



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

Weight:
2.08oz (59g)

FEATURES

- Isolation Class II
- Up to 20 Watts Output Power
- Regulated Single Outputs
- Low Ripple & Noise
- MTBF > 400,000 Hours
- Fully Encapsulated Plastic Case
- Low Standby < 0.5W
- PCB Mountable Switching Power Supply
- 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 PSAFC20 series of AC/DC switching power supplies provides up to 20 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, -40°C to +70°C operating temperature range, and over power, over voltage, and short circuit protection. The PSAFC20 series also has two types of screw terminal mechanical options available. All models have UL/cUL, CB, and CE safety approvals.

MODEL SELECTION TABLE

Model Number	Input Voltage	Output Voltage	Output Current		Ripple & Noise ⁽¹⁾		Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load	Ripple	Noise			
PSAFC20-3.3S	90~264 VAC (120~370 VDC)	3.3 VDC	0%	3600mA	75mVp-p	120mVp-p	11.88W	74%	4500µF
PSAFC20-5S		5 VDC	0%	3600mA	75mVp-p	120mVp-p	18W	78%	3500µF
PSAFC20-12S		12 VDC	0%	1660mA	1% Vout	1% Vout	20W	82%	470µF
PSAFC20-15S		15 VDC	0%	1330mA	1% Vout	1% Vout	20W	83%	330µF
PSAFC20-24S		24 VDC	0%	833mA	1% Vout	1% Vout	20W	83%	47µF

SPECIFICATIONS: PSAFC20 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			385	mA
	At 230VAC and full load			250	
Inrush Current	At 115VAC, <2 ms, cold start			20	A
	At 230VAC, <2ms, cold start			40	
External Fuse (required)		2A slow blow type			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		-2		+2	%
Line Regulation	Low line to high line	-0.5		+0.5	%
Load Regulation	5% - 100% load	-1		+1	%
Output Power		See Table			
Output Current		See Table			
Minimum Load		0			%
Ripple & Noise		See Table			
Maximum Capacitive Load		See Table			
Hold-Up Time	At 115VAC		12		ms
	At 230VAC		56		
Temperature Coefficient		-0.02		+0.02	%/°C
PROTECTION					
Short Circuit Protection	Hiccup mode, indefinite	Auto-recovery			
Over Voltage Protection		Zener diode clamp			
Over Power Protection	Hiccup technique	Auto-recovery			

