

Medical & ITE

General Purpose

Rated 160W Max. 240W Peak 320W **SNP-G16x-U Series**



3.3" x 5" x 1.7"

Features:

- Peak load $(1.4 \sim 2 \text{ x rated current}, \text{Vo=rated for 5 sec})$
- Design for BF application
- Convection cooling for Rated power
- Built-in PFC and 12V output for fan, available for G12x, G16x, and G20x
- EMI class B
- -20°C to +70°C operating temperature

Applications:

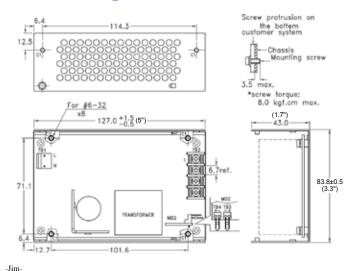
- For peak load and surge load applications, such as motor drive, coffee machine, vending machine, gaming machine, and other industrials.
- For EMI class B application, such as home healthcare device, and other medical devices.

General Specifications:

Input voltage	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz
Inrush current	< 30/60A at 115/230VAC
Hold up time	20ms typical
Over load/Short circuit protection	auto recovery
Over voltage protection	latch off
Operating temperature	20°C to 70°C
derating: $2.5\% / ^{\circ}\text{C} > 50^{\circ}$	C for convection cooling
Storage temperature	40°C to +85°C

EMI	EN55022 "B", EN61000-3-3
Harmonics	EN61000-3-2, class D
EMS	EN61000-4-2,-3,-4,-5,-6,-8,-11
Safety	.UL/CSA 60950-1, 2 nd edition, EN 62368-1
	ANSI/AMMI/CSA/EN60601-1, 3.1 edition
	CB report, CE mark, RM report/file
Energy Saving (f	or w/o -A suffix)ENERGY STAR
	for computers version 6.0
	for displays version 6.0
	ErP regulation EC(No) 1275/2008
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Mechanical Specifications:



Notes:

Size: Fits 1U Height 3.3" x 5" x 1.7"

2. Mounting Hole:

Side edge: 12.5 x 114.3 (mm) Bottom: 71.1 x 101.6 (mm) Connectors: AC input: Molex 5277-02A or equivalent

DC output: Terminal blocks (default for SNP-G167-U) or Molex 5273-08A (default for others) or equivalent Fan, Remote sense: Molex 5045-02A or equivalent

Output Pin assignment: Function Pin assignment:

Pin No.	1	2	3	4	5	6	7	8
SNP-G167-U	+Vo	+Vo	GND	GND				
OTHER MODELS	+Vo	+Vo	+Vo	+Vo	GND	GND	GND	GND

		TB3	TB4
1	Function Pin	FAN Output	Remote Sense
D	1	GND	Sense -
	2	+12V	Sense+

Packing:

Net weight: 539 g approx. / unit

Gross weight: 15.3 kg approx. / carton, 24 units / carton Carton size (mm): 384 (L) x 339 (W) x 327 (H)

10 years Warranty (contact Skynet's Distributors for details)



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Output Specifications:

MODEL	OUTPUT	LOAD		INITIAL	STEP EFFICIENCY			AVERAGE		
NO.	RAIL	MIN.	RATED	MAX.	PEAK	ACCURACY	@ 20% LOAD	@ 50% LOAD	@ 100% LOAD	EFFICIENCY
SNP-G167 -U SNP-G167 -UA SNP-G167 -UM SNP-G167 -U5	+12V	0A	13.3A	20A	26.6A	+11.9V~+12.1V	80%	88%	89%	85.5%
SNP-G168 -U SNP-G168 -UA SNP-G168 -UM SNP-G168 -U5	+15V	0A	10.66A	16A	21.3A	+14.9V~+15.1V	80%	88%	89%	85.5%
SNP-G165 -U SNP-G165 -UA SNP-G165 -UM SNP-G165 -U5	+18V	0A	8.88A	13.33A	17.8A	+17.9V~+18.1V	80%	88%	89%	85.6%
SNP-G169 -U SNP-G169 -UA SNP-G169 -UM SNP-G169 -U5	+24V	0A	6.66A	10A	13.3A	+23.9V~+24.1V	80%	87%	89%	85.3%
SNP-G16G-U SNP-G16G-UA SNP-G16G-UM SNP-G16G-U5	+28V	0A	5.7A	8.55A	11.4A	+27.9V~+28.1V	80%	90%	90%	86.6%
SNP-G16J -U SNP-G16J -UA SNP-G16J -UM SNP-G16J -U5	+36V	0A	4.45A	6.66A	8.9A	+35.8V~+36.2V	80%	89%	89%	86%
SNP-G16T-U SNP-G16T-UA SNP-G16T-UM SNP-G16T-U5	+48V	0A	3.35A	5A	6.67A	+47.8V~+48.2V	90%	90%	89%	86.6%

Note:

Standby Power Cosumption 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.

