



# RAID System (Universal)

PFC + 450W  
SNP-Z4L3



## Description:

The redundancy family with output power from 80W to 450W, meets the needs of Disk Array, RAID system, and Sub-system applications.

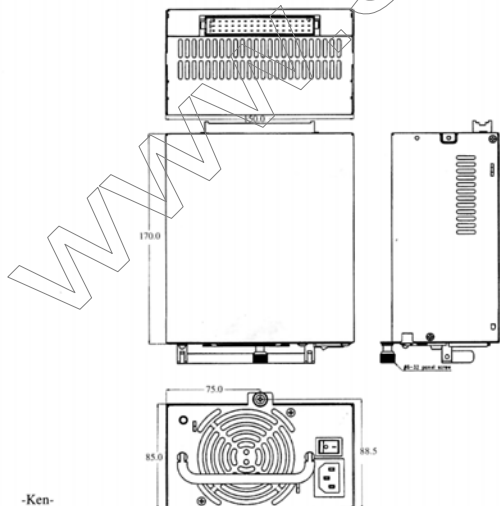
SNP-Z4L3 with Power factor correction solution features hot swap the best choice for communications and storage data processing system.

## General Specifications:

Input voltage .....	90 VAC to 260 VAC
Input frequency .....	47 Hz to 63 Hz
Input current .....	10A at 115VAC, 5A at 230VAC
Inrush current .....	less than 20A at 115VAC cold start, 25°C
Outputs .....	See output table
Efficiency .....	70% typical
Hold up time .....	>16ms at nominal line and rated load
Over current protection .....	auto-recovery
Short circuit protection.....	auto-recovery
Over voltage protection .....	latch-off

Redundancy .....	built in isolation diodes
DC ok.....	present 5V operation ok
Operating temperature .....	0°C to 40°C
Cooling .....	forced air convection 40CFM required
Storage temperature .....	-20°C to +85°C
EMI .....	FCC 20780 "A", EN55022 "A"
Harmonics .....	EN61000-3-2
PFC .....	>0.9 at nominal line and rated load
EMS .....	EN61000-3-2,-3,-4,-5
Safety .....	meet UL 60950 CSA 22.2 No. 60950, EN60950

## Mechanical Specifications:



### Notes:

- Dimensions shown in mm as left. Tolerance:  $\pm 0.8$ mm.
- Size:  
150 x 170 x 85 (mm)
- Connectors:  
AC inlet : meet IEC 320  
Main connectyor : Din 41612 F48 female connector
- Pin assignment:  
2~6dbz                    +12V  
8~20dbz                 GND  
18~22dbz                +5V  
24d                        DC ok  
24bz, 26~32dbz        NC



## Output Specifications:

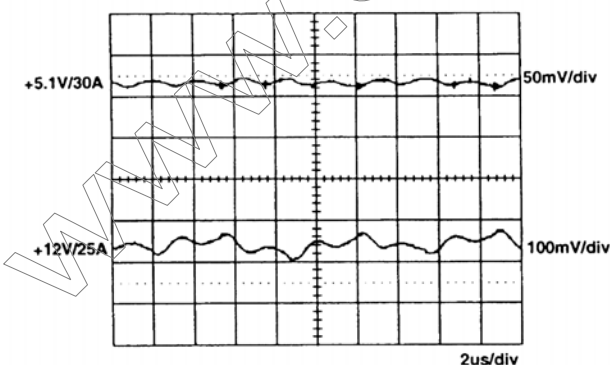
MODEL NO.	OUTPUT RAIL	LOAD				VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.
		MIN.	RATED	MAX.	PEAK				
SNP-Z4L3	+5V	5A	30A	30A	33A	+5.0V~+5.2V	50mVpp	±1%	±3%
	+12V	4A	25A	30A	34A	+11.4V~+12.6V	120mVpp	±1%	±5%

## Note:

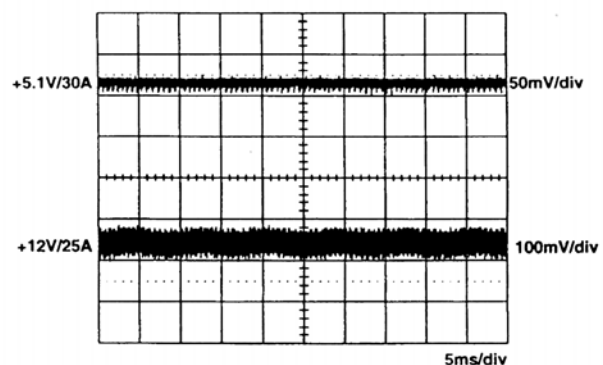
1. The max. load should be kept within 450W, and the peak load can provide 2 seconds.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
4. Load regulation 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 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.

