



Switching Power Supply

ART. 13/00287-00

DESCRIPTION: Input:100~240V AC 50/60Hz
Output:12.0VDC 2.0A

MODEL: 18-1202000

COLOR: Black

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1、SCOPE:

The purpose of the document is to specify the functional requirements of a 24.0W switching power supply.

2、INPUT CHARACTERISTICS:

2.1 Input Voltage:

Rated Voltage: 100 ~ 240Vac

Variation Range: 90-264Vac

2.2 Input Frequency:

Rated Frequency: 50/60Hz.

Variation Frequency: 47-63Hz

2.3 Input Current:

0.8 Amps max At any input voltage and rated, DC output rated load.

2.4 Ac Leakage Current:

0.25mA Max.At 264Vac input

2.5 Inrush Current:

80Amps Max. Cold start at 240Vac input, with rated load and 25°C ambient.

3. OUTPUT CHARACTERISTICS:

3.1 Power output

Voltage	Min. Load	Rated. Load	Peak Load	Output power
12.0Vdc	0.00A	2.0A	2.05-4.0A	24.0W

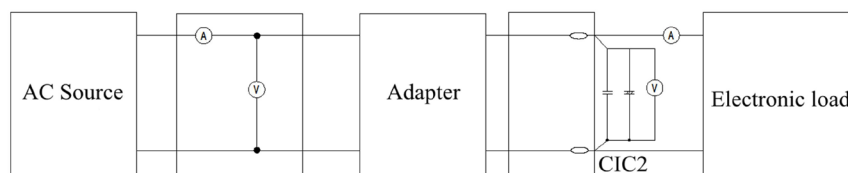
3.2 Combined Load/Line Regulation

Voltage	Min. Load	Rated. Load	Line Regulation	Load Regulation
12.0Vdc	0.00A	2.0A	$\pm 3\%$ 11.65-12.36V	$\pm 5\%$ 11.4-12.6V

3.3 Voltage accuracy: $\pm 5\%$

3.4 Ripple and Noise:

Output Ripple voltage is 150mV peak to peak or less.(100Vac 60Hz/240Vac 50Hz)



Measured methods:

*The ripple is measured from peak to peak with band width limit of 20MHzC1:0.1uF Ceramics

capacitor C2:47uF/50Vluminum capacitor under DC output full load,AC nominal input 25°C ambient temperature).

3.5 Turn on delay time:

3 Second Max.at 100Vac input and output Max.load.

3.6 Rise time:

40 mS Max.at 100Vac input and output Max load.

3.7 Hold up time:

5 mS Min.at 100Vac input and output Max.Load.

3.8 Efficiency:

Energy Star Compliance: Level VI Requirement

Average Efficiency achieve 86.2% 115Vac input.

Average Efficiency achieve 86.2% 230Vac input.

3.9 Standby Power:

Rated Voltage:100~240Vac 0.1W max

4、 PROTECTION FUNCTION:

4.1 Short circuit protection:

The power supply will be auto recovered when short circuit faults remove.

4.2 Over current Protection:

The power supply will be auto recovered when over current faults remove.

4.3 Output voltage achieve over voltage protection point.

Will auto protection without output. Be capable of auto-recovery function

5、 ENVIRONMENTAL REQUIREMET:

5.1 Operating Temperature:

-20°C to 50°C, Full load, Normal operation.

5.2 Storage Temperature:-40°C to 80°C

With package

5.3 Relative Humidity:

25%(0°C)~75% (40°C) RH,72Hrs, Full load, Normal operating.

5.4 Operating altitude -50 TO 4500m AMSL

6. SAFETY AND EMI REQUIREMENT:

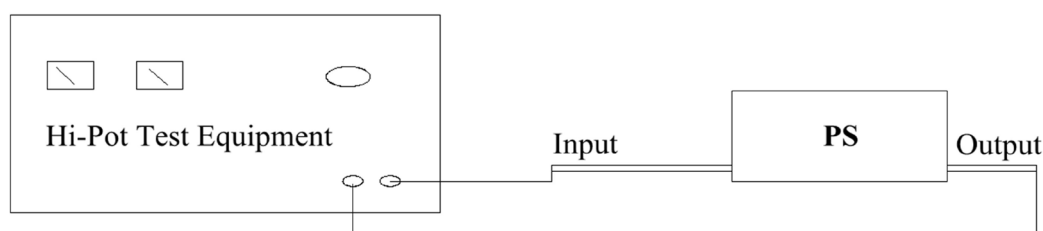
6.1 Regulatory Standards

	Type	Country	Standard		Type	Country	Standard
	UL/FCC	USA	UL62368-1		PSB/CB	SINGAPORE	IEC62368-1
✓	TUV GS	EUROPE	EN62368-1		PSE	JAPAN	J62368-1
	CCC	CHINA	GB4943		KC	KORE	K62368-1
✓	CE	EUROPE	EN62368-1		CSA	CANADIAN	CAS C22.2
	RCM	AUSTRALIA	AS/NZ62368-1				

