LEVEL3

Size:
2.91 x 2.13 x 0.86 inches
74.0 x 54.0 x 21.8 mm

Weight:
5.86oz (166g)

FEATURES

- 50 Watts Output Power
- Single Outputs
- High Efficiency up to 89%
- Low Ripple & Noise
- CE, CB, and UL Approvals for Standard Case Models
- Fully Encapsulated Plastic Case
- Regulated Output
- PCB Mountable Switching Power Supply
- -40°C to +70°C Operating Temperature Range
- Universal Input Voltage Range: 90-264VAC (120-370VDC)
- Short Circuit, Over Power, and Over Voltage Protection
- Screw Terminal Mechanical Options Available

DESCRIPTION

The PSANC50 series of AC/DC power supplies provides 50 watts of output power in a 2.91" x 2.13" x 0.86" encapsulated PCB mountable package. This series consists of single output models with a universal input range of 90-264VAC (120-370VDC). Some features include low ripple and noise, -40°C to +70°C operating temperature range, and over power, over voltage, and short circuit protection. The PSANC50 series also has two types of screw terminal mechanical options available. Standard models have CE, CB, and UL safety approvals.

MODEL SELECTION TABLE

Model Number	Input Voltage	Output Voltage	Output Current		Ripple & Noise	Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load				
PSANC50-5S	90~264 VAC (120~370 VDC)	5 VDC	0%	8000mA	120mVp-p	40W	86%	10000µF
PSANC50-12S		12 VDC	0%	4167mA	120mVp-p	50W	90%	3500µF
PSANC50-15S		15 VDC	0%	3333mA	150mVp-p	50W	87%	3000µF
PSANC50-24S		24 VDC	0%	2083mA	240mVp-p	50W	88%	2200µF
PSANC50-48S		48 VDC	0%	1040mA	480mVp-p	50W	89%	330µF

NOTES
1. Screw terminal mechanical options available (see pages 5-6). Please call factory for ordering details.
2. It is recommended to add a Varistor 14S471K in parallel on the L/N input side.
3. This product is Listed to applicable standards and requirements by UL.

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

SPECIFICATIONS: PSANC50 SERIES

All specifications are based on 25°C After Warm Up, Nominal Input Voltage, and Full Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage	"L" to DC "+"	90		264	VAC
	"N" to DC "-"	120		370	VDC
Input Frequency		47		63	Hz
Input Current	At 115VAC and full load			1000	mA
	At 230VAC and full load			600	
Inrush Current (<2ms)	At 115VAC			40	A
	At 230VAC			60	
External Fuse (recommended)		3.15A slow blow type			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		-2		+2	%
Line Regulation	Low Line to High Line	-1		+1	%
Load Regulation	5% - 100% full load	-1		+1	%
Output Power				50	W
Output Current		See Table			
Minimum Load		0			%
Ripple & Noise (20MHz BW)	Measured at 20MHz bandwidth with 0.1µF and 47µF parallel capacitor	See Table			
Max Capacitive Load		See Table			
Hold-Up Time		10			ms
Temperature Coefficient		-0.02		+0.02	%/°C

