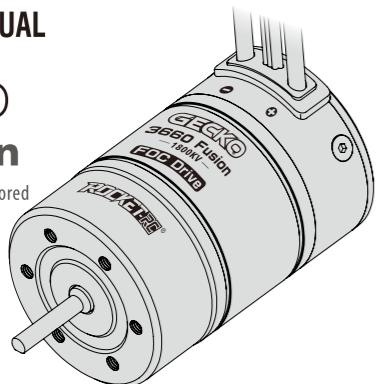




## INSTRUCTION MANUAL

GECKO

## 3660 Fusion

1/10<sup>th</sup> Crawler integrated sensed brushless power system

Dear user, thank you for purchasing this product! Due to the power by this product increases when it is started to use, incorrect use and operation may cause personal injury and equipment damage. Therefore, we recommend that you read this manual carefully before using the equipment, and strictly abide by the prescribed operating procedures. We do not assume any liability for random disassembly, modification or third-party products, including but not limited to compensation for incidental or indirect losses.

## WARNINGS

- Before using, Ensure that the powersystem is reasonable. Unreasonable powermatching will cause the motor to be damaged due to overload.
- Do not overtighten the screws when installing the motor. Be sure to use the appropriate mounting screws.
- Before connecting the motor, Ensure that the insulated parts are well treated. Short circuit will destroy the product.
- Be sure to connect the components correctly. Wrongly connected remote control car may not work properly, or the components may be damaged or other unpredictable conditions.
- Avoid the motor operating temperature exceeding 130°C (266°F). High temperature may cause the rotor to demagnetize and damage motor.
- Do not touch the motor after use to avoid overheating and scalding. Wait for the motor to cooldown completely before using it.

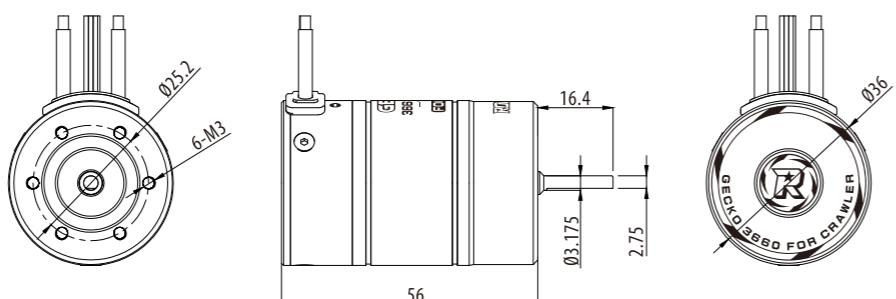
## FEATURES

- All-weather waterproof and dustproof design, with outstanding start-up, acceleration, and smooth linear control.
- FOC drive with built-in magnetic encoder for precise rotor position detection.
- Powerful low-speed torque, precise speed loop control, and ultra-low-speed linear performance.

- BEC supports 6.0V/7.4V/8.4V voltage selection, with a continuous current of 4A and a maximum current of 8A.
- Multiple protection features: ESC over-temperature protection, overload protection, overcurrent protection, low battery voltage protection, and throttle signal loss protection.

