



**POWER INVERTER LIMITADA**

Address: Pje. Enrique Campino 763, La Florida Santiago - CHILE

Tel: +56 22 7615261

Website: [www.powerinverter.cl](http://www.powerinverter.cl)

Email: [ventas@powerinverter.cl](mailto:ventas@powerinverter.cl)

**CONVERTER 220VAC TO 48, 24VDC OPTIONAL 1400W OR 1600W**

Model & Name	Specification
YK-AD4830 Switching Power Supply	<ol style="list-style-type: none"><li>1. AC 176V ~ 280V input, 45Hz ~ 63Hz</li><li>2. <b>DC 48V30A output</b></li><li>3. <b>With battery interface</b></li><li>4. Output Voltage Range : 40 ~ 58VDC adjustable</li><li>5. Efficiency : &gt;88%/&gt;87%</li><li>6. Working Frequency: 160KHz</li><li>7. Power grid Regulation: <math>\pm 0.1\%</math>max</li><li>8. Load Regulation: <math>\pm 0.5\%</math>max</li><li>9. 19inch 2U</li></ol>



## YKAD4830 (AC/DC) 48V 30A Switching power supply Specification

### I . Information

YK-AD4830 Switching Mode Power Supply /SMPS is a high efficient, high performance and high reliable telecom power supply. YK-AD4830 Switching Mode Power Supply/SMPS adopts the most advanced PWM technique and reliable circuit topological structure. YK-AD4830 Switching Mode Power Supply/SMPS has many good points, including small volume, light weight, high efficiency, wide working temperature range, strong anti-jamming, wide input range, fast dynamic response, high stability, low noise and ripple, strong protection function etc.

YK-AD4830 Switching Mode Power Supply /SMPS is applied to Computer Numerical Control Machine Tools, data processing and other equipments; They also can be used as the charge/discharge equipment of battery and automatically protect to battery.

### II . Character

- ☆ Wide input voltage range
  - ☆ DC output voltage adjustable
  - ☆ High precision voltage regulation
  - ☆ Low output noise ripple
  - ☆ Intelligent fan
  - ☆ Strong protection function
    - Limiting Output Power Protection
    - Over current and Short-circuit Protection
    - Input Over voltage and Under voltage Protection
    - Output over voltage protection
    - Output limiting current
    - protection Over temperature
    - protection
  - ☆ High efficiency, small volume and light weight ☆19
- inch rack mounting and stand-alone available

### III . Specification

Item	Performance Parameter	Test Condition
Input Voltage	AC:220V	
Input Voltage Range	AC:176V~280V	Output Full-load
Start up Surge	<12A	Output Full-load
Input Current	8A	Output Full-load ,Input220V

<b>Output Float Charging Voltage</b>	53.5V	Factory Settings
<b>Output Equal Charging Voltage</b>	56.5V	Factory Settings
<b>Output Voltage Range</b>	48V: 40~58VDC Adjustable	59.0V over voltage protection, need to restart
<b>Output Current</b>	30A	Output Limiting Current

		(101%-105%)
<b>Power Grid Regulation</b>	±0.1%max	Output zero load to full load
<b>Load Regulation</b>	±0.5%max	Output zero load to full load
<b>Dynamic Response</b>	100usmax	20%~100%load
<b>Output Phone Constant Weight Noise</b>	<2mV	Noise Meter
<b>Output Peak Noise</b>	≤200mV	0~20MHz
<b>Efficiency</b>	>88%/>87%	
<b>Working Frequency</b>	160KHz	
<b>Start up Delay Time</b>	≤5S	
<b>Hold Time</b>	≥20mS	
<b>Equalized-current Deviation</b>	<5%	<2A
<b>Temperature Coefficient</b>	0.02%℃	
<b>Working Temperature</b>	-10℃~+45℃	85℃ over temperature protection, can restore
<b>Storage Temperature</b>	-40℃~+85℃	
<b>Humidity</b>	5%~95%RH	Without Condensing
<b>Insulating Strength</b>	Leakage Current<30mA	50Hz2000V/500V/1min
<b>Insulating Resistance</b>	>10MΩ	DC 1000V
<b>External Dimension</b>	Rack Mount Type: 483*88*300mm Vertical Type: 106*255*365mm	Width*Depth*Height
<b>Weight</b>	7.5kg	

