



Size: 4in x 2in x 1.28in  
(50.8mm x 106.6mm x 32mm)

**OPTIONS**

- Output Voltage -12V-48V
- Output Power - Rated 120W Max. 150W Peak 200W

**APPLICATIONS**

- Medical and ITE General Purpose

**FEATURES**

- Designed for BF application
- Safety Class II
- 12V output for fan
- High mechanical torque start-up
- UL/CSA/EN60950-1 2<sup>nd</sup> Edition, ANSI/AMM/CSA/EN60601-1 3.1 Edition Safety Approvals
- Convention cooling for rated load
- Forced air for max. load
- Wide input voltage 90~264VAC
- Over load, Over Voltage, and Short Circuit Protection
- Energy star Level VI
- High Operating Altitude

**DESCRIPTION**

The PSSNP-G12 series of AC DC open frame power supplies offers rated output power of 120 watts, max output power of 150 watts, and a peak output power of 200 watts of output power in a 4" x 2" x 1.28" frame. This series consists of single output models with a wide input voltage range of 90~264VAC and output voltages available ranging from 12V~48V. Each model of this series is protected against over load, over voltage, and short circuit protection and are Energy Star Level VI compliant. This series also has UL/CSA/EN60950-1 2<sup>nd</sup> Edition, ANSI/AMM/CSA/EN60601-1, 3.1 Edition safety approvals.

**MODEL SELECTION TABLE**

Model Number <sup>(4)</sup>	Input Voltage Range	Output Voltage	Output Current				Step Efficiency			Output Power			Average Efficiency
			Min.	Rated	Max.	Peak	@20% Load	@50% Load	@100% Load	Rated	Max.	Peak	
PSSNP-G127	90~264VAC	12V	0A	10.0A	12.5A	16.6A	82%	89%	90%	120W	150W	200W	86.5%
PSSNP-G127-A													
PSSNP-G127-M													
PSSNP-G127-MA													
PSSNP-G128	90~264VAC	15V	0A	8.0A	10.0A	13.4A	82%	89%	90%	120W	150W	200W	86.5%
PSSNP-G128-A													
PSSNP-G128-M													
PSSNP-G128-MA													
PSSNP-G125	90~264VAC	18V	0A	6.6A	8.3A	11.1A	82%	89%	90%	120W	150W	200W	86.5%
PSSNP-G125-A													
PSSNP-G125-M													
PSSNP-G125-MA													
PSSNP-G129	90~264VAC	24V	0A	5A	6.3A	8.3A	83.5%	90%	90.5%	120W	150W	200W	88%
PSSNP-G129-A													
PSSNP-G129-M													
PSSNP-G129-MA													
PSSNP-G12G	90~264VAC	28V	0A	4.3A	5.4A	7.2A	83.5%	90%	90.5%	120W	150W	200W	88%
PSSNP-G12G-A													
PSSNP-G12G-M													
PSSNP-G12G-MA													
PSSNP-G12J	90~264VAC	36V	0A	3.4A	4.2A	5.6A	83.5%	90%	90.5%	120W	150W	200W	88%
PSSNP-G12J-A													
PSSNP-G12J-M													
PSSNP-G12J-MA													
PSSNP-G12T	90~264VAC	48V	0A	2.5A	3.1A	4.2A	83.5%	90%	90.5%	120W	150W	200W	88%
PSSNP-G12T-A													
PSSNP-G12T-M													
PSSNP-G12T-MA													

