

Wall Industries, Inc.

PSPSD-20 SERIES

85~264VAC Input Voltage Range
Single Outputs
20 Watts Output Power
AC/DC Switching Power Supply



FEATURES

- Single Outputs
- RoHS Compliant
- Universal AC Input Range (Full Range)
- High Efficiency and High Reliability
- Over Voltage, Over Load, and Short Circuit Protected
- Wide Operating Ambient Temperature (-20°C to +60°C)
- 20W Output Power
- 100% Full Load Burn-in Tested
- Output Voltages Available from 5VDC to 48VDC
- Ultra-Miniature Size, Low Profile: 3.50" x 2.01" x 0.79"
- ±10% Output Voltage Adjustability
- All Using 105°C Long Life Electrolytic Capacitors

DESCRIPTION

The PSPSD-20 series of AC/DC switching power supplies offers 20 Watts of output power in a 3.50" x 2.01" x 0.79" low profile open frame package. All models have a single output and a universal AC input voltage range of 85~264VAC. Some features include wide operating temperature range (-20°C to +60°C), ±10% output adjustability, and over load, over voltage, and short circuit protection. These supplies are RoHS and UL94V0 compliant and have UL/cUL, CB, and CE safety approvals. All models are 100% full load burn-in tested.

SPECIFICATIONS: PSPSD-20 SERIES		
<p>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.</p>		
INPUT SPECIFICATIONS		
Input Voltage Range	85~264VAC	
Input Frequency	47~63Hz	
AC Current	0.5A max.	
Inrush Current	Cold Start 20A typ. at 115VAC; 40A typ. at 230VAC	
OUTPUT SPECIFICATIONS		
Output Voltage	See Table	
Voltage Accuracy	±2.0%	
Voltage Adjustment Range	±10% of rated output voltage	
Line Regulation	±0.5%	
Load Regulation	±2.0%	
Output Current	See Table	
Ripple & Noise <i>(See Note 1)</i>	See Table	
Setup Time	< 2.0s at 115VAC and full load; < 1.0s at 230VAC and full load	
Hold Up Time	> 10ms at 115VAC and full load; > 20ms at 230VAC and full load	
Temperature Coefficient	±0.03%/°C	
Overshoot and Undershoot	< 5.0%	
PROTECTION		
Over Load Protection	105% ~ 150% of rated output power, hiccup mode, auto-recovery	
Over Voltage Protection	110% ~ 140% of rated output voltage, constant voltage	
Short Circuit Protection	Long-term mode, auto-recovery	
GENERAL SPECIFICATIONS		
Efficiency (typical)	See Table	
Withstand Voltage	Primary to Secondary	3000VAC; ≤ 10mA
	Primary to PG	1500VAC; ≤ 10mA
	Secondary to PG	500VDC; ≤ 10mA
Isolation Resistance	≥ 100MΩ	
Leakage Current	Input to Output	< 0.35mA
	Input to PG	< 0.75mA
ENVIRONMENTAL SPECIFICATIONS		
Operating Ambient Temperature	-20°C to +60°C	
Storage Temperature	-40°C to +85°C	
Working Humidity	20 ~ 90% RH (non-condensing)	
Storage Humidity	10 ~ 95% RH (non-condensing)	
Cooling Method	Free air convection	
MTBF (MIL-HDBK-217F)	> 100,000 hours @ 25°C and full load	
PHYSICAL SPECIFICATIONS		
Dimensions (L x W x H)	3.50 x 2.01 x 0.79 inches (89 x 51 x 20 mm)	
Weight	4.47oz (126.67g)	
Packing	60PCS/CTN, 7.6Kgs, 0.017CBM	
Flammability	UL94V0	
SAFETY & EMC <i>(See Note 2)</i>		
Safety Standards	UL60950-1 ⁽³⁾ , EN60950-1: 2006	
EMI Conduction and Radiation	Compliance to EN55022 (CISPR22) Class B	
Harmonic Current	Compliance to EN61000-3-2,17625.1-2003	
EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, light industry level, criteria A	

