



Size:
3.5 x 2.5 x 0.98 inches
89.0 x 63.5 x 25.0 mm

FEATURES

- RoHS Compliant
- Isolation Class II
- 40 Watts Output Power
- Single, Dual, and Triple Outputs
- UL/cUL, CE, and CB Approval
- Fully Encapsulated Plastic Case
- PCB Mountable Switching Power Supply
- -40°C to +70°C Operating Temperature Range
- Universal Input Voltage Range: 90-264VAC (100-375VDC)
- Short Circuit, Over Current, Over Voltage, and Over Temperature Protection
- Screw Terminal Mechanical Options Available

DESCRIPTION

The PSAJC series of AC/DC switching power supplies provides 40 watts of output power in a 3.5" x 2.5" x 0.98" encapsulated PCB mountable package. This series consists of single, dual, and triple output models with a universal input range of 90-264VAC (100-375VDC). Some features include low ripple and noise, -40°C to +70°C operating temperature range, and short circuit, over current, over voltage, and over temperature protection. The PSAJC series also has two types of screw terminal mechanical options available. All models are RoHS compliant and have UL/cUL, CE, and CB safety approvals.

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation	Output Power	Efficiency	Maximum Capacitive Load
			Min Load ⁽¹⁾	Max Load						
PSAJC-3.3S	90~264 VAC (100~375 VDC)	3.3 VDC	1%	8000mA	±3%	0.5%	1%	26.4W	76%	60,000µF
PSAJC-5S		5 VDC	1%	8000mA	±2%	0.5%	1%	40W	81%	40,000µF
PSAJC-5.1S		5.1 VDC	1%	7800mA	±2%	0.5%	1%	40W	81%	40,000µF
PSAJC-9S		9 VDC	1%	4444mA	±2%	0.5%	1%	40W	83%	7200µF
PSAJC-12S		12 VDC	1%	3333mA	±2%	0.5%	1%	40W	84%	8600µF
PSAJC-15S		15 VDC	1%	2666mA	±2%	0.5%	1%	40W	83%	6600µF
PSAJC-24S		24 VDC	1%	1667mA	±2%	0.5%	1%	40W	83%	1400µF

DUAL OUTPUT MODELS

Model Number	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation ⁽²⁾	Cross ⁽³⁾ Regulation	Output Power	Efficiency	Maximum Capacitive Load
		Min Load ⁽¹⁾	Max Load							
PSAJC-5D	Vo ₁ +5 VDC	10%	4000mA	±2%	0.5%	1% (sym. load)	5%	40W	81%	12,000µF
	Vo ₂ -5 VDC		4000mA	±2%	0.5%	1% (sym. load)	5%			12,000µF
PSAJC-12D	Vo ₁ +12 VDC	10%	1666mA	±2%	0.5%	1% (sym. load)	5%	40W	83%	4400µF
	Vo ₂ -12 VDC		1666mA	±2%	0.5%	1% (sym. load)	5%			4400µF
PSAJC-15D	Vo ₁ +15 VDC	10%	1333mA	±2%	0.5%	1% (sym. load)	5%	40W	83%	1000µF
	Vo ₂ -15 VDC		1333mA	±2%	0.5%	1% (sym. load)	5%			1000µF
PSAJC-5S12S	Vo ₁ 5 VDC	25%	5000mA	±3%	0.5%	2% (sym. load)	1%	40W	82%	10,000µF
	Vo ₂ 12 VDC		1250mA	±5%	5%	6% (sym. load)	7%			470µF
PSAJC-5S24S	Vo ₁ 5 VDC	25%	5000mA	±3%	0.5%	2% (sym. load)	1%	40W	82%	10,000µF
	Vo ₂ 24 VDC		625mA	±5%	5%	6% (sym. load)	7%			400µF

