

# 承认书



## SPECIFICATION FOR APPROVAL Switching power Supply / 开关电源

客户:

CUSTOMER: J157

产品描述:

DESCRIPTION: Input:100~240V AC 50/60Hz Output:12VDC 3A

机种型号:

OUR MODEL NO: AK36GN-1200300V

样品编号:

日期:

SAMPLE NO: AK18106

DATE: 2015-05-05

产品颜色:

SAMPLE COLOR: Black

White

符合环保项: RoHS

APPROVAL SIGNATURE/客户确认		
核准/APPROVED BY	审核/CHECKED BY	检测/TESTED BY

Manufacturer/制造商		
业务/SALES	核准/APPROVED BY	设计/DESIGNED BY
唐莲萍		

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版本目录/Rev. List			
版本/Rev.	日期/Date	描述/ Description	制订/Design
A0	2015-05-05	新版本/New Rev. 0	Angel

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## 1、描述/ DESCRIPTION:

本规格书适应于 AK36GN-1200300V 型号的开关电源.

The purpose of the document is to specify the functional requirements of a 36W switching power supply.

## 2、输入特性/INPUT CHARACTERISTICS:

### 2.1 输入电压/Input Voltage:

额定电压/Rated Voltage:100~240Vac

调整范围/Variation Range:90-264Vac

### 2.2 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50/60Hz.

调整频率/Variation Frequency:47-63Hz

### 2.3 输入电流/Input Current:

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 1.0A.

1.0Amps max At any input voltage and rated, DC output rated load.

### 2.4 浪涌电流/Inrush Current:

当输出为额定负载,环境温度为 25℃,输入 240Vac 冷态起机时无损坏.

When the output of the rated load, the ambient temperature is 25℃, input from 240Vac cold machine without damage to.

### 2.5 AC 漏电流/Ac Leakage Current:

当输入电压 240Vac 时,最大漏电流为 0.25mA.

0.25mA Max.At240Vac input.

**3、输出特性/OUTPUT CHARACTERISTICS:**

**3.1 输出功率/Power output**

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	峰值功率 Peak	输出功率 Output power
12Vdc	0.01A	3A		36W

**3.2 负载特性,调整率/Combined Load/Line Regulation**

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	线性调整 Line Regulation	负载调整率 Load Regulation
12Vdc	0.01A	3A	±2%	±5%

**3.3 纹波和噪音 Ripple and Noise:**

测试条件:在输入 115/230Vac 和输出最小及最大负载时,使用示波器带宽为 20MHz 连接到适配器的输出端,同时输出端并联一个 47uF 的电解电容和一个 0.1uF 的瓷片电容.

At 115/230Vac input and output Min and Max.Load, the ripple and noise are as follows when measure with Max. Bandwidth of 20MHz and Parallel 47uF/0.1uF,crossed connected at testing point.

电压 Voltage	最大纹波/最大噪音 Ripple and Noise(Max.)
+12Vdc	150mV p-p

**3.4 启动延迟时间/Turn on delay time:**

当输入 230Vac 和输出最大负载时,最大启动时间为 3S.

3Seconds Max.at 230Vac input and output Max.load.

**3.5 上升时间/Rise time:**

当输入 115Vac 和输出最大负载时最大时间为 40 mS.

40 mS Max.at 115Vac input and output Max load.

**3.6 保持时间/Hold up time:**

当输入 115Vac 和输出最大负载时,最小保持时间为 5 mS .

5 mS Min.at 115Vac input and output Max.Load.

**3.7 效率/Efficiency:**

当 115/230Vac 输入电压时, 1/4, 1/2, 3/4 和满载计算平均效率, 最小 84.63%。

84.63% Min , At 115/230Vac input voltage,1/4, 1/2, 3/4 and full load calculation average efficiency

适配器满足能效 V。

Adapter meet efficiency lever V.



**3.8 过冲/Overshoot:**

在电源开启或关闭的时候,最大 15%.

15% Max.When power supply at turn off/on.

**4、保护功能/PROTECTION FUNCTION:**

**4.1 短路测试/Short circuit test:**

该电源供给器在短路解除时能正常工作恢复.

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

**4.2 过流保护/Over current Protection:**

过流故障排除后,电源将自动恢复正常工作.

