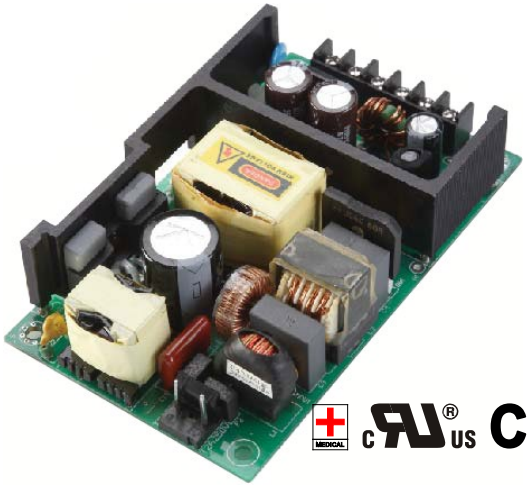
Wall Industries, Inc.

DATASHEET
Rev. B

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 3rd edition)(2); EN 60601-1:2006 (TUV/T-mark 3rd edition); CE			
EMI Requirements for CISPR-11		Vin = 220VAC	B			Class
EMI Requirements for FCC PART-18		Vin = 110VAC	B			Class

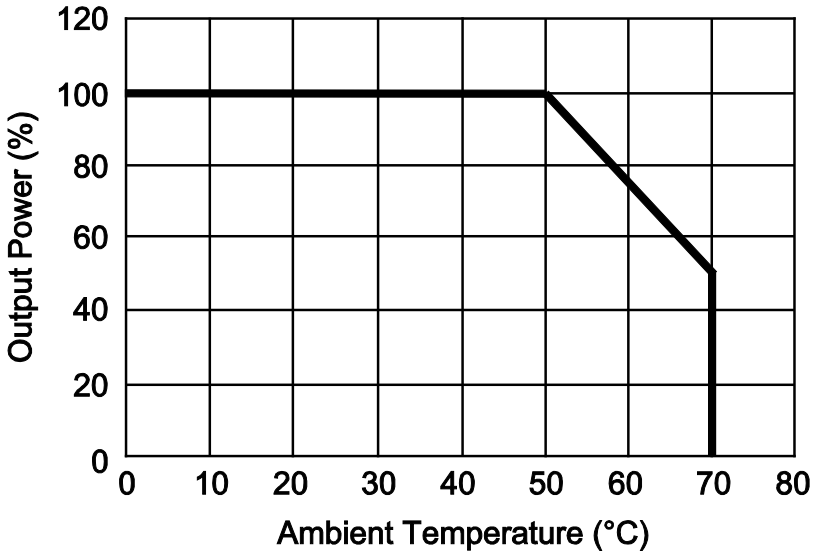
MODEL SELECTION TABLE					
Model Number	**Input Voltage Range**	**Output Voltage**	**Output Current**	**Total Regulation**	**Max. Output Power**
PSMBU81-102	90 ~ 260VAC	5 VDC	14.00 A	5%	70W
PSMBU81-103		7 VDC	11.43 A	5%	80W
PSMBU81-104		9 VDC	8.89 A	4%	80W
PSMBU81-105		12 VDC	6.66 A	3%	80W
PSMBU81-106		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

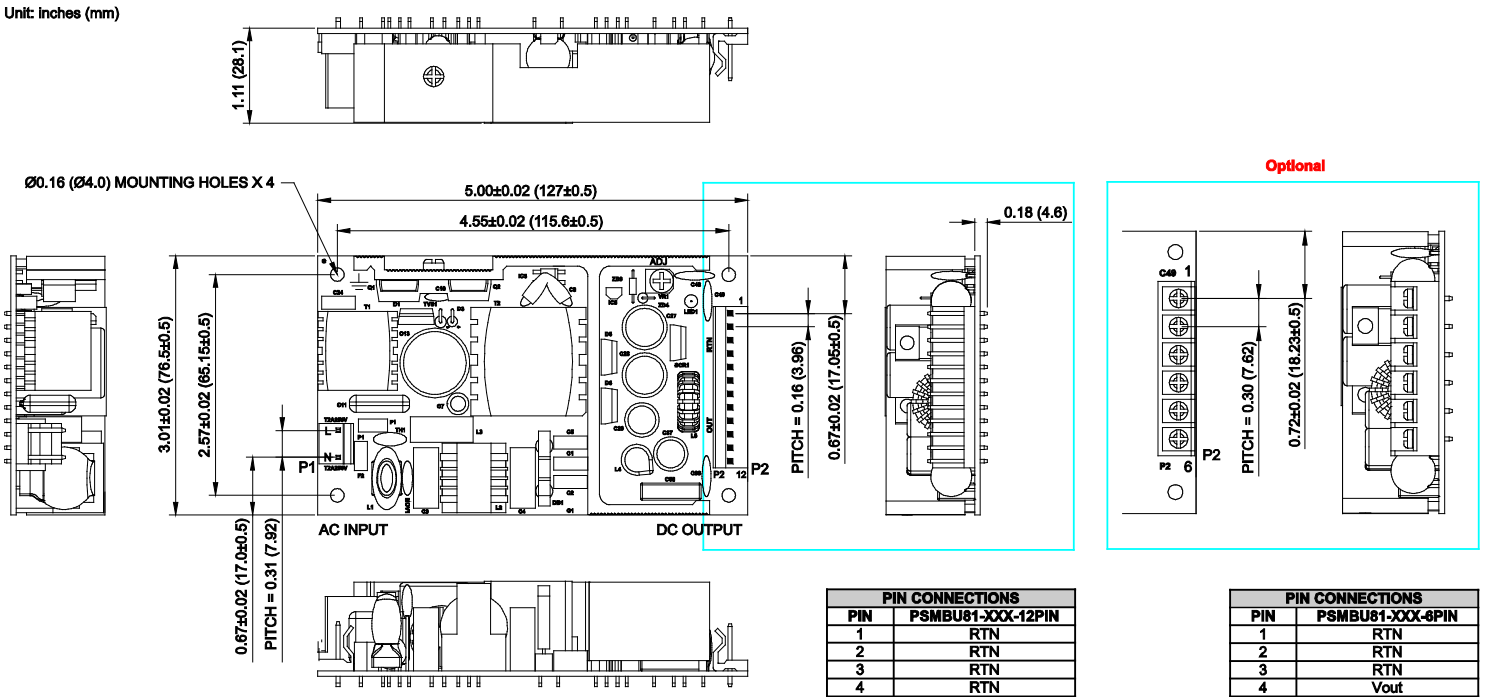
1. *Recommended to be used on the metal chassis.*
2. *This product is Listed to applicable standards and requirements by UL.*

**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVE



MECHANICAL DRAWING



NOTES:

1. All dimensions are for reference only
2. Weight: 10.6oz (300g)
3. Input connector mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal.
4. Output connector mates with screw terminal (Terminal block) (16-22AWG) or Molex housing 09-50-3121 and Molex 2478 series crimp terminal

PIN CONNECTIONS	
PIN	PSMBU81-XXX-12PIN
1	RTN
2	RTN
3	RTN
4	RTN
5	RTN
6	RTN
7	Vout
8	Vout
9	Vout
10	Vout
11	Vout
12	Vout

PIN CONNECTIONS	
PIN	PSMBU81-XXX-6PIN
1	RTN
2	RTN
3	RTN
4	Vout
5	Vout
6	Vout

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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