



Size:
5.00 x 3.00 x 1.18 inches
127.0 x 76.2 x 30.0 mm

Weight:
12.3oz (350g)

FEATURES

- RoHS Compliant
- High Power Density
- Power Factor > 0.95 @ 115VAC
- 3 x 5 Inch Open Frame Footprint
- 90~264 VAC Input Voltage Range
- Single Outputs
- 87% High Efficiency
- 120 Watts Output Power with Convection Cooling
- 180 Watts Output Power with 15CFM Forced Air
- Over Voltage, Over Load, and Short Circuit Protection
- Low Leakage Current < 100µA at 264VAC
- Medical Body Floating (BF) Rated, MOOP Type
- UL60601-1 3rd ed., EN60601-1 3rd ed., IEC EN60601-1 3rd ed., and CSA-C22.2 No.60601-1 3rd ed. Medical Approvals

DESCRIPTION

The PSM180 series of AC/DC medical power supplies provides 120 Watts with convection cooling and 180 Watts with 15CFM forced airflow in a compact 3 x 5 inch open frame footprint. This series consists of single output models ranging from 12VDC to 48VDC with a 90~264VAC input voltage range. These supplies also feature a low leakage current of less than 100µA at 264VAC, power factor > 0.95 at 115VAC, and 87% typical efficiency. These supplies are also protected against short circuit, over voltage, and over load conditions. The PSM180 series has UL60601-1 3rd ed., EN60601-1 3rd ed., CSA-C22.2 No.60601-1 3rd ed., and IEC EN60601-1 3rd ed. medical approvals.

MODEL SELECTION TABLE

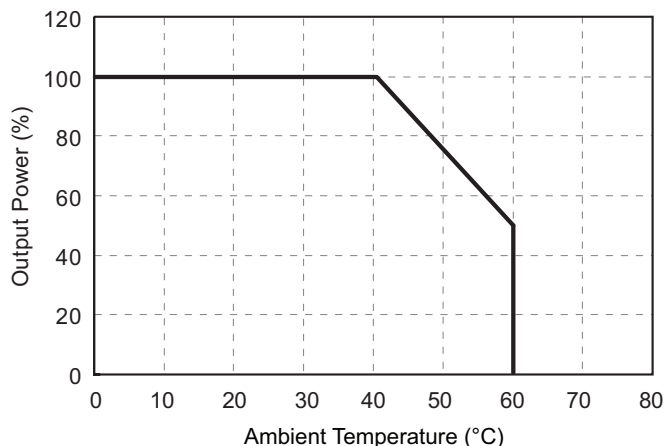
Model Number	Input Range	Output Voltage	Minimum Load	Output Current		Output Power ⁽¹⁾		Ripple & Noise ⁽²⁾	Output Regulation
				Convection	15CFM Forced Air	Convection	15CFM Forced Air		
PSM180B-1Y120	90 - 264 VAC	12 VDC	0A	10.00A	15.00A	120W	180W	240mVp-p	±3%
PSM180B-1Y150		15 VDC	0A	8.00A	12.00A	120W	180W	240mVp-p	±3%
PSM180B-1Y190		19 VDC	0A	6.32A	9.48A	120W	180W	240mVp-p	±2%
PSM180B-1Y240		24 VDC	0A	5.00A	7.50A	120W	180W	240mVp-p	±2%
PSM180B-1Y280		28 VDC	0A	4.29A	6.43A	120W	180W	240mVp-p	±2%
PSM180B-1Y480		48 VDC	0A	2.50A	3.75A	120W	180W	240mVp-p	±2%

NOTES

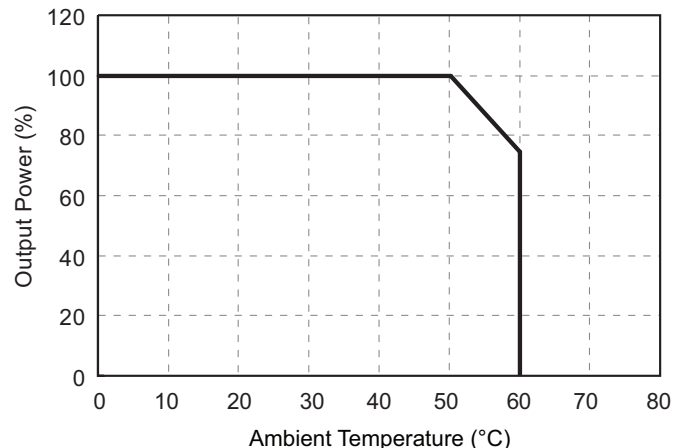
1. 120W max. with convection cooling and 180W max. with 15CFM minimum forced airflow.
2. Ripple & noise is measured at 20MHz limited bandwidth and with a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor in parallel across the output.

