RoHS2 2011/65/EU + c UL us CB

Size: 6.00in x 3.50in x 1.46in
(152.40mm x 88.90mm x 37mm)

FEATURES

- Wide Operating Voltage, 90 to 260VAC, 47 to 63Hz
- Dual Output (5V Standby Output)
- Remote On/Off Control
- Surge ±3kV
- Class I
- Meets Medical Safety 3rd Edition
- Input to Output: 2MOPP
- Active Power Factor Correction
- Short Circuit and Over Load Protection
- ANSI/AAMI ES 60601-1:2005 (UL/cUL 3rd Edition) Safety Approvals

APPLICATIONS

- Medical Equipment
- Patient Monitor
- Blood Pressure System
- Portable Medical Devices
- ECG Machine

DESCRIPTION

The PSMBU123 series of AC DC open frame medical power supplies offers up to 125 watts of output power in a 6” x 3.50” x 1.46” unit. This series consists of dual output models and a wide operating voltage of 90 to 260VAC. Each model has active power factor correction, meets medical safety 3rd edition approvals, and has short circuit and over load protection. This series has ANSI/AAMI ES 60601-1:2005 (UL/cUL 3rd Edition) safety approvals.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage		Output Current		Ripple & Noise	No Load Consumption	Output Power	Total Regulation	Efficiency
		Vo1	Vsb	Io1	Isb					
PSMBU123-105	90~260VAC	12VDC	5VDC	9.00A	3.0A	100mVp-p	0.5W	123W	±3%	88%
PSMBU123-107		19VDC	5VDC	5.68A	3.0A	150mVp-p	0.5W	123W	±3%	88%
PSMBU123-108		24VDC	5VDC	4.58A	3.0A	200mVp-p	0.5W	125W	±3%	88%
PSMBU123-110		36VDC	5VDC	3.05A	3.0A	200mVp-p	0.5W	125W	±3%	88%
PSMBU123-111		48VDC	5VDC	2.29A	3.0A	200mVp-p	0.5W	125W	±3%	88%

SPECIFICATIONS

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						
Operate Input Voltage Range			90		260	VAC
Safety Approval Input Voltage Range			100		240	VAC
Input Frequency	Sine Wave		47		63	Hz
Power Factor Correction			0.95		0.99	
Input Current	Low Line	Full Load, Vin=100VAC			1.7	A
	High Line	Full Load, Vin=240VAC			1.0	
Inrush Current	Low Line	Full Load, 25ºC, Cool Start, Vin=100VAC			35	A
	High Line	Full Load, 25ºC, Cool Start, Vin=240VAC			65	
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Line Regulation(3)	Full Load, Vin=100~120VAC or 200~240VAC				1	%
Total Regulation(4)			-3		+3	%
Output Power			See Table			
Output Current			See Table			
Ripple & Noise (20MHz bandwidth)(5)			See Table			
Transient Response Time	Full Load, Vin=110VAC				4	ms
Start-Up Time	Full Load, Vin=100~240VAC				1.5	s
Hold-Up Time(6)	Full Load, Vin=100VAC		50			ms
Temperature Coefficient	All Conditions		-0.04		+0.04	%/ºC
PROTECTION						
Short Circuit Protection			Automatic Recovery			
Over Load Protection	Recovers automatically after fault conditions is removed		110		150	%
ENVIRONMENTAL SPECIFICATIONS						
Operating Case Temperature	Derate linearly from 100% load at 50ºC to 50% load at 70ºC		-10		70	ºC
Storage Temperature	10~95% RH		-40		85	ºC
Operating Humidity	Non-Condensing		0		95	%RH
Storage Humidity			0		95	%RH
Surge Voltage	All Conditions				2	kV
Operating Altitude	All Conditions				3000	m
Vibration	10~500Hz, 10min./1cycle, 60min. each along X, Y, Z axes		5			G
Cooling			Free Air Convection			
MTBF	Operating Temperature at 25ºC, Calculated per MIL-HDBK-217F		100,000			Hours

