



**Size:**  
2.055 x 1.055 x 0.75 inches  
52.2 x 26.8 x 19.0 mm

**Weight:**  
1.23oz (35g)

**FEATURES**

- Isolation Class II
- RoHS Compliant
- 8 Watts Output Power
- Single and Dual Outputs
- Low Ripple & Noise
- Fully Encapsulated Plastic Case
- PCB Mountable Switching Power Supply
- -40°C to +70°C Operating Temperature Range
- Universal Input Voltage Range: 90-305VAC (120-430VDC)
- Short Circuit, Over Power, and Over Voltage Protection
- CE and UL/cUL 60950-1: 2nd Edition Safety Approvals
- Screw Terminal Mechanical Options Available

**DESCRIPTION**

The PSAHC08 series of AC/DC switching power supplies provides 8 watts of output power in a 2.055" x 1.055" x 0.75" encapsulated PCB mountable package. This series consists of single and dual output models with a universal input range of 90-305VAC (120-430VDC). Some features include low ripple and noise, -40°C to +70°C operating temperature range, and <0.3W no load power consumption. These supplies are also protected against over power, over voltage, and short circuit conditions. The PSAHC08 series also has two types of screw terminal mechanical options available. All models are RoHS compliant and have CE and UL/cUL 60950-1: 2nd edition safety approvals.

**MODEL SELECTION TABLE**

**SINGLE OUTPUT MODELS**

Model Number	Input Voltage	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation (10% - 100%)	Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load						
PSAHC08-3.3S	90~305 VAC (120~430 VDC)	3.3 VDC	0%	2000mA	±2%	±0.2%	±1.0%	6.6W	69%	26,000µF
PSAHC08-3.8S		3.8 VDC	0%	2100mA	±2%	±0.2%	±1.0%	8W	71%	25,000µF
PSAHC08-5S		5 VDC	0%	1600mA	±2%	±0.2%	±1.0%	8W	72%	6000µF
PSAHC08-8S		8 VDC	0%	1000mA	±2%	±0.2%	±1.0%	8W	79%	2500µF
PSAHC08-9S		9 VDC	0%	888mA	±2%	±0.2%	±1.0%	8W	79%	2300µF
PSAHC08-12S		12 VDC	0%	666mA	±2%	±0.2%	±0.5%	8W	79%	1050µF
PSAHC08-14S		14 VDC	0%	571mA	±2%	±0.2%	±0.5%	8W	80%	500µF
PSAHC08-15S		15 VDC	0%	533mA	±2%	±0.2%	±0.5%	8W	80%	440µF
PSAHC08-24S		24 VDC	0%	335mA	±2%	±0.2%	±0.5%	8W	81%	180µF

**DUAL OUTPUT MODELS**

Model Number	Input Voltage	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation (10% - 100%)	Output Power	Efficiency	Maximum Capacitive Load
			Min Load <sup>(1)</sup>	Max Load						
PSAHC08-5S3.3S	90~305 VAC (120~430 VDC)	5 VDC	25%	1600mA	±2%	±0.2%	±0.5%	9W	71%	1200µF
		3.3 VDC	25%	310mA	±15%	±3.0%	±5.0%			
PSAHC08-8S5S		8 VDC	25%	1000mA	±2%	±0.2%	±0.5%	8.75W	77%	800µF
		5 VDC	25%	150mA	±5%	±3.0%	±5.0%			
PSAHC08-12S5S		12 VDC	25%	666mA	±2%	±0.2%	±0.5%	9W	78%	260µF
		5 VDC	25%	200mA	±5%	±3.0%	±5.0%			
PSAHC08-12S7.5S		12 VDC	25%	560mA	±2%	±0.2%	±0.5%	8.6W	78%	260µF
		7.5 VDC	25%	250mA	±5%	±3.0%	±5.0%			

