SPECIFICATION
产品规格书

客户名称 Customer:

产品名称 Product Name: 开关电源 slim switching power supply

型号规格 Part Number: YY-D-200-5 K 系列产品

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Revision History

修订履历

Revision 版本	Change Item 修改项次	APPROVED BY 批准	Date 修改日期

备注说明:

K 款带 PFC 主动电路　属于 K 系产品

30A(INPUT:100Vac -175Vac)；　40A(INPUT:176Vac -240Vac)

签名:　　日期:　　年　月　日

Content

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1：产品品概述 Product Overview

本产品为 AC-DC 恒压电源供应器，适用于多数工业直流供电设备，如显示屏等…,具有效率高、体积小、稳定以及高可靠性等特点；电源具有各种完善的保护功能，如输出短路、过温保护…

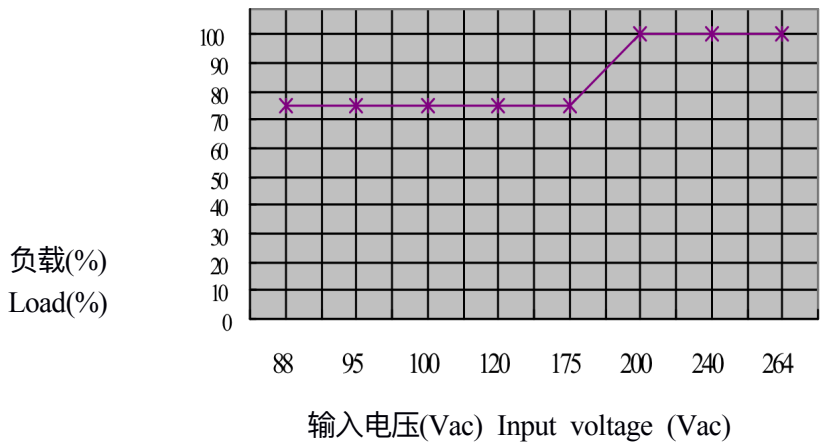
The product which is AC-DC constant voltage power supply can drive the industrial equipment, like LED display. Its characteristics are that it have a high efficiency, small capacity, a stable output and a high reliability. It also have various protection function, such as short circuit protection, over temperature protection and so on.

2：电气规格 Electrical Specification。

2.1 输入特性 Input Electrical Characteristics。

型号 model / 项目 Project	YY-D-200-5 K 系
额定功率 Normal output power	200W
正常输入电压 Normal voltage range	100 Vac ~240Vac
输入电压范围 Intput voltage range	88 Vac ~264Vac
频率范围 Frequency range 最大	47HZ~63HZ
功率因数 PF	≥0.95
漏电流 Leakage Current	≤0.25ma,@220Vac
最大输入电流 Max intput ac current	3A
浪涌电流 Inrush current	冷启动 45A(在 50% Ipeak 下测试 twidth=600us)/230VAC
效率(满载) Efficiency(full load)	90% (@220V)

2.2 工作电压降额曲线 Operate voltage rating Cuidline.



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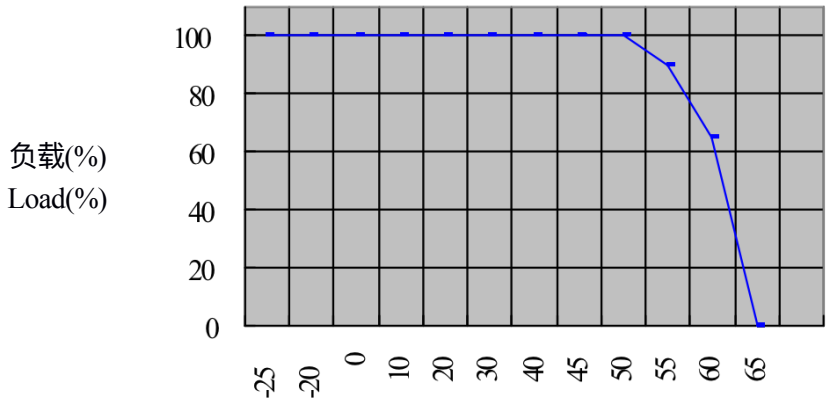
3：输出特性 Output Electrical Characteristics

3.1 工作温度曲线 Operate temperature rating Cuidline.



