



AMPX ESC 120A (12-24S) HV Drone Electronic Speed Controller

Our Product Introduction

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Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: AMPX ESC 120A (12-24S)
- Price: Negotiable



Product Specification

- Model: AMPX 120A HV ESC
- PWM Input Signal Voltage: 3.3V/5V (compatible)
- Power Wire / Wire Length: 8AWG/190mm
- Supported Lithium Cell Count: 12~24S
- Dimensions (L*W*H): 117.5*56.3*42.8mm
- Operating Environment Temperature: (-20~65°C)
- Current Limit: 120A
- Highlight: Android System Drone Remote Control, Android System Drone controller, Skydroid H12 Drone Remote Control



More Images



Product Description

AMPX ESC 120A (12-24S) HV Drone Electronic Speed Controller

Support dual throttle (CAN digital throttle + PWM analog throttle) control, priority CAN digital throttle control.

Quick response, it will take only 0.60 seconds from starting motor to full speed running.

Good compatibility and stability with special control algorithm for disc motors.

Have output interfaces of RPM and error signal.

With CAN communication interface, can be real-time communication with flight control. (Note: This function should be matched with flight control)

Convenient installation screw holes without considering Esc part front and back sides.

The control signal interface and the main power supply are fully isolated, which is safer and more reliable.

Protection Function**Short Circuit Protection**

When the Esc checks to trigger the short-circuit protection, the Esc shuts down the output. 100ms later the Esc automatically restores to restart.

Stall Protection

If the Esc detects a motor stall, triggering stall protection, the throttle must be returned to zero and then advanced again to restore normal operation.

Voltage Protection

Upon power-up, if the Esc detects battery voltage below 40V or above 105V, it will emit an alarm sound and not start the motor. This protection is disable during flight.

Temperature Protection

During flight, if the temperature of the Esc is higher than 125°C, it will generate a fault signal and start reducing the output power to 50% of the maximum value. If the temperature continues to rise to 140°C, the Esc will turn off the output, and the normal output will not be restored until the throttle setting is reset to zero. When the temperature drops to 80°C, the maximum output power of the esc starts to rise.

Throttle Loss Protection

If the Esc detects a loss of throttle signal for more than 2 seconds, it will cut power. Power will be restored to the previous level once the signal is regained.

Startup Protection

If the motor is not started within 10 seconds after increasing the throttle, the Esc will shut down the output. Normal operation can be restored by returning the throttle to zero and then advancing it again.

Throttle calibration setting

Connect the motor first, push the throttle to the maximum, then power up. After hearing two "bi bi" sounds, pull the throttle to the minimum. When you hear a "DO Mi sO" sound, it indicates that the throttle range setting is successful.

AMPX 120Av2 12~24S HV

MULTI PROTECTION=MORE SECURITY



CONTINUOUS CURRENT 120A CURRENT LIMIT 120A PROTECTION LEVEL IPX4 SUPPORTED LITHIUM CELL COUNT 12~24S

Features

- Support dual throttle (CAN digital throttle + PWM analog throttle) control, priority CAN digital throttle control.
- Quick response, it will take only 0.60 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 and automatic energy recovery when lowering motor speed.
- Have output interfaces of RPM and error signal.
- With CAN communication interface, can be real-time communication with flight control. (Note: This function should be matched with flight control)
- Convenient installation screw holes without considering ESC part front and back sides.
- The control signal interface and the main power supply are fully isolated, which is safer and more reliable.

Protection Function

Short Circuit Protection

When the ESC checks to trigger the short-circuit protection, the ESC shuts down the output. 100ms later the ESC automatically restores to restart.

Stall Protection

If the ESC detects a motor stall, triggering stall protection, the throttle must be returned to zero and then advanced again to restore normal operation.

Voltage Protection

Upon power-up, if the ESC detects battery voltage below 40V or above 105V, it will emit an alarm sound and not start the motor. This protection is disabled during flight.

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During flight, if the temperature of the ESC is higher than 125°C, it will generate a fault signal and start reducing the output power to 50% of the maximum value. If the temperature continues to rise to 140°C, the ESC will turn off the output, and the normal output will not be restored until the throttle setting is reset to zero. When the temperature drops to 80°C, the maximum output power of the esc starts to rise.

Throttle Loss Protection

If the ESC detects a loss of throttle signal for more than 2 seconds, it will cut power. Power will be restored to the previous level once the signal is regained.

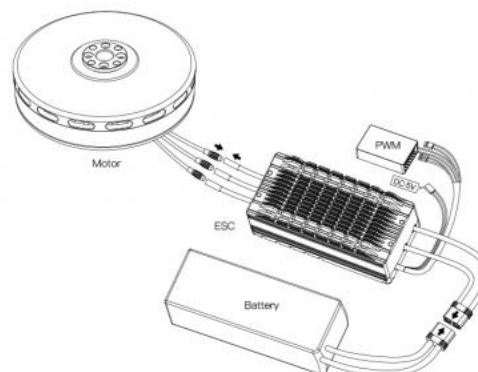
Startup Protection

If the motor is not started within 10 seconds after increasing the throttle, the ESC will shut down the output. Normal operation can be restored by returning the throttle to zero and then advancing it again.

Throttle Calibration Setting

Connect the motor first, push the throttle to the maximum, then power up. After hearing two "bi bi" sounds, pull the throttle to the minimum. When you hear a "DO MI SO" sound, it indicates that the throttle range setting is successful.

