

IT & Medical Applications (Universal)



Features:

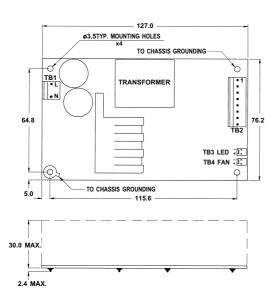
- Only 1.28 inch height
- 4.7 Watt per cubic inch
- With ITE & Medical safety
- Efficiency between 79% to 87%
- Operation from 0°C to 70°C by convection
- Single side PCB for low assembly cost

General Specifications:

Input voltage	90VAC to 264VAC
Input frequency	47Hz to 63Hz
Inrush current	less than 30A at 115VAC
	less than 60A at 230VAC
Efficiency	79%~87% depends on models
	at rated load and 115VAC
Hold up time	20ms typical
	at rated load and 115VAC
Earth leakage current	< 300uA
Over load protection	auto recovery

Short circuit protection	auto recovery
Over voltage protection	latch off
Operating temperature (open frame	type)0 to 70°C
	derating: $2.5\% / ^{\circ}\text{C} > 50^{\circ}\text{C}$
Cooling	free air convection
Storage temperature	40°C to +85°C
EMI	FCC"B"
	EN55022"B", EN55011"B"
EMS	EN61000-4-2,-3,-4,-5,-6,-8,-11
Harmonics	EN61000-3-2 class "A"
Safety	UL 60950-1,2601
	CSA 22.2 No. 60950-1, 601.1
	EN 60950-1, 60601-1

Mechanical Specifications:



Notes:

Dimensions shown in mm as left. Tolerance: +-1mm (Excluding cables).

Size: 76.2 X 127 X 32.4 (mm) 3" X 5" X 1.28" Packing

Packing
Net weight: 245 g approx. / unit
Gross weight: 14.2 kg approx. / carton, 48 units / carton
Carton size (mm): 397 (L) x 339 (W) x 327 (H)

Connectors
a) TB1-AC input
b) TB2-DC output Molex 5277-02 or equivalent for all models Molex 5277-10 or equivalent for quad outputs and Molex 5277-8 or equivalent for the others Molex 5045-2 or equivalent for all models except quad outputs Molex 5045-2 or equivalent for all models except quad outputs Molex 5045-2 or equivalent for SNP-Y096

TB3-LED TB4-FAN TB4-Remote sense

PIN NO.	1	2	3	4	5	6	7	8	9	10
SNP-Y091	+5V	+5V	GND	GND	GND	+12V	+12V	-12V		
SNP-Y09E	+3.3V	+3.3V	GND	GND	GND	GND	+5V	+5V	+12V	-12V
SNP-Y093	+5V	+5V	GND	GND	GND	+12V	+12V	NC		
SNP-Y09F	+5V	+5V	+5V	GND	GND	GND	+24V	+24V	+12V	-12V
SNP-Y096	+5V	+5V	+5V	+5V	GND	GND	GND	GND		
SNP-Y097	+12V	+12V	+12V	GND	GND	GND	GND	+5V		
SNP-Y097-1	+12V	+12V	+12V	GND	GND	GND	GND	NC		
SNP-Y098	+15V	+15V	+15V	GND	GND	GND	GND	+5V		
SNP-Y098-1	+15V	+15V	+15V	GND	GND	GND	GND	NC		
SNP-Y099	+24V	+24V	+24V	GND	GND	GND	GND	+5V		
SNP-Y099-1	+24V	+24V	+24V	GND	GND	GND	GND	NC		
SNP-Y09T	+48V	+48V	+48V	GND	GND	GND	GND	NC		
SNP-Y090	+5V	+5V	+5V	GND	GND	GND	+12V	+12V	-12V	-5V

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Rated 90W Peak 135W SNP-Y09 Series

Output Specifications:

MODEL	OUTPUT	LOAD				VOLTAGE	RIPPLE	LINE	LOAD	EFFICIENCY
NO.	RAIL	MIN.	RATED	MAX.	PEAK	ACCURACY	NOISE	REG.	REG.	TYPICAL
SNP-Y091	+5V +12V -12V	0A 0A 0A	5A 4A 0.5A	10A 5A	15A 10A	+4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%	82%
SNP-Y09E	+3.3V +5V +12V -12V	0A 0A 0A 0A	8A 5A 2A 0.5A	10A 8A		+3.2V~+3.4V +4.75V~+5.25V +11.4V~+12.6V -11.4V~-12.6V	50mV 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5%	79%
SNP-Y093	+5V +12V	0A 0A	5A 4A	10A 6A	15A 10A	+4.95V~+5.05V +11.4V~+12.6V	1% 1%	±1% ±1%	±3% ±3%	82%
SNP-Y09F	+5V +24V +12V -12V	0A 0A 0A 0A	5A 1.5A 1A 0.5A	8A 2.5A	10A 4.5A	+4.95V~+5.05V +22.8V~+25.2V +11.4V~+12.6V -11.4V~-12.6V	1% 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5%	82%
SNP-Y096	+5V	0A	17A			+4.75V~+5.25V	1%	±1%	±1%	80%
SNP-Y097	+12V +5V	0A 0A	7A 1A		11A	+11.88V~+12.12V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	82%
SNP-Y097-1	+12V	0A	7.5A		11A	+11.88V~+12.12V	1%	±1%	±1%	83%
SNP-Y098	+15V +5V	0A 0A	5.6A 1A		9A	+14.85V~+15.15V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	82%
SNP-Y098-1	+15V	0A	6A		9A	+14.85V~+15.15V	1%	±1%	±1%	83%
SNP-Y099	+24V +5V	0A 0A	3.5A 1A		5.5A	+23.75V~+24.24V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	84%
SNP-Y099-1	+24V	0A	3.75A		5.5A	+23.75V~+24.24V	1%	±1%	±1%	85%
SNP-Y09T	+48V	0A	1.85A		2.8A	+47.6V~+48.4V	1%	±1%	±1%	87%
SNP-Y090	+5V +12V -12V -5V	0A 0A 0A 0A	5A 4A 0.5A 0.5A	10A 6A	15A 10A	+4.9V~+5.1V +11.4V~+12.6V -11.4V~-12.6V -4.75V~-5.25V	1% 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±3%	80%

Note:

- 1. At peak load, the output can last for 8 seconds without shut down.
- 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
- specified accuracy range at rated load.

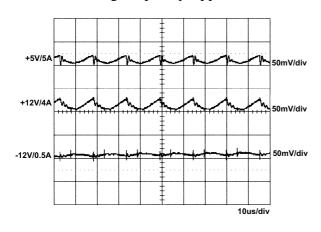
 3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- 4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
- 5. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope 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 drop down to regulation limit at rated load and nominal line.

-Jim-

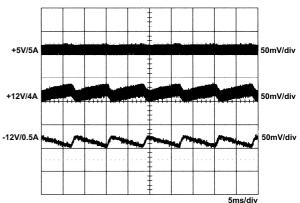
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Performance for SNP-Y901:

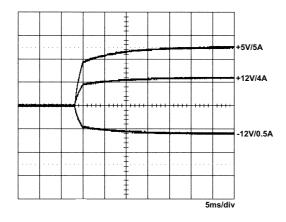
1. Switching frequency ripple



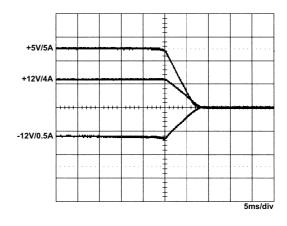
2. Line frequency ripple



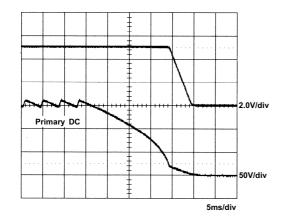
3. Output turn on wave form



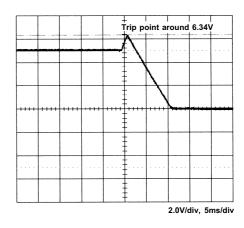
4. Output turn off wave form



5. Hold-up time



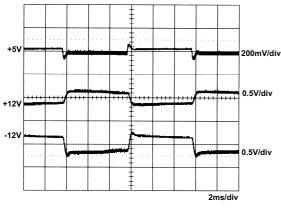
6. Over voltage protection



-Jim-

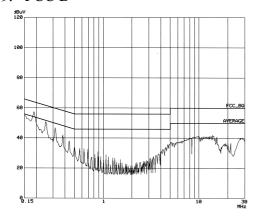
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7. +5V step response

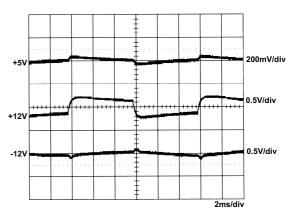


+5V step from 1A to 5A other output at 60% rated load

9. FCC B



8. +12V step response



+12V step from 0.8A to 4A other output at 60% rated load

10. EN 55022 B

