ACE RC®

Product no:#2340

RIPPER Sensorless Brushless Motor Instructions

Thank you for purchasing the ACE RC RIPPER™ sensorless motor. This motor will provide you the benefit of the latest in brushless technology. We believe it will be to your benefit to take the time and effort to read these instructions. We are confident you will be satisfied with the performance of the RIPPER sensorless Motor.

RIPPER™ sensorless motors are our's proud contribution to Hi-Performance motor Technology. The RIPPER™ Series is a new breed of brushless motors precisely engineered to operate at the intersection of power and efficiency. No single motor can live up to that expectation under all conditions, so we designed a series of motors – each one targeting peak performance for a particular application. RIPPER™ brushless motors deliver high-end competition performance.

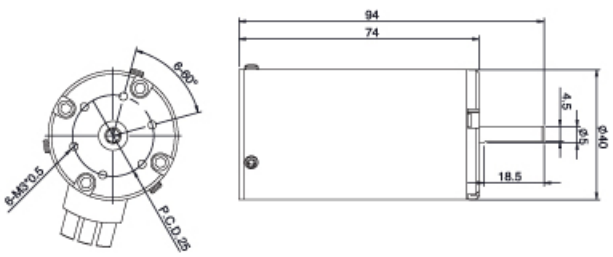
Features

1 High efficiency (>90%), the additional heat-sink is unnecessary in most applications.
2 New design with lighter weight but bigger torque.
3 Higher power than the competition, faster acceleration and higher top speed.
4 Top quality materials:
  Aluminum shell (case)
  High quality magnets
  Copper wires of high temperature endurance
  Good quality bearings
5 Anti-broken rotor with special workmanship

Safety Precautions and Warnings

- Please read instructions before operating.
- Do Not use a Schottky Diode with this motor.
- Avoid over-gearing by monitoring temperature.
- Operating temperature should not exceed 165F – 175F (74C – 80C) degrees.
- Do Not over tighten the motor mounting screws.

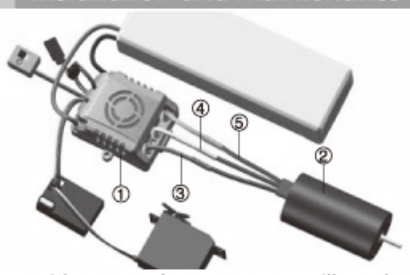
Basic Dimension



Specifications

Motor Type	IBL 40/20
KV	2000
Diameter	40.0 mm
Length Without Shaft	74 mm
Shaft	5.00 mm
Shaft Length	18.5 mm
Weight	385 g
Rm	0.005 ohm
Max Volts	26 V
Io @ 10V	2.3 A @ 10 V
Continuous Watts	1350 W

Installation and Maintenance



①ESC
②Motor
③Blue Wire (#A)
④Yellow Wire (#B)
⑤Orange Wire (#C)

- With a sensorless motor you will need to connect the 3 ESC motor leads (#A, #B, #C) from the Electronic Speed Control (ESC), one to each tab.
- If the motor runs in the opposite direction desired, swap any two motor wires, it will reverse the location of the motor.
- Brush off dirt and dust frequently from the bearings. Place a drop of oil on each bearing at the same time.

Caution

Changing to a higher voltage battery will require a lower Kv motor and/or a lower gear ratio, unless the original motor has a low enough Kv rating to begin with. The ESC will be burn out if the motor and gear ratio does not match the input voltage properly. See the example below showing how battery voltage affects power output.
Input 7.2V, internal resistance 0.18Ω --- 40A
(V/R=I 7.2/0.18=40A)
Input11.1V internal resistance 0.18Ω --- 61.6A
(V/R=I 11.1/0.18=61.6A)

WARNING

- In case of accidentally coming loose of motor, ensure the motor is firmly mounted on the motor mount before operating.
- Do follow the voltage range shown on the specification above for battery selection.
- Double check if the ESC current meets the specification shown above.
- Do not make the positive and negative wires to touch each other while power is applied.
- Do not operate the car in the rain or get water or moisture into the motor. It may cause the permanent damage for the motor and ESC.
- Do not try to touch the rotating pinion or the shaft, or it may cause physical injury.
- Please stop to use the motor once you find any electrical or mechanical defective issue.

