



Size:
2.0 x 1.0 x 0.61 inches
51.2 x 25.8 x 15.4 mm

Weight:
1.06oz (30g)

FEATURES

- Universal Input Range: 90-264VAC (120-370VDC)
- Isolation Class II
- Regulated Output
- Low Ripple & Noise
- Fully Encapsulated Plastic Case
- UL/cUL, CE, and CB Safety Approvals
- PCB Mountable Switching Power Supply
- -25°C to +70°C Operating Temperature Range
- Optional -40°C~+70°C Operating Temperature Range
- Short Circuit, Over Power, and Over Voltage Protection
- Screw Terminal Mechanical Options Available

DESCRIPTION

The PSAHC series of AC/DC switching power supplies provides up to 5.5 Watts of output power in a 2.0" x 1.0" x 0.61" 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, -25°C to +70°C operating temperature range, and over power, over voltage, and short circuit protection. The PSAHC series also has two types of screw terminal mechanical options and an extended operating temperature option available. All models have UL/cUL, CB, and CE safety approvals.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load			
PSAHC-3.3S	90~264 VAC (120~370 VDC)	3.3 VDC	0%	1250mA	4W	68%	13,800µF
PSAHC-5S		5 VDC	0%	1000mA	5W	71%	6000µF
PSAHC-12S		12 VDC	0%	420mA	5W	75%	1400µF
PSAHC-15S		15 VDC	0%	333mA	5W	75%	1000µF
PSAHC-24S		24 VDC	0%	230mA	5.5W	77%	170µF

SPECIFICATIONS: PSAHC SERIES

All specifications are based on 25°C After Warm-Up Time, Normal 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		AC input voltage range		90		264	VAC
		DC input voltage range		120		370	VDC
Input Frequency				47		440	Hz
Input Current		At 115VAC and full load				110	mA
		At 230VAC and full load				70	
Inrush Current (< 2ms)		Standard Models		At 115VAC		10	A
				At 230VAC		20	
		“E1” Suffix Models		At 115VAC		23	A
				At 230VAC		46	
External Fuse (required)				1.5A slow blow type			
OUTPUT SPECIFICATIONS							
Output Voltage				See Table			
Voltage Accuracy				-2		+2	%
Line Regulation		Low line to high line			±0.3		%
Load Regulation		5% - 100% load			±0.5		%
Output Power				See Table			
Output Current				See Table			
Minimum Load				0			%
Ripple & Noise	Ripple	Measured at 20MHz BW and with a 0.1μF & 47μF parallel capacitor		< 0.2% Vout + 40mV max			Vp-p
	< 0.5% Vout +50mV max.						
Maximum Capacitive Load		@230VAC		See Table			
Hold-Up Time				15			ms
Temperature Coefficient				-0.02		+0.02	%/°C

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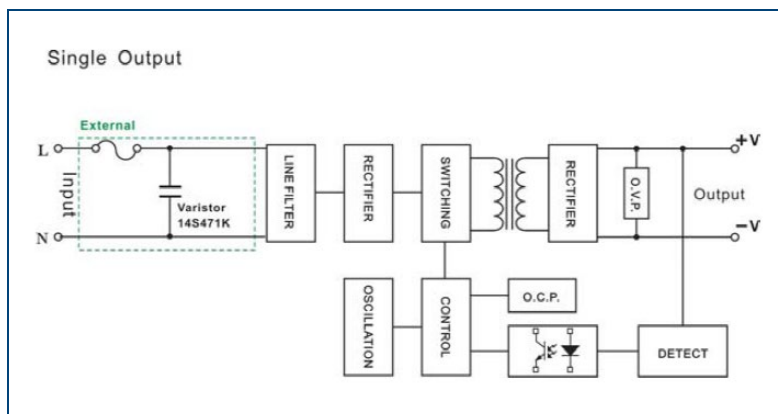
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
PROTECTION					
Short Circuit Protection	Hiccup mode			Automatic Recovery	
Over Voltage Protection				Zener diode clamp	
Over Power Protection	Hiccup technique			Automatic Recovery	
GENERAL SPECIFICATIONS					
Efficiency			See Table		
Isolation Voltage	Input to Output	3000			VAC
Leakage Current				0.75	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Standard Models with Derating "-E1" Suffix Models with Derating	-25 -40		+70 +70	°C
Storage Temperature		-40		+85	°C
Humidity				95	% RH
Cooling				Free air convection	
MTBF	25°C (MIL-HDBK-217F)	450,000			hours
PHYSICAL SPECIFICATIONS					
Weight				1.06oz (30g)	
Dimensions (L x W x H)	Tolerance ±0.5mm			2.0in x 1.0in x 0.61 in (51.2mm x 25.8mm x 15.4mm)	
Case Material				Plastic resin with fiberglass (Flammability to UL 94V-0)	
SAFETY & EMC					
Safety Approvals ⁽⁵⁾				UL/IEC/EN 60950, EN 62368-1	
EMC	EMI (Conducted and Radiated Emissions)			EN 55032 Class B	
	EMS (Noise Immunity)			EN 55024	