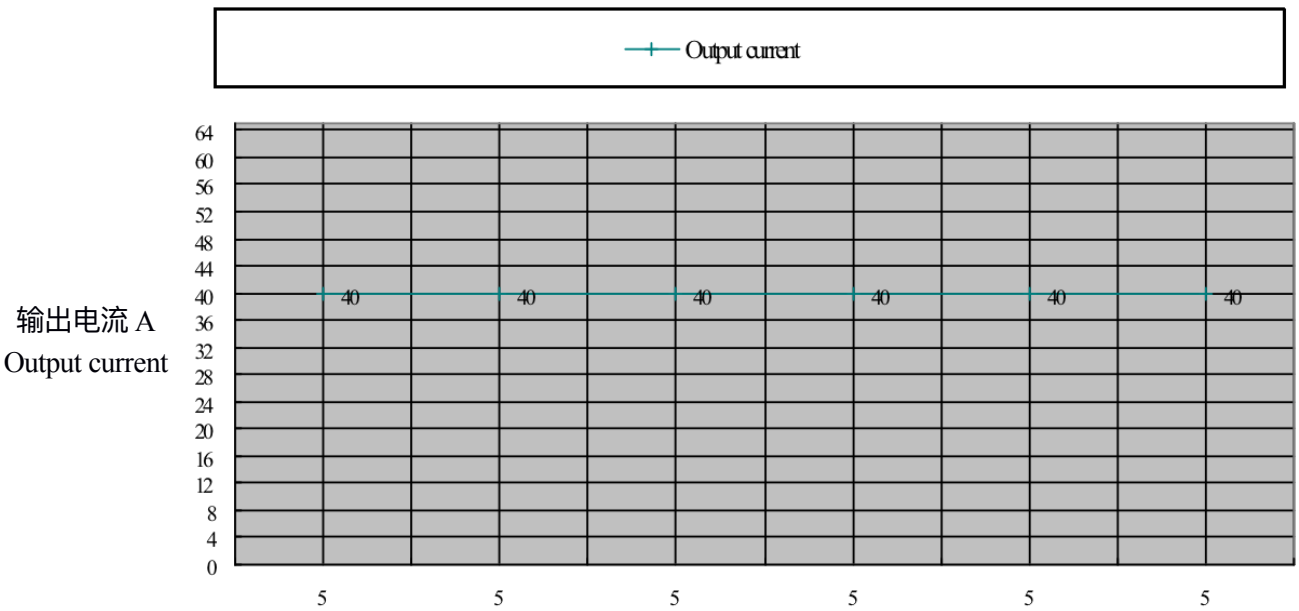
产品工作环境温度(°C)，

Operating environment temperature。

如产品工作长期处在-40 度环境，请特别注明要求。

If the product has long been working at the environment - 40°C, please indicate your special request

3.2 输出电流与电压关系曲线 Output viltage curve



输出电压 Vdc

Output voltage

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3.3 输出电压与电流 Output voltage & Current Regulation

型号 model 项目 Project	YY-D-200-5 K 系
输出电压 Output Voltage	5V
设定精度（空载） Setting	±0.1V
输出额定电流 Output Rated Current	**30A(INPUT:100Vac -175Vac)**； 40A(INPUT:176Vac -240Vac)
峰值电流 Peak Current	**32A(INPUT:100Vac -175Vac)**； 41A(INPUT:176Vac -240Vac)
调整率 Regulation	±3%

3.4 开机延迟时间 Power on delay time

延迟时间 delay time 输出电压 Output Voltage	220Vac Intput @ -40～-5℃	220Vac Intput @ ≥25℃
5 Vdc	≤5S	≤3S
5 Vdc	≤6S	≤3S

3.5 输出动态响应 Output Transient Response

输出 Output Voltage	变化速率 Slew Rate	电压变化范围 Voltage Limit	负载变化 Load Change
5 Vdc	1～1.5A/uS	≤±5%	从最小值到 50%和从 50%到最大值 @Min.to 50% load and 50% to max load
5 Vdc	0.5A～1A/uS	≤±3%	

