



5" x 9" x 1.6"

General Specifications:

Input voltage 90 VAC to 264 VAC
 Input frequency 47 Hz to 63 Hz
 Inrush current < 30A at 110VAC
 (cold start at 25°C) or < 60A at 220VAC
 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 depending on model

Features:

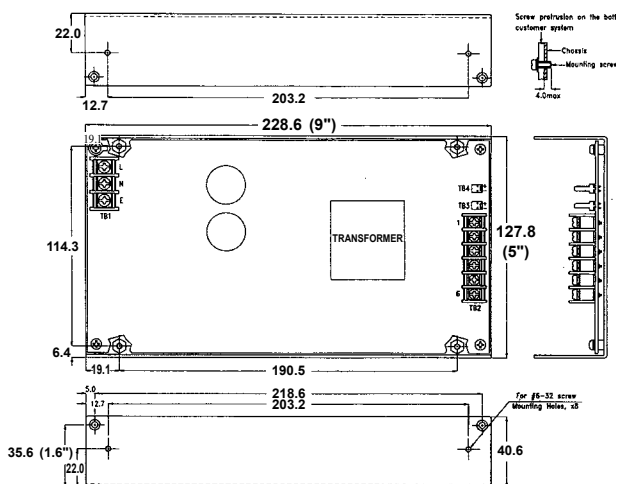
- With built-in PFC
- Only 1.6 inch height
- 4.62 Watt per cubic inch
- With ITE safety only
- Efficiency between 80% to 90%
- Operation from 0°C to 70°C by convection

Applications:

- For ITE and industrial equipment.

Remote sense compensates for 0.5V load drop min.
 Operating temperature 0°C to 70°C
 derating : 2.5% / °C > 50°C
 Cooling 300W free air convection
 360W with 18 CFM cooling for single output
 Storage temperature -20°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 UL 60950-1
 CSA C22.2 No. 60950-1
 EN60950-1

Mechanical Specifications:



Notes:

1. Size:
5" x 9" x 1.6"
2. Mounting Hole:
114.3 x 190.5 (mm)
3. Connectors:
AC input: Terminal blocks
DC output: Terminal blocks
Remote Sense : Molex 5045-02A or equivalent
4. Output Pin assignment:

| PIN NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------|-------|-------|-------|-----|------|------|------|------|------|------|-----|-----|
| SNP-Z301 | +5V | +5V | +5V | GND | GND | GND | GND | GND | +12V | -12V | | |
| SNP-Z305 | +18V | +18V | GND | GND | GND2 | +12V | | | | | | |
| SNP-Z306 | +5V | +5V | +5V | GND | GND | GND | GND | GND | GND | +5V | +5V | +5V |
| SNP-Z307 | +12V | +12V | +12V | GND | GND | GND | GND2 | +5V | | | | |
| SNP-Z308 | +15V | +15V | +15V | GND | GND | GND | GND2 | +12V | | | | |
| SNP-Z308-1 | +15V | +15V | +15V | GND | GND | GND | GND2 | +5V | | | | |
| SNP-Z309 | +24V | +24V | GND | GND | GND2 | +5V | | | | | | |
| SNP-Z30C | +9.5V | +9.5V | +9.5V | GND | GND | GND | NC | NC | | | | |
| SNP-Z30T | +48V | +48V | GND | GND | GND2 | +5V | | | | | | |

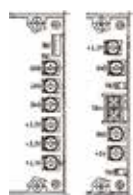
5. Packing:
Net weight: 1000 g approx. / unit
Gross weight: 14 kg approx. / carton, 12 units / carton
Carton size (mm): 485 (L) x 291 (W) x 360 (H)

Output Specifications:

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

Note:

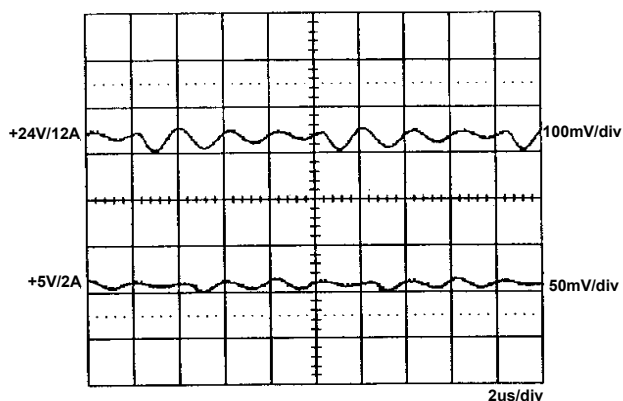
- Each output can provide up to max load separately. Continuous staying in more than total output power is not allowed in free air convection. The max. load must be with 18 CFM fan cooling.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
- Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
- 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.
- 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.
- Efficiency is measured at rated load and nominal line.
- Model Selection:
SNP-Z30x is for ITE application.
- The output connector for SNP-Z30B & SNP-Z30D is shown as right-hand figure.



