

FEATURES

- Single Output
- 3000VAC I/O Isolation
- MTBF > 125,000 Hours
- High Efficiency up to 84%
- EMC Complies with EN61000
- Meets IEC61140 Safety Class II
- 85~265VAC Universal Input Range
- DIN Rail and Chassis Mounting Options Available
- Operating Temperature to +71°C (Refer to Derating Curve)
- IEC / EN / UL 60950-1 / UL 508 (optional) Safety Standards
- EMI Complies with EN55022 Class B and FCC part 15, level B



DESCRIPTION

The PSAZF60 series of AC/DC power supplies offers 60 Watts of output power in an encapsulated design. This series has single output models with a universal input range of 85 ~265VAC. Other features include continuous short circuit protection, over voltage protection, and output current limitation. EMS meets EN61000-4 (-2,-3,-4,-5,-6,-8,-11) and EMI meets EN55022 level B conducted noise. The compliance to these EMI specifications minimizes system design time, cost, and eliminates the need for external filter components. The PSAZF60 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 125,000 hours. This series also has DIN rail and chassis mount options available.

SAFETY SPECIFICATIONS			
SAFETY			
Safety Approvals	IEC/ EN / UL 60950-1 ⁽⁷⁾ , UL 508 (optional)		
Conducted EMI	EN55022 Class B		
Conducted EMS	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. ±1KVDC ±0.5KV	B
	EN61000-4-6	0.15 ~ 80MHz 10Vrms (functional earth ports included) 80% AM 1KHz modulation	B B
	EN61000-4-8	50Hz, 30A/m 60Hz, 30A/m	A
	EN61000-4-11	30% 10ms 60% 100ms 95% 5000ms	B C C



Wall Industries, Inc.

Rev. D

PSAZF60 Series
60 Watt, Single Output
Encapsulated PCB Mount
AC/DC Switching Power Supply

SPECIFICATIONS: PSAZF60 Series					
<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>					
SPECIFICATIONS	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT (V_{in})					
Operating Voltage Range		85		265	VAC
		120		370	VDC
Input Frequency		47		63	Hz
Inrush Current	cold start at 25°C	115VAC		30	A
		230VAC		50	A
Built-in Input Fuse		6A / 250VAC			
External Input Fuse (Recommended)		3A 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.		±0.2	±1.0	%
Output Power		See Table			
Output Current		See Table			
Minimum load		10% of I _o			
Ripple & Noise (20MHz BW)	5.1VDC Output Models		2.0	3.0	% V _{p-p}
	Other Output Models		1.0	1.3	% V _{p-p}
Overshoot				5.0	%
Transient Recovery Time	50% load step change (I _o =100% to I _o =50%)		400	1000	µs
Transient response Deviation	50% load step change (I _o =100% to I _o =50%)		±3.0	±6.0	%
Hold-up Time	115VAC, 60Hz		20		ms
PROTECTION					
Over Voltage Protection	Zener diode clamp		120		% of V _o
Current Limitation (See Note 6)	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	-10		+71	°C
Storage Temperature		-40		+85	°C
Humidity				95	%
Cooling		free air convection			
Temperature Coefficient	All Outputs		±0.02		%/°C
MTBF	MIL-HDBK-217F @ 25°C, Ground Benign	125,000 hours			
PHYSICAL					
Weight	PCB Mounting (standard)	Approximately 12.17oz (345g)			
	Chassis Mounting ("C" suffix) (See Note 1)	Approximately 12.59oz (357g)			
	DIN Rail ("DN" suffix) (See Note 2)	Approximately 14.46oz (410g)			
Dimensions (L x W x H)	PCB Mounting (standard)	3.50 x 2.66 x 1.34 inches 89.0 x 67.5 x 34.0 mm			
	Chassis Mounting ("C" suffix) (See Note 1)	4.41 x 2.67 x 1.50 inches 112.0 x 67.8 x 38.0 mm			
	DIN Rail ("DN" suffix) (See Note 2)	4.41 x 2.67 x 1.93 inches 112.0 x 67.8 x 49.0 mm			
Flammability		UL94V-0			
Case Material		Plastic resin and Fiberglass			