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

**4.3 过压保护/Over Voltage Protection:**

当输出电压超过额定电压的 150%~180%时,电源将保护,故障排除后能恢复正常工作.

The power supply will auto recovered when faults remove 150%~180%.

**5、环境要求/ENVIRONMENTAL REQUIREMET:**

**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 储藏温度/Storage Temperature:-20°C to 80°C**

带外壳/With package

**5.3 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)RH,72Hrs,Full load, Normal operating.

**5.4 振动/Vibration:**

**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<sup>2</sup>)

**2. 运输/Transportation:**

IEC 721-3-2 2M2

5-9Hz,A=3.5mm

9~200Hz,加速度 Acceleration=5m/S<sup>2</sup>

200~500Hz,加速度 Acceleration=15m/S<sup>2</sup>

**3. 轴向振动/Axes,10 cycles per axis.**

在测试过程中不能出现永久性的损坏.

**No permanent damage may occur during testing.**

在电源开启和关闭后,样机能够恢复到最初条件.

**The SAMPLE has to restore to its original situation after power off/on..**

**5.5 跌落试验/Dropping Packed:**

插墙式跌落高度为 1000mm、桌面式跌落高度为 760mm;

**1000mm for wallmount type and 760mm for desktop type as above described;**

测试台面是厚 13mm 的夹木板, 离地面高 19-20mm

**The horizontal surface consists of hardwood at least 13mm thick, mounted on two layers of plywood each 19mm to 20mm thick, all supported on a concrete or equivalent non-resilient floor.**

**6、安全及 EMI 要求/SAFETY AND EMI REQUIREMENT:**

**6.1 安全:符合标准 EN 60065.**

**Safety: accord with EN 60065.**

**6.2 高压/DIELECTRIC STRENGTH Hi-Pot:**

**初级对次级/Primary to secondary: 3000Vac/10mA/60S or 4242VDC/5mA/60S for type test.**

**6.3 绝缘抗阻/Insulation resistance:**

**初级对次级/Primary to secondary: 20M  $\Omega$  min at 500V DC.**

**6.4 EMI 标准/EMI STANDARD**

**Meets the Limits of/测试符合**

**<1>.EN55022 class B rules**

7、 结构参数/MECHANICAL REQUIREMENT:

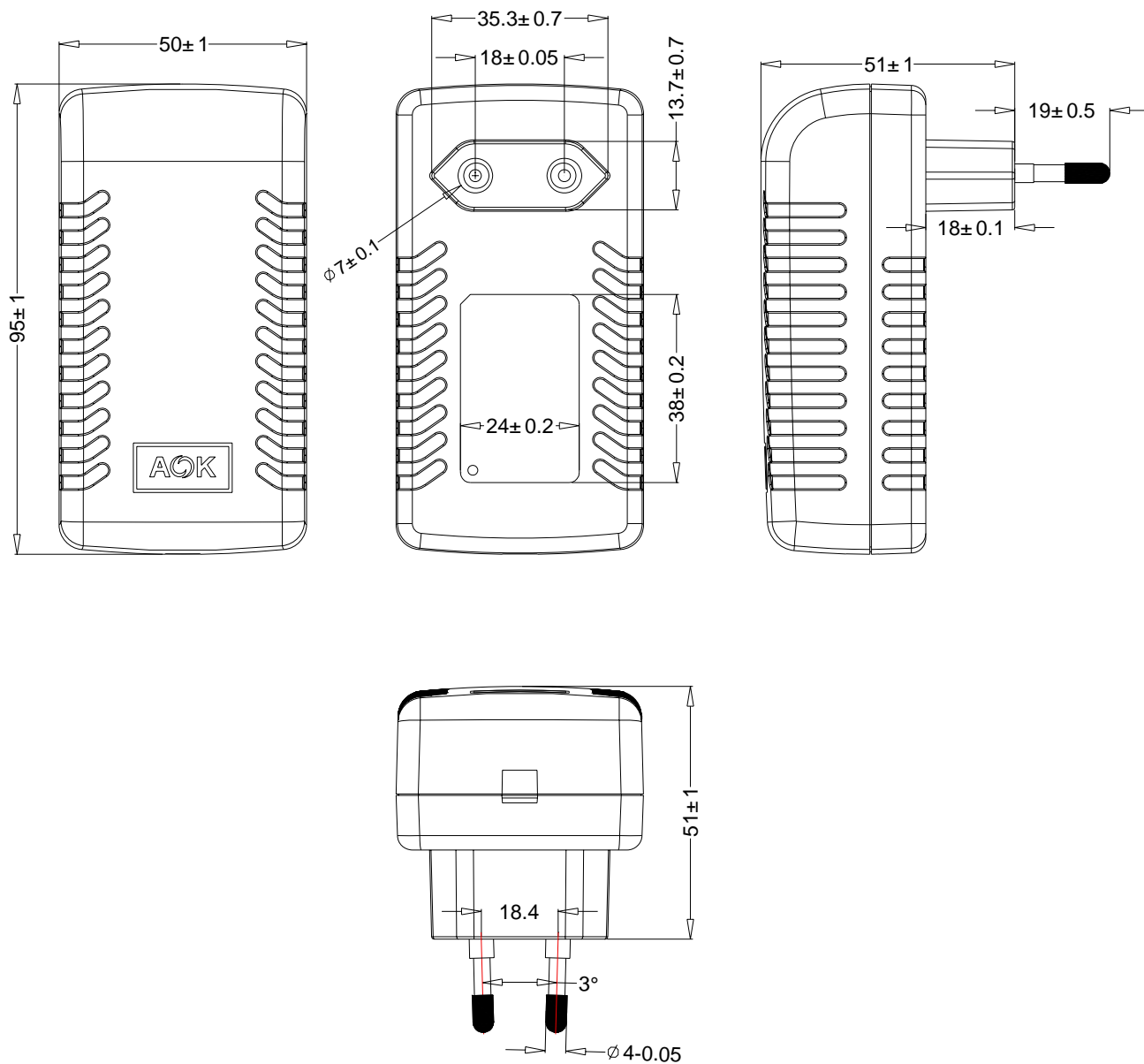
7.1 外壳/Enclosure:

外壳尺寸: L95 x W50 x H51mm

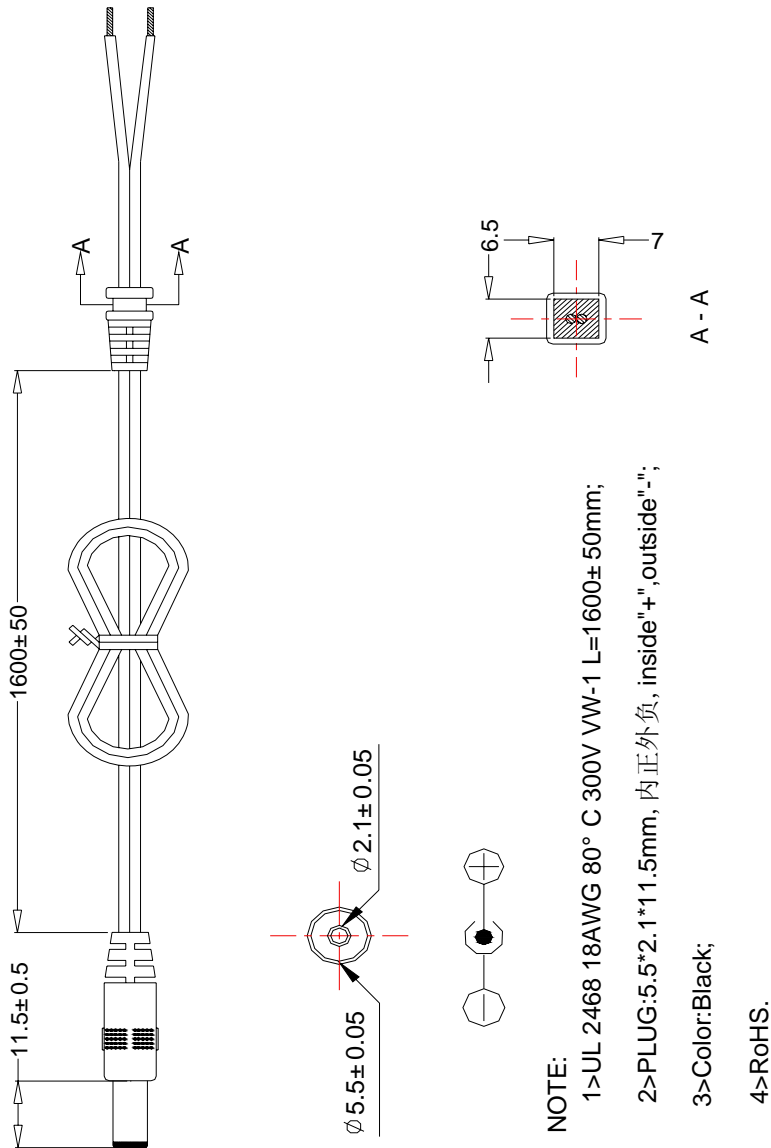
The power supply size: L95 x W50 x H51mm