**SPECIFICATIONS**

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 Range		90		264	VAC
Input Frequency		47		63	Hz
Inrush Current	@115/230VAC		<30/60		A
Leakage Current	Earth Leakage Current		<300		uA
	Touch Current		<100		
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Initial Accuracy	12V	11.9		12.1	V
	15V	14.9		15.1	
	18V	17.9		18.1	
	24V	23.8		24.2	
	28V	27.9		28.1	
	36V	35.8		36.2	
	48V	47.8		48.2	
Output Power		See Table			
Output Current		See Table			
Hold-Up Time			20		mS
<b>PROTECTION</b>					
Short Circuit Protection		Auto Recovery			
Over Load Protection		Auto Recovery			
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	Derating: 2.5%/°C >45°C for convention cooling	-20		70	°C
Storage Temperature		-40		+85	°C
Cooling	For Rated Load	Convention Cooling			
Air	For Max. load	Forced Air			
<b>GENERAL SPECIFICATIONS</b>					
Efficiency		See Table			
Peak Load Duration	Peak 200W			5	Sec
Isolation Grade	Primary ↔ Ground		1 (1500)		MOPP (VAC)
	Primary ↔ Secondary		2 (4000)		
	Secondary ↔ Ground		1 (1500)		
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		5.64oz (160g)			
Dimensions (L x W x H)		4in x 2in x 1.28in (106.6 x 50.8 x 32.0mm)			
<b>SAFETY &amp; EMC CHARACTERISTICS</b>					
Safety Approvals		UL/CSA/EN60950-1 2 <sup>nd</sup> Edition ANSI/AMM/CSA/EN60601-1, 3.1 edition CB Report CE Mark Rm report/file			
EMI <sup>(3)</sup>		EB55022 "B" EN61000-3-3			
EMS		EN61000-4-2, -3, -4, -5, -6, -8, -11			
Harmonics		EN61000-3-2 Class D			
Energy Saving (Without A Suffix)	ENERGY STAR	For computers version 6.0 For displays version 6.0 ErP regulation EC(No) 1275/2008			

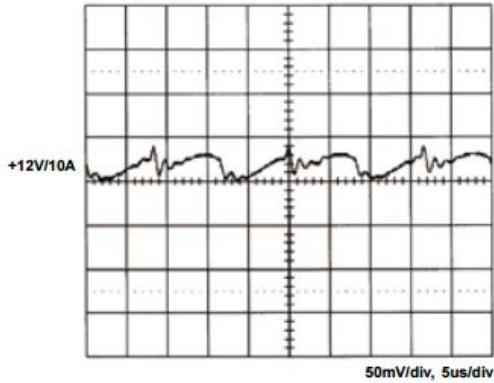
**NOTES**

- (1) Standby Power Consumption with System:  
For computers and displays, Energy Star in U.S. and ErP regulation in Europe require the input power should be less than 0.5W at standby mode.
- (2) Output Load: 120W for convention cooling; 150W for forced air cooling.
- (3) EMI grounding: If there is a metal sheet under the power supply, connect the EMI ground to the metal sheet.
- (4) Most power supplies will create audible burst sound at light load, if the application wants to meet input power <0.5W at standby mode.  
PSSNP-G12x is for ITE application which requires standby mode.  
PSSNP-G12x-A is for ITE application but without burst sound and no standby mode.  
PSSNP-G12x-M is for medical application which requires standby mode.  
PSSNP-G12x-MA is for medical application but without burst sound and no standby mode.

