



Size:
3.90 x 3.23 x 1.38 inches
99.0 x 82.0 x 35.0 mm

Weight:
11.3oz (320g)

FEATURES

- RoHS Compliant
- Up to 53.8 Watts Output Power
- 3000VAC I/O Isolation
- High Efficiency up to 89%
- Operating Altitude up to 5000M
- Easy Assembly from Top Side
- Suitable for Critical Applications
- Miniature Size, High Reliability
- High Power Density
- 100% Full Load Burn-in Test
- No Load Power Consumption < 0.5W
- PCB Soldering Side with Conformal Coating
- -25°C to +70°C Wide Operating Temperature Range
- All Using 105°C Long Life Electrolytic Capacitors
- Withstand 300VAC Surge Input for 5 Sec.
- Universal Input Voltage Range: 90-264VAC (127-370VDC)
- Over Load, Over Voltage, and Short Circuit Protection
- 5V, 12V, 15V, 24V, and 48VDC Single Output Models
- UL60950-1 (2nd edition), IEC60950-1:2005 (2nd edition), EN60950-1:2006 Safety Approvals

DESCRIPTION

The PSPSD-50 series of AC/DC switching power supplies provides up to 53.8 Watts of output power in a 3.90" x 3.23" x 1.38" enclosed case. This series consists of single output models ranging from 5VDC to 48VDC with an input voltage range of 90~264VAC (127~370VDC). Standard features include high efficiency up to 89%, 3000VAC I/O isolation, and a -25°C to +70°C operating temperature range. This series also has short circuit, over load, and over voltage protection. All models are RoHS compliant and have UL60950-1 (2nd edition), IEC60950-1:2005 (2nd edition), and EN60950-1:2006 safety approvals.

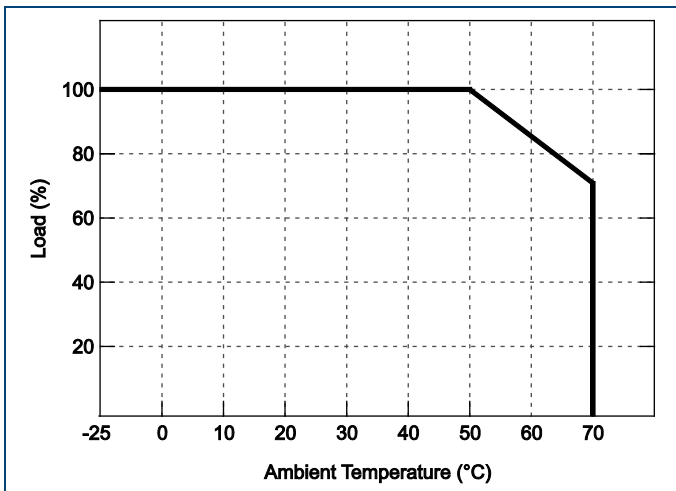
MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise ⁽¹⁾	Output Power	Efficiency	
			Min	Max			At 115VAC	At 230VAC
PSPSD-50-5	90 ~ 264 VAC (127 ~ 370 VDC)	5 VDC	0A	8A	80mVp-p	40W	79%	80%
PSPSD-50-12		12 VDC	0A	4.2A	120mVp-p	50W	84%	85%
PSPSD-50-15		15 VDC	0A	3.4A	120mVp-p	51W	85%	86%
PSPSD-50-24		24 VDC	0A	2.2A	200mVp-p	52.8W	86%	87%
PSPSD-50-48		48 VDC	0A	1.12A	200mVp-p	53.8W	88%	89%

NOTES

1. Ripple & noise is measured at 20MHz limited bandwidth and using a 12" twisted pair-wire terminated with a 0.1µF & 10µF capacitors in parallel.
 2. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
 3. DIN-35 rail bar accessories are available for this series. Please call factory for ordering details.
 4. This product is Listed to applicable standards and requirements by UL.
- *Due to advances in technology, specifications subject to change without notice.*

