

FEATURES

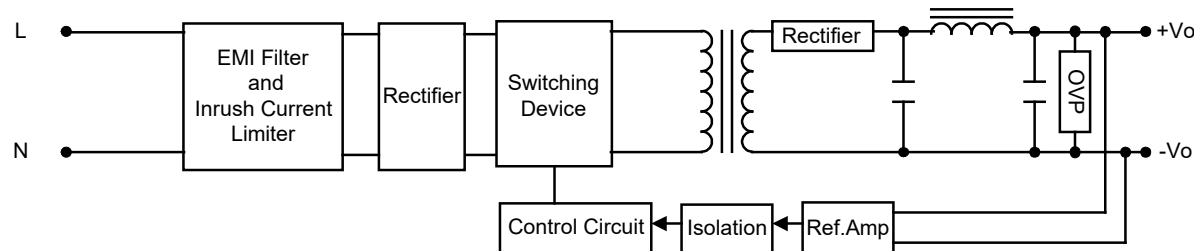
- Single Output
- I/O Isolation 3000VAC
- MTBF > 330,000 Hours
- High Efficiency up to 78%
- EMC Complies with EN61000
- IEC61140 Safety Class II Approved
- 85~265VAC, 47~440Hz Universal Input Range
- IEC / EN / UL 60950-1 Safety Standards Approved
- Operating Temperature 71°C (Refer to Derating Curve)
- EMI Complies with EN55022 Class B and FCC part 15, level B



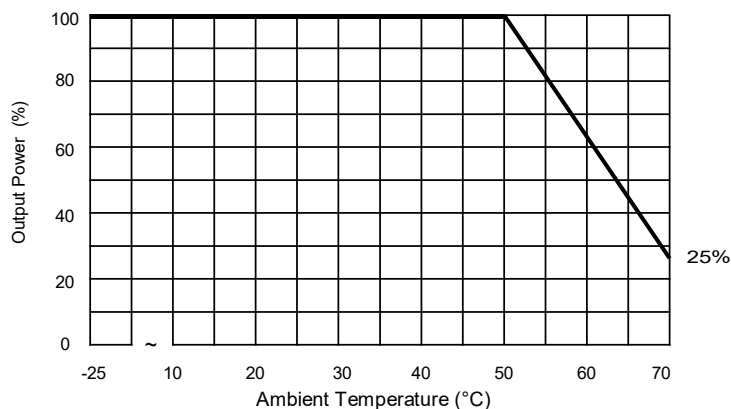
DESCRIPTION

The PSADF series of AC/DC power supplies offers 7 Watts of output power in an encapsulated design. These modules have a single output and a universal input range of 85-265VAC. Other features include continuous short circuit protection, over voltage protection, and output current limiting. These units are also EMC EN61000-4 (-2,-3,-4) and EMI EN55022 level B approved. The compliance to these EMI specifications minimizes system design time, cost, and eliminates the need for external filter components. The PSADF series has IEC/ EN/UL 60950-1 safety approvals, which qualifies this product for worldwide markets. This series has a wide variety of applications including both commercial and industrial with a MTBF of 330,000 hours.

BLOCK DIAGRAM



DERATING CURVE



MODEL SELECTION GUIDE

Model Number	Output Voltage	Output Current		Input Current (115VAC, 60Hz)		Output Power	Efficiency (typ)	Capacitive Load (max)
		Min	Max	Nom	Max			
PSADF-07S03	3.3 VDC	140mA	1400mA	10mA	96mA	4.62W	70%	2200μF
PSADF-07S05	5 VDC	140mA	1400mA	10mA	139mA	7W	73%	2200μF
PSADF-07S12	12 VDC	58mA	583mA	10mA	130mA	7W	78%	1000μF
PSADF-07S15	15 VDC	47mA	466mA	10mA	130mA	7W	78%	1000μF
PSADF-07S24	24 VDC	29mA	291mA	10mA	130mA	7W	78%	680μF



Wall Industries, Inc.

