



RAID System (Universal)

**PFC + 150W
SNP-R153-P**



Description:

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

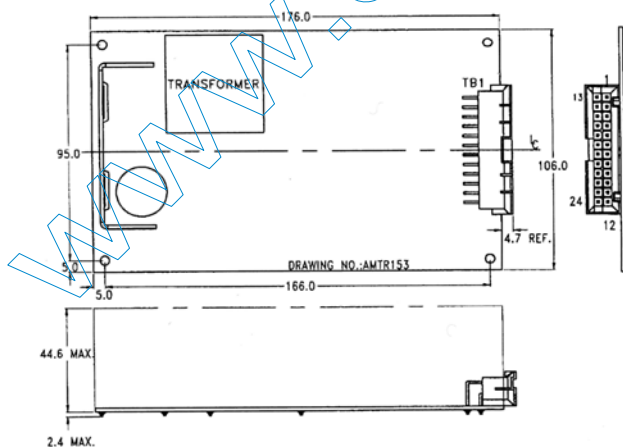
SNP-R153-P with PFC solution features hot swap capability and current sharing function for redundant operation, the high peak current is suitable for motor starting.

General Specifications:

Input voltage 90 VAC to 264 VAC
 Input frequency 47 Hz to 63 Hz
 Input current 6A at 115VAC, 3A at 230VAC
 Inrush current less than 10A at 115VAC cold start, 25°C
 Outputs See output table
 Efficiency 70% typical
 Hold up time > 16ms, at nominal line and rated load
 Over voltage protection latch off
 Short circuit protection latch off
 Over current protection latch-off

Remote Sense available
 Power sharing active sharing, N+1 function
 Operating temperature 0°C to 60°C , derating : 2.5% / °C from 50°C
 Cooling Free air convection for 150W
 Storage temperature -40°C to +85°C
 EMI FCC 20780 "B", EN55022 "B"
 Harmonics EN61000-3-2
 PFC >0.9 at nominal line and rated load
 EMS EN61000-4-2,-3,-4,-5
 Safety meet UL 1950
 CSA 22.2 No. 234, EN60950

Mechanical Specifications:



Notes:

- Dimensions shown in mm as left. Tolerance: ±0.4mm.
- Size:
108 x 197 x 47 (mm)
- Connectors:
AC input & output : Molex A-42404-24 or equivalent
- Pin assignment for DC output:

Pin	1	+5V	Pin	13	+5V
2	+5V	Pin	14	+5V	
3	GND	Pin	15	GND	
4	GND	Pin	16	GND	
5	+12V	Pin	17	+12V	
6	+12V	Pin	18	+12V	
7	Power share	Pin	19	Power share	
8	LED (+5V)	Pin	20	FAN (+12V)	
9	+5V Remote (+)	Pin	21	+5V Remote (-)	
10	F.G. (Earth)	Pin	22	F.G. (Earth)	
11	N.C.	Pin	23	N.C.	
12	AC L	Pin	24	AC N	



Output Specifications:

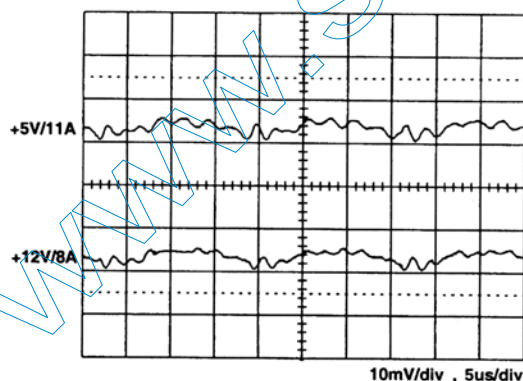
MODEL NO.	OUTPUT RAIL	LOAD				VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.
		MIN.	RATED	MAX.	PEAK				
SNP-R153-P	+5V	0A	11A	15A	18A	+4.90V~+5.1V	50mVpp	±0.5%	±2%
	+12V	0A	8A	15A	18A	+11.8V~+12.6V	120mVpp	±0.5%	±5%

Note:

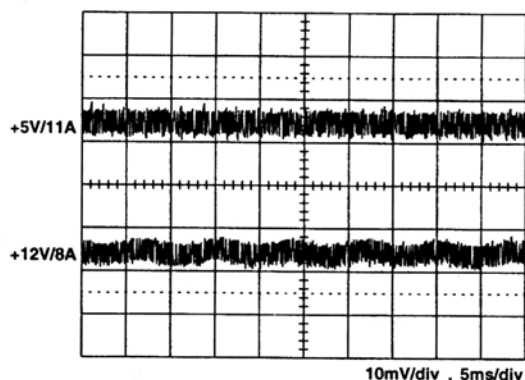
1. The total output current is rated load with free air convection and 200W with 30CFM of forced air flow over the unit. The peak power can provide 230W longer than 15 seconds.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined 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 +5V output drops down to +4.75V at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

Performance:

1. Switching frequency ripple

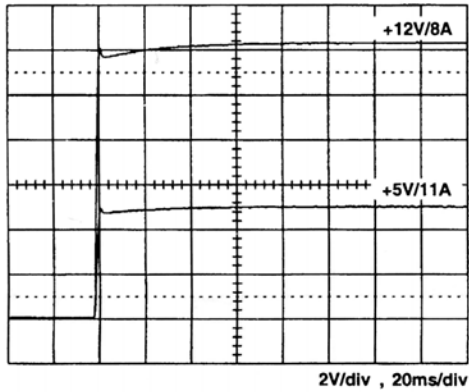


2. Line frequency ripple

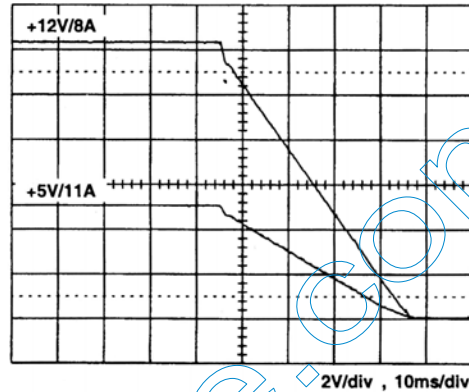




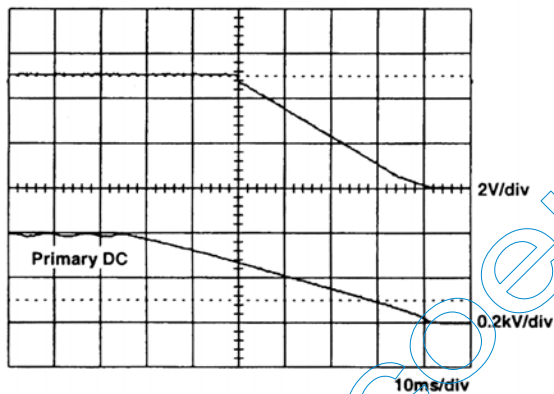
3. Output turn on wave form



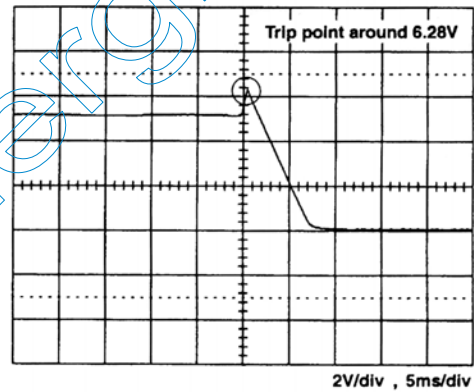
4. Output turn off wave form



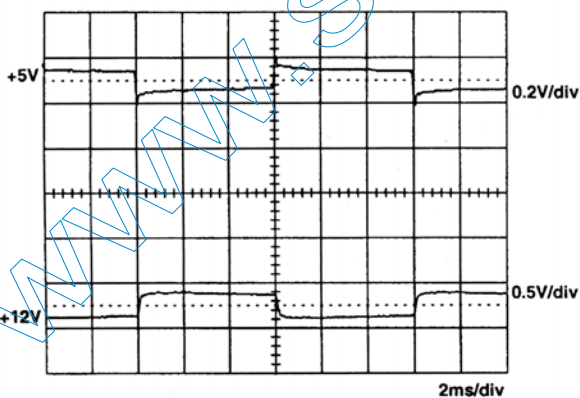
5. Hold up time



6. Over voltage protection

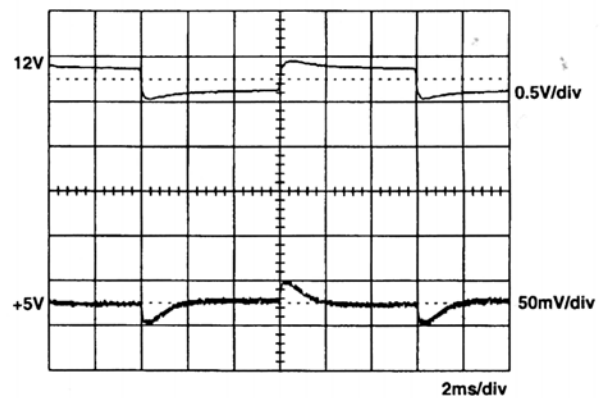


7. +5V step response



+5V step from 2.2A to 11A
other output at 60% load

8. +12V step response

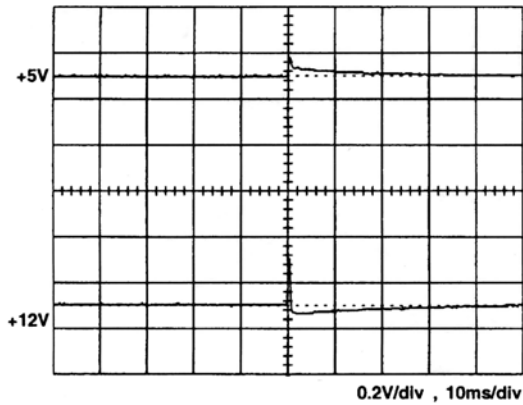


+12V step from 1.6A to 8A
other output at 60% load

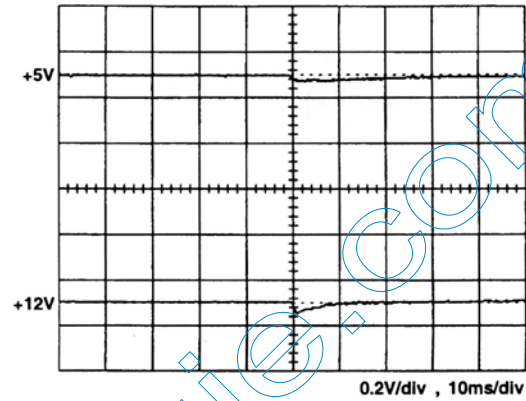
-Ken-



9. Power Redundancy (1 --> 2)



10. Power redundancy (2 -->1)



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