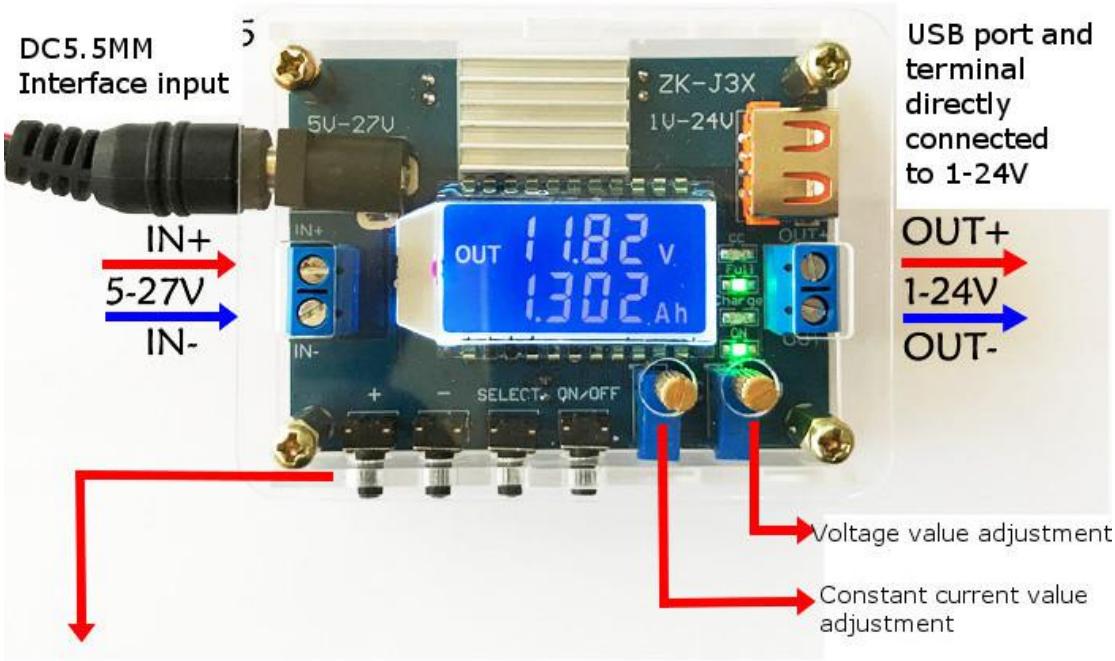
Manual

Note:

1. USB port output voltage range can be adjusted 1-24V
2. USB is not fixed 5V, you must verify the voltage before plugging in USB device
3. Includes acrylic heat sink copper column screws and other accessories, you need to assemble yourself
4. The module is a DC-DC step-down module, and it is not possible to input the AC current directly depressurized by the transformer.
5. Do not use the input voltage excessively. To increase the safety factor, it is recommended that the input of the power module be connected in series with a 3A fuse.
6. This is a buck module, and the input voltage needs to be higher than the output voltage 2V. If the output voltage cannot be adjusted, it may be because the position of the potentiometer is higher than the input voltage. You can adjust the CV potentiometer counterclockwise. Look at the output voltage change.



"+"key: long press one to enter or exit the precision correction interface;
short press one currently needed correction value to increase one unit;
"-"key: long press a clear capacity count value; short press a current required correction value to reduce one unit;
"SELECT" button: long press a switch between current, power and capacity display;
short press between input voltage and output voltage display;
"ON_/OFF" button: long press one to set the power-on default output to be off or on;
short press one to control the output on or off.

Misunderstanding about current regulation:

Only when your device needs constant current function, you need to adjust the current. For example, the driverless LED, the battery directly connected to the non-charging circuit, etc. need

to adjust the maximum limiting current. For example, navigation, mobile phone, router, etc. do not need constant current, only need to adjust the voltage regulation work, and the current is automatically determined by your load. Turning down the current will only cause the work to be abnormal. Only when your device's current is at or above the set value will it switch to constant current mode, and the other will work at constant voltage.