ESC & Motor Suggestions

FOR CARS:
The RIPPER IBL40 ultimate performance motor is for any 1/8th scale vehicle. Must be used with a brushless car ESC only. ACE RC BLC series is recommended. See below "ESC & Motor Suggestions" charts to choose the right motor for your performance needs!

Motor Type	IBL40 /20	IBL40 /20	IBL40 /20
Gear Rate	1:8 Off-Road For 4 cells Lipo: 10-16	1:8 Monster For 4 cells Lipo: 12-19	1:8 Monster For 6 cells Lipo: 15-21
Power System Suggestion	BLC-80C ESC 4 Cells Lipo Battery	BLC-150C ESC 4 Cells Lipo Battery	BLC-150C ESC 6 Cells Lipo Battery
Main Application	1:8 Buggy/Truggy powerful	1:8 Monster powerful	1:8 Monster crazy powerful

NOTE

We have to emphasize that again. The IBL brushless motors are very powerful. Please make sure that your car can take the stress. And we strongly recommend that do not let the head speed go beyond the limit of the car, or it may cause property damage and bodily harm.

Manufactured by
THUNDER TIGER GROUP
http://www.thundertiger.com

ACE RC®

BRUSHLESS ESC　1:8

產品料號：2340

RIPPER
無刷馬達使用說明書

感謝您選購ACE RC RIPPER™系列無刷馬達。使用前，請詳閱此使用說明與注意事項。

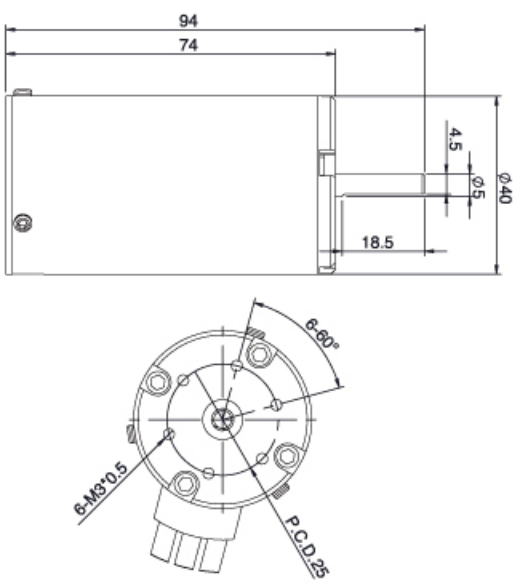
產品特點

1 全新設計，四極轉子，整體效率超過90%，溫升極低，無需外加散熱片即可滿足絕大多數應用。
2 和競爭產品相比，重量更輕，扭矩更大。
3 使用優質用料：鋁合金精美外殼，高品質磁鋼，耐高溫線材，進口優質軸承。
4 轉子使用特殊材料加固，高速運轉下無爆裂現象。

使用前安全須知

- 本產品非一般玩具，未滿14歲之使用者請由成人陪同操作，並於使用前詳閱操作說明書。
- 操作此產品前請先詳讀操作說明及安全須知。
- 請勿使用碳刷馬達（蕊基）二極體於馬達上，以避免無刷速控器損壞。
- 請勿使用過大之齒比以避免馬達溫度過熱。
- 馬達溫度最高建議控制在攝氏74-80度之間。
- 請勿過度鎖付馬達固定螺絲，以免螺牙受損。

