

# *Specification*

Product: Desktop Type AC DC Adapter Series: VP-48W

Vendor' Model No.: VP-1204000 (12V4A)

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## **1. Input Requirements**

### **1-1. Input Voltage**

100-240Vac

### **1-2. Input Frequency**

50-60Hz

### **1-3. Input Current**

- 1.) 1.5 A Max, AT 115Vac, Full load.
- 2.) 0.8A Max, AT 230Vac, Full load.

### **1-4. Efficiency**

When 100-240Vac line input voltage (120Vac), the efficiency shall be 85% or better under maximum load.

### **1-5. No Load Power Consumption**

The internal power loss at no load shall be less than 0.3W AT 264Vac.

### **1-6. Inrush Current**

- 1.) 30A Max.(AT 115Vac, Cold Start.)
- 2.) 60A Max.(AT 230Vac, Cold Start.)

### **1-7. Turn-On Time**

3.5 Seconds Max. (AT 115Vac, Cold Start)

### **1-8. Hold Up Time**

10m Seconds Min. (AT 115Vac Full Load).

### **1-9. Configuration**

2- Wire input AC line (Line, Neutral).

### **1-10. Line Regulation**

The maximum voltage change on DC output shall be within tolerance when AC input voltages varies within the range specified  $\pm 2\%$ .

### **1-11. Input Protection Device**

An adequate internal fuse on the AC input line shall be protected

### **1-12. Hi-Pot Test**

Primary-Secondary: 3.3KVac For 3 Seconds. (Leakage Current 10mA)

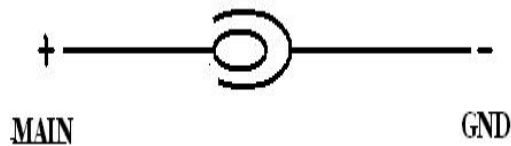
**1-13. Insulation Resistance**

Insulation resistance shall be more than 100Mohm AT 500Vdc between primary line, Neutral line and secondary between primary line neutral line and frame ground. (F.G)

**2. Output Requirements**

**2-1. Output Voltage and Current**

Output Voltage	Tolerance	Output Current	
		Min	Max
+12Vdc	±5%	0A	4A



**2-2. Output Voltage Regulation**

The total output voltage regulation shall be +5%, including the effects of line voltage variations, load current, ripple and noise. and the AC component of the load current.

**2-3. Ripple and Noise**

The power supply shall not exceed the following limits on the indicated voltage for 60Hz or 50Hz ripple, switching frequency ripple and noise measured with a 20MHz width

Output Voltage	Ripple and Noise
+12Vdc	1% (Max)

Ripple and Noise: 50/60Hz Ripple +Switching Ripple and Noise

Ripple and noise are measured at the end of output cables which are added a 0.1uF(104) Ceramic capacitor and a 10uF Electrolytic capacitor (connect parallel)

**2-4. Over Voltage Protection**

The voltage will not exceed the upper trip limit. Use for ZENER diode

Output Voltage	Upper
/	/

### 2-5. Over Current Protection

When the adapter output current is over 120%-150% should be shut down and no dangers or hazardous .It can auto recover when remove away the short.

### 2-6. Short Circuit Protection

A Short circuit place at output will not cause damage to adapter it can auto recover when remove away the short.

### 2-7. Leakage Current

0.25mA Max. (AT 264Vac 50Hz).

### 2-8. LED Display

Description	Green
Power ON	√
Power OFF	/

### 2-9. ESD Requirements

- 1.) The adapter shall meet IEC PUB. GERNERIC standard : EN50082-1:1997
- 2.) Basic Standard:
  - a.) EN61000-4-3 (Electrostatic Discharge,ESD,8kV air discharge,4kV Contact discharge, Performance Criterion B)
  - b.) EN61000-4-4 (Electrical Fast Transient/Burst,EFT,power line:1KV,Signal Line:0.5kV, Performance Criterion B)
  - c.) EN61000-4-5(Surge Immunity Test,1,2/50us Open Circuit current,Power Line -1kV, Line to earth -2kV,Performance Criterion B)

## 3. Environmental Requirements

### 3-1. Temperature

- 1.) Operating: 0°C to +40°C
- 2.) Storage : -20°C to +80°C

### **3-2. Humidity**

- 1.) Operating: 10% to 90% non-condensing
- 2.) Storage : 5% to 95% non-condensing

### **3-3. Altitude**

- 1.) Operating: 10,000 FEET.
- 2.) Storage : 40,000 FEET.

## **4. EMI/EMC Requirement**

The radiated and conducted emissions of this ac adapter complies

With the requirements of the EN 55022

## **5. Safety Agency Requirements**

The adapter shall be meet with the following safety standards.

## **6. Reliability**

The Power Supply Shall be designed and produced to have a mean time between failures (MTBF) of 30,000 Operating Hours at nominal input voltage, 90% loading, and 25 °C ambient

## **7. Mechanical Features**

### **7-1. Dimensions (Case Size )**

Length: 120mm

Width : 53mm

Height: 32mm

### **7-2. Weight**

Power unit: 250g. (Max)

## **8. Attachment Files**

**8-1. Outline Drawing**





