

# Electrical Specification

Description:      ADAPTER

Model No.:    LS-PW12W-9V1A

Specification:      9V1A

Revision:              A0

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### E. C. LIST

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## 1. SCOPE

The document detail the electrical,mechanical and environmental specifications of a Adapter POWER, the power supply provide 18.0 W (continuous output power ).output. The power supply shall meet the **RoHS** requirement.

### 1.1. Description

- SMPS Adaptor(Wall mount)
  SMPS Adaptor(Desk-top)  
 Open Frame
  SMPS Unit(With Case)  
 Others

## 2. Input Characteristics

### 2.1. Input Voltage & Frequency

The range of input voltage is from 90Vac to 264Vac single phase.

	Minimum	Nominal	Maximun
Input Voltage	90Vac	100Vac-240Vac	264Vac
Input Frequency	47Hz	60Hz/50Hz	63Hz

### 2.2. Input AC Current/AC

0.6Amax. @ 100-264Vac input & Full load

### 2.3.Inrush Current (cold start)

10Amax. @ 264Vac input

### 2.4.Efficiency(Normal)

82.2 % min. @ (type83% at input 110Vac)& Full load

82.7% min. @ (type83% at input 230Vac)& Full load

## 3. Output Characteristics

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

Input Voltage	Input power	Rated Output	No Load	Output Range	Ripple and Noise Range
AC110V	$\leq 0.3W$	+5V	0.0A	11.4-12.6V	$\leq 100mV_{p-p}$
AC230V	$\leq 0.3W$	+5V	0.0A	11.4-12.6V	$\leq 100mV_{p-p}$

**3.2 Output Voltage/Cuttent**

Input Voltage	Output Voltage	Output Current	Ripple and Noise Range
AC115V	11.4-12.6V	0-1A	$\leq 150mV_{p-p}$
AC230V	11.4-12.6V	0-1A	$\leq 150mV_{p-p}$

**3.3 Turn-on Delay Time**

5.0S max. @ 100Vac to 240Vac input & Full load

**3.4 Hold-up Time**

6mS min. @ Full load & 115Vac/60Hz input turn off at worst case

10mS min. @ Full load & 230Vac/50Hz input turn off at worst case

**3.5 Rise Time**

50mS max. @ Rated load

**3.6 Fall Time**

50mS max. @ Full load

**3.7 Output Overshoot/Undershoot**

10%max. When the power on or off

**3.8 Output Load Transient Response**

Output voltage within **11.4V-12.6V** for load step from 20% to 80%, R/S:0.5A/Us, frequency: 100Hz

**4. Protention Requirements****4.1. Short Circuit Protection**

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed

#### 4.2. Over Current Protection

Over current protection with auto recovery function. Current limit: 4A(max.).

### 5. Environment Rquirements

#### 5.1. Operating Temperature and Relative Humidity

-35°C to +60°C

10%RH to 100%RH

#### 5.2. Storage Temperature and Relative Humidity

-40°C to +80°C

5%RH to 100%RH non-condensing @ Sea level shall be low 10,000 feet

#### 5.3. Vibration

10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth:3.5mm) for 1Hour for each of  
The Perpendicular axes X,Y,Z

### 6. Reliability Requirements

#### 6.1. Burn-in

The power supply shall under go a minimum of 4 Hours burn-in test at  $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$  under full load condition

#### 6.2. MTBF Qualification

The MTBF shall be at least 50,000hours at 25°C, Full load and nominal input condition

### 7. EMI/EMS Standards/EMI/EMS

#### 7.1. EMI Standards/EMI

GB 9254-2008	EN55022
GB 4943-2001	EN60950

## 8. Safety Standards

**8.1. Primary to Secondary: 3000Vac 5mA Max / 60second(3 second for production)**

**Primary to Earth: 1500Vac 5mA Max / 60second(3 second for production)**

**Secondary to Earth: 1500Vac 5mA Max / 60second(3 second for production)**

### 8.2. Leakage Current

0.75mA max. at 264Vac/50Hz

### 8.3. Insulation Resistance

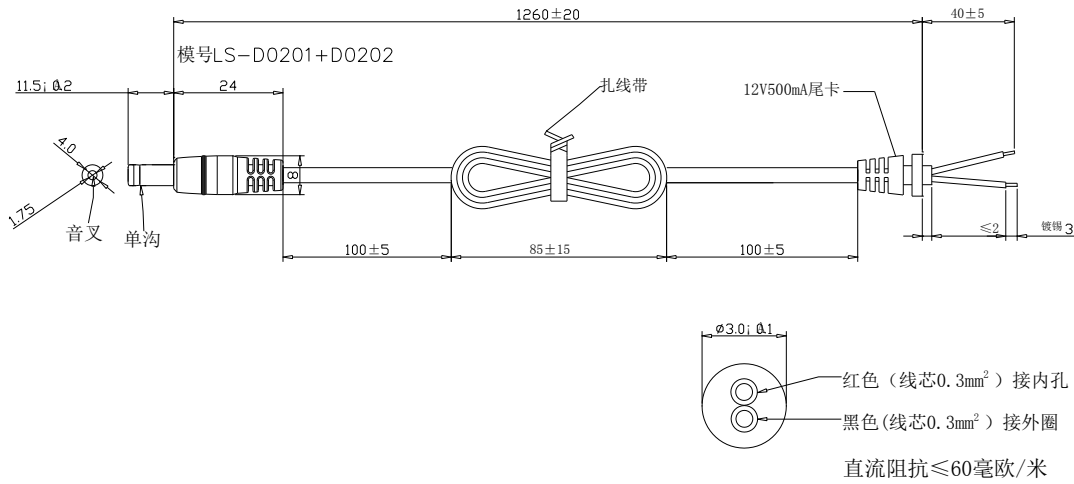
50M  $\Omega$  min. at primary to secondary add 500Vdc test voltage.

## 9. Mech. Outline Drawing





10.DC Cord/DC



11.Product figure frame picture

