



SM13P1R - SM15P1R Series

13 - 15 Watt AC - DC Medical Desktop Power Supply
IEC 60601-1-2 4th Ed. EMC, 2x MOPP Protection

Date: 4/10/18

Rev: 041018

Page: 1 of 3

The SM13P1R – SM15P1R Series medical switch mode power supply offers 13 Watts to 15 Watts output power, with an output voltage range of 5 Vdc - 36 Vdc. Case style is a desktop enclosure with choice of IEC 320 C6, C8 and C14 input socket, and is certified to ES, EN, IEC 60601-1 3.1 Edition, and IEC 60601-1-2 4th Edition (EMC) safety approvals.

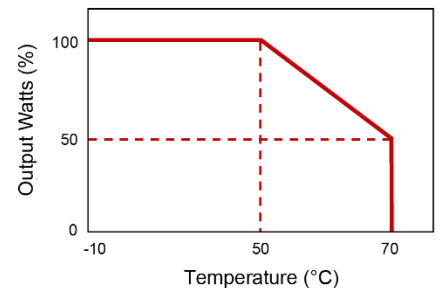


Input Voltage	80 to 275 Vac
Input Frequency	47 to 63 Hz
Input Current (Low Line)	0.32 A Typ. at 110 Vac
Input Current (High Line)	0.19 A Typ. at 240 Vac
Safety Ground Leakage Current	0.15 mA Max.
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P) ¹	50 - 100 mV, P-P
Temperature Coefficient	± 0.04% / °C Max.
Transient Response Time	50% Load Change at 110 VAC Input: 4 ms
Efficiency	75 – 85% Typ.
No Load Power Consumption	0.3 W Typ.
Over-Voltage Protection	112 – 132%
Over-Current Protection	110 – 150%, Auto Recovery
Line Regulation	± 1% Max. at Full Load
Load Regulation	± 5% Max.
Start-Up Time	2 s Max.
Hold-Up Time	10 ms Min.
Withstanding Voltage	Primary to Secondary: 4,000 VAC (C14 & C6 only) Primary to PE: 1,500 VAC
Insulation Resistance	50 MΩ Min.
Inrush Current	23 A @ 100 Vac Max., full load at 25°C Cold Start 55 A @ 240 Vac Max., full load at 25°C Cold Start
Mean Time Between Failure	Full Load, 25°C Ambient (MIL-HDBK-217F): 200,000 Hrs. Min.
Operating Temperature	-10 - 70°C (See Derating Curve)
Storage Temperature	-40 to 85 °C
Weight	170 g. (ref.)
Industry Compliance	Directive 2011/65/EU (RoHS 2)
EMC Requirements	IEC 60601-1-2: 2014 4 th Edition
EMI Requirements	Meets Conduction Limits of: FCC Part 18 Class B, CISPR-11 Class B, and EN 55011 Class B
Safety Compliance	cURus (ES 60601-1:2005(R2012), CSA C22.2 No. 60601-1:14) TUV/T-mark (EN 60601-1:2006/A1:2013), CE, CB (IEC 60601-1 3.1 Ed.) PSE (C6, C14: 5V – 30V; C8: 5V – 15V), CCC (C8 Only)

Features:

- Universal Input 100 - 240 Vac
- Available with IEC 320 C6, C8, and C14 Input Socket
- High Altitude tested: 3,000 M.
- High ESD Immunity
- Over-Current Protection
- Short Circuit Protection
- 100% Burn-In
- RoHS 2 Compliant
- 2 MOPP Protection

Derating Curve



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

Notes:

1. Measured w/ 0.1 μF ceramic capacitor & 47 μF electrolytic capacitor in parallel and a 20 MHz bandwidth limited scope.



SM13P1R - SM15P1R Series

13 - 15 Watt AC - DC Medical Desktop Power Supply
IEC 60601-1-2 4th Ed. EMC, 2x MOPP Protection

Date: 4/10/18

Rev: 041018

Page: 2 of 3

Output Voltage and Current Table

Model Number	Output Voltage Range	Output Current <i>Limited to Output Power †</i>	Maximum Output Power
SM13P1R__R	5 – 8 Vdc	2.60 – 1.62 A	13 W
SM15P1R__R	8 – 11 Vdc	1.87 – 1.36 A	15 W
SM15P1R__R	12 – 13 Vdc	1.25 – 1.15 A	15 W
SM15P1R__R	14 – 16 Vdc	1.07 – 0.93 A	15 W
SM15P1R__R	17 – 21 Vdc	0.88 – 0.71 A	15 W
SM15P1R__R	22 – 27 Vdc	0.68 – 0.55 A	15 W
SM15P1R__R	28 – 33 Vdc	0.53 – 0.45 A	15 W
SM15P1R__R	34 – 36 Vdc	0.44 – 0.41 A	15 W

