

APPROVAL SHEET

CUSTOMER	DIGIMAX
CUSTOMER P/N	
DESCRIPTION	12V/2A
EDAC MPN	EA1019HVES(04)
EDAC MODEL NO FOR SAFETY	EA1019HVES
DATE	2023-08-20
REVISION	2

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

EDACPOWER

翌勝電子股份有限公司

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新北市中和區建一路 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

東莞市翌勝電子有限公司

廣東省東莞市鳳崗鎮金鳳凰工業區金鳳凰大道108號
Tel: 0769-38859898 Fax: 0769-38859897

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: **EA1019HYES Series**

This product is AC to DC switching power transfer device, it can provide for an **12V, 2A max & 24W 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. 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. **0.8A**(Max.) @ 115Vac input with full load.

b. **0.4A**(Max.) @ 230Vac input with full load.

2-4. Energy saving standards :

Designed to meet the following standard

DOE Level VI

2-4-1. Efficiency

Average Efficiency 86.2% minimum at 115Vac/60Hz & 230Vac/50Hz input voltage and 25%, 50%, 75% & 100% of max output current. Meet DoE Level VI requirement .

2-4-2 No Load Power Consumption:

No Load Watt < 0.1W at 115Vac/60Hz & 230Vac/50Hz input voltage.

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 (**T2.0A/250V**)

2-7. Inrush Current

40A at 115 Vac

80A at 230 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

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

2-10. Rise Time

50mSec., @ 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 from start up.

3-0. Output Requirements

3-1. Output Voltage and Current

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
<u>+12V</u>	<u>0</u>	<u>2.0A</u>

3-2. Load Regulation

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

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
+12	Vp-p 180mV

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 Load Protection

180% 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.

3-6. 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.

3-7. 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

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 (non operation)

6-0. Safety

6-1. Hi-Pot Test

4242Vdc 3mA 2Sec. between primary and secondary circuit

6-2. Insulation Test

500Vdc, 3 Sec. between primary and secondary circuit
IR should 50 MΩ.

6-3. Leakage Current

250uA, at 240Vac/50 Hz

6-4. Safety

TUV, CB, CE

6-5. EMS

Items	Specification	Reference
ESD	Contact: ± 4KV	IEC 61000-4-2
	Air: ± 8KV	
RS	Frequency:80~1000MHz Field Strength: 3V/M , 80% AM(1KHz)	IEC 61000-4-3
EFT	1.0 KV on input AC power ports.	IEC 61000-4-4
SURGE	Line to Line: ±1KV (peak)	IEC 61000-4-5

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 : 60.5L x 39W x 45H (mm)

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

7-3. Output Cable (Reference) : UL2468 #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/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) : 120g

27.5+/-0.5

R1.5

19.5+/-0.5

EDAC EDACPOWER ELEC.

AC Adapter
Model: EA1019HVES
AC Input: 100-240Vac, 0.8A, 50-60Hz
DC Output: 12.0V $\overline{=}$ 2.0A 24.0W

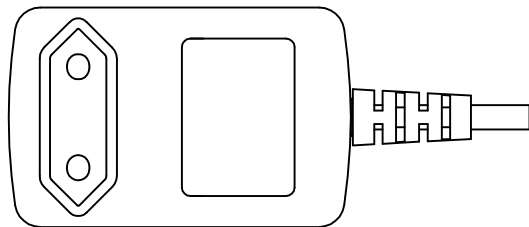
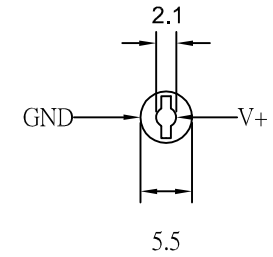
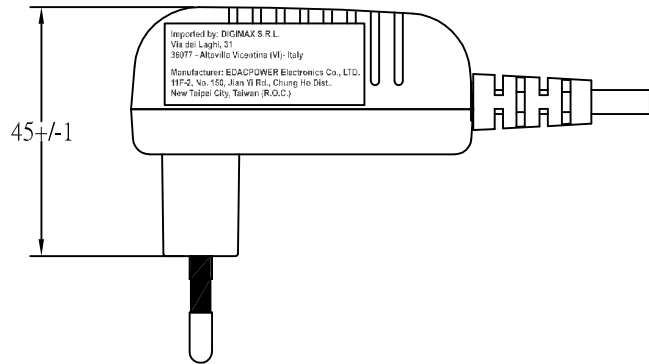
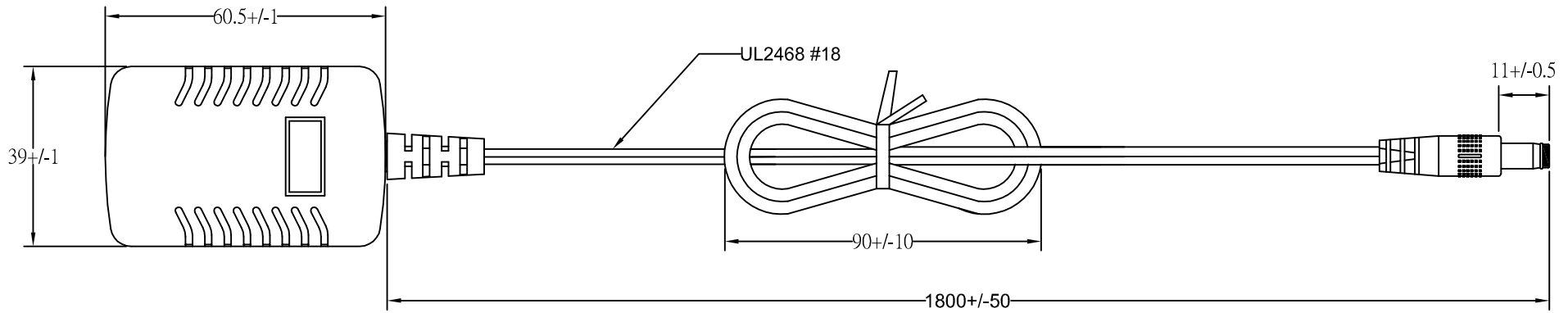
CAUTION
FOR INDOOR USE ONLY
I.T.E. USE ONLY

