



# SMF81P Series

UL, EN, IEC 60601-1 3<sup>rd</sup> Edition Medical  
30 Watt AC - DC Open Frame Power Supply

Date: 10/21/13

Rev: 101713

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The SMF81P Series open frame medical switch mode power supply has 80 Watts convection cooled output in a 3" x 5" inch size, with UL/CUL, IEC, and EN 60601-1, 3<sup>rd</sup> Edition safety approvals.

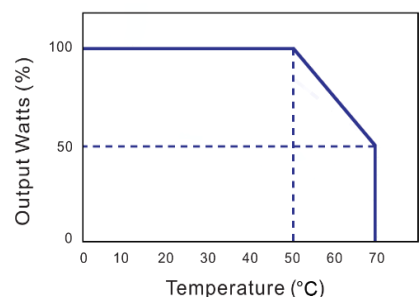


Input Voltage	90 to 264 VAC
Input Frequency	47 to 63 Hz
Input Current (Low Line)	1.2 A Max at 100 VAC
Input Current (High Line)	0.4 A Max at 240 VAC
Power Factor Correction	0.95 - 1
Safety Ground Leakage Current	0.1 mA Max at 240 VAC, Full Load
Output Voltage & Current	See Table on Page 2
Ripple & Noise (P-P)	1% Max., Full Load at 90 VAC Input
Over-Voltage Protection	112 - 132%
Over-Current Protection	110 - 150%
Temperature Coefficient	±0.04% / °C Max
Transient Response	50% Load Change at 100 VAC Input: 4 ms Max
Efficiency	72.5 - 85%
No Load Power Consumption	≤ 0.5 Watts
Line Regulation	± 1% Max at Full Load
Load Regulation	± 5% Max at 230 VAC
Start-Up Time	0.3 - 2 s
Hold-Up Time	16 ms Min
Withstanding Voltage	Primary to Secondary: 6,653 VDC Primary to Ground: 2,121 VDC
Insulation Resistance	50 MΩ Min
Inrush Current	28A @ 115VAC Max at 25°C Cold Start 56A @ 230VAC Max at 25°C Cold Start
Mean Time Between Failure	Full Load at 25°C Ambient: 100,000 Hours Min
Operating Temperature	See Derating Curve
Storage Temperature	-40 to 85 °C
Industry Compliance	Directive 2011/65/EU (RoHS 2)
EMI Requirements	Meets Conduction Limits of: CISPR-11 Class B, FCC Part 18 Class B, and EN 55011 Class B
Safety Compliance	ANSI/AAMI ES 60601-1:2005 (UR Listed 3rd Edition), EN 60601-1:2006 (TUV/T-mark 3rd Edition), CE, CB, FCC

## Features:

- Universal Input 100 - 240 VAC
- 5 - 36 VDC, Single Output
- Over-Voltage, Over-Current, and Short Circuit Protection
- Internal EMI Filter
- Input Surge Protection
- Active Power Factor Correction
- 100% Burn-In
- RoHS 2 Compliant
- 2 MOPP Protection
- Class I

## Derating Curve



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



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## Output Voltage and Current Table

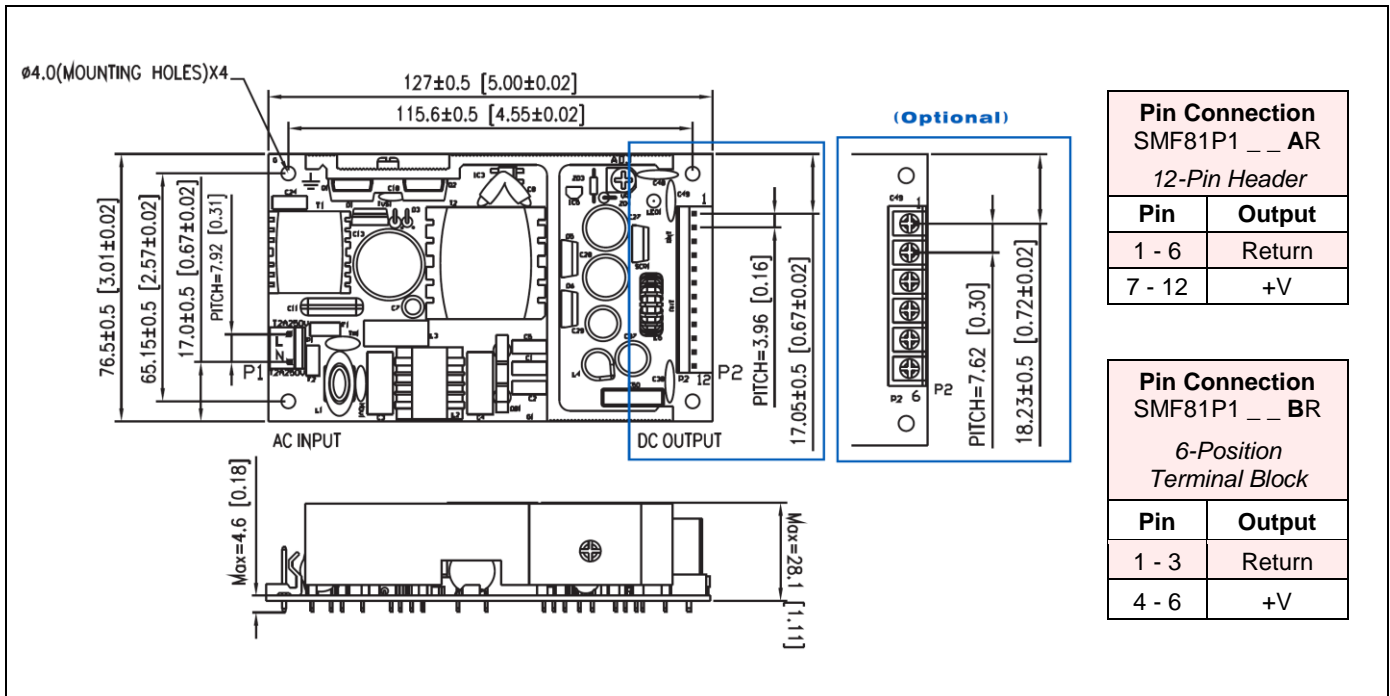
Model Number *	Output Voltage Range	Maximum Output Current	Total Regulation	Maximum Output Power
SMF81P105_R	5 VDC	14.00 A	5%	70W
SMF81P107_R	7 VDC	11.43 A	5%	80W
SMF81P109_R	9 VDC	8.89 A	4%	80W
SMF81P112_R	12 VDC	6.66 A	3%	80W
SMF81P115_R	15 VDC	5.33 A	3%	80W
SMF81P118_R	18 VDC	4.44 A	3%	80W
SMF81P124_R	24 VDC	3.33 A	2%	80W
SMF81P130_R	30 VDC	2.66 A	2%	80W
SMF81P136_R	36 VDC	2.22 A	2%	80W

\* SMF81P1□□□R

Output Connector: A = Pin Header  
B = Terminal Block

Output Voltage: See Table

## Mechanical Specification



- Input Connector Mating:
  - Crimp Terminal: Molex Housing 09-50-3031 and Molex 2478 Series Crimp Terminal

- Output Connector Mating:
  - Pin Header: Molex Housing 09-50-3121 and Molex 2478 Series Crimp Terminal
  - Terminal Block: 22 - 16 AWG Wire