WANPTEK

DPS Series DC Power Supply

Operation manual

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Security Profile

This manual contains the important safety that DPSxxxx series products must follow in operating, using and storage environments.Instructions. To ensure your personal safety, you should read this manual well before using it to ensure that the product works in the best environment.

When you get a brand new power supply, you need to make the necessary checks to ensure the normal use of the instrument.

1、Check for damage caused by transportation.

2、Check whether the random accessories are complete or not.

3、Before switching on, please check the input power switch located behind the machine to see if it meets your actual input voltage.

4、Check the machine by electrifying, whether the output voltage and current are normal.

If any problems are found in the above inspection, please contact the distributor in time.

Safety Symbol

The following safety symbols appear in the manual or on the machine

Warning

High Voltage Danger

Earthing

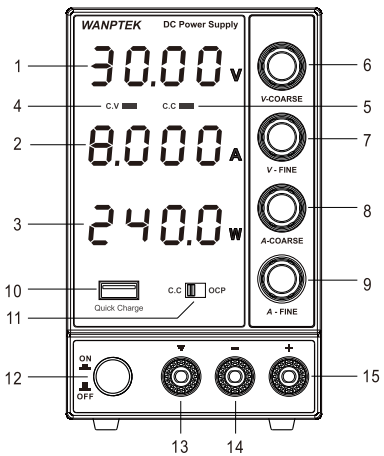
Product Overview

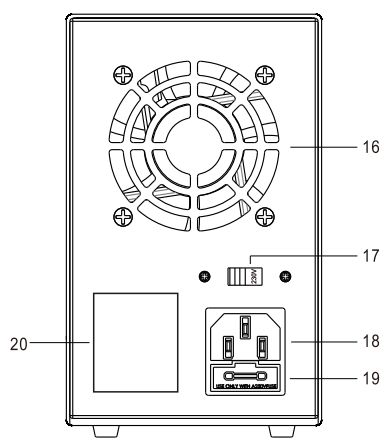
DPS series products are a three-window four-bit high-precision switching DC regulated power supply, which can display voltage, current and power at the same time. Products are widely used in mobile phone maintenance, computer maintenance, school and production line use, its output voltage and output current can be continuously adjusted between 0 and nominal value. Power supply stability and ripple coefficient are very good, with USB fast charging function and perfect short circuit protection circuit. It is small in size, beautiful in design, convenient in operation, and can work long hours at full load. It is loved by the vast number of users.

Specification Parameter

Model	DPS305U	DPS3010U	DPS605U
Output voltage	0～30V	0～30V	0～60V
Output current	0～5A	0～10A	0～5A
Output power	150W	300W	300W
Auxiliary output	USB Quick Charging 18W, Supports multiple quick charging protocols		
Input voltage	AC230V±10% 50Hz (AC115V±10% 60Hz)		
Working TEMP	0℃～40℃;Humidity:<80%RH		
Storage TEMP	-10℃～70℃;Humidity:<70%RH		
C.V	Voltage stability≤0.1%+3mV		
	Load stability≤0.1%+3mV		
	Ripple noise:≤20mVrms(Effective value)		
C.C	Current stability≤0.1%+3mA		
	Load stability≤0.2%+3mA		
	Ripple noise:≤5mArms(Effective value)		
Protection mode	Current limiting protection/short circuit alarm stop output and self-recovery		
Display	Four-digit digital tube, three-window display		
Accuracy	0.5%+3digit		
Resolution	Voltage:00.01V current:0.001A		
Product size	L225mm x W90mm x H145mm		
Weight	1.8Kg		
Fuse	2A	3A	3A

Panel Description





1	Voltage Display
2	Current Display
3	Power Display
4	CV Indicator Light
5	CC Indicator Light
6	Voltage Coarse
7	Voltage Fine
8	Current Coarse
9	Current Fine
10	Quick Charge
11	Short Circuit Alarm
12	Power Switch
13	GND（Green）
14	－（Black）
15	＋（Red）

16	Fan
17	Power Selection
18	Ac Socket
19	Fuse Box
20	Sticker

Work requirements

1、AC Input：

Please confirm the AC voltage allowed by this machine first. This machine can realize two kinds of AC voltage input through the switch of back panel：
AC 230V±10% or AC 115V±10%

When you can see "230V",Permissible input voltage：AC230V±10%

When you can see "115V",Permissible input voltage：AC115V±10%

The wrong input of AC voltage will cause serious damage to the machine. Please confirm the input voltage required by the machine.

