

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: EA1050E Series

This product is AC to DC switching power transfer device, it can provide for a 12V 3.5A max & 42W 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

2-2. Input Frequency:

47~63 Hz

2-3. Input Current:

a. 1.2A (Max.) @ 115Vac input will full load.

b. 0.6A (Max.) @ 230Vac input will full load.

2-4. Efficiency:

78% Typical at normal line input and full load.

2-5. Configuration

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

2-6. Input Fuse

The hot line side of the input shall have a fuse, rating (T2A/250V)

2-7. Inrush Current:

≅ 40A at 100 Vac

≅ 80A at 240 Vac At cold start, maximum load.

2-8. Line Regulation:

This line regulation is less than ± 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., @ Rated 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 100Vac for start up.

3-0. Output Requirements

3-1. Output Voltage and Current:

	Voltage (Vdc)	Current Min.(A)	Current Max.(A)
O/P	<u>+12V</u>	<u>0</u>	<u>3.5A</u>

3-2. Load Regulation:

	Voltage (Vdc)	Tolerance (%)	Regulation (V)
O/P	<u>+12V</u>	<u>+5/ -5</u>	<u>11.40V~12.60V</u>

3-3. Dynamic Load Regulation

±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
<u>+12V</u>	<u>1.2% max. of rated output voltage</u>

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. Short-Circuit Protection

The adapter can withstand continuous short at DC output and no damage.
It will enter into normal condition if the fault condition is removed.

3-6. Over Voltage Protection

150% max of rated output voltage
(Output clamped with zener diode, do not test with external DC source).

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 nominal AC input / DC output maximum load and environment temperature 25°C.

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 maximum load and normal voltage input.

3-10. Voltage Isolation

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

3-11. LED Display

Description	Green
Power ON	ON
Power OFF	OFF

4-0. Reliability.

4-1. MTBF: (When calculated using MIL-HDBK-217F)

The power supply shall be designed and produced to have a mean time between failures (MTBF) of 30,000 operating hours at 90% confidence-level while operating under the following conditions.

Test condition : Input: 220Vac 45 minutes on , 15 minutes off

Output: 80% of rated load

Temperature : 40 +/- 5°C

Quantity : 45 pcs

Result : without failure after 31 days burn-in

5-0. Environment.

5-1 Temperature :

- a. Operating : 0 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 10,000Ft (operation) and 40,000Ft (non operation).

6-0. Safety.

6-1. Hi-Pot Test:

4242 Vdc 5mA 3 Sec between primary and secondary circuit.

6-2. Insulation Test:

500Vdc, 1 minute between primary and secondary circuit.

IR should \geq 50 M Ω .

6-3. Leakage Current:

$\leq 750\mu A$, at 240Vac/50 Hz.

6-4. Safety :

EK, PSE, CE, FCC, CCC, TUV, UL/CUL, GOST-R, BSMI, DOIR+C-TICK, NORDIC

6-5. EMS:

Items	Specification	Reference
ESD	Contact: $\pm 4KV$	IEC 61000-4-2
	Air: $\pm 8KV$	
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: $\pm 1KV$ (peak)	IEC 61000-4-5
	Line to F.G : $\pm 2KV$ (peak)	

6-6. EMI for both Conduction & Radiation: (At Resistor load)

Comply with Standards
CISPR22, EN55022 Class B

7-0. Mechanical Characteristics.

7-1. Physical Size: 120 mm (L) * 60 mm (W) * 35 mm (H)

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

7-3. Output Cable: UL1185 #18,

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/EN60950)

Products shall be dropped from a height of 900mm 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 need not be operational.

7-6. Net Weight (Reference): 255g

3.5



EDACPOWER ELEC.

AC ADAPTER 电源适配器 직류전원장치

MODEL 型号 모델명 : EA1050E-120

AC INPUT 输入 정격입력:100-240V~1.8A, 50-60Hz

DC OUTPUT 输出 정격출력:12V= 3.5A

CAUTION 注意

FOR INDOOR USE ONLY 室内产品使用

I.T.E. USE ONLY

Endast för inomhusbruk
Apparaten skall anslutas till jordat uttag,
när den ansluts till ett nätverk

DATE CODE:

08	09	10			1	2	3	4	5
1	2	3	4	5	6	7	8	9	0

出厂日期



Local Rep: SPS Inc
Tel: +82-42-936-4905
KTL:SU10315-8002A



LPS



I.T.E. POWER SUPPLY
41TJ
E209833



RoHS

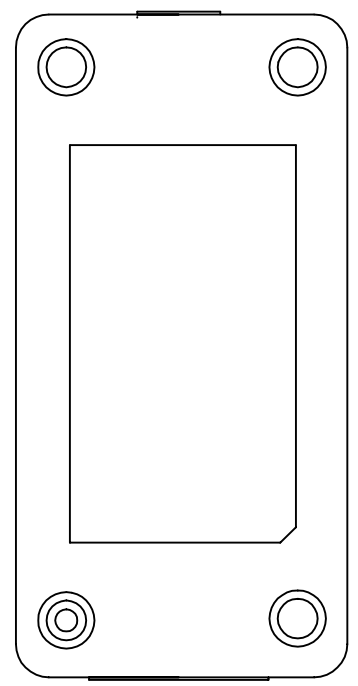
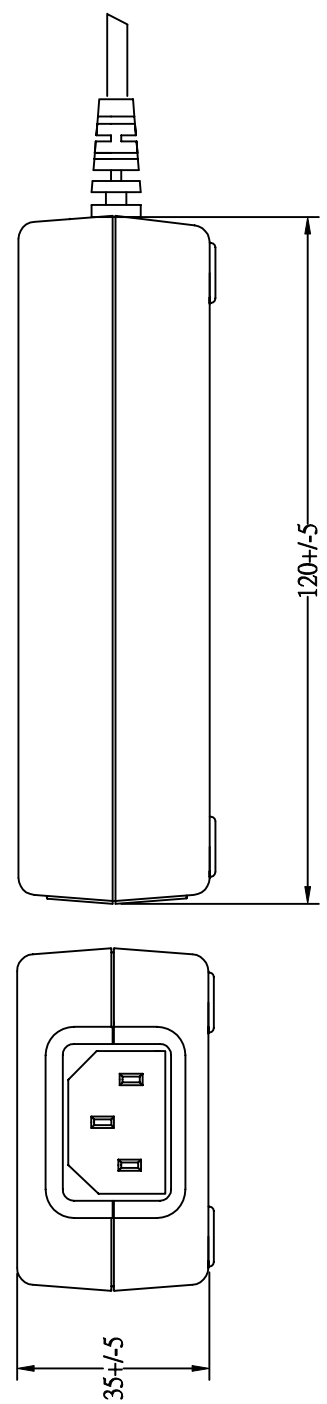
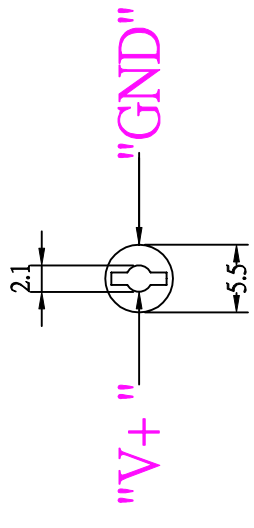
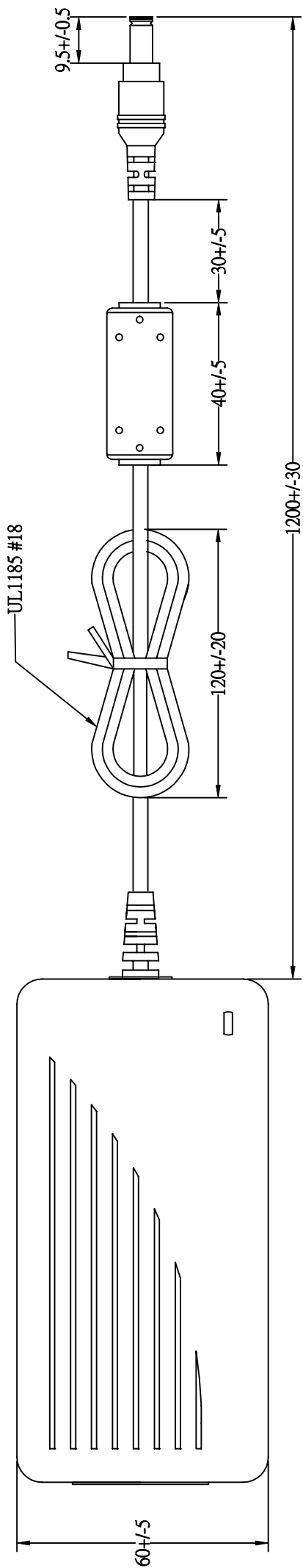


MADE IN CHINA 中国制造
53120050E122 C3

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EDAC P/N.: 3120050E122
Background: Black color
Character: Siliver color
Unit: mm



EDAC POWER ELEC.			APPROVED
MODEL	EA1050E(123)	UNIT	mm
COLOR	BLACK	SCALE	
CUS.		DATE	2007-10-08
		CHECK	DESIGNED
			DRAWING
			L.J.YU