User Manual of Henge 12A UBEC

Thank you for choosing our products, please make sure that you use the equipment's rated voltage or withstand voltage, and correctly adjust the output voltage of UBEC before using this product.

1. Specifications:

1.1 Output: 5V/12A, 6V/12A or 7.4V/12A (Changeable with an jumper);

1.2 Input: 7-25.5V (2 to 6 cells Lipo battery pack, 6 to 16 cells NIMH battery pack);

1.3 Continuous output current: 12A;

1.4 Burst output current: 20A (≤15 Sec);

1.5 Ripple: ＜35mVp-p(@8A/12V);

1.6 Size: 58mm*38mm*18mm (L*W*H);

1.7 Weight: 25g(Including the cable and the ferrite ring);

2. Features:

2.1 Designed with an advanced switching power supply control chip with overcurrent and overheat protection function, the max efficiency of the chip is up to 93% ;

2.2 The small size and the light weight make it very convenient to use;

2.3 Provide large output current, the continuous output current is 12A, and the burst output current is 20A,fully guarantee the power demand of equipment.;

2.4 Designed with a high quality switching power supply conversion chip, significantly reduce the electromagnetic interference and ensure the receiver works properly;

2.5 With ultra-wide input voltage range, works properly from 7V-25.5V (low voltage version);

2.6 Shows the working status with an indicator(LED),Output: 5V,yellow LED on; 6V,yellow and red LED on; 7.4V,red LED on;

3. The advantages compared with the traditional linear BEC:

Compared to the traditional linear BEC , the switch-mode BEC has the following advantages:

When using a lithium batterypack more than 3S, a switch-mode BEC has much higher efficiency with lower heat.For a traditional linear BEC, For example, a 4S lithium battery pack has a typicalvoltage of 14.8V, in order to let BEC output 5V/1A, the current flow into the BEC is at least 1A, so the power on BEC is 14.8V* 1A=14.8W. But the useful output power is only 5V*1A=5W,so the efficiency of the linear mode BEC is just 5W/14.8W=33.8%, the redundant power 14.8W-5W=9.8W changes to heat, which makes the BEC very hot, and makes it enter protection state, thus unable to work.For a switch-mode BEC in the above case, in order to let BEC output 5V/1A, the current flow into BEC is only 0.37A (actual test data), so the power on BEC is 14.8V* 0.37A =5.476W, and the efficiency of BEC is 5W/5.476W=91.3%.

4. Special Explanation:

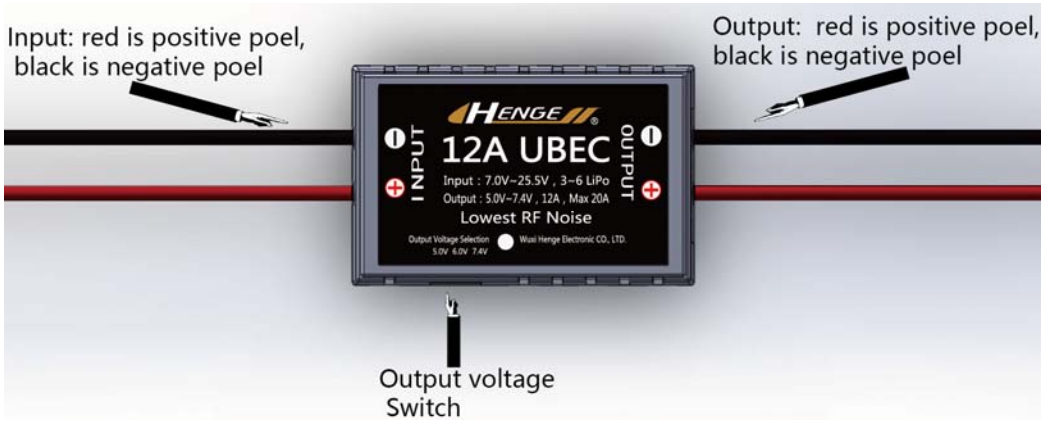
4.1 Although we have tried our best to reduce the electromagnetic interference, it may still cause very little interference when the switch-mode UBEC is working. Thus please put the whole UBEC as far as possible away from the receiver to ensure it's working properly.

4.2 Because of high current, try to keep ventilated when using it; Do not wrap any material outside of the UBEC.

5. How to use the UBEC:

5.1 Output / Input tip

See below picture



5.3 Output voltage adjustment

Use a tweezer or screwdriver to turn the switch on the side of the UBEC

（1） Turn the switch to 5V, yellow light on

（2） Turn the switch to 6V, both yellow and red lights on

（3） Turn the switch to 7.4V, red light on

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