

PFC + 100W SNP-Z10X-M Series

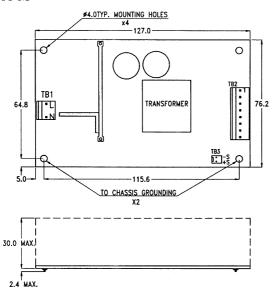


General Specifications:

Input voltage	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz
Inrush current	less than 30A at 115VAC
	less than 60A at 230VAC
	cold start, 25°C
Efficiency	80% ~90% depends on model
Hold up time	20mS typical
	at rated load and 115VAC
Over current protection	
Short circuit protection	auto recovery
Over voltage protection	latch off

Mechanical Specifications:

SNP-Z106-M



Description:

SNP-Z10X-M series is modified from the SNP-Z10 series; not only the original characteristics of active PFC and high power density from the SNP-Z10 series are remained, but also the safety requirements to medical power, such as low leakage current, double fuse, 8mm creepage distance for primary to secondary, are designed in.

Model available:

- SNP-Z106-M for 5V/20A
- SNP-Z107-M for 12V/9A
- SNP-Z108-M for 15V/7A
- SNP-Z109-M for 24V/4.5A
- SNP-Z10T-M for 48V/2.1A
- SNP-Z101-M for 5V/10A, 12V/3A, -12V/0.8A
- SNP-Z104-M for 5V/10A, 15V/2.5A, -15V/0.8A
- SNP-Z10H-M for 28V/3.8A
- SNP-Z10K-M for 5V/2.5A, 24V/2.8A, 12V/0.7A

Remote Sense	compensates for 0.5V max. load drop
Earth leakage	250uA max. at 240VAC
Operating temperature	e 0°C to 50°C convection
Cooling	free air convection for 100W
	with 18CFM forced air flow for 130W
Storage temperature	20°C to +85°C
	FCC "B"
	EN55011 "B", EN61000-3-3
Harmonics	EN61000-3-2 class D
EMS	EN61000-4-2,-3,-4,-5,-6,-8,-11
Safety	UL 2601-1
	CSA C22.2 No. 601 (CUL)
	EN60601-1

Notes:

- 1. Dimensions shown in mm as left. Tolerance: +/-0.4mm.
- 2. Size:
- 2.1 SNP-Z106-M, Z107-M, Z108-M, Z109-M, Z10T-M, Z10H-M
 127.0 X 76.2 X 32.4 (mm)
 5" X 3" X 1.28"

2.2 SNP-Z101-M, Z104-M, Z10K-M 127.0 X 76.2 X 34.4 (mm)

5" X 3" X 1.35"

3. Packing:

Net weight: 290 g approx. / unit

Gross weight: 12.5~kg approx. / carton, 36~units / carton Carton size (mm): 339~(L)~x~339~(W)~x~327~(H)

4. Connectors:

AC input: Molex 5277-02A or equivalent DC output: Molex 5273 or equivalent Remote Sense: Molex 5045-02A or equivalent

-James-

Output Specifications:

MODEL	OUTPUT	LOAD			VOLTAGE	RIPPLE	LINE	LOAD
NO.	RAIL	MIN.	RATED	MAX	ACCURACY	NOISE	REG.	REG.
SNP-Z106-M	+5V	0A	20A	26A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
SNP-Z107-M	+12V	0A	9A	11A	+11.88V~+12.12V	100mVpp	±0.5%	±1%
SNP-Z108-M	+15V	0A	7A	8.7A	+14.85V~+15.15V	100mVpp	±0.5%	±1%
SNP-Z109-M	+24V	0A	4.5A	5.4A	+23.76V~+24.24V	100mVpp	±0.5%	±1%
SNP-Z10T-M	+48V	0A	2.1A	2.7A	+47.52V~+48.48V	150mVpp	±0.5%	±1%
SNP-Z101-M	+5V	0.5A	10A	15A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
	+12V	0.05A	3A	4.1A	+11.40V~+12.60V	120mVpp	±0.5%	±5%
	-12V	0A	0.8A	1.1A	-11.40V~-12.60V	120mVpp	±0.5%	±5%
SNP-Z104-M	+5V	0.5A	10A	15A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
	+15V	0.05A	2.5A	4.1A	+14.25V~+15.75V	150mVpp	±0.5%	±5%
	-15V	0A	0.8A	1.1A	-14.25V~-15.75V	150mVpp	±0.5%	±5%
SNP-Z10H-M	+28V	0A	3.8A	4.65A	+27.72 ~+28.28V	100mVpp	±0.5%	±1%
SNP-Z10K-M	+5V	0.5A	2.5A	4A	+4.95V~+5.05V	50mVpp	±0.5%	±1%
	+24V	0.05A	2.8A	4A	+22.8V~+25.2V	240mVpp	±0.5%	±5%
	+12V	0A	0.7A	1A	+11.4V~+12.6V	120mVpp	±0.5%	±5%