MODEL SELECTION TABLE

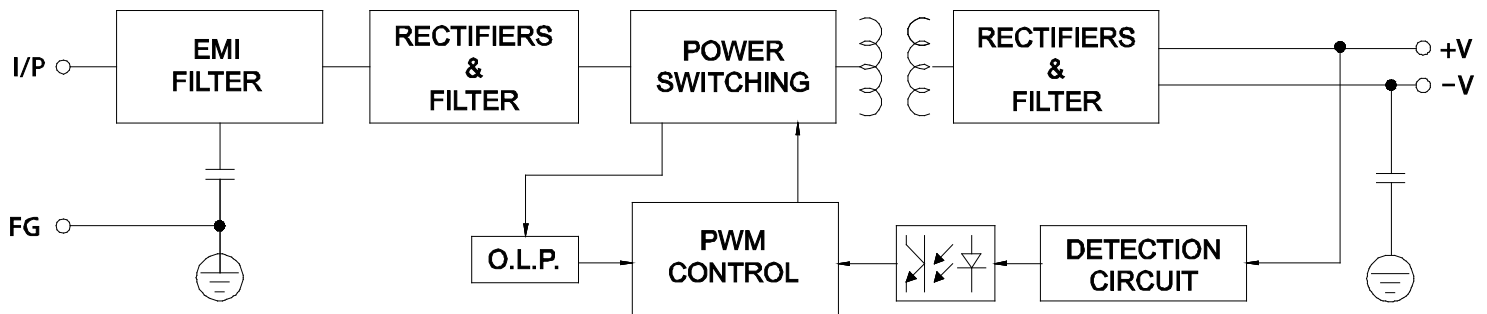
Model Number	Input Voltage	Output Voltage	Output Current	Ripple & Noise ⁽¹⁾		Output Power	Efficiency	
				-10°C~0°C	0°C~+50°C		115VAC	230VAC
PSPSD-20-5	85 ~ 264 VAC	5 VDC	4A	75mVp-p	50mVp-p	20W	72%	72%
PSPSD-20-12		12 VDC	1.67A	120mVp-p	120mVp-p	20W	78%	78%
PSPSD-20-15		15 VDC	1.34A	100mVp-p	100mVp-p	20W	80%	80%
PSPSD-20-24		24 VDC	0.84A	100mVp-p	100mVp-p	20W	78%	76%
PSPSD-20-48		48 VDC	0.42A	100mVp-p	100mVp-p	20W	78%	78%

NOTES

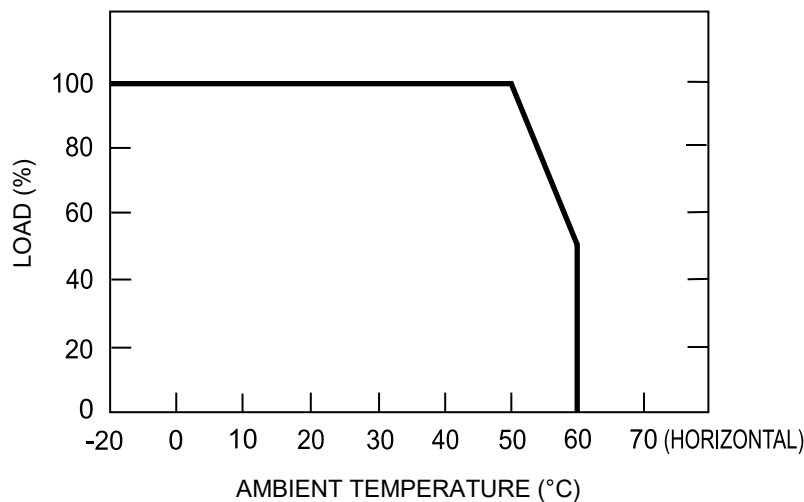
1. Ripple & noise is measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1μF and 47μF capacitors in parallel.
2. The SPS is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
3. This product is Listed to applicable standards and requirements by UL.