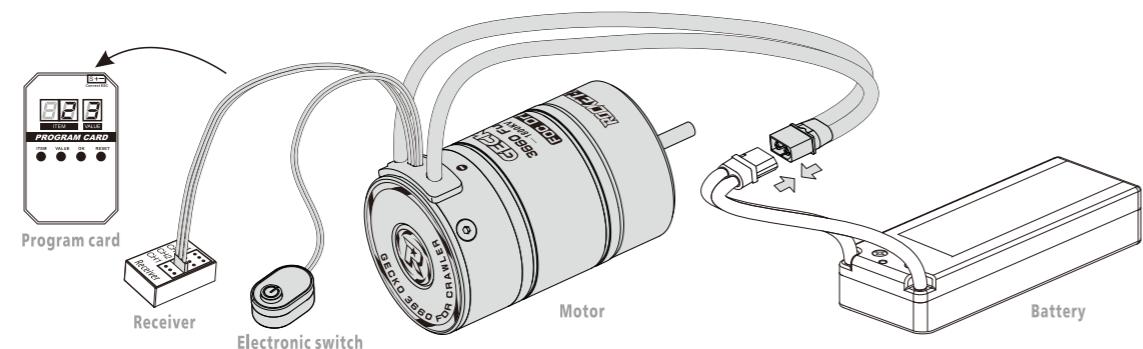
## SPECIFICATION: GECKO 3660 Fusion

Cont. Current	40A
Suitable Car	1/10th crawler car
Battery	2~3 cells Lipo, 4~9 cells NiMH
BEC Output	6.0V/7.4V/8.4V, Cont. Current 4A, Max 8A(Buck-Switching Mode)
Programming	Support LED digital programming cards
Motor Type	Sensored Brushless
Motor model	3660
Motor KV	1800KV
Dimension	Ø36x56mm
Shaft diameter	Ø3.175mm
Weight	177.8g
Waterproof	YES



## INSTALLATION &amp; CONNECTORS

- Connecting the Receiver:** Insert the ESC throttle control cable into the throttle channel of the receiver (usually TH or Ch2). The red wire in the cable supplies BEC voltage to the receiver and servos, so do not provide additional power to the receiver, as this may damage the ESC. If additional power is required, carefully remove the red wire from the throttle cable and insulate it, leaving it disconnected.
- Connecting the battery:** The ESC input wires are polarized. When connecting the battery, ensure that the ESC's (+) wire is connected to the battery's (+) terminal, and the (-) wire is connected to the battery's (-) terminal. Reversing the polarity will damage the ESC. Damage caused by reversed power connection is not covered under warranty.
- Inspection:** Before turning on the power of the remote control car, please ensure double check the correctness of the motor connection and the reliability of the installation.



## Important Notes

The ESC consumes a standby current of 1.2mA when powered off. After use, please disconnect the ESC from the battery to prevent battery depletion during prolonged inactivity.

## LED INDICATOR DESCRIPTION

Under normal conditions, the red LED remains steadily on.

## POWER-ON STAGE

**Green LED steadily on:** the throttle signal cable is disconnected. Please check the throttle signal cable connection.

**Green LED flashing slowly:** the throttle is not at zero. Please set the throttle to zero.

## OPERATING STAGE

**Green LED steadily on:** the throttle is in the forward or reverse position.

**Green LED flashing:** low battery voltage protection activated. Power output is limited to 50%. The ESC will automatically shut down after 40 seconds. Please replace the battery.

**Red and green LEDs flashing slowly simultaneously:** overheat warning. Temperature exceeds 100°C.

**Red and green LEDs flashing rapidly simultaneously:** overheat protection activated. Temperature exceeds the overheat protection threshold.

## MOTOR SOUND DESCRIPTION

If a rapid, continuous "beep beep..." sound occurs, it indicates that the throttle signal cable is disconnected. Please check the throttle signal cable connection. If a slow "beep... beep... beep..." sound occurs after power-on, it indicates that the throttle is not at the zero position. Please set the throttle to zero.

## TROUBLESHOOTING

- After powering on, if the motor does not operate and no sound is emitted, please check the connection between the battery pack and the motor.
- If the green LED flashes after powering on, please check the battery pack voltage.
- After powering on, if the green LED flashes rapidly and the motor emits a continuous "beep beep..." warning sound, please check the throttle signal cable connection or ensure the throttle is at the neutral position.
- If the vehicle moves slowly when the throttle is at neutral, please fine-tune and calibrate the throttle neutral position on the transmitter.
- If the vehicle runs in the opposite direction to the throttle input, please set the motor rotation direction using the programming card.
- If the vehicle cannot accelerate properly, please check whether the battery pack voltage is too low or the ESC temperature is too high. If the battery voltage is low, please replace the battery pack. If the ESC temperature is too high, check all connections. If the issue persists, please check the EPA settings on the transmitter.

## AUTOMATIC MOTOR CALIBRATION

If the motor experiences abnormal performance or overheating after a strong impact, it is recommended to perform the automatic motor calibration procedure:

- Remove the gear from the motor (the motor must be in a no-load state).
- Disconnect the throttle signal cable from the receiver.
- Connect the battery and press and hold the power button for about 6 seconds (do not release). Wait until the red and green LEDs on the button start flashing, indicating the motor has entered the automatic calibration process. You can then release the button and wait for the motor to complete the automatic calibration (approximately 6 seconds); the motor will rotate during this process.