DERATING CURVE

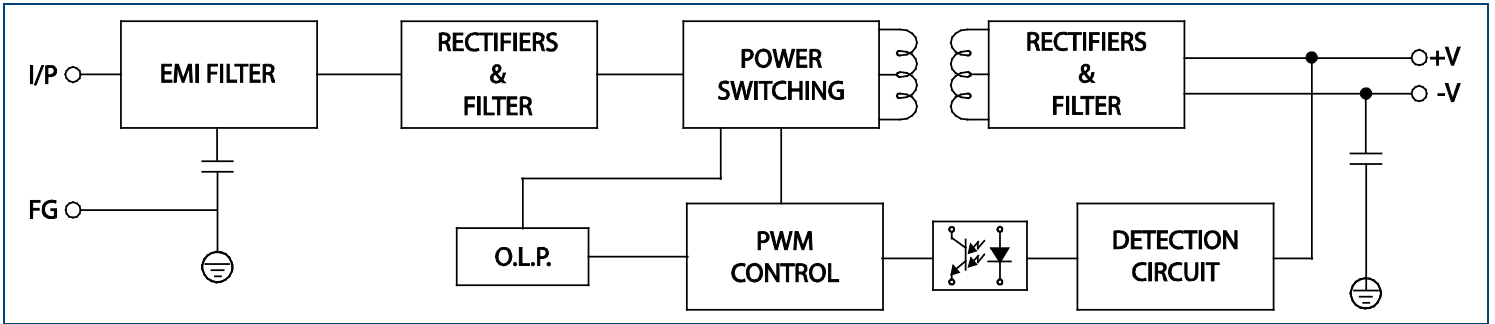


SPECIFICATIONS: PSPSD-50 SERIES

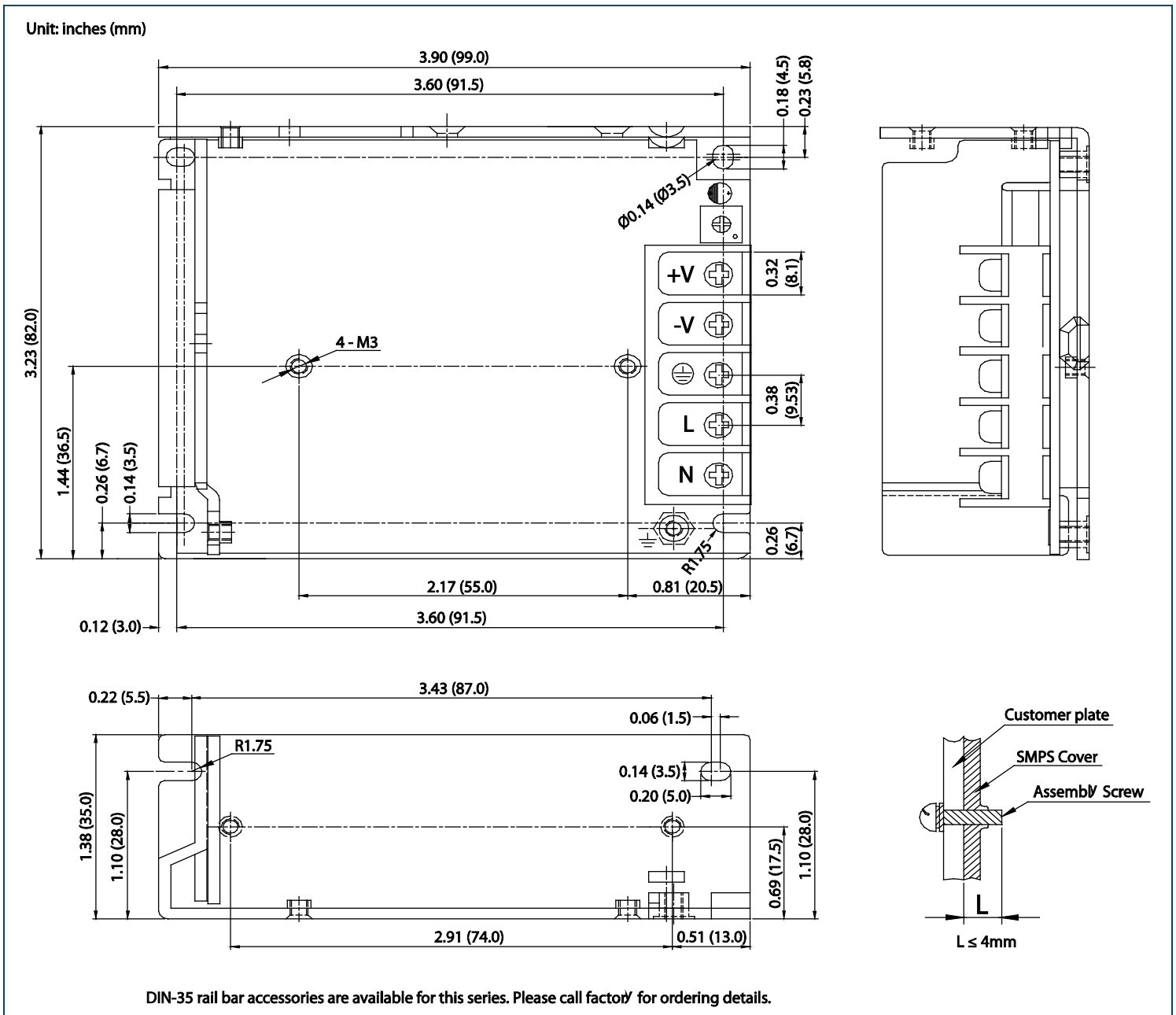
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage	AC input voltage range	90		264	VAC
	DC input voltage range	127		370	VDC
Input Frequency		47		63	Hz
AC Current				1.5	A
Inrush Current	At 115VAC and cold start			20	A
	At 230VAC and cold start			40	
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		-3.0		+3.0	%
Voltage Adjustability		-5		+10	%Vo
Line Regulation	Low Line to High Line	-0.5		+0.5	%
Load Regulation	0% to 100% full load	-1.0		+1.0	%
Output Power		See Table			
Output Current		See Table			
Ripple & Noise	Measured at 20MHz BW and with 0.1µF and 10µF capacitors in parallel	See Table			
Hold-up Time	At 115VAC and full load	20			ms
	At 230VAC and full load	50			
Setup Time	At 115VAC and full load			2.0	ms
	At 230VAC and full load			1.5	
Temperature Coefficient		-0.03		+0.03	%/°C
Overshoot and Undershoot				5.0	%
PROTECTION					
Short Circuit Protection		Long term mode, auto-recovery			
Over Voltage Protection	Constant voltage	105		150	%Vo
Over Load Protection	Constant power	105		150	%Io