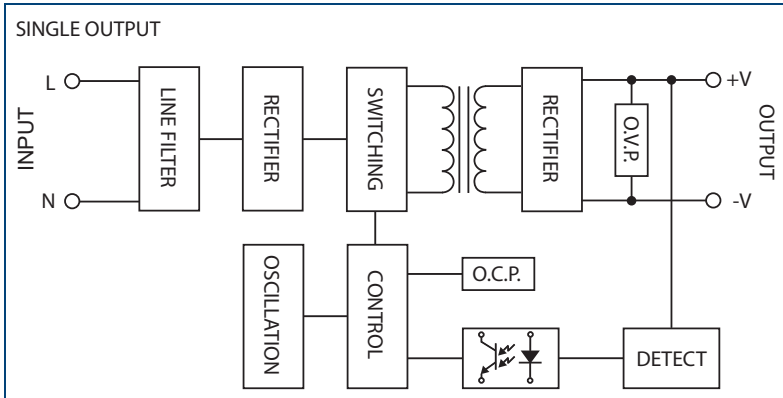
**NOTES**  
 1. Some models require a minimum loading on the output to maintain specified regulations. Operation under no-load conditions will not damage these devices; however, they may not meet all listed specifications.  
 2. Screw terminal mechanical options available (see page 4). Please call factory for ordering details.

**SPECIFICATIONS: PSAHC08 SERIES**

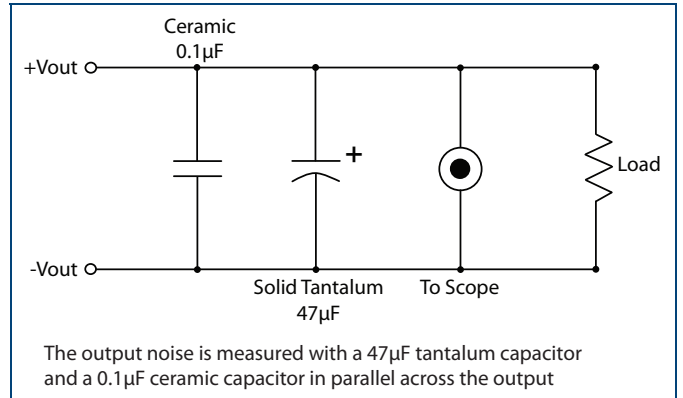
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>					
Input Voltage	AC input voltage range	90		305	VAC
	DC input voltage range	120		430	VDC
Input Frequency		47		440	Hz
Input Current	At 115VAC and full load			180	mA
	At 230VAC and full load			110	
Inrush Current (<500µs)	At 115VAC			25	A
	At 230VAC			45	
No load Power Consumption				0.3	W
External Fuse (recommended)		2A slow blow type			
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Voltage Accuracy		See Table			
Line Regulation	Low line to high line	See Table			
Load Regulation	10% - 100% load	See Table			
Output Power		See Table			
Output Current		See Table			
Minimum Load	Single Outputs	0			%
	Dual Outputs	25			
Ripple	3.3V~15V models			100	mVp-p
	24V models	Measured at 20MHz BW and with a 47µF tantalum capacitor and a 0.1µF ceramic capacitor in parallel across the output. (See page 3)		150	
	Dual Output Models			100	
Noise	3.3V~15V models			150	mVp-p
	24V models	Measured at 20MHz BW and with a 47µF tantalum capacitor and a 0.1µF ceramic capacitor in parallel across the output. (See page 3)		200	
	Dual Output Models			150	
Maximum Capacitive Load		See Table			
Hold-Up Time		10			ms
Temperature Coefficient		-0.02		+0.02	%/°C
<b>PROTECTION</b>					
Short Circuit Protection		Hiccup mode, indefinite (auto-recovery)			
Over Voltage Protection		Zener diode clamp			
Over Power Protection		Hiccup technique, auto-recovery			
<b>GENERAL SPECIFICATIONS</b>					
Efficiency		See Table			
Switching Frequency		124	132	140	KHz
Isolation Voltage	Input to Output	3000			VAC
Leakage Current				0.25	mA
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	See derating curve on page 3	-40		+70	°C
Storage Temperature		-40		+85	°C
Humidity				95	% RH
Cooling		Free air convection			
MTBF	25°C (MIL-HDBK-217F)	350,000			hours
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		1.23oz (35g)			
Case Material		Plastic resin with fiberglass (Flammability to UL 94V-0)			
Dimensions (L x W x H)		2.055 x 1.055 x 0.75 inches (52.2 x 26.8 x 19.0 mm)			
<b>SAFETY &amp; EMC</b>					
Safety Approvals		UL/cUL 60950-1 2nd edition; CE			
EMC	EMI (Conducted and Radiated Emissions)	EN 55022 Class B			
	EMS (Noise Immunity)	EN 55024			