Output Load:

160 W for convection cooling; 240 W for forced air cooling.

Peak Load Duration:

Peak 320W can last for 5 sec.

Isolation Grade:

: 1MOPP (1500Vac) Primary ←→ Ground $\begin{array}{ll} \longleftrightarrow & \text{Secondary} : 2\text{MOPP} (4000\text{Vac}) \\ \longleftrightarrow & \text{Ground} : 1\text{MOPP} (1500\text{Vac}) \end{array}$ Primary Secondary ←→ Ground

Leakage Current: Earth leakage current < 300uA Touch current < 100uA

Model Selection:

Most of power supplies will create audible burst sound at light load, if the application wants to meet input power < 0.5W at standby mode.

SNP-G16x-U is for ITE application which requires standby mode.

SNP-G16x-UA is for ITE application but without burst sound and no standby mode.

SNP-G16x-UM is for medical application which requires standby mode.

SNP-G16x-U5 is for medical application but without burst sound and no standby mode.

* SNP-G16x-U5, 5=MA

-Jim-

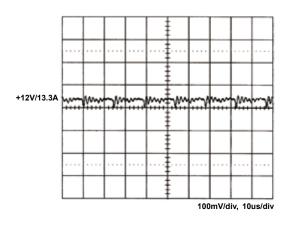


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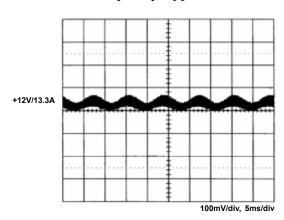
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Performance for SNP-G167-U:

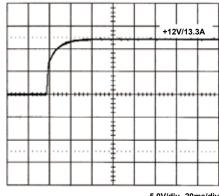
1. Switching frequency ripple



2. Line frequency ripple

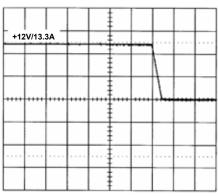


3. Output turn on wave form



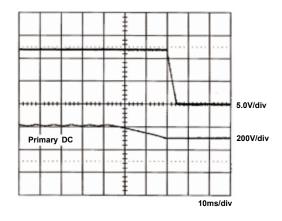
5.0V/div, 20ms/div

4. Output turn off wave form

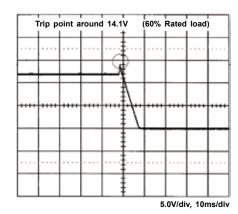


5.0V/div, 10ms/div

5. Hold-up time



6. Over voltage protection



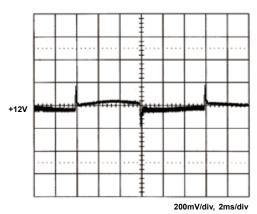
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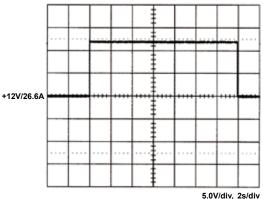
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7. +12V step response



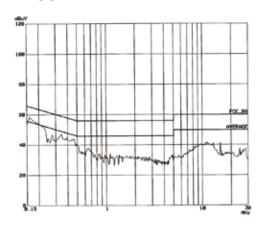
+12V step from 3.99A to 13.3A

8. Peak load

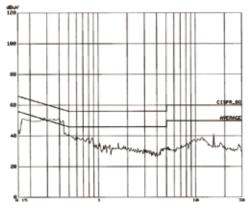


5.0V/div, 2s/div

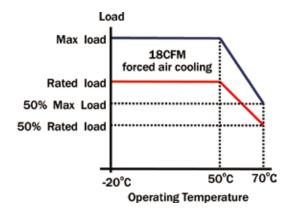
9. FCC B



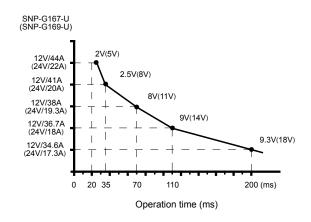
10. EN55022 B



11. Power derating curve



12. Capability for driving motor



-Jim-

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