#### IV . Switching DC Power Supply FAQ

**Question1: Does the same specification of the switching power supply can be Parallel used with two or more units?**

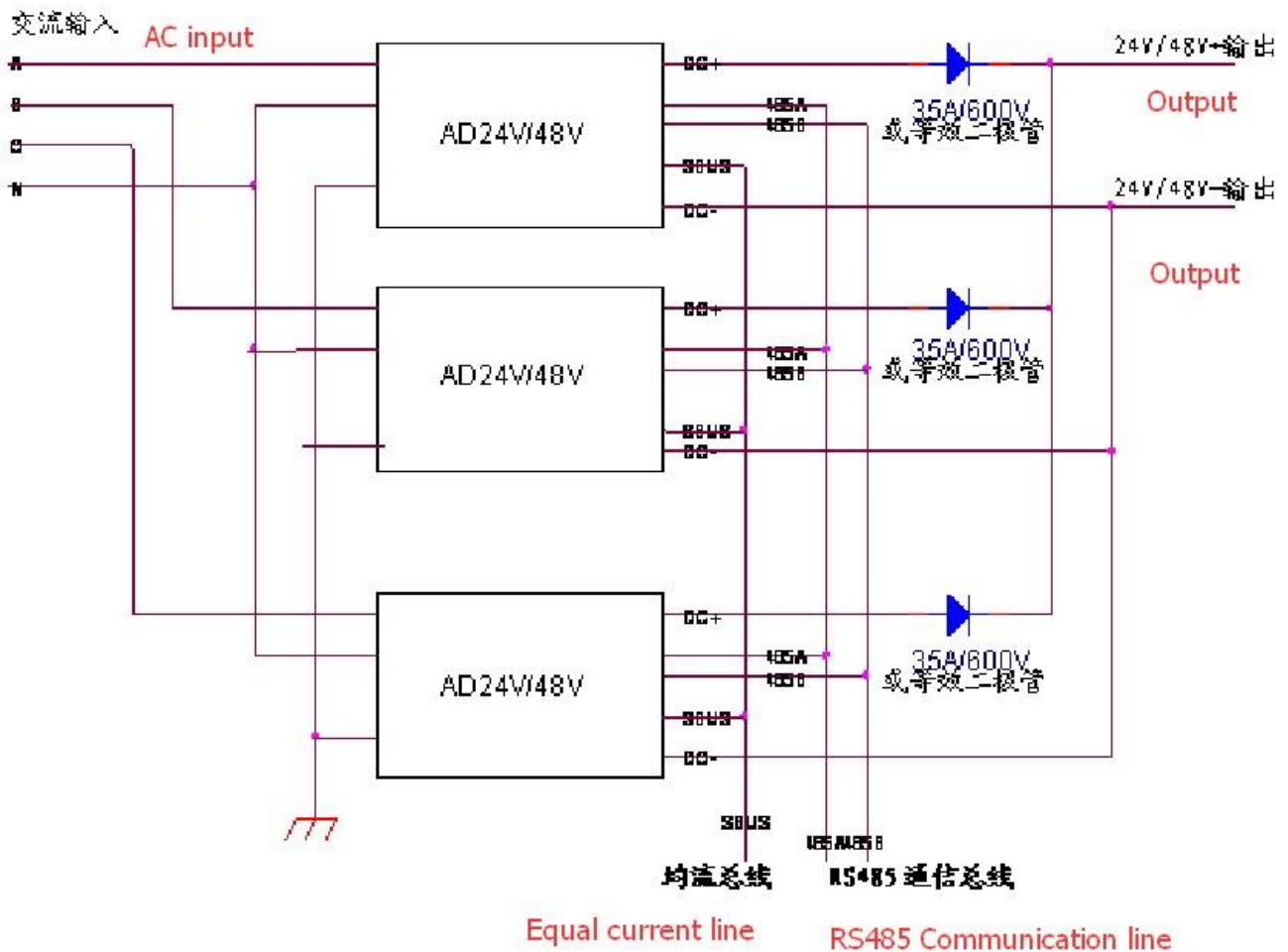
**Answer:**

- Yes
- All of our switching power supply can support parallel use.

