



Size: 4in x 2in x 1.02in (101.6mm x 50.8mm x 26mm)

**FEATURES**

- Wide Operating Voltage Range of 90-260VAC
- Single Outputs
- High ESD Immunity
- Input to Output: 2MOPP
- Cooling by Free Air Convection
- RoHS 2 Compliant
- 100% Burn-In Tested
- Short Circuit, Over Voltage, and Over Load Protection
- IEC60601-1 Edition 3.1, ES60601-1:2005(R2012), CSA C22.2 No. 60601-1:14, and EN60601-1:2006/A1:2013 Safety Approvals

**APPLICATIONS**

- Patient Monitor
- Ultrasound System
- Portable Medical Device
- Blood Chemistry Analyzer
- Medical Imaging

**DESCRIPTION**

The PSHBU100 series of AC/DC medical open frame power supplies offers up to 100 watts of output power in a 4" x 2" x 1.02" package. This series consists of single output models with a wide operating voltage range of 90-260VAC. Each model in this series has high ESD immunity, RoHS 2 compliance, and short circuit, over voltage, and over load protection. This series has IEC60601-1 Edition 3.1, ES60601-1:2005(R2012), CSA C22.2 No. 60601-1:14, and EN60601-1:2006/A1:2013 safety approvals.

**MODEL SELECTION TABLE**

Model Number	Operate Input Voltage Range	Output Voltage	Output Current		Ripple & Noise	Output Power	Efficiency
			Min Load	Max Load			
PSHBU100-105	90-260VAC	11~13VDC	7.69A	8.33A	100mVp-p	100W	86%
PSHBU100-106		13~16VDC	6.25A	7.69A	100mVp-p	100W	86%
PSHBU100-107		16~21VDC	4.76A	6.25A	100mVp-p	100W	87%
PSHBU100-108		21~27VDC	3.70A	4.76A	100mVp-p	100W	88%
PSHBU100-109		27~33VDC	3.03A	3.70A	100mVp-p	100W	88%
PSHBU100-110		33~40VDC	2.50A	3.03A	100mVp-p	100W	89%
PSHBU100-111		40~50VDC	2.00A	2.50A	100mVp-p	100W	89%
PSHBU100-112		50~55VDC	1.81A	2.00A	100mVp-p	100W	89%

**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 Voltage Range	Safety Approval & Label Specification Label	100		240	VAC
	Operate Voltage Range	90		260	
Input Frequency	Sine Wave	47		63	Hz
Input Current	Low Line	Full Load, Vin=100VAC		1.4	A
	High Line	Full Load, Vin=240VAC		0.7	
Inrush Current	Low Line	Full Load, 25°C, Cool Start, Vin=100VAC		50	A
	High Line	Full Load, 25°C, Cool Start, Vin=240VAC		100	
Power Factor Correction		0.90		1	
Safety Ground Leakage Current	Vin=240VAC/60Hz			0.25	mA
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Line Regulation <sup>(3)</sup>	Full Load, Vin=100~120VAC or 200~240VAC			1	%
Total Regulation <sup>(4)</sup>			±3		%
Output Power		See Table			
Output Current		See Table			
Ripple & Noise <sup>(5)</sup>		See Table			
Transient Response Time	Full Load, Vin=110VAC			4	ms
Start-Up Time	Full Load, Vin=100~240VAC	0.25		0.5	S
Hold-Up Time <sup>(6)</sup>	Full Load, Vin=100VAC		16		mS
Temperature Coefficient	All Conditions			±0.04	%/°C
<b>PROTECTION</b>					
Short Circuit Protection		Automatic Recovery			
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
Over Voltage Protection		112		132	%

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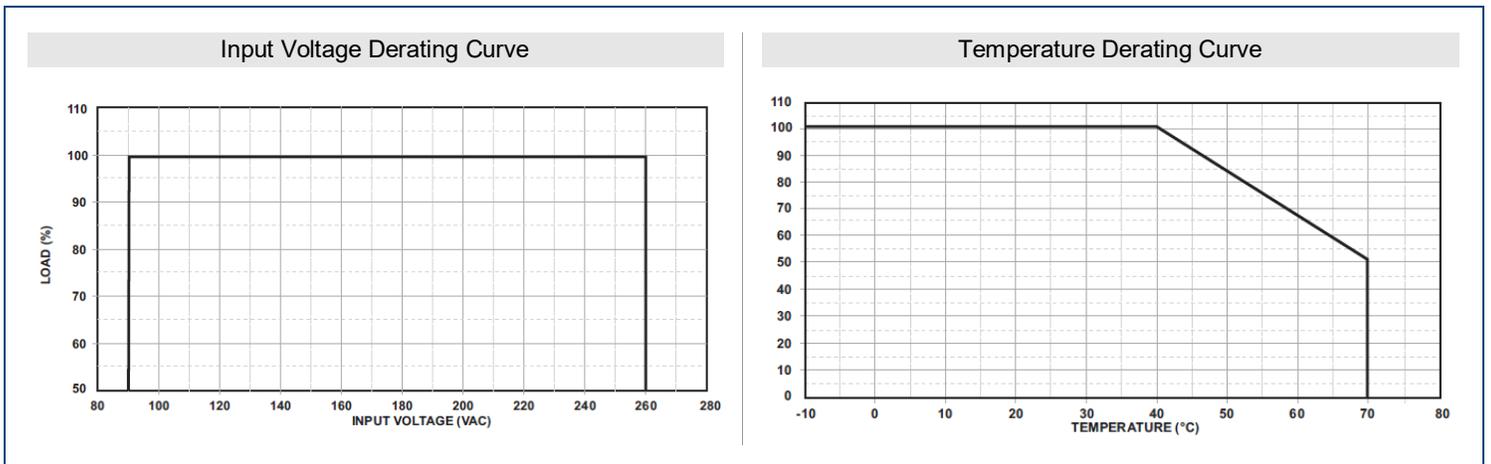
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	Derate linearly from 100% load at 40°C to 50% load at 70°C	-10		70	°C
Storage Temperature	10~95%RH	-40		85	°C
Operating Humidity	Non-Condensing	0		95	%RH
Storage Humidity		0		95	%RH
Operating Altitude	All Conditions			3000	M
Vibration	10~500Hz, 10min./1cycle, 60min. each along X, Y, Z axes			5	G
Cooling		Free Air Convection			
MTBF	Operating temperature at 25°C, per MIL-HDBK-217F	100,000			Hours
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	Full Load, Vin=230VAC	See Table			
Dielectric Withstand Voltage	Primary to Secondary, Limit Current <10mA	4000			VAC
	Primary to PE, Limit Current <10mA	2828			
Insulation Resistance		50			MΩ
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		6.35~8.82oz (180~250g)			
Dimensions (L x W x H)		4in x 2in x 1.02in (101.6mm x 50.8mm x 26mm)			
Flammability Rating		UL94V-1			
<b>SAFETY CHARACTERISTICS</b>					
Safety Approvals	IEC60601-1 Edition 3.1 ES60601-1:2005 (R2012) CSA C22.2 No. 60601-1:14 EN60601-1:2006/A1:2013				
EMC Emission	Compliance to EN55011 (CISPR11), EN60601-1-2				
Dielectric Withstanding Voltage	Primary to Secondary, limit current <10mA	4000			VAC
	Primary to PE, limit current <10mA	2828			
Electro Static Discharge	Air Discharge, IEC61000-4-2			15	kV
	Contact Discharge, IEC61000-4-2			8	
Protection Class		Class I			