7.2 输入线 (Input Connector) :

两 Pin EU 插脚/Two pin input plug of EU.

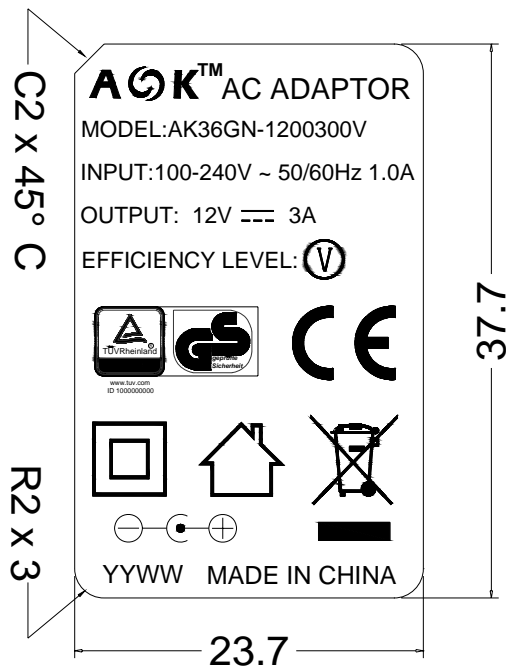


8、线材/CORD:





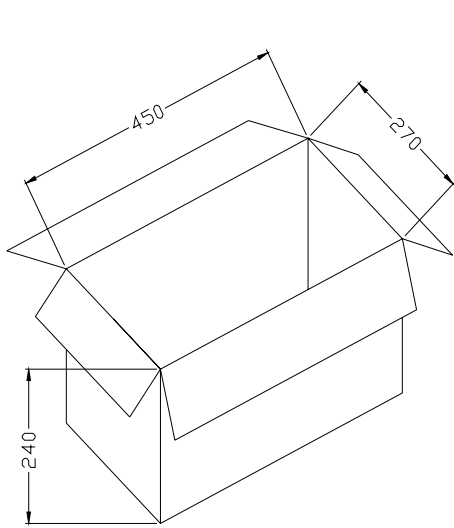
9、铭牌/LABEL:



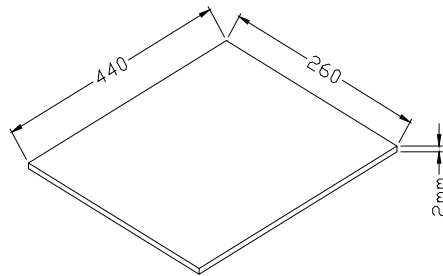
NOTE:

- 1.颜色/Color:黑底白字  
Black ground white character;
- 2.材质/Material: PET+雾面/fog surface;
- 3.厚度/Thickness:0.2mmT;
- 4.误差/Tolerance:+0/-0.2mm;
- 5.环保/RoHS;
- 6.YYWW, YY表示年份, WW表示周数.