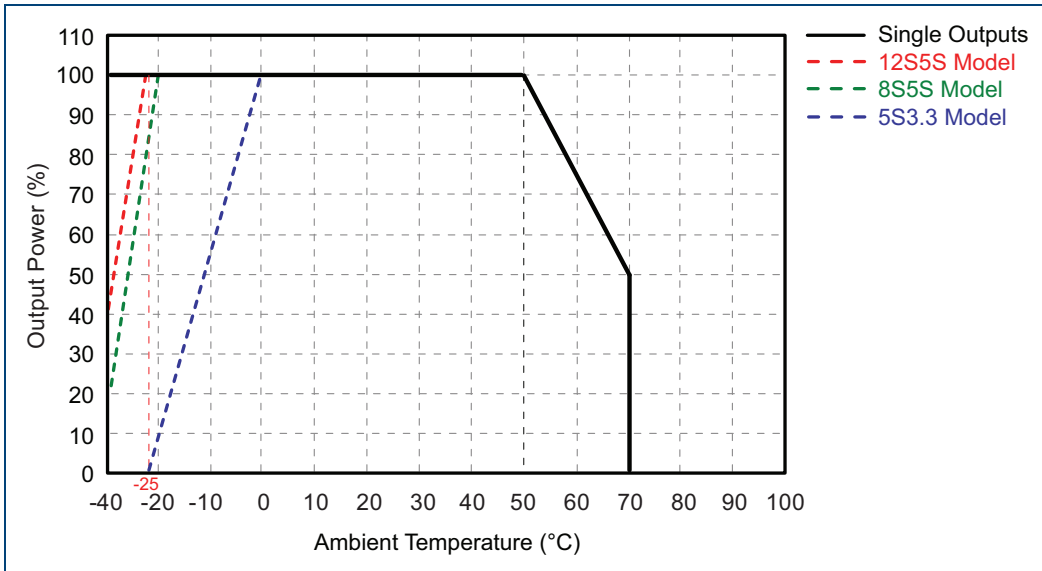
**BLOCK DIAGRAM**



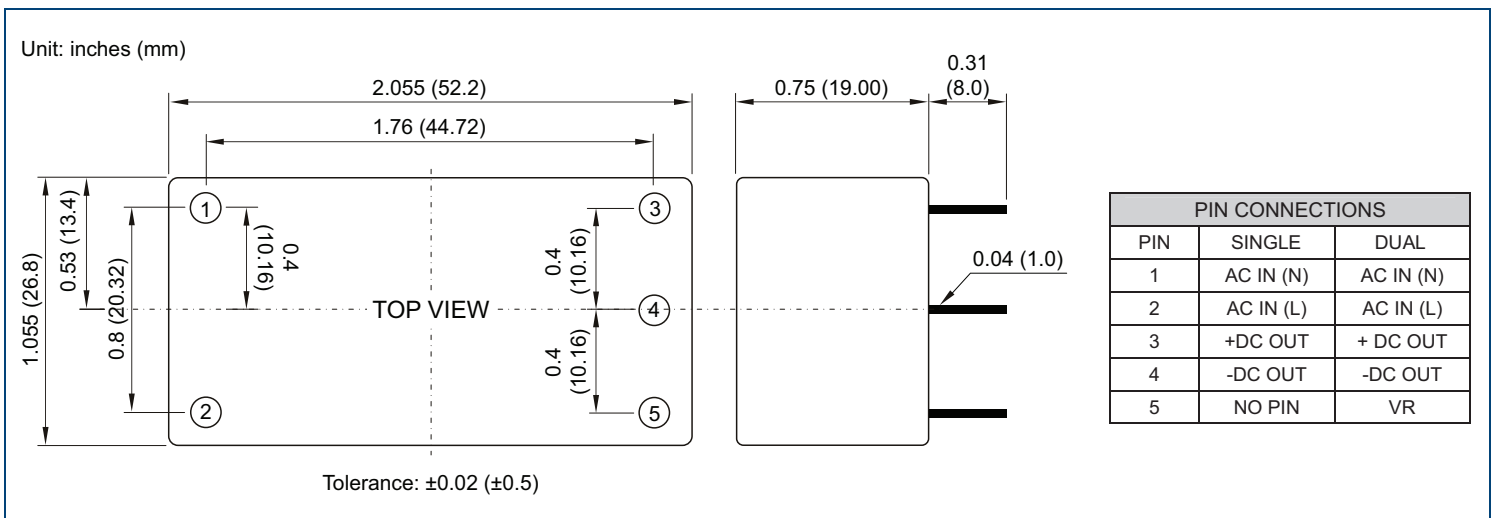
**RIPPLE & NOISE SETUP**



**DERATING CURVE**



**MECHANICAL DRAWING**



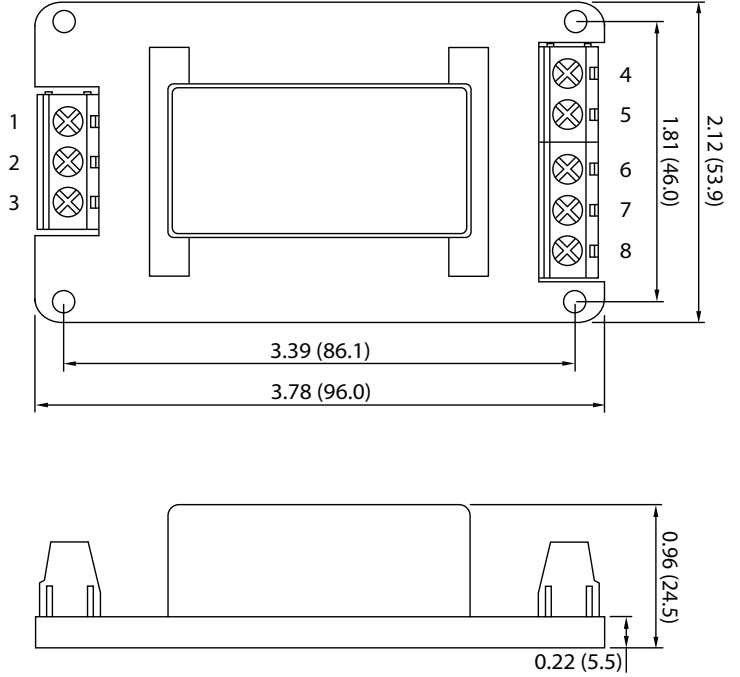
SCREW TERMINAL OPTIONS

PSAHC08-A2



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

Unit: inches (mm)