MODEL SELECTION TABLE

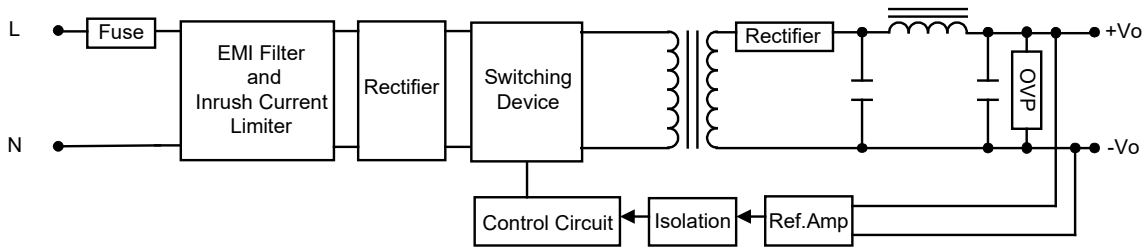
Model Number	Output Voltage	Output Current		Input Current ⁽³⁾		Output Power	Efficiency (typical)	Maximum Capacitive Load
		Min	Max	No load	Max load			
PSAZF-60S051	5.1 VDC	1A	10A	50mA	936mA	51W	79%	8000µF
PSAZF-60S12	12 VDC	0.5A	5A	50mA	1060mA	60W	82%	3900µF
PSAZF-60S15	15 VDC	0.4A	4A	50mA	1047mA	60W	83%	3300µF
PSAZF-60S24	24 VDC	0.25A	2.5A	50mA	1035mA	60W	84%	1500µF
PSAZF-60S36	36 VDC	0.166A	1.666A	50mA	1035mA	60W	84%	1000µF
PSAZF-60S48	48 VDC	0.125A	1.25A	50mA	1035mA	60W	84%	680µF

NOTES

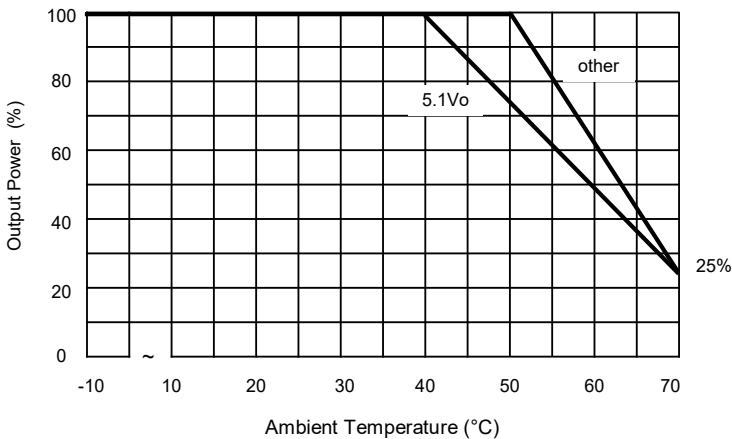
1. To order the chassis mount version please add the suffix "C" to the model number (Ex: PSAZF-60S12C).
2. To order the DIN rail version please add the suffix "DN" to the model number (Ex: PSAZF-60S12DN).
3. These power modules require a minimum output loading to maintain specified regulation. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.
4. Input Current is measured at 115VAC, 60Hz.
5. Other input and output voltages may be available, please contact factory.
6. Long term short circuit operation may damage the unit.
7. This product is Listed to applicable standards and requirements by UL.