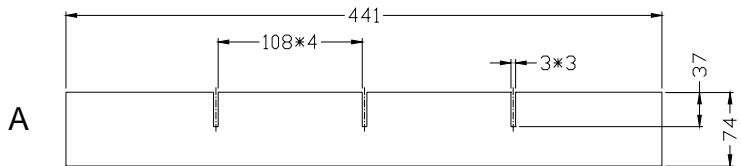
10、包装说明/PACKING:



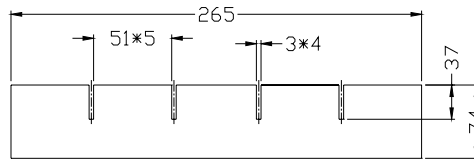
外箱/Outside box



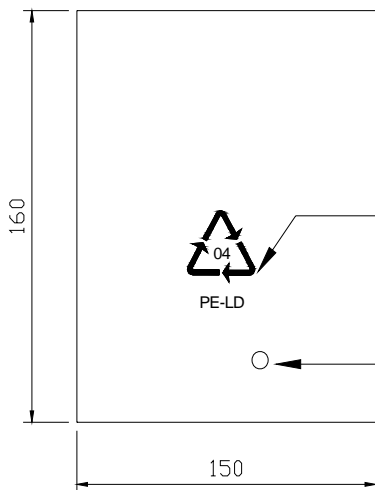
平板/Slab



A



B



绿色字体/  
Green lettering

透气孔  
Breathe freely os

包材/Packaging:

A:L441\*74mm

B:265\*74mm

外箱/Outside box:L450\*W270\*H240mm

平板/Slab:L440\*W260\*2mmT

胶袋/Pe bag:L160\*W150\*0.03mmT

数量/Quantity:60PCS/CTN

**11、 测试报告/ELECTRICAL TEST REPORT:**

No 序号	Test item 测试项目	Test condition 测试条件	Standard spec 标准规格	Test data 测试数据					Unit 单位	Judge 判定 Pass/ Fail
				1	2	3	4	5		
1	Output Voltage 输出电压	Vin100Vac 60Hz Io=0 输入 100Vac 空载	±5%	12.43	12.40				V	Pass
2	Output Voltage 输出电压	Vin100Vac 60Hz Io=Rated Current 输入 100Vac 60Hz 额定电流	±5%	12.11	12.07				V	Pass
3	Average Efficiency 平均效率	Vin 115Vac 60Hz 输入 115Vac 60Hz	84.63%	85.09	85.21				%	Pass
4	Ripple&Noise mVp-p 纹波&杂讯	Vin100Vac 60Hz Full load 输入 100Vac 60Hz 满载	150mVp-p	80	80				mVp-p	Pass
5	Line Regulation 线性调整率	Vin=100V~240V Io=Rated Current 额定电流	±2%	/	/				/	Pass
6	Standby Power 待机功耗	Vin 115Vac 60Hz Io=0 输入 115Vac 60Hz	0.3W max	0.07	0.07				W	Pass
7	Short circuit test 短路测试	Vin100Vac 60Hz 输入 100Vac 空载	No odor smoke fire plastic deformation and excessive heat happen. 无冒烟,起火,外壳 变形及过热现象	OK	OK				/	Pass
8	OCP 过电流保护	Vin100Vac 60Hz 输入 100Vac	100-300%	4.49	4.51				A	Pass
9	Output Voltage 输出电压	Vin240Vac 50Hz Io=0 输入 240Vac 空载	±5%	12.43	12.40				V	Pass
10	Output Voltage 输出电压	Vin240Vac 50Hz Io=Rated Current 输入 240Vac 60Hz 额定电流	±5%	12.11	12.08				V	Pass
11	Average Efficiency 平均效率	Vin230Vac 50Hz 输入 230Vac 50Hz	84.63%	85.19	85.27				%	Pass
12	Ripple & Noise mVp-p 纹波&杂讯	Vin240Vac 50Hz Full load 输入 240Vac 50Hz 额定电流	150mVp-p	60	60				mVp-p	Pass
13	Line Regulation 线性调整率	Vin=100V~240V Io=Rated Current 输入 100V~240V	±2%	/	/				/	Pass
14	Standby Power 待机功耗	Vin230Vac 50Hz Io=0 输入 230V 50Hz	0.3W max	0.14	0.14				W	Pass
15	Short circuit test 短路测试	Vin240Vac 50Hz 输入 240Vac 50Hz	No odor smoke fire plastic deformation and excessive heat happen. 无冒烟,起火,外壳 变形及过热现象	OK	OK				/	Pass
16	OCP 过电流保护	Vin230Vac 50Hz 输入 230Vac 50Hz	100-300%	5.89	5.87				A	Pass
17	Hi-pot test 高压测试	高压/DIELECTRIC STRENGTH Hi-Pot: 初级对次级 /Primary to secondary: 3000Vac/10mA/60S or 4242Vdc/5mA/60S for type test		OK	OK				/	Pass
18	Burn in 老化	Input:220Vac/50Hz Full Load 4hrs 输入 220Vac/50Hz 满载 4 小时		OK	OK				/	Pass
19	Drop test 跌落	Heigh:1m Three*faces(once on each plane) 高 1 米,3 个面,每面 1 次.		OK	OK				/	Pass
REMARK 备注										

