

PCB Mount

Chassis/DIN Rail Mount



Size: 3.50 x 2.66 x 1.35in Size: 4.41 x 2.67 x 1.50in

FEATURES

- Universal Input of 85~264VAC
- Fully Encapsulated Plastic Case
- PCB, Chassis, and DIN-Rail Mounting Packages Available
- Protection Class II per IEC/EN 60536
- Over Voltage, Over Load, and Short Circuit Protection
- RoHS & REACH Compliant
- CE Marked
- Medical and Industrial Safety Approvals

DESCRIPTION

The PSMAY60 series of medical and industrial AC/DC power modules offers 60 watts of output power in a compact PCB, Chassis Mount, or DIN Rail mount package. This series consists of single output models with a universal input range of 85~264VAC in a fully encapsulated plastic case. Each model in this series has over voltage, over load, and short circuit protection, is RoHS & REACH compliant, and has medical and industrial safety approvals.

MODEL SELECTION TABLE

Model Number ⁽²⁾	Input Voltage Range	Output Voltage	Output Current	Input Current		Maximum Capacitive Load	Efficiency	Output Power
				115VAC, 60Hz	230VAC, 50Hz			
PSMAY60-S051	85~264VAC (120~370VDC)	5.1VDC	1000mA	880mA	528mA	8000µF	84%	60 Watts
PSMAY60-S12		12VDC	5000mA	1000mA	600mA	3900µF	87%	
PSMAY60-S15		15VDC	4000mA	1000mA	600mA	3300µF	87%	
PSMAY60-S24		24VDC	2500mA	1000mA	600mA	1500µF	87%	
PSMAY60-S48		48VDC	1250mA	988mA	593mA	680µF	88%	

SPECIFICATIONS

All specifications typical at 25°C, resistive load, 115VAC, 60Hz Input Voltage, after warm-up time rated 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	AC Range	85		264	VAC
	DC Range	120		370	VDC
Input Frequency		47		440	Hz
Inrush Current	@115VAC, Cold Start @25°C			30	A
	@230VAC, Cold Start @25°C			60	A
No Load Power Consumption				0.5	W
Leakage Current			80		µA
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		±1.0	±2.0		%Vnom.
Line Regulation	Vin=Min. to Max. @Full Load	±0.2	±1.0		%
Load Regulation	Io=0% to 100%	±0.5	±1.0		%
No Load Power Consumption				0.5	W
Output Power		See Table			
Output Current		See Table			
Minimum Load		No Minimum Load Requirement			
Maximum Capacitive Load		See Table			
Ripple & Noise (20MHz bandwidth) ⁽³⁾	5.1VDC Models		2.0	3.0	%Vpp of Vo
	Other Output Models		1.0	1.5	%
Overshoot				5	%
Hold-Up Time	@115VAC, 60Hz		20		Ms
	@230VAC, 50Hz		80		Ms
Temperature Coefficient			±0.02		%/°C
PROTECTION					
Short Circuit Protection		Hiccup Mode, Automatic Recovery			
Over Load Protection ⁽⁴⁾	85VAC, Hiccup Mode, Automatic Recovery	105			%Inom.
Over Voltage Protection	Zener Diode Clamp		120		% of Vo

SPECIFICATIONS

All specifications typical at 25°C, resistive load, 115VAC, 60Hz Input Voltage, after warm-up time rated output current unless otherwise noted.
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SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
ENVIRONMENTAL SPECIFICATIONS					
Operating Ambient Temperature	Natural Convection	-40		+80	°C
Storage Temperature		-40		+95	°C
Humidity	Non-Condensing			95	%RH
Lead Temperature	1.5mm from Case for 10Sec.			260	°C
Power Derating	Above +60°C			2.3W/°C	
Cooling ⁽⁶⁾				Natural Convection	
MTBF	Calculated per MIL-HDBK-217F @25°C, Ground Benign		125,000		Hours
GENERAL SPECIFICATIONS					
Efficiency	@Max. Load, 115VAC		See Table		
Switching Frequency			65		KHz
I/O Isolation Voltage	Reinforced Insulation, Rated for 60 Seconds	4000			VACrms
I/O Isolation Resistance	500VDC	1000			MΩ
PHYSICAL SPECIFICATIONS					
Weight	PCB Mounting	12.70oz (360g)			
	Chassis Mount	13.40oz (380g)			
	DIN Rail Mount	15.27oz (433g)			
Dimensions (L x W x H)	PCB Mounting	3.50in x 2.66in x 1.35in (88.9mm x 67.5mm x 34.2mm)			
	Chassis Mount & DIN Rail Mount	4.41in x 2.67in x 1.50in (112mm x 67.8mm x 38mm)			
Case Material	(Flammability to UL 94V-0 rated)	Plastic Resin			
Pin Material	PCB Mount	Copper Alloy with Gold Plate Over Nickel Subplate			
SAFETY CHARACTERISTICS					
Safety Standards	UL/cUL 60950-1 ⁽⁹⁾ CSA C22.2 No. 60950-1 ANSI/AAMI ES606011 CAN/CSA-C22.2 No. 60601-1 IEC/EN 60950-1 IEC/EN 60950-1 3 rd Edition 2xMOPP UL508 ⁽⁹⁾ , CSA C22.2 No. 107.1-01				
Safety Approvals ⁽⁶⁾	UL/cUL 60950-1 Recognition (UL certificate) ⁽⁹⁾ IEC/EN 6090-1 (CB-Report) UL/cUL 508 Listed Certificate ⁽⁹⁾ ANSI/AAMI ES60601-1 2xMOPP Recognition (UL certificate) IEC/EN 60601-1 3 rd Edition (CB-Report)				
EMI Conduction and Radiation	EN55011, EN55022, EN55032, EN61000-6-4, EN61000-6-3, FCC Part 15				Class B
EMS	EN60601-1-2 4 th , EN55024, EN61000-6-2, EN61000-6-1				
	ESD	EN61000-4-2 Air±15kV, Contact±8kV			A
	Radiated Immunity	EN61000-4-3 10V/m			A
	Fast Transient	EN61000-4-4 ±2kV			A
	Surge	EN61000-4-5 ±1kV			A
	Conducted Immunity	EN61000-4-6 10Vrms			A
	PFMF	EN61000-4-8 30A/m			A
	Dips & Interruptions	EN61000-4-11	0% to 230VAC	0.5 Cycle	A
	0% of 230VAC		1 Cycle	A	
	70% of 230VAC		25/30 Cycle	A	
	0% of 230VAC		250/300 Cycle	B	

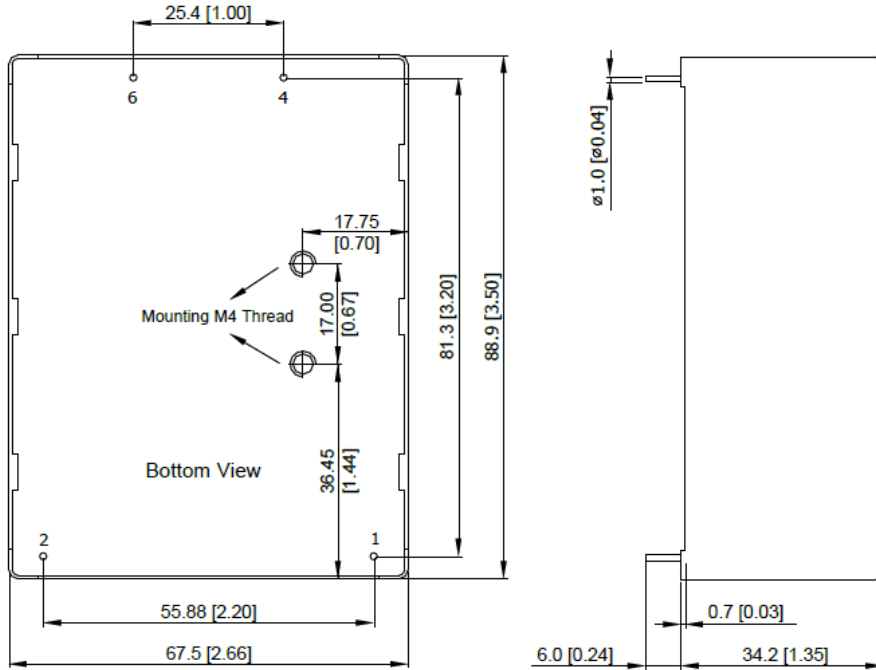
NOTES

- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet.
- Chassis Mount and Din Rail mounts are available for this series. To indicate chassis mount option, add "C" to end of model number. To indicate Din Rail mount option, add "D" to end of model number.
- Ripple & Noise of PCB mounting type measured with a 0.1µF/50V MLCC and a 1µF/50V aluminum electrolytic.
- Long term overload condition may cause damage
- Natural convection is about 20LFM but is not equal to still air (0 LFM).
- Safety approvals cover frequency 47-63Hz.
- It is recommended to protect the converter by a slow blow fuse in the input supply line.
- Other input and output voltage may be available, please call factory.
- This product is Listed to applicable standards and requirements by UL.

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

MECHANICAL DRAWINGS

PCB Mounting

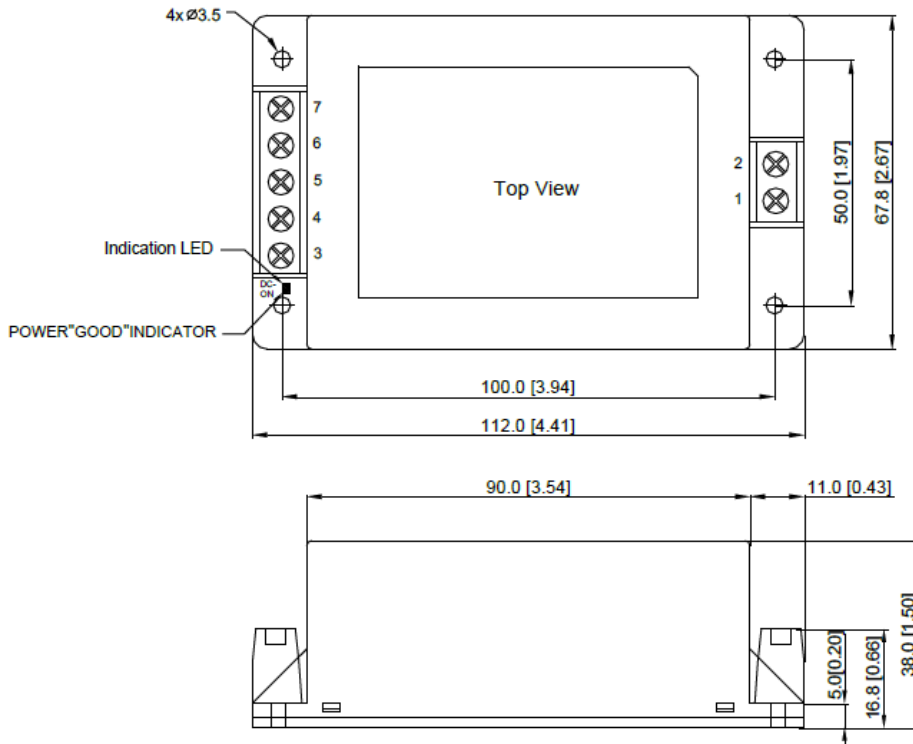


Pin Connections

Pin	Function
1	AC (N)
2	AC (L)
4	+Vout
6	-Vout

All dimensions in mm (inches)
Tolerance: ± 1.0 (± 0.04)
Pin Diameter $\varnothing 1.0 \pm 0.1$ (0.04 ± 0.004)

