

## Precautions before use

1. The equipment must work under safe operating conditions;
2. Please first understand the relevant contents of the user manual before turning on the power;
3. Any operation that violates the safety requirements of this manual is strictly prohibited.

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## Chapter 1 Manual Statement

### 1.1 Manual Usage Statement

The contents of this manual are subject to change without notice.

Please read this manual carefully before using the product. After reading, please put the manual near the product for reference when needed. When the position of the product changes, please attach the product manual.

Although this manual has been carefully reviewed, mistakes and omissions are inevitable. If you find mistakes and do not understand the place, please contact the company's customer service or instrument dealer. Therefore, the Company will not be responsible for any direct, indirect, sudden or continuing damage caused by the error of the content of this manual or the use of this manual.

Copyright notice: The copyright belongs to the company, and it is not allowed to reprint, copy or modify this user manual without permission.

### 1.2 Verification And Calibration Statement

Special statement, The power supply equipment listed in this manual fully conforms with the specifications and characteristics indicated in the company's standard product catalog. The power supply has passed the factory inspection of our company before leaving the factory. The procedures and steps of verification are in accordance with the specifications and standards of the electronic Inspection Center.

### 1.3 Quality Assurance

1、The company guarantees that the products produced and manufactured are strictly quality confirmed, product manufacturing defects or faults occurring during the warranty period after leaving the factory will be repaired free of charge.















2、For the user to change the line, function caused by the fault or beyond the quality guarantee period of the product, according to the actual condition of the maintenance cost fee, for force majeure caused by failure and damage, Failure occurs, for example, earthquake, flood, riot, or fire and other non-human control factors, the company does not provide free warranty service.

## Chapter 2 Safety

### 2.1 Safety Statement

The safety precautions in this section and the manual must be followed throughout the operation, maintenance, and repair of this product. If these safety precautions are not followed, the manufacturer declares that it is not responsible for the user's actions in violation of such requirements.

#### 2.1.1 Definition of electrical symbols, safety signs and warning signs

Symbol	Description		Symbol	Description
	AC	Alternating Current		Ban
	DC	Direct Current		Power on
	AC/DC	Alternating/Direct Current		Disconnect power
N	N	The neutral conductor		Represents a switch that makes power on/off with the same operating element. The commonly used keys have two stable positions.
	PE	Protective conductor		
	Ground connection			High temperature: Indicates that the temperature here is higher than the acceptable range of the human body, do not arbitrarily touch to avoid personal injury
	Pay attention to safety: To avoid personal injury or damage to the instrument, the operator must refer to the instructions in the manual			Be careful of electric shock
	This sign indicates a risk, if it can't be carried out in accordance with the instructions for use, may cause personal injury, before did not understand the instructions, please do not operate.			This sign indicates a risk, if it can't be carried out in accordance with the instructions for use, can result in casualties. This identification calls your attention to procedures, conventions, conditions, and so on.

## 2.2 Safety Note Points

	Please read this manual carefully before use and keep it properly.
	Do not use the product in situations other than those described in the manual This product should only be used in the situations described in the product manual
	Before connecting the power supply, please check that the power supply conforms to the rated input value of the instrument and confirm that the switch is in the disconnected state.
	Protective earthing: Before turning on the power supply, ensure that the protective earthing is connected to prevent electric shock
	The necessity of protective earthing: Do not cut the internal or external protective grounding wires or interrupt the connection of protective grounding terminals. This creates a potential electric shock hazard that may cause harm to the human body.
	Fuse: Only the required rated current, voltage and specific form of fuse can be used (Normal fuse, Time delay, etc). Do not use different specifications of fuse or short fuse holder, otherwise it may cause electric shock or fire hazard
	Please do not tear down instrument shell The operator shall not remove the casing of the instrument. Replacement of parts and internal adjustment should only be performed by qualified maintenance personnel
	Please do not under explosive or corrosive air operations Do not operate the instrument in flammable gas or gas or corrosive environment
	<ul style="list-style-type: none"> <li>When the product changes position, turn off the power switch and disconnect all connections</li> <li>The weight of the product is greater than 20kg. When changing the position of the product, please operate more than two people. You can find the weight in the product sample book</li> <li>Product please be careful when handling, light put, avoid collisions, high products are easy to dump, please be careful operation</li> <li>Please bring the product manual when moving the product location When moving the product, please attach the product manual</li> </ul>
	<ul style="list-style-type: none"> <li>Check and ensure that AC input voltage Settings are consistent with fuse specifications, there is no abnormality on the surface of the power cord, be sure to disconnect the power cord or turn off the power switch before checking</li> <li>If there is any abnormality or failure, please stop using immediately, disconnect the power cord or disconnect the power from the distribution box, do not use the product until it has been repaired</li> <li>For output or load cables, please use a cable with a large overcurrent capacity</li> <li>Please do not disassemble or change the product, if you must alter, please contact the company</li> </ul>
	Please do not let water droplets or metal object into the product inside
	注意 When the voltage and current Settings are completed and the output is started, the output terminal is a dangerous voltage, and any contact may lead to casualties
	警告 If the product is damaged due to the use of the wrong power grid input, it is not covered by the product warranty.

## 2.3 Safety Sign

### 2.3.1 The Following Terms May Appear In This Manual

<b>Warning</b>	A warning statement indicates conditions and behavior that may endanger the life safety of the operator.
<b>Notice</b>	A caution statement identifies conditions and behavior that may cause damage to the product or loss of data.

