

RPS/RKS Series

Adjustable DC Regulated Power Supply

Instruction Manual

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1、Product Overview

RPS, RKS series adjustable dc regulated power supply is designed for laboratory, school and the production line, the output voltage and load current can be adjustable between 0 and the nominal value. The RPS series has the electric circuit protection function can stop the output and brings a 3.3V/5.0V/1A fixed output. Stability and ripple coefficient is good can perfect protection circuit.Can work at the full load for a long time, can be used as a regulated power supply or a stabilized current supply.

RPS series is linear dc regulated power supply

RKS series is switch dc regulated power supply

2、Specification

| Model | Voltage | current | External circuit protection features | 3. 3V/5V/1A Fixed output | Display |
|------------|---------|---------|--------------------------------------|--------------------------|---|
| RPS3003C-2 | 0~30V | 0~3A | Y | Y |  |
| RPS3005C-2 | 0~30V | 0~5A | Y | Y | |
| RPS6002C-2 | 0~60V | 0~2A | Y | Y | |
| RPS6003C-2 | 0~60V | 0~3A | Y | Y | |
| RPS6005C-2 | 0~60V | 0~5A | Y | Y | |
| RPS3003D-2 | 0~30V | 0~3A | Y | Y |  |
| RPS3005D-2 | 0~30V | 0~5A | Y | Y | |
| RPS6002D-2 | 0~60V | 0~2A | Y | Y | |
| RPS6003D-2 | 0~60V | 0~3A | Y | Y | |
| RPS6005D-2 | 0~60V | 0~5A | Y | Y | |
| RPS3010D-2 | 0~30V | 0~10A | Y | Y |  |
| RPS3020D-2 | 0~30V | 0~20A | Y | Y | |
| RPS3030D-2 | 0~30V | 0~30A | Y | Y | |
| RKS3010D | 0~30V | 0~10A | N | N | |
| RKS3020D | 0~30V | 0~20A | N | N | |
| RKS3030D | 0~30V | 0~30A | N | N | |
| RKS6020D | 0~60V | 0~20A | N | N | |
| RKS6030D | 0~60V | 0~30A | N | N | |
| RKS6040D | 0~60V | 0~40A | N | N | |
| RKS6050D | 0~60V | 0~50A | N | N | |
| RKS6060D | 0~60V | 0~60A | N | N | |

3、Parameter Specification

[3-1] Rated working conditions

- (1) power supply voltage 220 v + 10% for 50 hz 60 hz
- (2) working conditions: temperature: 0 °C to 40 °C, relative humidity: < 80% RH
- (3) storage conditions: temperature: - 10 °C ~ 70 °C; Relative humidity: < 70% RH
- (4) the output mode (see product specification)

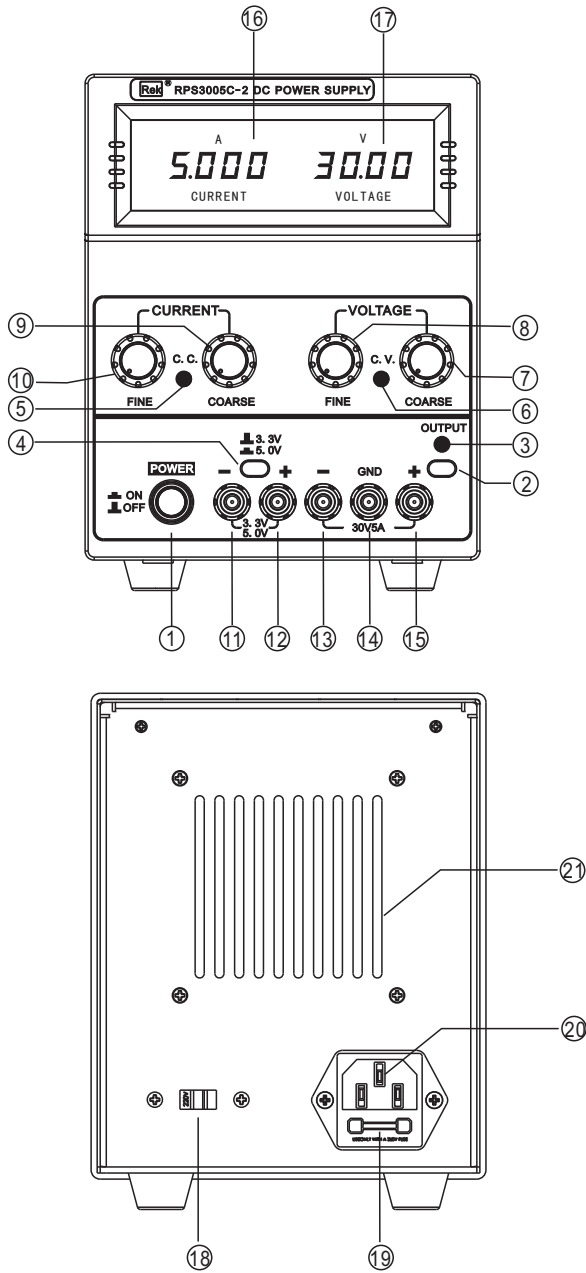
[3-2] Steady current working status:

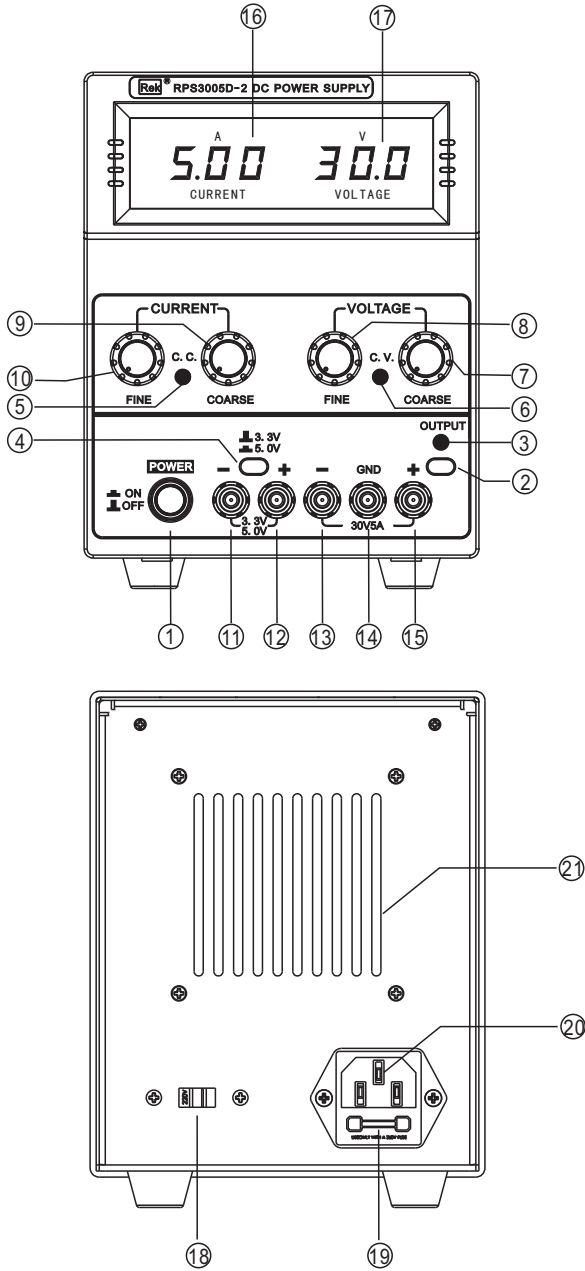
- (1) the output current is adjustable from 0 between nominal value
- (2) Ripple noise $\leq 3\text{mArms}/5\text{mArms}$
- (3) Current stability $\leq 0.2\% + 3\text{mA}/5\text{mA}$
Load stability $\leq 0.2\% + 3\text{mA}/5\text{mA}$

