HOBBYWING EZRUN 4278SD Sensored Brushless Motor User Manual

Contents

HOBBYWING EZRUN 4278SD Sensored Brushless

Warnings

Avoid wrong pairing to overload and damage the motor. Always wire up all the parts of the equipment carefully. If any of the connections come loose as a result of vibration, your model RC may lose control. Never apply full throttle if the pinion is not installed. Due to the extremely high RPMs without load, the motor may get damaged. Never allow the motor case to get 100 degrees Celsius (212 degrees Fahrenheit) because the magnets maybe demagnetized by high temperature.

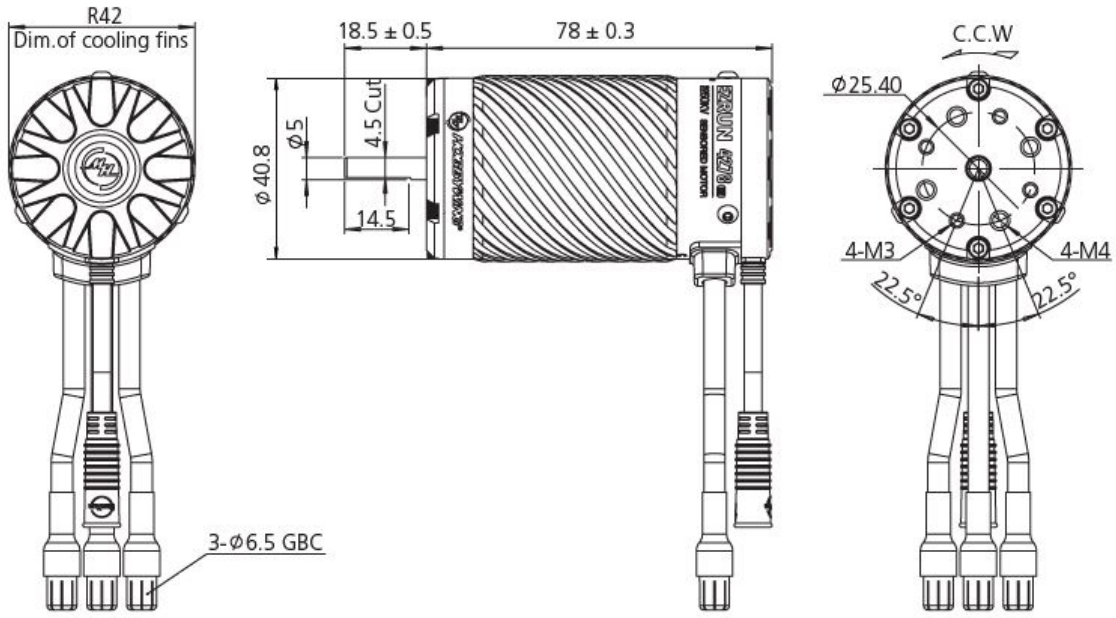
Features

- Chip built in the motor,when matched with Hobbywing EZRUN MAX8 G2 esc, it not only has perfect compatibility, the ESC can automatically identify the motor and build a pure/full sensor mode power system, providing better manipulating performance and more delicate manipulating feel.
- The rotor adopts four strong magnetic and high temperature resistant sintered Nd Fe B magnets, widens the magnetic tile, provides super torque, and makes the motor have strong explosive force and stable output power.
- The independent high-precision encoder always outputs pure rotor position signal, which effectively avoids the interference of sensor signal and makes the motor work stably in sensor state.
- High output efficiency, effectively reduce the motor temperature and output more power under the same load.
- CNC machined aluminum housing, high purity copper windings, advanced rotor structure, 0.2mm silicon steel laminations, high quality stainless steel output shaft, high-precision bearing for high durability and smoothness.
- The innovative new sensor interface and rubber cover bearing have better waterproof and dustproof effect than the traditional sensor motor.

