DC POWER SUPPLY

USER IS MANUAL

VER:0 5

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SAFETY BRIEF

This manual contains important safety instructions that must be followed in the operation and storage environment of the R-SPS series. To ensure your personal safety, and ensures that this product works in the best environment, please read this manual carefully before using .

When you get a brand-new power supply, you need to do the necessary checks to make sure the instrument is working properly.

1. To check whether there are damages caused during transportation.
2. To check whether all the accessories are complete.
3. To check whether the output voltage and output current are normal after turning on the device.

If finding out any problems, please contact the merchant immediately.

SAFETY SYMBOL

The safety symbols below will appear in this manual or on the DC power supply.

⚠	Attention
⚡	High Voltage
⏚	Grounding

PRODUCT BRIEF

The R-SPS series of adjustable regulated DC Power Supply designed for use in laboratories, schools and production lines. Both output voltage and output current are continuously adjustable between 0 and nominal.

The stability and ripple factor of the power supply are very good and have a perfect protection circuit. Can work at full load for a long time. This power supply can be used as both a regulated power supply and a regulated current supply.

SPECIFICATION

1. Switchable DC regulated power supply

Model Number	R-SPS1520	R-SPS1530	R-SPS3020	R-SPS6010	R-SPS1005
Output Voltage	0~15V	0~15V	0~30V	0~60V	0~100V
Output Current	0~20A	0~30A	0~20A	0~10A	0~5A
Input Voltage：	230V±10% 50Hz（115V±10% 60Hz）				
Working Temperature：	0℃~40℃；Relative Humidity：＜80%RH				
Storage Temperature：	-10℃~70℃；Relative Humidity：＜70%RH				
Constant Voltage State：	Voltage stability≤1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mVrms(valid value)				
Constant Current State：	Current stability≤1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mArms(valid value)				
Display Accuracy：	±1%+5digits				
Display Resolution：	Voltage:00.01V Current:00.01A				
Product Dimension：	Length312mm X Width188mm X Height86mm				
Product Weight	2.18Kg		2.18Kg	2.18Kg	
Fuse Standard	5A(AC220V Input)/8A(AC110V Input)				

The above parameters are measured at an ambient temperature of 25±5°C, relative humidity: <80%RH, and preheated for 30 minutes. The actual parameters will vary slightly.

SPECIFICATION

1．Switchable DC regulated power supply

Model Number	R-SPS1550	R-SPS1560	R-SPS3030	R-SPS10010
Output Voltage	0~15V	0~15V	0~30V	0~100V
Output Current	0~50A	0~60A	0~30A	0~10A
Input Voltage：	230V±10% 50Hz（115V±10% 60Hz）			
Working Temperature：	0℃~40℃；Relative Humidity：＜80%RH			
Storage Temperature：	-10℃~70℃；Relative Humidity：＜70%RH			
Constant Voltage State：	Voltage stability≤ 1%+30mV			
	Load stability≤1%+30mV			
	Ripple noise≤80mVrms (valid value)			
Constant Current State：	Current stability≤1%+30mV			
	Load stability≤1%+30mV			
	Ripple noise≤80mArms (valid value)			
Display Accuracy：	±1%+5digits			
Display Resolution：	Voltage:00.01V Current:00.01A			
Product Dimension：	Length312mm X Width188mm X Height86mm			
Product Weight	2.58Kg	2.58Kg	2.58Kg	
Fuse Standard	8A(AC220V Input)/12A(AC110V Input)			

The above parameters are measured at an ambient temperature of 25 ± 5°C, relative humidity: ＜80%RH, and preheated for 30 minutes. The actual parameters will vary slightly.

SPECIFICATION

1．Switchable DC regulated power supply

Model Number	R-SPS15100	R-SPS3050	R-SPS3060	R-SPS6020	R-SPS6030
Output Voltage	0~15V	0~30V	0~30V	0~60V	0~60V
Output Current	0~100A	0~50A	0~60A	0~20A	0~30A
Input Voltage：	230V±10% 50Hz（115V±10% 60Hz）				
Working Temperature：	0℃~40℃；Relative Humidity：＜80%RH				
Storage Temperature：	-10℃~70℃；Relative Humidity：＜70%RH				
Constant Voltage State：	Voltage stability≤ 1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mVrms (valid value)				
Constant Current State：	Current stability≤1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mArms (valid value)				
Display Accuracy：	±1%+5digits				
Display Resolution：	Voltage:00.01V Current:00.01A				
Product Dimension：	Length373mm X Width270mm X Height96.5mm				
Product Weight	2.98Kg	2.98Kg	2.98Kg		
Fuse Standard	15A(AC220V Input)/25A(AC110V Input)				

The above parameters are measured at an ambient temperature of 25 ± 5°C, relative humidity: ＜80%RH, and preheated for 30 minutes. The actual parameters will vary slightly.

