

East Tester®

ETP-B Series DC Stabilized Power Supply (Single Channel) User Manual



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Catalog

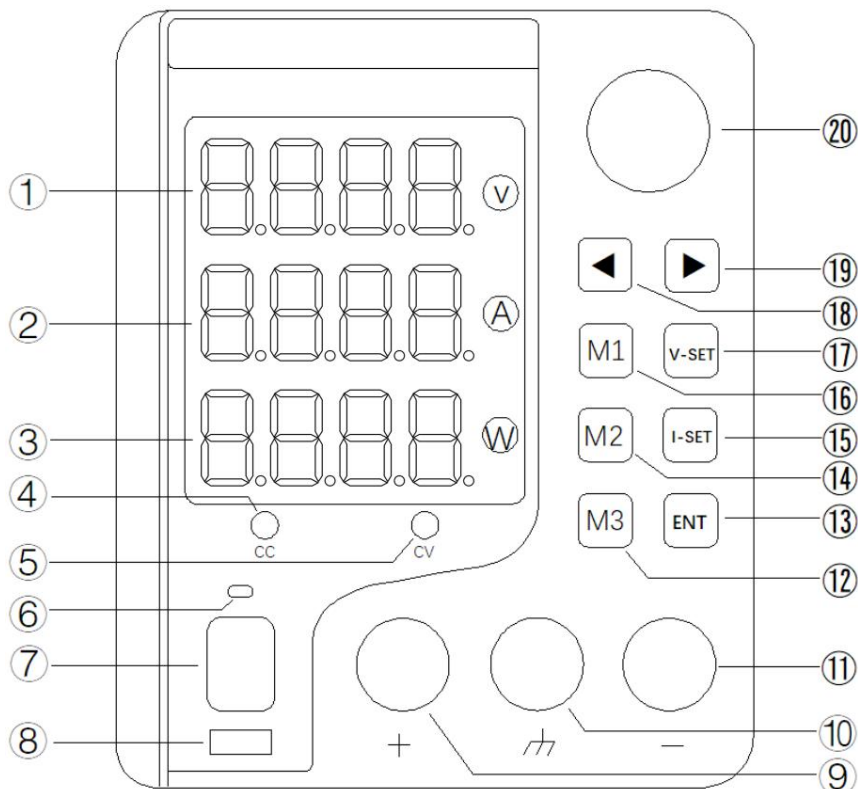
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— Summary

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. In the meanwhile, the 5V/2A USB fast charge function is optional.

1. 1 Function Features

- LED digital display, 4 digits display of voltage, current and power
- Over voltage, over current, over power, over temperature protection
- Intelligent cooling fan with energy saving
- 3 sets of Shortcut parameter storage/call function
- 5V/2A USB fast charge function(optional)
- Encoder adjustment, the specified numbers can be adjusted accurately
- Multiple communication modes to realize the remote control

