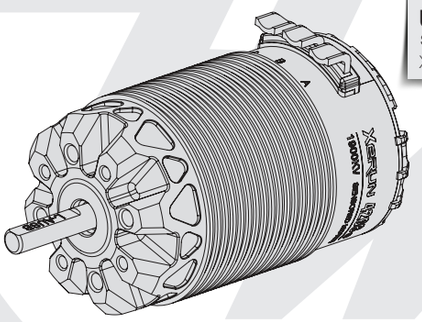
HOBBYWING®

XERUN USER MANUAL

Sensored Brushless Motor

XERUN 4268/4274 G3



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Thank you for purchasing this HOBBYWING product! The power of brushless power system is powerful. Any improper use may cause personal injury and damage to the product and related devices. We strongly recommend reading through this user manual before use and strictly abide by the specified operating procedures. We shall not be liable for any liability arising from the use of this product, including but not limited to reimbursement for incidental or indirect losses. Meanwhile, we do not assume any responsibility caused by unauthorized modification of the product. We have the right to change the product design, appearance, performance and use requirements without notice.

01 Warnings

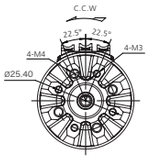
- Never leave this unit unsupervised when it is powered on.
- All wires and connections should be well insulated. Short circuits can possibly damage the products.
- Avoid incorrect connections between the electronic speed controller(ESC)and the motor.
- Never allow this product to come in contact with water, oil, fuel or other electro-conductive liquids. If this happens, stop the use of your product immediately and let it dry carefully.
- Please carefully check power devices and manual of car frame to ensure the power pairing is reasonable. Avoid wrong pairing to overload and damage the motor.
- Never apply full throttle if the pinion is not installed. Due to the extremely high RPMs without load, the motor can get damaged.
- 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 allow the motor case to get 100 degrees Celsius(212 degrees Fahrenheit) because the magnets maybe demagnetized by high temperature.

02 Features

- When the built-in chip of motor is matched with Hobbywing XeRun XR8 series of ESC, the ESC can automatically identify the motor and build a pure sensor mode power system, providing better manipulating performance and more delicate manipulating feel.
- When this motor is used together with Hobbywing XERUN XR8 PRO G2 ESC can start more effective turbo timing than the last generation of system. The motor can release maximum power instantly. The maximum speed can be promoted by 50%. Easily win your rival.
- The motor adopts the patent technology of "error-free" Hall sensor system, the independent high-speed and 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.
- The mechanical turbo timing of motor can be adjusted from 20-40°. It is convenient for driver to calibrate accurately output power of motor and meet power requirements of various application.
- The motor has low cogging effect and small torque pulse. It is very smooth at low speed and has superb manipulating performance.
- The protection grade of Off-Road motor is IP5X. Its excellent dustproof performance can easy to deal with various Off-Road dusty track environment.
- On the premise of improving the performance, the design of 4268SD G3 is optimized which extremely reduce the weight of motor. The weight of 1900KV / 2200KV is 20g / 45g lighter than peers. The light motor is convenient for the driver to adjust the balance performance of the vehicle.

03 Specifications

PN	Model	KV (No-load)	LiPo	Internal resistance	No-load current	Outer diameter/Length	Bearing size(mm)	Shaft diameter/ Exposed shaft length	Pole	Weight	Application
30401906	XERUN-4268SD-1900KV-G3-OffRoad	1900KV	2-6s	0.0075Ω	4A	42mm（1.654in） 67.8mm（2.669in）	Front:D16*D5*T5 Rear:D11*D5*T5	5mm（0.197in） 18.5mm（0.728in）	4	315g	1/8 Off-load
30401907	XERUN-4268SD-2200KV-G3-OffRoad	2200KV	2-6s	0.0069Ω	4.1A					285g	
30401908	XERUN-4268SD-2000KV-G3-OnRoad	2000KV	2-6s	0.0069Ω	4.2A					285g	1/8 On-road
30401909	XERUN-4268SD-2800KV-G3-OnRoad	2800KV	2-4s	0.0035Ω	6.1A					300g	
30405001	XERUN-4274SD-2250KV-G3	2250KV	2-6s	0.0037Ω	5A	42mm(1.654in) 74mm(2.913in)				354g	1/8 Truck, Monster truck



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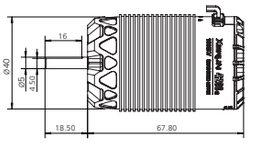

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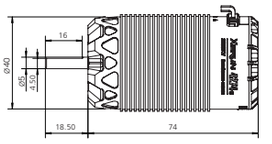

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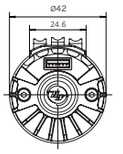