3.6 输出上升时间 DC output voltage rise time

输出电压 Output Voltage	输入 220Vac 带满载启 220Vac input & full load	标注说明 Note
5 Vdc	≤50mS	上升时间为输出电压从 10%上升到 90%段的时间 The rise time measured is when the output voltages rise from 10% to 90% of specified output voltage Vout observed on the channel waveform.
5 Vdc	≤75mS	

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3.7 输出纹波和噪声 DC Output Ripple & Noise

输出电压 Output Voltage	纹波和噪声 Ripple & Nnoise
5 Vdc	150mVp-p@25°C
	240mVp-p@-25°C

测试说明 Note

A.纹波和噪声测试：纹波和噪声测试带宽设置在 20mHZ.

Ripple & Nnoise test：Ripple & Nnoise bandwidth is set to 20mHZ.

B.测试纹波和噪声时要在输出端并联 1 个 0.1UF 瓷片电容和一个 10UF 电解电容

Use a 0.1uf ceramic capacitor in parallel with a 10uf eaectrolyic capacitor at output connector terminals for ripple & noise measurements.

4：保护功能 Protection

4.1 输出短路保护 DC Output Short Circuit Protection

输出电压 Output Voltage	Comments
5 Vdc	短路时关闭输出，故障排除自恢复工作 Output will be stopped when the circuit is shorted and restart operating after eliminating malfunction

4.2 输出过流保护 DC Output Over Load Protection

输出电压 Output Voltage	Comments
5 Vdc	输出电流超过额定值 105～135%，关闭输出，故障排除后自恢复工作 Output will be stopped when the DC current is more than 105～130% of rated current and restart operating after eliminating malfunction

4.3 过温保护 Over temperature Protection

输出电压 Output Voltage	Comments
5 Vdc	产品温度达到设定值，关闭输出，故障排除后自恢复工作 Output will be stopped when the temperature reaches the set value and restart operating after eliminating malfunction

5：绝缘性能 Isolation

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5.1 绝缘耐压 Dielectric Strength

输入对输出(Input To Output)	50Hz 3000Vac 交流档测试 1 分钟，漏电流≤5mA 。 3000Vac 50HZ 1minute ≤5mA
输入对壳(Input To FG)	50Hz 1500Vac 交流档测试 1 分钟，漏电流≤5mA 。 1500Vac 50HZ 1minute ≤5mA

5.2 绝缘阻抗 Insulation Resistance

输入对输出 Input To Output	直流 500V 测试绝缘阻值最小值不能小于 10MΩ DC 500V 10MΩ Min (at room temperature)
输出对壳 Output To FG	直流 500V 测试绝缘阻值最小值不能小于 10MΩ DC 500V 10MΩ Min (at room temperature)
输入对壳 Input To FG	直流 500V 测试绝缘阻值最小值不能小于 10MΩ DC 500V 10MΩ Min (at room temperature)

6：电磁兼容性 EMC

6.1 电磁干扰 EMI

电源电磁干扰符合以下标准 The power supply shall comply whth the following criterion.

A. 传导干扰度 Conduciton Emission
EN55022,CLASS A

B. 辐射干扰度 Radiated interference
EN55022,CLASS A

说明：若是客户有需要，可以配合在客户的整机上进行更改,达到标准。
Note：Youyi power can word together with customer to modify the power and the system to meet above crierion

6.2 电磁抗扰 EMS

A. 静电抗扰度 ESD
*GB17626.2-1998/IEC61000-4-2 Lever 3 A

A. 浪涌 SURGE
*GB16726.5-1998/IEC61000-4-5 Lever 3 B

C. 电压跌落 DIP
*GB17626.11-1998/IEC61000-4-11

7：工作环境 Environmental Requirement

7.1 环境温度 Temperature

A. 工作温度 Operating:-25°C～+60°C

说明:产品在-40 度低温均能够开机工作;如需求工作长期处在-40 度，请特别注明要求。

Products are able to start and work at -40°C. If the product has long been working at the environment - 40°C, please indicate your special request

B. 存储温度 Storage:-40°Cto+70°C

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7.2 环境湿度 Humidity

A．工作湿度 Operating:从 15RH 到 90RH.
From 15RH to 90RH relative humidity(non-condensing).

