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› YedaHcy 36V/48V 1500W Brushless Motor Controller with LCD Display User Manual

## YedaHcy YedaHcy8zu4f51q7x

# YedaHcy 36V/48V 1500W Brushless Motor Controller with LCD Display User Manual

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your YedaHcy 36V/48V 1500W Brushless Motor Controller. This controller is designed to provide stable speed and sensitive braking control for electric bicycles and scooters, enhancing the riding experience. Please read this manual thoroughly before installation and use to ensure proper function and safety.

## 2. SAFETY INFORMATION

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- Always disconnect power before performing any installation, maintenance, or troubleshooting.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- Do not expose the controller to water or extreme temperatures.
- Seek professional assistance if you are unsure about any installation steps.
- Verify voltage compatibility (36V/48V) with your electric vehicle's battery and motor.

## 3. PRODUCT OVERVIEW

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The YedaHcy Brushless Motor Controller is constructed from durable aluminum alloy, ensuring a low failure rate and long-term reliability. It features a sturdy wire interface and is designed for efficient energy saving.



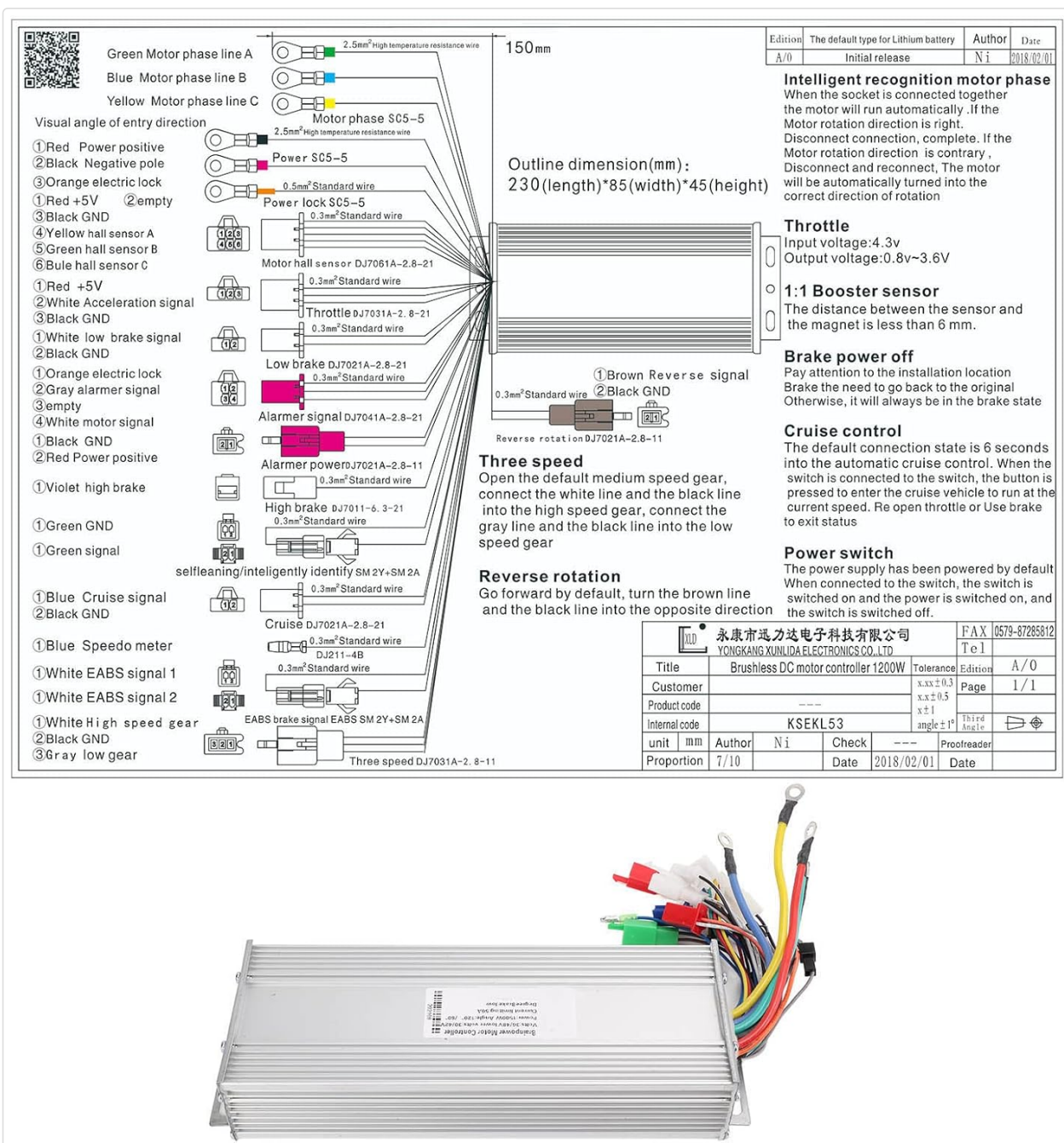
**Figure 3.1:** Front view of the YedaHcy Brushless Motor Controller, showcasing its aluminum alloy casing and various wire interfaces.



**Figure 3.2:** Angled view of the controller, highlighting the robust wiring harness with color-coded connectors for various functions.

## 4. SETUP AND INSTALLATION

The controller includes 18 wiring connections. Refer to the detailed wiring diagram below for proper installation. Ensure each connection is made securely.