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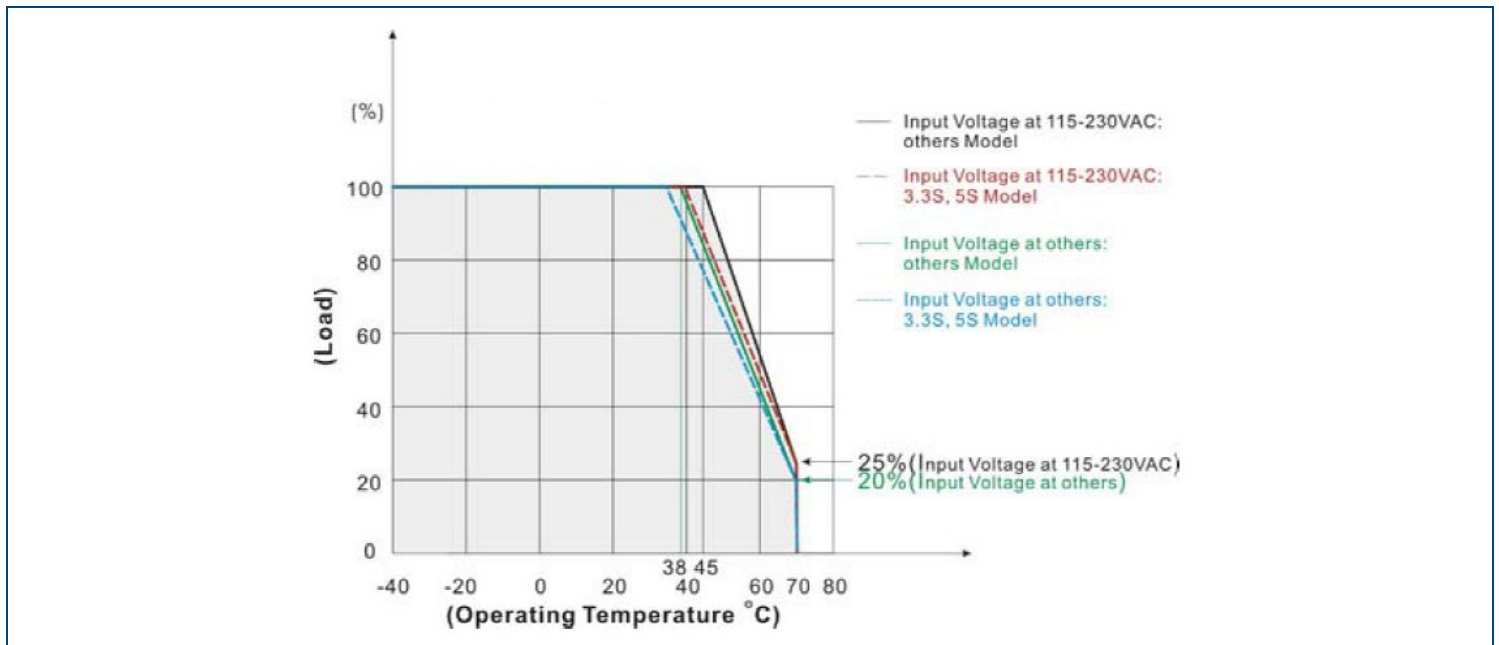
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Isolation Voltage	Input to Output	3000			VAC
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	With derating	-40		+70	°C
Storage Temperature		-40		+85	°C
Humidity				95	% RH
Cooling		Free air convection			
MTBF	25°C (MIL-HDBK-217F)	400,000			hours
PHYSICAL SPECIFICATIONS					
Weight	Tolerance ±0.5mm	2.08oz (59g)			
Case Material		Plastic resin (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		CE, UL/cUL ⁽⁴⁾ , CB			
EMC	EMI (Conducted and Radiated Emissions)	EN 55022 Class B			
	EMS (Noise Immunity)	EN 55024			

NOTES

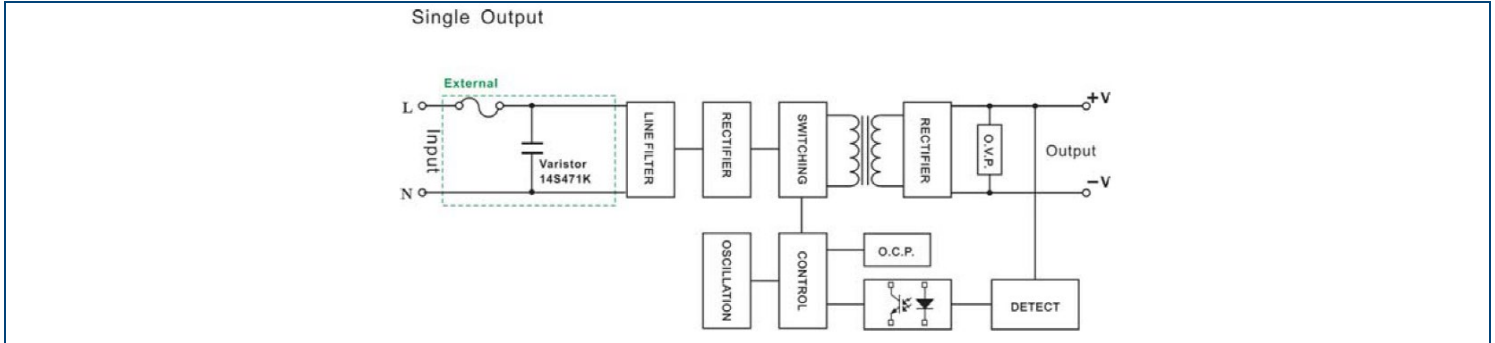
1. Ripple & noise is measured at 20MHz bandwidth, full load, and with 47µF and 0.1µF capacitors in parallel across the output.
2. It is recommended to add Varistor 14S471K at L/N input side in parallel
3. Screw terminal mechanical options available (see page 4). Please call factory for ordering details
4. This product is Listed to applicable standards and requirements by UL.

