



Size:
2.07 x 1.08 x 0.93 inches
52.5 x 27.5 x 23.5 mm

Weight:
1.8oz (51g)

FEATURES

- Isolation Class II
- RoHS Compliant
- 10 Watts Output Power
- Regulated Single Outputs
- Low Ripple & Noise
- MTBF >450,000 Hours
- Fully Encapsulated Plastic Case
- PCB Mountable Switching Power Supply
- -25°C to +70°C Operating Temperature Range
- Optional -40°C~+70°C Operating Temperature Range
- Universal Input Range: 90-264VAC (120-370VDC)
- Short Circuit, Over Power, & Over Voltage Protection
- UL/cUL, CE, and CB Safety Approvals
- Two Screw Terminal Mechanical Options Available

DESCRIPTION

The PSAFC series of AC/DC switching power supplies provides 10 Watts of output power in a 2.07" x 1.08" x 0.93" 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 PSAFC 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			
PSAFC-3.3S	90~264 VAC (120~370 VDC)	3.3 VDC	0%	2500mA	8.25W	74%	75,000µF
PSAFC-5S		5 VDC	0%	2000mA	10W	79%	40,000µF
PSAFC-12S		12 VDC	0%	833mA	10W	82%	8500µF
PSAFC-15S		15 VDC	0%	667mA	10W	78%	3500µF
PSAFC-24S		24 VDC	0%	417mA	10W	80%	1200µF

NOTES

1. For -40°C to +70°C extended operating temperature range please add the suffix -E1 to the model number (Ex: PSAFC-12S-E1).
2. Screw terminal mechanical options available (see page 4). Please call factory for ordering details.

SPECIFICATIONS: PSAFC SERIES

All specifications are based on 25°C after warm-up, 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				220	mA
	At 230VAC and full load				150	
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)			2A slow blow type			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy			-2		+2	%
Line Regulation	Low line to high line		-0.3		+0.3	%
Load Regulation	5% - 100% load		-0.5		+0.5	%
Output Power			See Table			
Output Current			See Table			
Minimum Load			0			%
Ripple & Noise	Ripple	Measured at 20MHz BW and with 0.1uF & 47uF parallel capacitor	< 0.2% Vout + 40mV max			Vp-p
	Noise		< 0.5% Vout +50mV max.			
Maximum Capacitive Load	@230VAC		See Table			
Hold-Up Time			15			ms
Temperature Coefficient			-0.02		+0.02	%/°C