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

BLOCK DIAGRAM



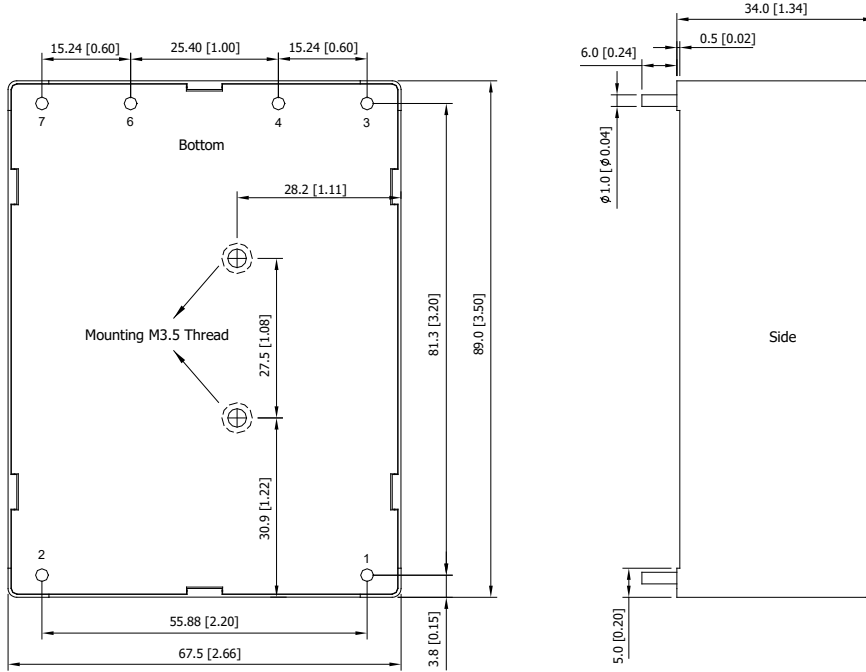
DERATING CURVE



MECHANICAL DRAWINGS

PCB Mounting (standard)

Unit: mm [inches]

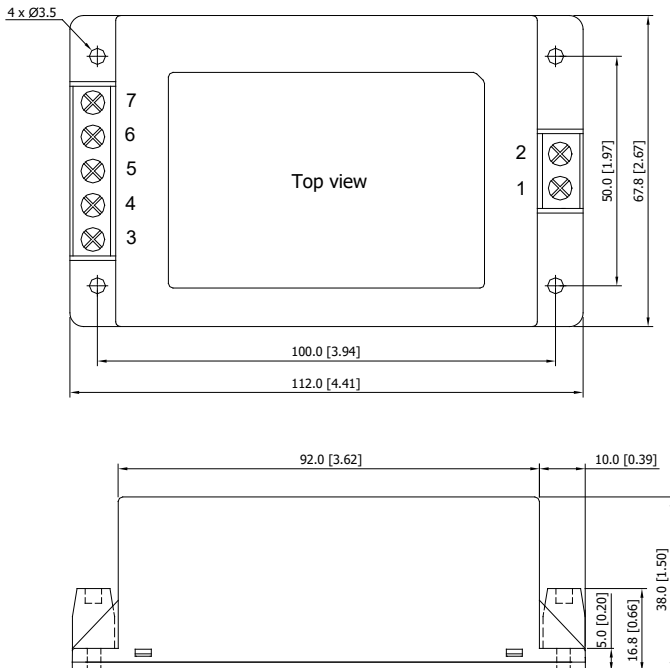


PIN CONNECTIONS	
Pin	Single
1	AC (N) - AC Neutral
2	AC (L) - AC Line
3	No Pin
4	+Vout
6	-Vout
7	No Pin

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

Chassis Mounting (add "C" suffix)

Unit: mm [inches]