# Zertifikat

# Certificate



Zertifikat Nr. Certificate No.  
SI 50269094

Blatt Page  
0001

Ihr Zeichen Client Reference	Unser Zeichen Our Reference	Längstens gültig bis Latest expiration date (day/mo/yr)
174013543	05-BEZ- 16022109 002	03.11.2018

**Genehmigungsinhaber License Holder**  
Shenzhen All-Key Technology  
Co., Ltd.  
3/F., B7 Building  
Xujingchang Industrial Zone  
Xinhe Village, Puyong Town  
Shenzhen, Guangdong  
P.R. China

**Fertigungsstätte Manufacturing Plant**  
Shenzhen All-Key Technology  
Co., Ltd.  
3/F., B7 Building  
Xujingchang Industrial Zone  
Xinhe Village, Puyong Town  
Shenzhen, Guangdong  
P.R. China

### Prüfzeichen Test Mark



Geprüft nach Tested acc. to  
EN 60065:2002+A1+A11+A2+A12  
ZEK 01.4-08/11.11

### STICHWORT

Der Anhang I der Richtlinie 2006/95/EG ist eingehalten. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden.  
Annex I of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.

**Zertifiziertes Produkt (Geräteidentifikation)**  
**Certified Product (Product Identification)**

**Lizenzentgelte - Einheit**  
**License Fee - Unit**

**Netzgerät (AC Adaptor)**

**Serienbezeichnung (Series Type Designation)** : AK360N-xywz

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x = Eine Dreistellige Zahl, welche die Ausgangsspannung in Volt angibt, nach Teilung der Zahl durch 10.  
(Is a 3 digit numerical code, which represents the out voltage in Volt after dividing the number by 10.)  
y = Eine Vierstellige Zahl, welche den Ausgangstrom in A angibt, nach Multiplikation der Zahl mit 100.  
(Is a 4 digit numerical code, which represents the out Current in A after multiplying the number by 100.)

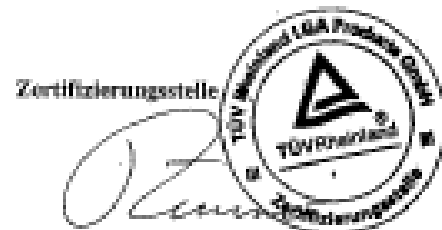
**Nennspannung (Rated Voltage)** : AC 100-240V, 50/60Hz  
**Nennstrom (rated current)** : 1,0A  
**Schutzklasse (Protection Class)**: II  
**Umgebungstemperatur (Ambient Temperature)** : 35°C  
**Fortsetzung auf Blätter (Continuation on pages)** 0002

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Dem Zertifikat liegt unsere Prüf- und Zertifizierungsvereinbarung zugrunde.  
Produkt und Fertigungsstätte erfüllen § 20 und § 21 des Produktsicherheitsgesetzes.  
This certificate is based on our Testing and Certification Agreement.  
Product and production fulfil par § 20 and § 21 of the Product Safety Law.