**Question 2: How to connect if parallel use?**

**Answer:**

- Please tell the sales before putting the order if need parallel use.
- There is a PCIP port on the back of the device, connect two or more PCIP ports together with line, all the output positive electrodes connection and then connect to the load of positive electrode, all the output negative electrodes connection and then connect to the load of negative electrode.
- As following showing



**Question 3: How many units can be parallel used of switching power supply?**

**Answer:**

- It can support not more than 15 units for parallel use.
- But generally speaking, we advise not more than 3 units for parallel use. If need parallel use more than 3 units, we advise you buy power system

**Question 4: What is the characteristic of switching power supply?**

**Answer**

- Wide input range
- overload, overcurrent, overtemperature, overvoltage , under voltage short circuit protection
- The DC output voltage can be adjusted continuously
- With the battery charge and discharge interface

**Question 5: What is the difference between switching power supply with battery interface and without.**

**Answer**

- They have the same appearance
- There is add a one circuit board in the power box if with battery interface

**Question 6: Why producing a large surge when power on the switching power supply?**

**Answer**

Because the surge current is very large, it may damage the rectifier tube and other devices, so surge current need to be limited.

**Question 7: Does the output voltage is adjustable of switching power supply? Answer:**

- Yes.
- The output voltage range for 24Vdc is 19 ~ 30VDC
- The output voltage range for 48Vdc is 40 ~ 58VDC

**Question 8: When the output voltage exceeds the adjustable voltage range , does power supply can continue to work? Answer**

- No.
- For example: 48VDC switching power supply, the range of output voltage is 40-58VDC, if over 59V, the machine will start over-voltage protection function, and will lock automatically , after reboot can Continue to use

**Question 9: The rack mount type switching power supply is also called rectifier module. What is the difference f or rectifier module between in switching power supply and in power system ?**

**Answer:**

- Rack mount type switching power supply is a whole module,it can use alone.
- But the rectifier module in power system is a part for system,it can't use alone, it just can use after forming a system with monitor module and DC distribution unit

**Question 10: What information does the switching power supply mainly display with LCD screen ? Answer:**

- Just can display voltage and current
- The voltage and current can't display at the same time, and display through switch.

**Question 11: What is the charging process of the switching power supply Answer:**

- Firstly it start charging the battery in state of constant current, when the voltage rises to the Equal Charging
- Voltage., Will transfer automatically to charge the battery with constant voltage.
- When the battery is filled gradually, charging current will automatically go down, down to the 1 / 5 of rated charging current will automatically switch to float voltage to charge the battery until full.

**Question 12: The front panel 2U switching power supply has a dial switch of Equal charging and float charging , what is the function of this switch?**



**Answer:**

- If the switch adjust to Automatic side , when charging for battery ,it will switch to equal charge and float charge automatically.
- If a manual adjust to Manual side, it need adjust the equal charging and float charging by manual adjustment
- When customer need the battery full fast, will choose the manual.

**Question 13: What is the function of the current file 1A to 9A in the back panel of Rack mount type switch power supply ?**

**Answer:**

- It can set charging current here.
- You can choose charging current according to actual use.
- Generally, Charge current is 10% of battery capacity. For example :100AH battery, the charging current is recommended to set up to 10A

**Question 14: Does the equal and float charging can be switched automatically?**

**Answer:**

- Yes, there are Manual switch and automatic switch function.

- When the battery charging current is over than 50% of the limiting current set, module switch to equal charging state automatically ,when the charging current decline to less the 40% of the limiting current set , module switch to floating charge state automatically.

**Question 15: What is the rated value of factory setting for equal and float charging of 24VDC, 48VDC switching power supply? Answer:**

- Switching power supply - 24VDC. Equal Charging voltage is 56.5V, the float charging voltage is 53.5V
- Switching power supply - 48VDC. Equal Charging voltage is 28.5V. The float charging voltage is 27V

**Question 16: What the specification can be customized of 1U rack mount type? And what about 2U? Answer:**

- 1U rack Mount type can customize: 48V:10A 24V:10A 20A
- 2U rack Mount type can customize: 48V : 15A/20A/25A/30A, 24VDC:30A/40A/50A

**Question 17: What is the warning value for battery undervoltage , and protection value for battery undervoltage of 24VDC and 48VDC battery?**

**Answer:**

- Warning value for battery undervoltage  
48V : 46.0V±0.5V, 24V : 23.0V±0.5V
- protection value for battery undervoltage  
48V : 42.0±0.5V, 24V : 21.0±0.5V

**Question 18: What is the work frequency of switching power supply?**

**Answer:**

- The work frequency : 160KHz

**Question 19: What is Switching mode power supply?**

**Answer:**

Switching power supply, is a high frequency power conversion device. Its function is to convert a Quasi voltage through different forms of schema conversion to the voltage and current required by the user

**Question 20 : What is the application switching mode power supply?**

- Switching power supply widely used in
- industrial automation control, military equipment, scientific research equipment, LED lighting, industrial equipment, communications equipment, power equipment, equipment, medical equipment, semiconductor refrigeration system, air purifier, electronic refrigerator, LED, LED, communication equipment, audio and video products, security monitoring, computer chassis, digital products and equipment, and other fields.