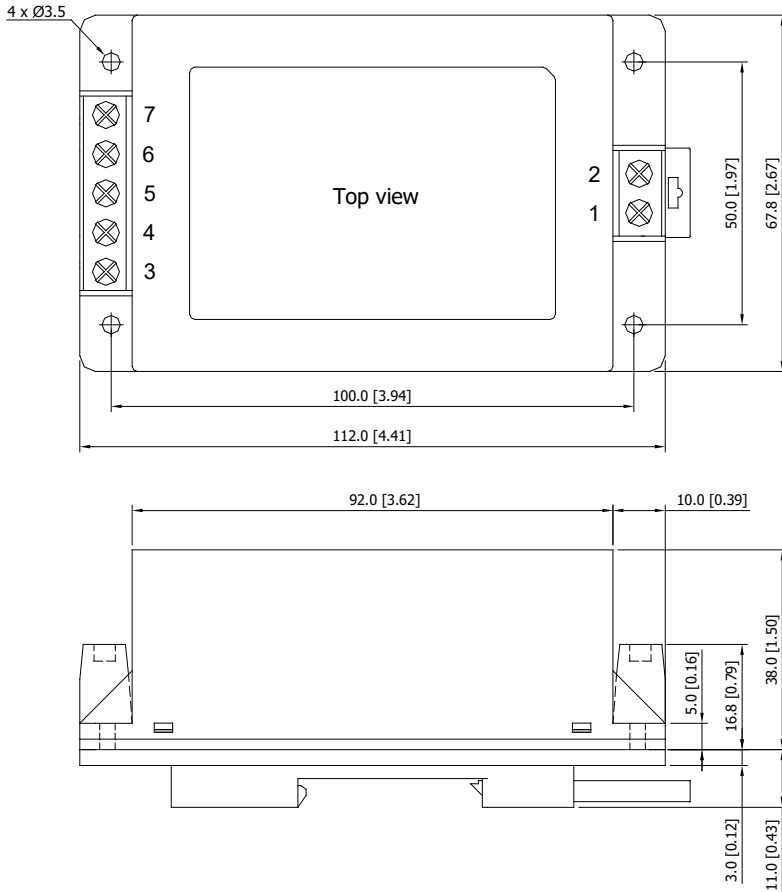


PIN CONNECTIONS	
Pin	Single Output
1	AC (N) - AC Neutral
2	AC (L) - AC Line
3	No Connection
4	+Vout
5	No Connection
6	-Vout
7	No Connection

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

DIN Rail Option (Suffix “DN”)

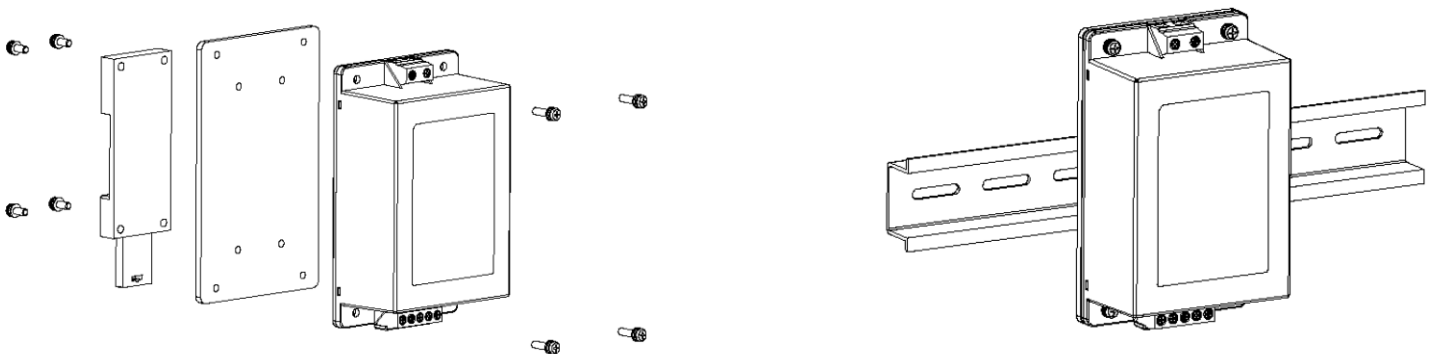
Unit: mm [inches]



PIN CONNECTIONS	
Pin	Single Output
1	AC (N) - AC Neutral
2	AC (L) - AC Line
3	No Connection
4	+Vout
5	No Connection
6	-Vout
7	No Connection

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

DIN-RAIL MOUNTING KIT





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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.

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