




APPROVAL SHEET

CUSTOMER	茂瑞
CUSTOMER P/N	
DESCRIPTION	19V/7.5A SERIES NO. (207)
EDAC MODEL	EA11603
DATE	2009-02-23
REVISION	0

APPROVED	DESIGN	PREPARE	RoHS
			
CONCLUSION 判定結果	APPROVED 承認	CONDITON APP'D 有條件承認	CUSTOMER'S SIGNATURE: 客戶簽章:



翌勝電子股份有限公司
 EDAC POWER ELECTRONICS CO., LTD.
 台北縣中和市建一路 150 號 11 樓之 2(E 棟)
 TEL: 886-2-82263289 FAX: 886-2-82263327

翌勝電子(蘇州)有限公司
 Edac Power Electronics (Suzhou) Co., Ltd.
 江蘇省蘇州工業園區勝浦鎮常勝路 59 號
 No.59, Chang Sheng Road, Sheng Pu,
 Suzhou Industrial Park, Jiangsu, China
 Tel: 512-6282-1628 Fax: 512-6282-9608

SUBJECT: SCOPE OF DOCUMENT

CONTAINS :

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: EA11603 Series

This product is AC to DC switching power transfer device, it can provide for a 19V, 7.5A max & 142.5W 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 110Vac/220Vac.

2-2. Input Frequency

47~63 Hz

2-3. Input Current

a. 2.5A (Max.) @ Rated AC input with full load.

b. 1.25A (Max.) @ Rated AC input with full load.

2-4. Efficiency

85% typical at normal line input and full load output

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 (T3.15A/250V)

2-7. Inrush Current

≅ 50A at 110 Vac

≅ 100A at 220 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

≧ 16 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 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)
<u>+19V</u>	<u>0</u>	<u>7.5A</u>

3-2. Load Regulation

Voltage (Vdc)	Tolerance (%)	Regulation (V)
<u>+19V</u>	<u>+5/, -5</u>	<u>18.05~19.95V</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>+19V</u>	<u>1.5% 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. Over Voltage Protection

120~140% of rated output voltage.

The output voltage shall be shutdown and latched when OVP occurred.

3-6. Over Current Protection

140% Max of rated output current.

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

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 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 30 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, 3 Sec. between primary and secondary circuit
 IR should \geq 50 M Ω .

6-3. Leakage Current

\leq 750 uA, at 240Vac/50 Hz

6-4. Safety

UL, CUL, TUV, PSE, CE

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

Comply with Standards
CISPR 22, EN 55022 Class B

7-0. Mechanical Characteristics

7-1. Physical Size : 173 mm (L) * 60 mm (W) * 38 mm (H)

7-2. Enclosure material : 94V-1 minimum

7-3. Output Cable (Reference) : [UL1571 #14](#)

