

# Switching Adapter (Universal)

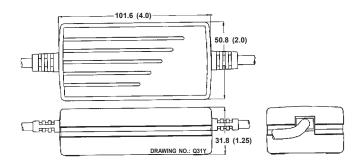
### 10W Con./20W Pk. **SNP-Q21 Series SNP-Q31** Series



#### **General Specifications:**

Input voltage	
Input frequency	
Inrush current	less than 30A at 115VAC
(Cold start)	less than 60A at 230VAC
Efficiency	
	at nominal line and rated load
Hold up time	>15ms
	at rated load and 115VAC

## **Mechanical Specifications:**



#### **Description:**

SNP-Q21 and SNP-Q31 series are 10~12 watts, single output and universal input switching mode power supplies in a small-sized plastic box which is with color option of either beige or black.

These two series are designed in full compliance with UL, CSA and VDE regulations for the application of CD-Rom and general purpose.

SNP-Q21 series is for class II type. SNP-Q31 series is for class I type.

### **Model available:**

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- SNP-Q216 for 5V/2A SNP-Q219 for 24V/0.5A
- - SNP-Q316 for 5V SN
- SN •

V/2A	•	SNP-Q217 for 12V/1A
4V/0.5A	•	SNP-Q21C for 9V/1.5A
V/2A	•	SNP-Q317 for 12V/1A
4V/0.5A	•	SNP-Q31C for 9V/1.5A

NP-Q319	101	24 V/0.JA	21
NP-031T	for	48V/0.25A	

Over load protection	auto recovery
Short circuit protection	auto recovery
Operating temperature	0 to 40°C
Cooling	free air convection
Storage temperature	$-20^{\circ}$ C to $+85^{\circ}$ C
EMI	FCC class "B"
	Vfg 243/1991
Safety	UL 60950
	CSA C22.2 No.234
TUV EN60950-1	(only for SNP-Q31X)

#### Notes:

2.

- 1. Dimensions shown in mm (inch) as left. Tolerance: +/-1mm (Excluding cables).
  - Size:
- 50.8 X 101.6 X 31.8 (mm) 2.0" X 4.0" X 1.25"
- Packing 3.
  - Net weight: 300 g approx. / unit for SNP-Q21 series
  - 220 g approx. / unit for SNP-Q31 series

Gross weight: 20 kg approx. / carton, 60 units / carton for SNP-Q21 series 15.5 kg approx. / carton, 60 units / carton for SNP-Q31 series Carton size (mm): 555 (L) x 395 (W) x 421 (H) for SNP-Q21 & -Q31 series

- Connectors:
- 4. a) AC input
  - For SNP-Q21 series North America, Class II Ungrounded 2 wires plug For SNP-Q31 series
  - North America, Nema 5-15P style 3 wires plug
  - b) DC output For SNP-Q21 & -Q31 series DC power jack, \$\$\phi2.1\$ or \$\$\phi2.5\$ socket type
  - \*\* Options available for AC input and DC output connector, if the detailed specifications can be provided.

#### -James-



### **Output Specifications:**

MODEL NO.	OUTPUT RAIL	MIN.	LOAD RATED	PEAK	VOLTAGE ACCURACY	RIPPLE NOISE	LINE REG.	LOAD REG.
SNP-Q216	+5V	0A	2A	4A	+4.95V~+5.10V	50mVpp	±1%	±3%
SNP-Q217	+12V	0A	1A	1.8A	+11.4V~+12.6V	100mVpp	±1%	±3%
SNP-Q219	+24V	0A	0.5A	0.9A	+22.8V~+25.2V	100mVpp	±1%	±3%
SNP-Q21C	+9V	0A	1.5A	1.8A	+9.2V~+9.8V	100mVpp	±1%	±3%
SNP-Q316	+5V	0A	2A	4A	+4.95V~+5.10V	50mVpp	±1%	±3%
SNP-Q317	+12V	0A	1A	1.8A	+11.4V~+12.6V	100mVpp	±1%	±3%
SNP-Q319	+24V	0A	0.5A	0.9A	+22.8V~+25.2V	100mVpp	±1%	±3%
SNP-Q31C	+9V	0A	1.5A	1.8A	+9.2V~+9.8V	100mVpp	±1%	±3%
SNP-Q31T	+48V	0A	0.25A	0.25A	+46.6V~+49.4V	200mVpp	±1%	±3%

#### Note:

1. Each output can provide up to peak load temporarily. Continuous staying in more than rated load is not allowed.

2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.

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.

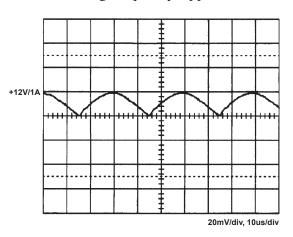
5. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.

6. Hold up time is measured from the end of the last charging pulse to the time which the +5V output drop down to 4.75V at rated load and nominal line.

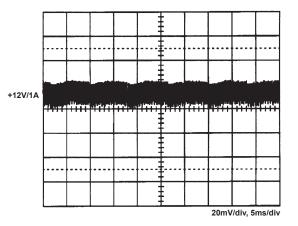
7. Efficiency is measured at rated load.

## **Performance for SNP-Q317:**

1. Switching frequency ripple



2. Line frequency ripple

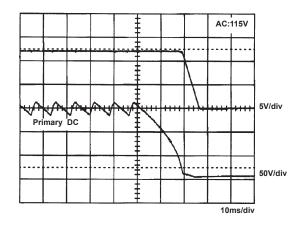


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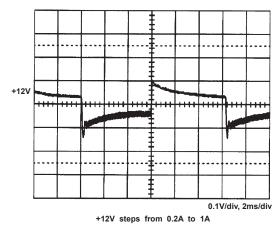


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3. Hold-up time

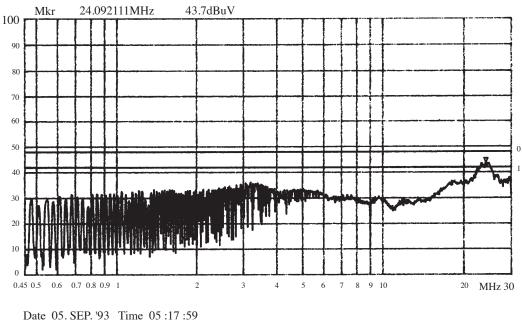


4. +12V step response



#### 5. FCC B PERFORMANCE

dBuV



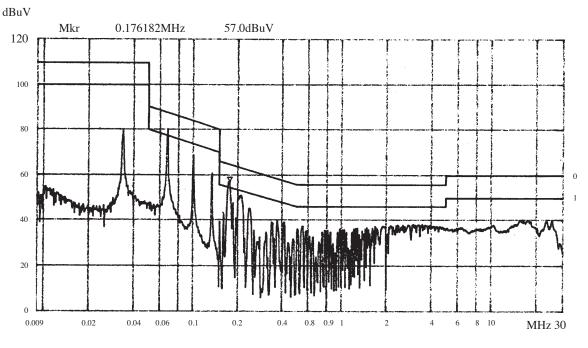
SKYNET EUT: POWER. M/N: SNP-Q317 LINE: VA. Q.P.: 24.0035MHz 42.1dBuV

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#### 6. VFG 243



Date 05. SEP. '93 Time 04: 48: 24 SKYNET EUT: POWER. M/N: SNP-Q317 LINE: L1. Q.P: 0.1668MHz 44.7dB7V

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-James-