Rev. D

PSADF Series
7 Watt Single Output
Encapsulated PCB Mount
AC/DC Switching Power Supply

SPECIFICATIONS: PSADF 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.							
SPECIFICATIONS		TEST CONDITIONS		Min	Typ	Max	Unit
INPUT (V _{in})							
Operating Voltage Range				85		265	VAC
Input Frequency				47		440	Hz
Inrush Current		cold start at 25°C	115VAC			10	A
			230VAC			20	A
External Input Fuse (Recommended)				1.5A Slow – Blow Type			
OUTPUT (V _o)							
Output Voltage				See Table			
Output Voltage Accuracy					±1.0	±2.0	%
Load Regulation		I _o = min. to max.			±0.5	±1.0	%
Line Regulation		V _{in} = min. to max.			±0.5	±1.0	%
Overshoot						5.0	%
Output Power						7	W
Output Current				See Table			
Ripple & Noise (V _{p-p})		20MHz bandwidth	3.3VDC & 5.0VDC Outputs		1.5	1.8	% of V _o
			Other Outputs		0.8	1.0	% of V _o
Hold-up Time		115VAC, 60Hz			15		ms
PROTECTION							
Over Voltage Protection		Zener diode clamp			120		% of V _o
Current Limitation		85VAC, Hiccup technique, automatic recovery		105			%
Short Circuit Protection				Hiccup mode, indefinite (auto-recovery)			
GENERAL							
Efficiency				See Table			
Switching Frequency					100		KHz
Isolation Voltage		Input to output, 60 seconds		3000			VAC
Isolation Test Voltage		Input to output, flash tested for 1 second		4700			VDC
Isolation Resistance		Test Voltage = 500VDC		100			MΩ
ENVIRONMENTAL							
Operating Temperature		Ambient		-25		+71	°C
Storage Temperature				-40		+85	°C
Humidity						95	%
Cooling				free air convection			
Temperature Coefficient		All Outputs			±0.01	±0.02	%/°C
MTBF		MIL-HDBK-217F @ 25°C, Ground Benign		330,000 hours			
PHYSICAL							
Weight				Approximately 1.55oz (44g)			
Dimensions				2.00(L) x 1.00(W) x 0.76(H) inches 50.8(L) x 25.4(W) x 19.3(H) mm			
Flammability				UL94V-0			
Case Material				Plastic resin and Fiberglass			
SAFETY							
Safety Approvals				IEC/ EN / UL 60950-1 ⁽⁶⁾			
Conducted EMI				EN55022 Class B			
Conducted EMC		Standard	Specification Requirement	Performance Criteria			
		EN61000-4-2	Air ±8KV Cont. ±4KV	B			
		EN61000-4-3	80 ~ 1000MHz 10V/m 80% AM 1KHz modulation	A			
		EN61000-4-4	AC port ±2KV DC, SL, TL±2KV Not less than 1 min.	B			
		EN61000-4-5	1.2/50µs (8/20µs) AC dif. ±1KV DC ±0.5KV	B			
		EN61000-4-6	0.15 ~ 80MHz 10Vrms (functional earth ports included) 80% AM 1KHz modulation	B			
		EN61000-4-11	30% 10ms 60% 100ms 95% 5000ms	B C C			