TRIPLE OUTPUT MODELS

Model Number	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation ⁽²⁾	Cross ⁽³⁾ Regulation	Output Power	Efficiency	Maximum Capacitive Load
		Min Load ⁽¹⁾	Max Load							
PSAJC-5S12D	Vo ₁ 5 VDC	25%	5000mA	±3%	0.5%	3% (sym. load)	3%	40W	82%	10,000µF
	Vo ₂ +12 VDC		600mA	±5%	5%	7% (sym. load)	7%			780µF
	Vo ₃ -12 VDC		600mA	±5%	5%	7% (sym. load)	7%			780µF
PSAJC-5S15D	Vo ₁ 5 VDC	25%	5000mA	±3%	0.5%	3% (sym. load)	3%	40W	81%	10,000µF
	Vo ₂ +15 VDC		500mA	±5%	5%	7% (sym. load)	7%			900µF
	Vo ₃ -15 VDC		500mA	±5%	5%	7% (sym. load)	7%			900µF

NOTES

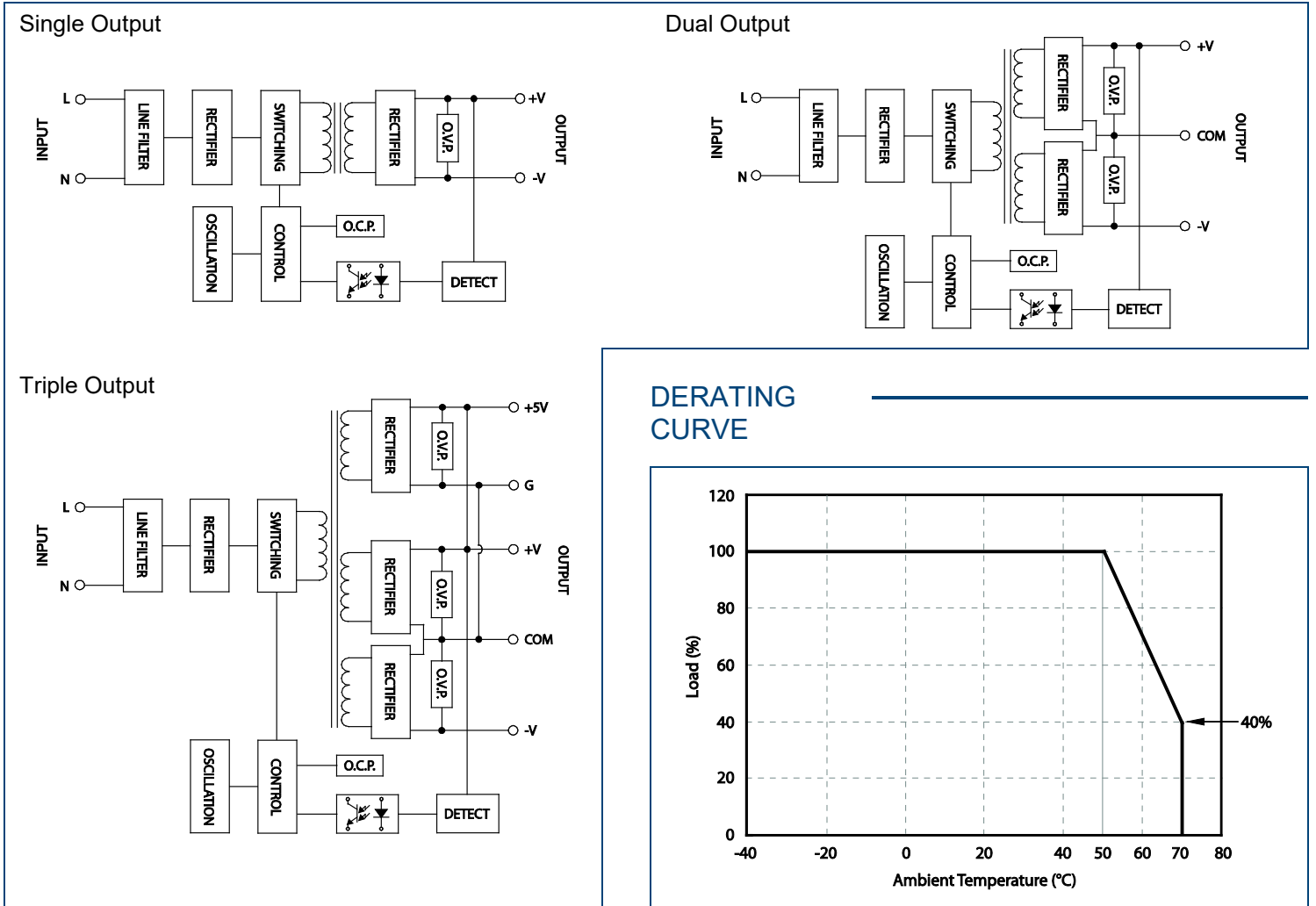
1. All models require a minimum loading on the output to maintain specified regulations. Operation under no-load conditions will not damage these devices; however, they may not meet all listed specifications.
2. Load Regulation
Single Output Models: Measured at 1%~100% Load
PSAJC-5D, PSAJC-12D, PSAJC-15D Models: Measured at 10%~100% Load
PSAJC-5S12S, PSAJC5S24S, PSAJC-5S12D, PSAJC-5S15D: Measured at 25%~100% Load
3. Cross Regulation
PSAJC-5D, PSAJC-12D, PSAJC-15D Models: Measured at 15%~100% Load
PSAJC-5S12S, PSAJC5S24S, PSAJC-5S12D, PSAJC-5S15D: Measured at 25%~100% Load
4. Screw terminal mechanical options available (see page 4). Please call factory for ordering details.
5. This product is Listed to applicable standards and requirements by UL.
**Due to advances in technology, specifications subject to change without notice.*