SPECIFICATIONS: PSAFC SERIES

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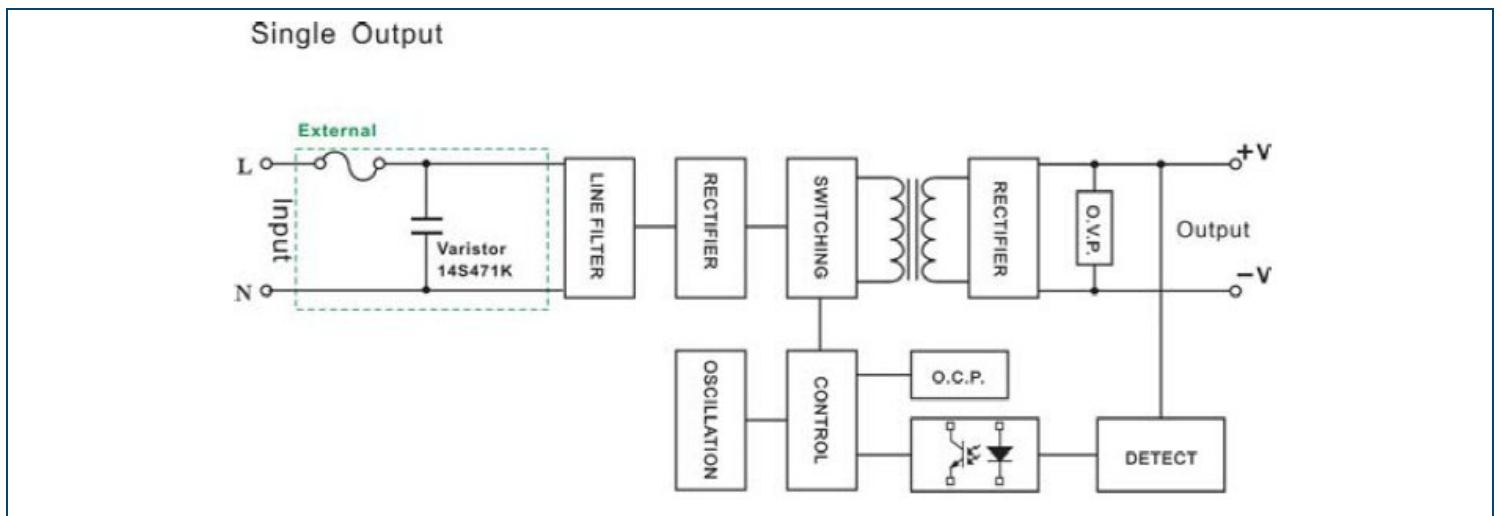
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
PROTECTION					
Short Circuit Protection		Hiccup mode, indefinite (auto-recovery)			
Over Voltage Protection		Zener diode clamp			
Over Power Protection		Hiccup technique, auto-recovery			
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Isolation Voltage	Input to Output	3000			VAC
Leakage Current				0.25	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Standard Models, with derating "-E1" Suffix Models	-25 -40		+70 +70	°C
Storage Temperature		-40		+85	°C
Humidity		20		85	% RH
Vibration		10-55Hz 0.5mm width / 1 minute cycle			
Shock		20G (3 directions each 3 times)			
Cooling		Free air convection			
MTBF	25°C (MIL-HDBK-217F)	450,000			hours
PHYSICAL SPECIFICATIONS					
Weight		1.8oz (51g)			
Case Material		Plastic resin with fiberglass (Flammability to UL 94V-0)			
Dimensions (L x W x H)		2.07 x 1.08 x 0.93 inches (52.5 x 27.5 x 23.5 mm)			
SAFETY & EMC					
Safety Approvals		UL/cUL ⁽⁴⁾ , CE, CB			
EMC	EMI (Conducted and Radiated Emissions)	EN 55022 Class B			
	EMS (Noise Immunity)	EN 55024			

NOTES

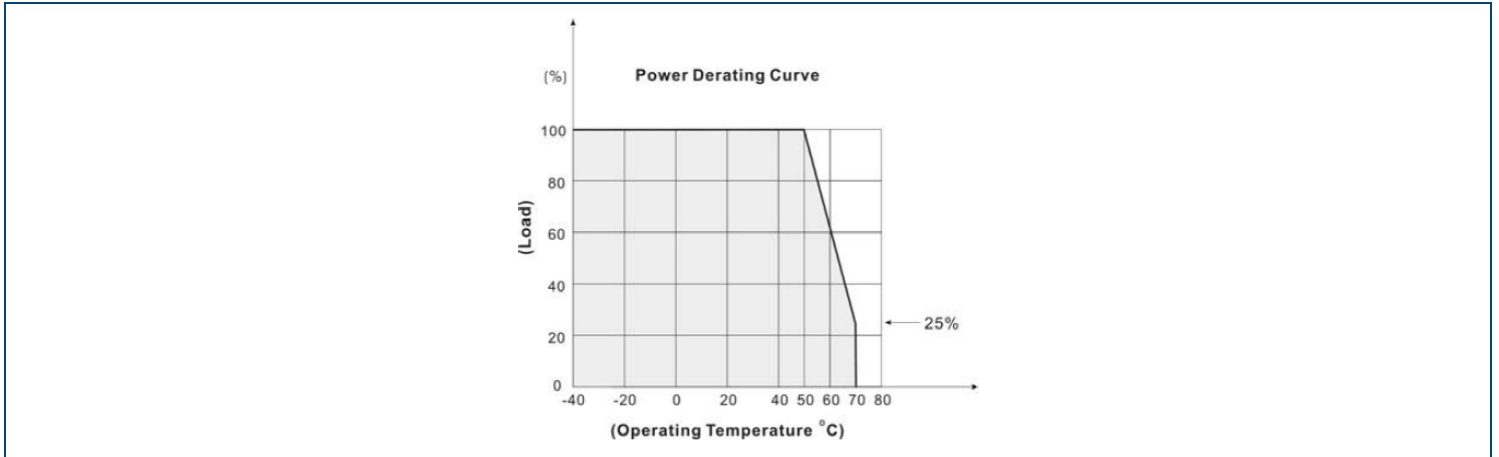
1. For -40°C to +70°C extended operating temperature range please add the suffix -E1 to the model number (Ex: PSAFC-12S-E1).
2. Screw terminal mechanical options available (see page 4). Please call factory for ordering details.
3. It is recommended to add Varistor 14S471K at L/N input side in parallel.
4. This product is Listed to applicable standards and requirements by UL.