SPECIFICATIONS: PSANC50 SERIES

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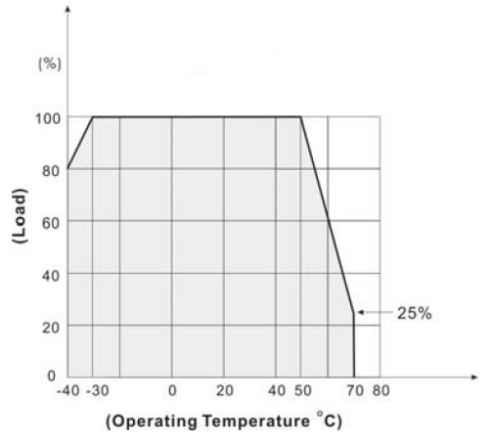
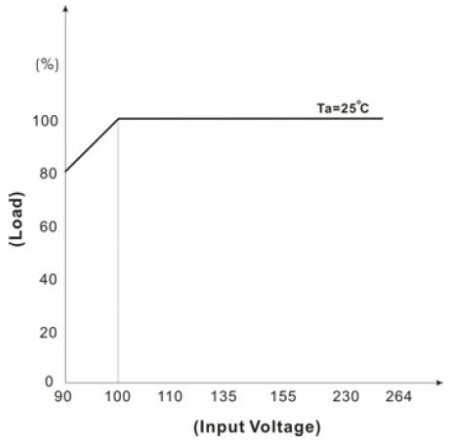
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
PROTECTION						
Short Circuit Protection			Hiccup mode, indefinite (auto-recovery)			
Over Voltage Protection			Zener diode clamp			
Over Power Protection			Hiccup technique, auto-recovery			
GENERAL SPECIFICATIONS						
Efficiency	@230VAC		See Table			
Switching Frequency	@230VAC			65		KHz
Isolation Voltage	Input to Output		3000			VAC
	Input to FG		1500			
	Output to FG		500			
Leakage Current					0.25	mA
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature	With derating (see derating curve)		-40		+70	°C
Storage Temperature			-40		+85	°C
Humidity					95	% RH
Cooling			Free air convection			
MTBF	25°C (MIL-HDBK-217F)		300,000			hours
PHYSICAL SPECIFICATIONS						
Weight			5.86oz (166g)			
Case Material			Plastic resin (Flammability to UL 94V-0)			
Dimensions (L x W x H)	Tolerance ±0.5mm		2.91 x 2.13 x 0.86 inches (74.0 x 54.0 x 21.8 mm)			
SAFETY, EMC, & COMPLIANCE						
Safety Approvals	Standard case models only		IEC/EN60950, UL/IEC/EN 62368+1[3]			
EMC	EMI (Conducted and Radiated Emissions)		EN 55032			
	EMS (Noise Immunity)		EN 55024			
	ESD	EN61000-4-2	Air ±8kV, Contact ±4kV (A)			
	Radiated Immunity	EN61000-4-3	3V/m (A)			
	Fast Transient	EN61000-4-4	±1kV (A)			
	Surge	EN61000-4-5	±2kV (A)			
	Conducted Immunity	EN61000-4-6	3Vrms (A)			
	PFMF	EN61000-4-8	1A/m (A)			
	Dips	EN61000-4-11	30% 500ms (A)			