DERATING CURVES

Derating Curve with Convection Cooling



Derating Curve with 15CFM Forced Air

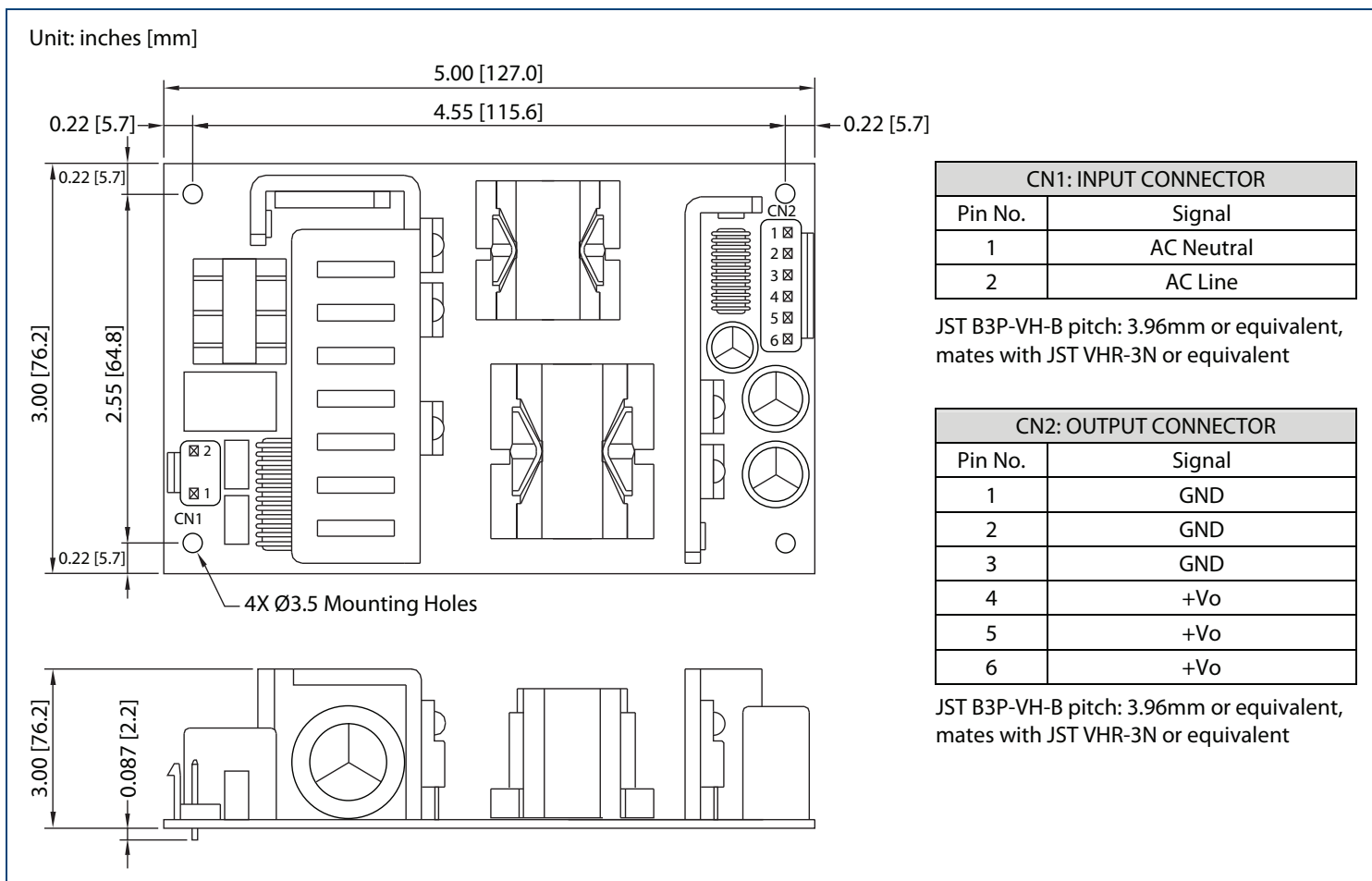


SPECIFICATIONS: PSM180 SERIES

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 Range			90		264	VAC
Input Frequency			47		63	Hz
Input Current (rms)	115VAC and full load				3	A
	230VAC and full load				1.5	
Inrush Current	115VAC, cold start, 25°C				50	A
	230VAC, cold start, 25°C				100	
Power Factor Correction	115VAC and full load		0.95			
	230VAC and full load		0.90			
Output Specifications						
Output Voltage			See Table			
Output Regulation			See Table			
Output Power	Convection cooling				120	W
	15CFM forced air cooling				180	
Output Current			See Table			
Minimum Load			0			%
Ripple & Noise (20MHz BW)	Measured at 20MHz limited bandwidth and with a 10μF electrolytic capacitor and a 0.1μF ceramic capacitor in parallel across the output			240		mVp-p
Hold-up Time	115VAC and full load		20			ms
Protection						
Over Voltage Protection			Latching type, AC recycle			
Over Load Protection	automatic recovery		110		150	%
Short Circuit Protection			automatic recovery			
General Specifications						
Efficiency	115VAC and full load		87			%
Environmental Specifications						
Operating Ambient Temperature	Convection cooling	Derating linearly 2.5% per °C from 41°C to +60°C	0		+60	°C
	15CFM forced air	Derating linearly 2.5% per °C from 51°C to +60°C	0		+60	°C
Storage Temperature Range			-40		+85	°C
Humidity	Non-condensing		5		95	%
MTBF	Full load and 25°C ambient temperature		100,000			hours
Physical Specifications						
Weight			12.3oz (350g)			
Dimensions (L x W x H)			5.00 x 3.00 x 1.18 inch (127.0 x 76.2 x 30.0 mm)			
Input Connector (CN1)	Mates with JST VHR-3N or equivalent		JST B3P-VH-B pitch: 3.96mm or equivalent			
Output Connector (CN2)	Mates with JST VHR-6N or equivalent		JST B6P-VH-B pitch: 3.96mm or equivalent			
Safety & EMC						
Safety Approvals	UL60601-1 3rd ed., EN60601-1 3rd ed., CSA-C22.2 No.60601-1 3rd ed., and IEC EN60601-1 3rd ed.					
EMC Standards	EN60601-1-2, FCC Part 18 Class B, EN55011 Class B, CE					

MECHANICAL DRAWING



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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