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

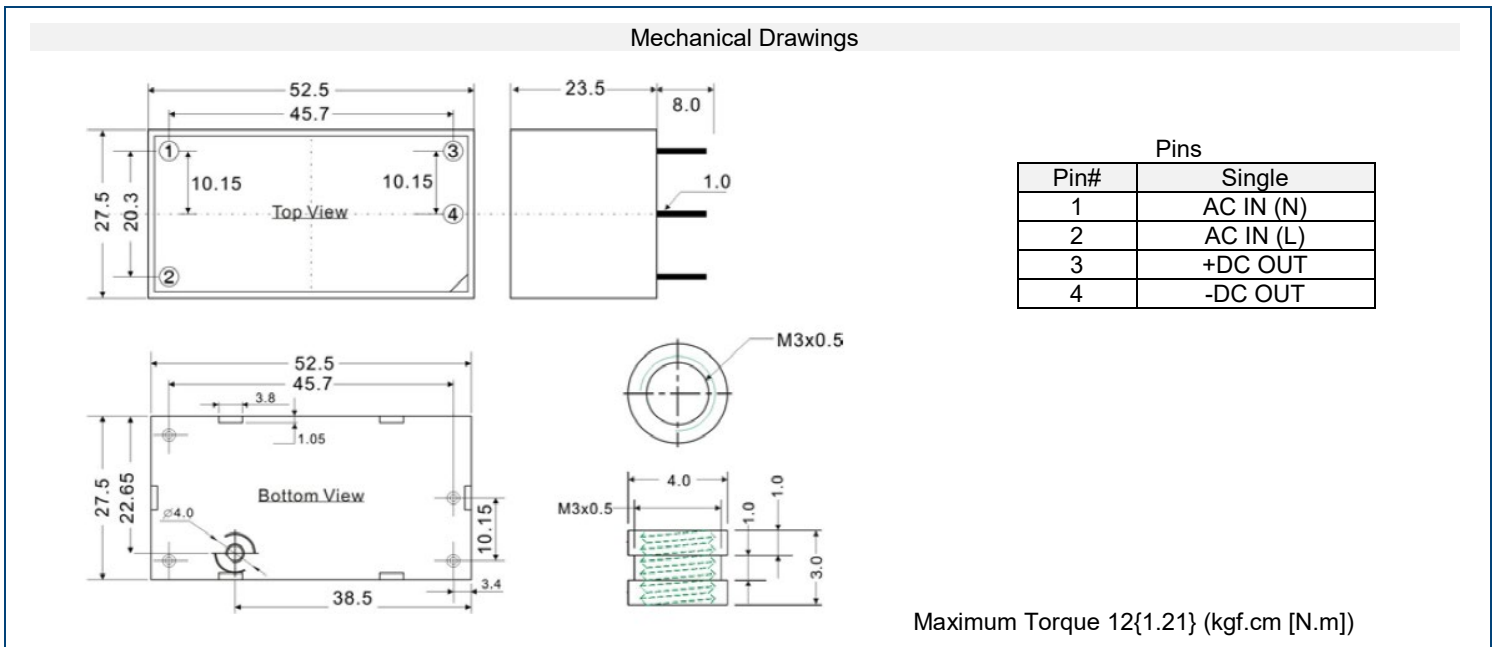
BLOCK DIAGRAM



DERATING CURVES



MECHANICAL DRAWING



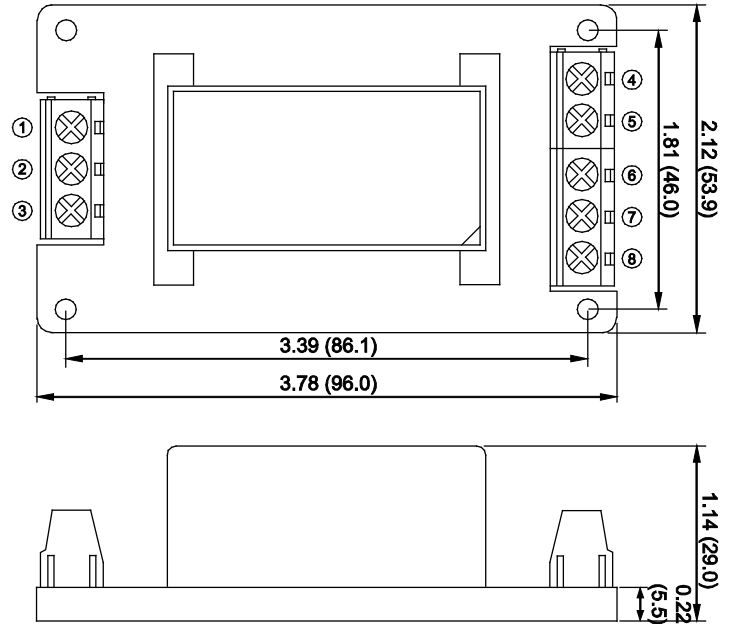
SCREW TERMINAL OPTIONS

PSAFC-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)

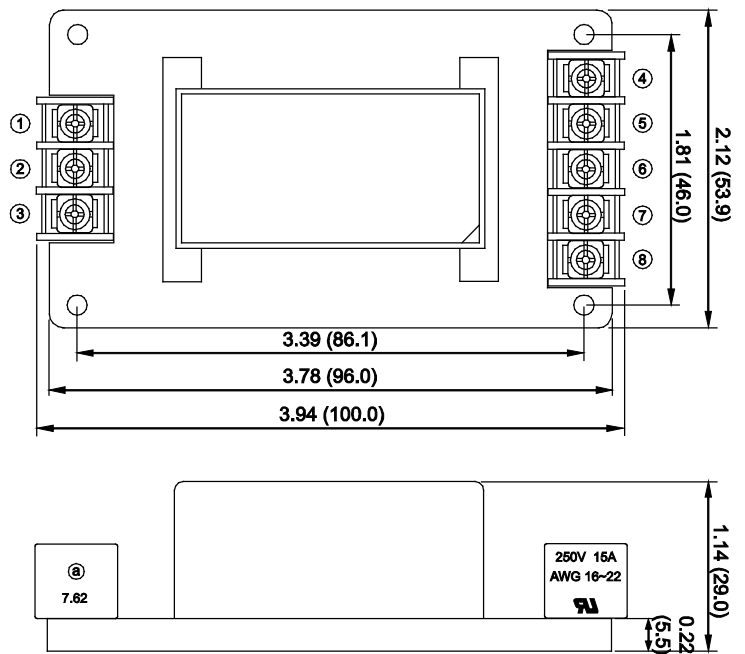


PSAFC-A5



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)



MODEL NUMBER SETUP

PSAFC	-	12	S	-	E1	A2
Series Name		Output Voltage	Output Quantity		Operating Temperature Options	Screw Terminal Options
		3.3: 3.3 VDC 5: 5 VDC 12: 12 VDC 15: 15 VDC 24: 24 VDC	S: Single Output		None: -25°C to +70°C Operating Temp. E1: -40°C to +70°C Operating Temp.	None: Encapsulated PCB Mount A2: See page 4 A5: See page 4

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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