

Wall Industries, Inc.

PSPSF-125 SERIES

90 ~ 264VAC Input Voltage Range
Up to 126W, Open Frame
Single Output, PFC Function
AC/DC Switching power Supplies



FEATURES

- Open Frame
- PFC > 0.98 @ 115VAC
- Single Outputs
- RoHS Compliant
- UL94V0 Compliant
- Universal AC Input (Full Range)
- High Efficiency and High Reliability
- Built-in Remote Sense Function
- All Using 105°C Long Life Electrolytic Capacitors
- 100% Full Load Burn-in Tested
- Up to 126W Output Power
- Wide Operating Ambient Temperature (-40°C ~ +70°C)
- Over Voltage, Over Load, and Short Circuit Protected
- GB4943-2001 and EN60950-1: 2006 Safety Approvals

DESCRIPTION

The PSPSF-125 series of AC/DC switching power supplies offers up to 126W of output power in a 5" x 3" x 1.2" open frame constructed package. All models have a single output and a universal AC input. Some features include wide operating temperature range (-40°C to +70°C), PFC function > 0.98, and efficiency up to 88%. These supplies are RoHS and UL94V0 compliant and have GB4943-2001, and EN60950-1: 2006 safety approvals. All models are protected against over load, over voltage, and short circuit conditions. All models are 100% full load burn-in tested.

SPECIFICATIONS: PSPSF-125 SERIES		
All specifications are based on 25°C Ambient Temperature, Rated Input, and Rated Load unless otherwise noted. We reserve the right to change specifications based on technological advances.		
INPUT SPECIFICATIONS		
Input Voltage Range	90 ~ 264VAC, 127VDC~370VDC	
Input Frequency	47 to 63Hz	
AC Current	1.5A max	
Inrush Current (typical)	30A @ 115VAC; 60A @ 230VAC Cold Start	
Leakage Current	< 3.5mA	
Power Factor	> 0.98 @ 115VAC; > 0.93 @ 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	≤ 2500ms (115VAC, full load); ≤ 1200ms (230VAC, full load)	
Hold Up Time	≤ 17ms (115/230VAC, full load)	
Temperature Coefficient	±0.03%/°C	
Overshoot and Undershoot	< 5.0%	
PROTECTION		
Over Current Protection	105% ~ 150% of rated output current, hiccup mode, auto-recovery	
Over Voltage Protection	120% ~ 150% of rated output voltage, hiccup mode	
Short Circuit Protection	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	
ENVIRONMENTAL SPECIFICATIONS		
Operating Ambient Temperature	-20°C to +70°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)	5.0 x 3.0 x 1.2 inches (127 x 76 x 30.5 mm)	
Weight	14.2oz (402.85g)	
Flammability	UL94V0	
SAFETY & EMC <i>(See Note 2)</i>		
Safety Standards	GB4943-2001, EN60950-1: 2006	
EMI	Compliance to EN55022 (CISPR22) Class B	
Harmonic Current	Compliance to EN61000-3-2,-3	
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	
						115VAC	230VAC
PSPSF-125-5	90 ~ 264 VAC	5 VDC	20A	100mV	100W	82%	84%
PSPSF-125-12		12 VDC	10.5A	100mV	126W	85%	87%
PSPSF-125-15		15 VDC	8.4A	100mV	126W	85%	87%
PSPSF-125-24		24 VDC	5.2A	100mV	124.8W	85%	87%
PSPSF-125-36		36 VDC	3.5A	120mV	126	86%	88%
PSPSF-125-48		48 VDC	2.6A	150mV	124.8W	86%	88%

