

## NULKOMMA X008-AAM002

# NULKOMMA X008-AAM002 Electric Bicycle Controller User Manual

Model: X008-AAM002

## 1. INTRODUCTION

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The NULKOMMA X008-AAM002 Electric Bicycle Controller is designed for DC48V 18A brushless motors, providing stable speed and sensitive control for electric bicycles and scooters. Its aluminum alloy shell features a groove design for excellent heat dissipation, protecting internal circuits from thermal overload. This controller is equipped with fully waterproof connectors, ensuring maximum durability and reliable performance in various weather conditions. High-performance wires and robust interfaces contribute to a low failure rate for long-term use.

## 2. SAFETY INFORMATION

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- Always ensure the electric bicycle's power is disconnected before attempting any installation, maintenance, or inspection of the controller or associated components.
- Consult a qualified technician or professional if you are unsure about any installation or wiring procedures. Improper installation can lead to damage or injury.
- Keep the controller away from direct exposure to water, extreme temperatures, and corrosive substances to prevent damage.
- Ensure all electrical connections are secure and properly insulated to prevent short circuits, which can cause component failure or fire.
- Do not attempt to open or modify the controller casing, as this may void the warranty and could lead to electrical hazards.

## 3. PACKAGE CONTENTS

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Verify that all items are present in the package:

- 1 x NULKOMMA X008-AAM002 Electric Bicycle Controller

## 4. SETUP AND INSTALLATION

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Follow these guidelines for proper installation of your controller:

1. **Identify Connections:** The interfaces on the controller are clearly labeled with instruction labels. Carefully identify each connection point for the motor, battery, display, brakes, and other accessories.
2. **Connect Components:** Ensure that each interface is correctly connected to its matching component. Incorrect wiring can cause damage to the controller or other parts of your e-bike system.
3. **Secure Mounting:** Mount the controller securely in a protected location on your electric bicycle, ensuring it is away from direct impact and excessive vibration. The aluminum alloy shell is designed for heat dissipation, so ensure adequate airflow around the unit.
4. **Customization Note:** This product is a customized item. After placing your order, it is essential to contact NULKOMMA customer service with your old product information. This step ensures that the correct product is matched to your specific bike configuration, facilitating proper functionality and compatibility.



Image showing the NULKOMMA X008-AAM002 Electric Bicycle Controller, highlighting its compact design and various connection ports for easy identification during installation.

## 5. OPERATING INSTRUCTIONS

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Once installed, the NULKOMMA X008-AAM002 controller provides seamless operation for your electric bicycle:

- **Power On:** Turn on your e-bike's battery and display system. The controller will automatically initialize.
- **Speed Control:** Use your e-bike's throttle or pedal-assist system to control the motor speed. The controller ensures stable speed delivery.
- **Braking:** The controller provides sensitive control for braking. When brakes are applied, the motor power will be cut off, and regenerative braking (if supported by your system) may engage.
- **Direction Change:** The controller facilitates sensitive control for changes in direction, responding to your e-bike's input.
- **Display Integration:** If using a compatible M5 display meter (not included), operational data such as speed, battery level, and assist mode will be shown on the display.

## 6. MAINTENANCE

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To ensure the longevity and optimal performance of your controller, follow these maintenance tips:

- **Regular Inspection:** Periodically check all cable connections to the controller for tightness and signs of wear or corrosion. Loose connections can lead to intermittent operation or damage.
- **Cleaning:** Keep the controller's exterior clean and free from dust, dirt, and debris. Use a soft, dry cloth for cleaning. Avoid using harsh chemicals or abrasive materials.
- **Environmental Protection:** While the connectors are waterproof, avoid prolonged exposure of the entire unit to heavy rain or submersion in water. Store your e-bike in a dry, temperate environment.
- **Avoid Physical Damage:** Protect the controller from direct impacts or excessive vibrations, which can damage internal components.

## 7. TROUBLESHOOTING

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If you encounter issues with your NULKOMMA X008-AAM002 controller, consider the following troubleshooting steps:

- **No Power/System Not Responding:**
  - Check the e-bike battery for charge and proper connection.
  - Verify all power cables to the controller are securely connected.
  - Ensure the e-bike's main power switch (if applicable) is in the 'ON' position.
- **Motor Not Engaging/Intermittent Power:**
  - Inspect motor phase wires and Hall sensor wires for secure connections and damage.
  - Check throttle or pedal-assist sensor connections.
  - Ensure brake levers are not engaged, as many systems cut motor power when brakes are applied.
- **Overheating:**
  - Ensure the controller is mounted in a location with adequate airflow.
  - Avoid prolonged operation under heavy load, especially in high ambient temperatures.
- **Persistent Issues:** If problems persist after performing these checks, it is recommended to contact NULKOMMA customer support or a qualified e-bike technician for further diagnosis and repair.

## 8. SPECIFICATIONS

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Specification	Detail
Model Number	X008-AAM002
Operating Voltage	DC48V
Rated Current	18A
Motor Type	Brushless Motor
Shell Material	Aluminum Alloy (with groove design for heat dissipation)
Connectors	Fully Waterproof

Compatibility	Ebike Display Meter M5 (display not included)
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## 9. WARRANTY AND SUPPORT

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NULKOMMA is committed to customer satisfaction:

- **Warranty:** If you are not satisfied with the product received, you may apply for an unconditional return and refund within 180 days from the date of purchase.
- **Customer Support:** For any questions, concerns, or issues regarding this product, please do not hesitate to contact NULKOMMA customer service via email. We aim to reply as soon as possible to assist you.
- **Manufacturer:** Nulkomma