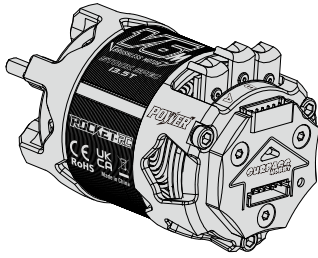




## 使用说明书

### 540 V6-M 系列

#### 1/10比例有感无刷电机



感谢您购买本产品，这是一个动力模型产品而不是玩具。它必须谨慎操作和具备安全常识，任何错误操作可能会导致人身伤害或损坏产品。本产品不允许儿童在没有成人直接监督的情况下使用。在安装和使用前，请务必阅读并遵守本手册规定的操作程序。我们不承担因不当使用本产品而引起的任何责任，包括但不限于对附带损失或间接损失的赔偿责任；同时，我们不承担因擅自对产品进行修改所引起的任何责任。

### 注意事项

- 使用此电机前，请确保动力搭配合理，不合理的动力搭配会导致电机超载而损坏。
- 电机安装时螺丝不要过紧，务必使用尺寸合适的电机安装螺丝。
- 连接电机前，请确保需要绝缘的部位处理良好，短路会损坏产品。
- 齿轮未安装前，禁止全油门操作。无负载情况下高速运转可能会损坏电机。
- 请务必正确连接好各部件，错误连接遥控模型车可能无法正常工作，或出现部件损坏和其他不可预知的情况。
- 避免电机工作温度超过130°C (266°F)，高温可能导致转子退磁并对电机造成损坏。
- 使用后切勿触摸电机，以免过热烫伤，待电机完全冷却后再使用。

### 产品特点

- 全新独特的定子模具设计，提供强大的扭矩和高转速。
- 数控CNC加工7075铝散热外壳。
- 美标高纯度铜线圈，最大化传导率。
- 电镀处理定子无老化生锈现象。
- 精准的可调节进角，双传感器标准端口。
- 可拆卸/可更换高速转子。

- 前后拼接外观/结构专利设计。
- 内部镁钛合金散热，降低热损耗。
- NSK原裝日本进口R2zz滚珠轴承，转子无阻顺畅。
- 加厚焊接镀金铜片，大功率无阻输入。
- 铝铁硼强磁防爆转子，TURBO转速高达8万转。
- 符合BRCA/ROAR/EFRA/IFMAR国际竞赛认证。

### 安装和连接

#### 1、安装电机

该电机安装螺丝孔为6个M3规格螺丝，25mm的安装孔距，面板螺孔可锁入深度5mm，所以建议采用不长于8mm的M3螺丝进行安装，具体安装情况可根据车架而定。

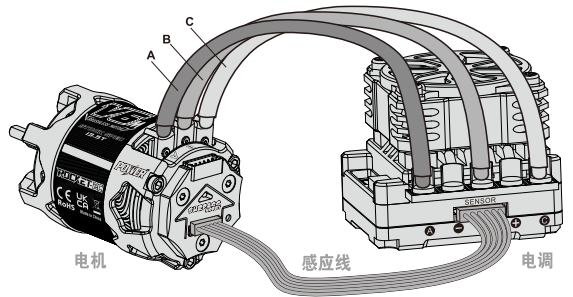
#### 2、电机连接

连接电机需焊接三根连接线。三根连接线无固定颜色区分或不作颜色区分，安装和连接时请注意以下2点：

- A. 使用有感ESC时，首先正确连接/焊接ESC和电机的连接线，即ESC的#A/#B/#C与电机的#A/#B/#C相互对应连接。再使用良好的感应线，并按正确的方位分别连接在电机和ESC的感应接口上。
- B. 使用无感ESC时，电机与电调连接没有固定的线序要求，若出现转向相反，任意交换两条电机线即可。

