

## Wall Industries, Inc.

### PSPDF-100 SERIES

**85~264VAC (120~370VDC) Input Voltage Range**  
**Single Outputs, Active PFC**  
**Up to 103.2 Watts Output Power**  
**AC/DC Switching Power Supplies**



#### FEATURES

- Single Output
- RoHS Compliant
- Built-in Active PFC Function, PF > 0.93
- Universal AC Input Range (Full Range)
- High Efficiency and High Reliability
- Over Voltage, Over Load, and Short Circuit Protected
- All Using 105°C Long Life Electrolytic Capacitors
- Up to 103.2W Output Power
- 100% Full Load Burn-in Tested
- Output Voltages Available from 5VDC to 48VDC
- Dimensions: 7.64" x 3.90" x 1.97"
- Output Voltage Adjustability

#### DESCRIPTION

The PSPDF-100 series of AC/DC switching power supplies offers up to 103.2 Watts of output power in a 7.64" x 3.90" x 1.97" enclosed case. All models have a single output and a universal AC input voltage range of 85~264VAC. Some features include built-in active PFC, output adjustability, and over load, over voltage, and short circuit protection. These supplies are RoHS compliant and have UL/cUL, CB, and CE safety approvals. All models are 100% full load burn-in tested.

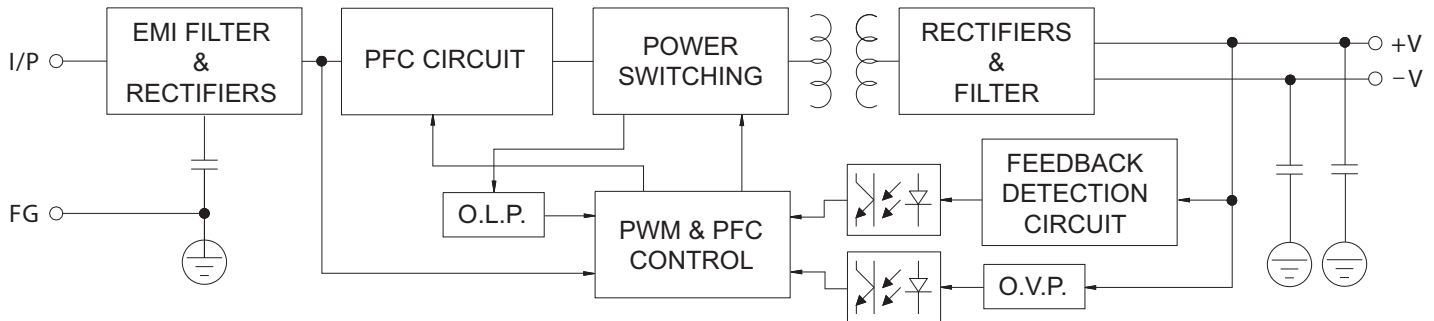
<b>SPECIFICATIONS: PSPDF-100 Series</b>		
<p style="color: red;">All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.                      We reserve the right to change specifications based on technological advances.</p>		
<b>INPUT SPECIFICATIONS</b>		
Input Voltage Range	85~264VAC (120~370VDC)	
Input Frequency	47~63Hz	
AC Current	1.7A max. at 115VAC; 0.8A max. at 230VAC	
Inrush Current	50A typ. at 230VAC Cold Start	
Power Factor	PF > 0.98 typ. at 115VAC; PF > 0.93 typ. at 230VAC	
<b>OUTPUT SPECIFICATIONS</b>		
Output Voltage	See Table	
Voltage Accuracy	5V, 12V, & 15V output models: ±2.0% 24V & 48V output models: ±1.0%	
Voltage Adjustment Range	See Table	
Line Regulation	±0.5%	
Load Regulation	5V output model: ±1.0% 12V, 15V, 24V, & 48V output models: ±0.5%	
Output Current	See Table	
Ripple & Noise ( <i>See Note 1</i> )	See Table	
Setup Time	< 2.0s at 230VAC and full load	
Hold Up Time	> 20ms at 230VAC and full load	
Temperature Coefficient	±0.03%/°C	
Overshoot and Undershoot	< 5.0%	
<b>PROTECTION</b>		
Over Load Protection	105% ~ 150% of rated output power, hiccup mode, auto-recovery	
Over Voltage Protection	110% ~ 150% of rated output voltage, shutdown	
Short Circuit Protection	Long-term mode, auto-recovery	
<b>GENERAL SPECIFICATIONS</b>		
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	< 0.25mA
	Input to PG	< 3.5mA
<b>ENVIRONMENTAL SPECIFICATIONS</b>		
Operating Ambient Temperature	-10°C to +60°C	
Storage Temperature	-20°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	
<b>PHYSICAL SPECIFICATIONS</b>		
Dimensions (L x W x H)	7.64 x 3.90 x 1.97 inches (194 x 99 x 50 mm)	
Packing	20PCS/CTN, 15.2Kgs, 0.053CBM	
<b>SAFETY &amp; EMC (<i>See Note 2</i>)</b>		
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	Voltage Adj. Range	Ripple & Noise <sup>(1)</sup>	Output Power	Efficiency (Typ)	
							120VAC	230VAC
PSPDF-100-5	85~264 VAC (120~370 VDC)	5 VDC	20A	4.0 ~ 5.9 VDC	100mVp-p	100W	78%	80%
PSPDF-100-12		12 VDC	8.5A	10 ~ 14 VDC	100mVp-p	102W	83%	85%
PSPDF-100-15		15 VDC	6.7A	13.5 ~ 17.0 VDC	100mVp-p	100.5W	83%	85%
PSPDF-100-24		24 VDC	4.2A	20 ~ 28 VDC	150mVp-p	100.8W	83%	86%
PSPDF-100-48		48 VDC	2.15A	43 ~ 55 VDC	250mVp-p	103.2W	84%	87%

