

XINMEILAN QB48V25A6G

XINMEILAN Kaabo Mantis 8 Electric Scooter 48V 25A Sine Wave Controller Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your XINMEILAN 48V 25A Sine Wave Controller, designed for the Kaabo Mantis 8 Electric Scooter. Please read these instructions carefully before use to ensure safe and efficient performance.

2. PRODUCT OVERVIEW

The XINMEILAN 48V 25A Sine Wave Controller is a replacement accessory for the Kaabo Mantis 8 Electric Scooter. It is available in two distinct versions: a **48V25A rear (A) main controller** and a **48V25A front (B) auxiliary controller**. It is crucial to identify the correct controller for your specific application as they are not interchangeable.

This controller utilizes sine wave technology for smoother power delivery and improved efficiency in your electric scooter's dual-drive system.



48v25a sine wave controller (rear a) (dual drive main control)

Image 1: XINMEILAN 48V 25A Sine Wave Controllers. The image displays two identical black controllers, each with a bundle of multi-colored wires extending from one end. White text on the controllers specifies their technical parameters.

3. SAFETY INFORMATION

- **Professional Installation Recommended:** Due to the electrical nature of this component and its critical role in scooter operation, installation and debugging should be performed by qualified professionals.
- **Power Disconnection:** Always ensure the scooter's power is completely disconnected before attempting any installation, inspection, or maintenance.
- **Correct Component Selection:** Verify that you have the correct controller (front or rear) for the intended replacement. Incorrect installation can lead to damage or malfunction.
- **Compatibility:** This controller is specifically designed for the Kaabo Mantis 8 Electric Scooter. Do not attempt to install it on other vehicle models.
- **Electrical Hazards:** Be aware of potential electrical hazards. Avoid contact with exposed wires or terminals when power is connected.

4. SETUP AND INSTALLATION

Installation of the controller requires technical knowledge and should ideally be performed by a professional. Incorrect installation can lead to damage to the controller, scooter, or personal injury.

1. **Verify Compatibility:** Before beginning, confirm that the controller matches your scooter's requirements and that you have the correct front or rear unit. Refer to your scooter's original manual for wiring diagrams if available.
2. **Disconnect Power:** Turn off the scooter and disconnect the battery to prevent accidental power surges or short circuits.
3. **Access Old Controller:** Locate and carefully remove the existing controller from your Kaabo Mantis 8 scooter. Note the routing and connections of all wires.
4. **Connect New Controller:** Connect the new XINMEILAN controller, ensuring all wires (motor phase wires, hall sensor wires, power, throttle, brake, display, etc.) are correctly matched and securely fastened. Pay close attention to color coding and connector types.
5. **Secure Controller:** Mount the new controller securely in its designated position, ensuring it is protected from moisture and physical damage.
6. **Initial Testing:** Reconnect the battery. Perform a preliminary test at low speed in a safe environment to ensure all functions (throttle, brakes, lights, display) are operating correctly before full use.
7. **Debugging:** If any issues arise, consult a professional for debugging and fine-tuning.

5. OPERATING INSTRUCTIONS

The controller operates automatically once correctly installed and powered. It manages the power delivery from the battery to the motor(s) based on throttle input and other sensor data, providing smooth acceleration and efficient performance.

- Ensure all connections are secure before each ride.
- Operate the scooter according to the manufacturer's guidelines for the Kaabo Mantis 8.
- Avoid exposing the controller to excessive moisture or extreme temperatures.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your controller.

- **Visual Inspection:** Periodically inspect the controller and its wiring for any signs of damage, corrosion, or loose connections.
- **Cleaning:** Keep the controller housing clean and free from dust, dirt, and debris. Use a dry, soft cloth for cleaning. Do not use water or harsh chemicals.
- **Environmental Protection:** Protect the controller from direct exposure to heavy rain, prolonged sunlight, and extreme temperatures.
- **Professional Check:** Consider having a professional inspect your scooter's electrical system, including the controller, during routine scooter maintenance.

7. TROUBLESHOOTING

If you experience issues with your scooter's performance after controller installation, consider the following basic troubleshooting steps:

- **No Power/No Response:**

- Check battery connection and charge level.
 - Verify all controller wiring connections are secure and correctly seated.
 - Inspect for any visible damage to wires or connectors.
- **Erratic Operation:**
 - Ensure the correct controller (front/rear) is installed in the appropriate position.
 - Check for loose or corroded connections.
 - Confirm that the throttle and brake levers are functioning correctly.
- **Overheating:**
 - Ensure the controller is not obstructed and has adequate airflow.
 - Avoid prolonged heavy loads or steep inclines that can stress the motor and controller.
- **Persistent Issues:** If troubleshooting steps do not resolve the problem, it is highly recommended to seek assistance from a qualified electric scooter technician or contact the seller for support.

8. SPECIFICATIONS

Feature	Specification
Product Model	QB48V25A6G
Voltage	DC48V
Undervoltage Protection	39V
Limit Current	25A
Compatibility	Kaabo Mantis 8 Electric Scooter (Front or Rear Dual Drive)
Type	Sine Wave Controller
Manufacturer	XML-SHL
Brand	XINMEILAN

9. WARRANTY AND SUPPORT

Specific warranty details for this product are not provided in this manual. For warranty claims, technical support, or further assistance, please contact the original seller or manufacturer directly. Ensure you retain your proof of purchase.

For general inquiries or to report issues, refer to the contact information provided at the point of purchase.