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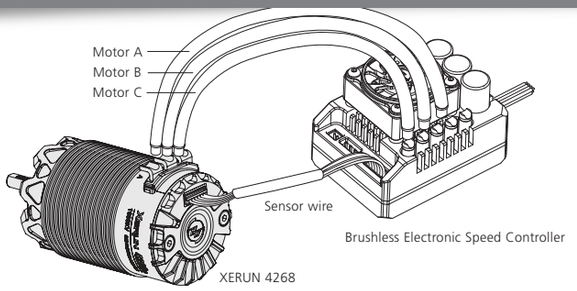
04 Installation & Connection



1. Install the motor

The motor mounting screw specifications are two groups of M3 and two groups of M4. The motor screw hole can be locked into the depth of 5.5mm. Before installing the motor on the vehicle, please carefully confirm whether the specification of the matching screw is appropriate, so as to avoid damaging the motor by using too long or too thick screw. Generally, it is recommended to use m3 / M4 screw with length not longer than 8mm, which is determined according to the thickness of frame motor mounting base.

2. Motor connection

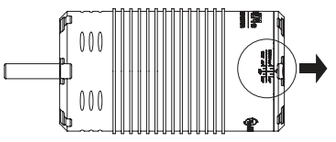
- When welding / connecting the motor and the electronic speed controller (ESC), please pay attention to the ESC marking to ensure that the terminals on the ESC and the motor are one-to-one, that is, wire A of the ESC matches wire A of the motor, wire B of the ESC matches wire B of the motor, wire C of the ESC matches wire C of the motor.
- Make sure the sensor wire is clean and undamaged, and pay attention to the orientation of the sensor wire. Connect the sensor wire to the terminal of the motor and ESC in the correct direction.

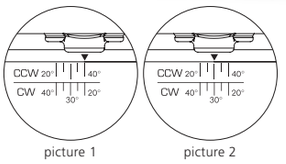
3. Inspection

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

05 Timing Adjustment

1. With the motor direction set to CCW, take the graduation/value after "CCW" on the motor case as the starting point when adjusting the timing. With the reversed triangle pointing at a value /graduation, the smaller/bigger the value, the smaller/bigger the timing. The timing is 40 degrees in picture 1.
2. With the motor direction set to CW, take the graduation/value after "CW" on the motor case as the starting point when adjusting the timing. (With the reversed triangle pointing at a value/graduation, the smaller/bigger the value, the smaller/bigger the timing. The timing is 20 degrees in picture 1.
3. The motor timing is 30 degrees by default (as shown in picture 2). The motor timing should be within 30 to 40 degrees if you want to activate the Turbo timing. And the timing can be within 20 to 40 degrees if you have no intention to activate the Turbo timing.





picture 1

picture 2

06 Gearing

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

1. The working temperature of the motor

The motor temperature should be lower than 100 degrees Celsius (212 degrees Fahrenheit) in operation. 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.

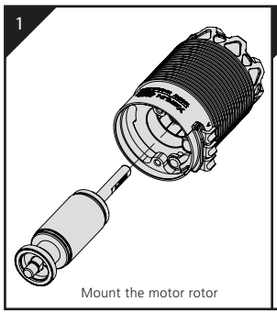
2. The principle of selecting gear ratio

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.)

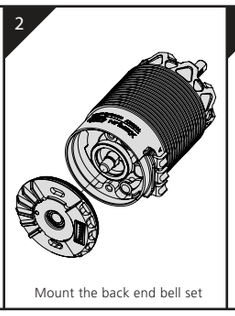
07 Assembly and Disassembly

In order to make the motor have longer service life and higher efficiency, we suggest to regularly check the bearing and clean the dirt in the motor. The specific time depends on the frequency of using the motor and the site conditions.

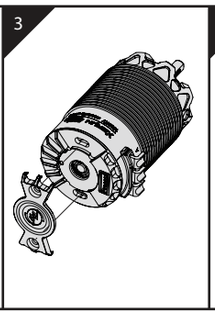
When installing, please follow the steps in the following assembly drawing; when disassembling, follow the reverse steps.

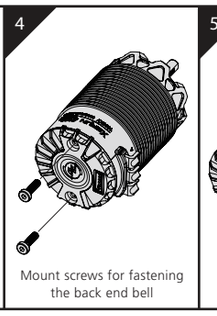


Mount the motor rotor

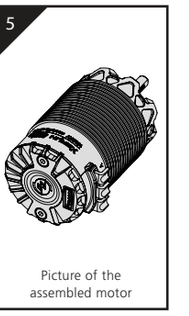


Mount the back end bell set



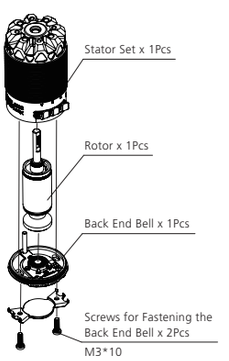


Mount screws for fastening the back end bell



Picture of the assembled motor

Parts List



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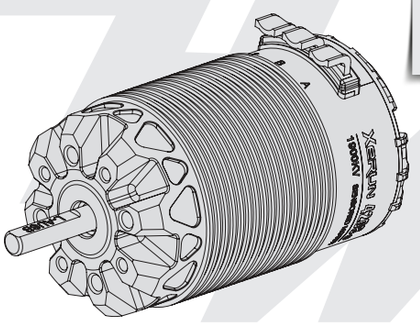
车用有感无刷电机
使用说明书
XERUN 4268/4274 G3



