

BAFANG BBS01B 36V250W

BAFANG BBS01B 36V250W Mid Drive Ebike Motor Controller User Manual

Model: BBS01B 36V250W

1. INTRODUCTION

This manual provides comprehensive instructions for the BAFANG BBS01B 36V250W Mid Drive Ebike Motor Controller. It is designed to assist users with the proper installation, operation, maintenance, and troubleshooting of the controller, ensuring optimal performance and longevity for your ebike conversion kit.

2. PRODUCT OVERVIEW & FEATURES

The BAFANG BBS01B 36V250W Mid Drive Ebike Motor Controller is an essential component for BAFANG BBS series mid-drive ebike conversion kits. This 2024 upgraded version includes several enhancements for a smoother and more controlled riding experience.

Key Features:

- **Upgraded Control Logic:** The controller features a slow start function for gentle acceleration and adjusts power based on throttle input for a more intuitive ride.
- **Speed Limit Functionality:** Allows for speed limits to be set via PAS (Pedal Assist System) settings in both electric and pedal-assist modes through the display.
- **Enhanced Connectivity:** Includes built-in gear sensor plug and front lamp plug for expanded functionality.
- **Durable Construction:** Manufactured from high-quality aluminum alloy, designed to withstand various environmental conditions.

UPGRADED VERSION

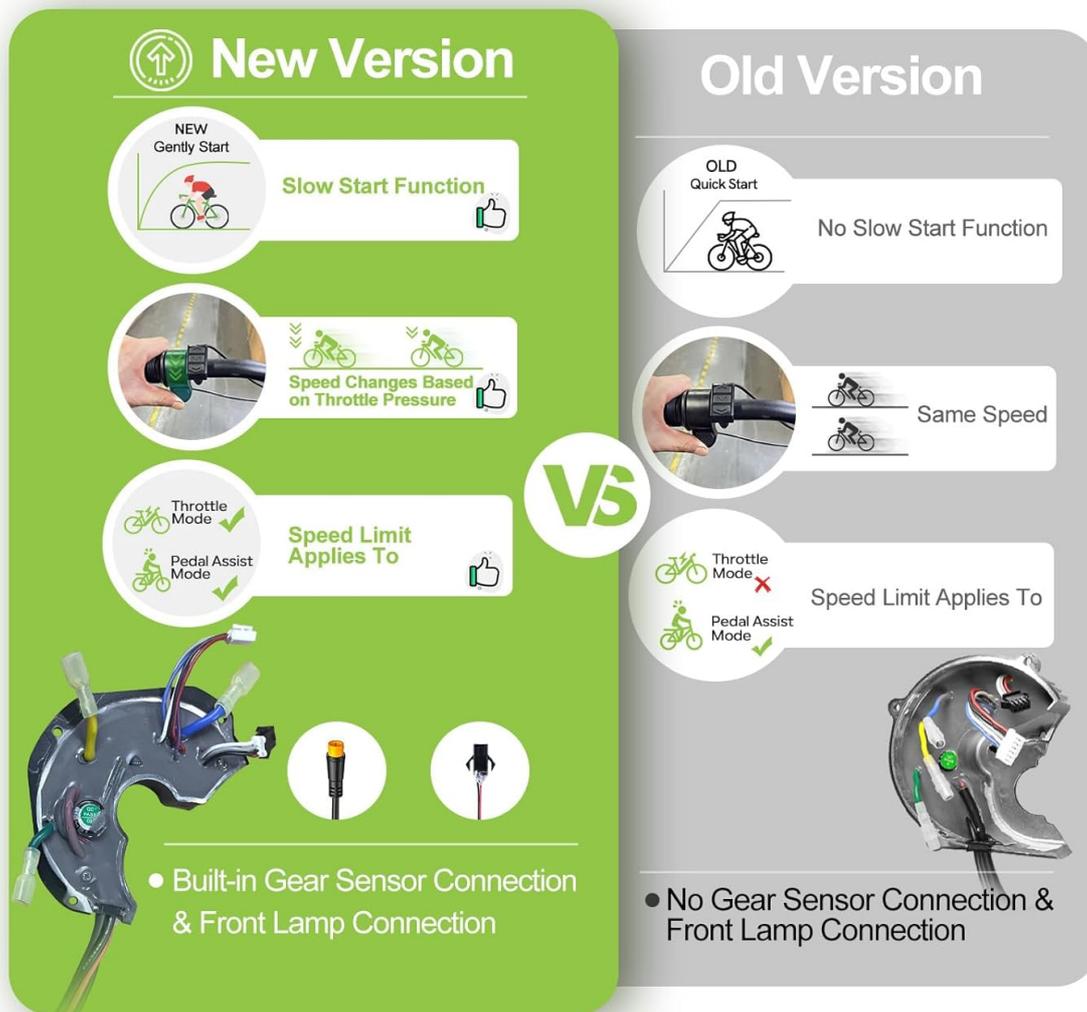


Figure 2.1: Comparison highlighting the upgraded features of the new BAFANG controller, including slow start, speed limits, and integrated sensor/lamp connections.

Compatibility:

This controller is compatible with BAFANG BBS series mid-drive motors, specifically models like BBS01B, BBS02B, and BBSHD. It is important to note that this controller is designed for the latest models and **does not work with BAFANG mid motors from 2015 or earlier**. Ensure your motor has the necessary gear sensor and front lamp plugs for full compatibility.