#### 3、检查

开启遥控车电源前，请务必再次仔细检查动力系统连接的正确性及安装的可靠性。



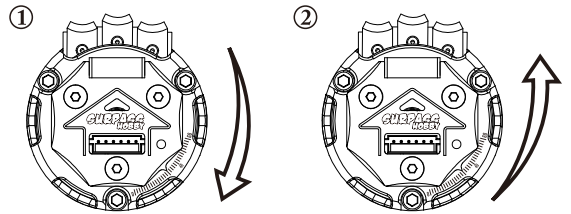
### 调整电机进角

- A. 首先松开电机背面的三个螺丝
- B. 转动进角传感器盖，调整位置
- C. 再拧紧三个螺丝

- 进角增加，电机温度升高，电池运行时间缩短。
- 调整电机进角，必要时请咨询专业技术人员。
- 进角调整需要微调，请仔细调整进角。

**注意** 进角调整后请将传感器盖螺丝锁紧，如果螺丝松散，由于振动或一些冲击，你的电机或ESC可能会损坏。

- ① 进角减少，电机转速和扭矩降低。功耗和温度下降。
- ② 进角增加，电机转速和扭矩增加。功耗和温度变高。



### 温度与齿比

齿比的合理选择非常重要，不合适的齿比可能会给您带来重大损失。请遵守以下要点来正确选择齿比！

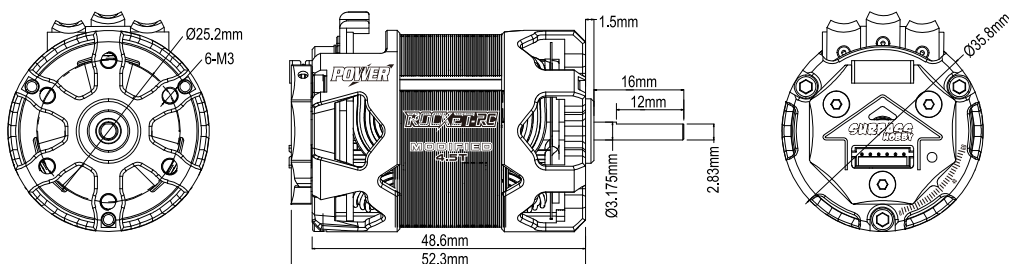
#### 1、电机的工作温度

电机在工作时，温度应低于130°C (266°F)；温度高于130°C时，将会使电机转子磁性减弱，且线圈可能出现局部烧熔短路现象，产生大电流而损坏电调。选择合适的齿比可以有效防止电机过热。

#### 2、齿比选择原则

为防止电机过热引发潜在危险而导致电调和电机损坏，请先从一个最少齿数的小齿进行齿比配置，并随时监测电机温度，这是能确保电机不过热的方法。模型车在行驶途中如果电机及电调温度一直处于低温范围内，您可以尝试使用齿数较多的小齿，并密切监测电机温度，以确保更改后的齿比在当时气候及赛道条件下是否适合您的模型车。（请注意气候及赛道条件是经常会发生变化，所以日常操作时频繁地监测电调及电机的温度是一项重要工作，可以确保您的电子设备长期有效的稳定工作）。

产品型号	产品编码	电机T数	KV值(空载)	最大功率	通用锂电	最大电流	电机极数	空载电流	内阻(Ω)	电机尺寸(mm)	转子尺寸(mm)	重量(g)	轴径(mm)	类型
540 V6-M	SP-054006-11	3.5T	9700	600W	1S	130A	2	10.2A	0.0016	Ø35.8x52.3	Ø12.1xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		4.0T	8500	530W	1-2S	115A	2	8.9A	0.0023	Ø35.8x52.3	Ø12.1xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		4.5T	7800	490W	1-2S	108A	2	8.0A	0.0029	Ø35.8x52.3	Ø12.1xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		5.0T	7150	450W	1-2S	104A	2	6.6A	0.0035	Ø35.8x52.3	Ø12.1xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M	SP-054006-12	5.5T	6300	430W	1-2S	100A	2	5.8A	0.0041	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		6.0T	6150	410W	1-2S	96A	2	5.3A	0.005	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		6.5T	5500	390W	1-2S	94A	2	4.9A	0.0059	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		7.5T	4800	360W	1-2S	86A	2	4.2A	0.0073	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M	SP-054006-13	8.5T	4350	340W	1-3S	80A	2	3.5A	0.0098	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		9.5T	3800	290W	1-3S	70A	2	3.0A	0.0135	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		10.5T	3500	250W	1-3S	63A	2	2.6A	0.0153	Ø35.8x52.3	Ø12.3xØ5x24.5	165	Ø3.175	MODIFIED
540 V6-M		13.5T	3650	190W	1-3S	49A	2	3.2A	0.0219	Ø35.8x52.3	Ø12.5xØ7.2x25.2	146	Ø3.175	SPEC
540 V6-M	SP-054006-14	17.5T	2900	130W	1-3S	34A	2	2.8A	0.0365	Ø35.8x52.3	Ø12.5xØ7.2x25.2	146	Ø3.175	SPEC
540 V6-M		21.5T	2400	100W	1-3S	28A	2	2.3A	0.0568	Ø35.8x52.3	Ø12.5xØ7.2x25.2	146	Ø3.175	SPEC
540 V6-M		13.5T	3100	190W	1-2S	59A	2	2.8A	0.0188	Ø35.8x52.3	Ø12.3xØ5.0x24.1	168	Ø3.175	OUTLAW
540 V6-M	SP-054006-14	17.5T	2400	130W	1-3S	41A	2	2.6A	0.0337	Ø35.8x52.3	Ø12.3xØ5.0x24.1	168	Ø3.175	OUTLAW
540 V6-M		21.5T	2200	100W	1-3S	34A	2	1.8A	0.0516	Ø35.8x52.3	Ø12.3xØ5.0x24.1	168	Ø3.175	OUTLAW



