

Dilwe 12 Tube Dual Mode Controller

Dilwe 12 Tube Dual Mode Brushless Motor Controller User Manual

Model: 12 Tube Dual Mode Controller

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Dilwe 12 Tube Dual Mode Brushless Motor Controller. Designed for conventional two-wheeled electric vehicles, small electric tricycles, and similar applications, this controller ensures efficient power management for your electric accessories. Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the product:

- Ensure the power supply is disconnected before performing any installation, maintenance, or wiring.
- Verify all connections are secure and correctly wired according to the instructions to avoid short circuits or malfunction.
- Do not expose the controller to water or extreme temperatures.
- Handle the controller with care to prevent physical damage.
- If you are unsure about any installation step, consult a qualified technician.

3. PRODUCT FEATURES

The Dilwe 12 Tube Dual Mode Brushless Motor Controller offers the following key features:

- **Premium Material:** Constructed from high-quality aluminum alloy with a rut design for effective heat dissipation, protecting internal circuits from thermal overload and ensuring a long service life.
- **Wide Application:** Suitable for conventional two-wheeled electric vehicles, small electric tricycles, and similar applications, meeting diverse daily needs.
- **Optimized Design:** Features a 12-tube configuration, which contributes to a greater output current, increased drive motor torsion, and improved power performance.
- **Reliable Connections:** Wires and interfaces are designed for durability, ensuring a low failure rate during long-term

use. Each interface includes an instruction label for straightforward installation.

- **Upgrade Replacement:** An ideal upgrade or replacement component for electric bicycles and scooters.

4. SPECIFICATIONS

Product Material	Aluminum Alloy
Product Size	Approx. 15 x 8.5 x 4 cm (5.9 x 3.3 x 1.6 inches)
Current Limit	26A - 32A
Battery Voltage	50V - 72V
Brake Level	High/Low Electrical Level
Phase Angle	60° / 120° Automatic Identification
Item Weight	1.23 pounds (approx. 0.56 kg)



Image 1: Dilwe Brushless Motor Controller showing its physical dimensions. The controller measures approximately 15 cm (5.9 inches) in length, 8.5 cm (3.3 inches) in width, and 4 cm (1.6 inches) in height.

5. SETUP AND INSTALLATION

Before beginning installation, ensure the power source to your electric vehicle is completely disconnected. The controller features various labeled interfaces for connection. Connect each wire according to its function as described below and indicated by the labels on the interfaces.

