

Ultimate Battery Eliminator Circuit(UBEC) Users' Manual Of SUNRISE MODEL 20A

1 Features:

- 1.1 Adopting the most advanced designing of Switch mode mastered by the main-controlling chip, combination of FET of extremely low resistor against high frequency, current limit protection.
- 1.2 Small and light. Max output current is 20A, high ability of with-loading. It is the first UBEC of heavy current in China.
- 1.3 Stable and excellent performance with great power of the brand component.
- 1.4 Output Voltage is 5V, 5.5V, 6V, 7V, 9V for selection by short-circuit plug (jumper wire).
- 1.5 Output double wires configured with a professional filtering magnet loop largely reduces the electromagnetic interference to assure the regular work with load.
- 1.6 6V to 50.4V wide range of regular working voltage.
- 1.7 Stable operating frequency, 100% Duty Cycle.
- 1.8 Totally enclosed electronic inductance reduces largely the electromagnetic interference.

2 Advantages of Switch BEC over traditional BEC:

Comparing with the linear regulator BEC, Switch BEC with battery pack has main advantages as followings:

When you use more than three bunches of Li-XX (11.1V) battery pack, it can reduce largely the heat in BEC and improve the efficiency of the whole kit. For example, a battery pack of four bunches Li-xx battery can supply 16.8V when it work regularly. If a traditional linear regulator BEC is used, the power pack must supply 1A current so as to output 5V/1A current. So the power of BEC is 16.8W (16.8V*1A). However, the actual useful output power of BEC is only 5W (5V*1A). So the efficiency of the whole power is only 29.7%(5/16.8), the rest of 11.8W power into heat may lead to the serious over-heat in BEC even a fatal damage and out of work of chips; If you use a Switch BEC, the testing power pack is just needed to input 0.36A so as to output 5.5V/1A, and the power is 6.048W (16.8V*0.36A), the whole efficiency of Switch BEC is 90.9%(5.5/6.046).

Note:

- 1) In order to give full play to the product performance, please cut off the battery first before the jumper selection of voltage, or it cause unwanted trouble.
- 2) Although many measures are taken to reduce the electromagnetic interference, a little electromagnetic interference is still unavoidable completely in using Switch BEC. For the working regularly of receiver, please keep the output filtering bead away from main controlling panel as far as possible (The output filtering bead is not allowed to pile on the main controlling panel). Meanwhile, please keep the Switch BEC away from the receiver as far as possible.

3 Technical Data:

- 3.1. Output Voltage: 5V, 5.5V, 6V, 7V, 9V (jumper selection)
- 3.2. Max output current: 20 Amps
- 3.3. Input: 6V-50.4V (2-12 cells lithium battery pack)
- 3.5. Quiescent current: 60 μ A-200 μ A
- 3.6. Size: 45mm*26mm*8mm (length*width*height)
- 3.7. Weight: 30g