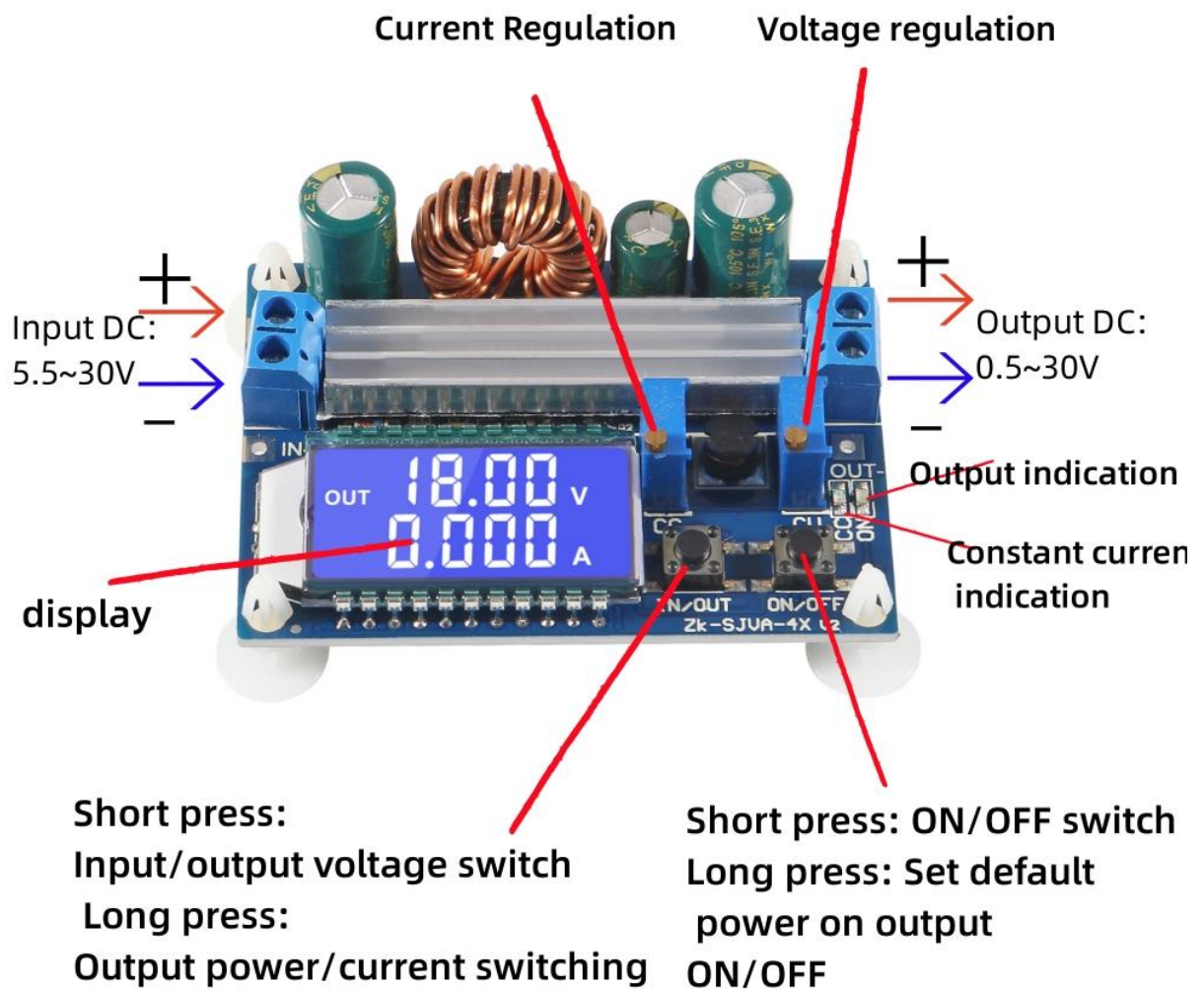


Parameter

1. Input voltage: 5.5-30V (When the input voltage is 5V, it is also possible to achieve voltage rise and fall, but the measurement of voltage and current is not accurate; Undervoltage protection when below 4.7V)
2. Output voltage: 0.5-30V
3. Output current: capable of long-term stable operation at 3A, and can reach 4A with enhanced heat dissipation
4. Output power: Natural heat dissipation of 35W, enhanced heat dissipation of 50W
5. Voltage display resolution: 0.01V
6. Current display resolution: 0.002A
7. Conversion efficiency: around 88%
8. Soft start: Yes (there is a possibility of failure when starting modules with high power and load)
9. Input reverse protection: Yes
10. Output anti backflow: Yes
11. Short circuit protection: Yes
12. Operating frequency: 180KHZ
13. Size: Length * Width * Height 66 * 48 * 21mm
14. Installation hole: diameter 4mm
15. Weight: 46g

