DATASHEET
Rev. D

Wall Industries, Inc.

PSPSD-20 SERIES

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



E232347

FEATURES

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

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.

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 *(See Note 1)*		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)
Packing		60PCS/CTN, 7.6Kgs, 0.017CBM
Flammability		UL94V0
SAFETY & EMC *(See Note 2)*		
Safety Standards		UL60950-1, 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

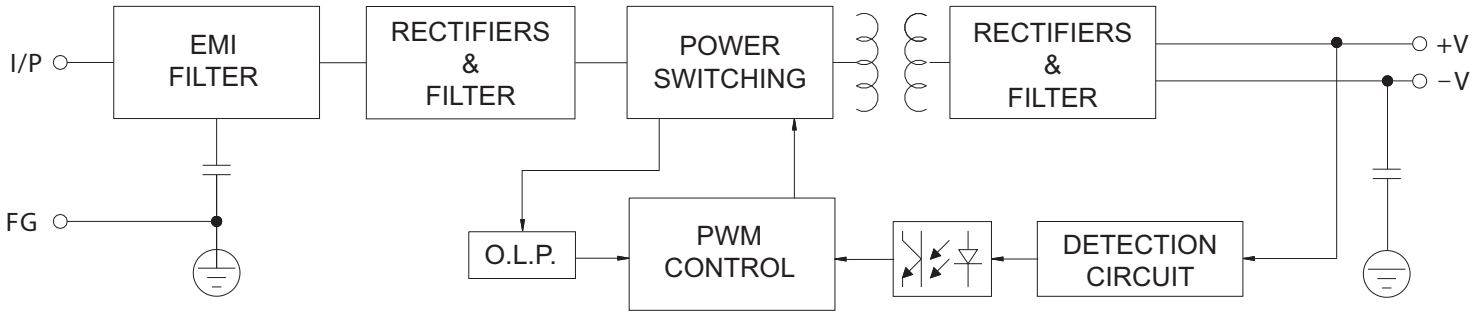
MODEL SELECTION TABLE

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%

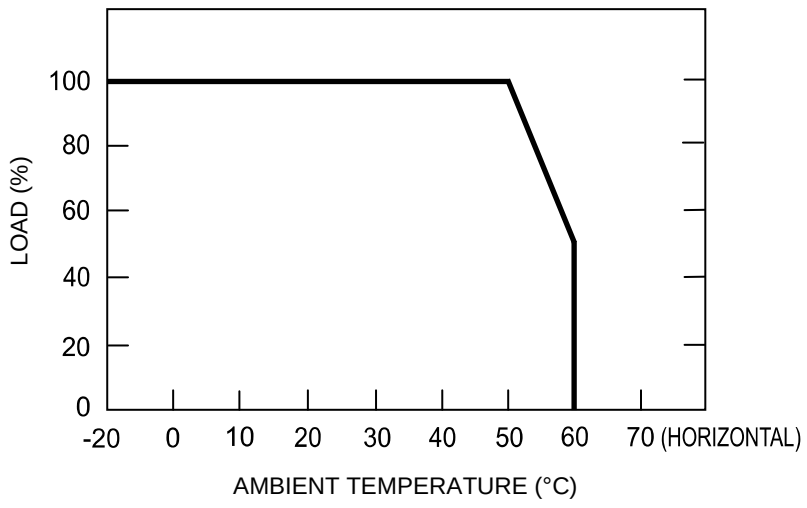
NOTES

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.

BLOCK DIAGRAM

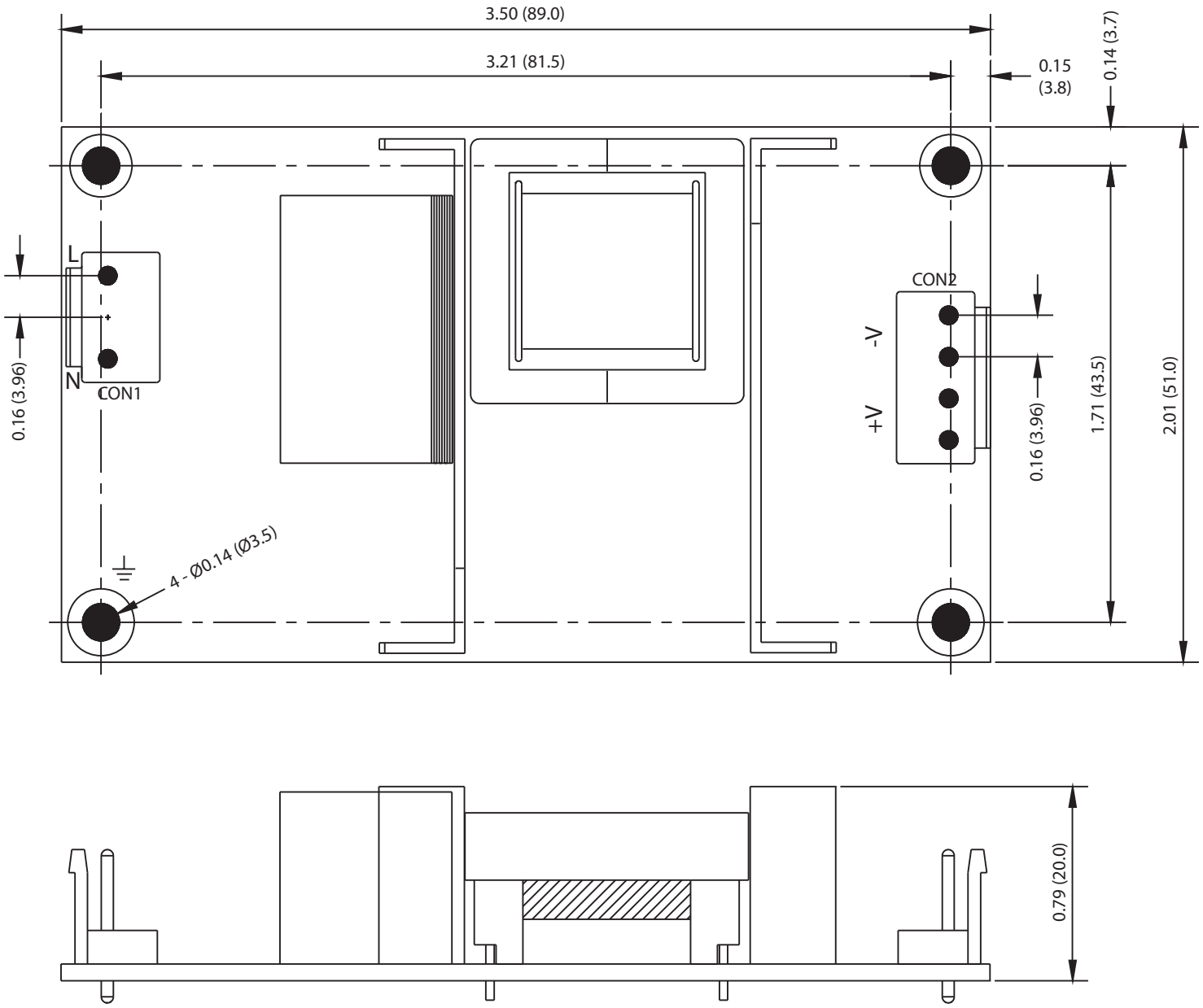


DERATING CURVE



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 ISO9001-2008 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.

Contact **Wall Industries** for further information:

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