

East Tester®

Single Channel DC Stabilized Power Supply

ETP3000A Series User Manual



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Catalog

一	Summary	错误！未定义书签。
1.1	Function Features	错误！未定义书签。
1.2	Introduction to Front Panel	1
1.3	Introduction to Back Panel	错误！未定义书签。
二	Operation Manual	错误！未定义书签。
2.1	Stabilized-Voltage Output	3
2.2	Stabilized-Current Ouput	4
三	Performance Index	5
3.1	Output Parameter	5
四	Accessories and Others	错误！未定义书签。
4.1	Accessories	错误！未定义书签。
4.2	Communication	6

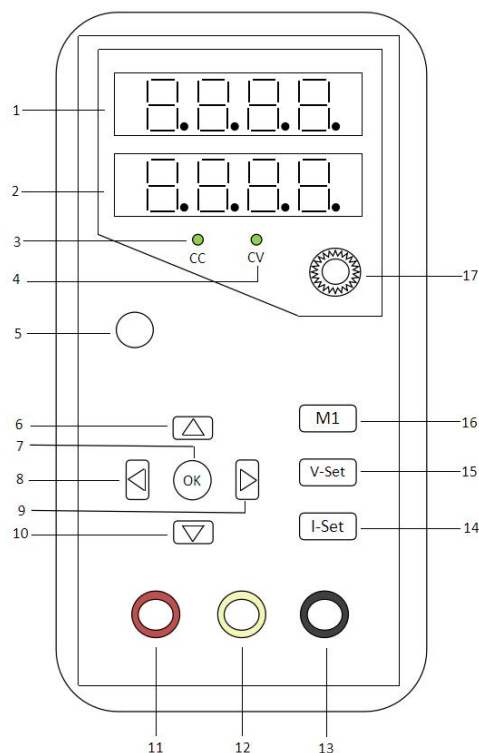
— Summary

This series of adjustable DC stabilized power supply is a single output DC stabilized power supply with four digits LED digital display. It can simultaneously display voltage, current; Constant voltage (CV), constant current (CC) mode automatic switching, voltage and current can be continuously adjusted; Using advanced switching power control technology and components, high efficiency, light weight, energy saving and environmental protection.

1. 1 Function Features

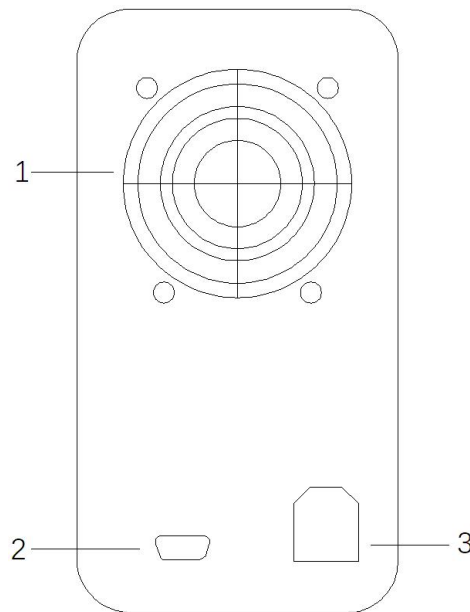
- LED digital display, 4 digits display of voltage, and current
- Auto switching mode between CV and CC, indicator light prompt
- Over voltage, over current, over power, over temperature protection
- Shortcut parameter storage/call function
- Communication port: RS232 to realize the remote control
- Intelligent cooling fan with energy saving
- Encoder adjustment, the specified numbers can be adjusted accurately

1. 2 Function Features



1. Voltage display: show the output voltage of current power supply; Unit: V
2. Current display: show the output current of current power supply; Unit: A
3. CC indicator light: when the power supply is in CC mode, the light will be on;
4. CV indicator light: when the power supply is in CV mode, the light will be on;
5. Power button: to turn on/off the power supply
6. “ \triangle ” : If it's in the setting state of voltage/current setting value, short press the corresponding flashing cursor and the value will add 1; If not, long press it to enter into the LED brightness adjustment mode.
7. “OK” : Confirmation key;
8. “ \triangleleft ” : Left shift key, it's used to move the selected cursor's position or adjust brightness of digital tubes under the voltage/current setting state;
9. “ \triangleright ” : Right shift key, it's used to move the selected cursor's position or adjust brightness of digital tubes under the voltage/current setting state;
10. “ ∇ ” : in the setting state of voltage/current setting value, short press the corresponding flashing cursor and the value will minus 1;
11. Output Positive Terminal: Positive Output Terminal (+)of power supply;
12. Ground Terminal : Connect the ground terminal to housing of power supply;
13. Output Negative Terminal: Negative Output Terminal(-) of power supply;
14. “I-Set” : Short press to enter into current setting state;
15. “V-Set” : Short press to enter into voltage setting state;
16. “M1” : Shortcut parameter storage/ call function key, short press to preset arbitrary voltage/ current setting value of the corresponding models, long press to set the preset M1 voltage/current value to current voltage/current setting value;
17. Adjusted knob, to set the voltage/current setting value, counterclockwise rotation "minus", clockwise rotation "plus";

1.3 Introduction to Back Panel



1. Fan vent: used for internal heat dissipation of power supply and intelligent temperature control adjustment;
2. Communication port: RS232, DB9 female port;
3. Power socket: with fuse, ACV input interface;

二 Operation Manual

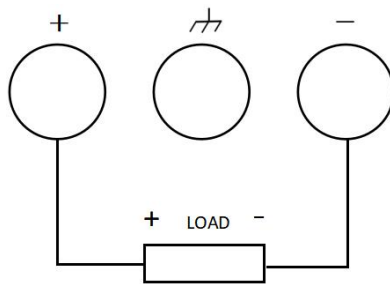
2.1 Stabilized voltage output

The power supply provides two output modes: voltage stabilized output (CV) and current stabilized output (CC).