NOTE

1. Pay attention to wiring according to the diagram and do not make mistakes.
2. The input IN of the module is prohibited from short circuiting with the output OUT, otherwise the constant current function will fail
3. Please ensure that the power of the power supply is always greater than the power required by the output load
If the module wants to output at full load, the input voltage must be above 8V. When the input voltage is 5V, the output power is about 15W, and the voltmeter and ammeter will fail. The maximum current value of the module is 4A, subject to the maximum output power. For example, if the output is 17V, the current should not exceed 2A
5. The module is equipped with output short-circuit protection. After short-circuit protection, the module automatically shuts off the output and can be restored by powering on the module again. If your power supply does not have output current limiting protection, it is recommended to connect a fuse in series at the input front of the module to improve the safety factor.



Module Function Description:

1. The module has two buttons, IN/OUT and ON/OFF: the IN/OUT button switches between input voltage and output voltage display, and long pressing can switch between output current and output power display; The ON/OFF button controls the output to be ON or OFF. Long press to set the default output state to ON or OFF for the next power on
2. CC is a potentiometer for current setting. Rotate clockwise to increase the set current. When the load current reaches the set current, it enters a constant current state and the CC constant current indicator light (red) lights up; The CV on the right is the voltage setting potentiometer, which can be rotated clockwise to increase the output voltage. The ON indicator light is an output status indicator light that lights up when there is voltage at the output terminal, otherwise it goes out.

usage method:

1. Used as a regular boost/buck module with overcurrent protection capability

(1) Adjust the CV constant voltage potentiometer to achieve the desired output voltage.

(2) Measure the output short-circuit current with a multimeter in 10A current mode (simply connect the two probes to the output terminal),

Simultaneously adjust the CC constant current potentiometer to achieve the predetermined overcurrent protection value for the output current. (For example, if the current value displayed on the multimeter is 2A, then the maximum current when using the module can only reach 2A. When the current reaches 2A, the red constant voltage and current indicator light will turn on, otherwise the indicator light will turn off.)

Attention: When used in this state, due to the current sampling resistor at the output end, there will be a voltage drop of 0-0.2V when connected to the load. At the same time, when the current is high, there will be a certain online voltage drop between the input and output wires, which is a normal phenomenon!

2. Used as a battery charger

Modules without constant current function cannot be used to charge batteries. Due to the large voltage difference between the depleted battery and the charger, the charging current is too high, causing battery damage. Therefore, constant current charging should be used for the battery at the beginning, and when it reaches a certain level of charging, it will automatically switch back to constant voltage charging.

(1) Determine the float charging voltage and charging current of the rechargeable battery you need; (If the parameters of the lithium battery are 3.7V/2200mAh, then the float charging voltage is 4.2V and the maximum charging current is 1C, which is 2200mAh)

(2) Under no-load conditions, measure the output voltage with a multimeter and adjust the constant voltage potentiometer to achieve the floating charge voltage; (If charging a 3.7V lithium battery, adjust the output voltage to 4.2V)

(3) Measure the output short-circuit current with a multimeter in 10A current mode (simply connect the two probes to the output terminal), and adjust the constant current potentiometer to achieve the predetermined charging current value;

(4) Connect the battery and charge it.

(Steps 1, 2, and 3 are: Connect the input terminal to the power supply, and the output terminal is unloaded without connecting the battery)

3. Used as a high-power LED constant current driver module

(1) Determine the operating current and maximum operating voltage required to drive the LED;

(2) Under no-load conditions, measure the output voltage with a multimeter and adjust the constant voltage potentiometer to reach the maximum operating voltage of the LED;

(3) Measure the output short-circuit current with a multimeter in 10A current mode, and adjust the constant current potentiometer to achieve the predetermined LED operating current;

(4) Connect the LED and test the machine.

(Steps 1, 2, and 3 are: Connect the input to the power supply, and output with no load without connecting the LED light.) Attention: When using this module with power exceeding 3A or 35W, please strengthen the heat dissipation!