B．存储湿度 Operating:从 10RH 到 95RH.
From 5RH to 95RH relative humidity(non-condensing).

7.3 海拔高度 Altitude

Operating:0 to 3000m

8：耐冲击&振动 Shock & Vibration

A. 耐冲击：49m/s2(5G),11ms,once each X,Y and Z axis.
B. 耐振动 10-55Hz,19.6m/s2(2G),20minutes each along X,Y and Z axis.

9：冷却方式 Cooling Method:

自然冷却 Natural cooling

产品依靠其铝合金外壳自然冷却，因此用户安装时应注意避免产品周围 5cm 内不能有遮挡物，以免影响产品散热。

Custom should avoid to place obstacle inside the 5cm of product surrounding in order to push cooling itself, because the product is cooled by natural air through the Aluminum Alloy Cabinet.

特别注意事项 Specific cautions

A. 产品在安装时，安装面可悬空或安装于金属面上，应避免安装面被塑料或木质等非导热材料接触遮挡。

A. The product should be suspended in air or placed on the face of metal when assembled, and be avoided to place on the face of non-conducting heat materials such as, plastics, board and so on.

B. 产品在安装时，模块间距离应控制在大于 5cm，避免相互间影响散热。

B. The space between each module should be exceeded 5cm in order to avoid affecting cooling of each other

10：平均故障间隔时间 MTBF

在满负荷 25°C环境温度的工作情况下，平均故障间隔时间至少 5 万小时.

The MTBF shall be at least 50,000 hours at 25°C,full load and normal input condition.

11：产品重量 Weight

重量 Weight： 345g

12：链接端子定义 Pin Connection

下图是产品俯视图，左边为输入接线端子，右边为输出接线端子.

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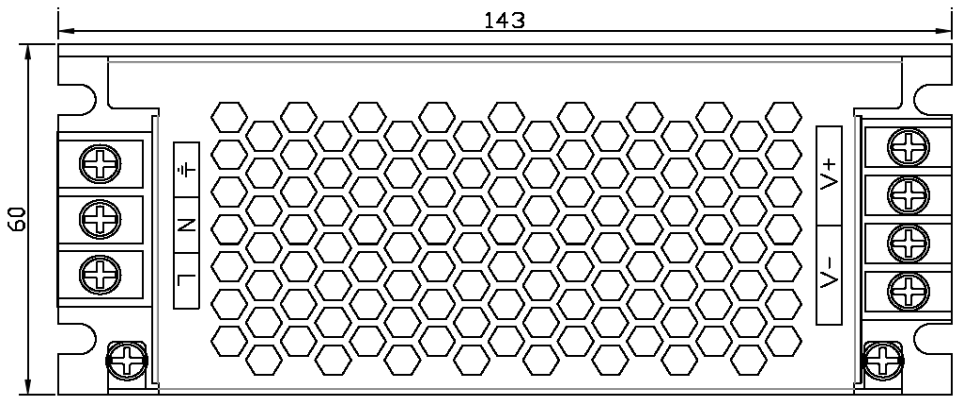
The figure below is vertical view of product, Input 3 pin terminal block is on the left side and Output 4 pin terminal block is on the right side.



Unit:mm

表 1 为交流输入接线端（3PIN，PIN 距 9.5mm）

Table 1 ： Input 3 pin terminal block (pitch 9.5mm)

名称 Name	功能 Function
N	交流输入 N 线 The AC Input Line N
L	交流输入 L 线 The AC Input Line L
⏚	接地线 Earth Line

表 2 为直流输出接线端（4PIN PIN 距 8.25mm）

Table 2 ： Output 4 pin terminal block (pitch 8.25mm)

说明：输出每对端子，其通过最大电流为 20A.切勿超载测试和使用，否则会因过流发热，损坏该端子！

Current through the output terminal block should not exceed 25A, so never overload test and work in that kind of condition. Or the terminal block will be damaged because of high temperature.

