

NO: [FJOS2401032](#)客 户: **F26AA0273**
CUSTOMER _____

承 认 书

SPECIFICATION FOR APPROVAL

客户料号: **EP-PS12V6A72WFJ**
CUSTOMER PART NO _____福佳型号: **FJ-SW2017S1206000 (2017S)**
FUJIA PART NO _____品名规格: **12V 6000mA 开关电源**
DESCRIPTION _____编制日期: **2024-05-15 (过六级 品字尾)**
DATE _____ [过 REACH, CA65](#)

制造商 MANUFACTURE			客户承认 CUSTOMER APPROVAL
设计 DESIGN	审核 CHECKED	批准 APPROVED	请客户确认回传我司存档, 谢谢
张雅颖			



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1. 概述/SCOPE

本规格书适合于 [FJ-SW2017S1206000](#) 认证型号的开关电源。

The purpose of the document is to specify the functional requirements of [FJ-SW2017S1206000](#) switching power supply.

2. 输入特性/ INPUT CHARACTERISTICS

2.1 输入电压/Input Voltage

额定输入电压/ Rated Input Voltage: 100-240Vac

输入电压范围/ Input voltage range : 90V—264Vac

2.2 输入频率/Input Frequency

频率范围/ Frequency range: 47-63Hz

额定频率/ Rate Frequency:50/60Hz

2.3 输入电流/Input Current

当输入额定电压带额定负载时，最大的输入交流电流 [1.5A](#)

[1.5A](#) max when input rated voltage and output rated load.

2.4 空载功率 / No-Load power: [0.21W](#) Max 115V/230Vac

2.5 浪涌电流/In-Rush Current

当输出为额定负载，环境温度为 25℃，输入 240Vac 冷启动时的最大浪涌电流为 100A.

100 A mps Max Cold start at 240Vac input ,with rated load and 25℃ ambient.

2.6 AC 漏电流/ AC Leakage Current

当输入电压 240Vac 时，最大的漏电流为 3.5mA.

3.5mA Max .At 240Vac input.

3. 输出特性/OUTPUT CHARACTERISTICS

3.1 测试方法/Method Of Measurement

恒压/Constant voltage 恒流/Constant current 恒定电阻/Constant resistor

选定工作模式，15 分钟后记录测试数据。/Select the working mode and record the test data after 15 minutes.

3.2 额定输出功率/Rated Output Power : [72W](#)

3.3 负载特性/调整率 (Combined Load/Line Regulation)

电压	最小负载	最大负载	负载调整	空载输出电压
Voltage	Min. Load	Max Load	Load Regulation	Unload output voltage
CC+12V	0A	6.0A	11.4V-12.6V	11.4V-12.6V

3.4 纹波和噪音/ Ripple And Noise

纹波与噪声：测量时示波器选用 20MHz 带宽限制, 输出端要并联一颗 0.1uF 的陶瓷电容和一颗 47uF 的电解电容。（在额定输入及输出的条件下检测）

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 47uF electrolysis capacitor. (test under the condition of rated input and rated output)

电压	电流	最大纹波最大噪音
Voltage	current	Ripple And Noise(Max)
<u>+12V</u>	<u>6000mA</u>	150m Vp-p

3.5 效率/Efficiency

3.5.1 VI 级平均工作效率 $\geq 88\%$

当输入 115VAC/230VAC 时, 输出额定负载的 25%,50%,75%,100%4 种情况下平均效率,
 115VAC /230VAC input, output rated load is 25%,50%,75%,100% 4 situations of average efficiency
 备注: 额定负载老化 30 分钟去 DC 头测试>Note: The rated load is aged for 30 minutes before the DC head is tested.

3.5.2 VI 级 10%工作效率参考值/REF 80.01%

当输入 115VAC/230VAC 时,效率参考值是 80.01%.是输出额定负载的 10%.
 115VAC/230VAC input, the reference is 80.01%. Is 10% of the output rated load.

3.6 负载调节率/ Load Regulation

在额定输出负载 20%-100%, 输入电压 100V-240V AC,负载范围内的负载调节小于 $\pm 5\%$ 。
 The rated output load is 20%-100%, the input voltage is 100V-240V AC, and the load adjustment within the load range is less than $\pm 5\%$.

3.7 电压调整率/Line Regulation

在额定负载下测量, 输入电压变化 100V ~ 240V 时, 额定输出电压的线性调节小于 $\pm 0.5\%$ 。
 The line regulation of rated output voltage is less than $\pm 0.5\%$ while measuring at rated load and 100V ~ 240V of input voltage changing.

3.8 容性负载测试/Capacitive Load Test

输入电压 115V-230Vac,80%负载和并联 1000uF 的电容时输出正常启动。
 Input voltage 115V-230Vac,80% load and parallel 1000uF capacitor output starts normally.

3.9 输出瞬态响应/Output Transient Response

额定输入电压 100V-240VAC,输出电流变化以 0.5A/ μ s 斜率从 20%到 80%负载再返回到 20%的负载且动态变化时间为 10mS 时,电源输出电压在应保持在 12V \pm 10% 的范围内。
 When the rated input voltage is 100V-240VAC, the output current changes at a slope of 0.5A/ μ s from 20% to 80% of the load and then back to 20% of the load and the dynamic change time is 10mS, the output voltage of the power supply should be kept in the range of 12V \pm 10%.

3.10 启动延迟时间/ Turn On Delay Time

当输入 100Vac 和输出最大负载时, 最大启动时间为 3S
3 second Max .At 100Vac input and output Max. Load

3.11 保持时间/Hold Up Time

当输入 100Vac 和输出最大负载时, 最小保持时间为 5ms
5ms Min.at100Vac input and output Max .Load.