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

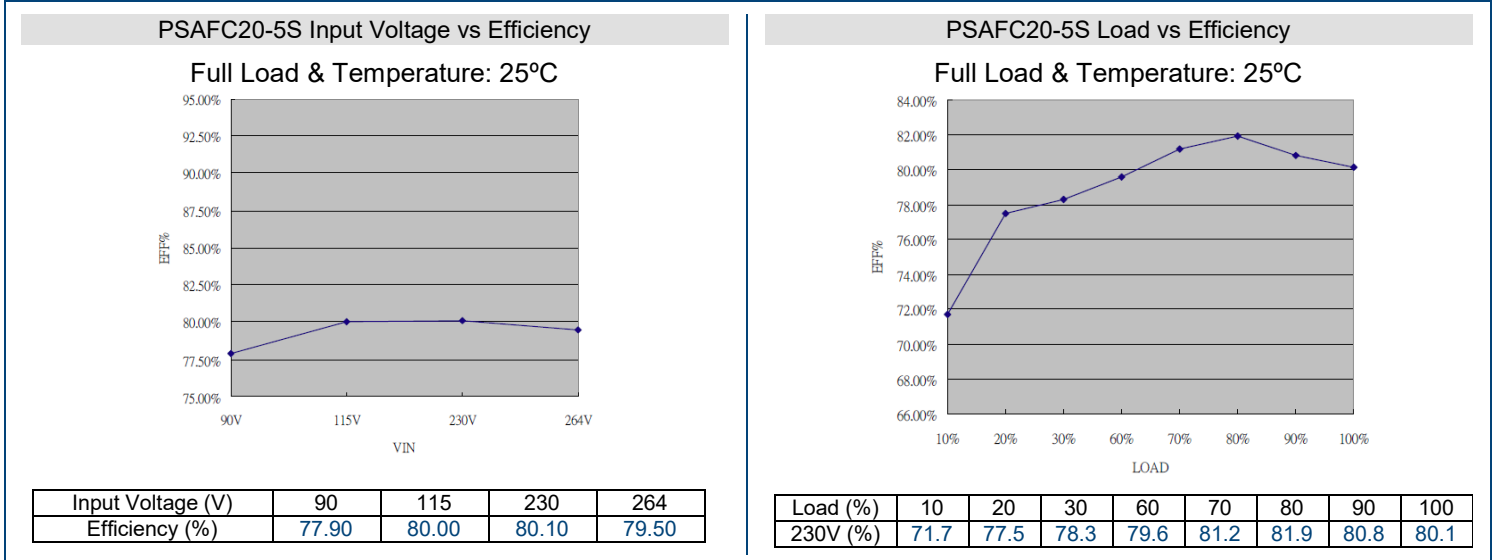
DERATING CURVE



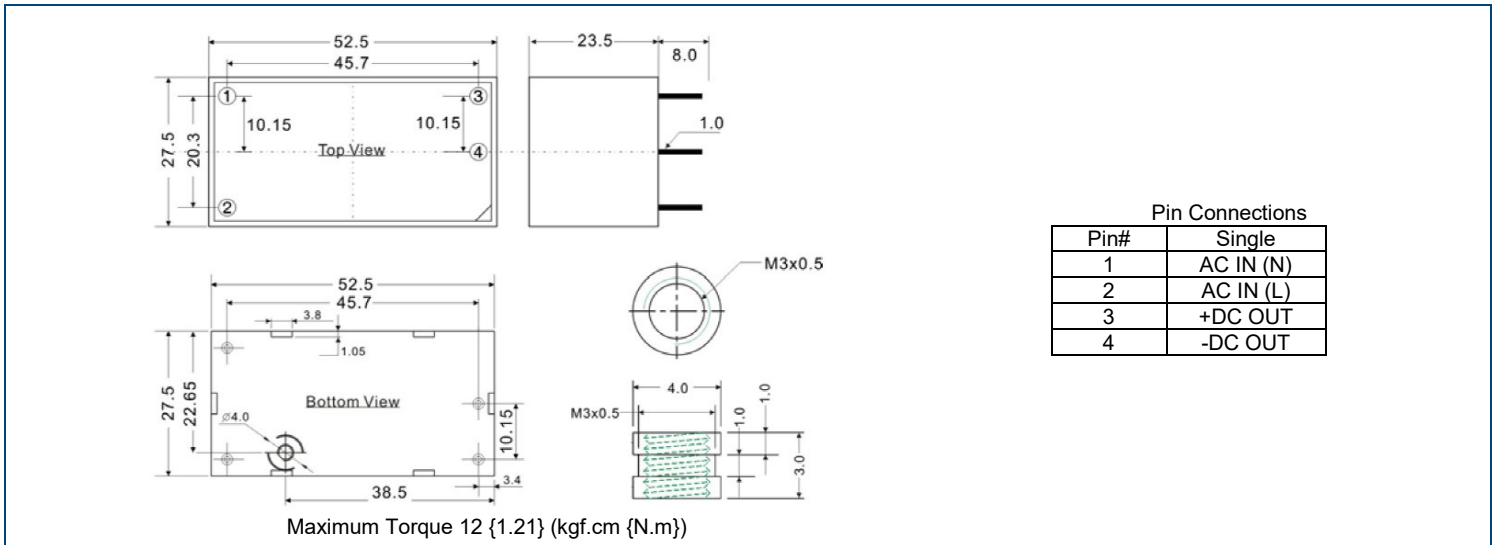
BLOCK DIAGRAM



EFFICIENCY GRAPHS



MECHANICAL DRAWING



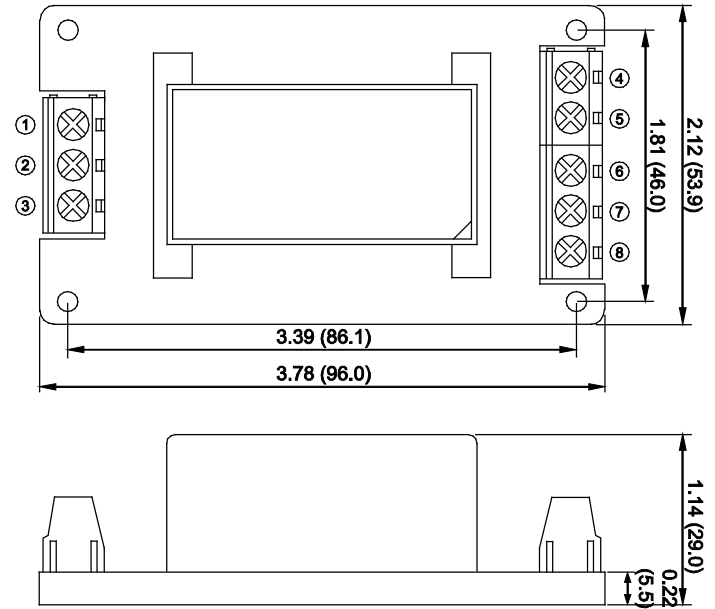
SCREW TERMINAL OPTIONS

PSAFC20-A2



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

Unit: inches (mm)

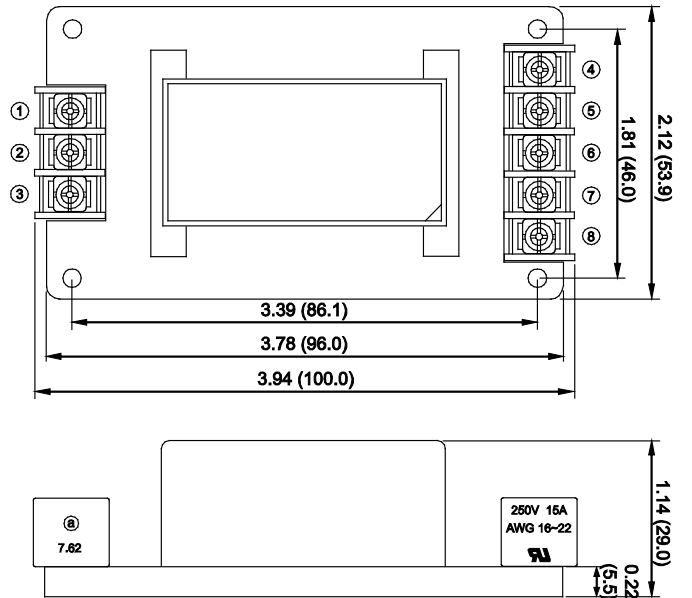


PSAFC20-A5



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

Unit: inches (mm)



MODEL NUMBER SETUP

PSAFC20	-	12	S	-	A2
Series Name		Output Voltage	Output Quantity		Mechanical Options
		3.3: 3.3 VDC 5: 5 VDC 12: 12 VDC 15: 15 VDC 24: 24 VDC	S: Single Output		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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