

1. Description

The switching voltage regulator HiCopter is supposed to act as a current supply for accessories in the X Copters. The switching voltage regulators HiCopter 12V make it possible to use wide range of input voltages from 4S up to 12S Li-XX cells.

2. Wiring

The switching voltage regulator **HiCopter 12V3A** comprises two input (IN) and two output (OUT) cables with cross-section of 1mm^2 . The batteries are connected to the input cables, the output cables are used to connect the powered accessories.

The switching voltage regulator **HiCopter 12V8A** comprises two input (IN) cables with cross-section of 1.5mm^2 that are used to connect the batteries, and two output (OUT) cables with cross-section of 2.5mm^2 that are used to connect the powered accessories.

The switching voltage regulator is switched on immediately after the power supply is connected.

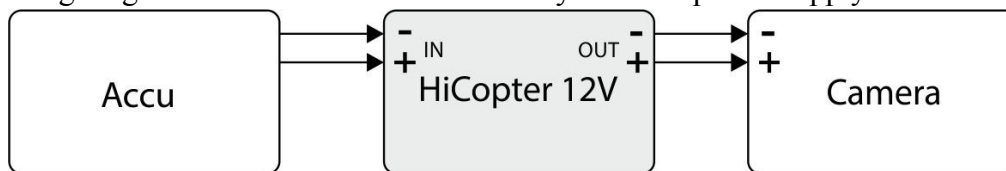


Fig. 1: Block diagram of regulator connection

3. Operating status

An important condition of keeping a correct output voltage is a sufficiently high supply voltage. The supply voltage of the battery must by all means be higher than the required output voltage. We recommend a minimum difference of at least 2V above the output voltage. Otherwise the output voltage would decrease under load conditions. The switched-on condition of the regulator and the information about the presence of voltage at its output are signaled by a shining LED.

4. Installation and heat protection

The switching voltage regulator HiCopter contains a heat protection means which prohibits destruction of the regulator by long time effects of excessive current or by a short circuit. If the heat protection is activated, the regulator „switches off“ for a short time necessary to cool down. After cooling down the HiCopter switches on again automatically. This affair is signaled by blinking of the green LED. The blinking frequency of the LED depends on the amount of applied load. When the heat protection is activated, the output voltage decreases to several hundreds of mV.

In order to ensure a proper function of the regulator always be sure to supply sufficient amount of cooling airflow.

5. Technical data of HiCopter regulator

Recommended input voltage	14 – 51 V
Maximum input voltage	51 V
Maximum allowed amounts of cells	4-12 LiXX or 12-42 NiXX
Output voltage	12 V
Operation temperature	- 20°C up to +85°C

5.1. Technical data of HiCopter 12V3A regulator

Weight	29 g
Dimensions	60 x 28 x 10 mm

Table showing the dependence of maximum continuous current loads on input voltages

Number of Lixx cells	4	5	6	7	8	9	10
Continuous output current* [A]	4.7	4.4	3.9	3.7	3.3	3.3	2.7

* maximum continuous current values are valid only for operating conditions with sufficient cooling airflow

5.2. Technical data of HiCopter 12V8A regulator

Weight	100 g
Dimensions	80x36x25 mm

Table showing the dependence of maximum continuous current loads on input voltages

Number of Lixx cells	3	4	5	6	7	8	9	10
Continuous output current* [A]	18	17.5	17	16.5	16	15.5	15	14.5

* maximum continuous current values are valid only for operating conditions with sufficient cooling airflow

6. Warranty

This product is covered by warranty for 24 months after the day of purchase provided that it has been operated in accordance with these instructions at the specified voltage and is not mechanically damaged. When claiming warranty repairs for the product, always attach a proof of purchase. Warranty and post-warranty service is provided by the manufacturer.

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