7-4. Vibration Test

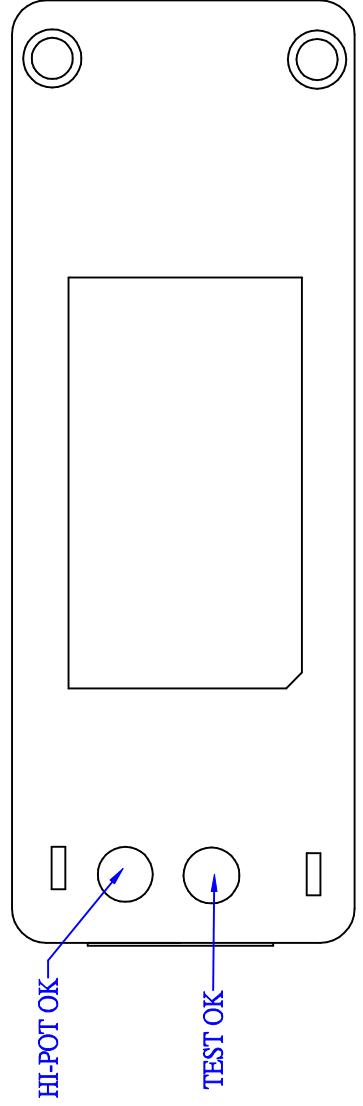
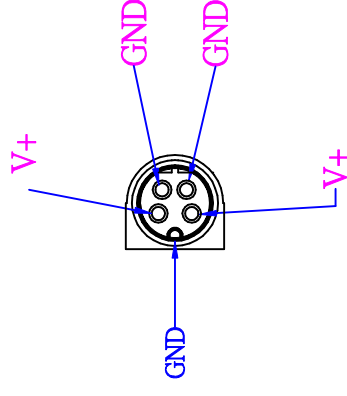
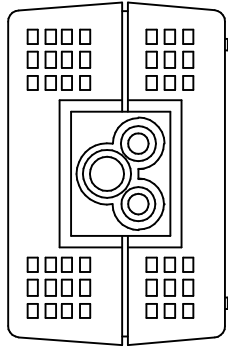
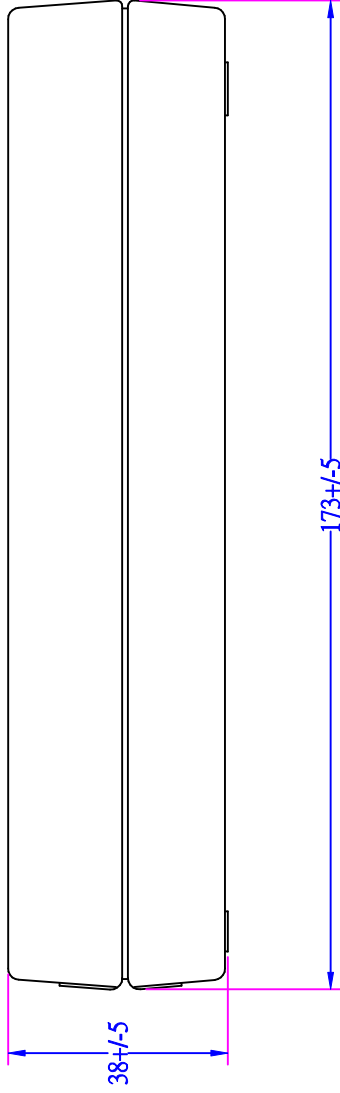
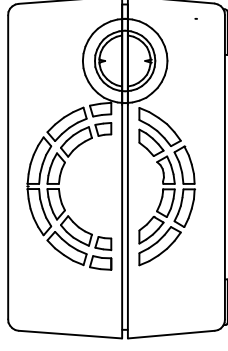
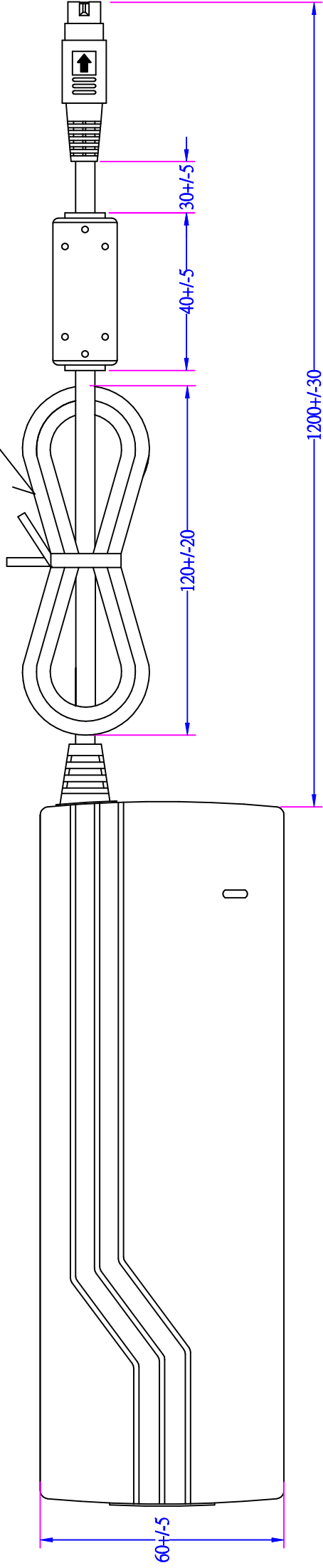
The vibration frequencies are set at 20Hz, with total amplitude of 1.5mm
Along the 3 directions namely X-Y-Z. The each direction should be vibrated
for 60 minutes, after testing no abnormal electrical or mechanical should occur.

7-5. Drop Test (Referencing to CSA C22.2 No.950/UL1950/UL1310/EN60950)

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

7-6. Net Weight (Reference) : [560 g](#)

UL1571 #14



EDACPOWER ELEC.

EDACPOWER ELEC.				APPROVED
MODEL	EA11603(207)	UNIT	mm	DESIGNED
color	BLACK	SCALE		CHECK
cus.		DATE	2009-01-13	DRAWING L.J.YU

3.5

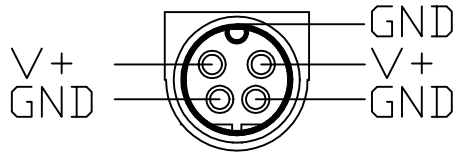
3.5

EDAC EDACPOWER ELEC.

MODEL: EA11603

AC INPUT: 100-240V~2.5A,50-60Hz

DC OUTPUT: 19V==7.5A



CAUTION:
FOR INDOOR USE ONLY
I.T.E. USE ONLY

DATE CODE:

0	9	10	11			1	2	3	4	5
1	2	3	4	5	6	7	8	9	0	



I.T.E. POWER SUPPLY
41TJ
E209833



RoHS



MADE IN CHINA
312 C3

71

41

EDAC P/N.: 312

Background: Black color

Character: Silver color

Unit: mm