

SUBJECT: SCOPE OF DOCUMENT

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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: **EA10731J** Series

This product is AC to DC switching power transfer device, it can provide for a **12V, 5A max & 60W 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. AC Input Voltage

Maximum Voltage: 264Vac

Normal Voltage: 100~240Vac

Minimum Voltage: 90Vac

2-2. AC Input Frequency

Maximum Frequency: 63Hz

Normal Frequency: 50~60Hz

Minimum Frequency: 47Hz

2-3. Input Current

2.0A (Max.) @ 100Vac/60Hz-240Vac/50Hz with full load.

2-4. Energy saving standards:

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

CoC Tier II

2-4-1. Efficiency

89.0% (avg.) at 115Vac/60Hz & 230Vac/50Hz input voltage and 25%, 50%, 75% & 100% of max output current.

79% at 115Vac/60Hz & 230Vac/50Hz input voltage and 10% of max output current

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 (3.15A/250V)

2-7. Inrush Current

60A at 110 Vac

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

8.3 mSec., @ Normal line, with full load.

2-10. Rise Time

50 mSec., @ 115V AC 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.

3-0. Output Requirements

3-1. Output Voltage and Current

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
+12V	0	5.0A

3-2. Load Regulation

Voltage (Vdc)	Tolerance (%)	Regulation (Vdc)
+12V	+5/, -5	11.4~12.6V

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
+12V	240mV

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

175% Max. of rated voltage.

The output voltage shall be shutdown and auto-recover mode when OVP occurred.

3-6. Over Current Protection

110~180% output current. At 100-240Vac input,

The adapter can withstand continuous short at DC output 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 (Optional)

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

3-9. Drop-out

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 to 40

b. Storage : -20 to 85

5-2 Humidity

- a. Operating : 10 to 90 %
- b. Storage: 5 to 90 %

5-3 Altitude

From sea level to 5,000 Meters (operation) and 5,000 Meters (no operation)

6-0. Safety

6-1. Hi-Pot Test

3000Vac/4242VDC, 3mA 2Sec. between primary and secondary circuit
L,N to FG 1800Vac 3mA 2Sec.

6-2. Insulation Test

500Vdc, 2 Sec. between primary and secondary circuit
IR should **50 MΩ.**

6-3. Leakage Current

500 uA, at 240Vac/50 Hz

6-4. Safety

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

6-5. EMS

Items	Specification	Reference
ESD	Contact: $\pm 4\text{KV}$	IEC 61000-4-2
	Air: $\pm 8\text{KV}$	
RS	Frequency: 1KHz Field Strength: 3V/M	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 : 105.5mm (L) * 46mm (W) * 28mm (H)

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

7-3. Output Cable (Reference) : UL2468 #18*2C

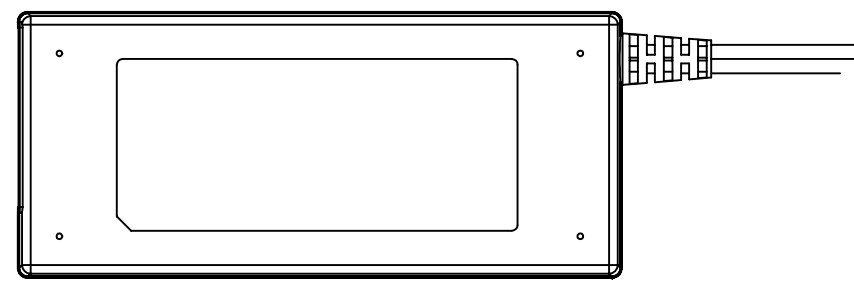
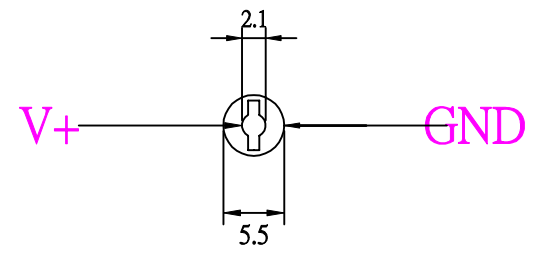
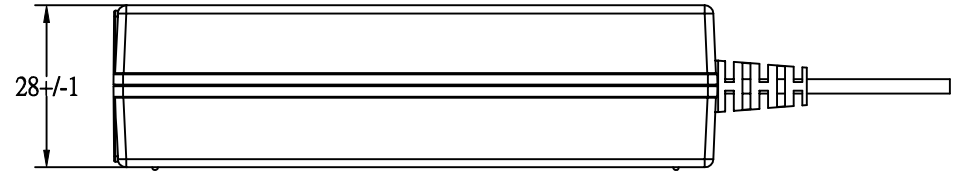
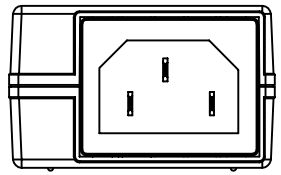
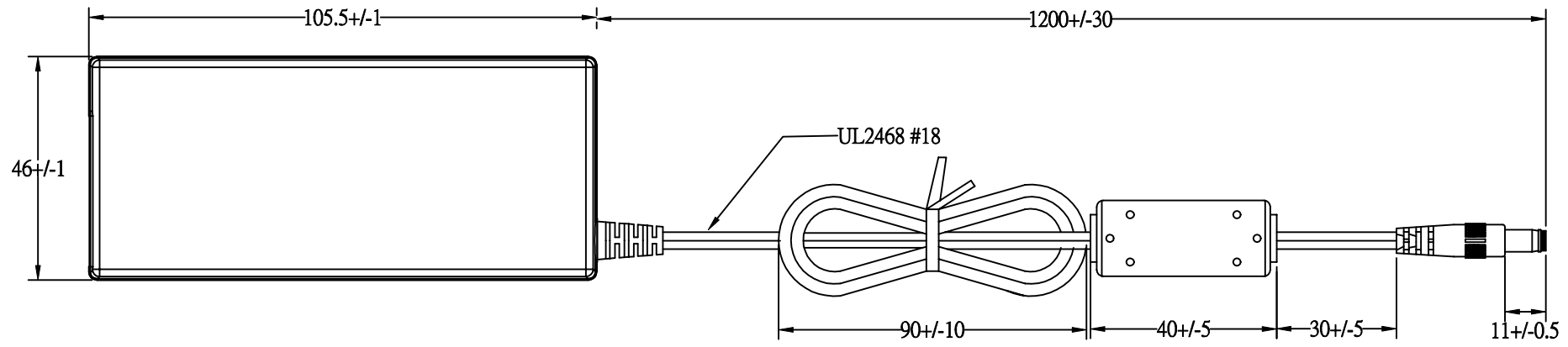
7-4. Vibration Test