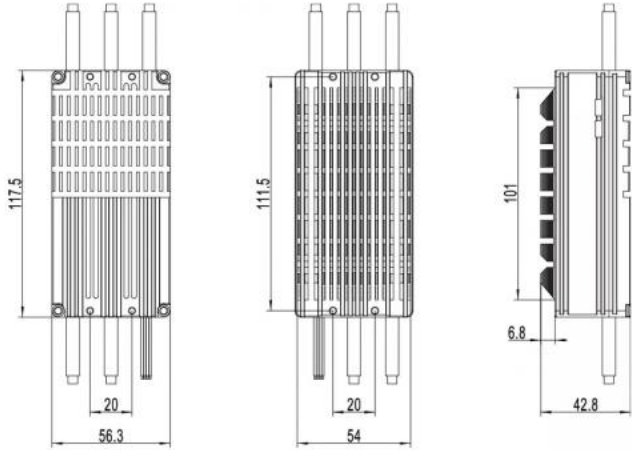
ESC Connection



Black Wire: Ground Wire
White Wire: Throttle Signal Wire
Yellow Wire: Fault Signal Wire
(Normal High, Fault Low)
Blue Wire: Speed Signal Wire (RPM)

RPM Conversion Formula:
 $M = \frac{RPM \cdot E}{FRE \cdot 60}$
M: RPM: Motor Speed
E: FRE: Motor Electrical Frequency (RPM signal frequency)
P: Number of Magnets (Poles) on the Motor
Red: CANH
Green: CANL

ESC Parameter					
Model	AMFX 120A HV ESC	Supported Lithium Cell Count	12-24S		
BEC	5V/200mA output	Throttle Pulse Width	Default 1050us-1940us, supports throttle calibration		
PWM Input Signal Voltage	3.3V/5V (compatible)	Dimensions (L*W*H)	117.5*56.3*42.8mm		
Online Update	Supported	Protection Level	IPX4		
Throttle Loss Protection	Supported	Phase Short Circuit Protection	Supported		
Error Signal Output	Supported	CAN communication	Supported		
Voltage Protection	Supported	Weight (excluding wires)	Approximately 315g		
Motor stall protection	Supported	Operating Environment Temperature	(-20~65℃)		
RPM Signal Output	Supported	Continuous Current	120A (Requires good heat dissipation conditions)		
Temperature Detection	Not Supported	Current Limit	120A		
Power Wire / Wire Length	8AWG / 190mm	Motor Wire / Wire Length	8AWG / 170 mm	Signal Wire Length	420 mm

ESC Dimension					
 <p>The image contains three technical drawings of the ESC. The front view shows a rectangular component with three wires extending from the top. Dimensions include a height of 117.5 mm, a width of 56.3 mm, and a base width of 20 mm. The side view shows the component from the side, with a height of 111.5 mm, a width of 54 mm, and a base width of 20 mm. The top view shows the component from above, with a height of 101 mm, a width of 6.8 mm, and a base width of 42.8 mm.</p>					

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 stroke to 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 40V.	Beep beep, beep beep... every 1 second.	Battery voltage is too low.	Change full power battery.
Voltage is more than 105V.	Beep beep, beep beep... every 1 second.	Battery voltage is too high	Change proper full power battery.
Temperature is higher than 125 centigrade degree.	Beep beep beep, beep beep beep ... every 1 second.	ESC temperature is too high.	Please cool down the ESC in a ventilated place
The power-on current or short-circuit protection is abnormal	Beep beep beep beep,beep beep beep beep...every 1 second.	Overload	Replace the propeller with appropriate one

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
Please follow local laws and regulations to legally use this product in flight, and be sure to stay away from people, high-tension lines, and public places. This product has strong power and high speed propeller operation with certain safety risks. Users must older than 18 years old and have relevant professional knowledge. Do not get close to the motor or propeller that rotates at high speed to avoid being cut. Before flight, please carefully check that all parts are in good condition, propeller and motor are installed correctly, and screws are not loose.

Our Services

1. We provide 1 Year Warranty. Buy with confidence.
2. If you are not satisfied when you receive your item, please return it within 14 days for a replacement or money back. Please contact me before you return it.
3. If item is defective in 3 months, We will send you a replacement without extra charger, or offer refund after we receive the defective item.
4. If item is defective after 3 months, you can still send it back to us. We will send you a new one after receiving the defective item. But you have to pay the extra shipping fee.



FAQ

Q1: Do you support OEM/ODM?

A1: Yes. We can print your logo on the product.

Q2: About samples.

A2: Under normal circumstances, samples will be ready within 7 days, and 10-20 days for OEM/ODM orders. Sample fee and shipping will be charged.

Q3: What is the delivery time?

A3: For regular orders, we can ship within 15 days, for OEM/ODM, we can ship within 25-45 days (depending on the quantity). In the event of delays, we will notify you in advance of the status and resolution.

Q4: What is the minimum order quantity?

A4: There is no MOQ for wholesale (1 piece accepted), including OEM/ODM.

Q5: What are your payment terms?

A5: L/C.TT100%.

Q6: Can you reduce the shipping cost?

A6: When calculating the shipping cost for you, we always choose the cheapest and safest express. Although we have partnerships with shipping companies, we can't keep costs down because it's not us who get paid. If you think it's expensive for you. You can always make your own choice.

Q7: Return policy.

A7: If you want to replace the received item, you must contact us within 7 days after receiving the item. Returned items should be in their original condition and you should pay for additional shipping.



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