LPS VI TÜV SUD CE RoHS

S/N:YYWWXXXXX

1312810190008 MADE IN CHINA

P/N.: 312810190008
Background: Black color
Character: Silver color
Unit: mm



EDAC POWER ELEC.				APPROVED
MODEL	EA1019HVES(04)	UNIT	mm	DESIGNED
color	BLACK	SCALE		CHECK
cus.		DATE	2023-08-20	DRAWING L.J.YU

客戶名稱

B009

版本

變更項目

1

1

1

*① 33.00mm

Imported by: DIGIMAX S.R.L.
Via dei Laghi, 31
36077 - Altavilla Vicentina (VI)- Italy
Manufacturer: EDACPOWER Electronics Co., LTD.
11F-2, No. 150, Jian Yi Rd., Chung Ho Dist.,
New Taipei City, Taiwan (R.O.C.)

*② 12.00mm

2

2

Imported by: DIGIMAX S.R.L.
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3

3

4

4

- 1. 材质: 50#压花底变色龙+雾面
- 2. 颜色: 黑底银字
- 3. 公差: ±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

吴江 巷泉包装材料有限公司
FAX:0512-63333167
TEL:0512-63330858

訂單號 (ORDER NUMBER)

核準 (APPROVED BY:)

品名 (DESCRIPTION)

料號 (PART NO.)

單位 (UNIT)

日期 (DATE)

标签

DIGIMAX进口商资料

mm

2023/06/26

繪圖 (DRAWN BY:)

校稿 (CHECKED BY:)

修訂 (REVISION)

主管 (CHARGE)

程文坦

侯恩英

Operating instructions

Safety Instructions:

- Keep the power supply unit, its individual parts and the packaging material away from children.
- Only use the power supply unit indoors. Never operate it in damp rooms or in the rain.
- Never use the power supply unit in areas where there is a risk of explosion.
- Keep the power supply unit away from open flames and hot surfaces.
- Do not expose the power supply unit to extreme temperatures, direct sunlight, strong vibrations, mechanical pressure, moisture, flammable vapours or solvents.
- If the power supply unit moves from a cold to a warm environment, condensation may form which can damage the electronic. Do not connect the power supply unit until it has reached room temperature.
- Do not operate the power supply unit if it shows visible damage, has been stored for a long time under unfavourable conditions or is defective.
- Do not immerse the power supply unit in water or other liquids. Never operate the power supply unit in such a way that it can fall into a tub or sink.
- Never reach for the power supply unit if it has fallen into water. In such a case, disconnect the mains plug immediately.
- Never pull the mains adapter out of the socket by the mains cable; always grasp the mains plug.
- Never use the connection cables as carrying handles.
- Never handle the power supply unit with wet or damp hands. There is a risk of electric shock.
- Also observe the safety instructions and operating instructions of the consumer devices that are connected to the power supply unit.
- When using in commercial facilities, observe the accident prevention regulations of the Association of Industrial Trade Associations for electrical installations and equipment.
- Do not alter or modify the power supply unit

Start up:

- Place the power supply unit on a solid surface that is not sensitive to heat.
- Only connect the power supply unit if the mains voltage of the socket corresponds to the specification on the type plate.
- Only connect the power supply unit to an easily accessible socket so that you can quickly disconnect it from the mains in the event of a fault.
- Lay the connection cables so that they do not become a tripping hazard.
- Do not bend the connection cables and do not lay them over sharp edges.
- The product heats up during operation. Do not cover the power supply unit with objects and ensure sufficient ventilation.