3. PACKAGE CONTENTS

Upon unpacking, please verify that all items listed below are present and undamaged:

- 1x BAFANG Motor Controller (BBS01B 36V250W)
- 1x Water-proof Gasket

4. IMPORTANT NOTICES BEFORE INSTALLATION

Adhering to these guidelines is crucial for preventing damage and ensuring correct operation:

- **Controller Serial Number:** Always check the serial number on your existing motor before ordering a

replacement controller to ensure compatibility.

- **Voltage and Wattage Consistency:** The voltage and wattage of the controller must precisely match the power specifications of your mid-drive motor. Inconsistent specifications can lead to operational failure.
- **System Voltage Match:** The voltage of the motor, the controller, and the battery must all be consistent. For example, a 36V motor requires a 36V controller and a 36V battery.

5. SETUP & INSTALLATION

The BAFANG mid-drive motor controller is designed for straightforward installation. For detailed visual guidance, refer to official BAFANG installation videos available online. Below are general steps and connection diagrams.

Connection Overview:



Figure 5.1: Overview of the BAFANG controller and its various connection points, including battery, gear shift, 1T4 motor, speed sensor, and front lamp connections.

Motor Cable Connections:

Ensure correct cable connections for your specific motor series (BBS or BBSHD).

BBS MOTOR CABLE



EB-BUS 1T4
Connector



Speed Sensor
Connector



Gear Shift Sensor
Connector



Front Lamp
Connector



Battery Connector
(Red "+", Black "-")

BBSHD MOTOR CABLE



EB-BUS 1T4
Connector



Speed Sensor
Connector



Gear Shift Sensor
Connector



Front Lamp
Connector



Battery Connector
(Red "+", Black "-")

Figure 5.2: Detailed view of the motor cable connections for both BBS and BBSHD series controllers, showing EB-BUS 1T4, Speed Sensor, Gear Shift Sensor, Front Lamp, and Battery Connectors.