## Performance:

### 1. Switching frequency ripple

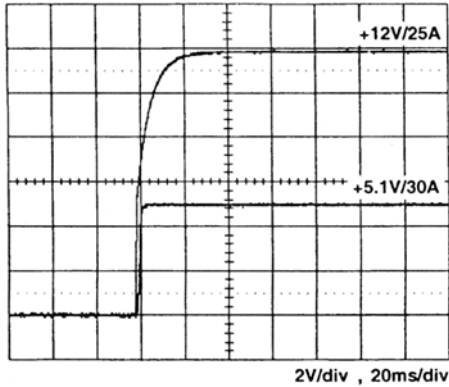


### 2. Line frequency ripple

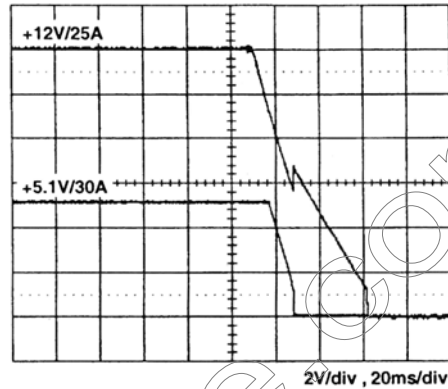




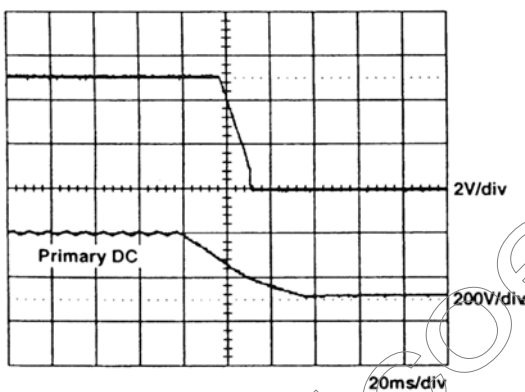
### 3. Output turn on wave form



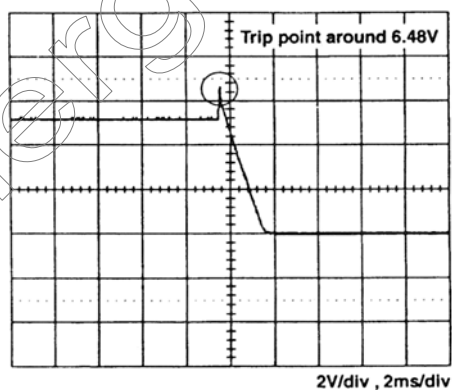
### 4. Output turn off wave form



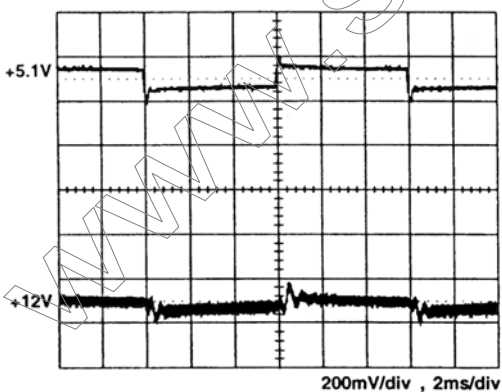
### 5. Hold up time



### 6. Over voltage protection

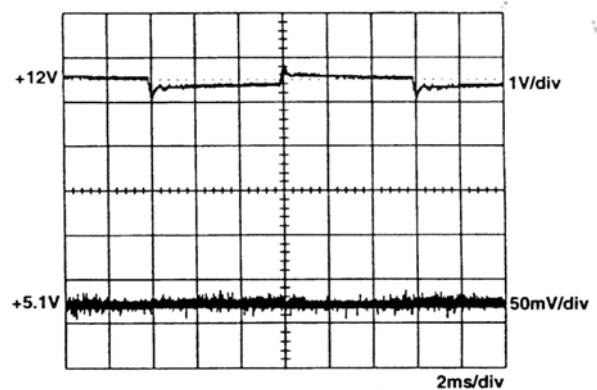


### 7. +5.1V step response



+5.1V step from 6A to 30A  
other output at 60% load

### 8. +12V step response

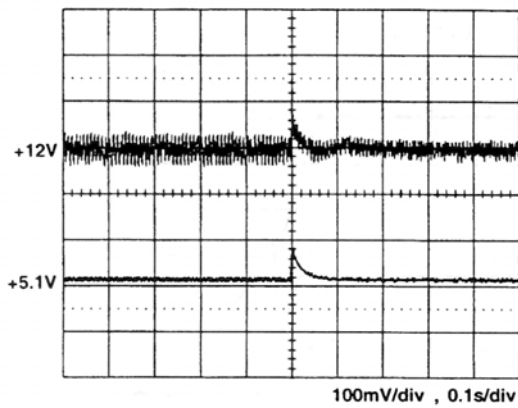


+12V step from 5A to 25A  
other output at 60% load

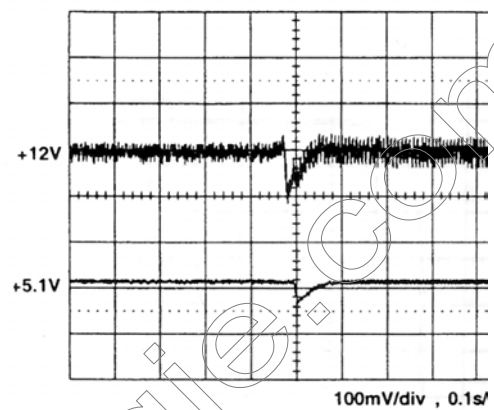
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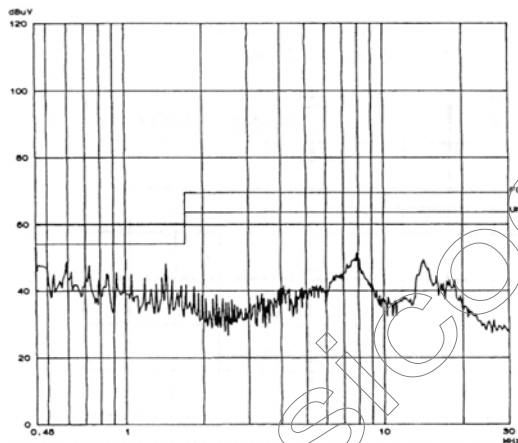
9. Power redundancy (1 --> 2)



10. Power redundancy (2 -->1)



11. FCC A



12. EN 55022 A