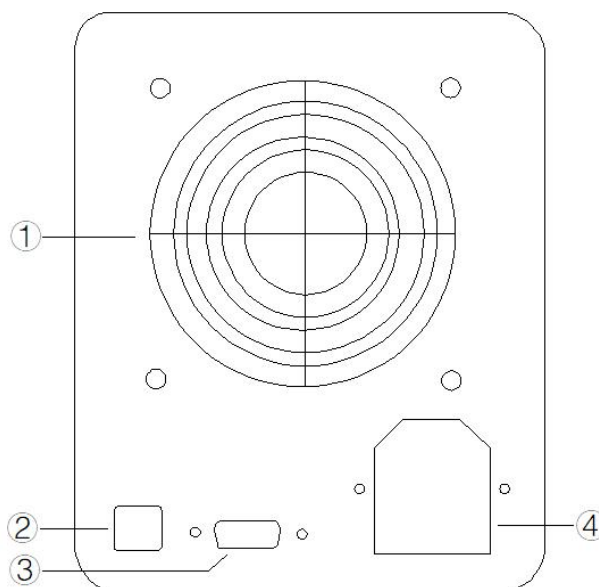


1. 2 Front panel

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. Power display: show the output power of current power supply; unit: W
4. CC indicator light: when the power supply is in CC mode, the light will be on;
5. V indicator light: when the power supply is in CV mode, the light will be on;
6. Switch display light: When the light is on, the power supply is on;.
7. Power button: to turn on/off the power supply;
8. USB fast charge : 5V/2A/10W USB charging interface to provide fast charge for the electronic products;
9. Output Positive Terminal: Positive Output Terminal (+)of power supply;
10. Ground Terminal : Connect the ground terminal to housing of power supply;
11. Output Negative Terminal: Negative Output Terminal(-) of power supply;
12. “ M3 ”: Shortcut parameter store/call key. Short press to preset any voltage/current value of the corresponding model, long press to set the pre-stored voltage and current value of M3 to the current voltage and current setting value;
13. “ENT”: short press the enter key, long press to enter into the brightness setting state;
14. “M2”: same as 12;
15. “I-SET”: Short press to enter into current setting state; Long press to enter into local address setting state;
16. “M1”: same as 12;
17. “V-SET”: Short press to enter into voltage setting state; Long press to enter into communication method setting state;
18. “◀”: Left shift key, it's used to move the selected cursor's position or adjust brightness of digital tubes/ local address/ communication method under the voltage/current setting state;
19. “▶”: Right shift key, it's used to move the selected cursor's position or adjust brightness of digital tubes/ local address/ communication method under the voltage/current setting state;
20. Adjusted knob, to set the voltage/current setting value, counterclockwise rotation "minus", clockwise rotation "plus";

Back panel



1. Fan vent: used for internal heat dissipation of power supply and intelligent temperature control adjustment;
2. Type-B interface(optional): USB communication;
3. DB9 communication port: RS232/RS485(RS485as optional) communication ;
4. Power socket: with fuse, ACV input interface

二 Operation Manual

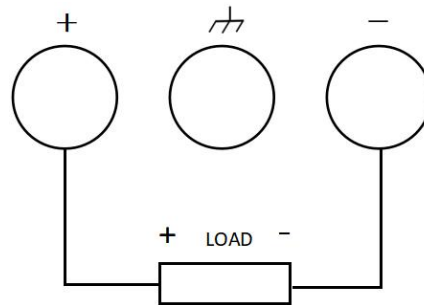
2.1 Stabilized voltage output

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

Taking model "ETP6005B" 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;

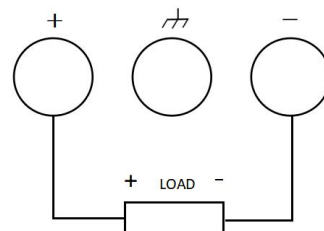


- (1) Turn on the power supply: click press power button to turn on it;
- (2) Voltage setting: Short press "V-SET", the voltage display interface will flash, adjust the knob to make voltage display as 30V, and then press "OK" key or do not action
- (3) Current: Short press "I-SET", the current display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

Take the model "ETP6005B" 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:

Connect to the load: as shown in the photo;

- (1) Turn on the power: click the power button, and it will be into the working status;
- (2) 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;
- (3) 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

Index Model	ETP 1506B	ETP 1520B	ETP 3005B	ETP 3010B	ETP 6003B	ETP 6005B	ETP 10003B	ETP 15002B
Output voltage	0~15V	0~15V	0~30V	0~30V	0~60V	0~60V	0~100V	0~150V
Output current	0~6A	0~20A	0~5A	0~10A	0~3A	0~5A	0~3A	0~2A
Stabilized Voltage status	Voltage stability: $\leq 0.1\% \pm 3mV$; Load stability: $\leq 0.1\% \pm 3mA$							
Stabilized Current status	Current stability: $\leq 0.1\% \pm 3mV$ Load stability: $\leq 0.1\% \pm 3mA$							
Display accuracy	Voltage: $0.5\% \pm 3$ readings Current: $0.5\% \pm 3$ 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, 0.56 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: $\leq 2000m$, temperature: 5~40 $^{\circ}C$, humidity: 10~85%RH							
Storage environment	Temperature: -20~80 $^{\circ}C$, humidity: $\leq 80\%$ RH							
Dimension	190mm* 115mm* 150mm (L*W*H)							
Weight	Net weight : 1.3kg							
Fuse specification	3A							

Note: The above parameters are measured at the ambient temperature of 25 $\pm 5^{\circ}C$, relative humidity <80%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

Standard communication port: RS232

Optional communication port: USB/ RS485

The following table describes the definition of the DB9 female interface at the end of the product.

PIN No	Definition	Explanation
2	TXD	RS232 Serial port data sending pin
3	RXD	RS232 Serial port data receiving pin
5, 9	GND	Signal Ground
6	A	RS485_A Pin
7	B	RS485_B Pin
Other pins	/	No meaning

Note: In the case of standard configuration, the corresponding interface (or pin) of optional communication function is empty. Users need to inform them in advance when configuring the optional communication function.

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