SPECIFICATIONS: PSAJC SERIES

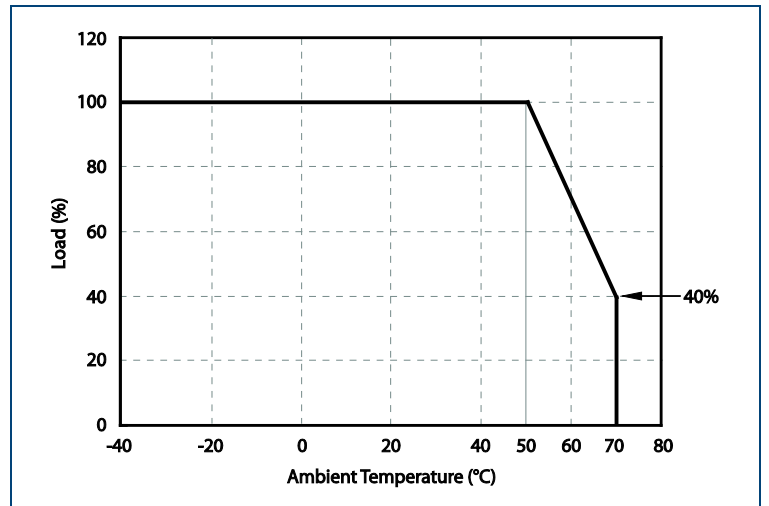
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION		TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage	AC input voltage range		90		264	VAC
	DC input voltage range		100		375	VDC
Input Frequency			47		440	Hz
Input Current	At 115VAC and full load				860	mA
	At 230VAC and full load				460	
Inrush Current (<2ms)	At 115VAC				30	A
	At 230VAC				50	
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy			See Table			
Line Regulation	Low Line to High Line		See Table			
Load Regulation			See Table			
Cross Regulation			See Table			
Output Power					40	W
Output Current			See Table			
Minimum Load			See Table			
Ripple & Noise	3.3VDC Output Model	Measured at 20MHz BW with 0.1µF and 47µF capacitors in parallel		50		mV of Vo
	Others			1		% of Vo
Max Capacitive Load			See Table			
Hold-Up Time			10			ms
Temperature Coefficient				±0.01		%/°C
PROTECTION						
Short Circuit Protection			Hiccup mode, indefinite (auto-recovery)			
Over Voltage Protection			Zener diode clamp			
Over Current Protection			Above 105% rated output power			
Over Temperature Protection				100		°C
GENERAL SPECIFICATIONS						
Efficiency			See Table			
Switching Frequency				132		KHz
Isolation Voltage (Input to Output)			3000			VAC
Leakage Current					0.75	mA
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature	With derating (see derating curve)		-40		+70	°C
Case Temperature					+95	°C
Storage Temperature			-40		+85	°C
Humidity					95	% RH
Cooling			Free air convection			
MTBF	At 25°C		200,000		400,000	hours
PHYSICAL SPECIFICATIONS						
Weight			9.88oz (280g)			
Case Material			Plastic resin + fiberglass (Flammability to UL 94V-0)			
Dimensions (L x W x H)			3.5 x 2.5 x 0.98 inches (89.0 x 63.5 x 25.0 mm)			
SAFETY & EMC						
Safety Approvals			UL/cUL ⁽⁵⁾ , CE, CB			
EMC	EMI (Conducted and Radiated Emissions)		EN 55022 Class B			
	EMS (Noise Immunity)		EN 55024			