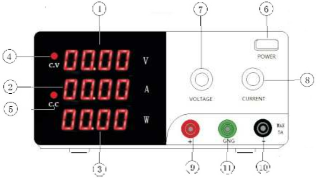
SPECIFICATION

1. Switchable DC regulated power supply

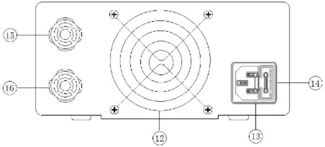
Model Number	R-SPS3080	R-SPS30100	R-SPS6050	R-SPS10020	R-SPS10030
Output Voltage	0~30V	0~30V	0~60V	0~100V	0~100V
Output Current	0~80A	0~100A	0~50A	0~20A	0~30A
Input Voltage：	230V±10% 50Hz（115V±10% 60Hz）				
Working Temperature：	0℃~40℃；Relative Humidity：＜80%RH				
Storage Temperature：	-10℃~70℃；Relative Humidity：＜70%RH				
Constant Voltage State：	Voltage stability≤1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mVrms (valid value)				
Constant Current State：	Current stability≤1%+30mV				
	Load stability≤1%+30mV				
	Ripple noise≤80mArms (valid value)				
Display Accuracy：	±1%+5digits				
Display Resolution：	Voltage:00.01V Current:00.01A				
Product Dimension：	Length373mm X Width270mm X Height96.5mm				
Product Weight	3.38Kg	3.38Kg	3.38Kg		
Fuse Standard	30A(AC220V Input)/50A(AC110V Input)				

The above parameters are measured at an ambient temperature of 25±5°C, relative humidity: ＜80%RH, and preheated for 30 minutes. The actual parameters will vary slightly.

PANEL INSTRUCTION



①	Output Voltage Display
②	Output Current Display
③	Output Power Display
④	Voltage Regulator
⑤	Current Regulator
⑥	Power Switch
⑦	Voltage Tuner
⑧	Current Tuner
⑨	Positive Polarity(red)
⑩	Negative Polarity(black)
⑪	Grounding(green)



⑫	Cooling Fan
⑬	Power Socket
⑭	Fuse Box
⑮	Output Terminal(+)
⑯	Output Terminal(-)

WORK REQUIEMENT

1. AC input: Please make sure the input voltage of this product
230V±10% 50Hz
115 V±10% 60Hz

2. Do not use in an environment where the ambient temperature exceeds 40 degrees Celsius. The cooling fan is located at the rear of the device and should have enough space for cooling.

Warning

Incorrect AC voltage input will cause serious damage to the device. Please make sure the required input voltage value.

OPERATION INSTRUCTION

There are two types of power output modes: constant voltage output (CV) and constant current output (CC). The output mode is determined by the voltage and current values set by the user and the load connected by the user. The output voltage or current value of the power supply won’t exceed the voltage and current values set by the user. In constant voltage mode, the output voltage value is equal to the user-set voltage value. In constant current mode, the output current value is equal to the user-set current value.

For example: the voltage value is set to 5V and the current value is set to 5A.

Steps

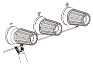
1. Turn on the powe switch
2. Adjust the voltage adjustment knob to 5V
3. Connect the “positive” and “negative” with wires and adjust the current knob to 5A.
4. Disconnect the wire and connect the load to use.

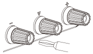
Attention

In actual CV operation, if the load resistance decreases and the output current increases to the set current value, the power supply will automatically switch to CC mode. When the load resistance value continues to decrease, the current will remain at the current set value. The voltage is proportionally reduced. At this time, increase the load resistance or increase the current set value to restore the CV output state.

CONNECT THE LOAD

1. Rotate the terminal knob by turning it counterclockwise
2. Insert the load terminal
3. Turn the terminal knob clockwise
4. Banana plug can be directly inserted into the terminal hole





Attention

Improper connection may result in damage to the power supply and the load connected to the power supply. When connecting the battery load, do not reverse the polarity of the “+” and “-” as this may damage the power supply.

CONSTANT VOLTAGE / CONSTANT CURRENT CHARACTERISTICS

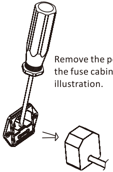
The working characteristics of this series of power supplies are constant voltage/constant current automatic conversion type, which can automatically change between constant voltage and constant current states with load changes. The intersection between constant voltage and constant current mode is called conversion point.For example, if the load causes the power supply to operate in a constant voltage mode, a constant voltage is output. As the load increases, the output voltage will remain constant and the output current will increase. When the current value reaches the set current limit value, the power supply will

automatically switch to constant current mode. The output current remains stable and the output voltage decreases proportionally as the load increases further. The conversion of constant voltage and constant current is indicated by the LED on the front panel.

CV indicator light is on during constant voltage, CC indicator is on when constant current.

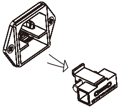
FUSE REPLACEMENT

If the fuse blows, the power supply will stop working. To find and correct the cause of the blown fuse, then replace it with a fuse of the same specification.



Remove the power plug first, then open the fuse cabin according to the illustration.

Fuse cabin is in the power socket.



Replace the fuse of same specification, then put the fuse cabin back.

HIGH VOLTAGE!
DANGER!

For effective safety protection, it is only necessary to replace the fuse of a specific specification. Before replacing the fuse, the power must be turned off and the power cord must be unplugged from the power outlet.

PRODUCT MAINTANCE

1. Disconnect the power when the product is not in use.
2. Unplug the power supply before cleaning.
3. Do not use hydrocarbons, chlorides or similar solvents, or use abrasive cleaners.

PRODUCT WARRANTY

1. This product is offered free maintenance service within one year from the date of purchase. Except in the following cases:
A: Lack of this product warranty card
B: Failures caused by improper use, such as improper handling and improper repair, modification or adjustment of the device.
C: Consumable materials are not covered by the warranty.
D: Naturally irresistible disasters such as floods, fires, earthquakes, etc.

2. Maintenance costs are charged for repairs that exceed the warranty period, and the costs incurred for maintenance are the responsibility of the user.

PACKING LIST

1. 1x Power Supply
2. 1x Power Cord
3. 1x Output Load Cord
4. 1x User’s Manual
5. 1x Warranty Card