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Istruzioni

Istruzioni di sicurezza:

- Tenere l'alimentatore, tutte le sue singole parti e il materiale di imballaggio lontano dalla portata dei bambini.
- Utilizzare l'alimentatore solo in ambienti chiusi. Non utilizzarlo mai in ambienti umidi o sotto la pioggia.
- Non utilizzare mai l'alimentatore in aree a rischio di esplosione.
- Tenere l'alimentatore lontano da fiamme libere e superfici calde.
- Non esporre l'alimentatore a temperature estreme, luce solare diretta, forti vibrazioni, pressione meccanica, umidità, vapori infiammabili o solventi.
- Se l'alimentatore passa da un ambiente freddo a uno caldo, può formarsi condensa che può danneggiare l'elettronica. Non collegare l'alimentatore fino a quando non ha raggiunto la temperatura ambiente.
- Non utilizzare l'alimentatore se presenta danni visibili, è stato conservato a lungo in condizioni sfavorevoli o è difettoso.
- Non immergere l'alimentatore in acqua o altri liquidi. Non utilizzare mai l'alimentatore in modo tale che possa cadere in una vasca, in un lavandino o in un contenitore con acqua o altri liquidi.
- Non toccare mai l'alimentatore se è caduto in acqua. In tal caso, scollegare immediatamente la spina di rete.
- Non estrarre mai la spina dalla presa di rete tirandola dal cavo; per scollegare l'alimentatore dalla rete afferrare la spina.
- Non utilizzare mai i cavi di collegamento come maniglie per il trasporto.
- Non maneggiare mai l'alimentatore con le mani bagnate o umide. C'è il rischio di scosse elettriche.
- Osservare anche le istruzioni di sicurezza e di funzionamento dei dispositivi collegati all'alimentatore.
- Quando si utilizza in ambiti diversi da quello privato, rispettare le norme in vigore del relativo settore di utilizzo.
- Non alterare o modificare l'alimentatore

Utilizzo:

- Posizionare l'alimentatore su una superficie solida non sensibile al calore.
- Collegare l'alimentatore solo se la tensione di rete della presa corrisponde alle specifiche indicate sulla targhetta.
- Collegare l'alimentatore solo a una presa facilmente accessibile in modo da poterlo scollegare rapidamente dalla rete elettrica in caso di guasto.
- Posizionare i cavi di collegamento in modo che non costituiscano un pericolo di inciampo.
- Non curvare i cavi di collegamento e non appoggiarli su spigoli vivi.
- Il prodotto si riscalda durante il funzionamento. Non coprire l'alimentatore con oggetti e garantire una sufficiente ventilazione.

Importato da:

DIGIMAX S.R.L.
Via dei Laghi, 31
36077 - Altavilla Vicentina (VI)- Italy

Prodotto da:

EDACPOWER Electronics Co., LTD.
11F-2, No. 150, Jian Yi Rd., Chung Ho Dist.,
New Taipei City, Taiwan (R.O.C.)

EA1019HVES(04) Packaging diagram

1. Importer/Manufacturer Info label: 33*12mm

Imported by: DIGIMAX S.R.L.
Via dei Laghi, 31
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Manufacturer: EDACPOWER Electronics Co., LTD.
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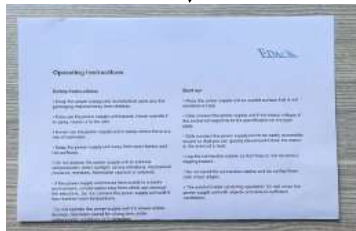
Importer +
Manufacturer label
pasted on the side of
adapter

2. Instruction Manual: A4 Double-sided
(English & Italian version) / Black & White printed

Step 1



Step 2



Step 3



Step 4



Step 5



3. Put the instruction manual in the bottom of gift box
("Operating Instructions" Above)

Gift box size: 88*58*87MM Item No: 294101201



3. Put the Adapter into gift box



Carton size: 520*319*300mm

Item No: 510104043



3 * 8 = 24 PCS each
layer, a total of 3 layers,
total 72 PCS in a carton.



Place the partitions 1
each at the bottom and
top.

