

## **General Purpose** (Universal)

## 30W **SNP-903 Series**



### **General Specifications:**

Input voltage	90VAC to 260VAC
Input frequency	47Hz to 63Hz
Inrush current	less than 30A at 115VAC
(Cold start)	less than 60A at 230VAC
Efficiency	higher than 70%
	at rated load and 115VAC
Hold up time	longer than 16ms
	at rated load and 115VAC
Over load protection	refer to spec.

## **Description:**

SNP-903 series is a 30W, universal input switching mode power supply. It is with various output options, which includes triple outputs, dual outputs and single ouput. Its design meets with UL, CSA, VDE regulations and EMI Vfg 243/1991.

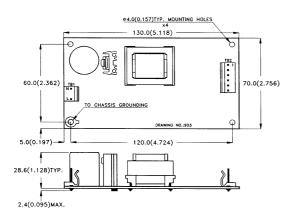
#### **Model available:**

- SNP-9031 for 5V/2A, 12V/1.5A, -12V/0.3A
- SNP-9033 for 5V/2A, 12V/1.5A
- SNP-9034 for 5V/1.5A, 15V/1.2A, -15V/0.3A
- SNP-9035 for 5V/2A, 24V/0.75A
- SNP-9036 for 5V/6A
- SNP-9037 for 12V/2.5A
- SNP-9038 for 15V/2A
- SNP-9039 for 24V/1.3A

Short circuit protection refer to spec.	S				
Over voltage protectionCrowbar	O				
Operating temperature (open frame type) 0 to 50°C					
Cooling Free air convection	C				
$Storage  temperature  -20^{\circ}C  to  +85^{\circ}C$	S				
EMI conduction standardFCC class "B"	E				
Vfg 243/1991					
SafetyUL 1950 D3	S				
CSA 22.2 No.234					
VDE EN60 950					

## **Mechanical Specifications:**

SNP-9033



- Dimensions shown in mm (inch) as above. Tolerance specified is  $\pm\,0.4$ mm.
- Size 70 X 130 X 32.1 mm
- 2.756" X 5.118" X 1.264" Mounting holes 60 X 120 mm
- 2.362" X 4.724"

Molex 5277-2 or equivalent for AC input TB2 Molex 5273-x or equivalent for DC output

TB2 pin Assignment

PIN NO.	1	2	3	4	5	6
SNP-9031	+5V	+5V	GND	GND	-12V	+12V
SNP-9033	+5V	+5V	GND	GND	NC	+12V
SNP-9034	+5V	+5V	GND	GND	-15V	+15V
SNP-9035	+5V	+5V	GND	GND	NC	+24V
SNP-9036	+5V	+5V	GND	GND		
SNP-9037	+12V	+12V	GND	GND		
SNP-9038	+15V	+15V	GND	GND		
SNP-9039	+24V	+24V	GND	GND		

-Ted-



## General Purpose (Universal)

30W SNP-903 Series

## **Output Specifications:**

MODEL	OUTPUT		LOAD		VOLTAGE	RIPPLE	LINE	LOAD
NO.	RAIL	MIN.	RATED	PEAK	ACCURACY	NOISE	REG.	REG.
SNP-9031	+5V	0A	2A	3A	+4.95~+5.05V	1%	±1%	±1%
	+12V	0A	1.5A	3A	+11.4~+12.6V	1%	±1%	±4%
	-12V	0A	0.3A	0.5A	-11.4~-13.0V	1%	±1%	±5%
SNP-9033	+5V	0A	2A	3A	+4.95~+5.05V	1%	±1%	±1%
	+12V	0A	1.5A	3A	+11.4~+12.6V	1%	±1%	±5%
SNP-9034	+5V	0A	1.5A	3A	+4.98~+5.02V	1%	±1%	±1%
	+15V	0A	1.2A	2A	+14.25~+15.75V	1%	±1%	±4%
	-15V	0A	0.3A	0.5A	-14.00~-16.00V	1%	±1%	±4%
SNP-9035	+5V	0A	2A	3A	+4.95~+5.05V	1%	±1%	±1%
	+24V	0A	0.75A	1.5A	+22.8~+25.20V	1%	±1%	±3%
SNP-9036	+5V	0A	6A	10A	+4.98~+5.03V	1%	±1%	±1%
SNP-9037	+12V	0A	2.5A	4A	+11.97~+12.03V	1%	±1%	±1%
SNP-9038	+15V	0A	2A	3A	+14.85~+15.15V	1%	±1%	±1%
SNP-9039	+24V	0A	1.3A	2A	+23.82~+24.21V	1%	±1%	±1%

#### Note:

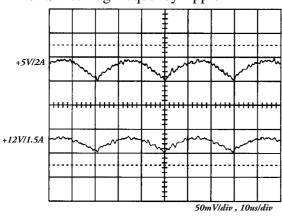
- 1. Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.
- 2. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the specified accuracy range at rated load.
- 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 ±40% of measured output load from 60% rated load at another output set to 60% ratedload.
- 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 drop down to regulation limit at rated load and nominaL line.
- 7. Rated load is maximum loading for flat mounting and free air convection cooling.

-Ted-

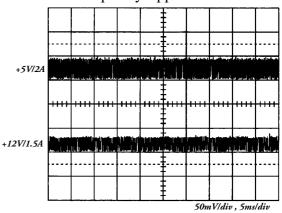
## General Purpose (Universal)

#### **Performance for SNP-9033:**

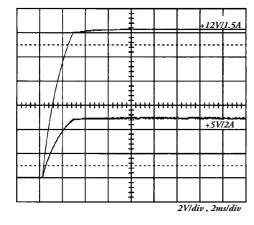
1. Switching frequency ripple



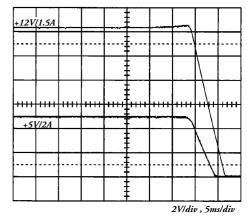
2. Line frequency ripple



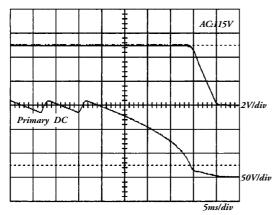
3. Output turn on wave form



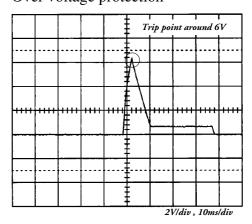
4. Output turn off wave form



5. Hold-up time



6. Over voltage protection



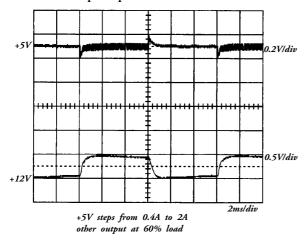
-Ted-

MAR. 2001

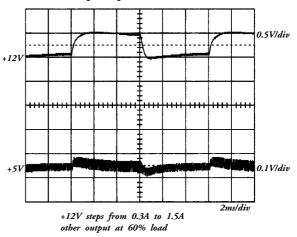


# General Purpose (Universal)

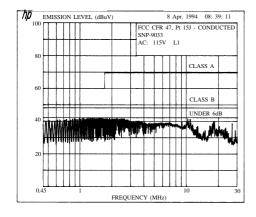
#### 7. + 5V step response



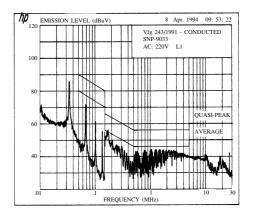
#### 8. + 12V step response



#### 9. FCC B performance



#### 10. Vfg 243/1991 performance



4-4