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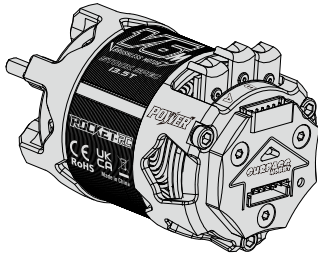
为了使电机效率更高、寿命更长，我们建议您使用后定期检查轴承并清理电机中的污垢。



## USER MANUAL

### 540 V6-M SERIES

#### 1/10<sup>th</sup> SCALE SENSORED BRUSHLESS RACING MOTOR



Thank you for purchasing Surpasshobby product, this is a powerful RC hobby product rather than a toy. It must be operated with care and common sense of safety. Any wrong operation may cause personal injury or damage the product. This product does not allow children to use it without the direct supervision of an adult. Before installation and use, please read and follow the operating procedures specified in this manual. We do not assume any liability arising from the use of this product, including but not limited to compensation for incidental or indirect loss; at the same time, we do not assume any liability arising from unauthorized modifications to the product.

### WARNINGS

- Before using, Ensure that the power system is reasonable. Unreasonable power matching will cause the motor to be damaged due to overload.
- Do not over tighten 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
- Full throttle operation is prohibited before the gear is installed. High-speed operation without load may damage the motor.
- 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 cool down completely before using it.

### FEATURES

- All-new and Unique Stator Design to Provide Strong Torque and High RPM.
- CNC Machined 7075 Aluminum Heat Sink Housing.
- American Standard High Purity Copper Windings for Maximum Conductivity.
- Stator Electroplated to Prevent Ageing and Rusting.
- Adjustable Timing & Dual Sensor Port.
- Detachable/Replaceable High Speed Rotor.
- Patented design of front and rear splicing structure.

- 36mm Full Size Outside Diameter Increase Output Power by 15%.
- Internal Titanium-Magnesium Alloy Heat Sink to Reduce Heat Loss.
- NSK R2ZZ Bearing Original Imported From Japan, Ensuring Smooth Operation.
- Thicker Gilding Gold Plated Copper for Maximum Non-resistant Input.
- The explosion-proof rotor made of NdFeB, TURBO speeds up to 80,000 RPM.
- BRCA & EFRA approved, Meets ROAR & IFMA specifications.

### INSTALLATION AND CONNECTION

#### 1. Install the motor

The mounting screw holes of the motor are 6 x M3 with distance 25mm, and the panel screw hole can be locked into the depth of 5mm. Therefore, it is recommended to use M3 screws no longer than 8mm for installation. The specific installation situation can be determined according to the frame.

