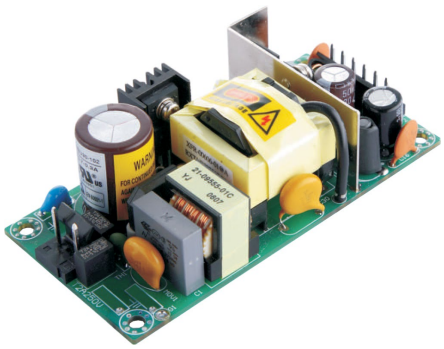


Size:
4.00 x 1.99 x 1.16 inches
101.5 x 50.5 x 29.5 mm

Weight:
7.05oz (200g)

FEATURES

- Class I
- RoHS Compliant
- Internal EMI Filter
- High ESD Immunity
- Input to Output: 2MOPP
- Up to 85% High Efficiency
- Wide Input Voltage Range: 80~275VAC, 47~63Hz
- Short Circuit, Over Voltage & Over Load Protection
- IEC60601-1 Editions 3.1, ES60601-1: 2005 (R2012), CSAC22.2 No. 60601-1:14, EN60601-1: 2006/A1:2013 Safety Approvals
- 100% Burn-in Tested

DESCRIPTION

The PSMBU31 series of class I medical AC/DC switching power supplies provides 30 Watts of continuous output power in a 4.00” x 1.99” x 1.16” open frame package. This series consists of single output models with a wide input voltage range of 80~275VAC. Some features include high efficiency up to 85%, internal EMI filter, 2MOPP insulation, and over load and over voltage protection. This series also has IEC60601-1 Editions 3.1, ES60601-1: 2005 (R2012), CSAC22.2 No 60601-1:14, EN60601-1: 2006/A1:2013 approvals. All models are RoHS compliant and have been 100% burn-in tested.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise	Total Regulation	Efficiency	Output Power
PSMBU31-102	80 ~ 275 VAC	5 VDC	6000mA	50mVp-p	±5%	78%	30W
PSMBU31-103		7 VDC	4280mA	70mVp-p	±5%	78%	30W
PSMBU31-104		9 VDC	3330mA	90mVp-p	±5%	79%	30W
PSMBU31-105		12 VDC	2500mA	100mVp-p	±5%	82%	30W
PSMBU31-106		15 VDC	2000mA	100mVp-p	±5%	82%	30W
PSMBU31-107		18 VDC	1660mA	100mVp-p	±5%	82%	30W
PSMBU31-108		24 VDC	1250mA	100mVp-p	±3%	82%	30W
PSMBU31-109		30 VDC	1000mA	100mVp-p	±3%	83%	30W
PSMBU31-110		36 VDC	830mA	100mVp-p	±3%	85%	30W

SPECIFICATIONS: PSMBU31 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.