BBS CONTROLLER

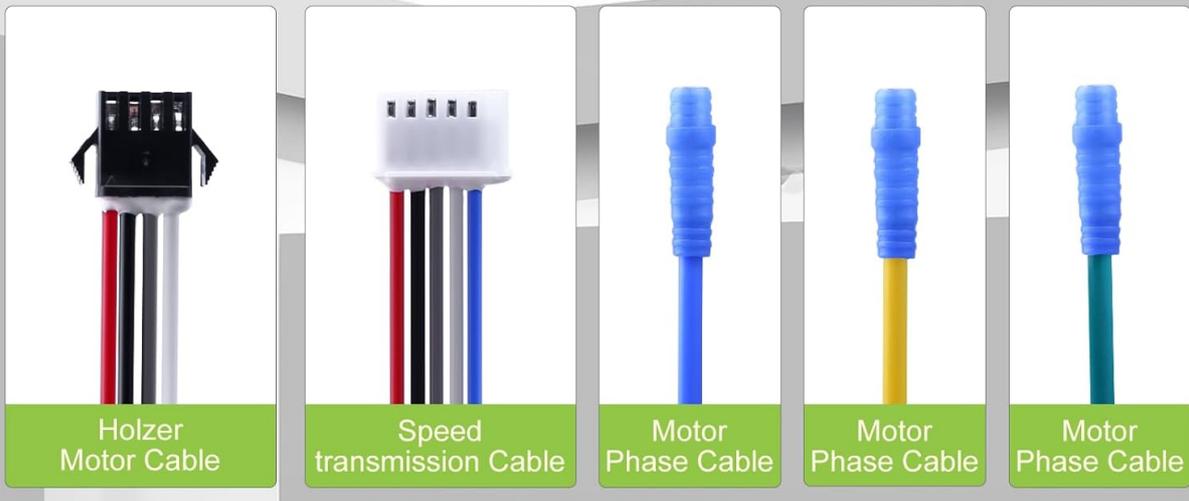


Figure 5.3: Close-up of the BBS Controller's internal cable connections, including Holzer Motor Cable, Speed Transmission Cable, and Motor Phase Cables (blue, yellow, green).

1. **Disconnect Power:** Before beginning any installation, ensure the ebike battery is disconnected.
2. **Remove Old Controller (if applicable):** Carefully detach the existing controller, noting all connections.
3. **Install New Controller:** Mount the new BAFANG controller securely.
4. **Connect Cables:** Connect all cables according to the diagrams provided and your motor's specific requirements. Pay close attention to the EB-BUS 1T4, speed sensor, gear shift sensor, front lamp, and battery connectors. Ensure the battery connector polarity is correct (Red for '+', Black for '-').
5. **Secure Connections:** Ensure all connections are firm and protected, utilizing the waterproof gasket where appropriate.
6. **Test Functionality:** Reconnect the battery and perform a functional test to ensure all components are working correctly.

6. OPERATING INSTRUCTIONS

The upgraded BAFANG controller offers enhanced control over your ebike's performance:

- **Slow Start Function:** The controller initiates power delivery gently, providing a smooth and

controlled start, reducing sudden jerks.

- **Throttle-Based Power Adjustment:** The controller intelligently adjusts power output based on the pressure applied to the throttle, offering a more responsive and natural riding experience.
- **PAS Speed Limits:** Utilize your ebike's display settings to configure speed limits for both electric-only and pedal-assist modes. This allows for compliance with local regulations or personal preference.

7. MAINTENANCE

The BAFANG controller is built with durable materials for long-lasting performance and minimal maintenance. To ensure its continued reliability:

- **Regular Inspection:** Periodically check all cable connections for tightness and signs of wear or damage.
- **Cleanliness:** Keep the controller free from excessive dirt, dust, and moisture. Wipe with a damp cloth if necessary, ensuring no water enters the unit.
- **Avoid Extreme Conditions:** While designed for durability, prolonged exposure to extreme temperatures or harsh chemicals should be avoided.

8. TROUBLESHOOTING

If you encounter issues with your BAFANG controller, consider the following common problems and solutions:

- **No Power/Motor Not Responding:**
 - Check all cable connections, especially the battery and motor phase cables, for secure attachment.
 - Verify that the battery is charged and properly connected.
 - Ensure the controller's voltage and wattage match the motor and battery specifications.
- **Erratic Operation/Inconsistent Power:**
 - Inspect the throttle and PAS sensors for damage or loose connections.
 - Check for any error codes on your ebike display, if applicable.
- **Compatibility Issues:**
 - Confirm that your motor is a BAFANG BBS series model from 2016 or later. This controller is not compatible with older models.
 - Ensure the controller's specifications (voltage, wattage) are identical to your motor and battery.