NOTES

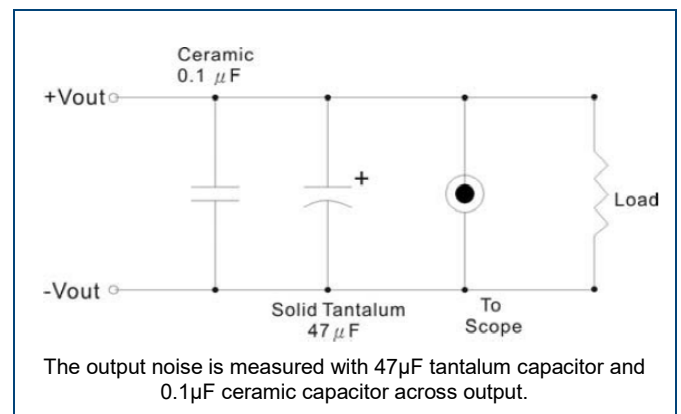
- For -40°C to +70°C extended operating temperature range please add the suffix -E1 to the model number (Ex: PSAHC-12S-E1).
- Screw terminal mechanical options available (see page 4). Please call factory for ordering details.
- It's necessary Varistor 14S471K at L/N input side in parallel.
- Safety approvals cover frequency 47-63Hz
- This product is Listed to applicable standards and requirements by UL.

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

BLOCK DIAGRAM

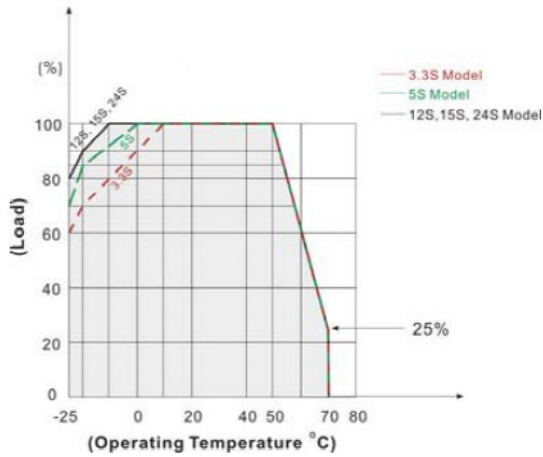


OUTPUT NOISE

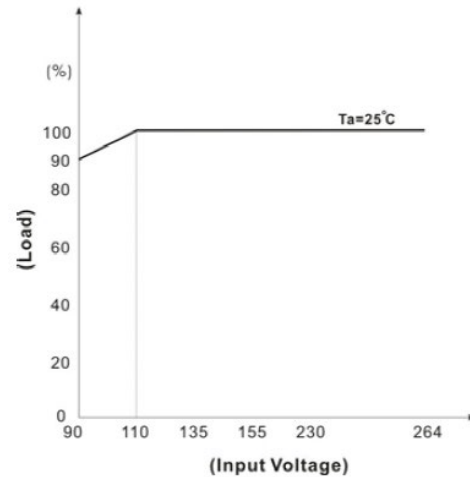
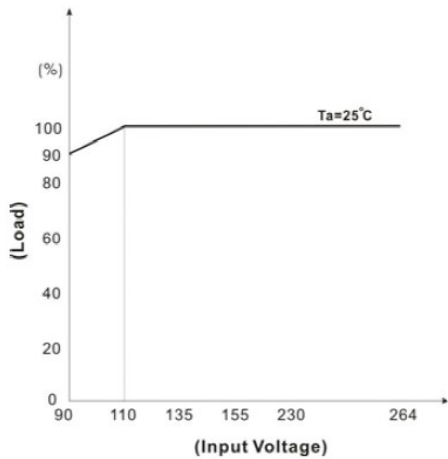
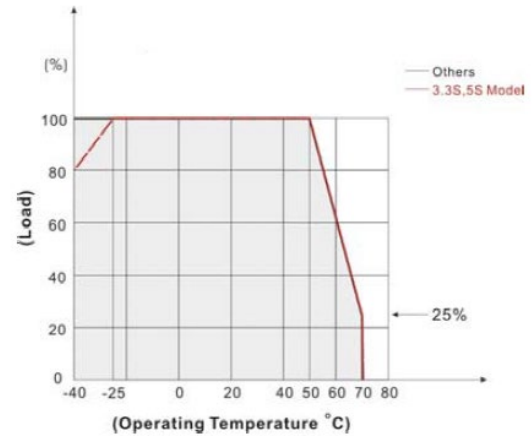