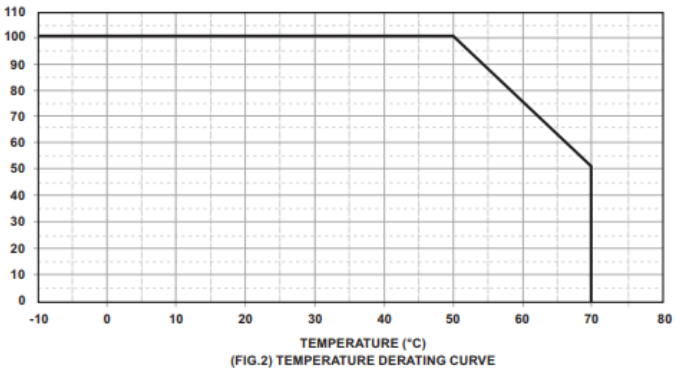
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage	Safety Approvals Input Voltage Range	100		240	VAC
	Operating Input Voltage Range (Derate linearly from 100% Load at 90VAC to 80% load at 80VAC)	80		275	
Input Frequency	Sine Wave	47		63	Hz
Input Current	Low Line, 100VAC, full load		0.7		A
	High Line, 240VAC, full load		0.3		
Inrush Current	Low Line, 100VAC, full load, 25°C, cool start			15	A
	High Line, 240VAC, full load, 25°C, cool start			36	
No Load Power Consumption	230VAC, no load			0.5	W
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Line Regulation	Full load, Vin=100~120VAC or 200~240VAC			1	%
Load Regulation	230VAC	See Table			
Output Power				30	W
Output Current		See Table			
Ripple & Noise[5]		See Table			
Hold-up Time	110VAC, full load	10			ms
Start-up Time	100~240VAC, full load			2	s
Time of Transient Response	110VAC, Full load to half load			4	ms
Temperature Coefficient	All Conditions			±0.04	%/°C
PROTECTION					
Over Voltage Protection	Recovers automatically after fault condition is removed	112		132	%
Over Current Protection		110		150	%
Short Circuit Protection		Automatic Recovery			
GENERAL SPECIFICATIONS					
Efficiency	230VAC, full load	78		85	%
Dielectric Withstanding Voltage (P-S)	Primary to Secondary, limit current <10mA			4000	VAC
Dielectric Withstanding Voltage (P-G)	Primary to PE, limit current <10mA			1500	
Insulation Resistance		50			MΩ
Safety Ground Leakage Current	Vin=264VAC, Fi=63Hz			0.165	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Derate linearly from 100% Load at 50°C to 50% load at 70°C	-10		+70	°C
Storage Temperature	10~95%RH	-40		+85	°C
Operating Humidity	Non-Condensing	0		95	%RH
Storage Humidity		0		95	%RH
Operating Altitude	All Conditions			3000	m
Cooling		Free air convection			
Vibration	10~500Hz, 10min./1cycle, 60min. each along X,Y,Z axes			5	G
MTBF	MIL-HDBK-217F, 25°C	200,000			hours
PHYSICAL SPECIFICATIONS					
Weight		7.05oz (200g)			
Dimensions (L x W x H)		4.00 x 1.99 x 1.16 inch (101.5 x 50.5 x 29.5 mm)			
Flammability Rating		UL94V-1			
Input Connector	Mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal				
Output Connector	Mates with Molex housing 09-50-3061 and Molex 2478 series crimp terminal				
SAFETY & EMC					
Safety Approvals	IEC60601-1 Editions 3.1, ES60601-1: 2005 (R2012), CSAC22.2 No. 60601-1:14, EN60601-1: 2006/A1:2013				
EMC Emission	Compliance to EN55011 (CISPR11), EN60601-1-2				Class B
Electrostatic Discharge	Air Discharge, IEC61000-4-2			15	kV
	Contact Discharge, IEC61000-4-2			8	
Surge Voltage	Line-Neutral			1	kV
	Line-PE & Neutral-PE			2	

NOTES

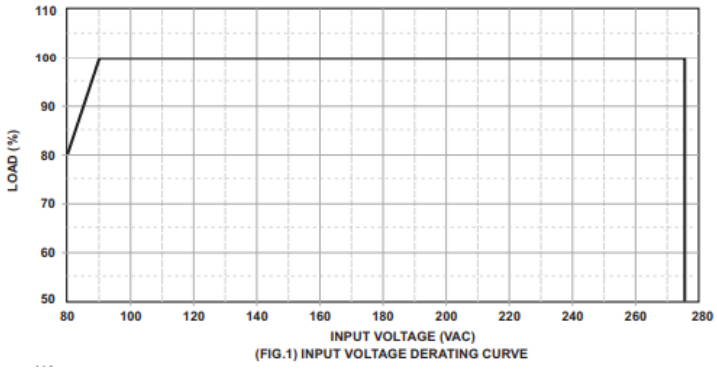
1. Output can provide up to peak load when the power supply starts up.
   Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load.
5. Ripple & noise is measured by using 20MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
7. Efficiency is measured at rated load, and nominal line.