**Question 21: What is the max output current of our switching power supply can make?**

**Answer :**

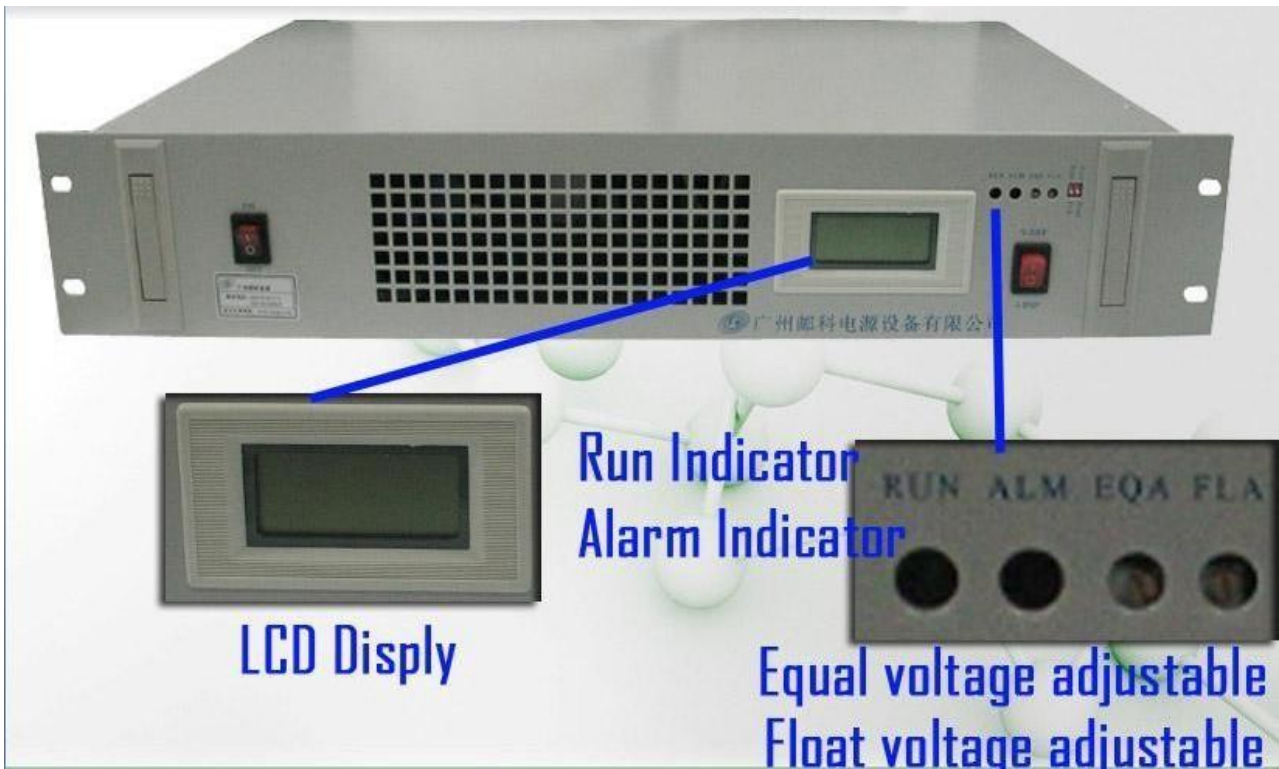
50A

**Question 22: Can switching power supply