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感谢您购买本产品！无刷动力系统功率强大，错误的使用可能造成人身伤害和设备损坏。在使用设备前，请务必仔细阅读本说明书，并严格遵守规定的操作程序。我们不承担因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。我们有权在不经通知的情况下变更产品设计、外观、性能及使用要求。

01 注意事项

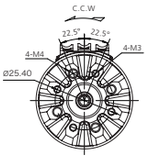
- 在产品处于通电状态时，请勿分散精力去处理其他事情。
- 连接电机前，请确保需要绝缘的部位处理良好，短路会毁坏产品。
- 连接电机前，务必认真核对电子调速器与电机的线序，避免线序错误的情况发生。
- 请勿让本产品与水、油、燃料或其他导电液体接触，因为这些可能含有对电子电路有害的物质。如果发生以上情况，请立即停用您的产品，并小心进行清洁和干燥处理。
- 使用此电机前，请认真查看各动力设备以及车架说明书，确保动力搭配合理，避免因错误的动力搭配导致电机超载而损坏。
- 齿轮未安装前，禁止全油门操作。无负载情况下高速运转可能会损坏电机。
- 请务必仔细连接好各部件，若连接不良，遥控模型车可能无法正常控制，或出现部件损坏等其他不可预知的情况。
- 勿使电机外壳温度超过100摄氏度（212华氏度），高温可能导致转子退磁并最终对电机造成不可恢复的损坏。

02 产品特色

- 电机中内置芯片，与好盈XeRun XR8系列电调搭配时，电调可自动识别出此电机，并构建纯有感模式的动力系统，提供更出色的操控性能和更细腻的操控手感。
- 该电机与好盈XERUN XR8 PRO G2电调搭配可开启比上一代系统更加明显的Turbo进角效果，让电机瞬间释放最大的动力，最高车速可提升50%，轻松超越对手。
- 电机采用“无错”霍尔传感系统专利技术，独立的高速高精度编码器始终输出纯净的转子位置信号，有效地避免了传感器信号干扰，使电机稳定工作于有感状态。
- 电机机械进角可做双向20-40°调整，便于车手更为精准地调校电机输出功率，满足各种应用的动力需求。
- 电机齿槽效应低，力矩脉动小，低速时非常顺滑，极佳的操控性能。
- 越野版电机防护等级为IP5X，出色的防尘性能，轻松应对各种Off-Road多尘赛道环境。
- 4268SD G3在保障性能提升的前提下，优化设计，极致地减轻了电机重量，1900KV/2200KV分别比同行低20g/45g。低重量电机便于车手进行车辆的平衡性能调教。

03 产品规格

PN	型号	KV（空载）	适用锂电	内阻	空载电流	外径 / 长度	轴承规格(mm)	轴径 / 外露轴长	马达极数	重量	主要用途
30401906	XERUN-4268SD-1900KV-G3-OffRoad	1900KV	2-6s	0.0075Ω	4A	42mm（1.654in） 67.8mm（2.669in）	前轴承：D16*D5*T5 后轴承：D11*D5*T5	5mm（0.197in） 18.5mm（0.728in）	4	315g	1/8 越野竞赛
30401907	XERUN-4268SD-2200KV-G3-OffRoad	2200KV	2-6s	0.0069Ω	4.1A					285g	
30401908	XERUN-4268SD-2000KV-G3-OnRoad	2000KV	2-6s	0.0069Ω	4.2A					285g	1/8 平路竞赛
30401909	XERUN-4268SD-2800KV-G3-OnRoad	2800KV	2-4s	0.0035Ω	6.1A					300g	
30405001	XERUN-4274SD-2250KV-G3	2250KV	2-6s	0.0037Ω	5A	42mm(1.654in) 74mm(2.913in)				354g	1/8 大脚、卡车



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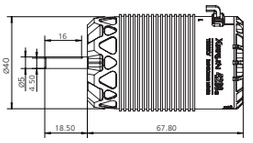

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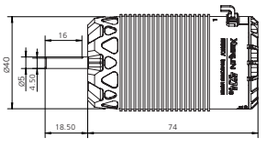

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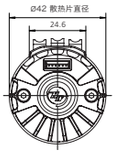