DERATING

Load vs Ambient Temperature



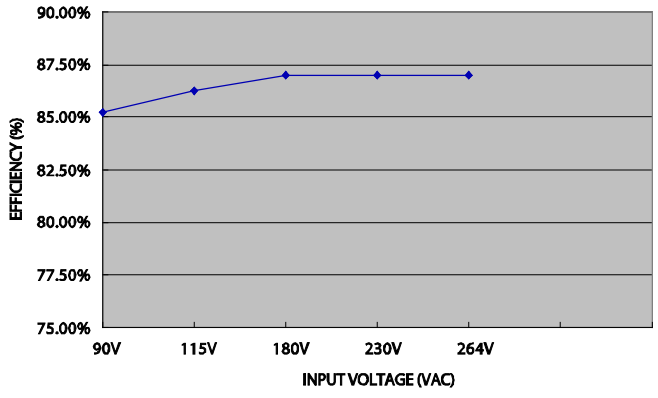
Load vs Input Voltage



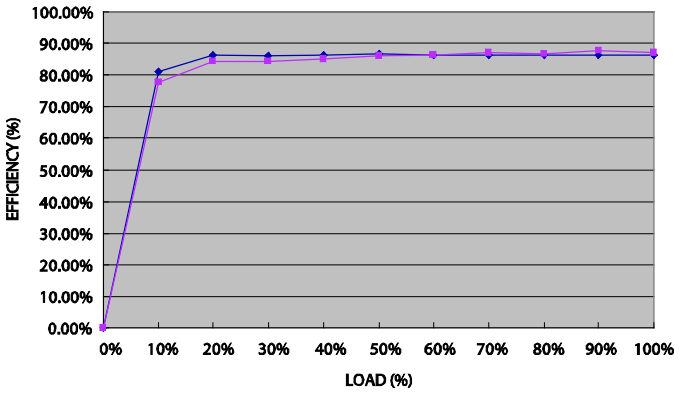
EFFICIENCY VS LOAD CURVES

PSANC50-5S

Input Voltage vs Efficiency

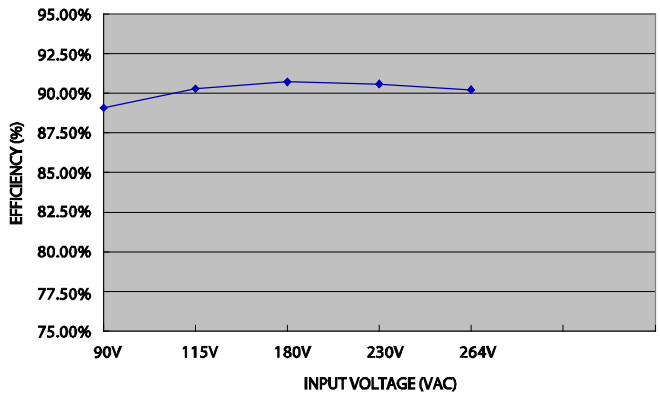


Load vs Efficiency

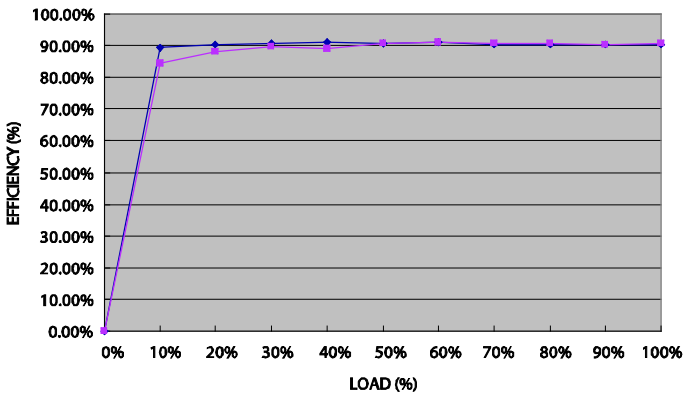


PSANC50-12S

Input Voltage vs Efficiency

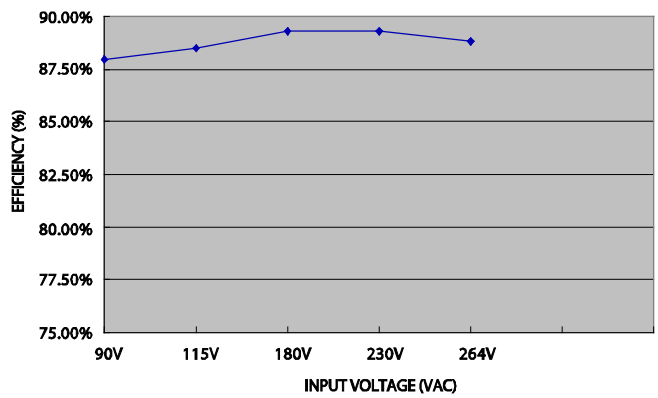


Load vs Efficiency

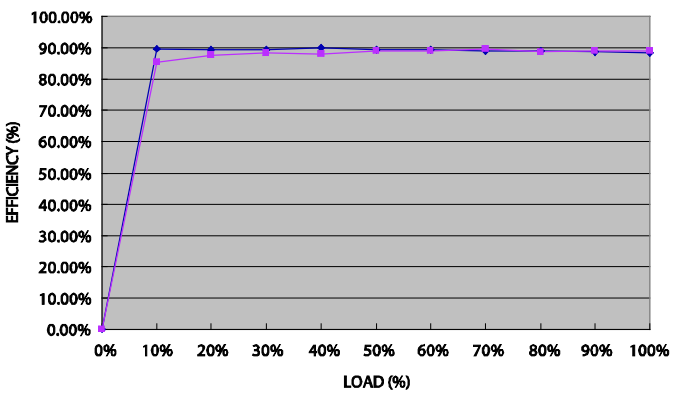


PSANC50-15S

Input Voltage vs Efficiency