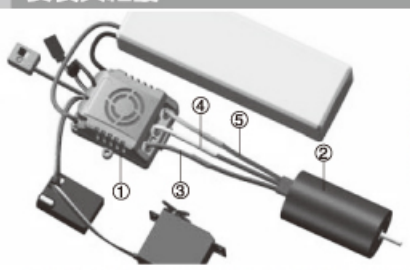
基本尺寸



規格

型號	IBL 40/20
KV值	2000
外徑	40.0 mm
長度（不含軸）	74 mm
軸徑	5.00 mm
軸外露長度	18.5 mm
重量	385 g
內阻	0.005 ohm
最大工作電壓	26 V
空載電流	2.3 A @ 10 V
持續功率	1350 W

安裝與維護



① 速控器
② 馬達
③ 藍色訊號線(#A)
④ 黃色訊號線(#B)
⑤ 橘色訊號線(#C)

- 無刷馬達需使用無刷馬達之專屬速控器（配有三條馬達訊號線接頭之速控器），無法使用一般之碳刷馬達速控器。
- 如果馬達轉動方向與需求是相反的，請將馬達輸出線的任意兩條對調，即可改變馬達轉動方向。
- 使用後，請清潔馬達上之灰塵及髒污，並適時以潤滑油保養馬達轉動軸承。

注意事項

如改用較高電壓的電池時，一定要換較低Kv值的馬達或更換較輕馬達齒輪比，因為同一個馬達的內部阻抗是固定的，若使用不同的電壓輸入，其消耗電流會有很大的不同，沒有注意ESC的規格隨意配用馬達或變動輸入電壓，很容易使ESC燒毀，以下為一個簡例說明：
輸入電壓7.2V時，一個內阻為0.18Ω的馬達會消耗40A的電流
(I=V/R 即 7.2/0.18=40) =288W
輸入電壓11.1V時，一個內阻為0.18Ω的馬達會消耗61.6A的電流
(I=V/R 即11.1/0.18=61.6)=684W
輸入電壓雖然只提高3.9V，但是功率卻多了一倍，所以我們強烈的建議使用者在使用較高電壓前，一定要先檢查ESC的溫度，同時，降低馬達的Kv值，再依兩者的溫昇來調整齒比。

警告

- 避免馬達突然鬆脫，在運轉前請確認馬達是否有確實固定在馬達座上。
- 確實遵照上面規格表的電壓範圍來選擇電池。
- 請再確認速控器電流符合上面規格表。
- 當電力作動時，勿使正負極電線插頭互相碰觸。
- 請勿在雨中操作，或者使馬達受潮，將可能導致馬達或速控器損壞。
- 請勿碰觸轉動的機件，否則會導致受傷危險。
- 本公司特別提醒：一旦發現電子或機械性的問題，請立刻停止使用並檢查，勿強迫操作而導致危險。

速控器與馬達搭配建議表

專供車用：
RIPPER IBL40 系列馬達可搭配1/8th規格之模型車。無刷馬達之使用需搭配專用之無刷馬達速控器。ACE RC提供一系列BLC無刷馬達專用電子速控器供您搭配選擇，請參考下列圖表選擇你所要的性能需求。

馬達型號	IBL40 /20	IBL40 /20	IBL40 /20
最終減速齒比（參考值）	1/8 Buggy/Truggy: 10-16 4節鋰電	1/8 大腳： 12-19 4節鋰電	1/8 大腳： 15-21 6節鋰電
推薦配置	BLC-80C 無刷電調 4節鋰電	BLC-150C 無刷電調 4節鋰電	BLC-150C 無刷電調 6節鋰電
主要應用	1/8 Buggy/Truggy 暴力配置	1/8 大腳暴力配置	1/8 大腳瘋狂配置

注意
我們必須再次強調，該系列內轉無刷馬達動力非常強大，請確認您的車子可以承受其力量，我們強烈建議勿使轉速超過車子的負荷極限，否則可能導致損壞或身體受傷。

Manufactured by
THUNDER TIGER GROUP
http://www.thundertiger.com

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