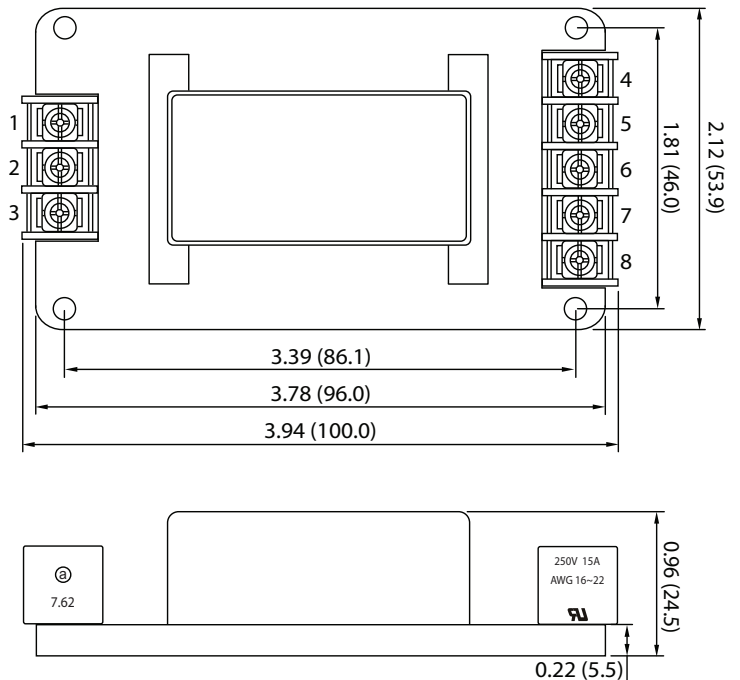


PSAHC08-A5



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

Unit: inches (mm)



## COMPANY INFORMATION

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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:

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