DERATING

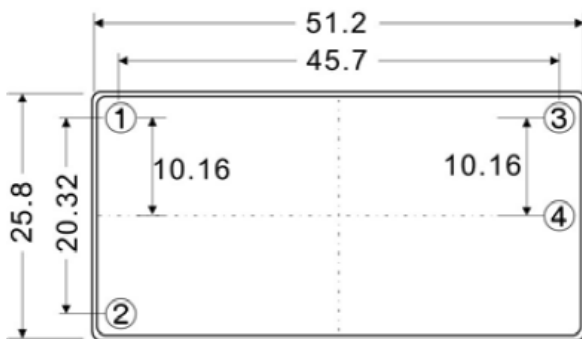
Standard Models



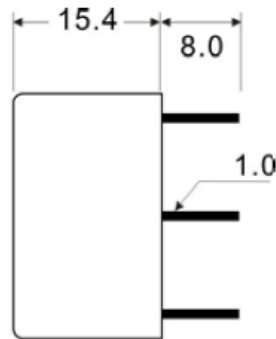
“-E1” Suffix Models



MECHANICAL DRAWING



Tolerance ± 0.5 mm



PIN CONNECTIONS

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

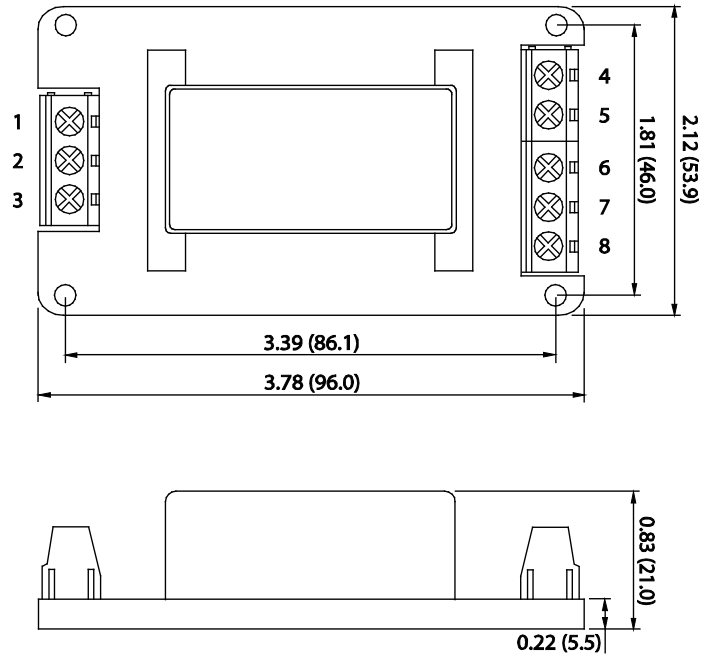
SCREW TERMINAL OPTIONS

PSAHC-A2



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

Unit: inches (mm)

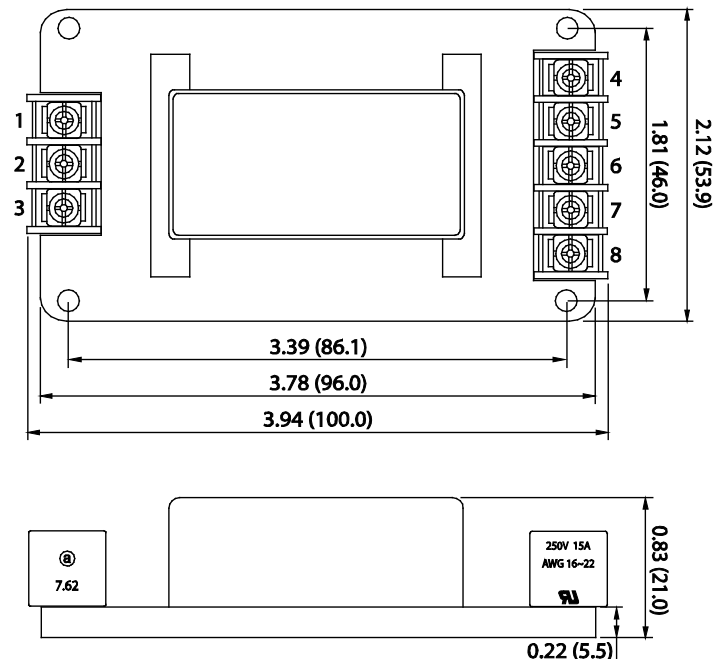


PSAHC-A5



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

Unit: inches (mm)



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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