XROTOR PRO ESC 60A

MAD COMPONENTS

4~6S Electronic Speed Controller manual V1.0

⚠ Disclaimer

Thank you for choosing this product. Please carefully read this manual before using this product. Using this product will indicate you're agreed with the all items in this manual. Please strictly follow these items during usage. We'll not commit any responsibility including but not limited to indirect loss or joint responsibility caused by improper usage, private modification and other faults. The maximum compensation will be not more than the cost of product itself.

⚠ Attention

This part has strong power. High speed running propellers have certain safety risk. User must be older than 18 years and have relative professional knowledge.
Before usage, please carefully check if all the components are in good conditions.

Features

- Quick response. it will take only 0.25 seconds from starting motor to full speed running.
- Good compatibility and stability with special control algorithm for disc motors.
- Synchronous freewheeling technology can bring better throttle linearity, driving efficiency.
- When the motor decelerates, it can automatically recycle energy to reversecharge the battery to extend the flight time Have output interfaces of RPM and error signal.
- IP67 protective grade. Convenient installation screw holes without considering ESC part front and back sides.

ESC Protection Mechanism

- Fast motor acceleration and deceleration response.
  When the electrical speed controller rec eives a large throttle change in flight control, the maximum limiting current can be reached within 10mS, effectively improving the response speed.

- Optimized heat dissipation design.
  The power device adopts double-sided heat dissipation process, which can effectively reduce the thermal resistance between the shell, and the measured maximum temperature of the internal device is only 15C higher than the surface temperature of the shell. The device life is greatly improved under full load operation condition.

- Perfect hardware self- check procedures.
  When the electrical speed controller rec eives a large throttle change in flight control, the maximum limiting current can be reached within 10mS, effectively improving the response speed.

- Integrated comprehensive protection functions.
  Reliable blocking protection can guarantee the protection of motor and electric adjustment itself after abnormal explosion; Short circuit protection can guarantee the burning fault caused by short circuit of motor line; Input PWM throttle identification protection, can prevent the introduction of interference during maintenance of misoperation.

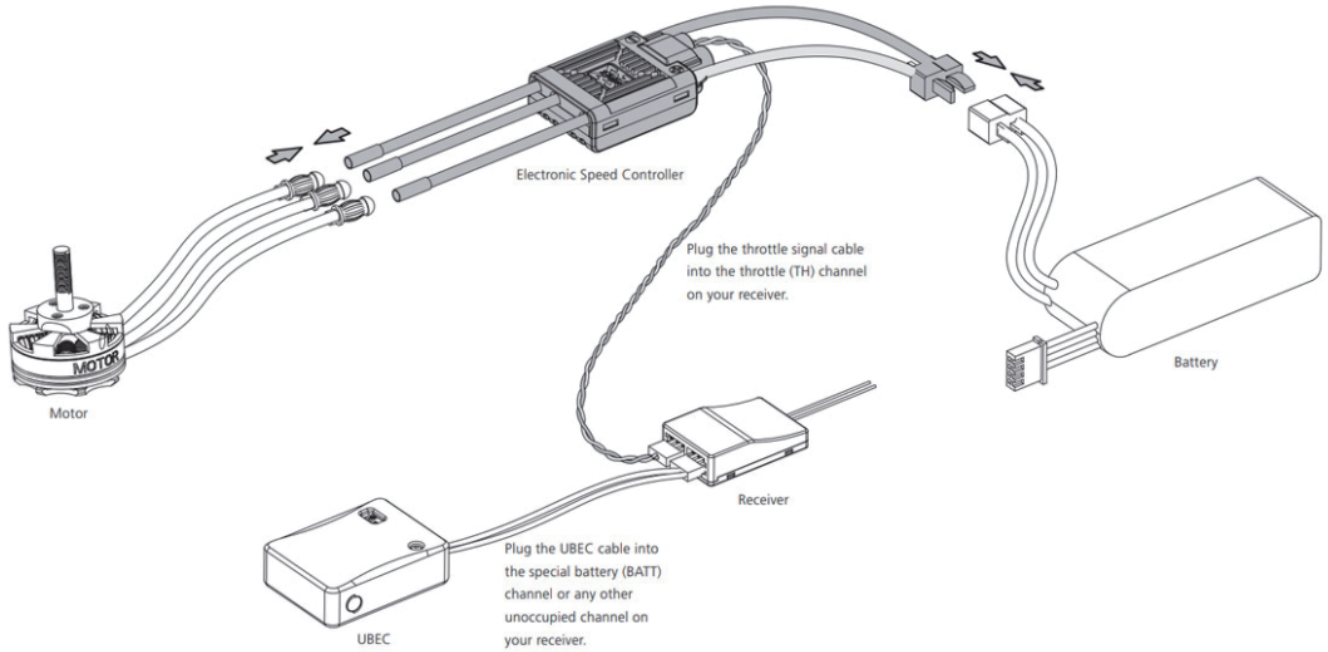
- Electric modularization design.
  Electric and motor, power line, signal line, lamp board line are completely separated, only need a screwdriver can be easily removed, quick repair.

- 485 communication interface.
  Provides firmware updates, in conjunction with the electrically tuned communication box to record data individually, or communicate with the flight control. Improve the black box data record of the entire system to improve the accuracy of fault locating after sales.

Protection Function

First to connect motor with ESC, then to power on & adjust throttle to top, you will hear sound of beep for two times. Then adjust the throttle to lowest, you will hear sound of Do Mi So, that means the throttle stroke has been set successfully.

ESC Connection



ESC Parameter

Name	XROTOR PRO 60A	Communication port	RS485
Support battery	4–6S LiPo	Digital communication throttle	support
Maximum operating voltage	60V	Maximum peak current	80A
PWM input level	3.3V/5V	Maximum continuous current	60A
PWM compatible frequency	50 – 500HZ	Waterproof grade	IP67
Signal line	400mm	Ambient temperature	–20– 45C
Botor cable	80mm	Weight:	58.1g
Battery cable	540mm	size	48*30*15.5

Switch: 1. Led status ON/OFF 2. Led color Red/Green 3. DEO status ON/OFF 4. Motor rotation CW/CCW

Trouble Shooting

Problem	Alarm	Cause	Solution
Motor can't start after powering on.	Quick noise of beep beep beep...	Throttle is not made zero.	Adjust throttle bottom
Motor can't start after powering on.	Beep, beep, beep... every 1 second.	Receiver has not throttle output signal.	Check sender and receiver co–work condition, check throttle control lines.
Voltage is less than 16V.	Beep beep, beep beep... every 1 second.	Battery voltage is too low.	Change full power battery.
Voltage is more than 64V.	Beep beep, beep beep... every 1 second.	Battery voltage is too high	Change proper full power battery.
Temperature is higher than 110 centigrade degree.	Beep beep, beep beep... every 1 second.	ESC's temperature is too high	Please cool down the ESC in a ventilated place