## THROTTLE RANGE SETTING (Only required when using a new transmitter. If not set before, this step can be skipped)

- Set the throttle channel EPA (End Point Adjustment) to 100% on your transmitter, and set the throttle trim (TRIM.TH) to 0.
- Connect all the wires properly.
- Press and hold the ESC power button. After the motor beeps twice, release the button to enter programming mode.
- Power on the transmitter.
- Move the throttle stick to full forward and wait for one beep and one LED flash.
- Move the throttle stick to full reverse and wait for one beep and one LED flash.
- Return the throttle stick to the neutral position and wait for the startup tone. Throttle range setting is now complete.

## CUSTOMIZING THE ESC

To begin, connect the ESC battery wires to a charged battery, then connect the BEC wire 3pin wire to the program card "S+—" port (3pin port). Turned on the ESC, the programming card will automatically read the ESC settings, and the setting items of the programming card will display 1 to 13 successively, indicating that the connection is successful. You can start programming ESC. (if it is not displayed, it means that the connection is unsuccessful, please try to turn off ESC repeatedly, reconnect the programming card and turn on ESC again until it is successful)

TIPS! Program card is done using the 4 buttons below on the led, The function of each button start from right hand side are ITEM, VALUE, OK and RESET.

Please refer to the menu below to program the function settings you need.

"ITEM" button → go to next item to select.  
 "VALUE" button → go to next value select.  
 "OK" button → go to confirm your select.  
 "RESET" button → go back to factory setup.



## Program Manual

**Low Voltage Cut-Off:** This function is designed to prevent the lithium battery pack from over-discharging. When using a lithium battery, please make sure to set an appropriate low-voltage protection threshold. The ESC continuously monitors the battery voltage in real time. Once the voltage drops below the set threshold, the ESC will reduce power output to 50% for 40 seconds, and then completely shut off the output.

ITEM	VALUE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. RunningMode	Forward with Brake	Forward with Brake	Forward/Reverse	Forward/Reverse						
2. Temp Protect	105°C	125°C								
3. Cells Number	Automatic	2S	3S							
4. Protection threshold	Disabled	2.8V	2.9V	3.0V	3.1V	3.2V	3.3V	3.4V	3.5V	
5. BEC voltage	6V	7.4V	8.4V							
6. Motor Action	CCW	CW								
7. NeutralRange	4%	6.00%	8%	10.00%	12.00%					
8. Zero position of the throttle	1500 µs	Automatic								
9. Low Speed Throttle	10%	15.00%	20%	25.00%	30%	35%	40%	45%	50%	
10. Low Speed Throttle Punch	100rpm	200rpm	300rpm	400rpm	500rpm	600rpm	700rpm	800rpm	900rpm	
11. Throttle Acceleration Punch	1	2	3	4	5	6	7	8	9	
12. Throttle Deceleration Punch	1	2	3	4	5	6	7	8	9	
13. Max Forward Speed	20%	30.00%	40%	50.00%	60.00%	70.00%	80.00%	90.00%	100.00%	
14. Max Reverse Speed	20%	30.00%	40%	50.00%	60.00%	70.00%	80.00%	90.00%	100.00%	
15. Max Forward Torq	20%	30.00%	40%	50.00%	60.00%	70.00%	80.00%	90.00%	100.00%	
16. Max Reverse Torq	20%	30.00%	40%	50.00%	60.00%	70.00%	80.00%	90.00%	100.00%	
17. Max Brake Power	10%	20.00%	30%	40.00%	50.00%	60.00%	70.00%	80.00%	90.00%	
18. Drag Brake	0%	10.00%	20%	30.00%	40.00%	50.00%	60.00%	70.00%	80.00%	
19. Drag Brake Rate	1	2	3	4	5	6	7	8	9	
20. Auto Power Off Time	Disabled	1min	3min	5min	10min	15min	20min	30min	60min	

Underscore letter indicate factory default settings