3.12 上升时间/ Rise Time

当输入 100Vac 和输出最大负载时最大时间为 100ms, 输出电压 10%-90%
100ms Max. At 100Vac input and output Max. Load, Output voltage 10%-90%

3.13 过冲/ Overshoot

在电源开启或关闭的时候, 最大 10%
10% Max. When power supply on or turn off.

3.14 异音噪声/ Heterophonic Noise

在 115V/230Vac 输入, 在标准静音房, 使产品处于工作状态, 将声级计放在 A 计权, 在产品前、后、左、右、上各方各 30cm 处每面测试一次, 取最大值, 全电压全负载范围内, 小于 25dB。/ 115V/230Vac input, In the standard silent room, make the product in working condition, put the sound level meter on the A-meter, test each side at 30cm of the front, back, left, right and upper sides of the product, take the maximum value, full voltage and full load range, less than 25dB

4. 保护功能/ PROTECTION FUNCTION

4.1 短路电路保护/Short Circuit Protection

电源适配器在短路解除后能正常恢复工作。
The Power Supply will be auto recovered when short circuit faults remove.

4.2 过流保护/ Over Current Protection

过流点限制/Over Current Point Limited:是额定电流的 120-200%(input:110-230Vac)
当过电流时,输出将进入打嗝模式,当过流情况解除后,产品将会自动恢复正常
120-200% of rated current (input:110V-230Vac) When the overcurrent, the output will enter the hiccup mode, when the overcurrent situation is relieved, the product will automatically return to normal

4.3 过压保护/Over Voltage Protection

- 当故障情况消除时, 电源应自恢复。/The power supply shall be self-recovering when the fault condition is removed.
- 电源将进入锁存模式, 并且必须关闭和打开交流输入以重新启动电源。/ The power supply will go into latch-off mode, and have to OFF and ON the AC input to restart the power supply.

5. 环境要求/ENVIRONMENTAL REQUIREMENTS

5.1 工作温度/Operating Temperature

0°C -- +40°C, 满载, 正常工作。
0°C to +40°C, Full Load, Normal Operation.

5.2 工作湿度/Relative Humidity

5%(0°C)~90%(40°C), 72 小时, 满载, 正常工作。
5%(0°C)~90%(40°C) 72h Full Load, Normal operating.

5.3 储存温度/Storage Temperature

带外壳 :-20°C -- +70°C
With enclosure:-20°C to+70°C

5.4 储存湿度/Storage Humidity

带外壳 :20% -- 80%

With enclosure:20% to80%

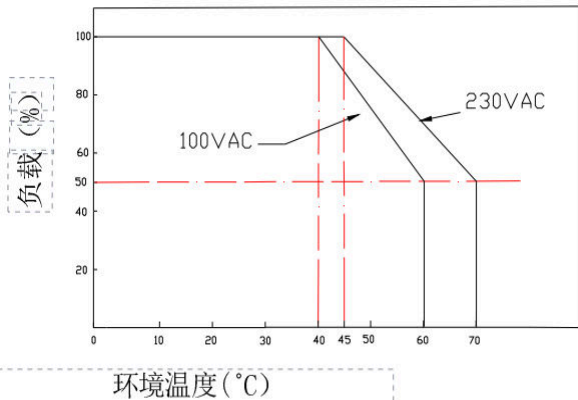
5.5 海拔高度/ALTITUDE : Sea level to 5000m

5.6 防护等级/Class Of Protection

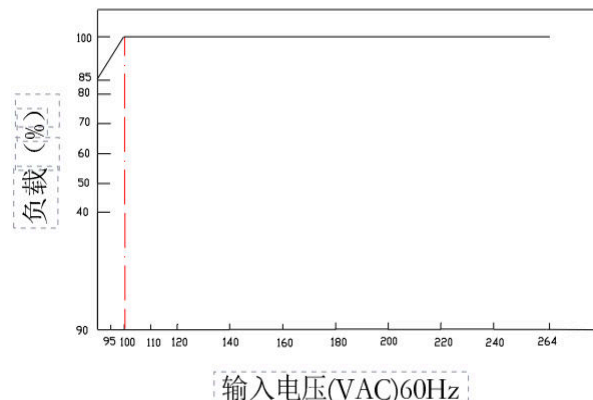
IPX0 IP20 IP44 IP65

5.7 降额曲线 / Derating curve

降额曲线



静态特性曲线



6. 机械特性/ MECHANICAL CHARACTERISTICS

6.1 跌落实验/ Dropping Testing

6.1.1 桌面式的产品跌落高度为: 木地板 0.75 米, 跌落 6 个面, 每个面跌落一次, 不可跌开, 产品功能与结构正常, 不做拉力测试。

Desktop products fall height: wood floor 0.75 meters, fall 6 surfaces, each surface fall once, can not fall open, product function and structure is normal, do not do tension test.

6.1.2 整箱为一角三棱六面, 每面各 1 次, 高度按下列标准测试, 跌落在木板.

- | | | | |
|-----------------|-------------|-----------------|-------------|
| ①.重量: 0-8Kg | 高度:900±50mm | ②.重量: 8.1-18Kg | 高度:700±50mm |
| ③.重量: 18.1-27Kg | 高度:550±50mm | ④.重量: 27.1-45Kg | 高度:400±50mm |

产品从一米高处跌落到木板上无损伤。

The product to be dropped from 1 meter height to a concrete floor no breakage.

6.2 摇摆实验/Cable Flexing Testing

DC 引线吊重 **400 克**, **正负摇摆角 45 度**, 最少能承受 **2000 次**, 弯曲速度每分 40 次, 不会出现损伤。

DC lead lifting weight 400g rams, positive and negative swing Angle 45 degrees, can withstand at least 2000 times, bending speed 40 times per minute, no damage.