TÜV Rheinland LGA Products GmbH - Thillystraße 2 - 90431 Nürnberg  
Tel.: (+49)2218 98 - 13 71 e-mail: cert-reality@tgv.rwth-aachen.de  
Fax: (+49)2218 98 - 59 33 http://www.tuv.com/industry

**Ausstellungsdatum Date of Issue** : 04.11.2013 (day/mo/yr)



Dipl.-Ing. (FH) T. Zimmer

# Zertifikat

# Certificate



Zertifikat Nr. Certificate No. Blatt Page  
S1 50269094 0002

Ihr Zeichen Client Reference Unser Zeichen Our Reference Längstens gültig bis Latest expiration date  
174013543 05-BEZ- 16022189 002 03.11.2018 (day/month/yr)

**Genehmigungsinhaber License Holder**  
Shenzhen All-Key Technology  
Co., Ltd.  
3/F., B7 Building  
Xujingchang Industrial Zone  
Xinhe Village, Fuyong Town  
Shenzhen, Guangdong  
P.R. China

**Fertigungsstätte Manufacturing Plant**  
Shenzhen All-Key Technology  
Co., Ltd.  
3/F., B7 Building  
Xujingchang Industrial Zone  
Xinhe Village, Fuyong Town  
Shenzhen, Guangdong  
P.R. China

### Prüfzeichen Test Mark



Geprüft nach Tested acc. to  
EN 60065:2002+A1+A11+A2+A12  
ZBK 01.4-08/11.11

Der Aufbau ist der Richtlinie 1006/2002 zu entnehmen. Das Zertifikat kann im Rahmen der Konformitätserklärung nach Anhang III verwendet werden.  
The design is of the directive 2006/95/EC is complied with. The certificate can be used in connection with the EC declaration of conformity acc. to Annex III.

Zertifiziertes Produkt (Geräteidentifikation)  
Certified Product (Product Identification)

Lizenzentgelte - Einheit  
License Fee - Unit

### Netzgerät (AC Adaptor)

wie Blatt (as page) 0001  
Fortsetzung (Continuation)

Ausgangsspannung  
(Output Voltage)

DC (V)  
3,3 - 5,0  
5,1 - 7,5  
9,0 - 15,0  
15,1 - 19,0  
19,1 - 24,0

Ausgangsstrom  
(Output Current)

IA  
0,01 - 4,00  
0,01 - 4,00  
0,01 - 3,00  
0,01 - 2,28  
0,01 - 1,88

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde.  
Produkt und Fertigungsstätte erfüllen § 20 und § 21 der  
Produktüberwachungsordnung.  
This certificate is based on our Testing and Certification Regulations.  
Product and production facility par § 20 and § 21 of the  
Product Safety Law.

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg  
Tel: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com  
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Zertifizierungsstelle



Dipl.-Ing. (FH) T. Zimmer

Ausstellungsdatum Date of Issue : 04.11.2013 (day/month/yr)

# C E R T I F I C A T E



of Conformity  
Low Voltage Directive 2006/95/EC

Registration No.: AN 50269095 0001

Report No.: 16022189 002

**Holder:** Shenzhen All-Key Technology  
Co., Ltd.  
3/F., B7 Building  
Xujingchang Industrial Zone  
Xinhe Village, Fuyong Town  
Shenzhen, Guangdong  
P.R. China

**Product:** Power Supply  
(AC Adaptor)

**Identification:** Series Type Designation : AK360X-xywz

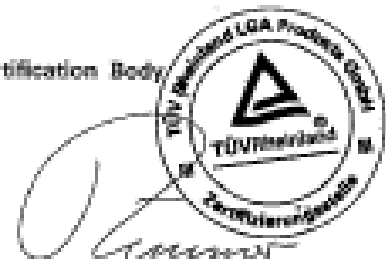
For a detailed listing of the variables x, y, w, z refer to  
license S1 50269094 0001-0002.

Serial No.: n.a.

(Issued in conjunction with the above mentioned  
TÜV Rheinland license.)

This certificate of conformity is based on an evaluation of a sample of the above mentioned product. Technical Report and documentation are at the License Holder's disposal. This is to certify that the tested sample is in conformity with all revision of Annex I of Council Directive 2006/95/EC, in its latest amended version, referred to as the Low Voltage Directive. This certificate does not imply assessment of the series-production of the product and does not permit the use of a TÜV Rheinland mark of conformity. The holder of the certificate is authorized to use this certificate in connection with the EC declaration of conformity according to Annex III of the Directive.

Certification Body



Date 04.11.2013

Dipl.-Ing. (FH) T. Zimmer

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

CE The CE marking may be used if all relevant and effective EC Directives are complied with. CE