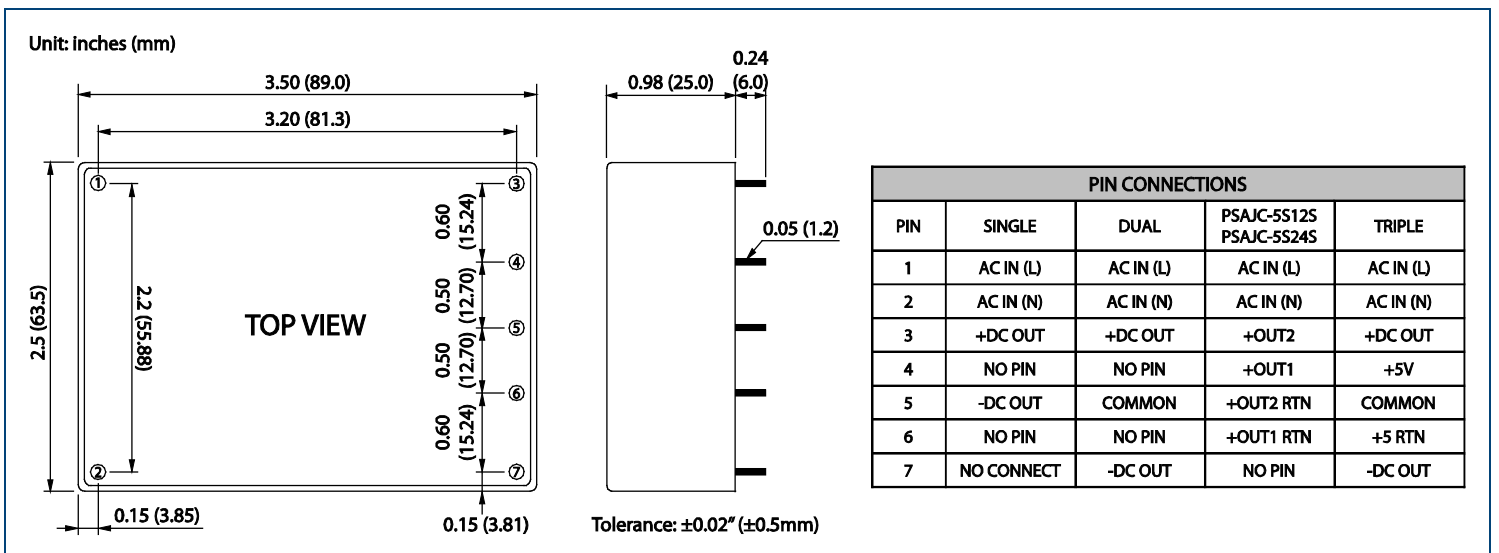
BLOCK DIAGRAMS



DERATING CURVE



MECHANICAL DRAWING



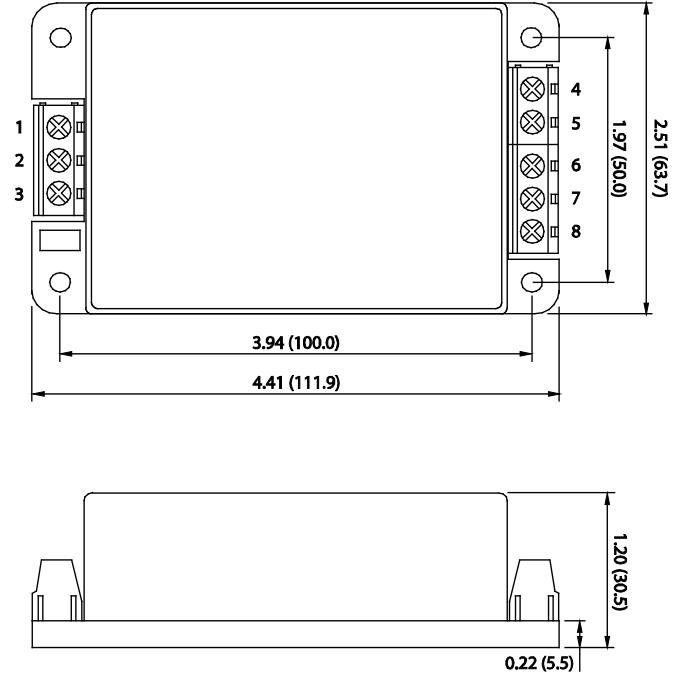
SCREW TERMINAL OPTIONS

PSAJC-A2



PIN CONNECTIONS				
PIN	SINGLE	DUAL	PSAJC-5512S PSAJC-5524S	TRIPLE
1	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT
2	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
3	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
4	+DC OUT	+DC OUT	+OUT2	+DC OUT
5	NO CONNECT	NO CONNECT	+OUT1	+5V OUT
6	-DC OUT	COMMON	+OUT2 RTN	COMMON
7	NO CONNECT	NO CONNECT	+OUT1 RTN	+5V RTN
8	NO CONNECT	-DC OUT	NO CONNECT	-DC OUT

Unit: inches (mm)