6.3 振动/ Vibration

6.3.1 测试标准: 国际电工电子委员会

Operating: IEC 721-3-3 3M3

5~9Hz,A=1.5mm 加速度 (9~200Hz,Acceleration 5m/s)

6.3.2 运输 (Transportation)

IEC 721-3-2 2M2

5~9Hz, A=3.5mm

9~200Hz, 加速度 Acceleration=5 m/s²

200~500Hz, 加速度 acceleration=15 m/s²

6.3.3 轴向振动/ AXES, 10 Cycles Per Axis

在测试过程中不能出现永久性损坏。

No permanent damage occur during testing.

在电源开启和关闭后, 样机能够恢复到最初条件。

The product has to restore to its original situation after power off/on

7. 安全标准/ SAFETY STANDARD

7.1 安全:符合标准 IEC62368-1, EN62368-1, GB4943。

Safety Accord with IEC62368-1, EN62368-1, GB4943。

注: 相应的 AC 插脚对应相应国家的标准, 如 CE 即对应为 EN62368-1

Note: AC pins corresponding corresponding corresponding to national standards, such as the CE that corresponds to EN62368-1。

7.2 高压/ Dielectric Strength Hi-Pot

初级对次级/ Primary to secondary, 2500Vdc (1800Vac) /5mA/3s.

7.3 绝缘阻抗/ Insulation Resistance

初级对次级/ Primary to secondary :100MΩ Min at 500V DC

8. 可靠性/ RELIABILITY

8.1 平均间隔故障时间计算/ MTBF

115V-230Vac电源适配器在25℃环境温度。输入电压 (115VAC或230VAC), 平均间隔故障时间至少 30,000 h.(参考标准:MIL-HDBK-217F)

115V-230Vac power adapter at 25℃ ambient temperature with the input voltage at(115VAC or 230VAC) the average interval failure time of at least 30,000 h.(reference standard License :MIL-HDBK-217F)

8.2 老化/ Burn-In

产品全数在40±5℃的环境中, 输入电压 230VAC, 带100%的额定负载老化4小时。

All products are in an environment of 40±5℃, Input voltage 230VAC, Aging for 4 hours with 100% rated load.

9. EMC 标准/EMC STANDARD

电源适配器符合以下标准:

The power supply shall meet the following standards

	测试项目/Test item	标准/Standard	性能标准/Performance Criterion
电磁兼容发射 Electromagnetic compatibility emission	传导 Conducted emission	EN55032(CISPR32), GB/T 9254.1	Class B
	辐射 Radiated emission	EN55032(CISPR32), GB/T 9254.1	Class B
	谐波电流 Harmonic current	EN61000-3-2, GB 17625.1	Class A
	电压闪变 Voltage flicker	EN61000-3-3 GB 17625.2
电磁兼容抗扰度 Electromagnetic compatibility immunity EN55035(CISPR 35), GB/T 9254.2	测试项目/Test item	标准/Standard	测试条件/Test conditions
	静电放电抗扰度 ESD	EN61000-4-2 GB /T 17626.2	8KV air, 4KV contact
	射频电磁场抗扰度 RF field susceptibility	EN61000-4-3 GB /T 17626.3	Level2, 3V/m
	电快速瞬变脉冲群抗扰度 EFT bursts	EN61000-4-4 GB /T 17626.4	Level2, 1KV
	浪涌抗扰度 Surge susceptibility	EN61000-4-5 GB /T 17626.5	Differential mode +/-1KV Common mode +/-2KV
	传导骚扰抗扰度 Conducted susceptibility	EN61000-4-6 GB /T 17626.6	Level 2, 3V
	磁场抗扰度 Magnetic field immunity	EN61000-4-8 GB /T 17626.8	Level2, 1A/m
	电压暂降/短时中断/电压变 Voltage dips, interruption	EN61000-4-11 GB /T 17626.11	0%UT ; 0.5P, Criterion: B 70%UT; 25P/30P, Criterion: C 0%UT; 250P/300P, Criterion: C

10. 环保要求/ GREEN REQUIREMENTS

10.1 有害物质/ Hazardous Substances

元件和材料的使用符合以下要求:

The components and used materials shall be in compliance with

- 无铅工艺 / Lead free process
- 无卤工艺 / Halogen free process
- 欧盟 RoHS 指令 / EU Directive 2015/863/EU “RoHS”
- 欧盟 WEEE 指令 / EU Directive 2012/19/EU “WEEE”
- REACH MEET/ EU 2006/1907/EC
- CA65

11. 点胶工艺/ FORM-IN-PLACE

- 黑胶/Black Glue
- 白胶/White glue

12. 重量/ WEIGHT

电源适配器单体重量为: 318±20g (Ref)

The weight of the power supply shall be 318±20g (Ref)

13. 重要提醒/ IMPORTANT NOTICE

13.1 请将我们的产品与配套产品终端连接测 EMI OK 后签字.