The wire and interface are durable, ensuring low failure rate in long term use

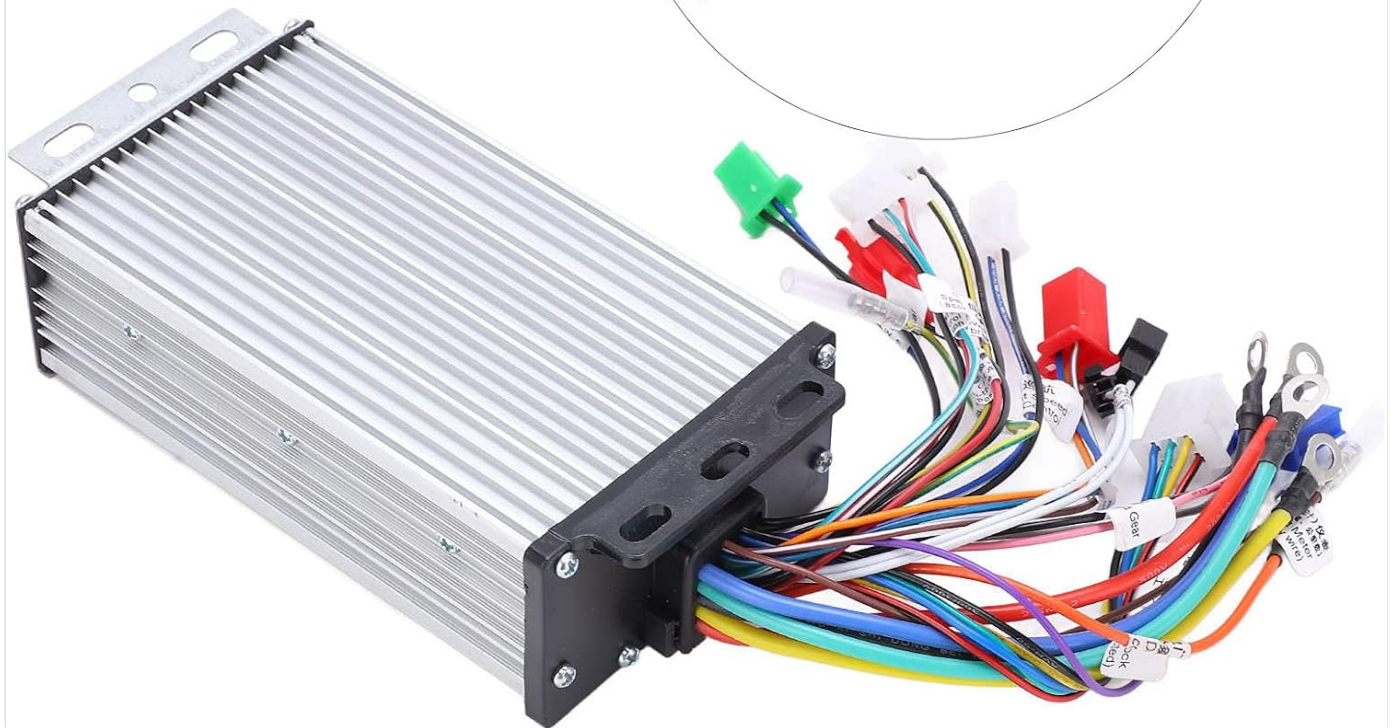


Image 2: Close-up view of the Dilwe Brushless Motor Controller's various wires and labeled interfaces, designed for easy identification and connection.

Wiring Connections:

1. **Power Supply:** Connect the positive and negative poles of your 50V-72V power supply.
2. **Electric Door Lock:** Connect to the electric door lock circuit.
3. **Motor:** Connect the three motor phase wires.
4. **Three Speed Gear:** Connect for three-speed control functionality.
5. **Intelligent Identification:** Connect for automatic identification features.
6. **Low-Level Brake:** Connect to the low-level brake signal.
7. **Anti-Theft Alarm Power:** Connect for anti-theft alarm system power. (Two connections)
8. **Multiple Data Meter:** Connect to a compatible data meter for displaying various parameters.
9. **Speed Control Handle:** Connect to the throttle or speed control handle.
10. **High-Level Brake:** Connect to the high-level brake signal.
11. **Reverse Gear:** Connect for reverse functionality.
12. **Fixed Speed Fast Sailing:** Connect for cruise control or fixed-speed operation.
13. **Conventional Meter:** Connect to a conventional display meter.
14. **Hall Sensor:** Connect the motor's Hall sensor wires.

15. **Mid Motor Conversion:** Specific connection for mid-drive motor conversions.

16. **Electric Acceleration:** Connect for electric acceleration input.

Note: Each interface is labeled. Ensure connections match the intended function. Incorrect wiring can damage the controller or other components.

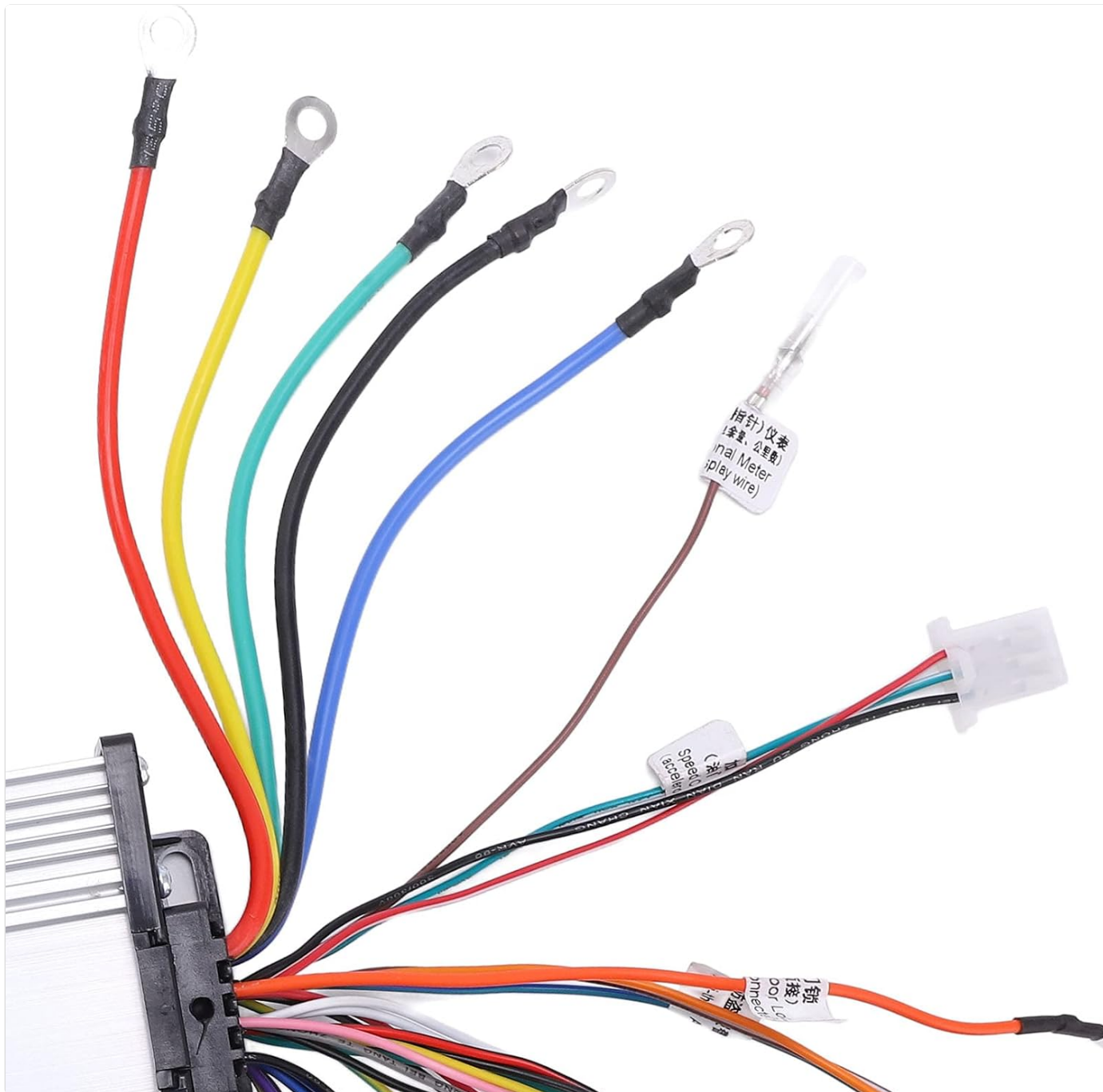


Image 3: A detailed view of the Dilwe Brushless Motor Controller's wiring harness, highlighting the individual labels on each connector for precise installation.

6. OPERATION

Once the controller is correctly installed and all connections are secure, you can power on your electric vehicle. The controller will manage the power delivery to the brushless motor based on your input from the speed control handle and other connected accessories. The dual-mode functionality allows for flexible operation with or without Hall sensors, depending on your motor configuration.

- **Power On:** Turn on the electric door lock or main power switch of your vehicle.

- **Speed Control:** Use the speed control handle (throttle) to regulate motor speed.
- **Braking:** Apply brakes; the controller will cut power to the motor based on high or low-level brake signals.
- **Special Functions:** Utilize connected features like three-speed gear, reverse, or fixed-speed sailing as per your vehicle's setup.

7. MAINTENANCE

The Dilwe Brushless Motor Controller is designed for durability and requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Regular Inspection:** Periodically check all wire connections to ensure they are tight and free from corrosion or damage.
- **Cleaning:** Keep the controller housing clean and free from dust, dirt, and moisture. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Environmental Protection:** Avoid operating the controller in excessively wet, dusty, or high-temperature environments.
- **Heat Dissipation:** Ensure the controller's heat sink fins are not obstructed to allow for proper heat dissipation.

8. TROUBLESHOOTING

If you encounter issues with your brushless motor controller, consider the following common troubleshooting steps:

- **No Power:**
 - Check the main power supply and battery connections.
 - Verify the electric door lock connection is secure and functioning.
- **Motor Not Responding:**
 - Inspect the motor phase wires and Hall sensor connections (if applicable).
 - Ensure the speed control handle is properly connected and operating.
 - Check for any loose or corroded connections.
- **Erratic Operation:**
 - Verify all connections are tight and correctly matched according to the labels.
 - Ensure no wires are pinched or damaged.
- **Overheating:**
 - Check for proper ventilation around the controller.
 - Ensure the heat sink fins are clean and unobstructed.
 - Confirm the motor and controller are appropriately matched for the vehicle's power requirements.

If the problem persists after performing these checks, it is recommended to consult a qualified technician or contact customer support.

9. WARRANTY AND SUPPORT

This product is manufactured by Dilwe. For specific warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. For further assistance or technical support, please visit the official Dilwe store or contact their customer service department.

Dilwe Store: <https://www.amazon.com/stores/Dilwe/page/4CC1109D-4F29-4308-AD00-F625D4E1E804>