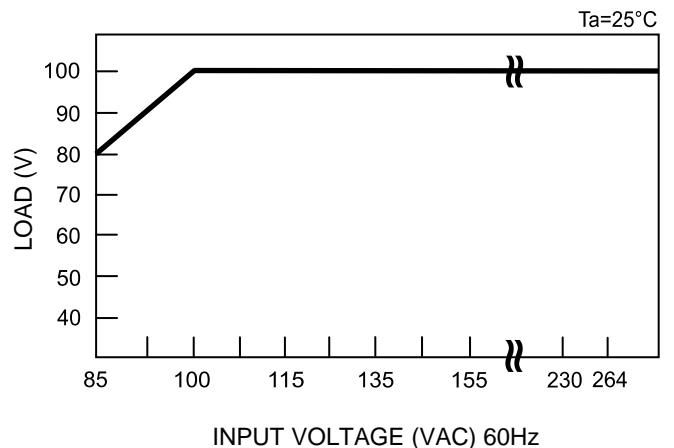
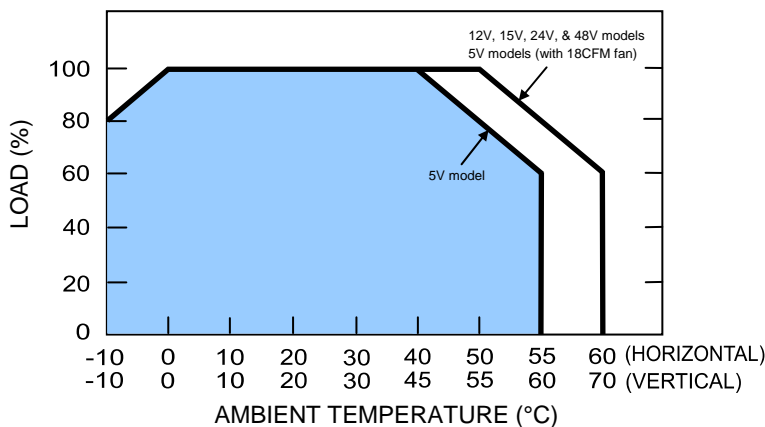
**NOTES**

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.