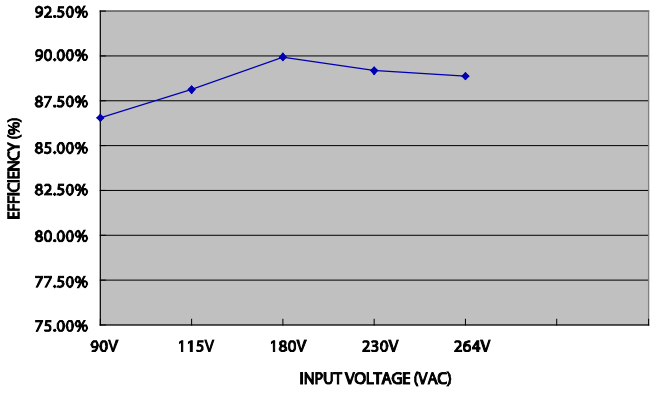
Load vs Efficiency



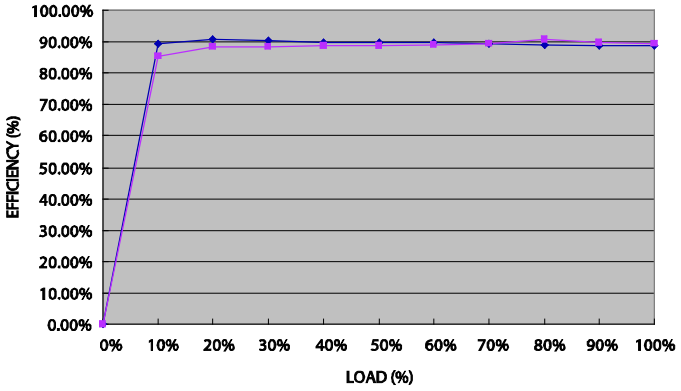
EFFICIENCY VS LOAD CURVES

PSANC50-24S

Input Voltage vs Efficiency

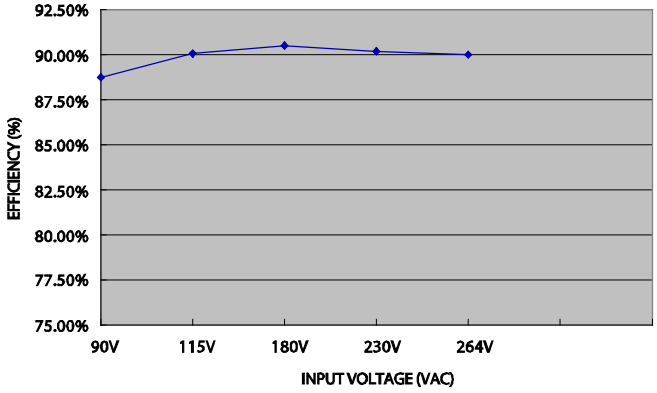


Load vs Efficiency

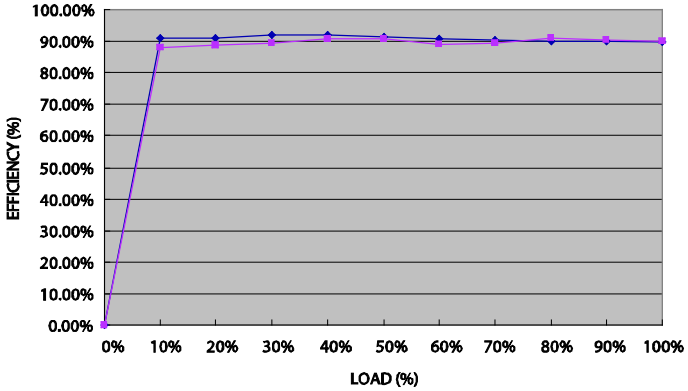


PSANC50-48S

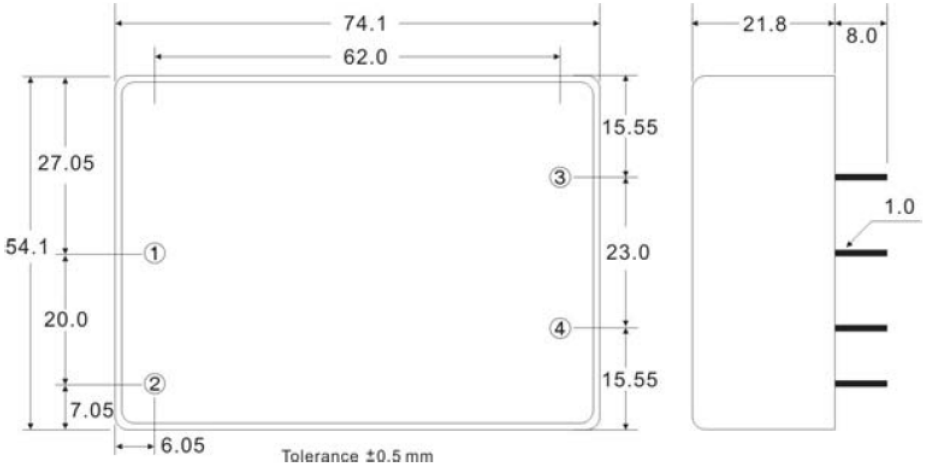
Input Voltage vs Efficiency



Load vs Efficiency



MECHANICAL DRAWING



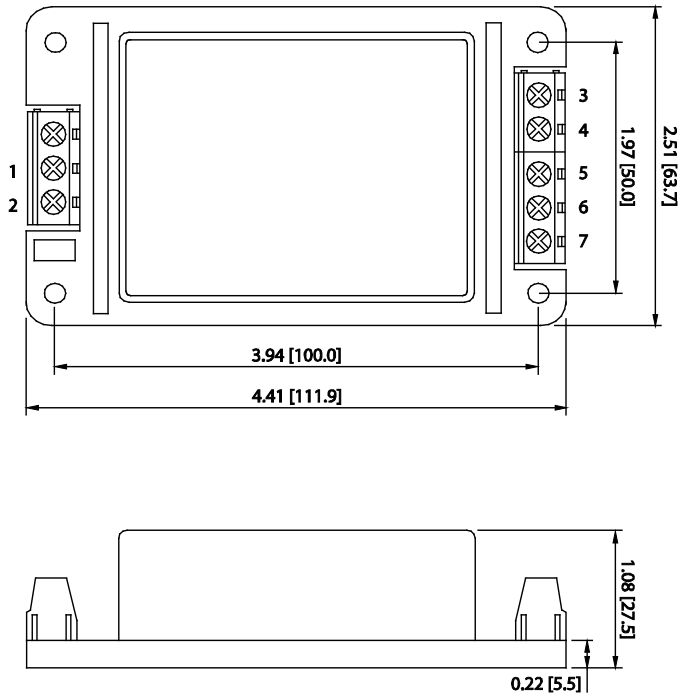
Pin#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	+DC OUT