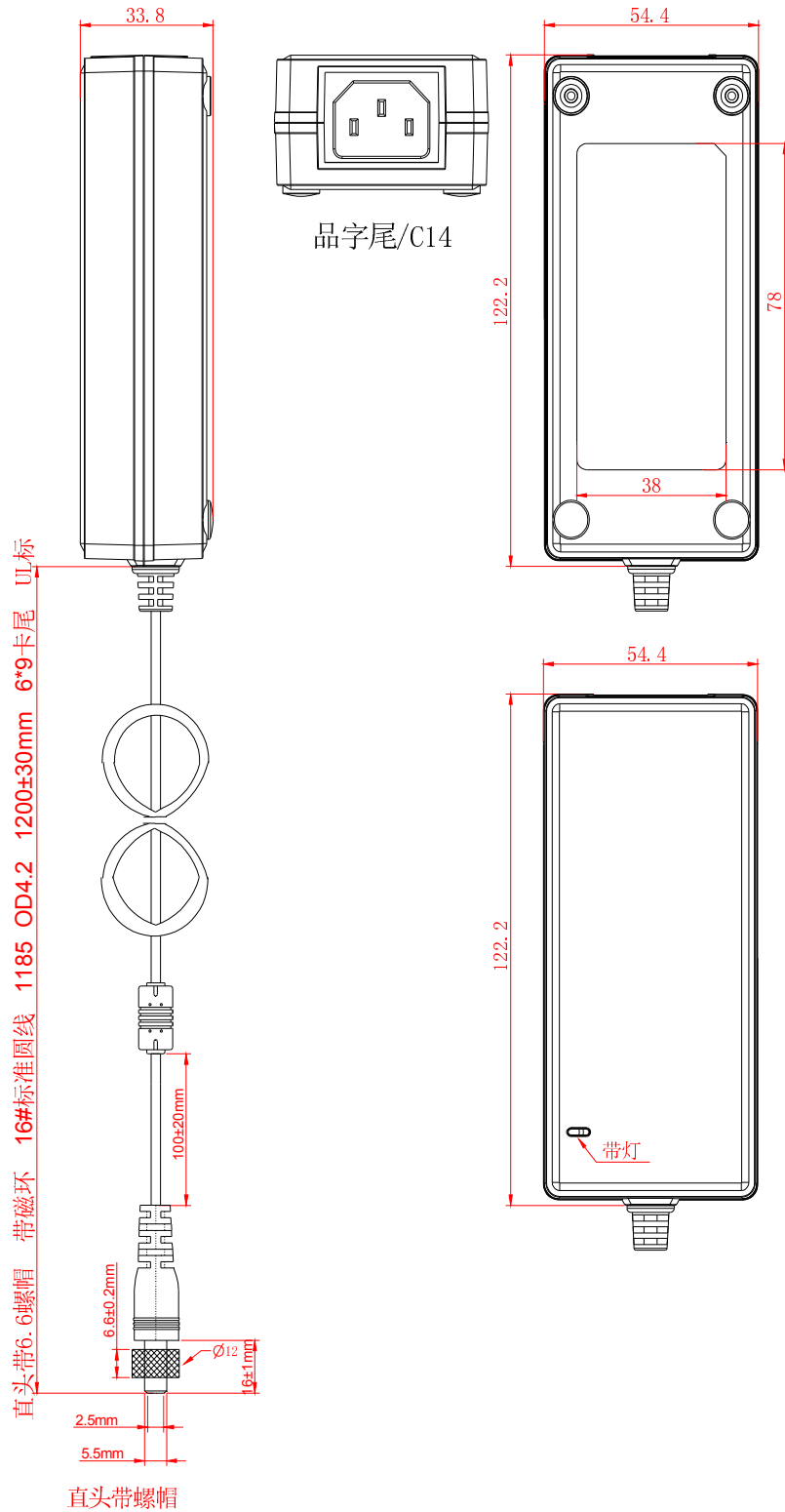
Please make sure the test about EMI with our product and your suitable terminal connection is OK Before you sign signature.

13.2 请签字确认并回传本司./ Please Sign And Return One Copy

13.3 电源存放半年以上需要通电测试并老化 1 小时.

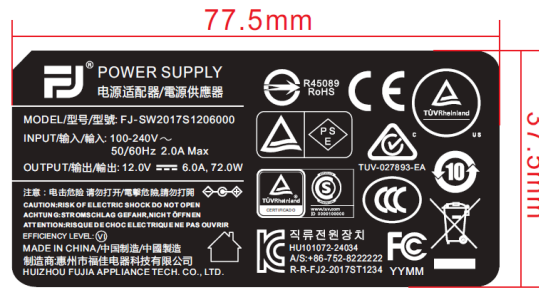
If the power supply is stored for more than half a year, it needs to be powered on for test and aging for 1 hour.

14. 外观图/OUTLOOK DRAWING(公差/Common difference :+/-0.5mm)

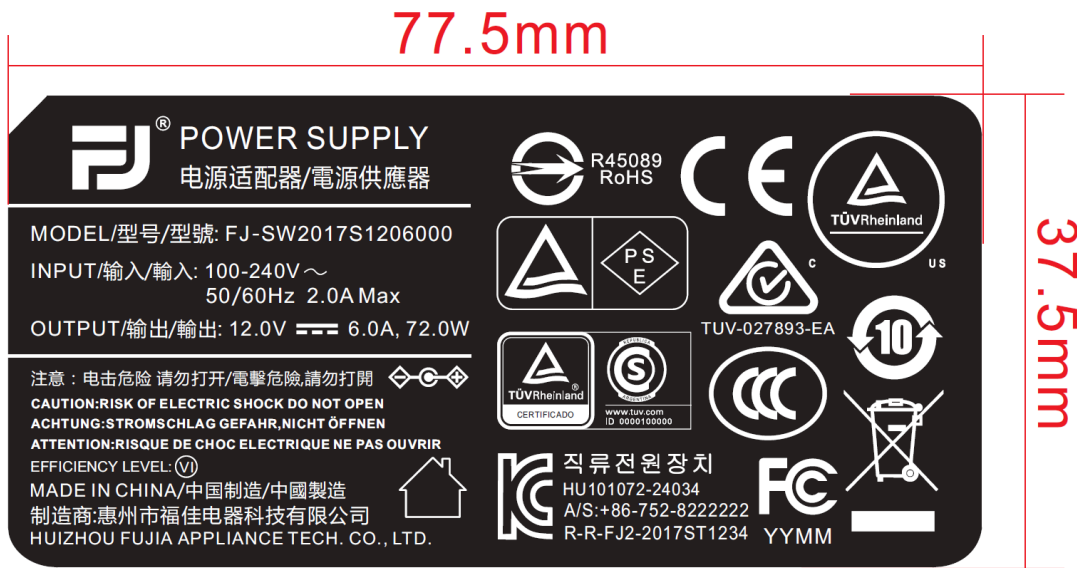


过 REACH,CA65

15. 铭牌/LABEL



比例/Scale: 1:1



比例/Scale: 2:1

注: 铭牌上的“TUV-027893-EA”为SAA证书认证号,随证书更新而同步更新;每次下单时请业务找认证部门确认,必要时修改标贴。

注: 铭牌上的YYMM为生产年、月,如2405代表2024年5月,生产年月随订单变化而变化,每一批都不一样,请找业务确认。

注: 客户下达订单时请提供该批次产品的“欧盟+英国进口商名称及地址”,“日本进口商名称”,“韩国进口商服务电话”以便体现在电源产品铭牌中。

电源适配器的《使用说明书》作为附件一并出厂销售,弃用《使用说明书》将有违反国家相关标准的风险。

注:

