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› mGYDY Motor Brushless Controller E Bike Kit with S900 LCD Display User Manual

mGYDY 20240408003

mGYDY Motor Brushless Controller E Bike Kit with S900 LCD Display User Manual

Model: 20240408003

1. INTRODUCTION AND OVERVIEW

This manual provides comprehensive instructions for the installation, operation, and maintenance of your mGYDY Motor Brushless Controller E Bike Kit, featuring the S900 LCD Display. This kit is designed to enhance your electric bicycle experience with reliable control and clear information display.

The controller is compatible with 36V, 48V, and 52V brushless motors ranging from 1500W to 2000W, supporting both motors with and without Hall sensors. Please read this manual thoroughly before installation and use to ensure proper function and safety.



Figure 1: mGYDY Motor Brushless Controller and S900 LCD Display Kit components.

2. PACKAGE CONTENTS

Upon opening the package, verify that all the following components are present and undamaged:

- 1 x 40A Brushless Motor Controller
- 1 x S900 LCD Display
- 1 x Controller Manual (physical document)
- 1 x Display Instruction Manual (physical document)

If any items are missing or damaged, please contact your retailer or mGYDY customer support immediately.

3. SETUP AND INSTALLATION

This section outlines the general steps for installing the brushless motor controller and S900 LCD display. For detailed wiring diagrams and specific installation procedures, please refer to the dedicated Controller Manual and Display Instruction Manual included in your package.

3.1 Controller Installation

1. **Mounting:** Securely mount the controller in a protected location on your e-bike, away from direct water exposure and physical impact. The controller casing is made of aluminum alloy and ABS, designed for durability.
2. **Motor Connection:** Connect the motor phase wires (typically three thick wires) from your brushless motor to the corresponding ports on the controller.
3. **Hall Sensor Connection (if applicable):** If your motor has Hall sensors, connect the Hall sensor wire harness to the controller's Hall sensor port. The controller supports motors with or without Hall sensors.
4. **Power Connection:** Connect your e-bike battery (36V, 48V, or 52V) to the controller's power input using the XT60 plug. Ensure correct polarity. The plastic box is insulated to prevent fire accidents and ensure battery safety.
5. **Accessory Connections:** Connect other accessories such as throttle, brake levers, and the S900 LCD display to their respective ports on the controller.

3.2 S900 LCD Display Installation

1. **Mounting:** Attach the S900 LCD display to your handlebar in a position that is easily visible and accessible during riding.
2. **Connection:** Connect the display cable to the designated port on the brushless motor controller.

3.3 Initial Setup and Self-Learning Function

The controller features a self-learning function for optimal motor compatibility. Refer to the Controller Manual for specific instructions on initiating this function. Generally, this involves a sequence of power-on and throttle operations to allow the controller to learn your motor's parameters.

4. OPERATING INSTRUCTIONS

4.1 Basic Operation

- **Power On/Off:** Use the power button on the S900 LCD display to turn the e-bike system on or off.
- **Throttle Control:** Apply the throttle to engage the motor and control speed.
- **Braking:** The system is designed with low-level brake input. Engaging the brake levers will cut off motor power.

4.2 Speed Limit Release

The controller includes two dedicated speed limit wires. To release the factory-set speed limit, these two wires can be disconnected. Consult the Controller Manual for the exact location and procedure for these wires. Disconnecting them provides convenient and flexible control over your e-bike's maximum speed.

4.3 Reverse Prevention Design

The three-mode controller incorporates a reverse prevention design. To rotate the motor forward, simply connect two specific wires as indicated in the Controller Manual. Avoid long-term connections for this function unless specifically required for testing or specific applications.

4.4 S900 LCD Display Functions

The S900 LCD display provides real-time information about your e-bike's status, including speed, battery level, and assist mode. Refer to the dedicated Display Instruction Manual for detailed information on navigating menus, adjusting settings, and understanding error codes.

5. MAINTENANCE

Proper maintenance ensures the longevity and reliable performance of your mGYDY E Bike Kit.

- **Cleaning:** Regularly clean the controller and display with a soft, dry cloth. Avoid using harsh chemicals or excessive moisture.
- **Inspection:** Periodically inspect all wiring connections for tightness and signs of wear or damage. Ensure the XT60 plug is securely connected.
- **Protection:** While the controller casing is robust (aluminum alloy and ABS), avoid exposing it to extreme temperatures, heavy impacts, or prolonged direct water immersion. The plastic box is insulated for safety.
- **Storage:** When not in use for extended periods, store the e-bike and its components in a dry, temperate environment.

6. TROUBLESHOOTING

If you encounter issues with your mGYDY E Bike Kit, consider the following basic troubleshooting steps. For more complex problems, refer to the specific troubleshooting sections in the Controller Manual and Display Instruction Manual.

- **No Power:**
 - Check battery charge level.
 - Ensure all power connections, especially the XT60 plug, are secure.
 - Verify the display is properly connected and powered on.
- **Motor Not Responding:**
 - Check motor phase wire connections.
 - If applicable, verify Hall sensor connections.
 - Ensure the throttle is functioning correctly.
 - Check for any error codes displayed on the S900 LCD.
- **Incorrect Speed/Performance:**
 - Verify the speed limit wires are configured as desired (connected for limit, disconnected for full speed).
 - Ensure the self-learning function was completed successfully.

If problems persist after following these steps, please consult the detailed manuals or contact mGYDY customer support.

7. SPECIFICATIONS

Model Number	20240408003
Brand	mGYDY
Applicable Motors	36V 1500W, 36V 2000W, 48V 1500W, 48V 2000W, 52V 1500W, 52V 2000W brushless motors (with or without Hall sensors)
MOS Tube	15
Maximum Current	40±1A
Rated Voltage	36V, 48V, 52V

Communicating Protocol	No. 2 Communicating Protocol
Brake Input	Low Level
Controller Size	Approx. 185x82x41mm / 7.3x3.2x1.6in
Display Size	Approx. 61x110mm / 2.4x4.3in
Material	Aluminum Alloy, Acrylonitrile Butadiene Styrene (ABS)
Included Components	40A Brushless Motor Controller, S900 LCD Display
UPC	744128904733

Note: All data are measured manually, and there may be certain errors in the measurement results.

8. WARRANTY AND SUPPORT

Warranty information for the mGYDY Motor Brushless Controller E Bike Kit is typically provided with the product packaging or within the dedicated Controller Manual and Display Instruction Manuals. Please refer to these documents for details regarding warranty coverage, terms, and conditions.

For technical support, troubleshooting assistance beyond this manual, or warranty claims, please contact your retailer or the manufacturer, mGYDY, through the contact information provided in your product documentation or on their official website.