2、Do not use in places where the ambient temperature exceeds 40 C.The exhaust fan is located at the back of the instrument. There should be enough space for heat dissipation.

3、Positive and negative output terminals need to be properly connected and in good contact, otherwise the connection will heat and damage the machine.

Operation instructions

There are two modes of power output: constant voltage output (C.V) and constant current output (C.C). The output mode is determined by the voltage and current values set by the user and the load that the user receives. The output voltage or current value of the power supply will not exceed the voltage and current value set by the user.
In the constant voltage mode, the output voltage is equal to the voltage set by the user.
In constant current mode, the output current value is equal to the current value set by the user.

Voltage regulation

1、Adjust the voltage roughly to the required voltage value, then fine-tune the knob to the required specific voltage value.

2、In general, the current knob can be adjusted to the maximum, and then the load can be connected for use.

Current regulation When the user needs to adjust the limiting current output：

1、Firstly, adjust the voltage to about 5-10V, then short-circuit the positive and negative terminals with wires (short-circuit alarm needs to be set to C.C position)。

2、Adjust the current to roughly adjust the knob to the required current value, and then fine-tune the knob to the required specific current value.

3、After disconnecting the short-circuit conductor and adjusting the required voltage by "voltage regulation" method, the connection load can be used.

For Example

Voltage value is set to 5V and current value is set to 5A.

Operation steps：

1、Turn on the power switch

2、Adjust the voltage adjustment knob to 5V

3、Connect the "positive" and "negative" poles with wires, and adjust the current knob to 5A.

4、Disconnect the conductor and connect the load.

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 continues to decrease, the current will remain at the set current value, and the voltage will decrease proportionally (I = V/R). At this time, the output state of CV can be restored by increasing load resistance or current setting value.

Short Circuit Alarm

This machine has the function of short circuit alarm interruption output, automatic return output for removing short circuit.

Usage method:

1. Put the short-circuit alarm switch to the OCP position C.C OCP , that is, turn on this function. When the output short-circuit (over-current) occurs, the machine will stop output and send out buzzing and OCP character prompts. When the output short circuit is removed, the machine will automatically return to normal output.

2. Put the short-circuit alarm switch to the C.C position C.C OCP , that is, turn off this function. When the output is short-circuit (over-current), the machine will output the maximum constant current according to the current set by the user.

3. The machine judges whether or not the output short circuit is based on whether the output current is larger than the current set by the user. Therefore, under this function, the machine can not work in constant current mode.

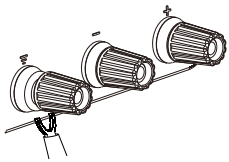
USB Quick Charging

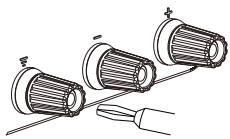
This machine supports USB fast charging function, and has built-in fast charging protocol identification chip. It can provide fast charging for mobile phones, PAD, charging treasure and other devices with fast charging function. The output voltage and current are automatically adjusted according to the fast charging protocol of the equipment. When an electronic device without fast charging function is used, it will be charged according to the standard 5V.