SCREW TERMINAL OPTIONS

PSANC50-A2

PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (N)
2	AC IN (L)
3	NO CONNECT
4	-DC OUT
5	NO CONNECT
6	+DC OUT
7	NO CONNECT

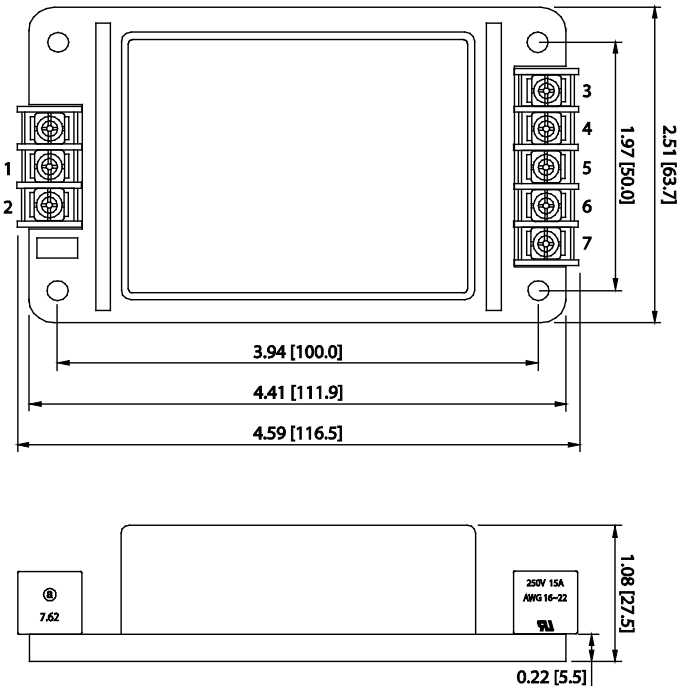
Unit: inches [mm]



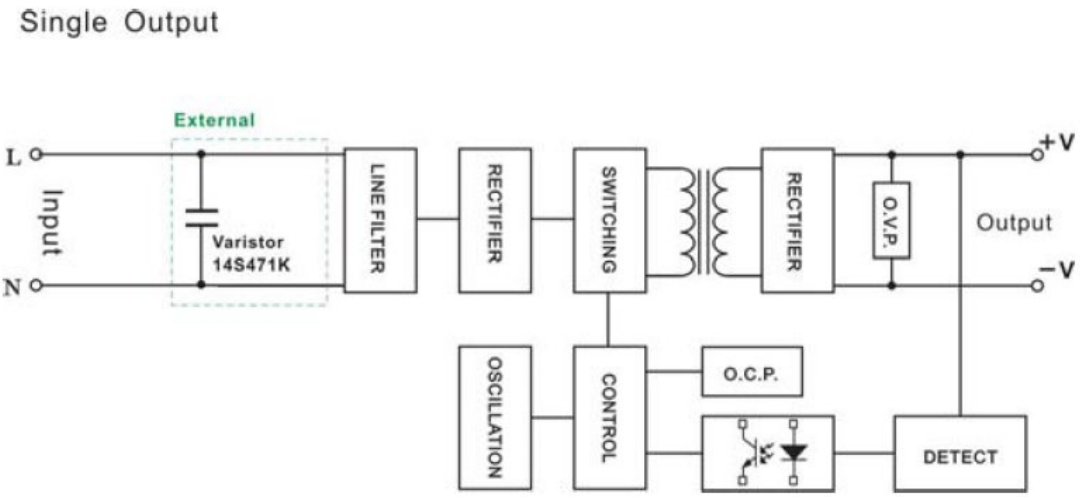
PSANC50-A5

PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (N)
2	AC IN (L)
3	NO CONNECT
4	-DC OUT
5	NO CONNECT
6	+DC OUT
7	NO CONNECT

Unit: inches [mm]



BLOCK DIAGRAM



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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