DC Adjustable Constant Voltage Power Module

General Information

The DC digital control adjustable constant voltage power module put the collection of analog integration and digital control functions in one. Its adjustable output voltage range is 0-50.00V, step by 0.01V. Its adjustable output current range is 0-15.00A, step by 0.01A. This module has power-down stored function and can store 10 groups preset value. And it also has the function of extracting quickly two groups' stored value. Compared with the traditional analog power supply, it is more convenient to quickly extract the voltage or current required. LCD display on the module has the function digital voltmeter and ammeter. You can view the preset voltage, input voltage, output voltage, the preset current, output current, output power, etc. on the output state remind area, you can see that output opens or not, the state of constant voltage and constant current, output is normal or not, the key is locked or not, and the current data groups that is being used. On the setting data interface, you can adjust overvoltage value, overcurrent value, over-power value, data groups, LCD brightness, etc. This module has many advantages, small size, advanced function, good visual effect, high operability, high-precision, being used independently, being inset into the device and been widely applied.

Technical Parameters

Input voltage range: 6-60.00V
Output voltage range: 0-50.00V
Output current range: 0-15.00A
Output power range: 0-750.0W
Output voltage resolution: 0.01V
Output current resolution: 0.01A
Output voltage accuracy: ± (0.5%+1 digit)
Output current accuracy: ± (0.5%+2 digits)
Open size: 71*39mm

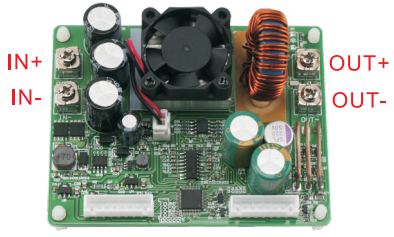
NOTE:

You must make sure that the input voltage is 1.1 times higher than output voltage. Under large current circumstances, pay attention to heat elimination.

When the current is more than 10A or the temperature is more than 45 °c , the fan will begin to work. when the temperature is more than 65°c, the module will stop working.

Connection Description

IN+: Input positive **IN-:** Input negative
OUT+: Output positive **OUT-:** Output negative



NOTE:

Input voltage range is DC 6-60V and 60V is the limit voltage; please leave a room to use. Or else it will be burnt.

The input must be DC power supply, not AC 220V, or else it will be burnt too.

Though this module has reverse connection protection and output short circuit protection, you can muse be in strict accordance with connection description to connect. If you connect the supply power with output interface, the module will be burnt.

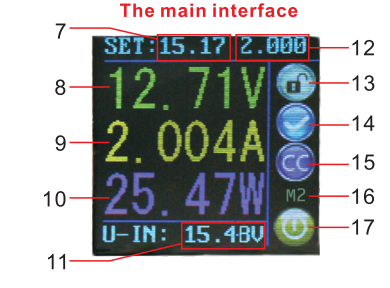
Panel and Display Interface Description

- **Panel description:**

1-Voltage setting/Page up to choose/ Shortcut extract M1 data
2-Data setting/ Extract value of the specified data group/Store value into the specified data group
3-Current setting/Page Down to choose/Shortcut extract M2 data
4-1.44 inch color LCD screen
5-Coding potentiometer/Data adjustment/Lock all buttons
6-Open or close output

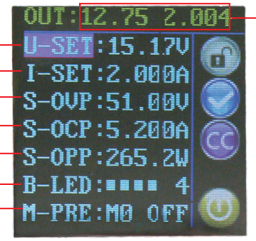
- **Display interface description:**

7-The preset value of output voltage
8- The actual value of output voltage
9-The actual value of output current
10-The actual value of output power
11-The actual value of input voltage
12-The preset value of output current
13-Lock or unlock icon
14-Output normal or not prompt
15-Constant voltage and constant current status prompt
16-Data group prompt
17-Open or close output prompt



18-Preset output voltage
19-Preset output current
20-Preset over- voltage
21-Preset over-current
22-Preset over-power
23-Preset screen brightness
24-Preset data set
25-The actual value of output voltage and output current

Data setting interface



Operating Instructions

- When connect the power supply, the screen shows welcome window firstly and then comes into main interface.

Welcom window

Main interface

- **Set the voltage and current output value on the main interface:**

  Press V/↑shortly, you can enter into voltage setting status. Then press the coding potentiometer, and then enter to adjust the numerical value. Turn coding potentiometer to adjust the numerical value. Turn by clockwise rotation to increase the numerical value; Turn by counterclockwise to decrease the numerical value. If you want to exit adjusting the numerical value, press shortly V/↑. In the same time the preset value will be stored. Or you can do nothing in one minute, the status will be automatically existed and the preset will be stored too. You can press A/↓to set the output current by the same way.

- **Set the data on the data setting interface:**

  On the main interface, you can press SET key shortly to enter into data setting interface. On the data setting interface, press shortly V/↑or A/↓ to page up or page down to U-SET or I-SET, and then set the output voltage current value by same way used in the main interface .

Data setting interface

- **Set the protection value:**

  Page up or page down to S-OVP, S-OCP or S-OPP to set over-voltage value , over-current value and over-power value correspondingly; when the value is up to the setting value, output will be closed. And then press shortly the coding potentiometer to enter setting interface. When the potentiometer is adjusted to the needed value, shortly press SET to exit.

- **Adjust the screen backlight brightness:**

  Adjust to B-LED, shortly press the coding potentiometer to enter into the status of adjusting the brightness of screen. When the potentiometer is adjusted to the needed level, shortly press SET to exit. There are six brightness levels of LCD screen, 0-5 level. Rank 0 is the darkest; rank 5 is the brightest. You can set what you like.

- **Data setting and store the specified data group:**

  Turn to M-PRE, shortly press the coding potentiometer to enter into the choice of the data groups orders. Turn coding potentiometer to data group you need to view. Then the data group you need will be displayed. And then press the coding potentiometer to enter into callout data output control option. Turn coding potentiometer to choose ON/ OFF. If choose ON, after extracting data, it is updated and the output status remain the same. If choose OFF, after extracting data, it is updated, but without output. If you want to exit choosing data set, press shortly SET key. Then press shortly V/↑or A/↓ to page up or page down to other place to adjust the data you need. After data setting done, keep pressing SET key more than 2s, all the data you set are automatically stored into the specified data group. In the same time, the right status bar will display the data group number. At last, you can press shortly SET key back to the main interface.

- **Set default boost or close output:**

  Turn to S-INI, shortly press the coding potentiometer to enter into the setting status. ON means default boot open; OFF means default boot close.

Functions Description.

- **Open or close the output:**

  You can press ON/OFF key to open or close the output on any interface.

- **Lock the button to avoid wrong operation:**

  On the any interface, you can keep pressing coding potentiometer more than 2s, all buttons are locked. You can see the key lock icon on the right of screen. If you want to unlock all buttons, keep pressing coding potentiometer more than 2s, all buttons are unlocked. The key unlock icon will be displayed on the right of screen.

- **M0-M9 ten groups data group:**

  M0 group is the boot default data group. When you extract the data group you need, this data group will cover M0 data group and be automatically stored on M0 data group.

- **Extract shortcut storage data group M1 or M2:**

  On the main interface, keep pressing V/↑or A/↓ more than 2s, you can extract Shortcut storage data group M1 or M2 quickly. In the same time the corresponding data group number will displayed on the right of the screen.

- **Extract the specified data group:**

  On the main interface, keep pressing SET key more than 2s, the sequence number of data group will be displayed on the right of the screen, you can turn coding potentiometer to choose data group you need. And then shortly press SET key, you can extract the specified data group you need.