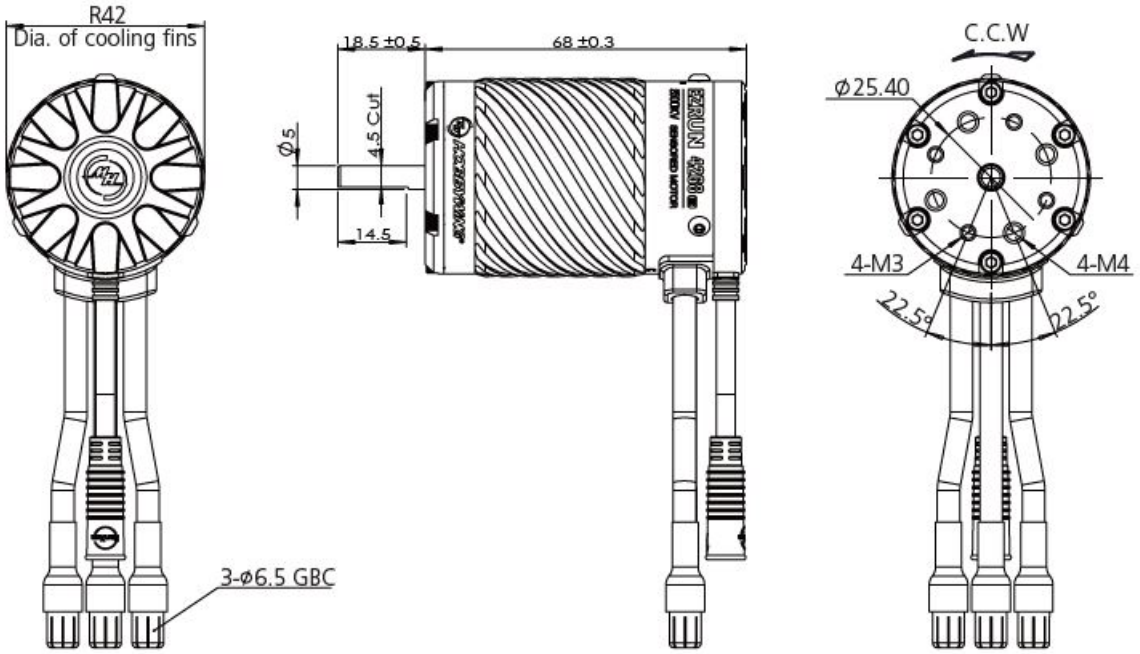
Specifications

Model	EZRUN 4278SD G2	EZRUN 4268SD G2
PN	30402800	30402751
KV Value	2250KV	2500KV
Lipo Cells	3-6S Lipo	3-4S Lipo
Resistance	0.0048Ω	0.0065Ω
No-load current	5.0A	4.8A
Outer Diameter/Length	42mm(1.654in) / 78mm(3.071in)	42mm(1.654in) / 68mm(2.677in)
Shaft diameter/Exposed shaf t length	5mm(0.197in) / 18.5mm(0.728in)	5mm(0.197in) / 18.5mm(0.728in)
Bearing size mm	Front: D16 D5*T5 Rear: D11*D5*T5	Front: D16*D5*T5 Rear:D11*D5*T5
Pole	4	4
Weight	455g	355g
Application	1/8 Truck, Monster Truck	1/8 Buggy, 1/10 Heavy duty Monster T rcuk

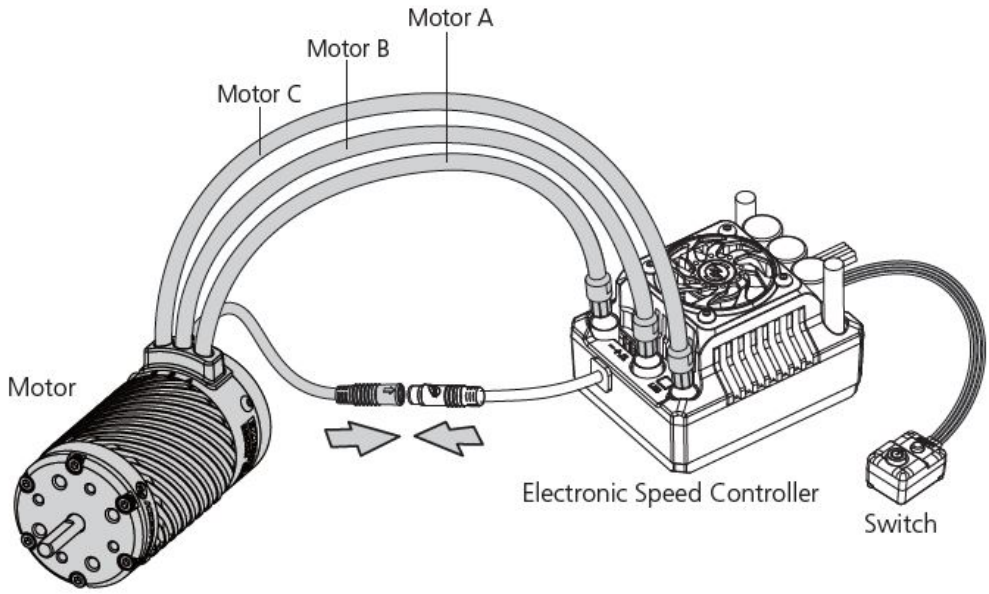
EZRUN 4278SD G2



EZRUN 4268SD G2



Installation & Connection



Install the motor

The specifications of mounting hole screws are two sets of M4 and two sets of M3, and the mounting holes are 5.5mm in depth, before installing the motor on the vehicle, please carefully confirm whether the specification of the screws is appropriate according to the thickness of the motor mounting plate to avoid damage to the motor due to too long screws.