SPECIFICATIONS

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
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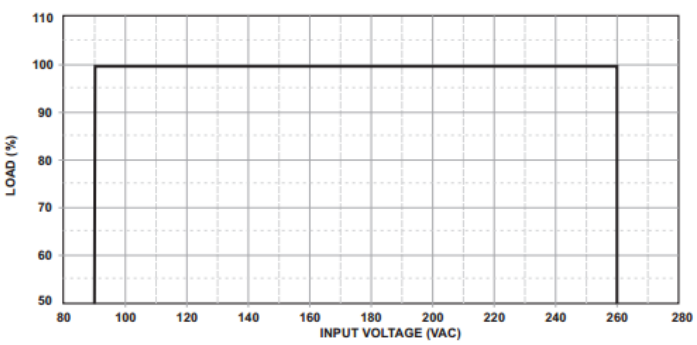
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
GENERAL SPECIFICATIONS					
Efficiency(7)	Full Load, Vin=230VAC		See Table		
Insulation Resistance	Primary to Secondary, 500VDC, 25ºC/70% RH	50			MΩ
Dielectric Withstanding Voltage (P-S)	Primary to Secondary, limit current <10mA			4000	VAC
Dielectric Withstanding Voltage (P-G)	Primary to PE, limit current <10mA			1500	VAC
Safety Ground Leakage Current	Vin=240VAC, 60Hz			0.1	mA
PHYSICAL SPECIFICATIONS					
Weight			19.40oz (550g)		
Dimensions (L x W x H)			6.00in x 3.50in x 1.46in (152.40mm x 88.90mm x 37.00mm)		
Input Connector			Mates with Molex housing 09-52-4104 and Molex2478 series crimp terminal		
Output Connector			Mates with Molex housing 09-52-4034 and Molex 2478 series crimp terminal		
Flammability Rating			UL94V-1		
SAFETY CHARACTERISTICS					
Safety Approvals	ANSI/AAMI ES 60601-1:2005 (UL/cUL 3rd Edition)				
EMC Emission	EN55011 (CISPR11), EN61000-3-2, -3				Class B
Class of Equipment					Class I
Flammability Rating					UL94V-1

NOTES

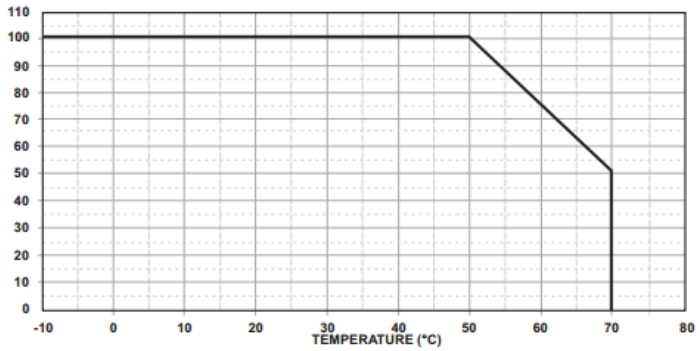
(1) Output can provide up to peak load when the power supply starts up. Staying in more than rated load continuously is not allowed.
(2) Each output is checked to be within voltage accuracy at factory at 60% load condition.
(3) Line regulation is defined by changing ±10% of input voltage from nominal 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 atrated 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.
(8) Remote control connector mates with Molex housing

DERATING CURVES

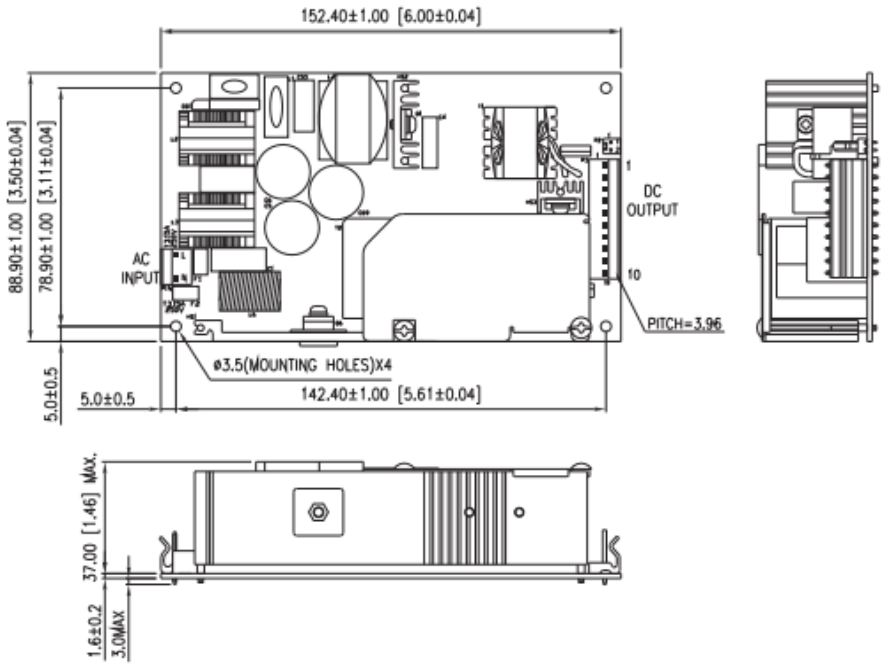
Input Voltage Derating Curve



Temperature Derating Curve



MECHANICAL DRAWINGS



PIN CHART

PSMBU123-1XX Pin 2

1	2
Vsb (+5VDC)	Remote On/Off

PSMBU123-1XX Pin 3

1	2	3	4	5	6	7	8	9	10
Remote On/Off	Vsb (+5VDC)	COM	COM	COM	COM	Vo1	Vo1	Vo1	Vo1

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 ISO9001-2008 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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