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

BLOCK DIAGRAM

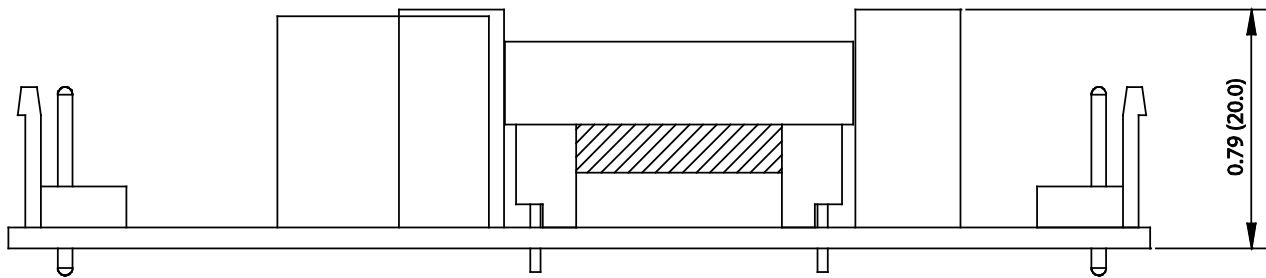
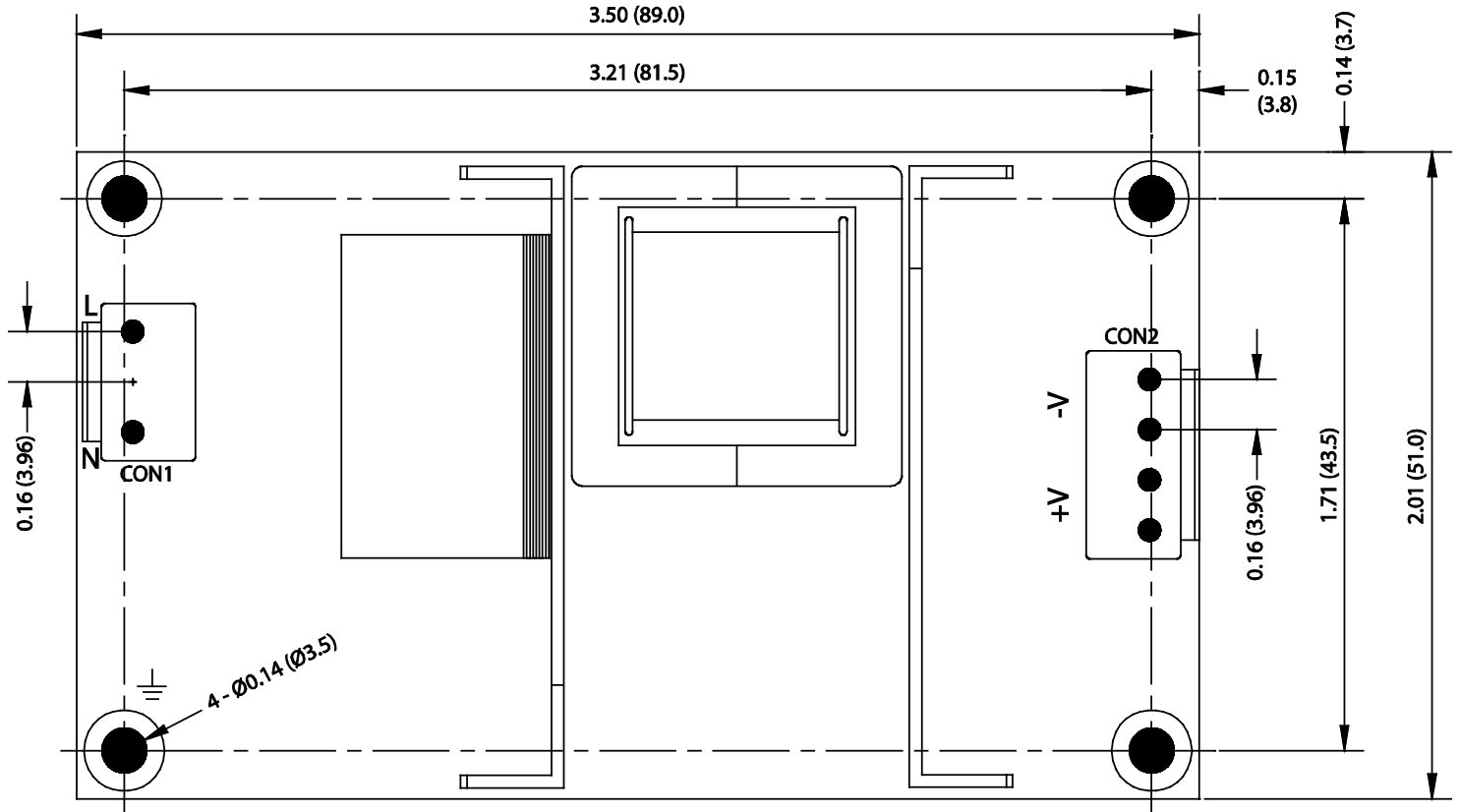


DERATING CURVE



MECHANICAL DRAWING

Unit: inches (mm)



Item	Connectors	Mating Housing	Contacts
AC IN (CON1)	LANDWIN 3961P0300T (central pin removed) or Molex 53520-0320 (central pin removed)	LANDWIN 3960S or JST VHR or Molex 51144	LANDWIN 3963T011R or JST SVH-21T-P1.1 or Molex 50539
DC OUT (CON2)	LANDWIN 3961P0400T or Molex 53520-0420		



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.

Contact **Wall Industries** for further information:

Phone: ☎ (603)778-2300
Toll Free: ☎ (888)597-9255
Fax: ☎ (603)778-9797
E-mail: sales@wallindustries.com
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833

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