If troubleshooting steps do not resolve the issue, the controller may require replacement. This controller serves as an ideal replacement part for faulty units, helping to restore your ebike's functionality efficiently.

9. SPECIFICATIONS

Detailed specifications for the BAFANG BBS01B 36V250W Mid Drive Ebike Motor Controller:

SPECIFICATION

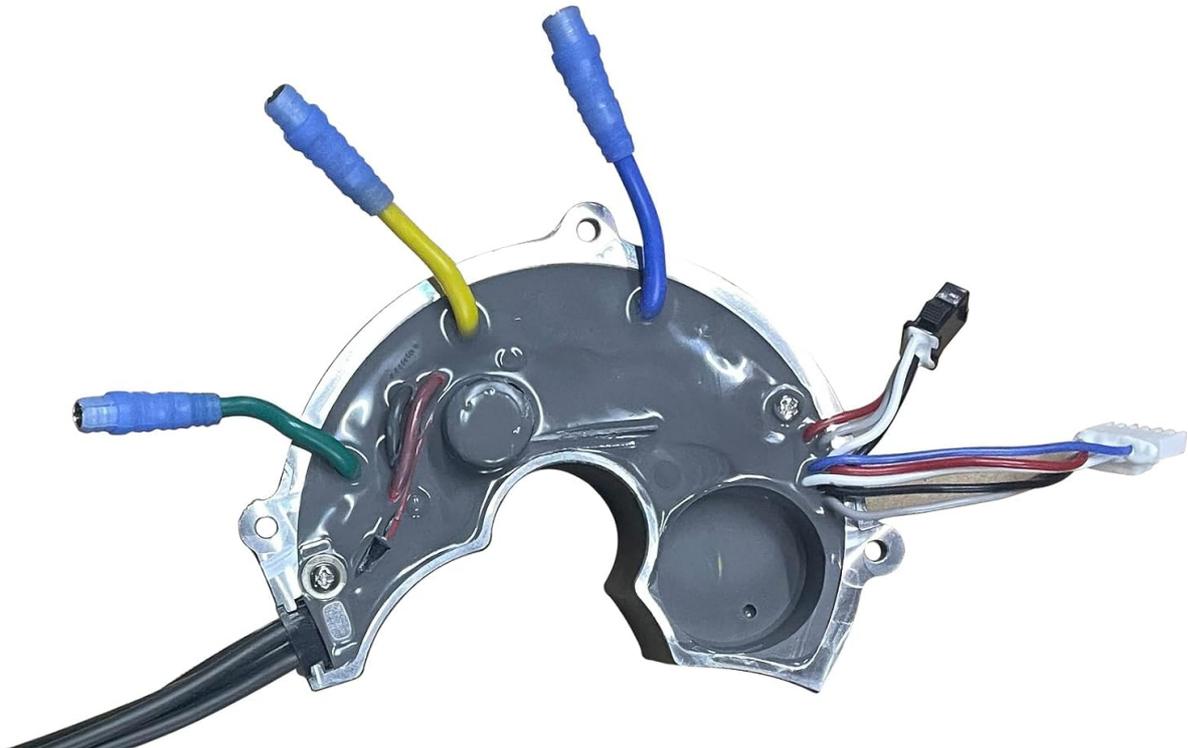
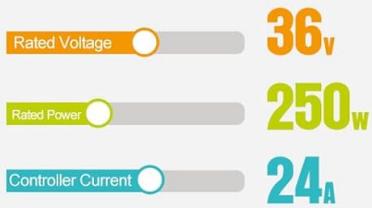


Figure 9.1: Visual representation of the controller's key specifications, including rated voltage, rated power, and controller current, along with a serial number label.

Specification	Detail
Model Name	BBS01B 36V250W (Internal: M315 MM G340.250.C)
Brand	BAFANG
Material	Aluminum Alloy
Rated Voltage	36V
Rated Power	250W
Controller Current	24A
Weight	Approximately 500g
Manufacturer	Bafang Electric (Suzhou) Co., Ltd

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official BAFANG website or contact your authorized BAFANG dealer. Ensure you have your product's serial number and proof of purchase available when seeking support.