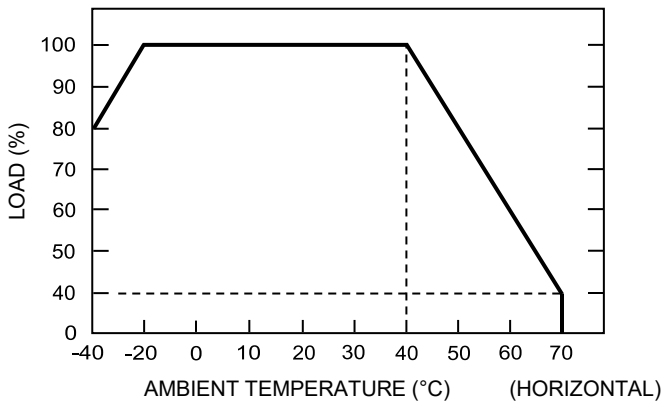
NOTES

1. Ripple & noise was 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.

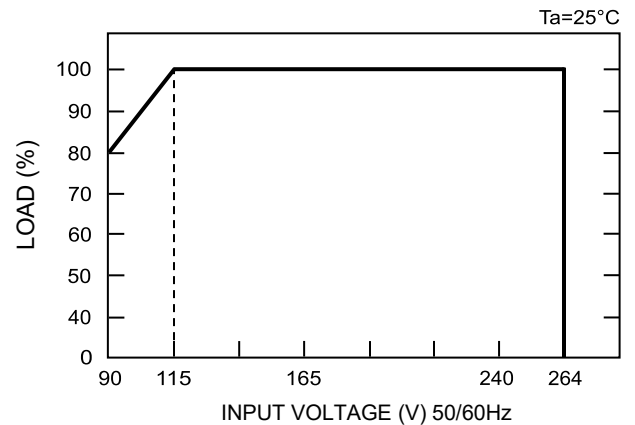
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVES

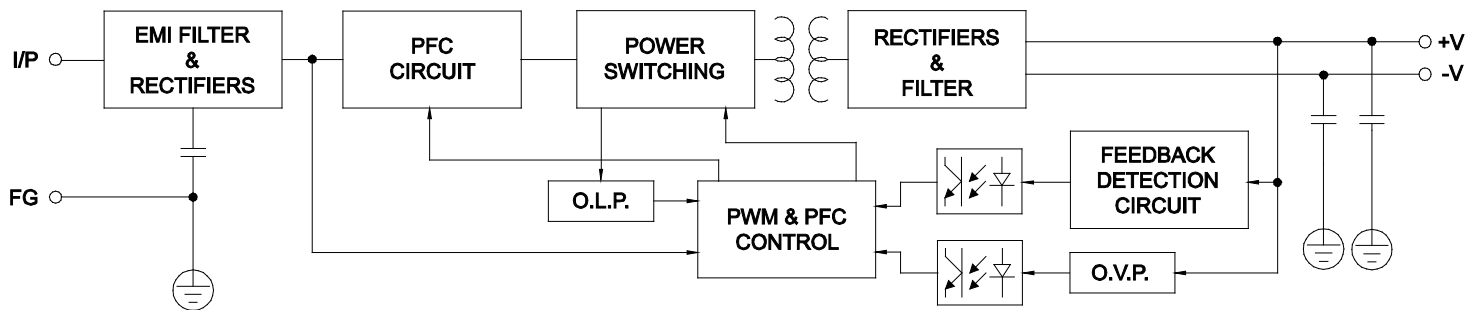
OUTPUT DERATING



OUTPUT DERATING VS INPUT VOLTAGE

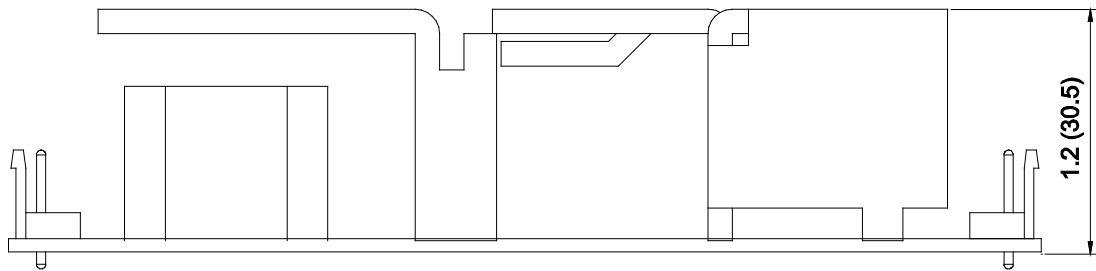
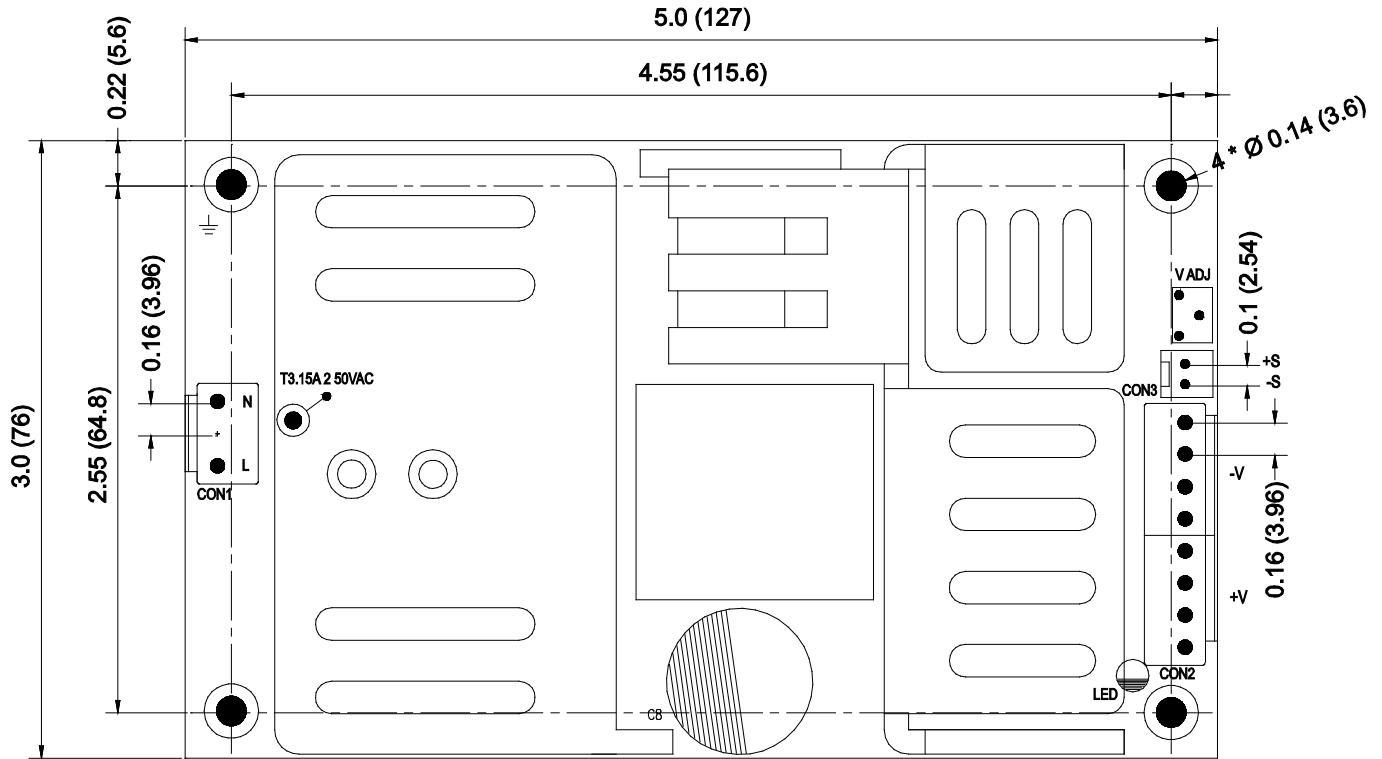


BLOCK DIAGRAM



MECHANICAL DRAWING

Unit: inches (mm)



ITEM	CONNECTORS	MATING HOUSING	CONTACTS
AC IN (CON1)	LANDWIN3961P0300T (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 3961P0800T		
SENSE (CON3)	LANDWIN 2541P0200T	LANDWIN 2510S or MOLEX 5051	LANDWIN 2563T011X or MOLEX 4809



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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