

EA11301J1246

# AC/DC switching power transfer device

Constant Voltage | max. 12.5A | max.150W | 12Vdc

AC plug: C14 | DC plug: Power-Mini DIN (male) 4Pin (Assembly/Lock Type)

## Input Electrical Specification

### Input Voltage

Rated Voltage	100-240 Vac +/- 10% full range.
Normal line input	115Vac/60Hz, 230Vac/50Hz.

### Input Frequency

Input Frequency	47~63 Hz
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### Input Current

2.5A(Max.) @ 115Vac input with full load.  
1.3A(Max.) @ 230Vac input with full load.

### Energy saving standards

Designed to meet the following standards: COC Tire2 VI

### Efficiency

Efficiency  $\geq$  89% (AVG.) normal input & 25%, 50%, 75% ,100% of max output load

### Configuration

3-wire AC input (Line ,Neutral, FG)

### Input Fuse

The hot line side of the input shall have a fuse, rating (5.0A/250V)

### Inrush Current

$\leq$ 60A at 110 Vac	At cold start, maximum load
$\leq$ 120A at 220 Vac	At cold start, maximum load

### Line Regulation

This line regulation is less than  $\pm$  1%, of rated output voltage @ full load

### Hold Up Time

$\geq$  10 mSec., @ Normal line, with full load.

### Rise Time

$\leq$  50 mSec.,@ 100-240VAC input, with full load from 10% to 90% of output voltage.

### Turn-ON Time

The output voltage should rise to 90% of rated output voltage in less than 3 SEC. from AC apply to 110Vac start up.



**Harmonic Standard and Power Factor**

The adapter complied with IEC 61000-3-2 class D harmonic standard while input power over than 75W. The P.F. shall >0.95 @100Vac input and >0.9 @240Vac input.

**Output Requirements**
**Output Voltage and Current**

Output Voltage (VDC)	Current Min. (A)	Current Max (A)
+12V	0	12.5A

**Combine Regulation**

Voltage (VDC)	Tolerance (%)
+12V	+5,-5

**Dynamic Load Regulation**

± 5% excursion for 50% - 100% or 100% - 50% load change of DC output at any frequency up to 1KHz(duty 50%).

**Ripple & Noise**

The power supply shall not exceed the following limits on the indicated voltage for 60Hz or 50Hz ripple, Switching frequency ripple and noise and dynamic load variations measured with a 20MHz bandwidth

Output	Ripple/Noise
+12V	1.5% max. of rated output voltage

Input condition : for rated voltage , Output condition : for max load

Ripple / Noise: 60Hz ripple + switching ripple and noise

Ripple & Noise are measured at the end of output cable which are added a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor

**Over Voltage Protection**

150% Max. of the rated output voltage. The output voltage shall be shutdown and auto-recover mode when OVP occurred.

**Over Current Protection**

110 ~ 180% of rated output current. The adapter will enter protection at overload mode and no damage. It will enter into normal condition if the fault condition is removed.

**Stability**

2% Max. at constant load with constant input (after 30 minutes of operation).

**Temperature Rise**

Less than 45°C on top/bottom case at normal AC input & 80% load of DC output at environment temperature 25°C.

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### Drop-out (Power Line Disturbance)

Output voltage shall remain within the specified regulation range, through the absence of a line input during 1/2 cycle, at full load and normal AC line input

### Voltage Isolation

The DC ground will be isolated from the AC neutral and AC line.

## Reliability

### MTBF ( MIL-HDBK-217F )

The power supply shall be designed and produced to have a mean time between failure ( MTBF) of 100,000 hours at 25° C.

## Environment

### Temperature

Operating	0° C to +40° C
Storage	-20° C to +85° C

### Humidity

Operating	10 to 90%
Storage	5 to 90%

### Altitude

From sea level to 5,000Meter ( operation ) and 5,000Meter ( non operation )

## Safety

### Hi-Pot Test

1800Vac, 5mA, 2Sec between primary and secondary circuit

### Insulation Test

500Vdc, 3Sec. between primary and secondary circuit  
IR should  $\geq$  50 M $\Omega$ .

### Leakage Current

$\leq$  250uA, at 264 Vac/60 Hz

### Safety

UL/CUL, TUV, CB, CCC, CE, FCC, RCM

### EMS

Items	Specification	Reference
ESD	Contact: $\pm$ 4KV	IEC 61000-4-2
	Air: $\pm$ 8KV	

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RS	Frequency: 80~1000MHz Field Strength: 3V/M, 80% AM(1KHz)	IEC 61000-4-3
EFT	1 KV on input AC power ports.	IEC 61000-4-4
Surge	Line to Line: ± 1KV (peak)	IEC 61000-4-5
	Line to F.G.: ± 2KV (peak)	

**EMI**

<b>Comply with Standards</b>
CISPR 32, EN 55032 Class B FCC PART 15 Class B

**Mechanical Characteristics**
**Physical Size**

160mm (L) \* 64 mm (W) \* 30 mm (H)

**Enclosure material**

94V-0 minimum

**Output Cable (Reference)**

UL1185 #14

**Vibration Test**

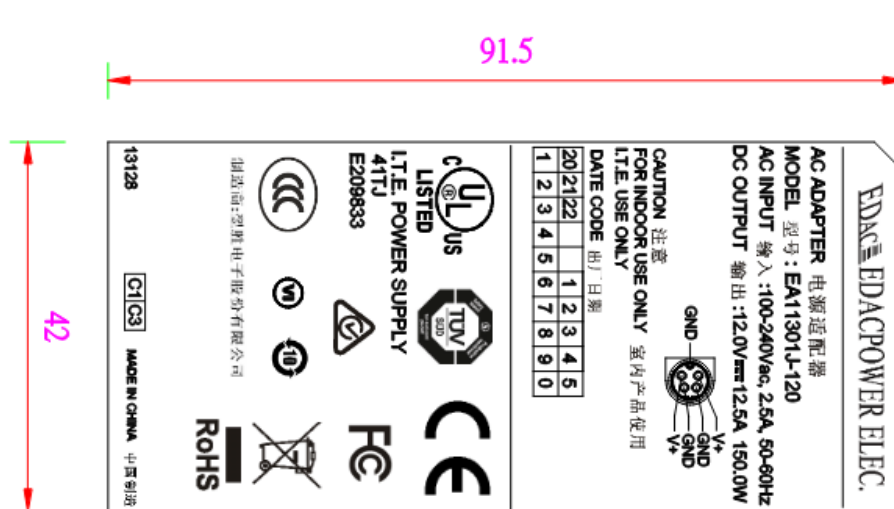
The vibration frequencies are set at 20Hz, with total amplitude of 1.5mm Along the 3 directions namely X-Y-Z. The each direction should be vibrated for 60 minutes, after testing no abnormal electrical or mechanical should occur.

**Drop Test (Referencing to CSA C22.2 No.950/UL1950/UL1310/EN62368)**

Products shall be dropped from a height of 1000 mm onto a horizontal surface consists of hardwood at 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 cannot into hazardous moving parts and hazardous voltage circuits need be operational , and need meet Hi-Pot specification requirement..

**Net Weight (Reference)**

605g



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**Mechanical Specification**