### 2.3.2 The following marks may appear on the product:






## 2.4 Use Environment (General Environment)

- 1、Indoor use;
- 2、Keep away from flammable, explosive and easy-corrosive media: such as alcohol, diluent, sulfuric acid and other flammable and explosive corrosivematerials;
- 3、Keep away from heat and avoid the sun;
- 4、Keep away from boilers, humidifiers, water sources, etc.Working relative humidity: 20~90%RH;
- 5、Keep away from strong electromagnetic interference sources;
- 6、Away from obvious vibration and shock;
- 7、The working environment requires good ventilation and no dust; Keep 30cm around the vent empty of any debris;
- 8、It is necessary to avoid sharp changes in temperature, which can cause water vapor to condense inside the machine.When condensation of water vapor, it is prohibited to use this power supply;
- 9、Watering is strictly prohibited.



If liquid or solid debris falls into the power supply from the top exhaust hole, it is easy to cause severe faults such as module explosion of the power supply.

 禁止	Do not place in rain or water;
	Do not place in combustible gas;
	Do not insert metal objects into the front and rear vents; otherwise, electric shock or fire may occur.
	Do not block the left, right and rear panel vents;
 强制	Working environment temperature 0~50°C, humidity 20~90%RH, no condensation, continuous work;
	Storage ambient temperature -20°C to 65°C;
	Storage environment humidity 10%-95%RH, no condensation, no corrosive and explosive gas;
 注意	If there is pollution in the use environment, it is necessary to consider the use of pipes to inhale air;
	Use near the receiver may be subject to interference.

## Chapter 3 Unpack

### 3.1 Check before unpacking

Inspect the packing case for damage, if found, notify the freight forwarder to inspect the goods, and record the damage at the time of delivery in order to protect yourself. If necessary, please timely feedback to the manufacturer, the manufacturer to assist in product inspection.

If no damage is found, unpack the package as follows

### 3.2 Unpack

- 1、Unpack the equipment according to the requirements on the outer packing box and take out the equipment;
- 2、First of all, check the product nameplate to make sure that the model is consistent with the order, check the items in the packing box to make sure that it is consistent with the packing list. If the items in the packing box are inconsistent with the contents listed in the packing list, please contact the customer service center or the distributor;
- 3、Visually observe whether there is obvious damage such as metal scratches, graffiti, dents, etc., check whether there is loose connection, fasteners have fallen off, or other abnormal phenomena, if you find damage, please immediately notify the company or its dealer. Our customer service center will repair or replace your machine. Do not immediately return the product without notifying customer service or its distributor;
- 4、In order to prevent accidental electric shock, please do not open the upper cover of the instrument by yourself. If something abnormal happens to the instrument, please seek technical support from the customer service center or its designated distributor.

## Chapter 4 Overview

### 4.1 Product Characteristics

- 1、 Using linear amplification technology, the reaction speed is fast and the output is stable;
- 2、 Small size, high reliability,etc.
- 3、 Suitable for resistive, inductive, rectification property and other loads;
- 4、 With overheating, and other abnormal conditions protection function;
- 5、 Using liquid crystal display, clear and eye-catching, easy to use.

### 4.2 Main Use And Scope Of use

Widely used in scientific research institutions, metrology institutes, university laboratories, etc.

- 1、 Aerospace measurement and control equipment;
- 2、 Navy, army and air force reconnaissance and detection system;
- 3、 Military and civilian radar power supply test;
- 4、 Electronic equipment power supply test, motor test, fan test, etc.
- 5、 Laboratories and testing units such as: DC power supply testing, product life and safety testing, OQC (FQC) testing, product testing and research and development, research units optimal AC power supply.

### 4.3 Product Features

- 1、 Using 32-bit RAM as the control system, the reaction speed is fast and the reliability is high.
- 2、 Adopting the power device protection mode combining hardware and software, the protection is fast and reliable;
- 3、 Using 16-bit AD/DA do control and sampling system,the product precision has the advantage of high precision.

### 4.4 Product Operation

This product is a PC Power supply unit, in order to facilitate the use of the operator, this series of products to provide the operator with DB9 communication interface control and panel operation key control, can meet most of the user's requirements for the use of AC power supply.The operation of this product is convenient and simple,For specific use, please follow the requirements of the following operating procedures when using it.



## Chapter 5 Troubleshooting Measure

### 5.1 OCP Troubleshooting Measure

OCP Definition: Power supply overcurrent protection.

Fault cause: The output current exceeds the overcurrent value set by the power supply.

Fault analysis: Because the output end load exceeds the set current.

Resolve the malfunction: 1. Check whether the output end load exceeds the rated current of the set value;

2. Check whether the load at the output end is damaged, resulting in a short circuit at the output end of the power supply.

### 5.2 OTP Troubleshooting Measure

OTP Definition: Power overtemperature protection.

Fault cause: The internal temperature sensor of the power supply reached the maximum value of detection.

Fault analysis: 1. Check whether the internal module is damaged;

2. Whether the power supply is overloaded

Resolve the malfunction: Contact the power supply manufacturer for after-sales service

## Chapter 6 Storage

Equipment should be stored in the storage environment temperature -20°C to 65°C, storage environment humidity 10%-95%RH, no condensation, no corrosive and explosive gases, and during storage should not be exposed to rain or exposure. Do not place the device in a dusty or high humidity environment

Upkeep: Do not place the device in a place that receives sunlight for long periods of time.

Clean: Please clean the equipment according to the use condition. Methods the following:

Disconnect the power supply;

Wipe the dust outside the device with a damp but no water dripping cloth (using a soft detergent and water).

When cleaning the LCD screen, be careful not to scratch the screen.

**Notice:** Do not glue any corrosive liquid to the device to avoid damage to the device.

**Warning:** Before powering on the device, ensure that the device is fully dry to avoid electrical short circuit and even personal injury caused by moisture.