add battery interface? Answer :** ● Yes.

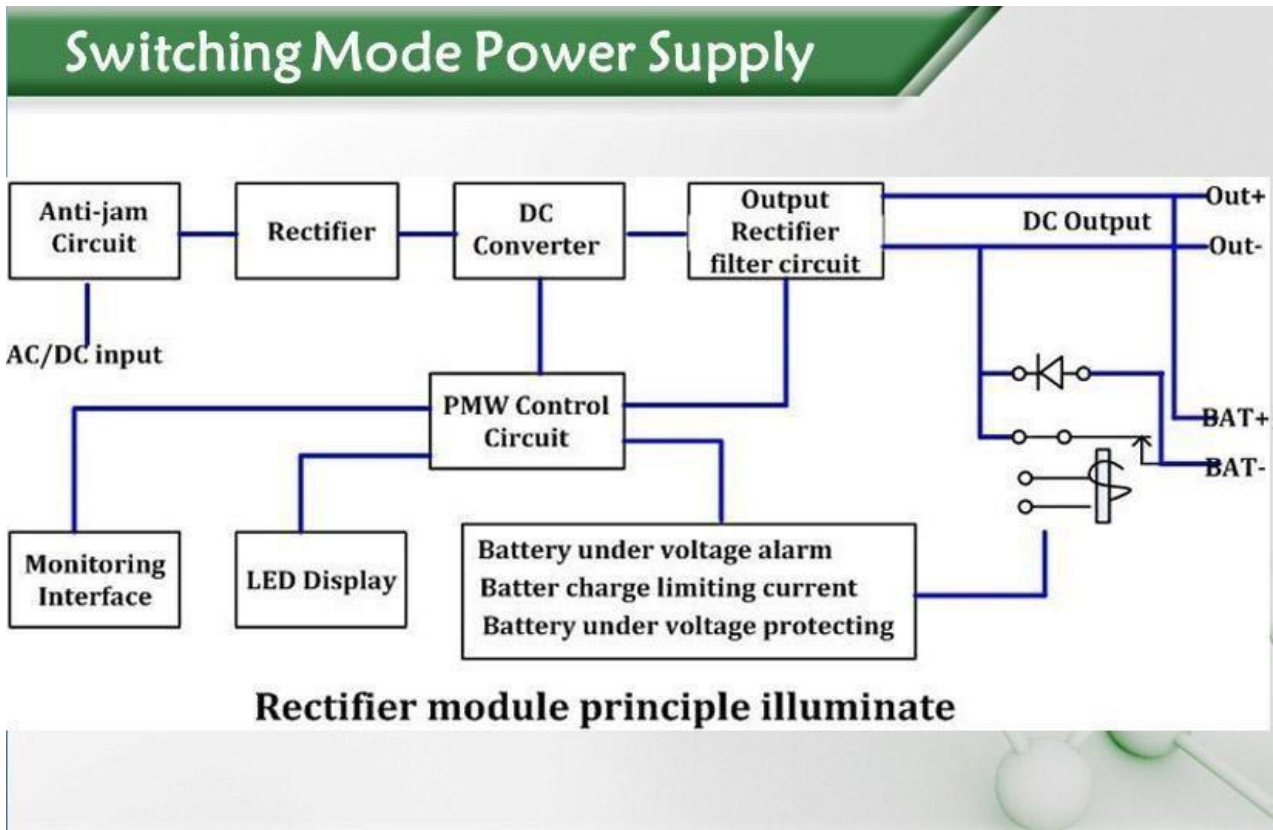
- In other word, not only can power for load appliances, but also charge for battery at the same time.