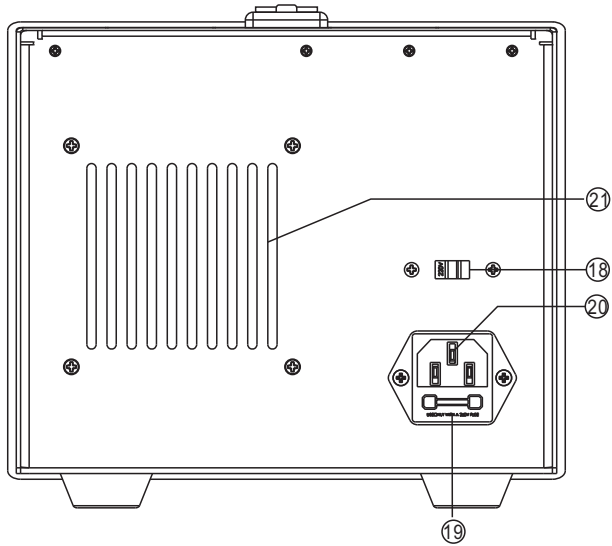
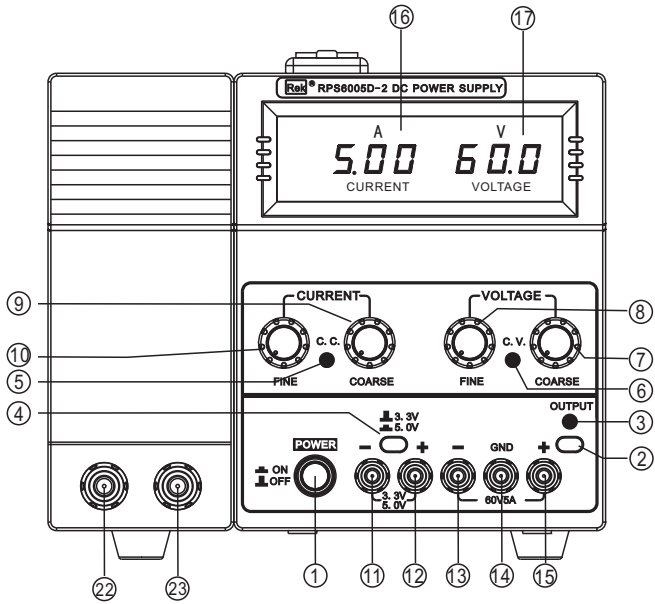
[3-3] Steady voltage working status:

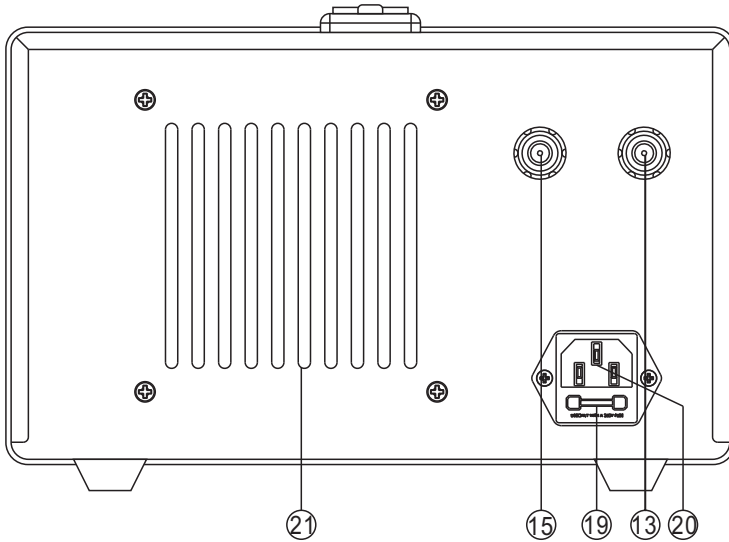
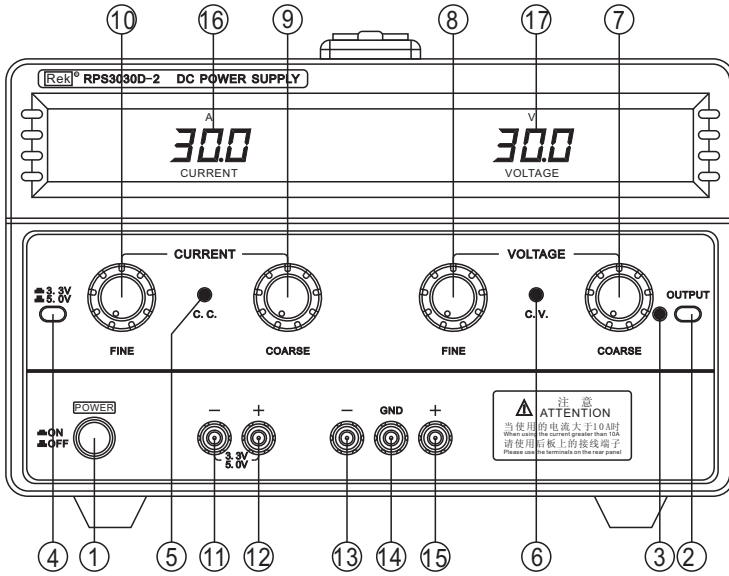
- (1) the output voltage is adjustable from 0 between nominal value
- (2) Voltage stability:
Voltage stability $\leq 0.01\% + 3\text{mV}$
Load stability $\leq 0.01\% + 3\text{mV}$ (0~30V)
Load stability $\leq 0.01\% + 5\text{mV}$ (0~60V)
- (3) Recovery time:
 $\leq 100\mu\text{S}$ (50% load changes, minimum load current 0.5 A)
- (4) Ripple noise:
 $\leq 0.5\text{mVrms}$ (5Hz~1MHz)
 $\leq 1.0\text{mVrms}$ (5Hz~1MHz)
- (5) temperature coefficient $\leq 3000\text{PPM}/^\circ\text{C}$