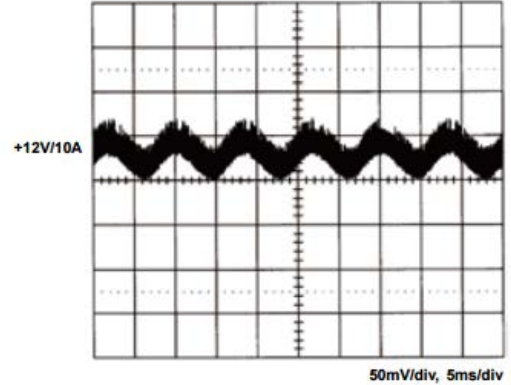
PERFORMANCE CURVES

For PSSNP-G127

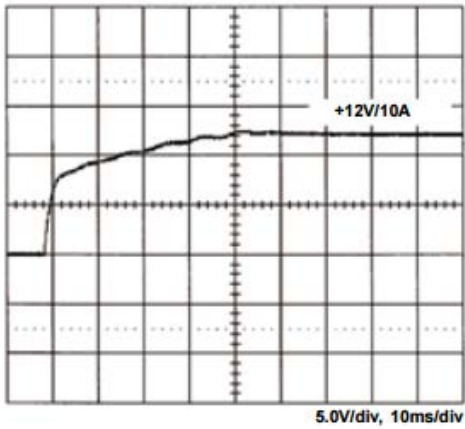
Switching Frequency Ripple



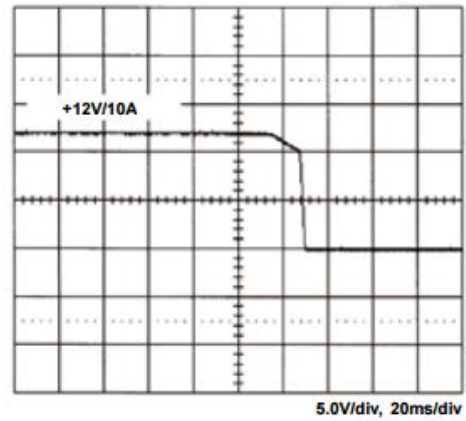
Line Frequency Ripple



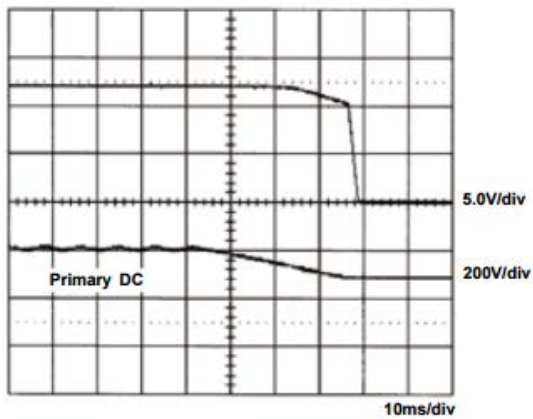
Output Turn on Wave Form



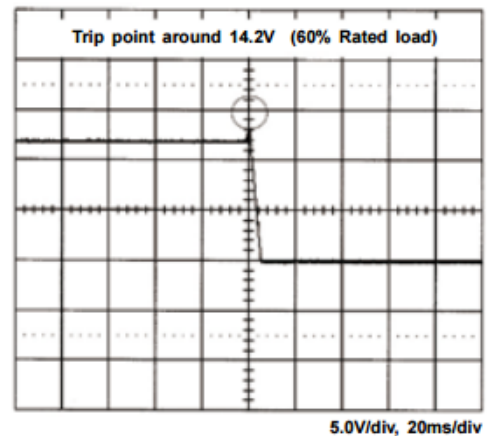
Output Turn Off Wave Form



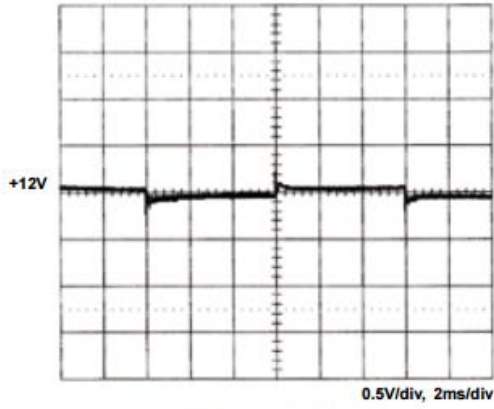
Hold-Up Time



Over Voltage Protection

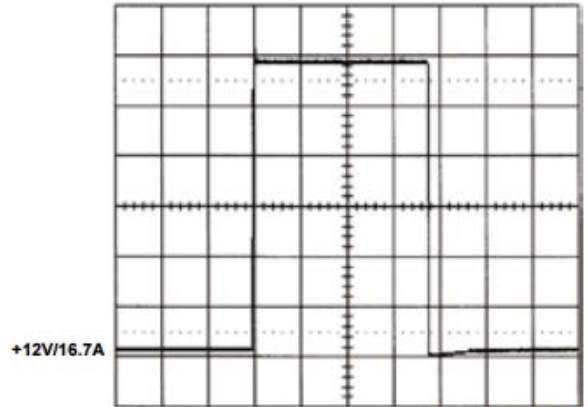


+12V Step Response



+12V step from 3A to 10A

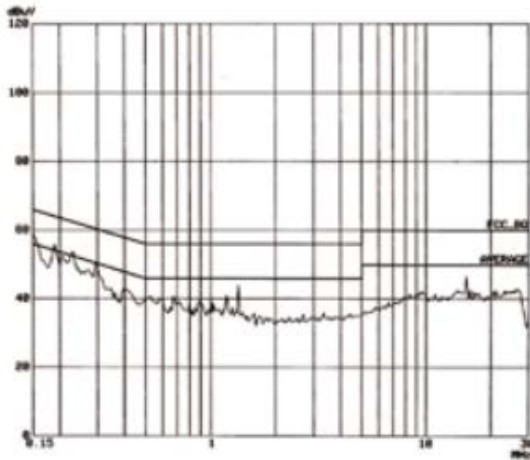
+12V Peak Load



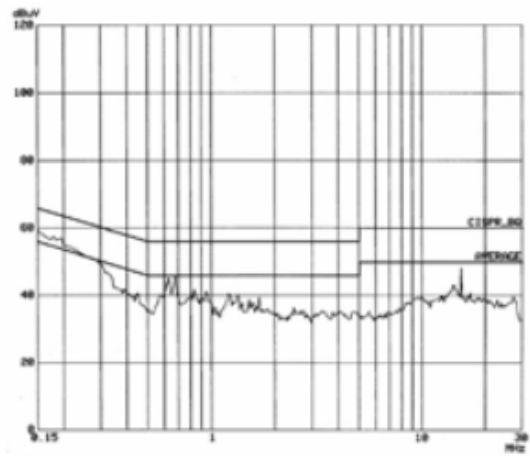
+12V/16.7A

2.00V/div, 1s/div

FCC B

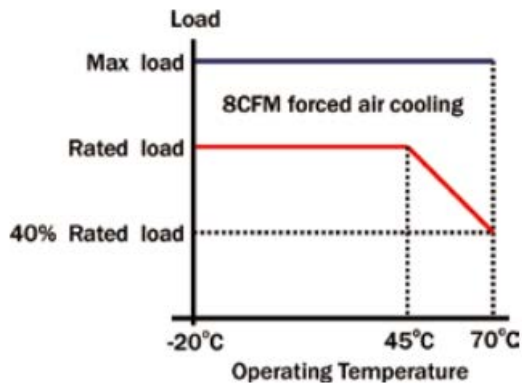


CISPR 22 B

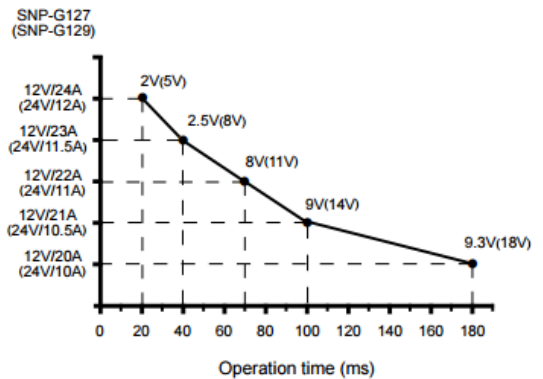


GRAPHS

Power Derating Curve



Capability for Driving Motor



MECHANICAL DRAWINGS

The drawing shows a top view of the power supply with the following dimensions and features:

- Overall width: 106.6 (4")
- Overall height: 50.8 (2")
- Four #3.2 TYP. MOUNTING HOLES (x 4) along the top edge.
- Terminal block TB4 on the top right.
- Terminal block TB2 on the right side.