Taking model "ETP6005A" as an example, when the voltage is set to 30V and the current is set to the maximum rating of 5A, the access load is $10\ \Omega$ /300W. $30V/10\ \Omega = 3A < 5A$. At this time, the power supply is in CV mode, and the power supply of 30V and 3A is output.

Operation steps:

Connect to load, shown as following picture;



- (1) Turn on the power supply: click press power button to turn on it;
- (2) Voltage setting: Short press "V-SET", the voltage display interface will flash, adjust the knob to make voltage display as 30V, and then press "OK" key or do not action
- (3) Current: Short press "I-SET", the current display interface will flash, adjust the knob to make current display as 5A, and then press "OK" key or do not action.

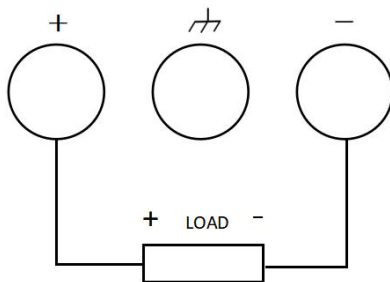
Tip: In CV mode, if the output current exceeds the current set value due to load changes, the device will switch to the CC mode of the current set value, and the output voltage will also be reduced proportionally. At this point, the CV mode can be restored by increasing the current setting value.

2.2 Stabilized-Current Output

Take the model "ETP6005A" as example, when set the voltage value as 10V and current 5V(max value), the load connected will be $1\ \Omega$ /300W. Because $10V/1\ \Omega = 10A > 5A$ and $10V/1\ \Omega = 10A > 5A$, the output value of the source will be 5V、5A in CC mode.

Operation steps:

- (1) Connect to the load: as shown in the photo;



- (2) Turn on the power: click the power button, and it will be into the working status;
- (3) Voltage setting: short press "V-Set", the voltage display interface flashes, adjust the knob to make the voltage display 10V, and then press "OK" or no action;
- (4) Current setting: Press "I-Set", the current display interface flashes, adjust the knob to make the current display 5A, and then press "OK" or no action

Tip: In CC mode, if the output voltage exceeds the voltage set value due to load changes, the device will switch to the CV mode of the current set value, and the output current will also be reduced proportionally. At this point, the CC mode can be restored by increasing the voltage setting value.

三 Performance Index

3.1 Output parameter

Model Index	ETP 1503A	ETP 1506A	ETP 3003A	ETP 3005A	ETP 3010A	ETP 6003A	ETP 6005A
Output voltage	0~15V	0~15V	0~30V	0~30V	0~30V	0~60V	0~60V
Output current	0~3A	0~6A	0~3A	0~5A	0~10A	0~3A	0~5A
Stabilized Voltage status	Voltage stability: $\leq 0.1\% \pm 3\text{mV}$; Load stability: $\leq 0.1\% \pm 3\text{mA}$						
Stabilized Current status	Current stability: $\leq 0.1\% \pm 3\text{mV}$ Load stability: $\leq 0.1\% \pm 3\text{mA}$						
Display accuracy	Voltage: $0.5\% \pm 3\text{ readings}$ Current: $0.5\% \pm 3\text{ readings}$						
Ripple and noise	VPP $\leq 1\%$						
Display Resolution	Voltage: max 10mV; Current: Max 1mA; Power: Max 10mW						
Display method	4 digits red LED display, 0.40 inches						
Power supply	AC 220V $\pm 10\%$ /50Hz or AC 110V $\pm 10\%$ /60Hz(if 110V, users need to talk to factory in advance)						
Operation environment	Indoor, attitude: $\leq 2000\text{m}$, temperature: $5\sim 40^{\circ}\text{C}$, humidity: $10\sim 85\%\text{RH}$						
Storage environment	Temperature: $-20\sim 80^{\circ}\text{C}$, humidity: $\leq 80\%\text{RH}$						
Dimension	190mm* 70mm* 130mm (L*W*H)						
Weight	Net weight 1.1kg						
Fuse specification	3A						

Note: The above parameters are measured at the ambient temperature of $25\pm 5^{\circ}\text{C}$, relative humidity $< 80\%\text{RH}$, and preheating for 30 minutes. Actual parameters may vary slightly.

四 Accessories and Others

4.1 Accessories

Use manual × 1

Qualified certificate × 1

Power plug × 1

4.2 Communication

①Communication parameter

Baud rate: 9600

Start bit: 1

Data bit: 8

Calibration bit: /

Stop bit: 1

Footer: 0x0A(newline) or 0x0D0A(CRLF)

②Cable connection

The product provides users with RS232 communication mode. The DB9 female connector has two TXD pins, three RXD pins, and five GND pins.

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