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Withstand Voltage	Primary to Secondary	≤ 10mA	3000		VDC
	Primary to PG	≤ 10mA	1500		
	Secondary to PG	≤ 10mA	500		
Isolation Resistance		100			MΩ
Leakage Current	Input to Output			0.25	mA
	Input to PG			0.75	
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	See derating curve	-25		+70	°C
Storage Temperature		-40		+85	°C
Operating Humidity	Non-condensing	20		90	% RH
Storage Humidity	Non-condensing	10		95	% RH
Cooling		Free air convection			
MTBF	MIL-HDBK-217F; 25°C and full load	200,000			hours
PHYSICAL SPECIFICATIONS					
Weight		11.3oz (320g)			
Dimensions (L x W x H)		3.90 x 3.23 x 1.38 inches (99.0 x 82.0 x 35.0 mm)			
SAFETY & EMC (See Note 2)					
Safety Approvals		UL60950-1 (2nd edition) ⁽⁴⁾ , IEC60950-1:2005 (2nd edition), EN60950-1:2006			
EMI Emission		EN55022, EN55024 Class B			
Harmonic Current		EN61000-3-2-3			
EMC Immunity		EN61000-4-2,3,4,5,6,8,11; EN55024, EN61000-6-2 heavy industry level			

BLOCK DIAGRAM



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: 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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