



APPROVAL SHEET

CUSTOMER	Digimax
CUSTOMER P/N	
DESCRIPTION	7.5V/3.33A SERIES NO. (01)
EDAC MODEL	EA10403A-075
DATE	2010-12-31
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. General Description

The purpose of this document is to specify a single phase AC input switching power supply with full range. The product is AC to DC switch mode power supply that provide single output [EA10403A-7.5V@3.33A](#) max with [25W max](#) DC output with constant voltage source. This Specification defines the input, output, performance characteristics, environment , noise and safety requirement.

2. Input Electrical Specification

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

- a. [1.0A \(Max.\)](#) @ AC 100Vac input with full load.
- b. [0.75A \(Max.\)](#) @ AC 240Vac input with full load.

2-4. Efficiency

Meet CEC [Level](#)

	Nameplate Output Power	Energy Star Spec
	0 to 1 Watt	$0.48 \times P_{no} + 0.14$
	> 1 50 Watts	$0.0626 \times \ln(P_{no}) + 0.622$
	> 50 to 250 Watts	0.87

Efficiency [82.34%](#) (avg.) @ normal input & 25% , 50% , 75% , 100% of max output load.

2-5. Configuration

[3](#)-wire AC input ([Line ,Neutral.FG](#))

2-6. Input Fuse

The Line of the AC input shall have a fuse , rated is [T3.15A/250V](#)

2-7. Inrush Current

The adapter cold inrush current should be less than the surge rating of its critical components(include fuse and bulk rectifiers) under all conditions of line voltage and frequency.And we are sure that our adapters isn't damaged with 10,0000 power-on cycles,the cold i²t calculation shows the endurance of them.

Maximum inrush current,from power-on(with power on an any point on the sinewava):

75A at 100 Vac

150A at 240 Vac

When doing the test,the adapter should be disconnected from power supply long enough untill the electrical charge stord in all energy storage components(capacitors) has been fully discharged.Then apply the input voltage

2-8. No Load Power Consumption :

Less than 0.3W @ 230V / 50Hz condition .

2-9. Hold Up Time

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

2-10. Rise Time

20 mSec. @ min Input voltage , 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 seconds from AC apply.

3. Output Electrical Specification

3-1. Output Voltage and Current

Output Voltage	Min Current(A)	Max Current(A)	Peak Current(A)
<u>+7.5V</u>	<u>0A</u>	<u>3.33A</u>	

3-2. Line / Load Regulation

	Output Voltage (V)	Tolerance (%)	Regulation(V)
Vo	<u>+7.5V</u>	+5% ~ -5%	<u>7.125 V ~7.875V</u>

3-3. Dynamic Load Regulation

± 5% excursion from 50% to 100% load and back to 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 and output parallel with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor to ground. Temperature at 25°C and nominal AC input voltage

Output	Ripple/Noise
<u>7.5V</u>	<u>150mV max.</u>

Ripple / Noise: 60Hz ripple + switching ripple and noise

3-5. Short circuit protection :

The output should shut-down when subjected to short circuit. The power supply shall return to normal operating after removing the short situation .

3-6. Open Circuit Protection :

When primary power is applied with no load on any output level, no damage or hazardous conditions should be occurred..

3-7. Over Current Protection :

110%---200% of max current

When over-current occurred, the output should shut down and when the over –power Situation is removed, the output shall be auto-recover without any harm .

3-8. Stability

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

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.

4. Reliability Specification

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

The power supply shall be designed and produced to have a mean time between failures (MTBF) of 30000 hours operating hours minimum conditions: 80% maximum load at 25 °C, nominal input voltage.

5. Environment Specification

5-1 Temperature

- a. Operating: 0 to 40°C
- b. Storage: -20 to 85°C

5-2 Humidity

- a. Operating: 10 to 90 % RH, NON-CONDENSING
- b. Storage: 5 to 90 % RH, NON-CONDENSING

5-3 Altitude

From sea level to 2000M(operation) and 5000M(non operation).

6-0. Safety Specification

6-1. Hi-Pot Test

1800Vac, 10mA, 3 seconds between primary and secondary circuit

6-2. Insulation Test

500Vdc, 3 Sec. between primary and secondary circuit

IR should 100 M.

