

Technical Support and E-Warranty Certificate www.vevor.com/support

#### **Brushless DC motor**

Model: BY10650Z

We continue to be committed to provide you tools with competitive price.

"Save Half", "Half Price" or any other similar expressions used by us only represents an estimate of savings you might benefit from buying certain tools with us compared to the major top brands and does not necessarily mean to cover all categories of tools offered by us. You are kindly reminded to verify carefully when you are placing an order with us if you are actually saving half in comparison with the top major brands.



#### **Brushless DC motor**

**MODEL: BY10650Z** 



#### **NEED HELP? CONTACT US!**

Have product questions? Need technical support? Please feel free to contact us:

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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.



## **Safety precautions**

## 1.1Safety advisory warning

Please read carefully before operation.

Be sure to read all safety warnings and all instructions before operating the motor. Failure to comply with warnings and instructions may result in electric shock, fire or serious injury.

If you encounter problems, please communicate with customer service in time to solve, your satisfaction is our service purpose.

#### 1.2 Warning sign for safe operation of motor



#### 1.3 Risk factor

- 1) Mechanical damage
- 2) Get an electric shock
- 3) Extrusion collision
- 4) Object impact
- 5) Other injuries

## 1.4 Operational considerations and triggers for motor non-work accidents

1) Check whether all accessories are connected tightly and not loose, check whether the pins in each plug-in are bent, and visually check whether each interface is consistent with the instructions in the wiring manual and whether the connection is correct. To avoid writing errors and burning the controller.

- 2) It is recommended to use lead-acid batteries. Lithium batteries can also work (note that the battery voltage and battery power match the kit power). The recommended battery capacity is 12AH-20AH. The battery voltage needs to be consistent with the motor kit voltage, allowing an over voltage range of +10%. The positive and negative terminals of the power supply must be connected correctly (the positive terminal is connected to the thick line of the controller in red, and the negative terminal is connected to the thick line of the controller in black). Charging the battery and controller creates small arcing and sparks, which is normal for charging.
- 3) The electric door lock (orange, red) must be connected (you can use the electric door lock, or you can shorten the orange and red wires with wires), this operation is the last step.
- 4) The accessories outside this kit, which belong to the accessories purchased by you, may not match with the kit and need to be used after matching. Please contact customer service in time to match the kit with each other.

### 1.5 Precautions and suggestions

All machine operators should be trained and certified in electrical skills.

- 1) Before opening the box, check whether the package is intact, broken, and whether there is water. After removing the cover, carefully remove dust from the motor.
- 2) Install in a dry, dust less place;
- 3) Install in a well-ventilated place;
- 4) It is installed in a wide and smooth place for easy daily operation and maintenance.

Thank you for your reading, if you still have operational problems, please contact customer service in time, before contacting customer service, please provide clear photos taken by the motor and controller nameplate, provide clear photos and clear videos of the accessory wiring connected to each plug-in of the controller, you need to clearly see the color of each wire and the color of the accessory line. In order to provide you with a more convenient and faster solution.

# TECHNICAL INFO PERFORMANCE PARAMETERS OF BY10650Z MOTOR

| Rated Voltage        | 48V DC                                |  |  |
|----------------------|---------------------------------------|--|--|
| Max Wattage          | 500W                                  |  |  |
| Rated Speed          | 450RPM                                |  |  |
| Gear ratio           | 6:1                                   |  |  |
| Rated Current        | 20A                                   |  |  |
| No-load Speed        | 3100RPM(510 RPM after gear reduction) |  |  |
| No-load Current      | ≤5A                                   |  |  |
| Motor Efficiency     | ≥85%                                  |  |  |
| Sprocket Number      | 420-13T                               |  |  |
| Screw thread         | M10*1.5 (Heat 80°C for 1-2 minutes,   |  |  |
|                      | rotate right and remove)              |  |  |
| Reduction gear ratio | 13T:34T                               |  |  |
| Load weight          | ≤350KG                                |  |  |
| Size                 | 235mm×140mm×150mm                     |  |  |
| Weight               | 4.2KG                                 |  |  |
| Range of application | Small electric car, Electric bicycle, |  |  |
|                      | Electric go-kart, Electric scooter    |  |  |

## PERFORMANCE PARAMETERS OF BY12WF02-A Controller

| Parameter                | Numerical value |  |
|--------------------------|-----------------|--|
| Rated Voltage            | 48V DC          |  |
| Max Wattage              | 500W            |  |
| Rated Current            | 30A             |  |
| Brake                    | BRAKE LOW LEVEL |  |
| Under Voltage Protection | 42V             |  |
| Working Temperature      | -40°C~60°C      |  |
| Size                     | 185mm×87mm×50mm |  |
| Weight                   | 0.55KG          |  |

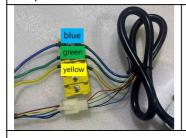
### **CONFIGURATION LIST**



- 1. Motor
- 2. The controller
- 3. Hardware tools

## **INSTALLATION PROCEDURE**

#### Step 1



Same color on both sides

Step 2



Voltage: DC48V-54V

1.Red:48v+

2.Black:54V-

Positive and negative can not be connected wrong, otherwise it will burn the controller.

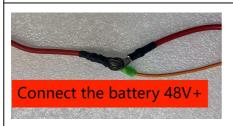
There may be a slight spark when connecting, which is a normal phenomenon of power-on.

## Instructions for other functions

Please purchase the necessary accessories by yourself



Reverse Key: Switch brown and black short, reverse speed is only 40%.



#### Electric lock:

The orange and red power cables of the controller are connected to 48V+ batteries



Brakes: Connect the electronic brake to realize the braking power off function.



#### Throttle:

Red: +4.3V
 Black: GND

3. Green: Throttle signal



The white wire is connected to the black wire to limit the speed

#### **COMMON PROBLEMS AND REMEDIES**

#### Phenomenon:

Motor does not work

#### Reason:

Battery The battery is too low and does not reach the required operating voltage **Solution**:

- Select a battery with the corresponding operating voltage;
- 2. Check whether each plug-in is connected correctly and whether the connected terminals are connected reliably, so as to avoid failure to work normally due to incorrect connection or poor contact.



### **CORRECT DISPOSAL**



This product is subject to the provision of european Directive 2012/19/EU. The symbol showing a wheelie bin crossed through indicates that the product requires separate refuse collection in the

European Union. This applies to the product and all accessories marked with this symbol. Products marked as such may not be discarded with normal domestic waste, but must be taken to acollection point for recycling electrical and electronic devices.

#### **FCC Information:**

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This product may cause harmful interference.
- 2)This product must accept any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications to this product not expressly approved by the party.responsible for compliance could void the user's authority to operate the product.

Note: This product has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This product generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- · Reorient or relocate the receiving antenna.
- · Increase the distance between the product and receiver.
- · Connect the product to an outlet on a circuit different from that to which the receiver is connected.
- · Consult the dealer or an experienced radio/TV technician for assistance.

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