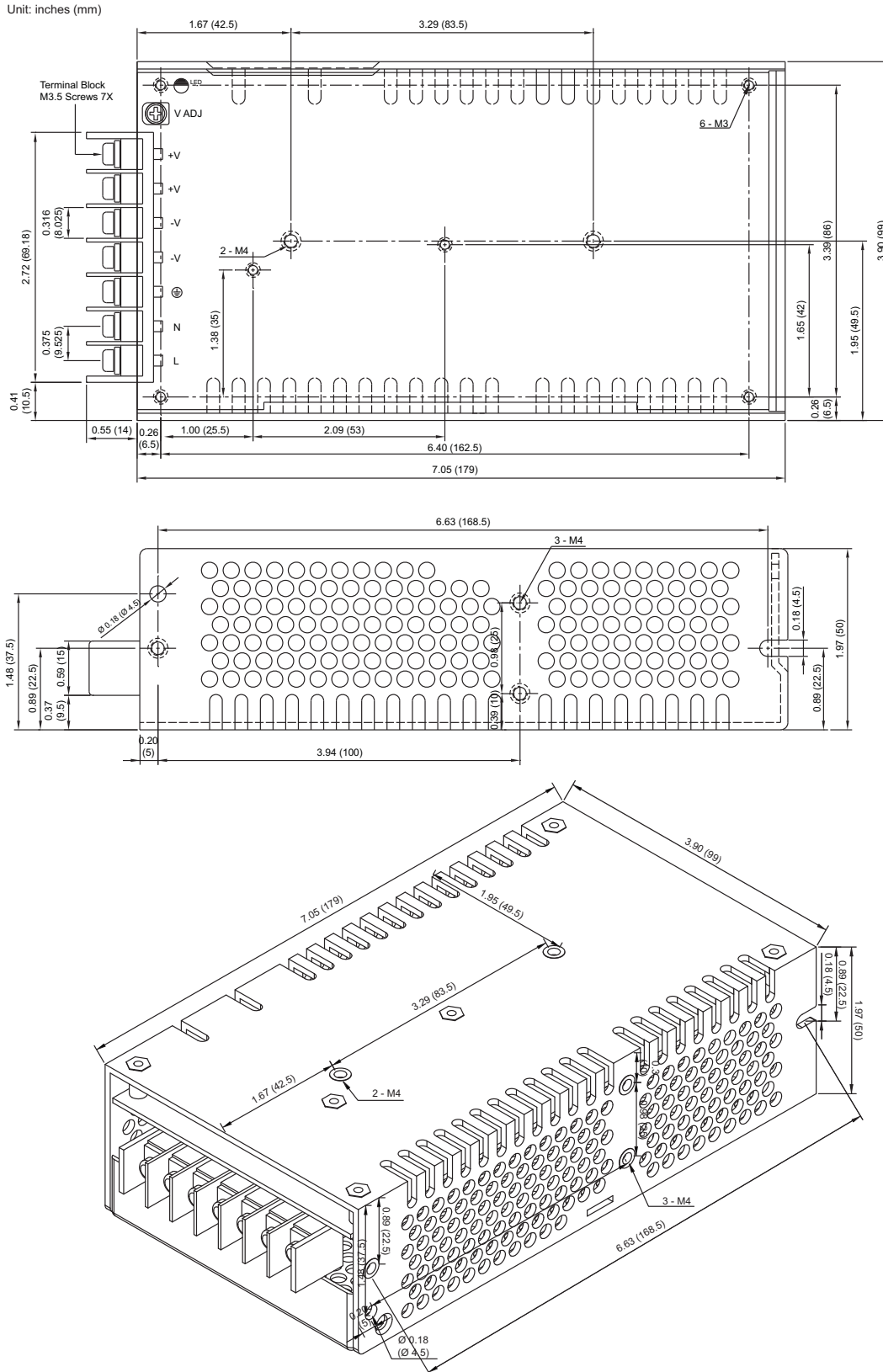
**BLOCK DIAGRAM**



**DERATING CURVE**



**MECHANICAL DRAWING**



## 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:

<u>Phone:</u>	☎ (603)778-2300
<u>Toll Free:</u>	☎ (888)597-9255
<u>Fax:</u>	☎ (603)778-9797
<u>E-mail:</u>	<a href="mailto:sales@wallindustries.com">sales@wallindustries.com</a>
<u>Web:</u>	<a href="http://www.wallindustries.com">www.wallindustries.com</a>
<u>Address:</u>	5 Watson Brook Rd. Exeter, NH 03833