How to Connect the Motor to an ESC

When connecting the motor and esc, please pay attention to the marked three-phase position of A, B and C to ensure that the three wires of the motor and esc are connected correspondingly. Otherwise, it cannot run normally and even damage the esc and motor. That is: Wire A of the esc matches wire A of the motor, wire B of the esc matches wire B of the motor, When the sensor wire of the motor is connected with the sensor wire of the esc, it shall be connected
correspondingly according to the arrow mark on the sensor interface.

Inspection

Before power on the esc, please check the reliability of the motor installation and the correctness of all connections.

Gearing

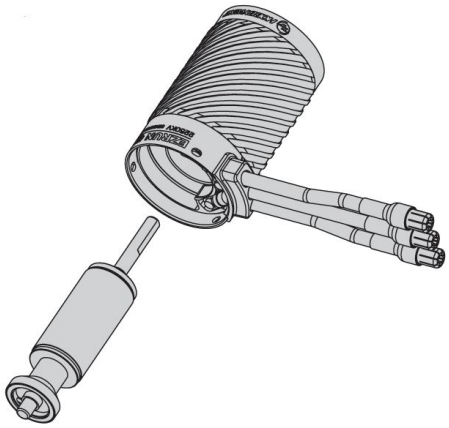
Reasonable selection of gear ratio is very important. Improper gear ratio may bring you great loss. You can select the gear ratio according to the following points!

1. The running temperature of the motor
2. The motor temperature should be lower than 100 degrees Celsius212 degrees Fahrenheit in operation.
3. Because high temperature may cause the magnets to get demagnetized, the coil to get melt and short circuited, and the ESC to get damaged. A suitable gearing ratio can effectively prevent the motor from overheating.
4. The principle of selecting gear ratio.
5. To avoid the possible damage to ESC and motor caused by the overheat, please start with a small pinion/a big FDR and check the motor temperature regularly.
6. If the motor and ESC temperature always stay at a low level
   during the running, you can change a big pinion/a low FDR and also check the motor temperature regularly to ensure that the new FDR is suitable for your vehicle, local weather and track condition.

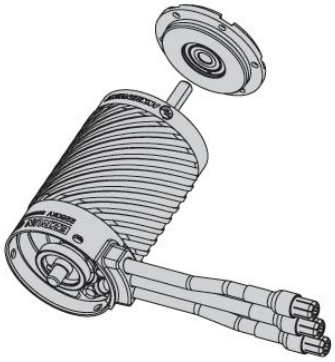
Note
For the safety of electric devices, please check the ESC and motor temperature regularly Gearing.

Assembly and Disassembly

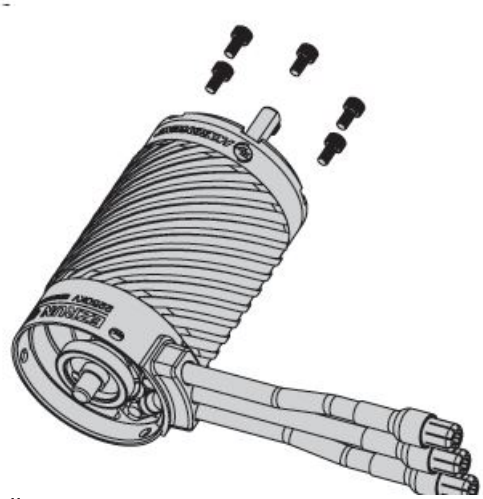
In order to make the motor have longer service life and higher ef ficiency, we suggest to r egularly check the bearing and clean the dirt in the motor . The specific time depends on the fr equency of using the motor and the site conditions. When installing, please follow the steps i n the following assembly drawing; when disassembling, follow th e reverse steps.



