

UBEC
10A 2-6S

20201221



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01 Warnings

- Read through the manuals of all power devices and ensure the configuration is rational before using this unit, as improper power configuration will overload and damage the unit.
- When installing the unit, relevant operations like soldering, connecting will be needed, so please ensure all wires and connections are well insulated before connecting the unit to related devices, as short circuit will damage the unit. When soldering relevant wires of the unit, please use a soldering iron with sufficient power to do the soldering, as poor connection may cause the unit to function abnormally or other unpredictable issues like damage to the device.
- Always keep away from unsafe elements like obstacles, crowd, high-voltage power lines. Please use it in the working environment as regulated in this manual. Although there are some protections, improper use may still cause permanent damage to the unit.
- Always disconnect and remove the battery after use. As long-time contact will cause the battery to completely discharge and result in damage to the battery or the unit. This will not be covered under warranty.

02 Introduction

The UBEC is an external switching-mode DC-DC regulator. It can obtain the DC voltage from a 2-6S LiPo battery and drops the voltage to a level suitable for receivers and other electronic devices. It can provide the stable current output of up to 10Amp. The UBEC can easily supply power to various equipment on the remote control model, and it is waterproof and dustproof, so especially suitable for rock crawler.

03 Features

- High efficiency DC-DC regulator chip for transfer efficiency of over 90%.
- All metal shell design helps to heat dissipation and reduce electromagnetic interference.
- Adjustable UBEC output voltage (6.0V/7.4V/8.4V) applicable for servos with different voltages.
- The continuous current of UBEC is up to 10A and 15A at max., which can be used for various electrical equipment (such as car light, winch, wiper, etc).
- Excellent waterproof and dustproof design as well as the IP67 protection grade can easily deal with different complicated environments.
- Multiple protections: over-current protection, output short-circuit protection, overheating protection, safe and reliable.
- External switch allows to turn on/off the UBEC easily.
- LED indicator for indicating the work status of the UBEC.

04 Specifications

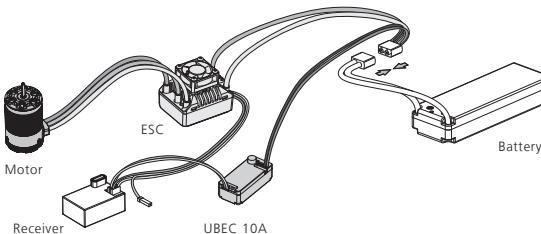
Model	UBEC-10A
Lipo Cells	2-6S LiPo
Output Voltage	6.0V / 7.4V / 8.4V Adjustable
Output Current	Continuous Current: 10A, Peak Current: 15A
Size	45*20*16.2mm
Weight	34g (Including weight of wire)

05 User Guide

1 Connection diagram

1. The using method when ESC has built-in BEC function:

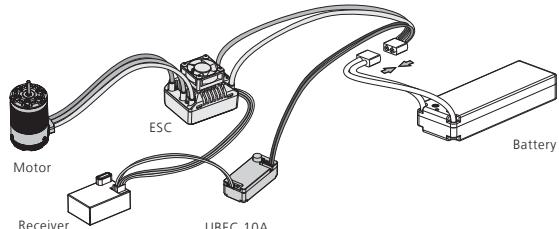
At this time, it is necessary to disconnect the BEC output of the ESC, which is to disconnect the middle wire of esc's throttle cable, and then connect the input end of UBEC with the battery pack in parallel, and insert the output end into the idle channel of the receiver.



Suggestion:
Take out the middle wire from JR plug of esc's throttle cable with sharp tweezers or screwdriver, and make it insulated. If you need to use the built-in BEC function of the ESC in the future, just reconnect the middle wire.

2. The using method when ESC has no built-in BEC function:

At this time, no changes need to be done to ESC, as long as the input end of UBEC is paralleled with the battery pack, and the output end is inserted into any idle channel of the receiver.



2 Voltage output adjustment

The output voltage can be adjusted in three levels (6.0V/7.4V/8.4V) through short-circuit different pins with jumper.

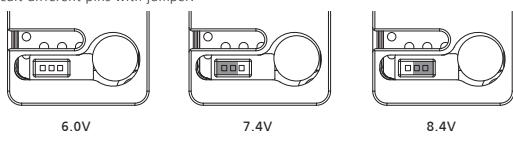
The setting method of each voltage output level is shown in the figure:

- 1) 6.0V: Do not short-circuit any pin;
- 2) 7.4V: Short-circuit the two pins far away from the capacitor;
- 3) 8.4V: Short-circuit the two pins close to the capacitor.

Note:

Due to the characteristics of BEC, BEC may not be able to output 7.4V voltage stably with the reduce of battery voltage when connected to 2S LiPo (The output voltage will reduce with the battery voltage).

Therefore, it is suggested to use 7.4V / 8.4V output with above 3S LiPo.



06 Other information

1. The Red LED is used for indicating the work status of the UBEC. If the Red LED turns on, it means that the UBEC outputs normal voltage; if the Red LED is not on, then please check the following issues:
 - 1) Check whether the connection between the UBEC and the battery is good.
 - 2) The switch is not open or damaged.
 - 3) The output is cut off due to triggering protection. Check whether the output end is short circuited; whether the load of output end exceeds the maximum output current allowed by UBEC; whether it is overheated (The internal temperature of UBEC exceeds 130°C).
2. The switch-mode UBEC may produce some electromagnetic interference during working and affect some receivers with poor performance (especially the old-fashioned AM and FM receivers). To ensure the normal operation of the receiver, please keep the UBEC over 5cm away from the receiver when mounting the UBEC.