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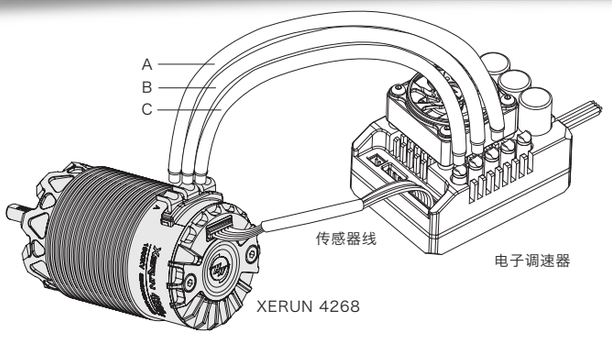
04 安装和连接



XERUN 4268

1、安装电机

该电机安装螺丝规格为两组M3，两组M4，电机螺丝孔可锁入深度为5.5mm，安装电机到车上前，请仔细确认所配螺丝规格是否合适，以免使用过长或过粗的螺丝而损坏电机；一般建议采用长度不长于8mm的M3/M4螺丝，具体根据车架马达安装座厚度而定。

2、电机连接

- 焊接/连接电机与电调（ESC）时，请注意ESC标记，确保ESC和电机上的端子一一对应，即: ESC电线A与电机A相匹配，ESC电线B与电机B相匹配，ESC电线C与电机C相匹配。
- 务必确保感应线是干净的、未损坏的，并注意感应线的方位，将感应线按正确的方位分别连接在电机和ESC的接线口上。

3、检查

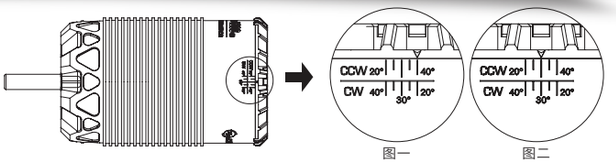
开启遥控车电源前，请再次仔细检查电机安装的可靠性及所有连接的正确性。

05 进角调整

1、当电调设置的电机转动方向为CCW时，以电机壳上CCW后面的刻度为准，箭头指向的数值越小，代表进角越小，箭头指向的数值越大则进角越大。如图一所示，该情况下进角为40度。

2、当电调设置的电机转动方向为CW时，以电机壳上CW后面的刻度为准，箭头指向的数值越小，代表进角越小，箭头指向的数值越大则进角越大。如图一所示，那么该情况下进角为20度。

3、电机出厂默认进角为30度，如图二所示，如需开TURBO，建议电机进角在30-40度之间调整，如不开TURBO，电机进角在20-40度之间均可。



图一　图二

06 齿比选择

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

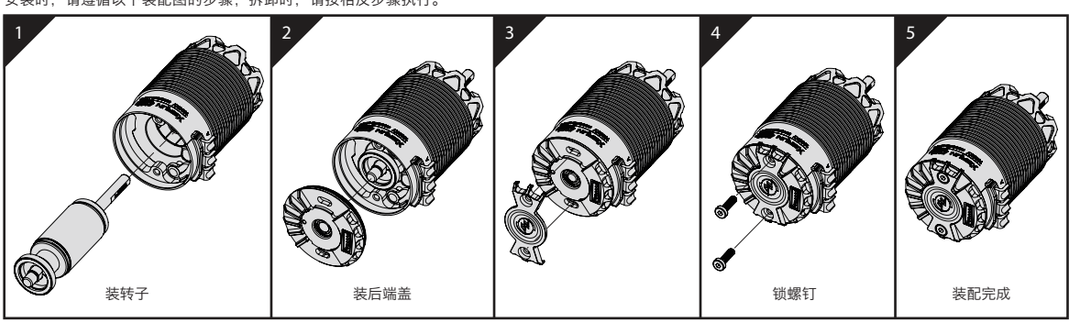
电机在工作时，温度应低于100°C（212°F）；温度高于100°C时，将会使电机转子磁性减弱，且线圈可能出现局部烧熔短路现象，产生大电流而损坏电调。选择合适的齿比可以有效防止电机过热。

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，请从一个最少齿数的电机小齿进行齿比配置，并随时检查电机温度，这是唯一能确保电机不过热的方法。车子在行驶途中，如果电机及电调温度一直处于稳定的低温范围内，您可以试着使用齿数较多的小齿，并密切监测电机温度，以确定更改后的齿比是否适合您的模型车、当地气候及赛道条件（**请注意气候及赛道条件不是恒定不变的，而是经常会发生变化，所以频繁地监测电调及电机的温度是一项重要的日常操作，它可以确保您的电子设备长期稳定地工作**）。

07 装配说明

为了使电机寿命更长、效率更高，我们建议定期检查轴承并清理电机中的污垢，具体时间取决于您使用电机的频次和场地情况。
安装时，请遵循以下装配图的步骤；拆卸时，请按相反步骤执行。



零件清单