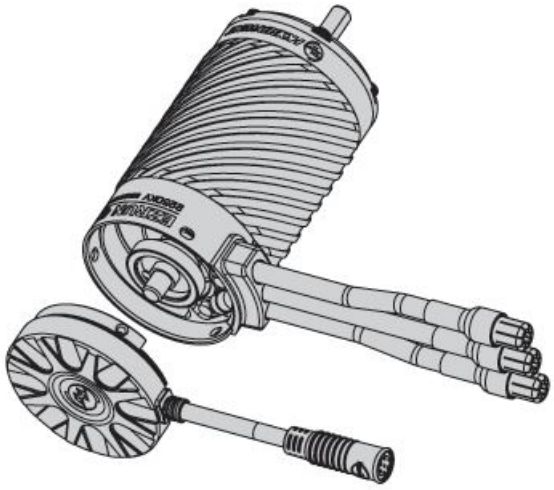
Mount the motor r otor



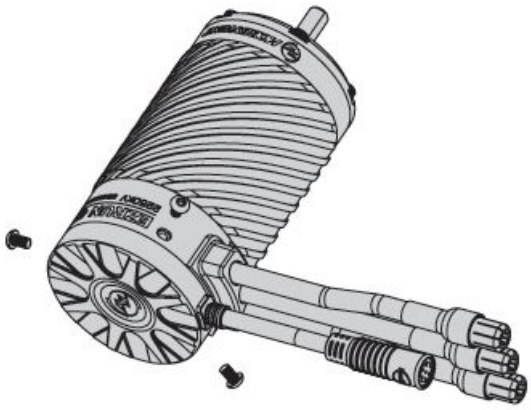
Mount the front end bell set



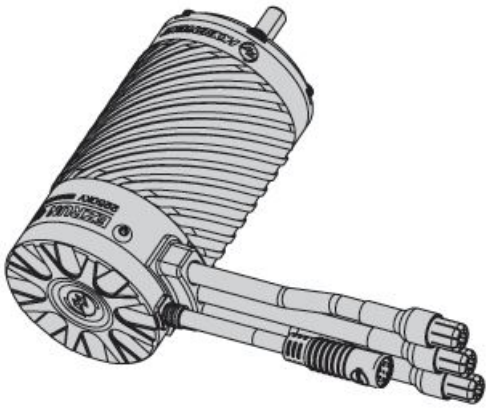
Mount screws for fastening the front end bell



Mount the back end bell set

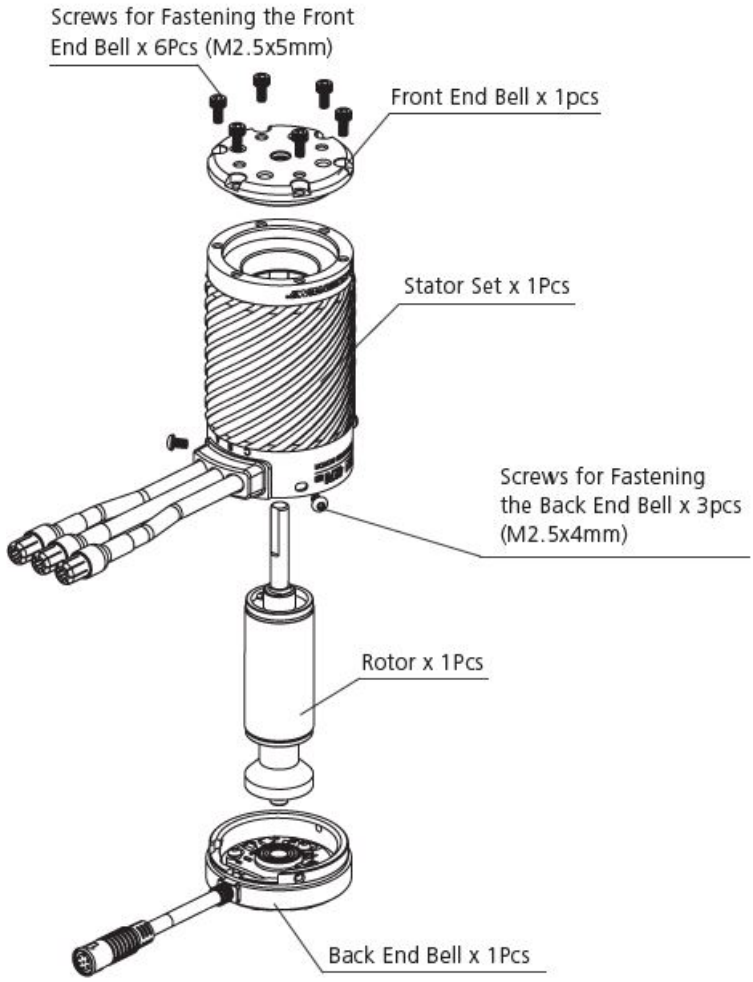


Mount screws for fastening the back end bell

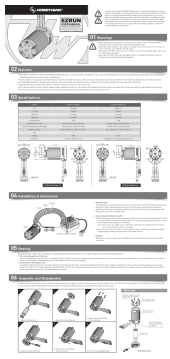


Picture of the assembled motor.

Parts List



Documents / Resources

	HOBBYWING EZRUN 4278SD Sensored Brushless Motor [pdf] User Manual EZRUN 4278SD, Sensored Brushless Motor, EZRUN 4278SD Sensored Brushless Motor