Supporting fast charging protocols include:
Qualcomm QC2.0, QC3.0, APPLE, Huawei FCP, SCP Samsung AFC and other fast charging protocols

Connection load

1. Rotate counterclockwise to loosen the terminal knob
2. Insert Load Terminal
3. Turn and tighten the knob of the connecting post clockwise
4. Banana plug can be directly inserted into connection post hole



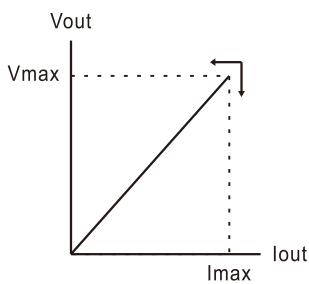


Warning

The wrong connection may cause damage to the power supply and load. When connecting the battery and other loads, do not connect the'+','-'poles in reverse, which may damage the power supply.

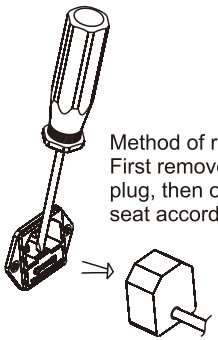
Constant Pressure/Current Characteristics:

The operating characteristics of this series of power supply are constant voltage/constant current automatic conversion type. It can automatically change between constant voltage and constant current state with the change of load. The intersection point between constant voltage and constant current mode is called conversion point. For example, if the load makes the power supply work in a constant voltage mode, a constant voltage is output. As the load increases, the output voltage will remain stable and the output current will increase. When the current value reaches the set current limit, the power supply will automatically be converted to constant current mode. The output current remains stable and the output voltage decreases proportionally with the further increase of the load. The conversion between constant voltage and constant current is indicated by the LED of the front panel. CV indicator is on at constant voltage and CC indicator is on at constant current.



Fuse replacement

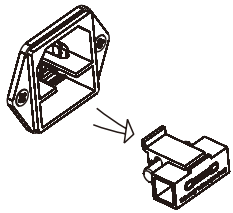
If the fuse burns out, the machine will stop working. To find out and correct the cause of fuse burnout, and then use the same specifications of the fuse replacement.



Method of replacing fuse: First remove the power plug, then open the fuse seat according to the view.

The fuse is seated on the power outlet.

After replacing the fuses of the same type and specifications, the fuse holder is reinstalled back.



HIGH VOLTAGE DANGER

For effective safety protection, it is limited to the replacement of fuses of specified specifications. Before the replacement of fuses, the power supply must be switched off and the power cord must be pulled out of the power socket.

Product Maintenance

1. When the machine is not in use, please disconnect the power supply.
2. Pull out the power plug before cleaning the machine.
3. Do not use hydrocarbons, chlorides or similar solvents, or detergents containing abrasive ingredients.

Product Warranty

1. The product will enjoy free maintenance service within one year from the date of purchase. Except for the following:
   a. Failure to produce the warranty card for this product:
   b. Faults arising from abnormal use, such as improper manual operation and improper repair, modification or adjustment of devices:
   c. Consumable materials are not covered by warranty.
   d. Natural irresistible disasters, such as floods, fires, earthquakes, etc.
2. Maintenance fees are charged for repairs that exceed the warranty period. Users will take care of the maintenance fees.

Packing List

1、The whole machine *1

2、Power cord*1

3、Output Load Line*1

4、Instructions for Use*1

5、Guarantee Card Qualification Certificate*1

Common Problem

Power can't be turned on
Check and verify whether the power cord has alternating current and the fuse is in good condition.

Power supply not output
Check that the output line is in good condition. Whether the voltage or current is turned up or not.

What is Constant Voltage (C.V)
The power supply output is constant according to the voltage set by the user, and the current will be supplied according to the actual needs of the load.

What is Constant Current (C.C)
When the current required by the load exceeds the limit current set by the user, the power supply automatically turns to the constant current mode. At this time, the current remains unchanged, and the voltage will be supplied according to the demand of the load.

The power supply can not be output according to the current size set by the user
The current value set by the user refers to the maximum limit current value that allows the power supply to output, while the actual output current value is supplied according to the actual needs of the load, but it will not exceed the current limit set by the user.