1. “CE”“10”标志,最低高度为5mm
2. “WEEE”垃圾桶标志,最低高度为7mm

备注/Note:

1. 材料/Material: 消银龙 100# (过光膜) 过网格/耐高温85°C (过REACH,过CA65)
2. 印刷/Printing: 黑底白字/black ground White character
3. 尺寸/Size: (W)77.5±0.2mm (H)37.5±0.2mm
4. 厚度/Thickness: 0.15mm

16. 包装图示/PACKING

PE 袋:

150mm (开口方向)



尺寸: 150*220 (+5/-2mm) *0.033mm

印刷: 单面印刷红色环保标志和回收标志(加说明书内容) (打孔)

提示: 电源适配器的《使用说明书》作为附件一并出厂销售, 弃用《使用说明书》将有违反国家相关标准的风险。

安全手册/safety manual



bridge
the gap

Safety Manual

DE : Spezifikation

FR : Specification

ES : Especificacion

IT : Specificazioni

CN : 產品規格

SAFETY NOTES

DE : Spezifikation

FR : Specification

ES : Especificacion

IT : Specificazioni

CN : 產品規格

EN

UP

- ▶ DO NOT use the product in the overload condition.
- ▶ DO NOT Wet, incinerate, or disassemble the product.
- ▶ DO NOT crush, throw or shake the product.
- ▶ Unplug the product from wall outlet and disconnect it from your devices before cleaning or when not in use.
- ▶ Keep out of reach of children.
- ▶ Please use the original or certified cables.

◀ 1 ▶

DE

UP

- ▶ Verwenden Sie das Produkt NICHT im Überlast Zustand.
- ▶ Das Produkt NICHT nass machen, verbrennen oder zeneggen.
- ▶ Das Produkt NICHT zerdrücken werfen oder schütteln.
- ▶ Ziehen Sie das Produkt aus der Wandsteckdose und trennen Sie es von ihren Geräten, bevor Sie es reinigen oder wenn Sie es nicht benutzen.
- ▶ Darf nicht in die Hände von Kindern Gelangen.
- ▶ Verwenden Sie bitte das Original Kabel oder zertifizierte kabel.

◀ 2 ▶

FR

UP

- ▶ Veuillez NE PAS utiliser ce produit en cas de surcharge.
- ▶ Veuillez NE PAS mouiller, brûler et démonter le produit.
- ▶ Veuillez NE PAS écraser, jeter ou secouer le produit.
- ▶ Débranchez le produit de la prise murale et débrancher-le de votre appareil connecté avant de le nettoyer ou lorsqu'il n'est pas utilisé.
- ▶ Gardez hors de portée des enfants.
- ▶ Veuillez connecter les câbles d'origine ou certifiés à ce produit.

◀ 3 ▶

ES

UP

- ▶ Para evitar daños al producto y sus dispositivos, NO lo use en condiciones de sobrecarga.
- ▶ No moje, incinere ni desmonte el producto.
- ▶ No aplaste, arroje ni sacuda el producto
- ▶ Desenchufe el producto de la toma de corriente y desenchufe su dispositivo antes de limpiarlo o cuando no esté en uso.
- ▶ Mantenga este producto fuera del alcance de los niños.
- ▶ Utilice los cables originales o certificados

◀ 4 ▶


IT

- ▶ NON utilizzare il prodotto in condizioni di sovraccarico.
- ▶ NON bagnare, incenerire o disassemblare il prodotto.
- ▶ NON schiacciare, lanciare o scuotere il prodotto.
- ▶ Scollegare il prodotto dalla presa a muro e scollegarlo dai dispositivi prima di pulirlo o quando non viene utilizzato.
- ▶ Tenere fuori dalla portata dei bambini
- ▶ Utilizzare i cavi originali o certificate

CN

- ▶ 为避免损坏产品和设备,请勿在过载情况下使用该产品。
- ▶ 请不要打湿、焚烧以及拆解该产品。
- ▶ 请不要碾压、抛掷以及摇晃该产品。
- ▶ 在清洁之前或不使用时,请从墙壁插座上拔下本产品并断开其与设备的连接。
- ▶ 放在儿童接触不到的地方。
- ▶ 请使用原装或正规数据线连接本产品。