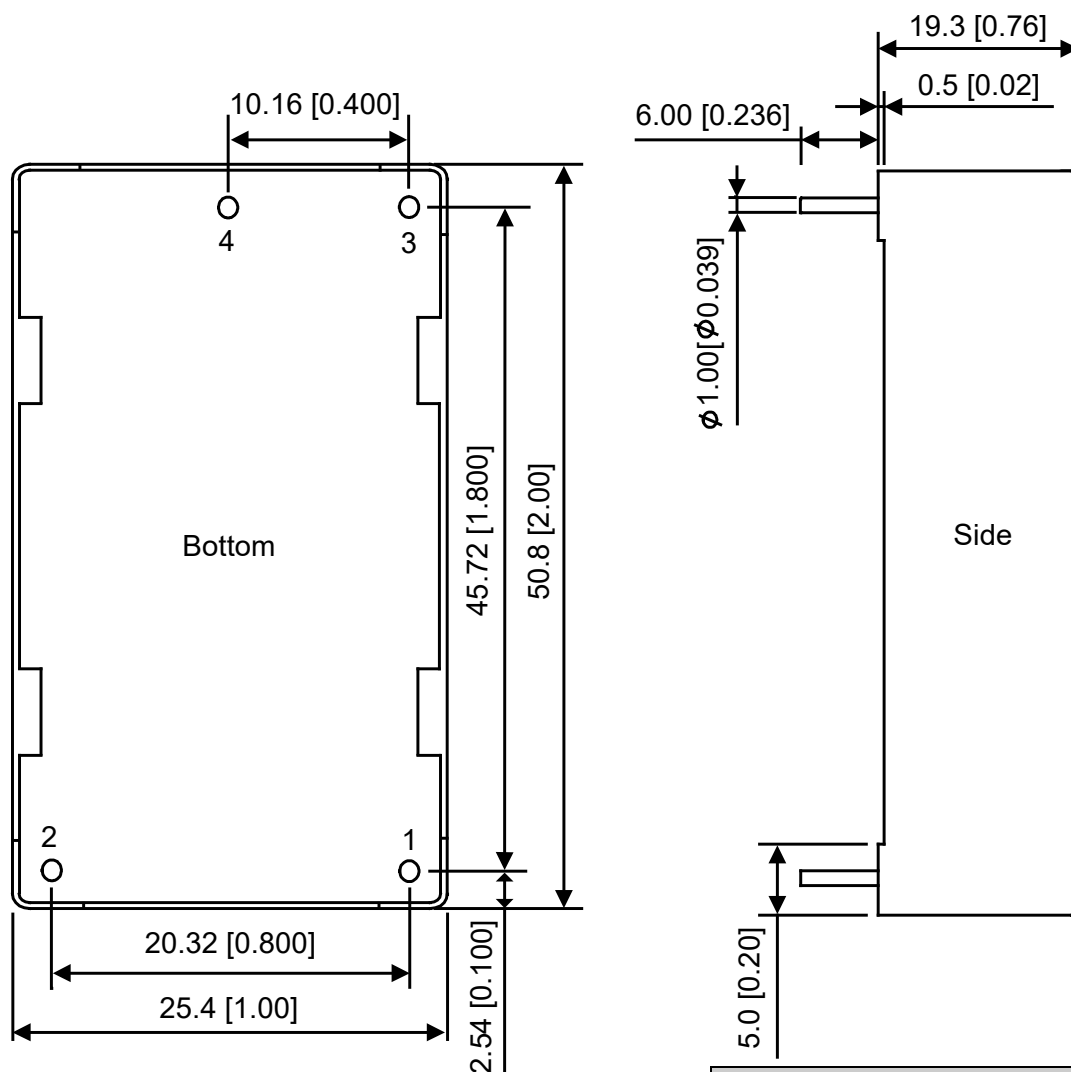
NOTES

1. Ripple & Noise measurement bandwidth is 0~20 MHz.
2. These power modules require a minimum output loading to maintain specified regulation.
3. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.
4. All AC/DC modules should be externally fused at the front end for protection.
5. Other input and output voltage may be available, please contact factory.
6. This product is Listed to applicable standards and requirements by UL.

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

MECHANICAL DRAWING

Unit: mm [inches]



Tolerance	Millimeters	Inches
	X.X±0.5	X.XX±0.02
	X.XX±0.25	X.XXX±0.01
Pin	±0.1	±0.004

PIN CONNECTIONS	
Pin	Single Output
1	AC (N) - AC Neutral
2	AC (L) - AC Line
3	+Vout
4	-Vout



Wall Industries, Inc.

Rev. D

PSADF Series
7 Watt Single Output
Encapsulated PCB Mount
AC/DC Switching Power Supply

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

©2019 Wall Industries, Inc. Specifications subject to change without notice. Wall Industries is not responsible for typographical errors. The information contained herein is for informational purposes only. This information is provided by Wall Industries and we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability or availability with respect to the information contained in this document for any purpose. All product and manufacturer names are trademarks or registered trademarks of their respective companies.