

Wall Industries, Inc.

PSMBU81 SERIES

**90~260VAC Input Voltage Range
Active Power Factor Correction, Single Outputs
UL/cUL 3rd Edition Medical Approvals
80 Watt AC/DC Switching Power Supplies**



FEATURES

- Class I
- Active Power Factor Correction
- 5" x 3" x 1.1" Open Frame Package
- Single Outputs from 5~36VDC
- RoHS Compliant
- 100% Burn-in Tested
- Internal EMI Filter
- Up to 80 Watts Output Power
- Input to Output: 4000VAC/2MOPP
- Wide Input Voltage Range: 90~260VAC, 47~63Hz
- Output Voltage Protection (Crowbar Design)
- Input Surge Voltage, Over Voltage, and Over Load Protection
- Meets FCC Part-18 Class B and CISPR-11 EN55011 Class B Emission Limits
- ANSI/AAMI ES 60601-1: 2005 (UL/cUL 3rd edition) and EN 60601-1:2006 (TUV/T-mark 3rd edition) Approvals

DESCRIPTION

The PSMBU81 series of Class I medical AC/DC switching power supplies provides up to 80 Watts of continuous output power in a compact 5" x 3" x 1.1" open frame package. This series has single output models with a wide input voltage range of 90~260VAC. These power supplies have active power factor correction, an internal EMI filter, and input surge voltage, over load, and over voltage protection. All models meet FCC Part-18 Class B and CISPR-11 EN55011 Class B Emission Limits. This series also has ANSI/AAMI ES 60601-1: 2005 (UL/cUL 3rd edition) and EN 60601-1:2006 (TUV/T-mark 3rd edition) safety approvals and also meets new CE requirements. All models are RoHS compliant and have been 100% burn-in tested.

SPECIFICATIONS: PSMBU81 SERIES							
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.							
SPECIFICATION		TEST CONDITIONS		Min	Nom	Max	Unit
INPUT SPECIFICATIONS							
Input Voltage Range		Safety Approvals Input Voltage Range		100		240	VAC
		Operating Input Voltage Range		90		260	
Input Frequency				47		63	Hz
Input Current	Low Line	Io = Full Load, Vin = 100VAC			1.2		A
	High Line	Io = Full Load, Vin = 240VAC			0.4		
Inrush Current	Low Line	Io = Full Load, 25°C, Cold Start, Vin = 115VAC				28	A
	High Line	Io = Full Load, 25°C, Cold Start, Vin = 230VAC				56	
Power Factor Correction (PFC)		Io = Full Load, Vin = 240VAC		0.95		1.0	
No load Power Consumption		Io = No Load, Vin = 230VAC				0.5	W
OUTPUT SPECIFICATIONS							
Output Voltage Range				See Table			
Load Regulation		Vin = 230VAC				5	%
Line Regulation		Io = Full Load				1	%
Output Power		Vin = 90~260VAC		See Table			
Output Current				See Table			
Ripple & Noise (peak to peak)		Full Load, Vin = 90VAC				1	%
Transient Response Time		Io = Full Load to Half Load, Vin = 100VAC				4	ms
Hold-Up Time		Io = Full Load, Vin = 110VAC		16			ms
Start-Up Time		Io = Full Load, Vin = 100VAC		0.3		2	s
Temperature Coefficient				-0.04		+0.04	%/°C
PROTECTION							
Over Voltage Protection				112		132	%
Over Current Protection				110		150	%
Input Surge Current Protection				yes			
GENERAL SPECIFICATIONS							
Efficiency		Io = Full Load, Vin = 230VAC		72.5		85	%
Dielectric Withstanding Voltage		Primary to Secondary		6653			VDC
		Primary to PE		2121			
Isolation Resistance		Test Voltage = 500VDC		50			MΩ
Safety Ground Leakage Current		Io = Full Load, Vin = 240VAC				0.1	mA
ENVIRONMENTAL SPECIFICATIONS							
Operating Temperature		Derate linearly from 100% Load at 50°C to 50% load at 70°C		0	50	+70	°C
Storage Temperature				-40		+85	°C
Operating Humidity				0		95	%
Storage Humidity				0		95	%
Operating Altitude						3000	m
MTBF		Operating Temperature at 25°C, calculated per MIL-HDBK-217F		100,000			hours
PHYSICAL SPECIFICATIONS							
Weight							Approx. 10.6oz (300g)
Dimensions (L x W x H)							5.00 x 3.01 x 1.11 inches (127.0 x 76.5 x 28.1 mm)
Input Connector							Mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal
Output Connector							Mates with screw terminal (Terminal block) (16-22AWG) or Molex housing 09-50-3121 and Molex 2478 series crimp terminal
SAFETY & EMI							
Safety Approvals							ANSI/AAMI ES 60601-1: 2005 (UL/cUL 3 rd edition); EN 60601-1:2006 (TUV/T-mark 3 rd edition); CE
EMI Requirements for CISPR-11		Vin = 220VAC		B			Class
EMI Requirements for FCC PART-18		Vin = 110VAC		B			Class

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current	Total Regulation	Max. Output Power
PSMBU81-102	90 ~ 260VAC	5 VDC	14.00 A	5%	70W
PSMBU81-103		7 VDC	11.43 A	5%	80W
PSMBU81-104		9 VDC	8.89 A	4%	80W
PSMBU81-105		12 VDC	6.66 A	3%	80W
PSMBU81-106		15 VDC	5.33 A	3%	80W
PSMBU81-107		18 VDC	4.44 A	3%	80W
PSMBU81-108		24 VDC	3.33 A	2%	80W
PSMBU81-109		30 VDC	2.66 A	2%	80W
PSMBU81-110		36 VDC	2.22 A	2%	80W

NOTES

1. Recommended to be used on the metal chassis.

DERATING CURVE