IMPORTANT WEEE INFORMATION

	<p>This symbol on the product(s) and / or accompanying documents indicates that, under the new Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), product(s) used electrical and electronic equipment (WEEE) should not be mixed with general household waste. For proper treatment, recovery and recycling, please take this product(s) to designated collection points where it will be accepted free of charge.</p> <p>Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.</p> <p>Please contact your local authority for further details of your nearest designated collection point.</p> <p>Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.</p> <p>For professional users in the European Union If you wish to discard electrical and electronic equipment (EEE), please contact your dealer or supplier for further information.</p> <p>For disposal in countries outside of the European Union This symbol is only valid in the European Union (EU). If you wish to discard this product please contact your local authorities or dealer and ask for the correct method of disposal.</p>
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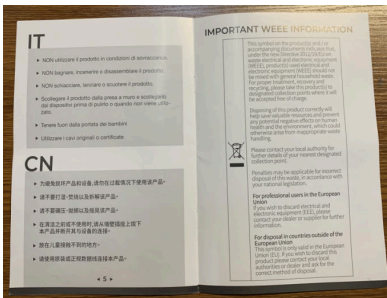
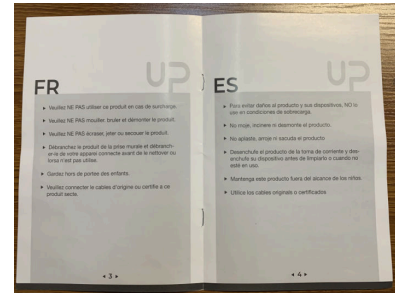
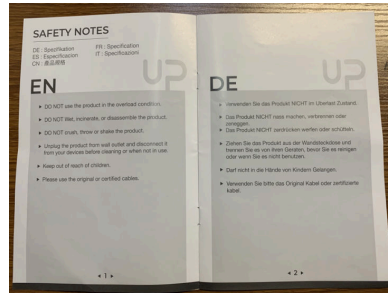
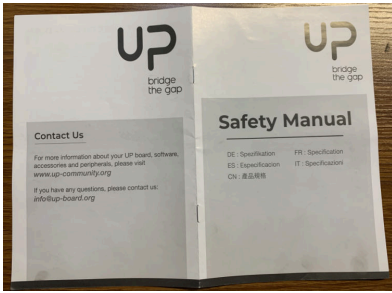


Contact Us

For more information about your UP board, software, accessories and peripherals, please visit www.up-community.org

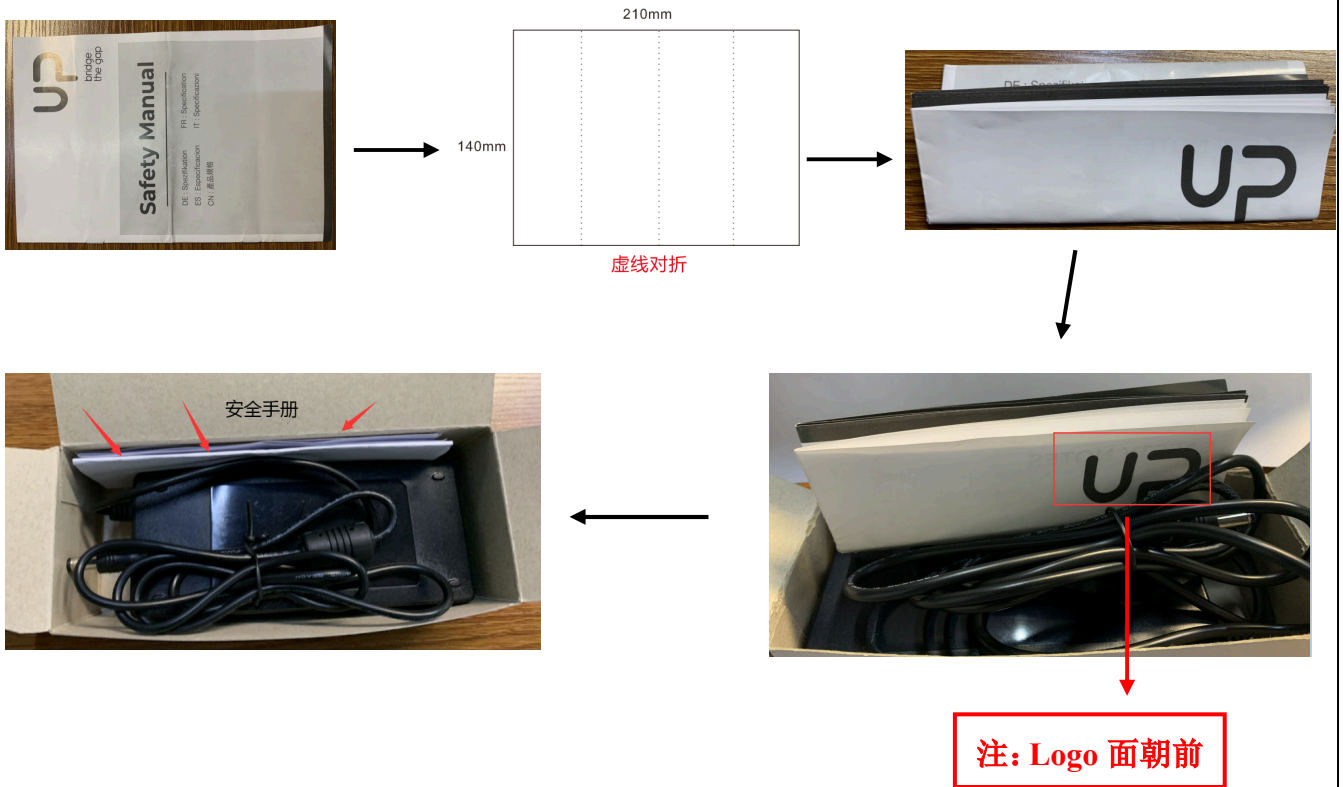
If you have any questions, please contact us: info@up-board.org

安全手册制作要求如下:

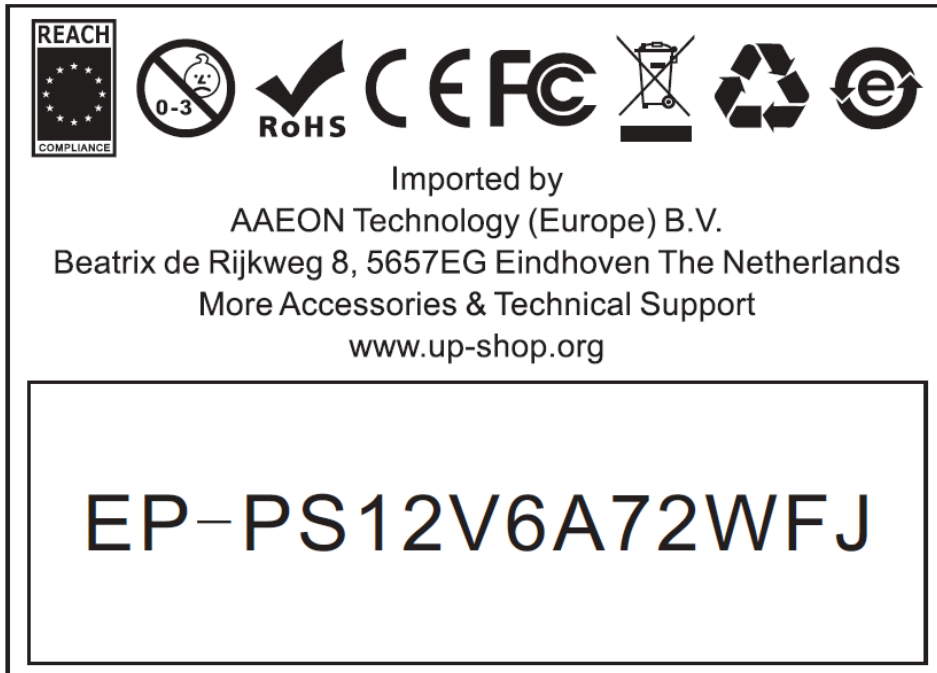


注：打钉对折，效果如图所示

- 注：1.展开尺寸：长 210mm*宽 280mm**
- 2.装钉合起来尺寸：长 210mm*宽 140mm**
- 3.安全手册对折两次，放进白盒侧边。参考如下图**



白盒标贴:



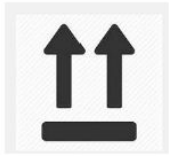
备注

- 1.尺寸/Size:长 63*宽 45mm
- 2.材质/Material: 铜版纸
- 3.印刷/Print: 白底黑字/white ground black character

白盒贴纸贴法如下图: (贴在白盒正面正中间位置)



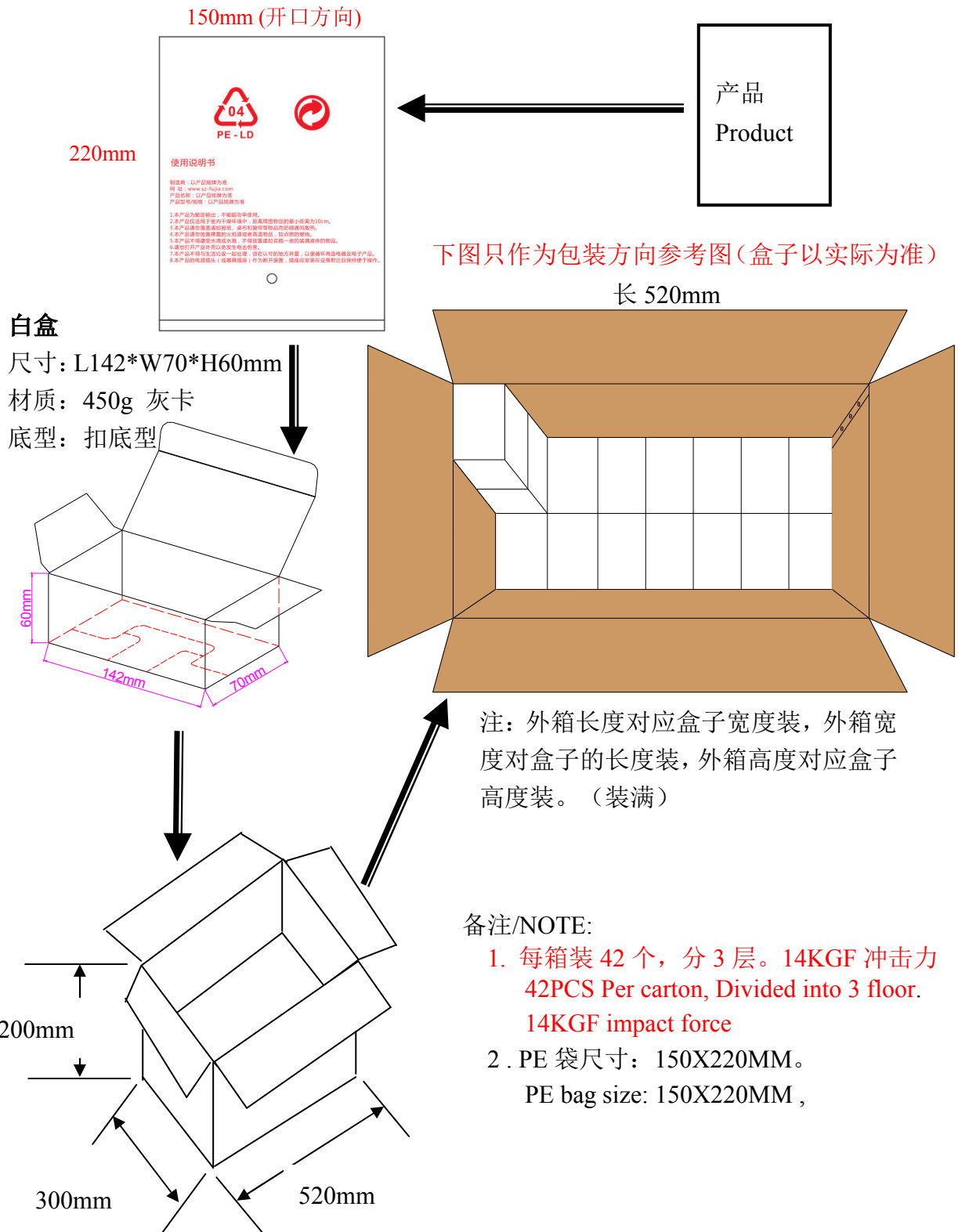
外箱唛头：（印正唛 2 面）



ITEM: (业务提供：随生产订单变化而变化)
QTY: PCS
N.W.: KG (请生产时用大头笔填写)
G.W.: KG (请生产时用大头笔填写)
P/O: (业务提供：随生产订单变化而变化)
Carton: (比如1/28 表示第一箱，如此类推，请生产时用大头笔填写)