1. Parameter:

1.1. Input voltage: 5-27V (The input voltage should be higher than the output voltage 2V. If you want to output 5V, the input voltage should be above 7V; if the output voltage cannot be adjusted, it may be because the potentiometer rotates above the input. Voltage, you can adjust the CV potentiometer for 20 turns to see the output voltage change.) The 24V battery can't be used, because the battery will fully charge more than 27V, which will damage the module.
1.2. Output voltage: 1-24V (output voltage is higher than 24.5V, auto-shutdown output, display 0V, after lowering the output voltage, press ONOFF button to solve)
1.3. Output current: The maximum output is about 3A. It is recommended to use in 2.5A. If the heat is large, you need to solve the heat dissipation problem. The output current in constant voltage mode is adaptive according to the load size, and it is not adjustable. (Adjustable limit current is about 3A, output current exceeds 3A, auto-shutdown output, display 0C, reduce load current, press ONOFF button to solve)
1.4. Output power: less than 30W (when the output power is greater than 30W, the output will be automatically turned off, and 0P will be displayed. After reducing the load power, press the ONOFF button to solve)
1.5. Voltage display: resolution 0.01V, factory accuracy ±0.1V (if the accuracy is high, it can be corrected manually after comparison with standard voltmeter)
1.6. Current display: resolution 0.001A, range 0-3A, factory accuracy ±0.05A; display error is larger when the output current is less than 0.05A, small current within 10-40mA can not be displayed (if high precision is required, Manual calibration after comparison with standard ammeter, calibration is more accurate when the output current is greater than 1A)
1.7. Capacity display: resolution O.OOlAh, range 99.99Ah (can be cleared by long button, automatically save after power failure, automatically accumulate after power-on. Saturated after reaching 99.99Ah, need to be manually cleared)
1.8. Conversion efficiency: less than 95%
1.9. Working current: about 30mA
1.10. Input reverse connection protection: Yes
1.11. Output anti-backflow: Yes, it can be directly connected to the battery for charging, no need to add diodes (there is a 1K ohm equivalent dummy load inside the module output. After the end of charging, the battery will lose battery power. Mind this, please The output is connected in series with a diode)
1.12. Short circuit protection: Yes
1.13. Size: 73.4 x 55.54 x 30.5mm (length x width x height)
1.14. Weight: 67.8g (including accessories, accessories weighing 41.5g)

2. Highlights:

2.1. Easy to adjust, the voltage and current are adjusted to long handle knob, no tools.
2.2. High precision calibration, self-calibration of input and output voltage output current, voltage accuracy of 0.01V, current accuracy of 0.001A.
2.3. All kinds of protection, anti-reverse connection--reverse anti-burning, anti-backflow--directly connected to the battery, do not worry about battery down-burning module, no need for another series of diodes, over-current protection--output short-circuit does not burn, charge battery limit Flow safe.
2.4. With DC5.5 input port, with USB adjustable voltage output interface.
2.5. Five kinds of parameters including capacity display, input and output voltage display, output current display, power display, capacity display.
2.6. The output ripple is very small and the output is LC filtered.

Remind:

After the output voltage is adjusted to 5V, the USB port only provides 5V voltage. Some mobile phones can't be charged, such as IPHONE. It needs to short the D+D-bit of the two lines in the middle of the USB port, and now many mobile phones need to be intelligently recognized for charging. In order to charge and achieve fast charging effect. Therefore, the phone is not prompted to charge, or the charging speed is very slow. There may be only 500MA. You need to add the connector or other operation yourself. It is not a problem with the product or the current is not enough.

3. Function description:

3.1. Button
"+"key: long press one to enter or exit the precision correction interface; short press one currently needed correction value to increase one unit;
"-"key: long press a clear capacity count value; short press a current required correction value to reduce one unit;
“SELECT” button: long press a switch between current, power and capacity display; short press between input voltage and output voltage display;
“ON_/OFF” button: long press one to set the power-on default output to be off or on; short press one to control the output on or off.

3.2. Potentiometer knob
On the left side is the current adjustment potentiometer CC, which rotates clockwise to increase the set current. When the load current reaches the set current, it enters the constant current state (note that the potentiometer can increase the output current, under constant pressure). , the output current depends only on the load and is based on the load);
On the right side is the voltage adjustment potentiometer C' clockwise rotation, which can increase the output voltage (this is a step-down module, the input voltage needs to be higher than the output voltage 2V. If the voltage is not adjustable, you can adjust the CV potential counterclockwise first. In the end).

3.3. Indicator lights

CC—constant current indicator light, bright when constant current (red);

Full—The battery is full of indicator lights (green). If the set constant current value is 2A, when the charging current reaches 0.2A or less, the lamp will turn, the Full indicator will light, and the Charge indicator will be off.

Charge—Battery charging indicator (blue);

ON—output status indicator (green);

3.4. Input and output ports

One input on the left side, DC5.5mm socket or 5.08mm terminal as input;

The output is on the right side, the USB port or the 5.08mm terminal is used as the output, and can also be output simultaneously.

(Special attention!!! The voltage of the USB port is not absolutely 5V, it is directly connected to the terminal, it is adjustable range 1-24V)

Package includes:

1 x Step down module

1 x Case kit

Parameter calibration interface

Input voltage calibration Press +- to adjust	
Output voltage calibration Press +- to adjust	
Output current calibration Press +- to adjust	

Input voltage calibration, press and hold the "+" key to enter the SET interface. The current display is the input IN voltage.

Short press "+" or key to adjust, long press "+" to exit SET interface;

Output voltage calibration Press and hold the "+" key to enter the SET interface. The current display is the input IN voltage.

Press the “SELECT” button to switch to display OUT voltage, short press "+" or "-" button to adjust.

Long press the "+" button to exit the SET interface;

Output current calibration Press and hold the "+" key to enter the SET interface. The current display is the input IN voltage.

Press the “SELECT” button to switch to the OUT voltage and press the “SELECT” button.

Switch to the display output current interface, short press "+" or key to adjust, long press "+" to exit the SET interface.

Note: The calibration is more accurate when the current is greater than 1A; the display error is large when the output current is less than 0.05A, and the output current may be less than 10-40mA.