

Specifications For Approval

Switching power supply

| | |
|-------------|---|
| Description | Switching Adapter Desktop Input: 100-240VAC \pm 10% 50/60Hz Output: +24VDC/4A |
| Part NO. | 8796-C2-24V |
| Color | Black |

CONTENTS

- 1. Scope**
- 2. Input Characteristic**
- 3. Output Characteristic**
- 4. Protection Requirement**
- 5. Environment requirements**
- 6. Reliability Requirements**
- 7. Safety**
- 8. Mechanical drawing**
- 9. Packing**
- 10. Caution**
- 11. Transport &Storage**

1. SCOPE

The purpose of the document is to specify a **Single phase AC Input**, Single output switching power supply. This product is AC to DC switching power transfer device, it can provide for a **24v, 4A max & 96W max** DC Output with constant voltage source. This Specification defines the input, output , performance characteristics, environment, noise and safety requirement for a power supply.

1.1. Description

☐ Desktop Adapter

2. INPUT CHARACTERISTICS

2.1. Input Voltage & Frequency

Input Voltage:

Rated Voltage: 100~240Vac

Variation Range: 90-300Vac

Input Frequency:

Rated Frequency: 50/60Hz.

Variation Frequency: 47-63Hz

2.2. Input AC Current

4Amps max At any input voltage and rated, DC output rated load.

2.3. Inrush Current(cold start)

40A Max. At 115Vac, Full load , cold start, 25 degree.

2.4. AC Leakage Current

2.5mA Max. At 240Vac input.

3. OUTPUT CHARACTERISTICS

3.1. Static Output Characteristics<Vo & R +N>

| Output | Rated Load | | Output Power |
|--------|------------|-------------|--------------|
| Rail | Min. Load | Rated. Load | |
| +24V | 0.01A | 4A | 96W |

3.2. Line/Load Regulation

| Output | Load Condition | | Line Regulation | Load Regulation |
|--------|----------------|-----------|-----------------|-----------------|
| Rail | Min. Load | Max. Load | | |
| +24V | 0.0A | 4A | ± 1% | ± 5% |

3.3. Ripple and Noise:

At 115/230Vac input and output Min and Max.Load, the ripple and noise are as follows when measure with Max. Band width of 20MHz and Parallel 47uF/0.1uF, crossed connected at testing point.

| Voltage | Ripple and Noise (Max.) |
|---------|-------------------------|
| 24V dc | (*)120mV p-p |

3.4. Turn- on Delay Time

2Seconds Max.at 115Vac input and output Max.load.

3.5. Rise time

40 mS Max.at 115Vac input and output Max load.

3.6. Hold-up Time

5 mS Min.at 115Vac input and output Max.Load.

3.7. Efficiency

85% Min, At 115/230Vac input voltage, 1/4, 1/2, 3/4 and full load calculation average efficiency.

3.8. Output Overshoot/ Undershoot

10% max. When the power on or off, when it is the full input voltage and full load.

3.9. Output Load Transient Response

Output voltage within 22.6-25.4V for load step from 20% to 80% , R/S: 0.4A/Us, frequency: 100Hz duration and 8ms at 80%.

4. PROTECTION FUNCTION

4.1. Over Current Protection

The power supply will be auto recovered when over current faults remove.

4.2. Over Voltage Protection

The voltage of power supply when the protected circuit is higher than a certain value, the protector cut off the line; When the supply voltage return to normal range, protector automatically switched on (105% - 150% of the rated voltage)

4.3. Short Circuit test

The power supply will be auto recovered when short circuit faults remove.

4.4. Ambient temperature range

0 to +65 °C

5. ENVIRONMENT REQUIREMENTS

5.1. Operation Temperature

0°C to 65°C ,Full load, Normal operation.

5.2. Storage Temperature

-20°C to +80°C

With package

5.3. Relative Humidity

5%(0℃)~90%(40 ℃)RH,72Hrs,Full load, Normal operating.

5.4. Vibration

1.Operating: IEC 721-3-3 3M3

5~9Hz,A=1.5mm
Acceleration(9~200Hz,Acceleration 5m/S2)

2.Transportation:

IEC 721-3-2 2M2
5-9Hz,A=3.5mm
9~200Hz, Acceleration=5m/S2
200~500Hz, Acceleration=15m/S2

3. Axes,10 cycles per axis.

No permanent damage may occur during testing.
The SAMPLE has to restore to its original situation after power off/on.