6.2 Insulation Resistance: 500VDC primary to the secondary input impedance of 100MΩ(Min)

6.3 DIELECTRIC WITHSTAND Hi-Pot:

HI-POT-- primary to secondary 3000Vac 5mA 1min



6.4 EMI STANDARD

Meets the Limits of

EN 55032:2015

EN 61000-3-2:2014

EN 61000-3-3:2013

EN55035:2017

(IEC 61000-4-2:2008,IEC 61000-4-3:2006+A1:2007+A2:2010,IEC 61000-4-4:2012,

IEC 61000-4-5:2005,IEC 61000-4-6:2008,IEC 61000-4-8:2009,IEC 61000-4-11:2004)

7. Reliability Requirements

7.1 Vibration

5 to 500Hz sweep at a shift gears for 20 minute for each of the perpendicular axes X,Y,Z
There into: acceleration frequency for 10 m2/s3 at 5~10Hz;
acceleration frequency for 3 m2/s3 At 10~200Hz;
acceleration frequency for 1 m2/s3 at 200~500Hz

7.2 Drop in

Random surface in all twice, Height: 1.0m, on the cement plane

7.3 STEEL BALL IMPACT

Ball weight: 500g±25g , diameter: 50mm
Top surface & back surface in all once, steel ball @ Height:1.3m free faller,on the cement Plane,
the case can not crack

7.4 Qualification

The MTBF shall be at least 50000hours at 25°C, Full load and input 230Vac

7.5 The lifetime electrolyte capacitor

The lifetime of electrolyte capacitor shall be at least 17520 hours at 25°C,
80% load and Rated input condition

7.6 Case description and flame retardant grade

The case is BLACK.the material is ABS+PC,and the flame retardant grade is UL94V-0

7.7 DC wire and SR test

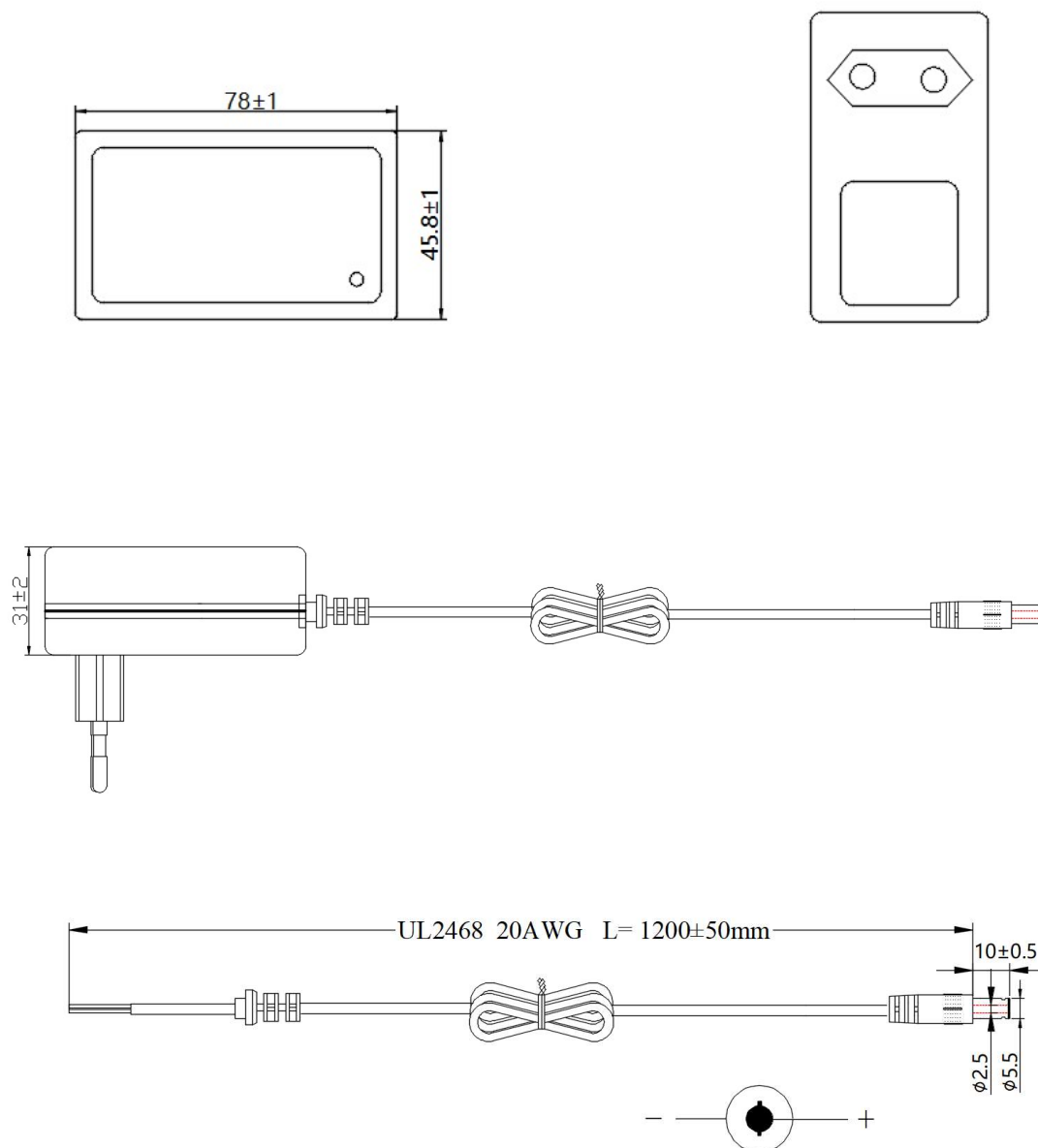
DC wire use 20#2468, Hang 0.3kg weight at the position of below DC wire or SR,rocking angle±90°,
Swaying frequency 40 times perminute,and wobble 3000 times,
The connectivity shall be well,and the Rate of wire breaking shall be less than 30%

