

## **ITE & Medical Applications** (Universal)



### **Features:**

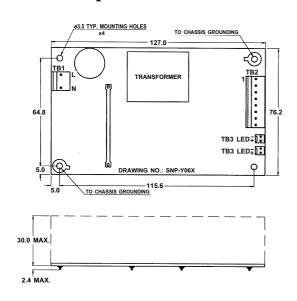
- Only 1.18 inch height
- 3.1 Watt per cubic inch
- With ITE & Medical safety
- Efficiency between 75% to 86%
- Operation from 0°C to 70°C by convection
- Single side PCB for low assembly cost

### **General Specifications:**

Input voltage	90VAC to 264VAC
Input frequency	47Hz to 63Hz
Inrush current	less than 30A at 115VAC
	less than 60A at 230VAC
	cold start, 25°C
Efficiency	
	at rated load and 115VAC
Hold up time	16mS typical, or 50mS typical
	at rated load and 115VAC, or 230VAC
Over load protection	auto recovery

Short circuit protection	auto recovery
Over voltage protection	latch off
Operating temperature	0 to 70°C convection
de	erating: $2.5\% / ^{\circ}\text{C} > 50^{\circ}\text{C}$
Cooling	free air convection
Storage temperature	40°C to +85°C
EMI	FCC "B"
EN	I55022"B", EN55011"B"
EMS EN610	000-4-2,-3,-4,-5,-6,-8,-11
Safety	UL 60950-1, UL 60601-1
CSA (	C22.2 No.60950-1, 601.1
	EN 60950-1, 60601-1

### **Mechanical Specifications:**



#### **Notes:**

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

Dimensions shown in m Size: 76.2 X 127 X 30 (mm) 3" X 5" X 1.18" Mounting holes: 64.8 X 115.6 (mm) 2.551" X 4.551" Connectors: a) TB1 - AC input b) TB2 - DC output c) TB3 - for LED TB4 - for FAN

d) TB3 - for LED TB4 - for Remote sense e) TB3 - for LED Output Pin assignment:

Packing:

Packing:
Net weight: 195 g approx. / unit
Gross weight: 12 kg approx. / carton, 48 units / carton
Carton size (mm): 397 (L) x 339 (W) x 327 (H)
Molex 5277-2 or equivalent for all models
Molex 5273-8 or equivalent for all models
Molex 5045-2 or equivalent for SNP-YL61,
-YL63, -YL67, -YL67-1, -YL68 - YL68-1, -YL69,
-YL69-1, -YL6E, -YL60
Molex 5045-2 or equivalent for SNP-YL66,
-YL6B

-YL6B Molex 5045-2 or equivalent for SNP-YL6T

PIN NO.	1	2	3	4	5	6	7	8
SNP-YL61	+5V	+5V	GND	GND	+12V	+12V	-12V	NC
SNP-YL63	+5V	+5V	GND	GND	+12V	+12V	NC	NC
SNP-YL66	+5V	+5V	+5V	+5V	GND	GND	GND	GND
SNP-YL67	+12V	+12V	+12V	GND	GND	GND	GND	+5V
SNP-YL67-1	+12V	+12V	+12V	GND	GND	GND	GND	NC
SNP-YL68	+15V	+15V	+15V	GND	GND	GND	GND	+5V
SNP-YL68-1	+15V	+15V	+15V	GND	GND	GND	GND	NC
SNP-YL69	+24V	+24V	+24V	GND	GND	GND	GND	+5V
SNP-YL69-1	+24V	+24V	+24V	GND	GND	GND	GND	NC
SNP-YL6T	+48V	+48V	+48V	GND	GND	GND	GND	NC
SNP-YL6B	+3.3V	+3.3V	+3.3V	GND	GND	GND	GND	GND
SNP-YL6E	+3.3V	+3.3V	GND	GND	+5V	+5V	-12V	+12V
SNP-YL60	+5V	+5V	GND	GND	+12V	+12V	-12V	-5V

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### **Output Specifications:**

MODEL	OUTPUT	LOAD				VOLTAGE	RIPPLE	LINE	LOAD	EFFICIENCY
NO.	RAIL	MIN.	RATED	MAX.	PEAK	ACCURACY	NOISE	REG.	REG.	TYPICAL
SNP-YL61	+5V +12V -12V	0A 0A 0A	3A 3A 0.3A		5A 5A 1A	+4.95V~+5.05V +11.4V~+12.6V -11.4V~-12.6V	1% 1% 1%	±1% ±1% ±1%	±3% ±3% ±5%	80%
SNP-YL63	+5V +12V	0A 0A	3A 3.5A		5A 5.5A	+4.95V~+5.05V +11.4V~+12.6V	1% 1%	±1% ±1%	±3% ±3%	80%
SNP-YL66	+5V	0A	10A		15A	+4.95V~+5.05V	1%	±1%	±1%	78%
SNP-YL67	+12V +5V	0A 0A	4.8A 0.5A		7.5A 1A	+11.88V~+12.12V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	81%
SNP-YL67-1	+12V	0A	5A		7.5A	+11.88V~+12.12V	1%	±1%	±1%	81%
SNP-YL68	+15V +5V	0A 0A	3.8A 0.5A		6A 1A	+14.85V~+15.15V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	82%
SNP-YL68-1	+15V	0A	4A		6A	+14.85V~+15.15V	1%	±1%	±1%	82%
SNP-YL69	+24V +5V	0.1A 0A	2.4A 0.5A		3.8A 1A	+23.75V~+24.24V +4.75V~+5.25V	1% 1%	±1% ±1%	±1% ±1%	83%
SNP-YL69-1	+24V	0.1A	2.7A		3.8A	+23.75V~+24.24V	1%	±1%	±1%	83%
SNP-YL6T	+48V	0A	1.25A		2A	+47.6V~+48.4V	1%	±1%	±1%	86%
SNP-YL6B	+3.3V	0A	10A		18A	+3.26V~+3.33V	50mV	±1%	±1%	75%
SNP-YL6E	+3.3V +5V +12V -12V	0A 0A 0A 0A	5A 4A 1A 0.6A	6A 5A	8A 7A 2A 1A	+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%	77%
SNP-YL60	+5V +12V -12V -5V	0A 0A 0A 0A	3A 3A 0.3A 0.3A		5A 5A 1A 1A	+4.5V~+5.5V +11.4V~+12.6V -11.4V~-12.6V -4.9V~-5.5V	1% 1% 1% 1%	±1% ±1% ±1% ±1%	±3% ±3% ±5% ±5V	80%

### Note:

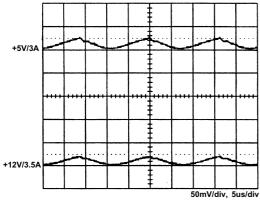
- 1. At peak load, the output can last for 8 seconds without shut down.
- 2. The maximum combinational load of SNP-Y06E for +3.3V & +5V is 35W.
- 3. At factory, all outputs in 60% rated load condition, each output is checked to be within the accuracy range while the main output is setting to within the specified accuracy range at rated load.
- 4. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- 5. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
- 6. 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.
- 7. 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.



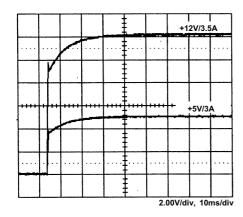
# ITE & Medical Applications (Universal)

### **Performance for SNP-YL63:**

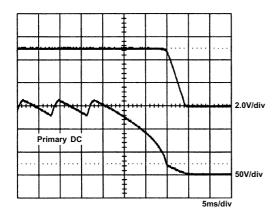
### 1. Switching frequency ripple



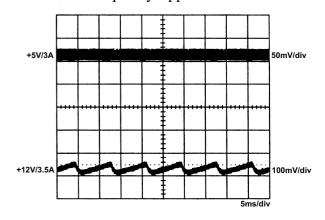
## 3. Output turn on wave form



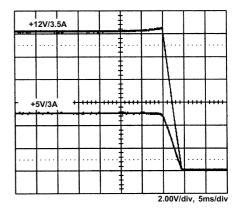
### 5. Hold-up time



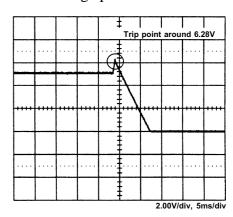
### 2. Line frequency ripple



### 4. Output turn off wave form



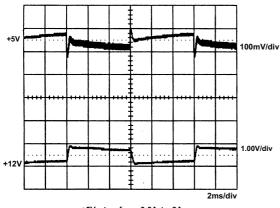
### 6. Over voltage protection





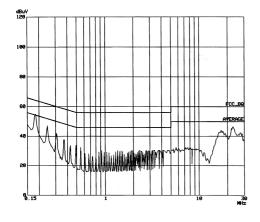
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### 7. +5V step response

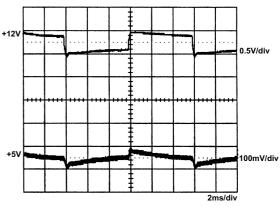


+5V step from 0.6A to 3A other output at 60% load

### 9. FCC B



### 8. +12V step response



+12V step from 0.7A to 3.5A other output at 60% load

### 10. EN 55022 B