5.5. Dropping Packed (Referencing to EN60950)

Products should be dropped from a height of 1M for wall mount type and 760mm for desktop type ;
The horizontal surface consists of hardwood at least 13mm thick, mounted on two layers of plywood each 19mm to 20mm thick,all supported on a concrete or equivalent non-resilient floor. Upon conclusion of test, the equipment need not be operational.

6. RELIABILITY REQUIREMENTS

6.1. Burn-in

The power supply shall be burn-in for 4 hours under normal input and 80%rated load at 30℃ ±10℃

6.2. MTBF Qualification

The power supply shall be designed and produced to have a mean time between failures (MTBF) of 30000 operating hours at 90% confidence-level while operating under the following conditions.

Test condition: Input 220Vac 45 minutes on, 15 minutes off

Output: 80% of rated load

Temperature: 40 +/-5℃

7. SAFETY

7.1. Hi-Pot Test

1500 Vdc 5mA 3 Sec. Between primary and secondary circuit.

7.2. Insulation Test

500Vdc, 3 Sec. Between primary and secondary circuit.

IR should ≥ 50 MΩ

8. MECHANICAL REQUIREMENT:

8.1. Picture



8.2.AC Input Adapter Receptacle type:



Figure3: AC Input Adapter Receptacles

8.3. DC Output Plug Types:



Figure 4: DC Output Plugs

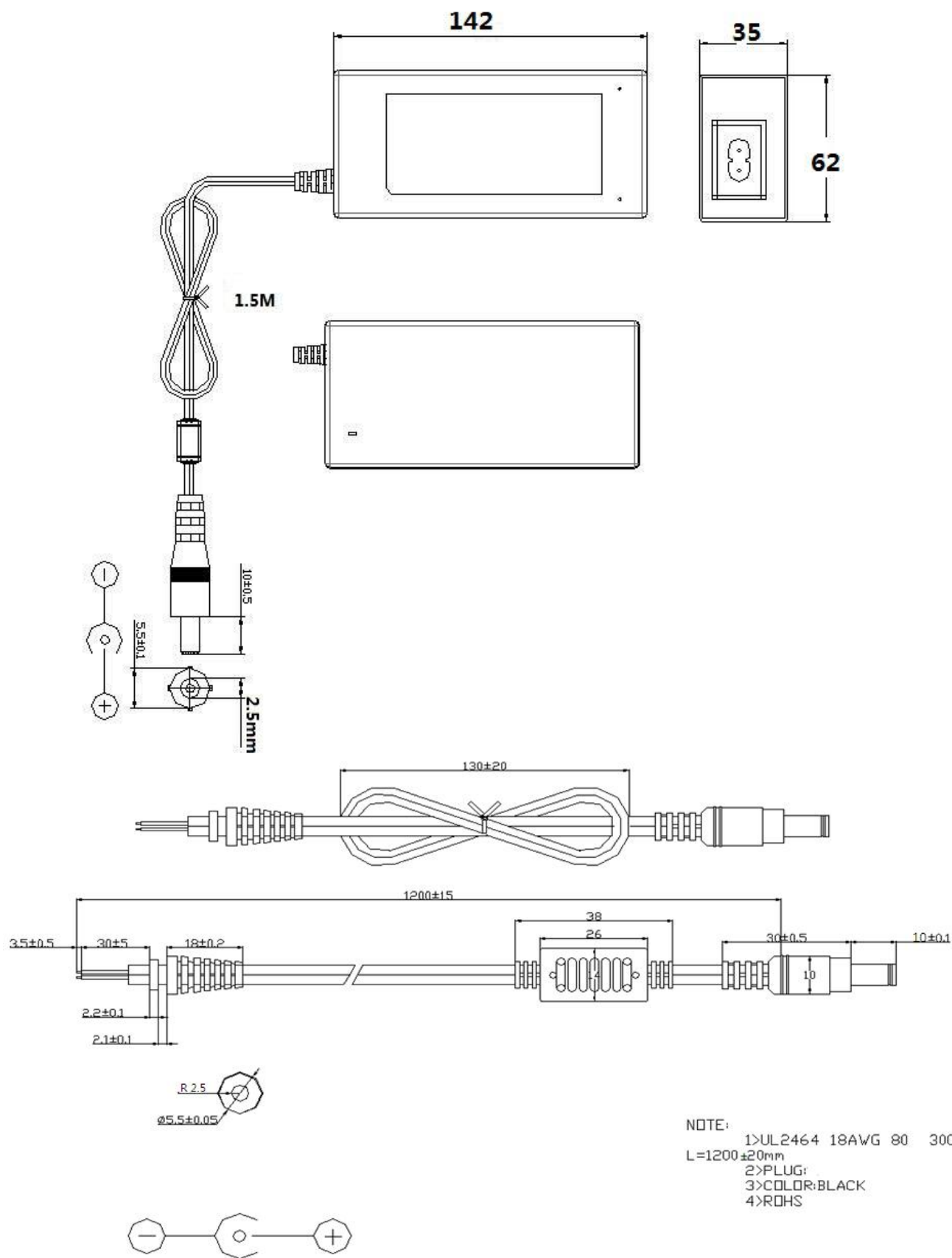
SPECIFICATION

8.4. AC cable:

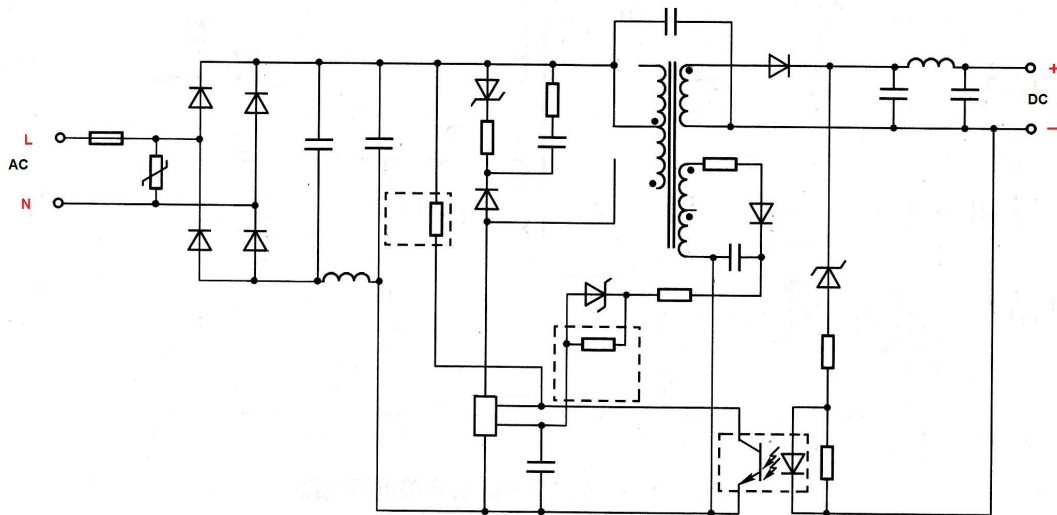


8.5. Adapter Outline Drawing

SPECIFICATION



8.6. Diagram



8.7. Label

NOTE :

1. Color: black ground White character ;
2. Material: PET+fog surface;
3. Thickness:0.2mmT ;
4. Tolerance:+0/-0.2mm.

9. Packing

Carton size: L49.5*W42*H16.5CM

Quantity:40PCS/CTN

Inside packing:White box

10. Caution

Using indoor only !

11. Transport &Storage

11.1 Transport

Suitable for cars, boats, planes transportation, transportation should be canopies, sunscreen, civilization loading and unloading.

11.2 Storage

The product should be stored in the box when not use, warehouse environment for-20 °C ~ + 60 °C , relative humidity 10% ~ 95%, and warehouse not allow to have the harmful gas, or inflammable or explosive products and corrosive chemicals, no strong mechanical vibration, impact and strong field, packing boxes from at least 20 cm high, the distance from the wall, heat source, window or air entrance at least 50 cm, in this stated conditions storage period generally is 2 years, more than 2 years should be inspection.