

XIBANY XIBANY001

XIBANY Intelligent Brushless Motor Controller for Mercane WIDEWHEEL PRO Electric Scooter - Instruction Manual

Comprehensive guide for installation, operation, and maintenance.

INTRODUCTION

This instruction manual provides essential information for the proper installation, function, and maintenance of your XIBANY Intelligent Brushless Motor Controller. This controller is specifically designed as a replacement part for the Mercane 2020 WIDEWHEEL PRO electric scooter. Please read this manual thoroughly before attempting any installation or use to ensure safety and optimal performance.

PRODUCT OVERVIEW

The XIBANY Intelligent Brushless Motor Controller is a critical component for the Mercane 2020 WIDEWHEEL PRO electric scooter, managing the power delivery to the motor for smooth and efficient operation. This replacement part is engineered for durability and reliable performance.

Key Features:

- **Intelligent Control:** Designed for precise motor management.
- **Exquisite Workmanship:** Manufactured with attention to detail for quality.
- **Long Service Life:** Constructed from high-quality, durable materials.
- **Direct Replacement:** Engineered to directly replace original parts.

PACKAGE CONTENTS

Upon opening the package, verify that all components are present and undamaged. The "1 Set" typically includes:

- XIBANY Intelligent Brushless Motor Controller (1 unit)
- Associated wiring harnesses and connectors (as pictured)



Image 1: The XIBANY Intelligent Brushless Motor Controller, showing the main unit and various attached connectors, including a multi-pin circular connector, a yellow XT60-style connector, and a smaller 3-pin connector.

SETUP AND INSTALLATION

Warning: Installation of electrical components on an electric scooter should only be performed by individuals with appropriate technical knowledge and experience. Incorrect installation can lead to serious injury, damage to the scooter, or fire. If you are unsure, seek professional assistance.

Before Installation:

- Ensure the scooter is powered off and disconnected from any charging source.
- Gather necessary tools (e.g., screwdrivers, wire cutters, electrical tape).
- Familiarize yourself with the existing controller's location and wiring configuration on your Mercane 2020 WIDEWHEEL PRO scooter.

Installation Steps:

1. **Access the Old Controller:** Carefully open the scooter's deck or housing to access the existing motor controller. Note how the old controller is mounted and connected.

2. **Disconnect Old Controller:** Systematically disconnect all wires from the old controller. Take photos or make diagrams of the connections before disconnecting to aid in reassembly. Pay close attention to motor phase wires, hall sensor wires, battery power, and signal wires.
3. **Remove Old Controller:** Unmount and remove the old controller unit.
4. **Install New Controller:** Position the new XIBANY controller in the same location as the old one. Secure it using appropriate fasteners.
5. **Connect Wiring:**
 - **Battery Power:** Connect the main power wires (typically red for positive, black for negative) from the scooter's battery to the corresponding terminals on the new controller. The yellow XT60-style connector is often used for battery power.
 - **Motor Phase Wires:** Connect the three thick motor phase wires (often blue, green, yellow) from the scooter's motor to the controller. Ensure they match the correct terminals.
 - **Hall Sensor Wires:** Connect the smaller hall sensor wires (typically a bundle of five thin wires) from the motor to the controller. These are crucial for motor commutation.
 - **Signal Wires:** Connect all other signal wires, such as throttle, brake levers, display, and lights, to their respective ports on the controller. Refer to your scooter's specific wiring diagram if available.



Image 2: A close-up view of the XIBANY controller's wiring connections, showing the main power input (yellow XT60-style connector) and other signal/motor wires exiting the unit.



Image 3: The XIBANY controller displaying multiple types of connectors, including a multi-pin circular connector, a yellow XT60-style connector, and a rectangular 3-pin connector, illustrating the variety of connections required.

6. **Secure Connections:** Ensure all connections are firm and properly insulated. Use electrical tape or heat shrink tubing where necessary to prevent short circuits.
7. **Test Functionality:** Before closing the scooter's housing, perform a preliminary test. Power on the scooter and check for basic functionality (e.g., throttle response, brake cut-off, lights).
8. **Reassemble Scooter:** Once satisfied with the functionality, carefully reassemble the scooter's housing.