名称 Name	功能 Function
V+ V+	直流输出正极 Output DC positive pole
V- V-	直流输出负极 Output DC negative pole

13：电源安装尺寸 Power Supply Mounting dimension

外形尺寸：长×宽×高=143×60×31mm

Outside dimension : L*W*H=143×60×31mm

下图为产品安装孔位图

The figure below is mounting hole position

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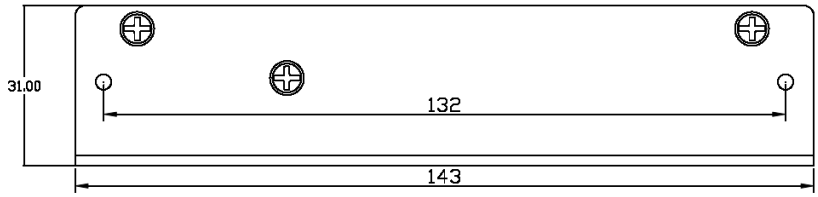

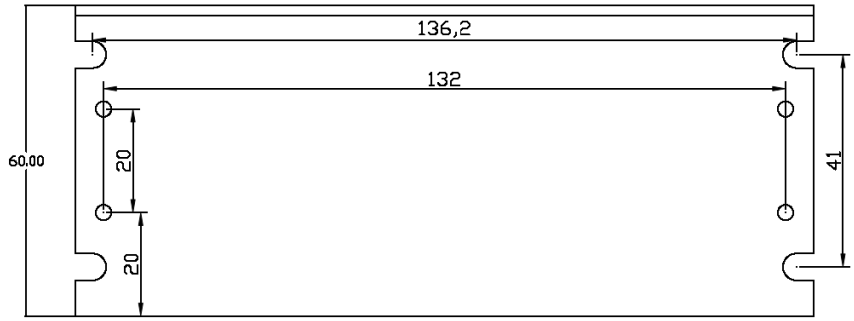

Unit:mm

提示：

方式 1.底壳上 4 个 U 槽应用 M3 螺丝锁在安装架上。

Method 1. M3 screws lock in the mounting rack of 4 U grooves under the cabinet.

安装时，以上两种安装方式选其一，固定螺丝进入电源本体的长度不能超过 3mm，在拧螺丝时，不可太用力，以免滑丝。

One way should be chosen from the two methods, make sure that the part of screw that is in the body of power supply should be less than 3mm and exert not much strength to avoid damaging the screw.

14：使用注意事项 Precautions for use

电源使用须注安全绝缘，各连接线头需要绝缘处理；产品要良好接地，避免用手接触机壳，以免烫伤。

The power supply must work at the condition of insulation and terminal post of cable have to go through the insulation treatment. Besides, make sure the product is grounded well and forbid touching the cabinet in order to avoid scalding hand.

15：包装、运输、贮存 Packaging, Transport, Storage

15.1 包装：包装箱上有产品名称、型号、厂家标识、厂家质量部门的检验合格证、制造日期等；包装箱内有附件清单。

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Packaging: The Product name, Model, Manufacturer mark, Inspection certificate from manufacturers quality department and production data should be recorded in the manifest which is inside the package.

15.2 **运输** ：适应于车、船、飞机运输，运输中应遮蓬、防晒、防水、文明装卸。

Transport: the car transport, shipment, aircraft transport is suitable and make sure that the products are under the condition of sunscreen and waterproof. The products should handle with care when loading or unloading.

15.3 贮存 ：产品未使用时应存放在包装箱内，仓库环境温度为 -10°C—+80°C，相对湿度为≤80%RH，避免存放在具有腐蚀性气体，并且无强烈的机械振动，冲击和强磁场的环境下，包装箱应垫离地至少 25cm 高，在本规定条件下的贮存期一般为 2 年，超过 2 年后应重新进检验。

Storage: It will be better that the product store in the environment temperature between -10°C and +80°C as well as the humidity less than 80%RH. Make sure that there is no corrosive gases in the store environment. Besides, the surrounding must not have the strong mechanical vibration and high-intensity magnetic field. And the case have to be block up at least 25cm away from the earth. The regulation mentioned above will let the products store for 2 years, power supply should be tested after 2 years.

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