

SUBJECT: SCOPE OF DOCUMENT

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1-0. General Description

2-0. Input Requirements

3-0. Output Requirements

4-0. Reliability

5-0. Environment

6-0. Safety

7-0. Mechanical Characteristics

1-0. General Description

The purpose of the document is to specify a Single phase AC input, single output switching power supply. This specification is suitable for: **EA11301K** Series

This product is AC to DC switching power transfer device, it can provide for a **24V, 6.25A** max & **150W** max DC output with constant voltage source.

This Specification defines the input, output, performance characteristics, environment, noise and safety requirement for a power supply.

2-0. Input Requirements

2-1. Input Voltage

Rated Voltage 100-240 Vac +/- 10% full range.

Normal line input 115Vac/60Hz, 230Vac/50Hz.

2-2. Input Frequency

47~63 Hz

2-3. Input Current

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

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

2-4. Energy saving standards:

2-4-0. Designed to meet the following standard :

COC TIER 2

2-4-1. Efficiency

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

Efficiency 79% (AVG.) normal input & 10% of max output load

2-4-2 No Load Power Consumption.

No Load Watt 0.15W at normal line input.

2-5. Configuration

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

2-6. Input Fuse

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

2-7. Inrush Current

60A at 110 Vac At cold start, maximum load.

120A at 220 Vac At cold start, maximum load.

2-8. Line Regulation

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

2-9. Hold Up Time

10 mSec.@ Normal line, with full load.

2-10. Rise Time

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

2-11. 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.

2-12. 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.

3-0. Output Requirements

3-1. Output Voltage and Current

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
+24V	0	6.25

3-2. Load Regulation

Voltage (Vdc)	Tolerance (%)
+24V	+5/, -5

3-3. Dynamic Load Regulation

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

3-4. 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
+24V	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

3-5. Over Voltage Protection

150% Max. of rated voltage.

The output voltage shall shutdown and latch-off when OVP is occurred.

3-6. 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.

3-7. Stability

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

3-8. Temperature Rise

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

3-9. 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

3-10. Voltage Isolation

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

4-0. Reliability

4-1. 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 degrees C.

5-0. Environment

5-1 Temperature

a. Operating : 0 °C to 40 °C

b. Storage : -20 to 85 °C

5-2 Humidity

a. Operating : 10 to 90 %

b. Storage: 5 to 90 %

5-3 Altitude

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

6-0. Safety

6-1. Hi-Pot Test

L、 N--> FG : 1800Vac, 10mA, 2S

P --> S : 3000Vac, 10mA, 2S

6-2. Insulation Test

500Vdc, 2Sec. between primary and secondary circuit

IR should 100 M .

6-3. Leakage Current

250uA at 240Vac/50 Hz

6-4. Safety

UL, CUL, TUV, CB, CE, FCC, BSMI, RCM, PSE, CCC

6-5. EMS

Items	Specification	Reference
ESD	Contact: $\pm 4\text{KV}$	IEC 61000-4-2
	Air: $\pm 8\text{KV}$	
RS	Frequency: 80~1000MHz Field Strength: 3V/M, 80% AM(1KHz)	IEC 61000-4-3
EFT	1.0 KV on input AC power ports.	IEC 61000-4-4
SURGE	Line to Line: $\pm 1\text{KV}$ (peak)	IEC 61000-4-5
	Line to F.G : $\pm 2\text{KV}$ (peak)	

6-6. EMI

Comply with Standards
CISPR 32, EN 55032 Class B
FCC PART 15 Class B

7-0. Mechanical Characteristics

7-1. Physical Size : 160mm (L) * 64 mm (W) * 30 mm (H)

7-2. Enclosure material : 94V-0 minimum

7-3. Output Cable (Reference) : UL1185 #16

7-4. 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.

7-5. 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.

7-6. Net Weight (Reference) : 605g

91.5

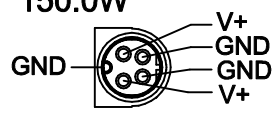
EDAC EDACPOWER ELEC.

AC ADAPTER 电源适配器 電源供應器

MODEL 型号 型號 : EA11301K-240

AC INPUT 输入 輸入 :100-240Vac, 2.5A,
50-60Hz

DC OUTPUT 输出 輸出 :24.0V==6.25A
150.0W



CAUTION 注意 注意
FOR INDOOR USE ONLY 室内产品使用 室內產品使用
I.T.E. USE ONLY

DATE CODE 出厂日期 出廠日期

20	21	22			1	2	3	4	5
1	2	3	4	5	6	7	8	9	0



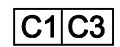
I.T.E. POWER SUPPLY
41TJ
E209833



制造商: 翌胜电子股份有限公司



2312811304001



MADE IN CHINA 中国制造 中國製造

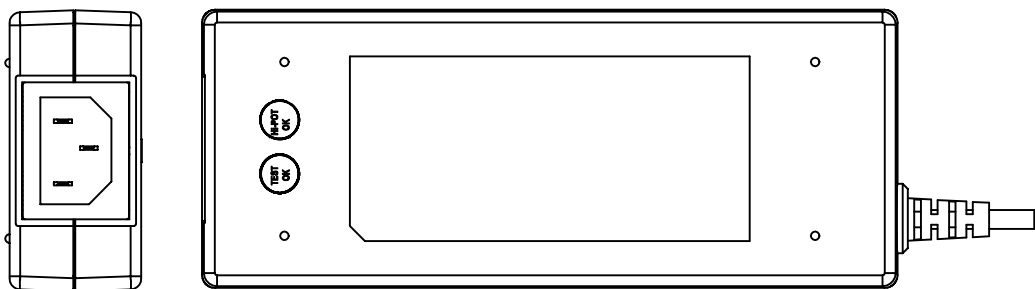
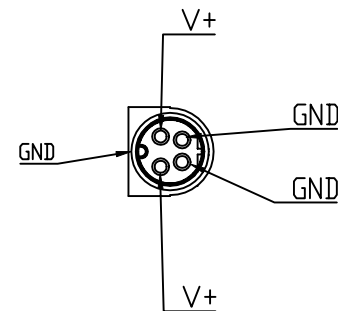
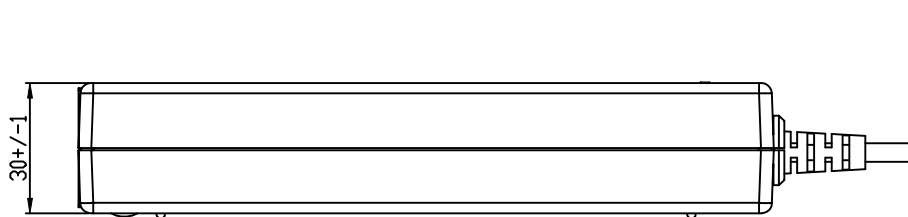
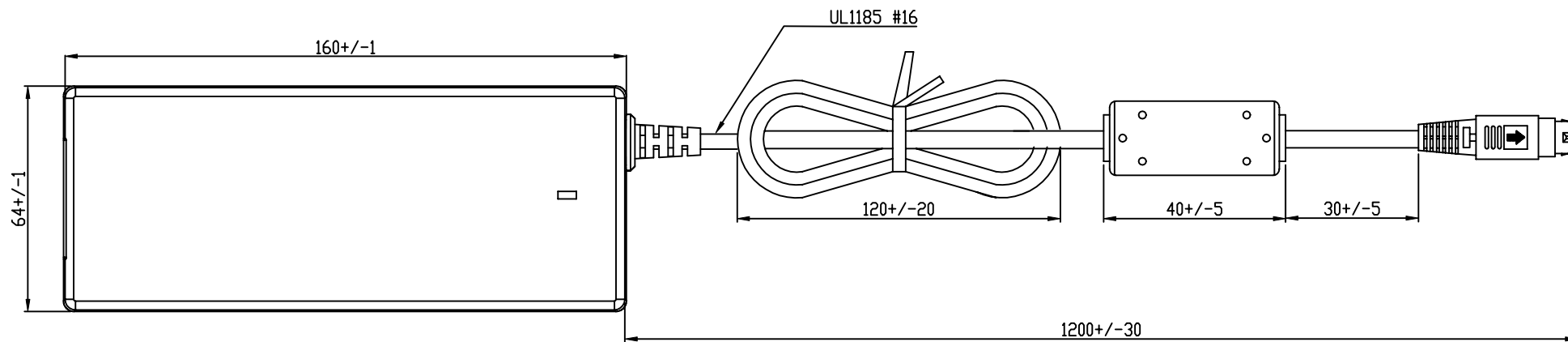
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EDAC P/N.: 312811304001

Background: Black color

Character: Silver color

Unit: mm



EDACPOWER ELEC.				APPROVED
MODEL	EA11301K(T04)	UNIT	mm	DESIGNED
color	BLACK	SCALE		CHECK
cus.		DATE	2020-05-25	DRAWING L.J.YU