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..

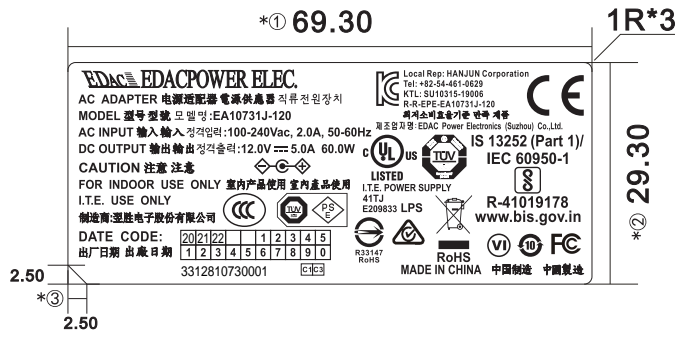
7-6. Net Weight (Reference) : 300 g



EDAC POWER ELEC.				APPROVED
MODEL	EA10731J(T03)	UNIT	mm	DESIGNED
color	BLACK	SCALE		CHECK
cus.		DATE	2020-05-16	DRAWING L.J.YU

客戶名稱	B009
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版本	变更项目



EDAC EDACPOWER ELEC.

AC ADAPTER 电源适配器 电源供应器 직류전원장치
 MODEL 型号 型号 모델명:EA10731J-120

AC INPUT 输入 输入 정격입력:100-240Vac, 2.0A, 50-60Hz
 DC OUTPUT 输出 输出 정격출력:12.0V \equiv 5.0A 60.0W

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

制造商: 昱胜电子股份有限公司

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최저소비효율기준 만족 제품
 제조업자명: EDAC Power Electronics (Suzhou) Co.,Ltd.

IS 13252 (Part 1)
 IEC 60950-1

LISTED
 I.T.E. POWER SUPPLY
 41TJ
 E209833 LPS

R-41019178
 www.bis.gov.in

R33147 RoHS
 RoHS
 MADE IN CHINA 中国製造 中國製造



- 1.材质:50#压花底变色龙+雾面
- 2.颜色:黑底银字
- 3.公差:±^{0.1}_{0.3}
- 4.UL编号:
- 5.出货检验报告 有 无
- 6.包装方式:
- 7.其他:*标示为重点检验尺寸

吳江 巷泉包裝材料有限公司		訂單號 (ORDER NUMBER)	核准 (APPROVED BY:)
FAX:0512-63333167 TEL:0512-63330858			
品名 (DESCRIPTION)	料號 (PART NO.)	單位 (UNIT)	日期 (DATE)
标签	312810730001	mm	2020-05-08
繪圖 (DRAWN BY:)	校稿 (CHECKED BY:)	修訂 (REVISION)	主管 (CHARGE)
Jane			苏小伟