6-3. Leakage Current

750 uA @ 240VAC 50Hz

6-4. Safety

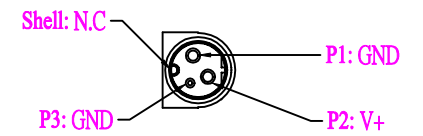
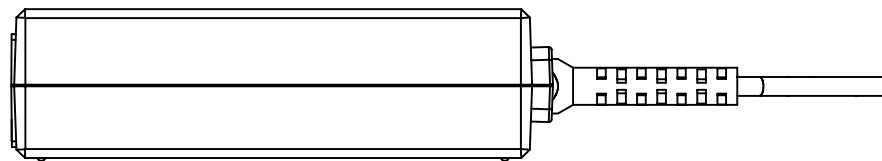
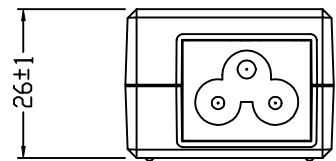
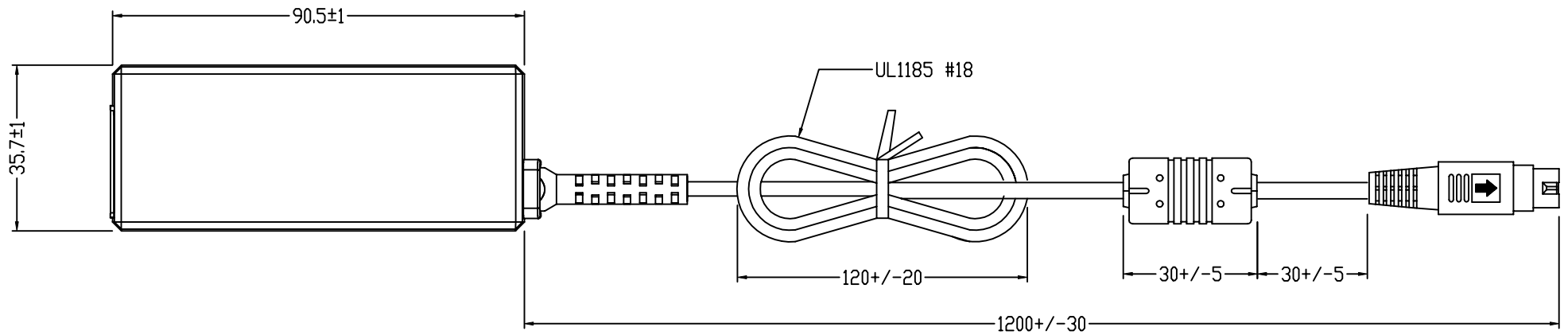
UL, CUL, TUV/GS, CE, FCC, CCC, PSE, BSMI

7. Mechanical Specification

7-1. Physical Size : 90.5L x 35.7 W x 26H (mm)

7-2. Enclosure material : 94V-0


7-3. Net Weight (Reference) : 160g






EDACPOWER ELEC.				APPROVED
MODEL	EA10403A(01)	UNIT	mm	DESIGNED
color	BLACK	SCALE		CHECK
cus.		DATE	2010-12-31	DRAWING




64+/-1

27+/-1




EDAC EDACPOWER ELEC. 

AC ADAPTER 电源适配器 電源供應器   
LISTED

MODEL 型号 型號 :EA10403A-075 I.T.E. POWER SUPPLY
 41TJ

AC INPUT 输入 輸入 :100-240V~1.0A, 50-60Hz E209833   

DC OUTPUT 输出 輸出 :7.5V==3.33A **RoHS LPS**

CAUTION 注意 注意   

FOR INDOOR USE ONLY 室内产品使用 室內產品使用 **R33147**

I.T.E. USE ONLY

DATE CODE:

11	12	13			1	2	3	4	5
1	2	3	4	5	6	7	8	9	0

MADE IN CHINA 中国制造 中國製造
 1312 C3

EDAC LABEL P/N.: 312

Background: Black color

Character: Silver color

Unit: mm