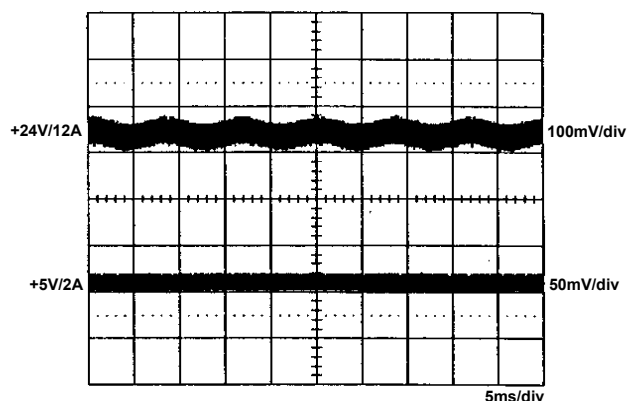
SNP-Z30B SNP-Z30D

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

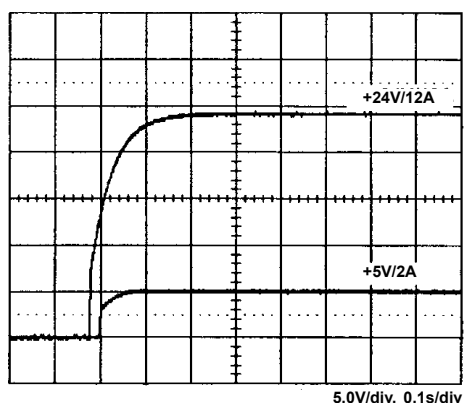
1. Switching frequency ripple



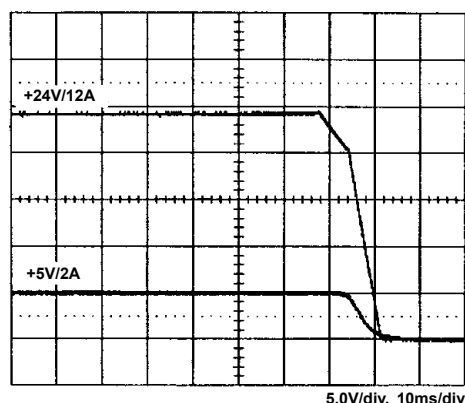
2. Line frequency ripple



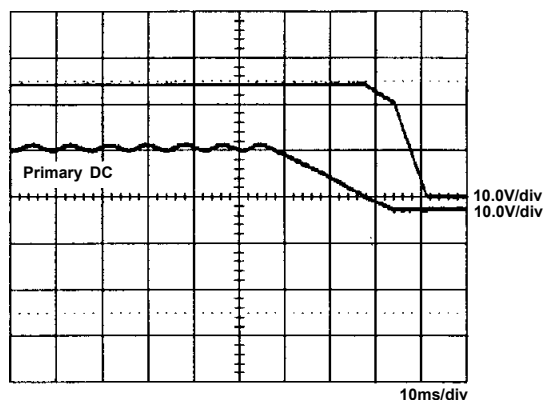
3. Output turn on wave form



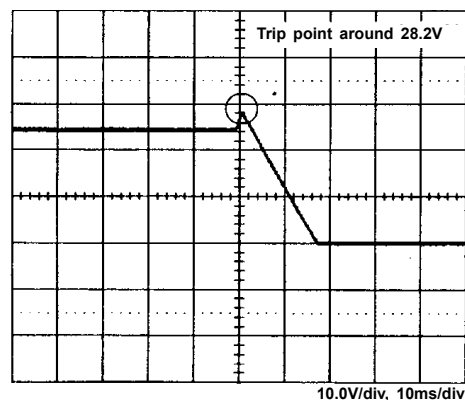
4. Output turn off wave form



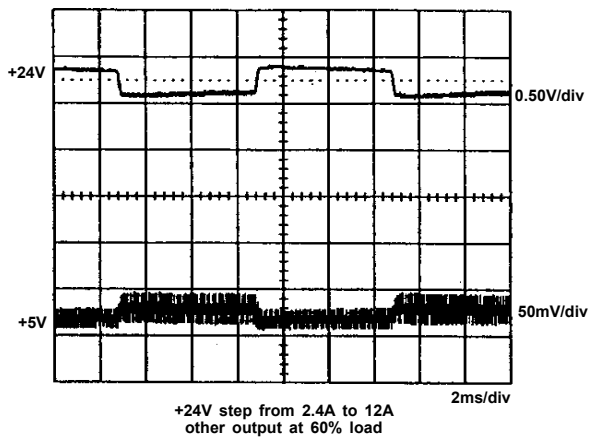
5. Hold-up time



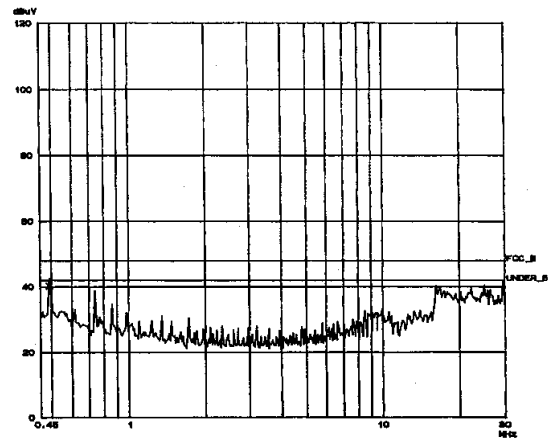
6. Over voltage protection



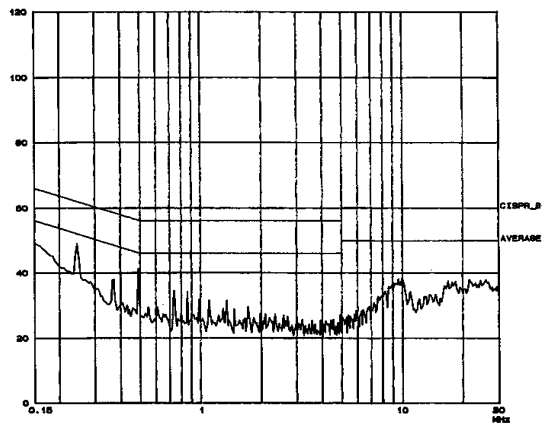
7. +24V step response



8. FCC B



9. CISPR 22 B



10. Thermal Profile

