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Constant Voltage Constant Current

Programmable Control Supply Power Module

Product model: DPS5005

General Information

The constant voltage and constant current programmable control power supply 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 0-5.000A, step by 0.001A. 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 set and LCD brightness. 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: 6.00-55.00V

Output current: 0-5.000A

Product Weight: about 113g

Open size: 71mm*39mm

Output current resolution: 0.001A

Output Current accuracy: $\pm (0.5\% + 2 \text{ digit})$

Output voltage range: 0V-50.00V

Output power range: 00.00-250.0W

Product Dimension: 79*43*48(mm) (L*W*H)

Output voltage resolution: 0.01V

Output Voltage accuracy: $\pm (0.5\% + 1 \text{ digits})$

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.

Connection description

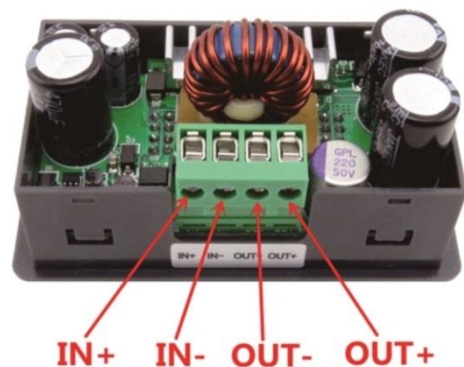
IN+: Input positive

IN-: Input negative:

OUT+: Output positive:

OUT-: Output negative

Note: Input voltage range is DC 6-55V and 55V 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, the module will be burnt.



Panel and Display interface description

Panel description

- 1-Voltage setting/Page up to choose/Shortcut extract M1 data group
- 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 group
- 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-Key lock or unlock prompt
- 14-Output normal or not prompt
- 15-Constant voltage and constant current status prompt
- 16-Data set 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

The main interface



Data setting interface



Operating instructions

When connect the power supply, the screen shows welcome window firstly and then comes into main interface. On the main interface, the output set voltage value and the output set current value is on the top of the screen. The big font value on the left are the current real output voltage, the current real output current and the current real output power. Input voltage is on the bottom of the screen. There are some running status icons on the right of



Welcome window



Main interface

the screen, key lock icon, abnormal output status icon, constant voltage and constant current icon, data set tip icon and opening or closing output icon.

Set the output voltage and output current on the main interface.

Press V/ ↑ key shortly, you can enter into voltage setting status. Then press the coding potentiometer, and then enter to adjust the numerical value. Press coding potentiometer to enter into the status of adjusting the numerical value you want to adjust. 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 and output current by same way used in the main interface .



Data setting interface

Set the protection value.

Page up or page down to S-OVP, S-OCV or S-OPP place 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 into the status of adjusting the numerical value you want to adjust. Turn coding potentiometer to adjust the numerical value. If you want to exit adjusting the numerical value, press shortly SET key.

Adjust the brightness of screen.

Page up or page down to B-LED, and then press shortly the coding potentiometer to enter into the status of adjusting the brightness of screen. Turn coding potentiometer to adjust the numerical value you need. If you want to exit adjusting the numerical value, press shortly SET key. There are six brightness levels of LCD screen, 0-5 level. Rank 0 is the darkest; rank 5 is the brightest. You can choose what you like.

Data setting and store the specified data group.

Page up or page down to M-PRE, and then press shortly the coding potentiometer to enter into the status of choosing the data groups. Turn coding potentiometer to choose the data group you need to view. Then the data group you need will be displayed. And then press the coding potentiometer to enter into status of changing output state. Turn coding potentiometer to choose ON or OFF. When choose ON, the data group is extracted and the output status remain the same. When choose OFF, the data group is extracted and the output is closed. 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, you can see the group number on the right of screen. At last you can press shortly SET key back to the main interface.

Set default boot open or close output

Page up or page down to S-INI, and then press shortly the coding potentiometer to enter into the setting status. Set ON, default boot open; set off, default boot close.

Function 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 press shortly SET key, you can extract the specified data group you need.