Vevitts YZ011

Vevitts 24V 350W 3000RPM Brushed Permanent Magnet Electric Motor User Manual

Model: YZ011

1. Introduction

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Vevitts 24V 350W 3000RPM Brushed Permanent Magnet Electric Motor. Please read this manual thoroughly before use and retain it for future reference.

This image displays the Vevitts 24V 350W 3000RPM Brushed Permanent Magnet Electric Motor, showing its compact design, the drive sprocket, and the red and black power wires.

This motor is designed for various applications, including electric scooters, bicycles, dirt quad scoots, go-karts, ATVs, skateboards, and minibikes. It features an aluminum body, copper coil, and is naturally air-cooled.

2. Safety Information

- Always disconnect power before performing any installation, maintenance, or repair work on the motor.
- Ensure all electrical connections are secure and properly insulated to prevent short circuits or electrical shock.
- Do not operate the motor in wet conditions or expose it to excessive moisture.
- Wear appropriate personal protective equipment (PPE), such as safety glasses and gloves, during installation and handling.
- The motor may become warm during operation. Avoid direct contact with the motor casing during or immediately after use to prevent burns.
- Ensure adequate ventilation around the motor during operation.

3. Product Features

- **Construction:** Features an aluminum body and full copper coil for durability and efficient heat dissipation.
- **Cooling:** Designed with natural air cooling.
- **Performance:** High-speed brushed DC electric motor with a rated speed of 3000 RPM.
- **Reversible Operation:** Capable of rotation in both clockwise and counterclockwise directions by reversing the power wires.
- **Integrated Sprocket:** Equipped with an 11-tooth sprocket for #25H chain drive systems.

This composite image presents the motor from top, bottom, and side perspectives, highlighting its robust aluminum body and integrated mounting points.

A detailed view of the motor's output shaft, emphasizing its durability and the securely attached 11-tooth sprocket for chain drive systems.

4. Specifications

Specification	Value
Model Number	YZ011
Voltage	24V DC
Rated Output	350W
Rated Speed	3000 RPM
Rated Current	20A
Torque	1.25 Nm (0.92 ft·lb)

Specification	Value
Load Capacity	85 KG
Motor Type	DC, Brushed, Permanent Magnet
Shaft Diameter	8mm
Sprocket	11 teeth, #25H Chain, 6.35 pitch
Sprocket Diameter	25mm
Motor Dimensions (L x W x H)	5.11 x 3.94 x 4.72 inches (approx.)
Cable Length	Approx. 13.4 inches
Motor Weight	4 lbs
Mounting Hole Distance (each tab)	Approx. 42mm (1 3/4 inches)
Mounting Hole Distance (across tabs)	Approx. 95mm (3 3/4 inches)
Threaded Hole Size	5.6mm (1/4 inch)

This diagram provides precise measurements of the motor, including its length, width, height, shaft diameter, and mounting hole distances, crucial for installation planning.

5. Setup and Installation

This motor is typically used as a replacement or component in DIY projects. Proper installation is crucial for safety and performance.

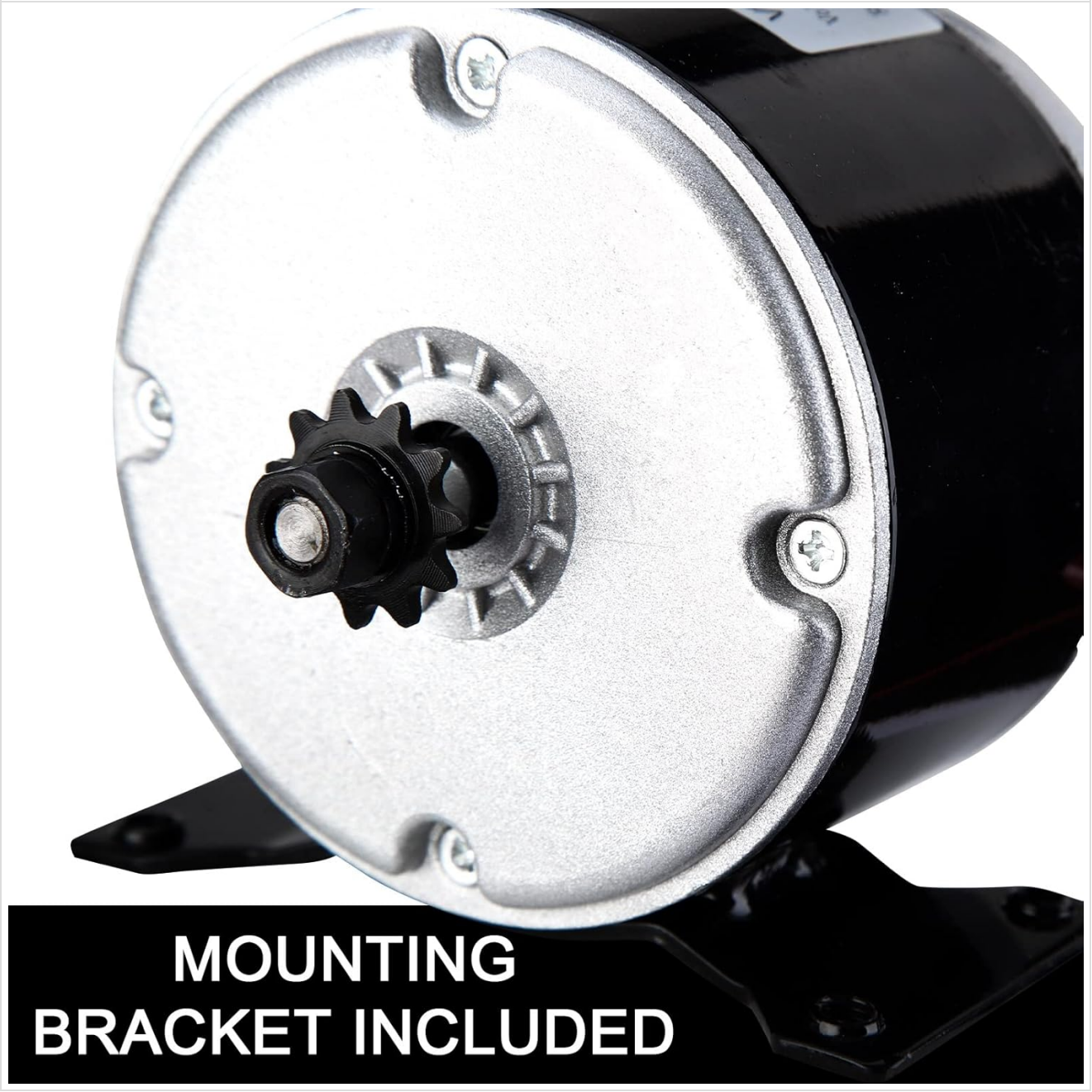
5.1. Pre-Installation Checks

- Verify that the motor specifications (voltage, wattage, RPM) match the requirements of your application.
- Ensure you have all necessary tools and components, including mounting hardware and appropriate wiring.
- Confirm that the mounting area on your device can accommodate the motor's dimensions and mounting hole pattern.

5.2. Mounting the Motor

1. Position the motor on the designated mounting surface.

2. Align the motor's mounting bracket holes with the corresponding holes on your device.
3. Secure the motor using appropriate bolts and nuts. Ensure all fasteners are tightened securely to prevent vibration and movement during operation.



This image focuses on the sturdy mounting bracket at the base of the motor, designed for secure attachment to various platforms.

5.3. Electrical Connections

1. Identify the motor's two power wires: one red and one black.
2. Connect the red wire to the positive (+) terminal of your 24V DC power source or controller.
3. Connect the black wire to the negative (-) terminal of your 24V DC power source or controller.
4. Ensure all connections are firm and insulated to prevent accidental contact or short circuits.

Note: The motor's wires are approximately 13.4 inches long. Plan your wiring route accordingly, and extend wires with appropriate gauge wiring if necessary, ensuring proper insulation.

6. Operating Instructions

6.1. Initial Start-up

1. After ensuring all connections are secure and safe, apply 24V DC power to the motor.
2. The motor should begin rotating. Observe for any unusual noises or vibrations.

6.2. Direction of Rotation

- The motor's default direction (red to positive, black to negative) is clockwise rotation, which is the intended working direction.
- To achieve counterclockwise rotation, reverse the polarity of the power supply (red to negative, black to positive).
- *Note:* When operating in the counterclockwise direction, the motor's speed may be reduced by approximately 200-300 RPM compared to clockwise operation.

7. Maintenance

The Vevitts electric motor is designed for durability and requires minimal maintenance. Regular checks can help ensure its longevity.

- **Cleaning:** Keep the motor free from excessive dust, dirt, and debris. Use a dry cloth or compressed air to clean the exterior. Do not use liquids directly on the motor.
- **Connections:** Periodically inspect all electrical connections for tightness and signs of wear or corrosion.
- **Mounting:** Check mounting bolts and brackets regularly to ensure they remain secure.
- **Sprocket/Chain:** If using a chain drive, ensure the chain is properly tensioned and lubricated, and the sprocket is free from damage.
- **Ventilation:** Ensure that the motor's natural air cooling is not obstructed.

8. Troubleshooting

Problem	Possible Cause	Solution
Motor does not start	No power supply; Incorrect wiring; Faulty controller/switch	Check power source and connections; Verify wiring polarity; Test controller/switch.
Motor runs slowly or weakly	Low voltage; Excessive load; Worn brushes (over time)	Check battery/power supply voltage; Reduce load; Consider motor replacement if brushes are worn.
Motor becomes hot during operation	Normal operation; Excessive load; Insufficient ventilation	*Note:* It is normal for the motor to become warm during operation. If excessively hot, reduce load or ensure proper ventilation.
Unusual noise or vibration	Loose mounting; Damaged sprocket/chain; Internal issue	Check mounting bolts; Inspect sprocket and chain; Discontinue use and contact support if internal issue is suspected.

9. Package Contents

The package includes:

- 1 x Vevitts 350W 3000RPM Permanent Magnet Electric Motor

10. Warranty and Support

For warranty information or technical support, please contact the manufacturer or your point of purchase. Keep your purchase receipt as proof of purchase.