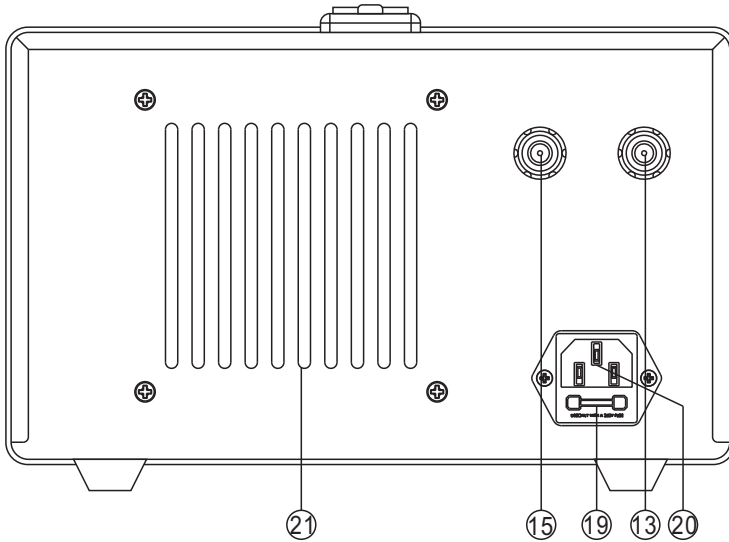
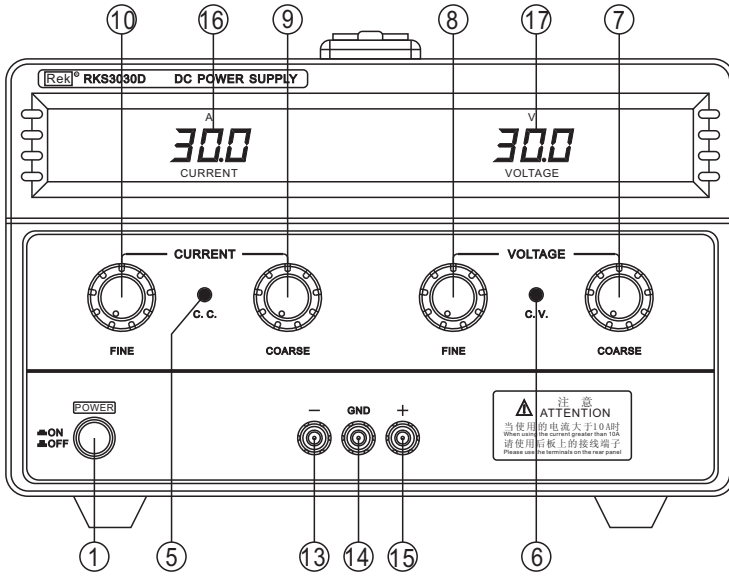
4、Panel control and indicator











[4-1] the Panel Description:

- ①、the power switch
- ②、control switch, voltage output
- ③、voltage output indicator light
- ④、3.3V/5.0V switch (output accuracy $\leq 1\%$)
- ⑤、stable current indicator light
- ⑥、stable voltage indicator light
- ⑦、Voltage adjustment roughly
- ⑧、Voltage adjustment fine-tuned
- ⑨、Current adjustment roughly
- ⑩、Current adjustment fine-tuned
- ⑪、3.3V/5.0V “-” output port
- ⑫、3.3V/5.0V “+” output port
- ⑬、“-” Output: negative polarity (black)
- ⑭、“GND” output: grounding (green)
- ⑮、“+” Output: positive polarity (red)
- ⑯、Current output display (display accuracy of 2% or less + 2 d)
- ⑰、Voltage output display (display accuracy of 1% or less + 2 d)
- ⑱、110 V / 220 V switch (according to clients' need)
- ⑲、Fuse box
- ⑲、power socket
- ⑳、Fan (fan with temperature control, when the internal
- ㉑、temperature up to 60 °C + 5 °C would working)

