

Regulated DC Power Supply

OPERATION
INSTRUCTION

English

● This product should not be thrown in the garbage. In accordance with the European directive 2012/19/EU, electronic equipment at the end of their life must be collected & returned to an authorized recycling facility. ● Este producto no debe desecharse en la basura. De acuerdo a la directiva europea 2012/19/EU, los equipos electrónicos al final de su vida se deberán recoger y trasladar a una planta de reciclaje autorizada. ● Dieses Produkt sollte nicht mit dem Hausmüll entsorgt werden. In Übereinstimmung mit der europäischen Richtlinie 2012/19/EU müssen elektronische Geräte am Ende ihrer Lebensdauer eingesammelt und einem autorisierten Recyclingbetrieb zugeführt werden.

Made in China

Thank you for purchasing this product. Please read the manual carefully before operating and keep this manual for future reference.
Statement: The company reserves the right to improve & upgrade products, product specifications and design are subject to change without notice.

SPECIFICATION

01

Model Number	302D	303D	305D I	305D II	305D III
Control Unit Dimensions	L250xW125xH155mm ±5mm				
Operating Ambient Temperature	-10°C~40°C/14°F~104°F				
Relative Humidity	<90%				
Output Range (Voltage)	0~30V				
Output Range (Current)	0~2A	0~3A	0~5A		
Display (Voltage & Current Readings)	Three-digit display (LED Nixie Tube)			Four-digit display (LED Nixie Tube)	
Reading Accuracy (Voltage & Current)	Reading discrepancies of up to ±1%, or ±1 unit of the reading.				
C.V. Mode (Constant Voltage)					
Line Regulation	≤0.01%+2mV				
Load Regulation	≤0.01%+2mV				
Ripple & Noise	1mV(有效值/Valid value)				
Temperature Coefficient	≤200PPM/°C				
C.C. Mode (Constant Current)					
Line Regulation	≤0.1%+3mA				
Load Regulation	≤0.02%+3mA				
Ripple & Noise	2mA(有效值/Valid value)				

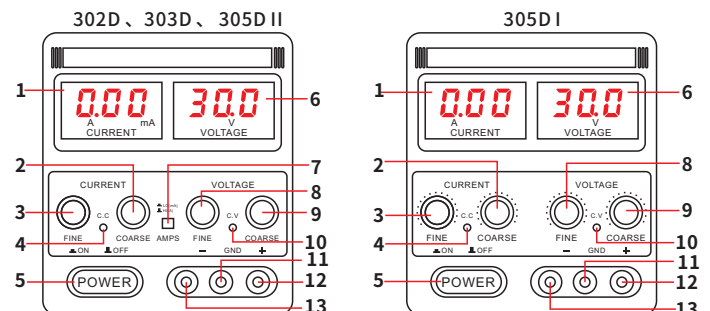
02

I. APPLICATIONS & FEATURES

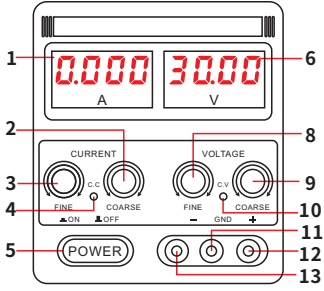
This product is specifically developed for use in scientific research, product R&D, test labs, higher education practical lessons, laptop repairs, electronic product manufacturing lines and more. The voltage and current are continuously adjustable within the specified range. Highly accurate and reliable, this product is also equipped with a complete set of overload protection circuit, making it an ideal choice for your industry.

II. PRODUCT REFERENCE

Control Panel

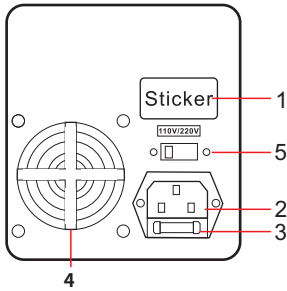


305D III

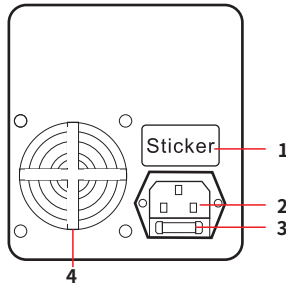


1. Current Display
2. Coarse Adjustment (Regulated Current)
3. Fine Adjustment (Regulated Current)
4. C.C. Mode Indicator (Constant Current)
5. Power Switch
6. Voltage Display
7. Unit Selector (A or mA)
8. Fine Adjustment (Regulated Voltage)
9. Coarse Adjustment (Regulated Voltage)
10. C.V. Mode Indicator (Constant Voltage)
11. Terminal (Ground END)
12. Output Terminal (Positive +)
13. Output Terminal (Negative -)

Reference: Rear Panel



1. Sticker
2. Terminal (AC Input)
3. Fuse box



4. Cooling Fan
5. AC Input Voltage Selector (110V or 220V)

III. OPERATION

1. Connect the power supply's power cord to an electrical outlet. (If the power supply comes with an AC input voltage selector, adjust the selector's voltage to the same voltage specifications as your electricity mains.)
2. Turn ON the power switch, and the C.V. mode indicator turns ON (When the coarse & fine adjustment knob is not at 0). The current & voltage display will turn ON, the current display shows value "000", while the voltage display shows the output voltage.
3. Adjust the voltage coarse / fine adjustment knob to set the desired output voltage (when the current coarse & fine adjustment knob is not at 0).
4. C.C. Mode
 - 1) First, adjust the voltage coarse / fine adjustment knob to any value between 2V to 5V (when the current coarse & fine adjustment knob is not at 0).
 - 2) Then, adjust the current coarse / fine adjustment knob to 0 (by turning the knob anti-clockwise all-the-way down).
 - 3) Use the leads to connect the positive terminal "+" with the negative terminal "-".
 - 4) Then, adjust the current coarse / fine adjustment knob to the desired amperage value, and proceed for use.
5. Connect the load to the power supply's positive "+" and negative "-" terminal to begin powering the load.
6. When the unit's internal temperature is equal to or higher than 45°C/113°F, the cooling fan will start up automatically and begin cooling.
7. Characteristics of Constant Voltage / Constant Current

This power supply's key function is referred to as "automatic C.C. and C.V. switching". This power supply can switch between C.V. mode and C.C. mode automatically based on the load change connected to the power supply. We refer to the change between modes as the point of change.

How it works: If the load puts the DC power supply in C.V. (Constant Voltage) Mode, then the power supply will output stabilized voltage (with the CV indicator ON). As the load increases, the output voltage will remain stabilized until it reaches the preset current. At this point, the output current will remain stabilized (with the CC indicator ON). As the load increases the output voltage will decrease in ratio to the increase. Vice versa, the change from C.C. (Constant Current) mode to C.V. (Constant Voltage mode) occurs as the load decreases.

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IV. MAINTENANCE & PRECAUTIONS

1. When charging up a battery, DO NOT connect the positive and negative in reverse.
2. The power supply SHALL NOT be used in its full operation capacity for an extended period. Please control the usage rate within 60%, failure to do so may result in premature failure of the power supply. (Set aside additional current capacity when ordering)
3. The cooling fan is located at the rear of the station, you should reserve enough space to allow cooling. The fan will turn ON when the power supply is turned ON. DO NOT use the power supply in environments where the room temperature is above 40°C/104 °F.
4. As the output power is relatively high, DO NOT short the circuit when the voltage setting is above 5V.