



#### **Features:**

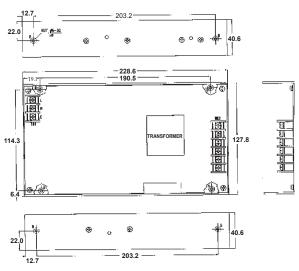
- With built-in PFC
- Only 1.6 inch height
- 4.2 Watt per cubic inch
- With ITE safety only
- Efficiency between 80% to 90%
- Operation from 0°C to 70°C by convection

## **General Specifications:**

Input voltage	90 VAC to 264 VAC
	47 Hz to 63 Hz
Inrush current	less than 30A at 110VAC
Oi	r 60A at 220VAC cold start, 25°C
Efficiency	80% to 90% depending on model
Hold up time	20 mS typical
	at rated load and 115VAC
Over load protection	auto recovery
Short circuit protection	auto recovery
Over voltage protection	latch off
Over temperature protection	n depending on model

Remote sense compensates for 0.5V load drop min.
Operating temperature
derating: $2.5\%$ / °C > $50$ °C
Cooling 300W free air convection
360W with 18 CFM cooling for single output
Storage temperature20°C to +85°C
EMI EN55022 "B", FCC "B"
Harmonics EN61000-3-2 class D
EMS EN61000-4-2,-3,-4,-5,-6,-8,-11
Safety
CSA C22.2 No. 60950-1
EN60950-1

# **Mechanical Specifications:**



#### **Notes:**

- Dimensions shown in mm as left. Tolerance: +/-1mm (Excluding cables).
- 127.8 X 228.6 X 40.6 (mm)
- 5 X 9 X 1.6 (inch) 3. Packing:
  - Net weight: 1000 g approx. / unit Gross weight: 14 kg approx. / carton, 12 units / carton Carton size (mm): 485 (L) x 291 (W) x 360 (H) Connectors:
  - AC input: Terminal blocks DC output: Terminal blocks Remote Sense: Molex 5045-02A or equivalent

-Kevin-



### **Output Specifications:**

MODEL	OUTPUT		LOAD		VOLTAGE	RIPPLE	LINE	LOAD
NO.	RAIL	MIN.	RATED	MAX.	ACCURACY	NOISE	REG.	REG.
SNP-Z301	+5V	0A	32A	45A	+4.95V~+5.05V	50mVpp	±1%	±1%
	+12V -12V	0A 0A	10A 1A	14A 2A	+11.40V~+12.60V -11.40V~-12.60V	100mVpp 100mVpp	±1% ±1%	±1% ±1%
SNP-Z30D	+3.3V +5V +12V	0A 0A 0A	20A 20A 8A	30A 30A 10A	+3.20V~+3.40V +4.75V~+5.25V +11.40V~+12.60V	50mVpp 50mVpp 100mVpp	±1% ±1% ±1%	±1% ±1% ±5%
SNP-Z305	+18V +12V(floating)	0A 0A	16A 1A	19.5A	+17.80V~+18.20V +11.75V~+12.75V	50mVpp 100mVpp	±1% ±1%	±1% ±3%
SNP-Z306	+5V	0A	60A	72A	+4.95V~+5.05V	50mVpp	±1%	±1%
SNP-Z307	$\begin{array}{l} +12V \\ +5V \text{(floating)} \end{array}$	0A 0A	25A 2A	30A	+11.80V~+12.20V +4.80V~+5.20V	100mVpp 50mVpp	±1% ±1%	±1% ±1%
SNP-Z308	+15V +12V(floating)	0A 0A	20A 0.5A	23A	+14.8V~+15.2V +11.76V~+12.24V	150mVpp 50mVpp	±1% ±1%	±1% ±1%
SNP-Z308-1	+15V +5V(floating)	0A 0A	20A 2A	23A	+14.80V~+15.20V +4.90V~+5.10V	150mVpp 50mVpp	±0.5% ±0.5%	±1% ±1%
SNP-Z309	$+24V\\+5V \text{(floating)}$	0A 0A	12A 2A	14.6A	+23.80V~+24.20V +4.80V~+5.20V	200mVpp 50mVpp	±1% ±1%	±1% ±1%
SNP-Z30C	+9.5V	0A	25A	30A	+9.30V~+9.70V	95mVpp	±0.5%	±1%
SNP-Z30T	+48V +5V(floating)	0A 0A	6.25A 2A	7.3A	+47.80V~+48.20V +4.80V~+5.20V	200mVpp 50mVpp	±1% ±1%	±1% ±1%
SNP-Z30B	+3.3V	0A	70A	90A	+3.14V~+3.47V	50mVpp	±1%	±1%

#### Note:

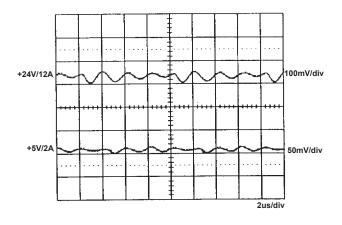
- 1. Each output can provide up to max load separately. Continuous staying in more than total output power is not allowed in free air convection. The max. load must be with 18 CFM fan cooling.
- 2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- 3. Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
- 4. Load regulation is defined by changing ±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.

-Kevin-

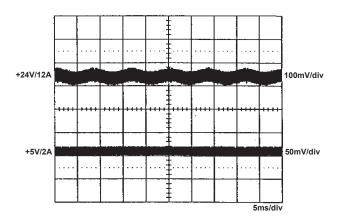


## Performance for SNP-Z309 (input voltage is 115VAC, unless others specified):

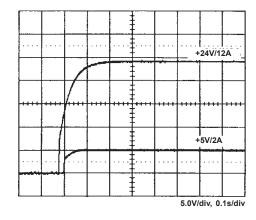
## 1. Switching frequency ripple



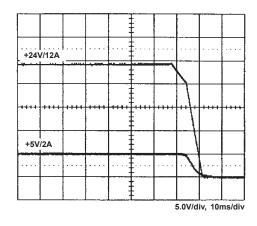
### 2. Line frequency ripple



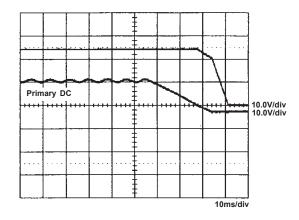
### 3. Output turn on wave form



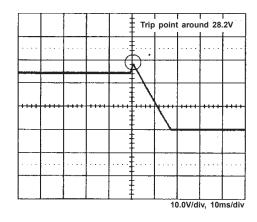
### 4. Output turn off wave form



## 5. Hold-up time



### 6. Over voltage protection

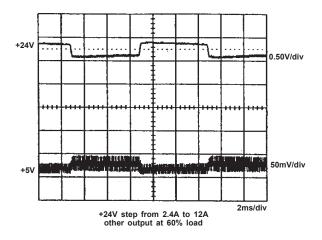


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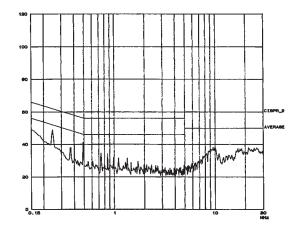




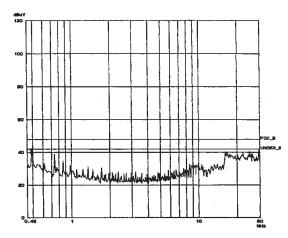
# 7. +24V step response



#### 9. CISPR 22 B



#### 8. FCC B



# 10. Thermal Profile

