

QUICRUN
USER MANUAL
 Sensorless Brushless Motor
 QUICRUN Outer 1621

20240819

HW-SMB341DUL00



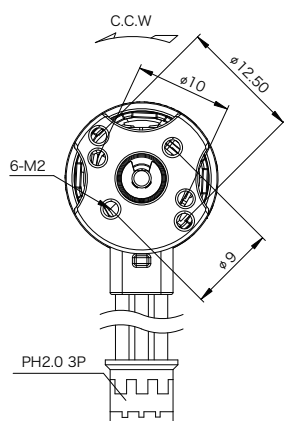
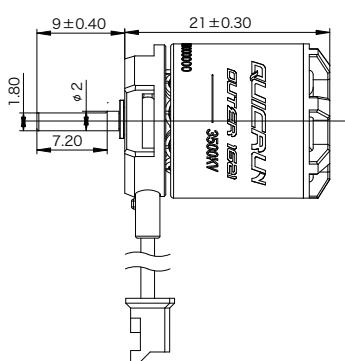
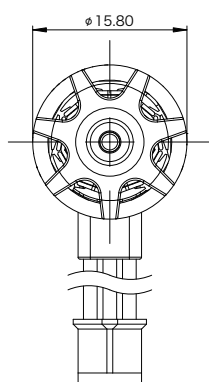
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01 Warnings

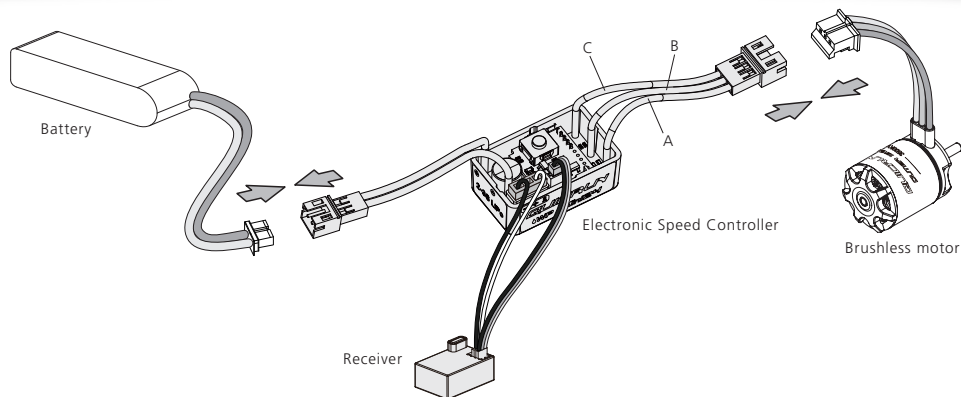
- Read the manuals of all the items being used in the build. Ensure gearing, setup, and overall install is correct and reasonable.
- All connections, must be made correctly. You may lose control, or run into major issues caused by incorrect, bad, weak, or poor connections.
- Never apply full throttle if the pinion is not installed. Due to the extremely high RPMs without load, the motor may get damaged.
- Stop usage if the motor exceeds 100°C/212°F, high temperature will damage the motor and cause the rotor to weaken.

02 Specifications

Model	KV	Lipo Cells	No-load Current	Max. Output Power (W)	Current @Max. Output Power(A)	Diameter/Length	Shaft Diameter/Length	Poles	Weight	Applications
QUICRUN Outer 1621SL	3500KV	2-3S	0.6	39.1	9.52	φ=15.8mm(0.62") L=21mm(0.83")	2.0mm/9mm	12	16.7g	1/24 Crawler



03 Installation & Connection



1. Installation of the motor

There are 6 motor mounting holes in M2 specification, and the mounting holes are 1.8mm in depth, before installing the motor on the vehicle, please carefully confirm whether the specifications of the screws are appropriate, as not to damage the motor due to excessive length. There are three types of mounting hole spacing of the motor, one group is 9mm, one group is 10mm, and one group is 12.5mm. Refer to the motor outline drawing for details.

2. How to Connect the Motor to an ESC

There is no specific wire sequence requirement for the connection between the motor and the esc, the # A/# B/# C three wires of the motor and esc can be connected at will, if the motor rotation in the opposite direction, you can exchange any two wires, or set the "Motor Rotation" parameter of the esc.

3. Inspection

Before powering on the esc, please check the motor installation and the order of all connections.

04 Gearing

Reasonable selection of gear ratio is very important. Improper gear ratio may cause damage. You can select the gear ratio according to the following points!

1. The operating temperature of the motor

The motor temperature should not exceed 100 degrees Celsius (212 degrees Fahrenheit) in operation. High temperature may cause the magnets to get demagnetized, the coil to melt and short circuit, and the ESC to get damaged. A suitable gearing ratio can effectively prevent the motor from overheating.

2. The principle of selecting gear ratio

To avoid the possible damage to ESC and motor caused by the overheating, please start with a small pinion/a big FDR and check the motor temperature regularly. If the motor and ESC temperature always stays at a low level during the running, you can change a larger pinion/a lower FDR and also check the motor temperature regularly to ensure that the new gearing 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.)