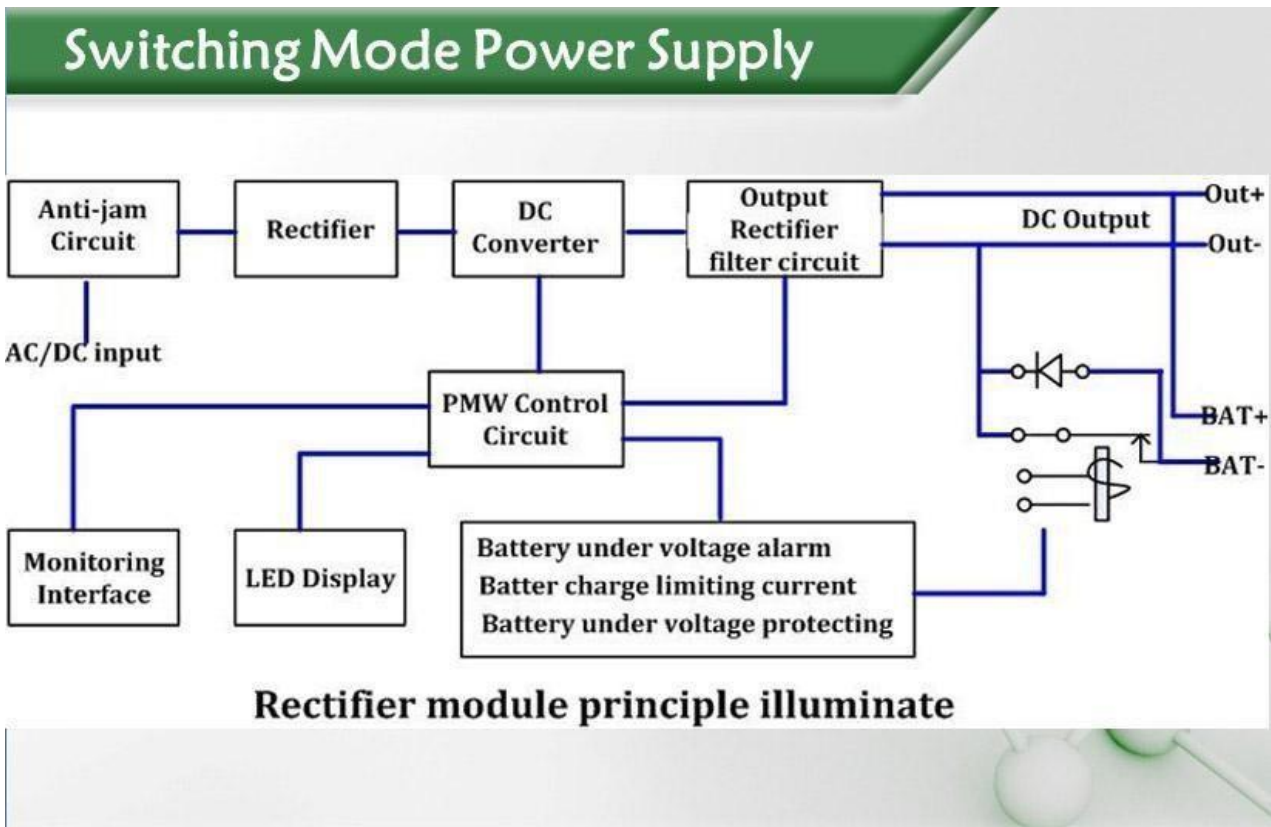




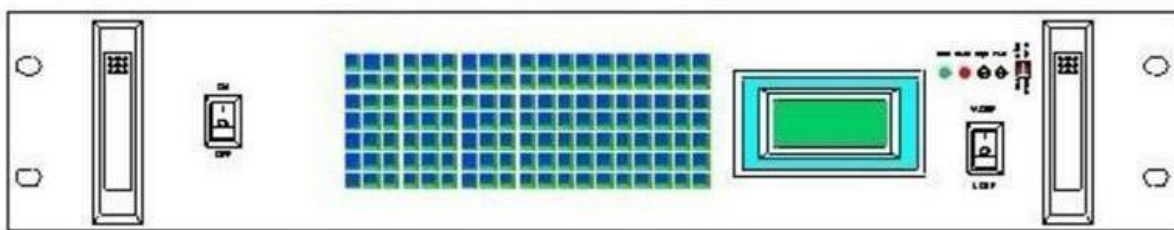


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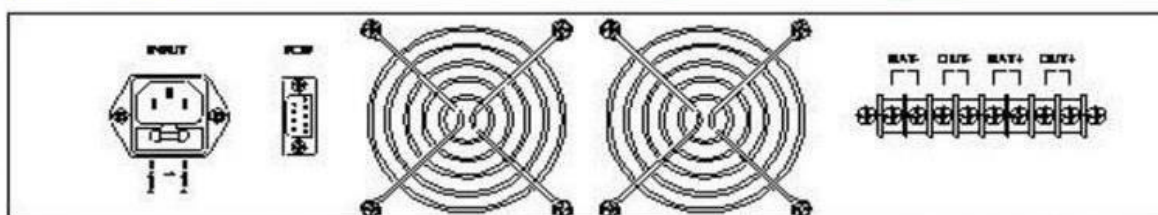




## Front View



## Rear View



19 Inch 2U Rack Mount Type

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## Process Quality Control

1. Components inspection.



2. PCB board aging for 24 Hours.



3. PCB board testing after board aging.



4. Process quality control.



## Process Quality Control

5. Parameters testing.



6. Make aging for 48 Hours.



7. Final quality testing with load.



8. Protection functions & overload capacity testing.

