457

Web: [www.apxonline.com](http://www.apxonline.com)  
Email: [sales@apxonline.com](mailto:sales@apxonline.com)

Specification subject to  
change without notice



# SM108Q1R – SM120Q1R Series

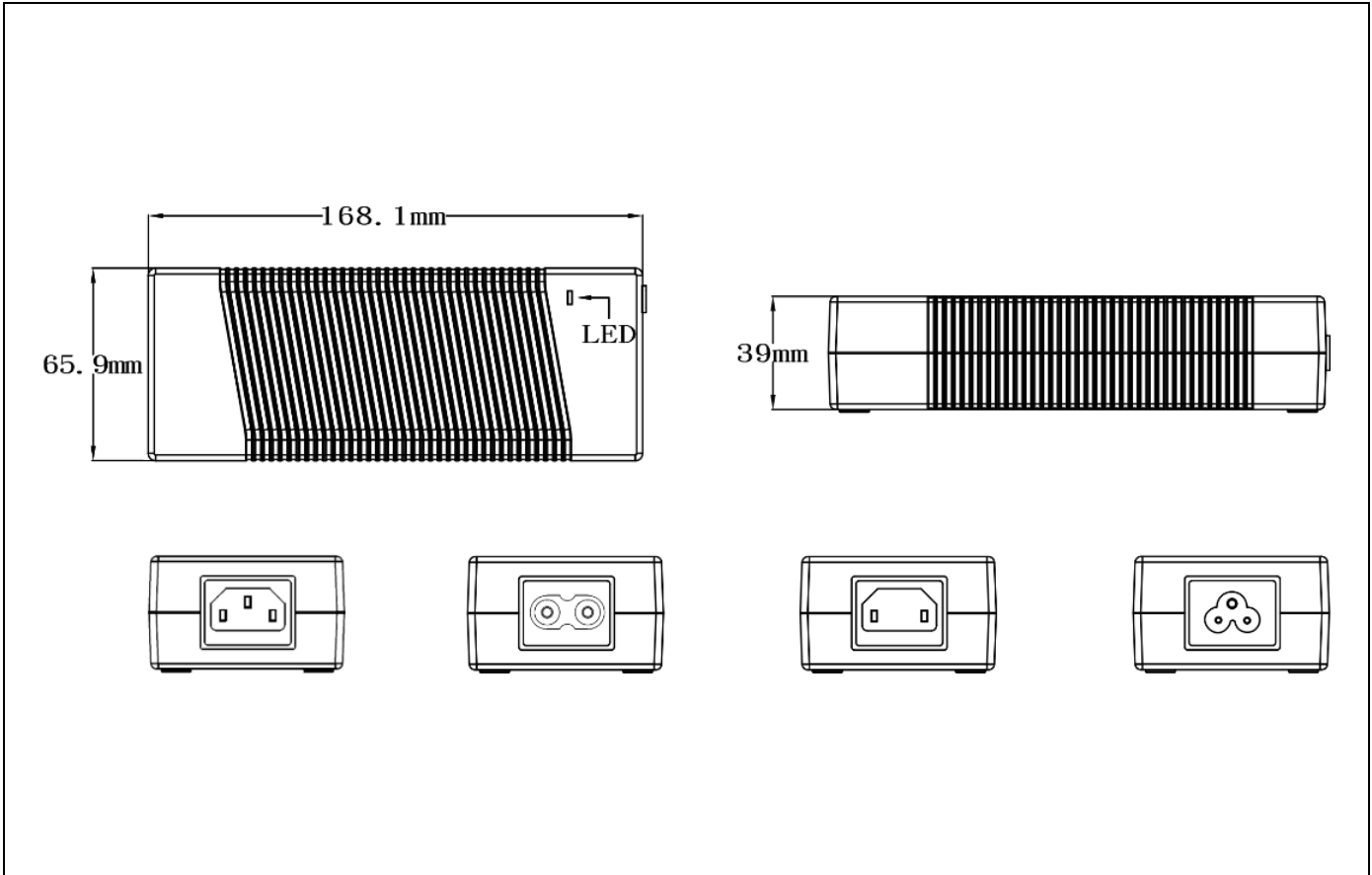
108 - 120 Watt AC-DC Medical Desktop Power Supply  
IEC 60601-1-2 4th Ed. EMC, DoE Level VI, RoHS 2

Date: 10/3/18

Rev: 011918

Page: 3 of 3

## 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.