**NOTES**

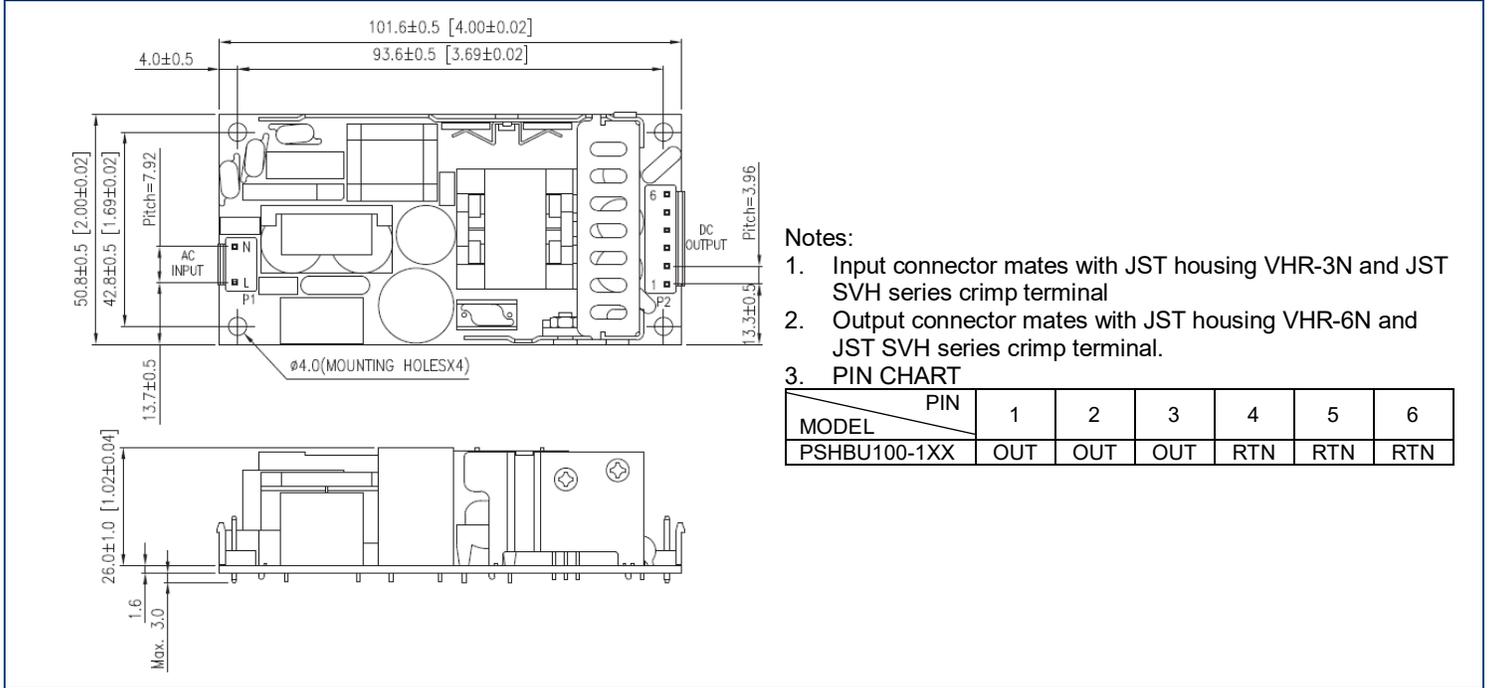
- Output can provide up to peak load when the power supply starts up. Staying in more than rated load continually is not allowed.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- Load regulation is defined by changing ±40% of measured output load from 60% rated load.
- 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.
- Hold up time is measured from the end of the last charging pulse to the time which the main output at rated load and nominal line.

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

**DERATING CURVES**



**MECHANICAL DRAWINGS**



- Notes:
1. Input connector mates with JST housing VHR-3N and JST SVH series crimp terminal
  2. Output connector mates with JST housing VHR-6N and JST SVH series crimp terminal.
  3. PIN CHART

**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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