Chassis Mount

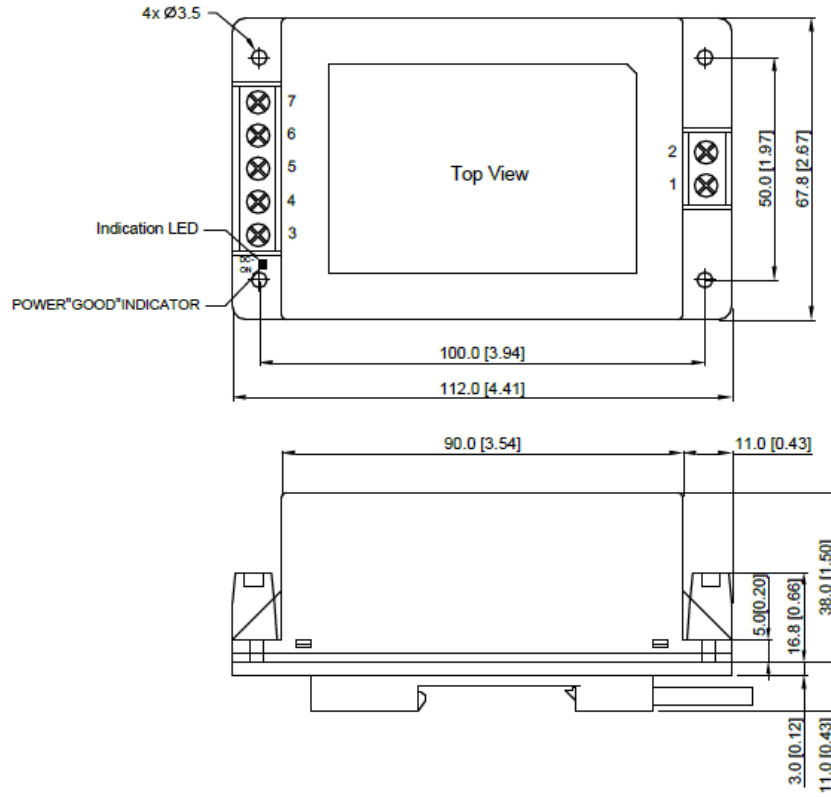


Pin Connections

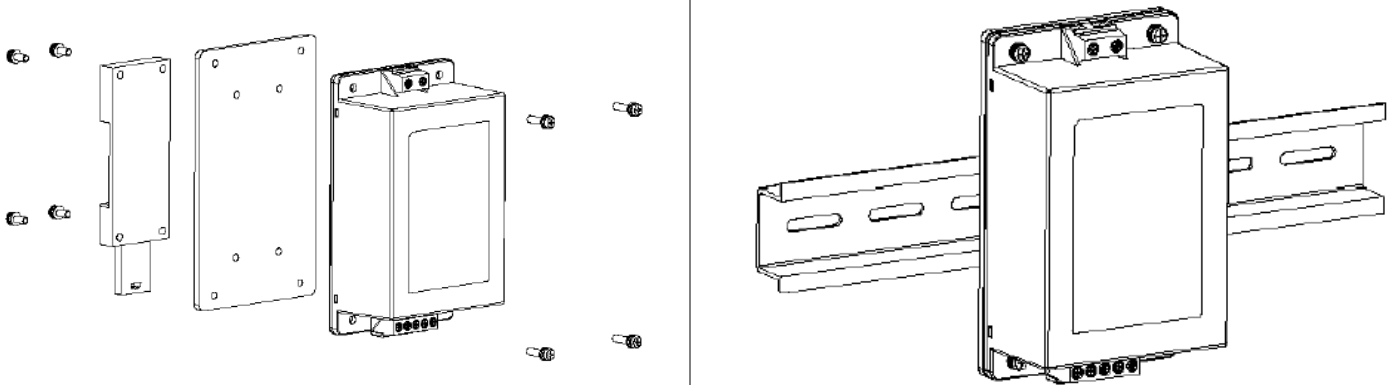
Pin	Function
1	AC (N)
2	AC (L)
3	NC
4	+Vout
5	NC
6	-Vout
7	NC

All dimensions in mm (inches)
Tolerance: ± 1.0 (0.04)

DIN Rail Mounting



DIN-Rail Mounting Bracket



MODEL NUMBER SETUP

PSMAY	60	-	S	24	X
Series Name	Output Power		Output Quantity	Output Voltage	Mounting Options
				051: 5.1VDC 12: 12VDC 15: 15VDC 24: 24VDC 48: 48VDC	C: Chassis Mount D: Din Rail Mount

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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