7.8 Connector Insertion test

The connector insertion test 5000 times,after the test is completed,functional connectivity is normal
And no loosening

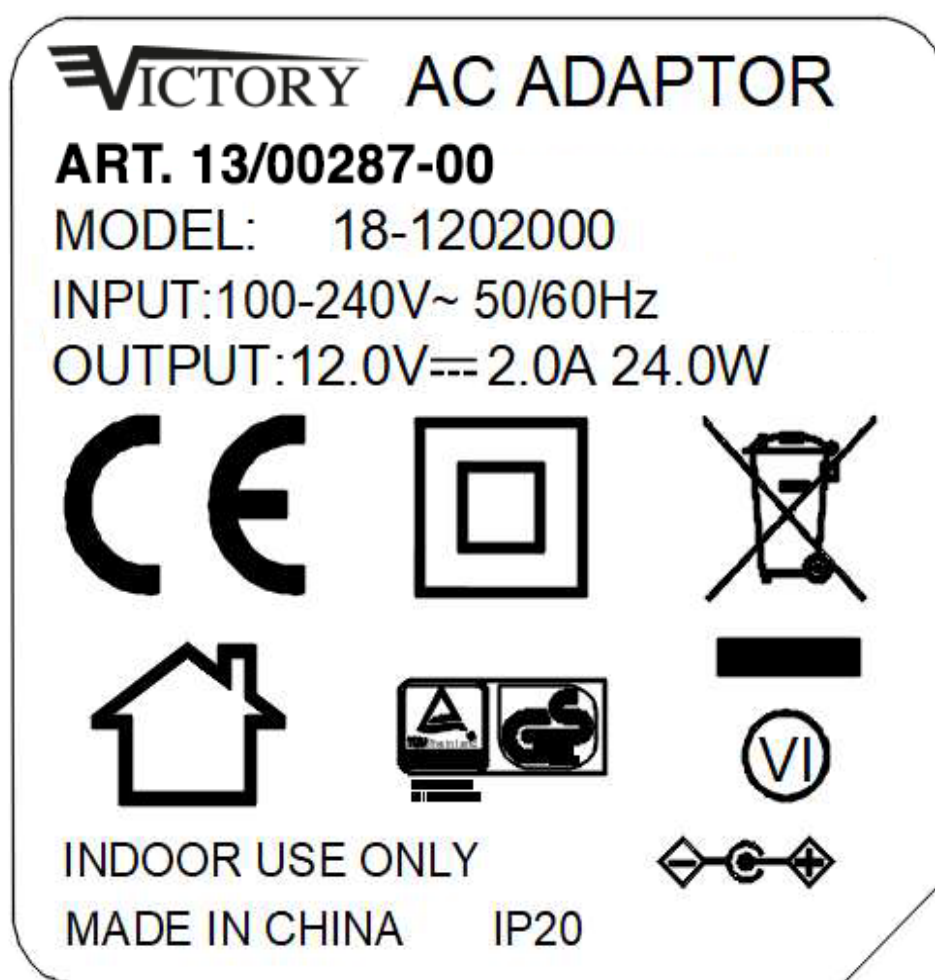
7.9 Temperature delta of the case surface

Temperature delta of the case surface should not exceed 45°C

**8、OUTLINE DIMENSION:**

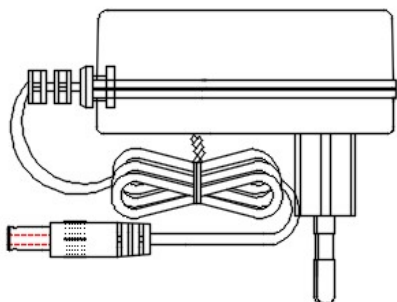
**9. LABEL:**

Laser printing.

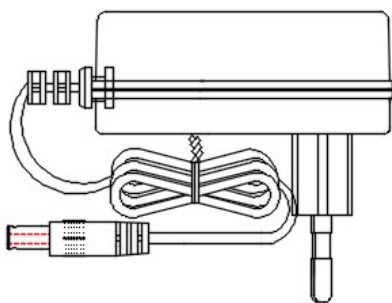
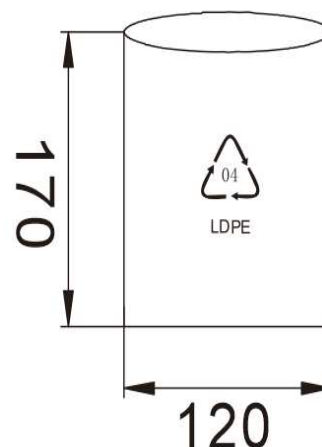


**10、PACKING STEP:**

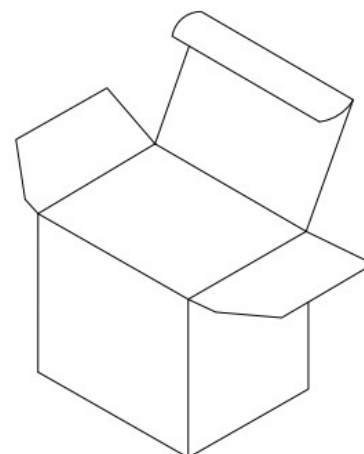
A: Product



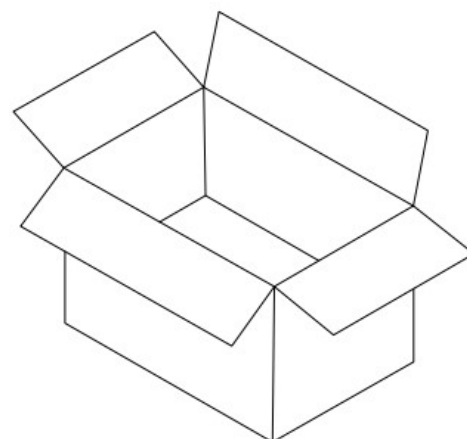
B: PE Bag



C: White box:
Length: 100mm
Width: 58mm
Height: 72mm

**Remarks:**

1. Firstly, put the product into PE bag according to the picture "A/B".
2. After finishing the first step, then put the product into White box according to the picture "C".
3. Then put the product into outer carton.
4. When packing finished, then seals the carton and labels the mark.
5. Through the QA inspection, the products can be shipped



Packaging

Outside box: 525*310*310 mm

**Informazione agli utenti ex art. 26 D.Lgs. 49/2014**

Il simbolo riportato sull'apparecchiatura (Allegato IX D.Lgs. 49/2014) indica che il rifiuto deve essere oggetto di "raccolta separata" e che è stato immesso sul mercato, in Italia, dopo il 31/12/2010. Pertanto, l'utente dovrà conferire (o far conferire) il rifiuto ai centri di raccolta differenziata predisposti dalle amministrazioni locali, oppure consegnarlo al rivenditore contro acquisto di una nuova apparecchiatura di tipo equivalente. L'utente ha dunque un ruolo attivo: la raccolta differenziata del rifiuto e le successive operazioni di trattamento, recupero e smaltimento favoriscono la produzione di apparecchiature con materiali riciclati e limitano gli effetti negativi sull'ambiente e sulla salute eventualmente causati da una gestione impropria del rifiuto. Nel caso di RAEE di piccolissime dimensioni (<25 cm), l'utente ha diritto al conferimento gratuito, senza obbligo di contestuale acquisto, ai distributori al dettaglio la cui superficie di vendita specializzata eccede i 400 mq.

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