MEAS: 52*30*20CM

Made in China



17. 材料清单厂家/ BILL OF MATERIALS MANUFACTURER

关键元器件物料差异表（安规管控元件以相应报告为准） Key Component Material Difference Table (Differences between safety control components shall be based on corresponding reports)				
位置 Location	规格参数 Specifications	主用品牌 Main Brand	备用品牌 Backup Brands	备用品牌 Backup Brands
	FJ-SW2017S 单面板 72W 110.5*45.3*1.6mm UL94-V0 REV:A0	鸿江	利裕达	
Q1	LH65R170 650V 20A 170mΩ DFN8*8	力宏微		
BD1, BD2	MSB30M 3A/1000V MSB	沃尔德		
Q3, Q4	DK5V100R15SL 100V 15mΩ T0-252	东科		
U1	KP2201SGA SOP-8	必易微		
CY1	Y1 222/400VAC 20% Y5V P=10mm 本体8mm (立式编带)	达孚	松田	
RT1	NTC 2.5Ω 5A Φ11mm P=7.5mm 2.5D11 (立式编带) 通用	时恒		
T1	高频变压器 PQ3220 立式6+4 500uH ±5% FJ-SW2017S (T1-12)	格普瑞	福佳	
LF3	T10*6*4 230uH MIN Φ0.8*2*5.5TS 加PCB底板 脚距5*5 脚长3.4±0.3mm	长瑞		
F1	3.15A/250V 慢断有脚 Φ3.6*10	蓝光	旭程	良胜
LF2	SQ1515 20mH 0.15*1.2 pin: 10*8 立式 L=3.4±0.3mm	奕杨	福佳	
LF1	T12*6*4 1.0mH ±30% Φ0.6*2*8.5TS 底座7*4.5mm TIW 并绕	长瑞	福佳	
CX1	0.47uF/275VAC X2 10% 18*14.5*8.5mm P=15±0.3mm L=3.3±0.4mm MPX	松田	达孚	

上述表格元器件可能会因为厂家某些原因问题，型号丝印可能不完全相同，但品牌质量规格同级，不会对产品的性能造成影响。请贵公司知悉并理解。

Components in the table above may have different type codes in screen print due to reasons of manufacturers. The product brand and quality however remain the same grade. No impact on product performance. Please kindly be informed and understand this.

18. 样品测试报告/ SAMPLES TEST REPORT

客 户 Customer	F26AA0273	客户编号 Customer No	FJOS2401032	室 温 Ambient temp	25℃						
产品型号 Model NO	2017S	产品编号 Part No		日 期 Date	2月2日						
输入电压/频率 Input volt/Freq	100-240Vac 50/60HZ	输出电压/电流 Output volt/Amp	12V 6A								
测试内容 Test content		1#样机/Sample NO:		2#样机/Sample NO:		判定 judge PASS or NG					
NO	测试项目 Test Item	测试标准 spec	115Vac	230Vac	115Vac		230Vac				
1	空载电压 Unload voltage	11.4V-12.6V	12.18	12.18	12.20	12.20	PASS				
2	空载纹波与噪声 UnLoad ripple&noise	≤150mV P-P	32	50	57	36	PASS				
3	满载电压 Rated Load output Voltage	11.4V-12.6V	11.93	11.90	11.81	11.80	PASS				
4	满载纹波&噪声 Rated load ripple&noise	≤150mV P-P	139	113	171	125	PASS				
5	额定输入电流 Rated input current	≤1500mA	1265	794	1449	923	PASS				
6	短路保护 Shortcircuit protection	No damage and auto recovered OK/NG	OK	OK	OK	OK	PASS				
7	过流保护 Over current protection	120-200%	9.31	9.56	9.12	9.72	PASS				
8	介电强度测试 Hi-Pot test	AC1.8KV 3S	<5mA	泄漏电流/Leakage current (0.87 mA); 绝缘击穿/insulation breakdown: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG			PASS				
9	绝缘阻抗测试 Insulation resistance	DC500V 5S	>100MΩ	绝缘阻抗/insulation resistance (197 MΩ); 绝缘击穿/insulation breakdown: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG			PASS				
10	输入/Input		输出/Output				能源之星/Energy star				
	电压 Voltage	功率 Pin (W)	负载% Load%	电压 Vout (V)	电流 Iout (A)	功率 Watt (W)	效率 EFF (%)	平均效率 average Eff (%)	能效标准 VI SPEC	空载功耗 Standby Power (W)	
	115Vac	82.05	100%	11.95	6	71.700	87.386	89.358	平均效率 AVG EFF ≥88%	0.02	PASS
		61.04	75%	12.03	4.5	54.135	88.688				
		40.33	50%	12.1	3	36.300	90.007				
		20	25%	12.18	1.5	18.270	91.350				
	230Vac	79.77	100%	11.9	6	71.400	89.507	90.496	空载功耗 Standby Power ≤0.21W	0.04	PASS
		59.88	75%	12	4.5	54.000	90.180				
		39.97	50%	12.16	3	36.480	91.268				
		20.12	25%	12.21	1.5	18.315	91.029				
115Vac	9.33	10%	12.15	0.6	7.290	78.135	REF (%)	80.01%		PASS	
230Vac	9.5	10%	12.16	0.6	7.296	76.800					
11	100V/240V输入时满载开关机测试 Turn on/off test when rated load and input 100V/240Vac		10 times	正常开机 Normal turn on : <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG							PASS
12	115-240V 满载老化/Rated load burn-in test at 115V-240Vac		≥4 hours	无损坏No damage : <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG							PASS
测试/TESTED BY		陈奕煌		核准/CHECKED BY		批准/APPROVAL BY					