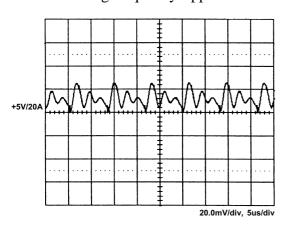
Note:

- 1. The total output current is rated load with free air convection and max. load with 18CFM of forced air flow over the unit.
- 2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- 3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
- 4. Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load at another output set to 60% rated load.
- 5. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor and a 47u electrolytic capacitor at rated load and nominal line.
- 6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
- 7. Efficiency is measured at rated load and nominal line.

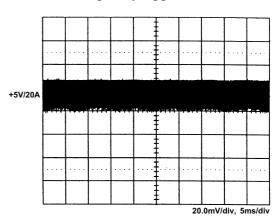
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Performance for SNP-Z106-M:

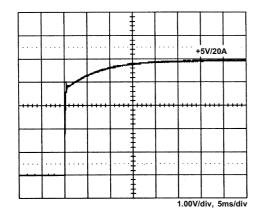
1. Switching frequency ripple



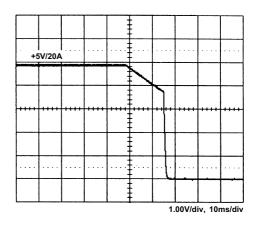
2. Line frequency ripple



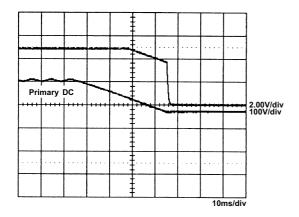
3. Output turn on wave form



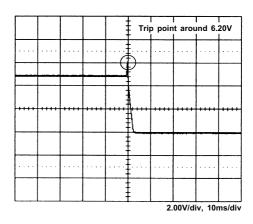
4. Output turn off wave form



5. Hold-up time



6. Over voltage protection

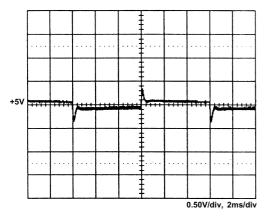


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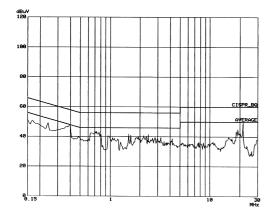
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7. +5V step response

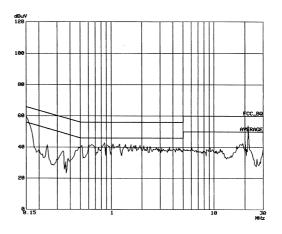


+5V step from 4A to 20A

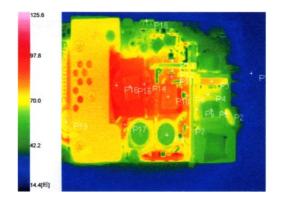
9. CISPR 22 B



8. FCC B



10. Thermal profile



Test condition:

 $M/N: SNP\text{-}Z106\text{-}M, Input: 244V \\ Output: 5V/20A, Ambient: 23.5°C$