5、Instructions

[5-1] Cautions

- 1、Ac input according to the rear panel (110V/ 220V switch):
switch to 110V: 110V 1 0%60Hz。
switch to 220V: 220V 1 0%50Hz。
- 2、do not use where the environmental temperature 40 °C,
the fan is located in the instrument back, should leave
enough space.
- 3、the output voltage overshoot: when switching power supply,
the output voltage is less than the preset.

[5-2] Limiting current Settings:

- 1、Decisions a maximum safe current for your instruments
- 2、The power supply with a shorter route temporarily (+) and (-) terminal short circuit. (the voltage must be adjusted below 10 v)
- 3、Rotating voltage control knob until the CC indicator bright
- 4、Adjust the current knob to the desired current value
- 5、Current value (overload protection) has been set, then do not change the current knob
- 6、Remove the short circuit, can enter the working state.

[5-3] The characteristics of constant voltage/current

This series of characteristics of the power supply is called constantvoltage/ current type automatic conversion, It can vary with the load at constant voltage and constant current state of continuous transformation.

For example, if the load to make the power work in constant voltage mode, just output stabilityConstant voltage. As the load increases, the output voltage will remain stable, Until you reach the preset current limit value, After arrived at current limit value, Output current is stable, The output voltage is inversely proportional to the load, CV indicator bright means constant voltage and CC indicator bright means constant current.

[5-4] Working:

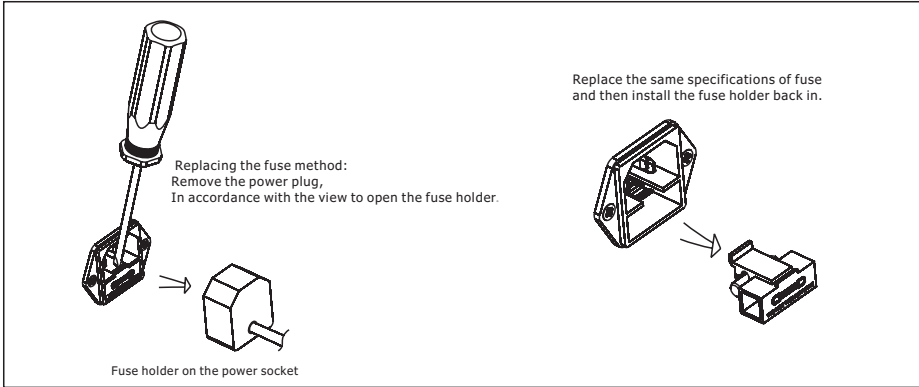
- 1、Put the power switch in "OFF" position.
- 2、to ensure that the input voltage. .
- 3、input power and put the power switch in "ON" position
- 4、adjust the "VOLTAGE" and "CURRENT" knob to the required VOLTAGE and CURRENT value.
- 5、external loads connected "+", "- " output terminals.

6、Maintenance

- 1、Please pull out the plug before clean.
- 2、With neutral detergent and water to wet soft cloth to wipe the instrument, do not spray cleaner directly on the instrument.
- 3、Do not use solvent containing hydrocarbons, chloride, or similar, also do not use detergent containing grinding ingredients.

7、Fuse Replacement

If the fuse blew out, Regulated power supply will stop working.



8、Packing list

- 1、 power supply x 1;
- 2、 power cord x 1 ;
- 3、 Users manual x 1;
- 4、 operation guide x 1;
- 5、 Certificate of approval x 1。

Product Warranty

- 1, product since the acquisition date within one year free maintenance services. Except for the following conditions:
 - a、 fail to produce the product warranty card:
 - b、 non normal use, such as improper operation of devices, the improper maintenance, modification or adjustment:
 - c、 consumptive material is beyond the scope of warranty::
 - d、 Belong to an irresistible natural disasters, such as flood, fire, earthquake, etc:
- 2、 More than warranty repair charge upkeep, users to pay for due to maintenance: