




APPROVAL SHEET

CUSTOMER	ARAS
CUSTOMER P/N	
DESCRIPTION	24V/3.12A SERIES NO. (M18)
EDAC MODEL	EA10722
DATE	2012-12-11
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:

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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: **EA10722 series**
This product is AC to DC switching power transfer device, it can provide for a **24Vdc, 3.12A max, 75W 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

Rated Voltage: 100~240Vac \pm 10% full range.

Normal line input voltage: 115Vac~230Vac.

2-2. AC Input Frequency

Maximum Frequency: 63Hz

Normal Frequency: 50~60Hz

Minimum Frequency: 47Hz

2-3. Input Current

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

b. **1.25A (Max.) @ 230Vac** input with full load.

2-4. Energy saving standards:

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

Energy Star Ver. 2.0

CEC Level V

ErP STEP 2

2-4-1. Efficiency

Average Eff. \geq **87%** @ normal input voltage

2-4-2 No Load Power Consumption.

Less than \leq **0.5W @ 230Vac/50Hz.**

2-5. Configuration

2-wire AC input (**Line ,Neutral**)

2-6. Input Fuse

The hot line side of the input shall have a fuse, rating (**T3.15A/250V**)

2-7. Inrush Current

\leq **80A** at 230 Vac At cold start, maximum load.

\leq **40A** at 115 Vac At cold start, maximum load.

2-8. Line Regulation

This line regulation is less than $\pm 1\%$, 100Vac/60Hz-240Vac/50Hz, with full load.

2-9. Hold Up Time

≥ 10 mSec.@ 100Vac/60Hz-240Vac/50Hz, with full load.

2-10. Rise Time

≤ 50 mSec. @ 100Vac/60Hz-240Vac/50Hz, 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 **3.0 SEC.**
100Vac/60Hz-240Vac/50Hz, with full load.

2-12. Fall Time

≤ 25 mSec.@ 100Vac/60Hz-240Vac/50Hz, with full load.

3-0. Output Requirements

3-1. Output Voltage and Current

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
+24V	0A	3.12A

3-2. Combine Regulation

Output Voltage (Vdc)	Tolerance (%)	Regulation(V)
+24V	+5% ~ -5%	22.8V ~ 25.2V

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. Drift(Warm-up period)

$\leq \pm 2\%$ @ 100Vac-240Vac input, with full load for 30Minutes warm up

3-5. 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 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 is measured at the end of output cable which is added a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor

3-6.Over current protection (Over Voltage Protection)

110%~150% Max of rated output current (Voltage) . 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.Temperature Rise:

Less than 50°C on top/bottom case at normal AC input & 80% load of DC output at environment temperature 25°C.

3-8. 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

3-9. Voltage Isolation

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

3-10. LED Display

Description	Green
Power ON	ON
Power OFF	OFF

4-0. Reliability

4-1. MTBF (MIL-STD-781C)

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 testing conditions.

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

Output: 80% of rated load

Temperature: 50 +/- 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 2,000 Meters (operation) and 5,000 Meters (non operation)

6-0. Safety

6-1. Hi-Pot Test

DC 4242V 3mA 2sec. between primary and secondary circuit

6-2. Insulation Test

500Vdc, 2Sec. between primary and secondary circuit

IR should \geq **50 MΩ**.

6-3. Leakage Current

\leq **250 uA**, at 240Vac/50 Hz

6-4. Safety

UL/CUL , PSE, CE, TUV/GS

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	$\pm 1\text{KV}$ (peak)	IEC 61000-4-5

6-6. EMI

Comply with Standards
CISPR 22, EN 55022 Class B

7-0. Mechanical Characteristics

7-1. Physical Size: 116mm (L) *50mm (W) *30 mm (H)

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

7-3. Output Cable (Reference): UL1185*18AWG

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.

3.5

3.5

AC ADAPTER

MODEL: EA10722

AC INPUT: 100-240V~2.0A,
50-60Hz


DC OUTPUT: 15-24V \equiv 4.3A MAX.
& 75W MAX.

