

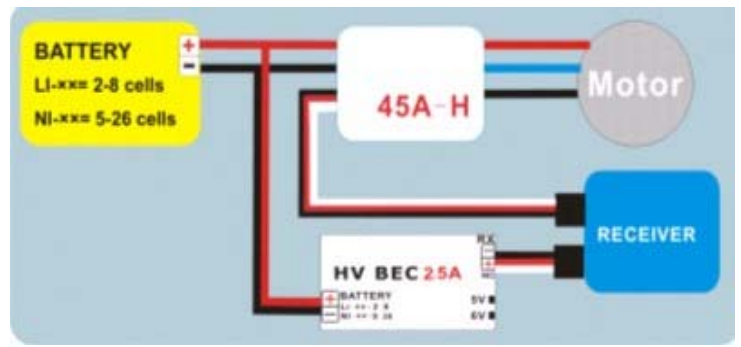
## HV (High Voltage ) BEC 2.5A instruction manual

This HV BEC 2.5 A is a DC to DC switch-mode BEC. It can be used in RC airplane/helicopter power systems. It can step down the battery's voltage to supply the power for the receiver and servos or other electronic device. The high frequency PWM control technology was employed in HV BEC 2.5 A; the maximum input voltage of HV BEC 2.5 A is 36V, and which can supply a 2.5 A output current. HV BEC 2.5 A is great for high efficiency and low heat generation. The output voltage either 5V or 6V can select with a jump connector to suit for different electronic device.

### Model : HV BEC 2.5 A



### Connection Diagram :



### Specifications :

Input Voltage: 4.4V (min) ~ 36V (max).

Battery Range:





LI-XX = 2 – 8 cells; 7.2V – 33.6V.

NI-XX = 4 – 26 cells; 4.8V– 36V.

BEC Current: 2.5 A.

Output Voltage: 5V or 6V (Select by a jump connector).

Protection:

-  RVP Reverse Input Voltage Protection  
Prevent BEC from damage when reverse polarity of the battery.
-  OVP, Over Voltage (battery) Protection.
-  OCP Over output current protection.
-  OLP Over load and heat protection.

Working Ambient : 0°C - 50°C.

Weight : 5 g (without wires).

8g (including wires).

Dimensions: 35 x 21 x 5.5(mm) (size of board).

### Features :

- DC to DC switch-mode BEC. It's using high frequency PWM technology, compact and high efficiency.
- It can choose 5V output voltage or 6V output voltage to suit different kinds of servos.
- Reverse Input Voltage Protection. Prevent BEC from damage when reverse polarity of the battery.
- Over Input voltage protection.

- Over current protection.
- Over load and heat protection.

### Instruction :

Please see the manual of the brushless ESC to check whether it has internal BEC or not before installation.

1、 When your brushless ESC does not have an internal BEC:

Please follow the above connection diagram to install when your brushless ESC does not have an internal BEC.

HV BEC mainly step down the output voltage and supply low voltage power to the receiver of the controller, therefore the signal wire of the BEC does not connect. (NC).

The receiver only sends signal to the ESC (Electronic Speed Controller), therefore the 5V power cord of the BEC does not connect. (NC).

2、 When your ESC has an internal BEC:

Please cut or remove the red wire and then insulate it before follow the connection diagram shown above when your ESC has an internal BEC.

HV BEC mainly step down the output voltage and supply low voltage power to the receiver,

therefore the signal wire of the BEC does not connect. (NC)

The receiver only send signal to the ESC, therefore the red wire of the BEC must be cut or removed and then insulated it, so the 5V power cord of the BEC does not connect. (NC)



### Advantages :

DC to DC switch-mode BEC have high efficiency and low power dissipation, so that it has low heat generation.

Traditional regulator is linear voltage regulator; the output voltage of the BEC is steady, and the output current and the input current are the same, as a result, the higher input voltage of the BEC, the higher dissipation power and higher heat generation due to stepping down the voltage of the BEC. That's the reason of the temperature of the BEC is higher when using four cells lithium battery than using two cells lithium battery.

For example, when the output voltage is 5V, the output current is 1A, so the output power is 5W, the input voltage is 10V, the input current is 1A ; Therefore the dissipation power is  $(10V-5V) \times 1A=5W$ . So the temperature of the BEC is very high.

Because of the application of high frequency switch control technology, the switch-mode regulation circuit can handle the input power down to 90 percent of output power.

For example, the output voltage is 5V, the output current is 1A, so the output power is 5W, the input power is about 5.5W, If the input voltage is 10V, the input current is 0.55A; if the input voltage is 30V, the input current is only 0.18A, therefore it costs steady only 0.5W

Therefore the switch-mode regulation circuit is great for high efficiency, low heat generation and low power dissipation.

### Warranty :

The manufacturer's guarantee is limited to the replacement of any defective parts or defective in workmanship. This does not include the damage caused by crash, over-loading or improper use.