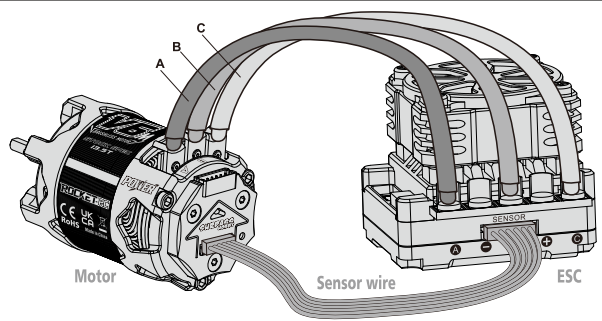
#### 2. Motor connection

Three connecting cables shall be solder to connect the motor. There is no fixed color distinction or no color distinction for the three connecting wires. Please pay attention to the following 2 points during installation and connection:

- When using inductive ESC, first correctly connect / weld the connecting cable between ESC and motor, that is, the #A / #B / #C of ESC and #A / #B / #C of motor are connected correspondingly. Then use a good induction cable and connect it to the induction wiring port of motor and ESC respectively according to the orientation of positive solution.
- When using non sensorless ESC, there is no fixed cable sequence requirement for the connection between the motor and the electric regulator. If the steering direction is opposite, arbitrarily exchange two motor lines.

#### 3. 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.



### ADJUST TIMING

#### A. First of all loosen the three screws on the back of the motor

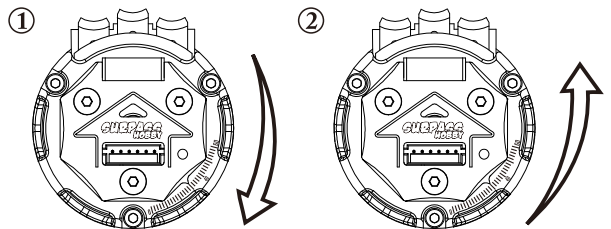
#### B. Turn the timing sensor cover and adjust the position

#### C. Tighten the three screws well

- Increase the timing, motor temperature is getting higher, battery shorten its running time.
- Adjust motor timing consultation with experts necessarily.
- Timing adjustment requires fine-tuning, please adjust timing carefully .

**Attention!** If your sensor cover screw tighten loosely, due to vibration or some shock, your motor or ESC can get damage. Please sensor cover screw lock tightly.

- ① Reduced the timing, motor RPM and torque reduce. Power consumption and temperature gets reduce.
- ② Increase the timing, motor RPM and torque increase. Power consumption and temperature increases.



### TEMPERATURE & GEAR RATIO

The reasonable choice of gear ratio is very important, and an inappropriate gear may cause you heavy losses. Please observe the following points to choose the correct gear ratio!

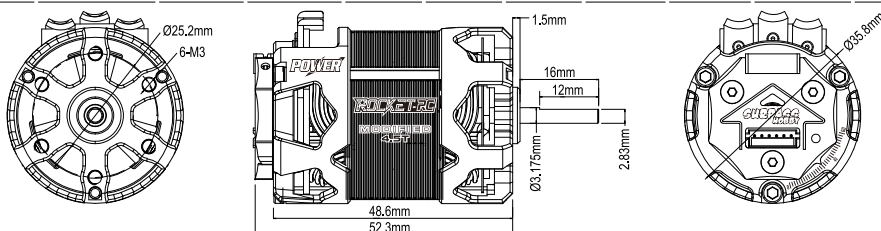
#### 1. The working temperature of the motor

When the motor is working, the temperature should be lower than 130°C (266°F); when the temperature is higher than 130°C, the rotor of the motor will be weakened, and the coils may be locally burned and short-circuited, which may cause large current to damage the ESC. Choosing a suitable gear ratio can effectively prevent the motor from overheating.

#### 2. The principle of Gearing

The principle of selecting gear ratio, 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. If the motor and ESC temperature always stay at a low, level during the operation, 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.)

Product	Item Number	Turns	Kv (RPM/Volt)	Watts(W)	lipo (S)	Max Amps	Rotor Poles	IO (7.4V)	Resistance (Ω)	Motor Size (mm)	Rotor Size (mm)	Weight (g)	Shaft (mm)	TYPE
540 V6-M	SP-054006-11	3.5T	9700	600W	1S	130A	2	10.2A	0.0016	Ø35.8x52.3	Ø12.1xØ5x24.5	165	Ø3.175	MODIFIED
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In order to make the motor more efficient and longer life, we recommend that you regularly check the bearings and clean up the dirt in the motor after use.