5 Amps High Voltage Switch Mode UBEC

1. Why do you need a high voltage UBEC?

The 5A-HV-UBEC is a switch-mode DC-DC regulator supplied with a 3-10 cells lithium battery pack and outputs a consistent safe power for your receiver, gyro and servos. It is very suitable for big electric RC models such as fixed-wing aircrafts and helicopters（above 4 cells lithium battery）. Using this UBEC, the receiver can obtain the power supply directly from the main battery pack, so the additional battery pack for receiver is unnecessary.

Compared with the linear mode UBEC, the overall efficiency of the switch-mode UBEC is much higher, so it can extend the working time of the receiver battery pack, and because a switch mode UBEC can significantly reduce the heat emission, it can avoid the loss of control caused by the over-heat problem which is frequently happened with the linear mode UBEC.

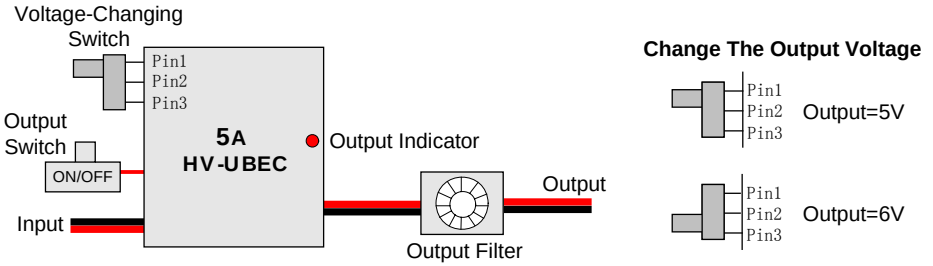
2. Specification:

2.1. **Output Voltage:** 5V or 6V (Changeable with an output-voltage select switch)
2.2. **Continuous output current:** 5 Amps
2.3. **Burst output current:** 7.5 Amps
2.4. **Input:** 8V-42V (3-10 cells lithium battery pack)
2.5. **Quiescent current:** 20mA
2.6. **Size:** 48mm*27mm*9mm (length*width*height)
2.7. **Weight:** 37g

3. Features:

3.1. Designed with an advanced switch mode DC-DC regulator IC, the max efficiency of the chip is up to 92%.
3.2. The output current is very large, the continuous output current is up to 5 Amps, and the burst output current is7.5 Amps.
3.3. With the output short-circuit protection function and the over-heat protection function.
3.4. A metal shield covers almost all the electronic components, and a specially -made filter is attached with the output wires to significantly reduce the electromagnetic interference.
3.5. With ultra-wide input voltage from 8V-42V.
3.6. Safe power on with the polarity protection function. If the input polarity is not correct, the UBEC can't work, but it will not be damaged. What you need to do is just swapping the battery pack's polarity.
3.7. Shows the working status with an indicator (LED), lights when the output is in normal range.
3.8. It has a switch to turn on or turn off the output.
3.9. Accessory: A step-down voltage regulator.

4. Wiring Method



5. Special Explanation

Although we have tried our best to reduce the electromagnetic interference caused by switch model UBEC, it still may cause some interference to the receiver. So please install the filter far away from the UBEC's main board, and DON'T stack the filter on the main board. Please put the whole UBEC as far as possible away from the receiver.

6. How to Use the UBEC?

6.1. Change the output voltage

The voltage is chosen by an output-voltage select switch. If the switch is located at Pin1 and Pin2, the output power is 5v. If the switch is located at Pin2 and Pin3, the output power will be 6V. Please refer to the wiring diagram on the left side.

6.2. Working status indicator (LED)

The LED shows whether the output is normal or not. It lights when the UBEC has the normal output. If it doesn't light, please check the battery connections.

6.3. Turn on or turn off the output

Set to the "ON" position to get the output; Set to the "OFF" position to switch off the output.

6.4. About the step-down voltage regulator

Allowing use of Futaba servo models 9241, 9251, 9253, 9254, 9255, 9256 and other digital servos not capable of handling 6V. This small device can change the voltage from 6V to 5.3V. When the UBEC's output is set to 6V, the step-down voltage regulator is useful. Connect the regulator inline between the Gyro and the rudder servo (Or between the receiver and the servo). If you are using a servo that can accept 6V input, the regulator is not required.