OPERATING INSTRUCTIONS

The XIBANY Intelligent Brushless Motor Controller functions as the brain of your electric scooter's propulsion system. Once correctly installed, its operation is integrated with the scooter's existing controls (throttle, brakes, display). There are no direct user controls on the controller itself.

- **Power On/Off:** The controller activates when the scooter's main power switch is turned on and deactivates when powered off.
- **Throttle Control:** It interprets signals from the throttle to regulate motor speed and acceleration.
- **Braking:** It works in conjunction with the scooter's braking system, potentially including regenerative braking if supported by the scooter's design and the controller's programming.

- **Display Communication:** It communicates with the scooter's display to provide information such as speed, battery level, and error codes.

Always operate your Mercane 2020 WIDEWHEEL PRO electric scooter according to its original manufacturer's instructions and local regulations.

MAINTENANCE

The XIBANY Intelligent Brushless Motor Controller is designed for minimal maintenance. However, periodic checks can help ensure its longevity and reliable performance.

- **Keep Dry:** Avoid exposing the controller to water or excessive moisture. While some scooters have water resistance, direct exposure can damage internal electronics.
- **Cleanliness:** Periodically inspect the controller's housing for dirt, dust, or debris. If accessible, gently clean the exterior with a dry, soft cloth. Do not use liquids or solvents.
- **Connection Checks:** During other scooter maintenance, visually inspect the wiring connections to the controller for any signs of corrosion, fraying, or looseness. Ensure all connectors are securely seated.
- **Temperature:** Ensure the controller is not operating in excessively hot environments, as this can lead to overheating. The scooter's design typically provides adequate cooling, but avoid blocking ventilation if applicable.

TROUBLESHOOTING

If you experience issues with your scooter after installing the new controller, consider the following troubleshooting steps:

- **No Power:**
 - Check battery charge level.
 - Verify all battery power connections to the controller are secure.
 - Inspect the scooter's main power switch and fuses (if any).
- **Motor Not Responding:**
 - Ensure throttle cable/connection is secure and undamaged.
 - Check motor phase wire connections (blue, green, yellow).
 - Verify hall sensor wire connections.
 - Confirm brake levers are not engaged, as many scooters have a brake cut-off safety feature.
- **Erratic Operation / Error Codes:**
 - Refer to your Mercane 2020 WIDEWHEEL PRO scooter's original manual for specific error code interpretations.
 - Recheck all wiring connections for proper seating and insulation.
 - Ensure no wires are pinched or damaged.
- **Overheating:**

- Ensure the controller has adequate ventilation within the scooter's housing.
- Avoid prolonged heavy loads or steep inclines if the controller frequently overheats.

If problems persist after performing these checks, it is recommended to consult a qualified electric scooter technician or contact XIBANY customer support.

SPECIFICATIONS

The following specifications apply to the XIBANY Intelligent Brushless Motor Controller (Model: XIBANY001):

Feature	Detail
Brand	XIBANY
Model Name	XIBANY001
Compatibility	Mercane 2020 WIDEWHEEL PRO Electric Scooter
Material	Aluminum (Frame Material)
Item Weight	50 Grams (approx. 1.76 ounces)
Package Dimensions	1.18 x 0.79 x 0.39 inches
Assembly Required	No (as a component, but installation into scooter is required)
Number of Pieces	1 (Controller unit)
Brake Style	Regenerative Braking (Controller supports this function)

WARRANTY INFORMATION

This XIBANY Intelligent Brushless Motor Controller comes with a **Limited Warranty**. The specific terms and duration of the warranty may vary based on your region and point of purchase. Please retain your proof of purchase for any warranty claims.

For detailed warranty terms and conditions, please refer to the documentation provided at the time of purchase or contact XIBANY customer support.

CUSTOMER SUPPORT

If you have any questions, require technical assistance, or need to report an issue with your XIBANY Intelligent Brushless Motor Controller, please contact XIBANY customer support through the retailer where the product was purchased or visit the official XIBANY website for contact information.

When contacting support, please be prepared to provide:

- Your product model number (XIBANY001)

- Date of purchase
- A detailed description of the issue