**Figure 4.1:** Comprehensive wiring diagram illustrating all connections for the motor controller, including motor phases, Hall sensors, throttle, brakes, and auxiliary functions.

## 4.1 Wiring Connections

- **Motor Phase Wires:** Connect the Green, Blue, and Yellow wires (2.5mm<sup>2</sup> high temperature resistance) to the corresponding motor phase wires.
- **Hall Sensor Wires:** Connect Red (+5V), Black (Negative pole), Green (Hall sensor C), Yellow (Hall sensor B), and Blue (Hall sensor A) to the motor's Hall sensor wires.
- **Throttle:** Connect Red (+5V), Black (GND), and White (Speed control signal) to the throttle unit.
- **Brake:** Connect Black (GND) and White (Brake signal) to the brake levers.
- **Power:** Connect the main Red wire (Positive) and Black wire (Negative) to your 36V/48V battery.
- **Power Lock:** Connect the Green wire to the power lock.
- **Electric Lock:** Connect the Orange wire to the electric lock.
- **Reverse Signal:** Connect the Brown wire for reverse functionality.
- **Cruise Control:** Connect the Blue wire for cruise control.

- **Three Speed:** Connect the Green and Blue wires for three-speed control.
- **EABS Signal:** Connect the two White wires for EABS (Electronic Absorbing Braking System) signals.
- **Low Gear:** Connect the Grey wire for low gear functionality.
- **Alarm Power/Signal:** Connect the Red wire for alarm power and Orange wire for alarm signal.
- **Self-learning/Intelligent Identification:** Connect the two Green wires for automatic motor parameter learning.

## 4.2 Initial Recognition Procedure

1. Connect the motor phase wires, Hall sensor wires, and main power wires.
2. Power on the system. The controller will attempt to recognize the motor's rotation direction.
3. If the motor rotates in the correct direction, disconnect the self-learning wires.
4. If the motor rotates in the wrong direction, disconnect the self-learning wires and reconnect them. The motor will automatically turn into the correct direction of rotation.

## 4.3 Specific Function Notes

- **Throttle:** Input voltage is 4.3V, output voltage ranges from 0.8V to 3.6V.
- **1:1 Booster Sensor:** Ensure the distance between the sensor and the magnet is less than 6mm for optimal performance.
- **Brake Power Off:** Pay attention to the installation location of the brake levers. Ensure the brake lever returns to its original position after release; otherwise, the brake state will remain active.
- **Cruise Control:** The default connection state activates automatic cruise control after 6 seconds of stable speed. To exit cruise control, press the brake lever.
- **Power Switch:** The power supply is active by default. When connected to a switch, the power is off when the switch is engaged, and on when the switch is disengaged.
- **Three Speed:** The controller defaults to medium speed. Connect the white and blue lines for high speed, green and blue for medium speed, and green and black for low speed.
- **Reverse Rotation:** The system defaults to forward motion. To enable reverse, connect the brown and black wires.

## 5. OPERATING INSTRUCTIONS

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Once installed, the controller provides sensitive speed control and efficient braking. The integrated LCD display allows for easy monitoring and adjustment of various settings, providing real-time information about your electric vehicle's performance.

- **Power On/Off:** Use the designated power switch (if installed) or the main battery switch to turn the system on or off.
- **Speed Control:** Use the throttle to adjust the motor speed. The controller ensures a smooth and responsive acceleration.
- **Braking:** Activating the brake levers will cut off motor power and engage braking.
- **LCD Display:** Refer to your specific LCD display manual for detailed instructions on navigating menus, viewing speed, battery level, and other parameters.

## 6. MAINTENANCE

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- Keep the controller clean and dry. Avoid exposure to moisture, dust, and corrosive substances.
- Periodically check all wire connections for tightness and signs of wear or damage.
- Ensure the controller's casing is free from physical damage.
- Do not attempt to open the controller casing unless you are a qualified technician, as this may void any warranty.

## 7. TROUBLESHOOTING

If you encounter issues with your controller, consider the following basic troubleshooting steps:

- **No Power:** Check battery connections, main power switch, and electric lock wiring. Ensure the battery is charged.
- **Motor Not Running:** Verify all motor phase wires and Hall sensor wires are correctly connected. Re-run the initial recognition procedure if necessary.
- **Erratic Speed Control:** Check throttle connections and ensure the throttle unit is functioning correctly.
- **Brakes Not Working:** Inspect brake lever connections and ensure they return to their original position.
- **Overheating:** Ensure the controller has adequate ventilation and is not covered. Reduce load if possible.

For persistent issues, contact customer support or a qualified technician.

## 8. SPECIFICATIONS

Feature	Specification
Item Type	Motor Brushless Controller LCD Display
Material	Aluminum Alloy
Voltage	36V/48V Universal
Power	1500W
Current Limit	50A
Controller Box Length	22.8 cm (9.0 in)
Controller Box Width	8.5 cm (3.3 in)
Controller Box Height	4.5 cm (1.8 in)
Product Weight	Approx. 871 g (30.7 oz)
Model Name	YedaHcy8zu4f51q7x

## 9. WARRANTY AND SUPPORT

For warranty information and technical support, please contact the seller or manufacturer directly. Keep your purchase receipt as proof of purchase.

Additional resources may be available from the manufacturer. You can visit their company page for more information: [YedaHcy Company Page](#)

