

Introduction

Wide voltage input DC4.8-30V, wide voltage output 0.5-30V, can both boost and step down. For example, if you adjust the output voltage to 18V, then the input voltage will change between 5-30V and will output 18V constant; For example, if you input 12V, adjust the potentiometer to set any output of 0.5-30V.

High power, high efficiency and better performance than the XL6009/LM2577 solution. It uses an external high-power MOS to package large current and high-voltage Schottky diodes.

The current can be set to limit the output current, constant current drive, battery charging and other occasions.

It has its own output anti-backflow function, so you don't need to add anti-backflow diode when charging the battery.

Feature:

Input voltage: 4.8-30V

Output voltage: 0.5-30V

Output current: can work stably at 3A for a long time, and can up to 4A under enhanced heat dissipation

Output power: natural heat dissipation 35W, enhanced heat dissipation 60W

Conversion efficiency: about 88%

Short circuit protection: Yes

Working frequency: 180KHZ

Dimensions: 68 x 37 x 22mm (L*W*H), mounting aperture: 3mm

Weight 38.7g

Instructions:

1. Use as a common buck-boost module with overcurrent protection

(1) Adjust the CV constant voltage device to make the output voltage reach the desired voltage value.

(2) Use the multimeter 10A current file to measure the output short-circuit current (directly connect the two test leads to the output terminal), and adjust the CC constant current potentiometer to make the output current reach the predetermined overcurrent protection value. (For example, if the current value displayed by the multimeter is 2A, then the maximum current can only be 2A when you use the module, and the red constant voltage constant current indicator will be on when the current reaches 2A, otherwise the indicator will be off)

Note: When using in this state, since there is a current sampling resistor of 0.05 ohm at the output end, there will be a voltage drop of 0~0.3V after the load is connected. This is normal! This voltage drop is not pulled by your load, but falls to the sampling resistor.

2. Use as a battery charger.

Modules without constant current function cannot be used to charge the battery. Because the voltage difference between the battery and the charger is very large, the charging current is too large, resulting in battery damage. Therefore, the battery should be used at the beginning. Stream charging, when the charging reaches a certain level, it automatically switches back to constant voltage charging.

Instructions:

(1) Determine the float voltage and charge current you need to charge the battery; (If the lithium battery parameter is 3.7V/2200mAh, then the float charge voltage is 4.2V, the maximum charge current is 1C, and the target is 2200mA)

(2) Under no-load conditions, the multimeter measures the output voltage, and adjusts the constant voltage positioner to make the output voltage reach the float voltage; (If charging the 3.7V lithium battery, adjust the output voltage to 4.2V)

(3) Use the multimeter 10A current file to measure the output short-circuit current (directly connect the two test leads to the output terminal), and adjust the constant current potentiometer to make the output current reach the predetermined charging current value;

(4) The charging lamp current defaults to 0.1 times the charging current; (the battery is gradually reduced during the charging process, gradually changing from constant current charging to constant voltage charging, if the charging current is set to 1A, then when the charging current is less than 0.1A, the blue light is off, the green light is on, and the battery is charged.

(5) Connect the battery and charge it. (Steps 1, 2, 3, and 4 are: input terminal is connected to the power supply, and the output terminal is not connected to the battery.)

3. As a high power LED constant current drive module

(1) Determine the operating current and maximum operating voltage at which you need to drive the LED;

(2) Under no-load conditions, the multimeter measures the output voltage, and adjusts the constant voltage positioner to make the output voltage reach the maximum working voltage of the LED;

(3) Measure the output short-circuit current with the multimeter 10A current file, and adjust the constant current potentiometer to make the output current reach the predetermined LED operating current;

(4) Connect the LED and test the machine. (Steps 1, 2, and 3 are: input is connected to the power supply, and the output is not connected to the LED.)

Note: This module is used in more than 3A, 35W, please strengthen the heat.

Precautions:

1. Module input IN-disable and output OUT- short circuit, otherwise the constant current function will be invalid.
2. Please ensure that the power of the power supply is always greater than the power required by the output load.
3. The module has no input anti-reverse function, please pay attention to the positive and negative directions of the power supply.
4. If the module wants full load output, the input voltage should be 8V or more. When the input voltage is 5V, the output power is about 15W. The module current value is up to 4A, subject to the maximum output power, such as output 17V, current should be no more than 2A.
5. Module with output short circuit protection.
6. The module has input undervoltage protection function. The default is about 4.2V. After this value is lower, the output will be automatically disconnected. After the input voltage is restored, it can be started automatically.
7. The module contains three indicator lights, constant voltage constant current status indication (red, bright in constant current mode), charging indication (blue), full indication (green, the size of the rotating current is 1/10 of the set current) .