TYPICAL OUTPUT VOLTAGE					
15V	16V	18V	19V	20V	24V

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


DATE CODE:

12	13	14			1	2	3	4	5
1	2	3	4	5	6	7	8	9	0




UL
LISTED


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




TUV
SUD



CE





PS
E



V

RoHS

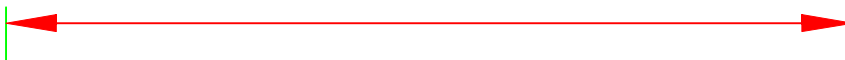




MADE IN CHINA
1312 C3

71

41

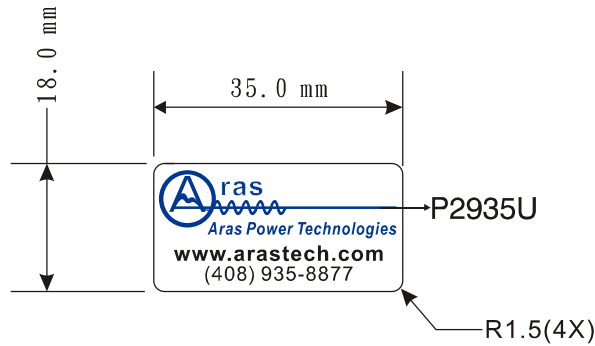


P/N: 312

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Background---Black

工程確認圖

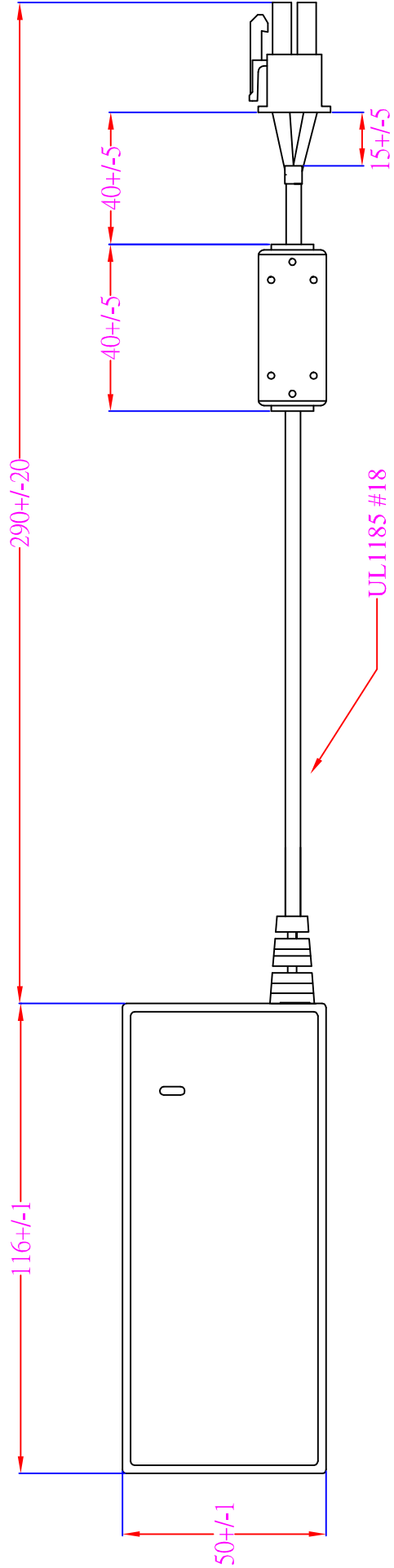
客戶名稱	B009	
	版本	變更項目



1. 材質:

供應商	材質名稱	規格(cm)	模數
	50#消銀龍		
	霧面		

2. 顏色: 銀底黑字+P2935U 3. 公差: ±0.2 4. UL 編號: 5. 出貨檢驗報告 <input type="checkbox"/> 有 <input type="checkbox"/> 無 6. 包裝方式: 7. 其他:	汎傑印刷紙業有限公司 蘇州宏升包裝製品有限公司 TEL: 0512-65286662(代表線) LS109530 FAX: 0512-65285552		訂單號 (ORDER NUMBER) 核準 (APPROVED BY:) _____	
	品名 (DESCRIPTION) 貼 標	料號 (PART NO.) R73K1-0001-00	單位 (UNIT) mm	日期 (DATE) 2012/08/27
	繪圖 (DRAWN BY:) 韓東霞	校稿 (CHECKED BY:) _____	修訂 (REVISION) _____	主管 (CHARGE) 鄧一江



UL1185 #18