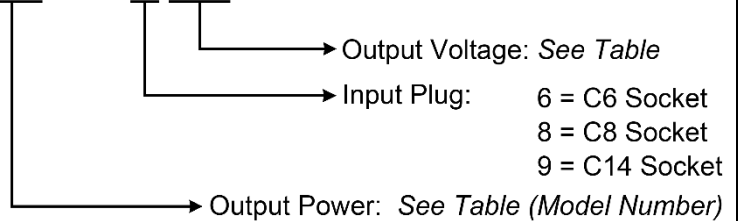
† To find Output Current:

Output Current = Max Power ÷ Output Voltage

Example: Output Current for SM15P1R_12R
(15W, 12 Vdc Output)

Output Current = 15 W ÷ 12 V
Output Current = 1.25 A

SM□□P1R□□□R





SM13P1R - SM15P1R Series

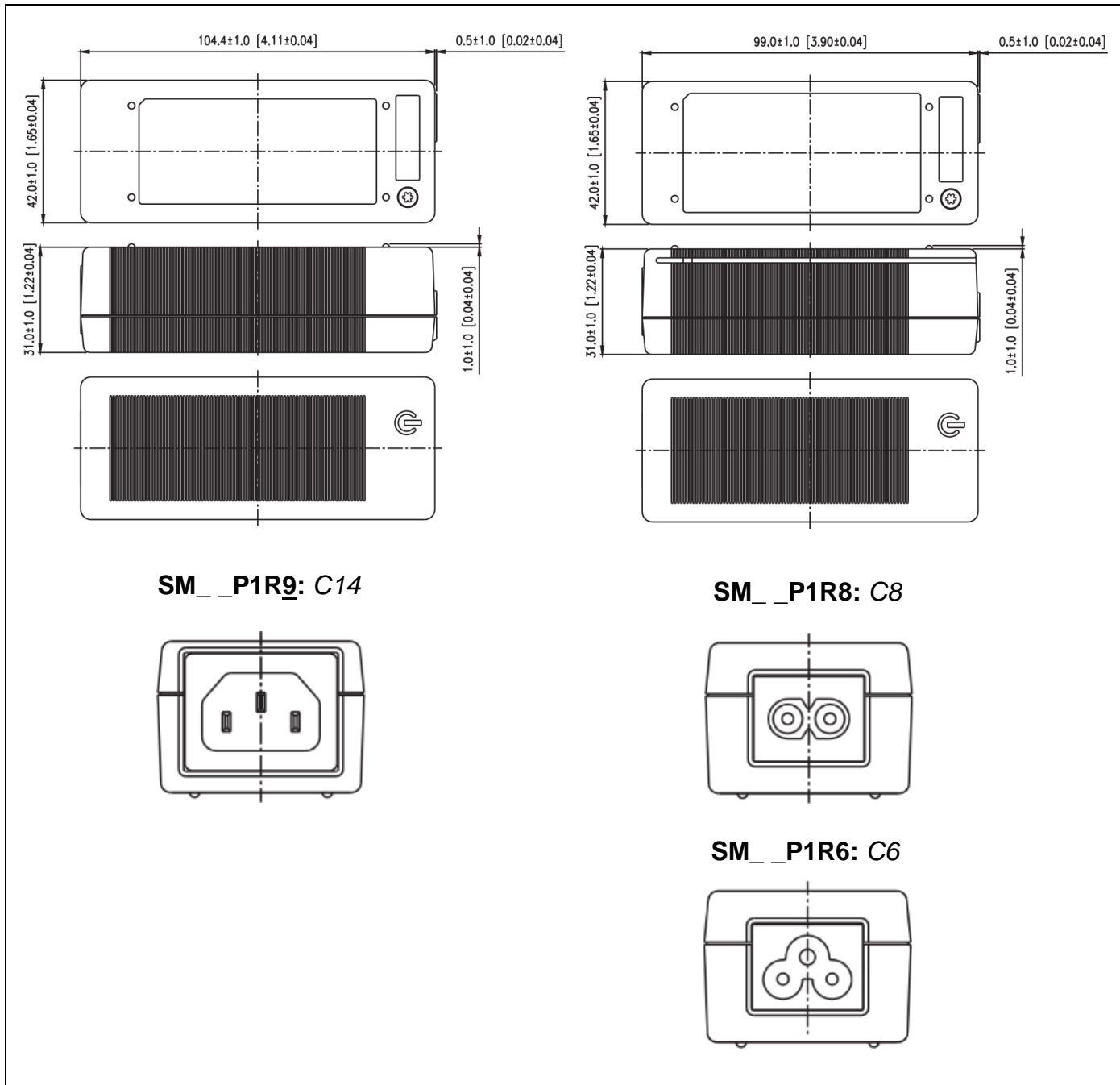
13 - 15 Watt AC - DC Medical Desktop Power Supply
IEC 60601-1-2 4th Ed. EMC, 2x MOPP Protection

Date: 4/10/18

Rev: 041018

Page: 3 of 3

Mechanical Specification (mm),[in]



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.



TECHNOLOGIES INC.
HICKSVILLE, NEW YORK

264 Duffy Avenue
Hicksville, NY 11801

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

Web: www.apxonline.com
Email: sales@apxonline.com

Specification subject to
change without notice