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

CHARACTERISTIC CURVES

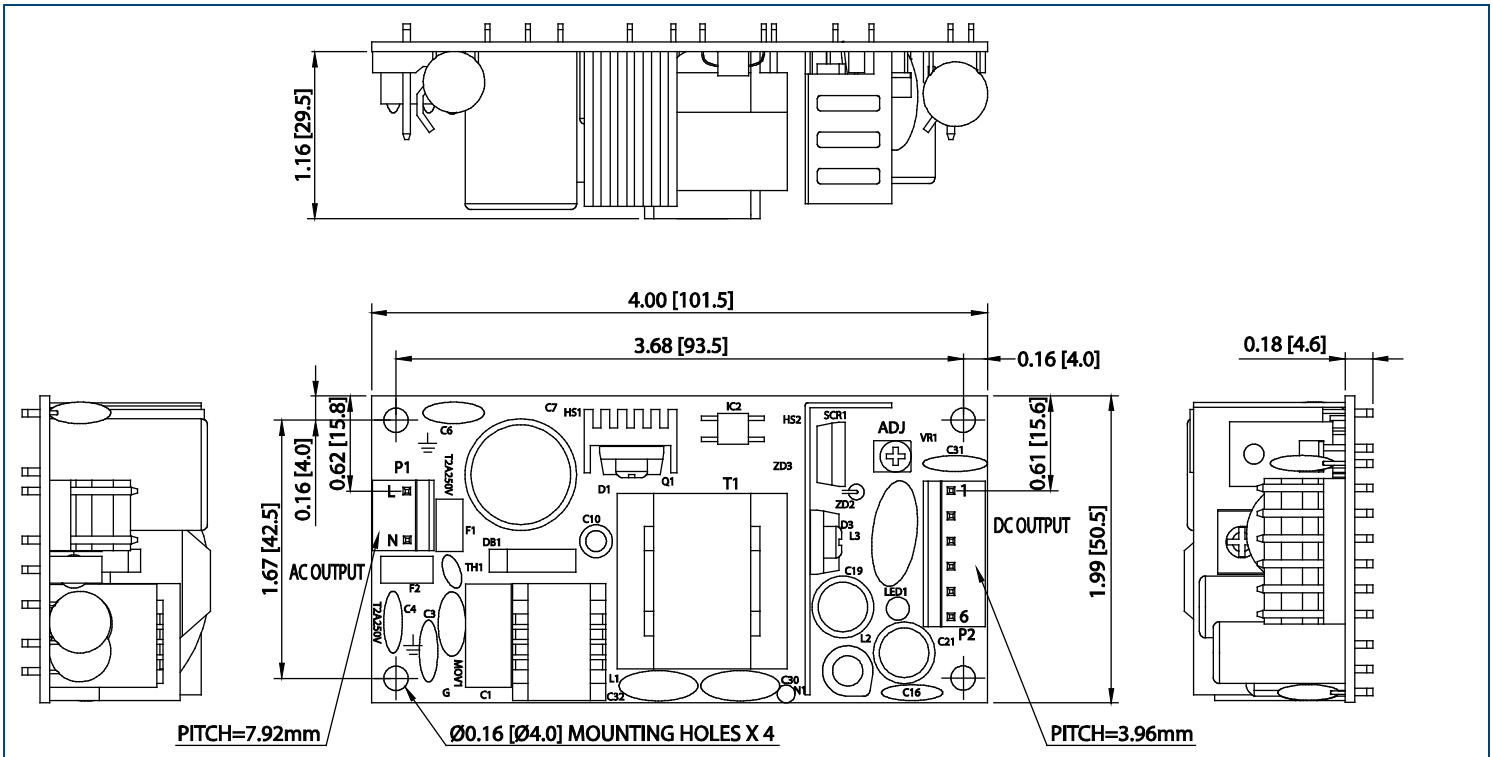


(FIG.2) TEMPERATURE DERATING CURVE

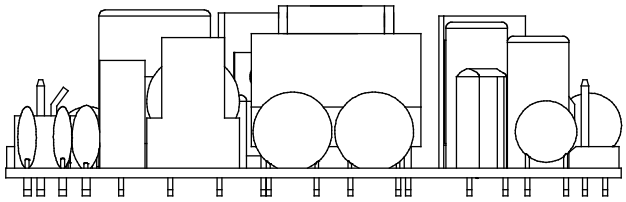


(FIG.1) INPUT VOLTAGE DERATING CURVE

MECHANICAL DRAWING



PIN CONNECTIONS	
Pin	Assignment
1	RTN
2	RTN
3	RTN
4	Vout
5	Vout
6	Vout



NOTES:
1. Unit: inches [mm]
2. Tolerance: ±0.02 [±0.5]
3. Weight: Approximately 7.05oz (200g)
4. Input Connector: Mates with Molex housing 09-50-3031 and Molex 2478 series crimp terminal
5. Output Connector: Mates with Molex housing 09-50-3061 and Molex 2478 series crimp terminal
6. All dimensions are for reference only

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.

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