- Transformer located in the center.
- Dimensions for mounting holes: 44.5 (width), 3.15 (hole diameter).
- Internal dimensions: 95.3 (width to TB2), 32.0 max. (1.28") (height to TB2), 3.0 max. (height to bottom edge).
- Label "TO FUNCTIONAL GROUND" pointing to a connection point.

**Notes:**

1. Size: 4" x 2" x 1.28"
2. Mounting Hole: 44.5 x 95.3 (mm)
3. Connectors:  
AC input: JST B2P3-VH or equivalent  
DC output: JST 710--VH04  
Fan: Molex 5045-02A or equivalent
4. Output Pin assignment:
 

1	2	3	4
V <sub>o</sub>	V <sub>o</sub>	GND	GND

**Function Pin Assignment:**

Function		TB3
Pin	1	FAN Output
	2	GND
		+12V

5. Packing:  
Net Weight: 5.64oz. (160g) approx./unit  
Gross Weight: 10 kg approx. /carton, 80 units/carton  
Carton size (mm): 422 (L) x 412 (W) x 287 (H)

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 ISO9001-2008 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:

Phone: ☎(603)778-2300  
 Toll Free: ☎(888)597-9255  
 Fax: ☎(603)778-9797  
 E-mail: [sales@wallindustries.com](mailto:sales@wallindustries.com)  
 Web: [www.wallindustries.com](http://www.wallindustries.com)  
 Address: 37 Industrial Drive  
 Exeter, NH 03833