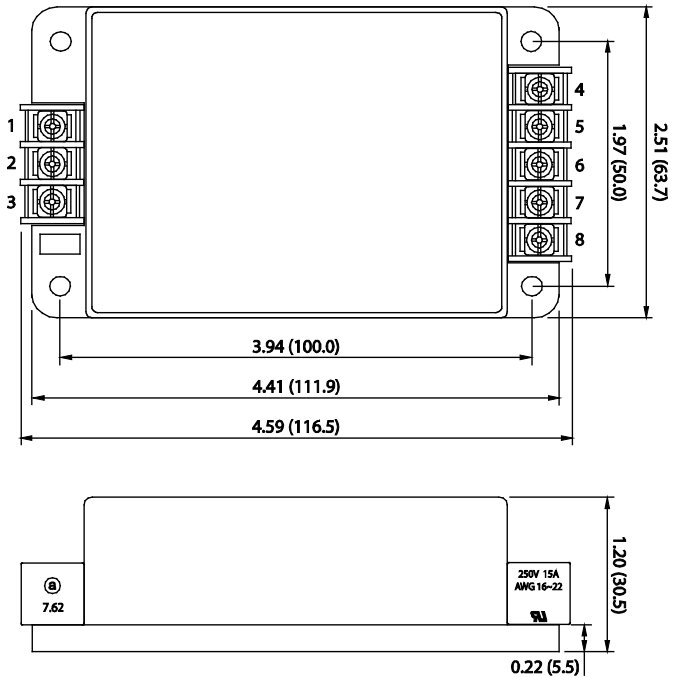


PSAJC-A5



PIN CONNECTIONS				
PIN	SINGLE	DUAL	PSAJC-5512S PSAJC-5524S	TRIPLE
1	NO CONNECT	NO CONNECT	NO CONNECT	NO CONNECT
2	AC IN (L)	AC IN (L)	AC IN (L)	AC IN (L)
3	AC IN (N)	AC IN (N)	AC IN (N)	AC IN (N)
4	+DC OUT	+DC OUT	+OUT2	+DC OUT
5	NO CONNECT	NO CONNECT	+OUT1	+5V OUT
6	-DC OUT	COMMON	+OUT2 RTN	COMMON
7	NO CONNECT	NO CONNECT	+OUT1 RTN	+5V RTN
8	NO CONNECT	-DC OUT	NO CONNECT	-DC OUT

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.

Contact **Wall Industries** for further information:

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