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› SPEDWHEEL 36V Controller for Inmotion P1 P1F Electric Bicycle Instruction Manual

SPEDWHEEL P1 P1F Controller (YCKH013-099-36)

SPEDWHEEL 36V Controller for Inmotion P1/P1F Electric Bicycle Instruction Manual

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your SPEDWHEEL 36V Brushless Motor Controller, designed for Inmotion P1 and P1F electric bicycles. Please read these instructions carefully before proceeding with installation or use to ensure proper function and safety.

2. PRODUCT OVERVIEW

The SPEDWHEEL 36V Brushless Motor Controller is a critical component for the efficient operation of your Inmotion P1 or P1F electric bicycle. It manages the power delivery to the brushless motor, ensuring smooth acceleration and control. This controller is an original replacement accessory, designed for compatibility and reliable performance.

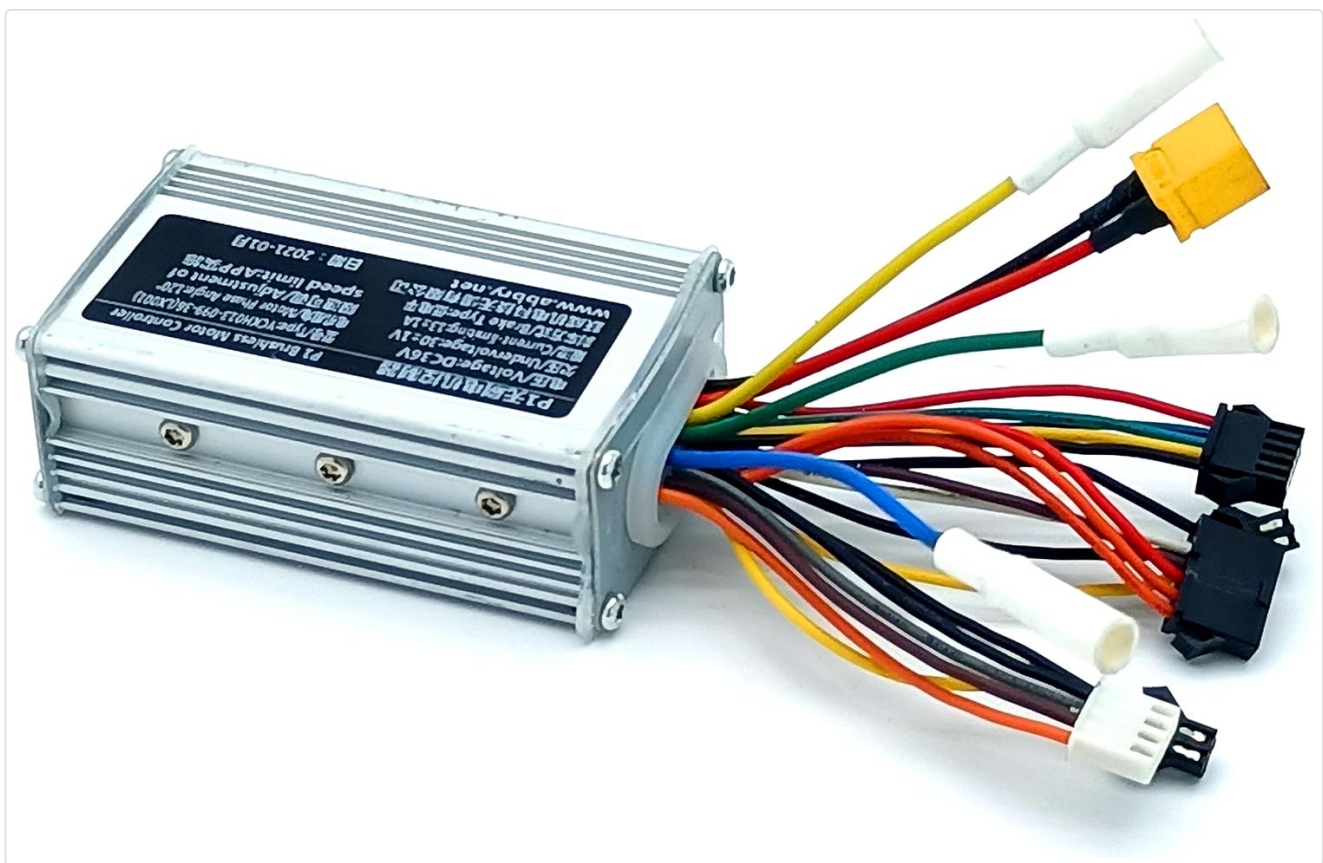


Figure 2.1: Front view of the SPEDWHEEL 36V Brushless Motor Controller, showing the main unit and connected wiring harness. The label on the controller is visible.

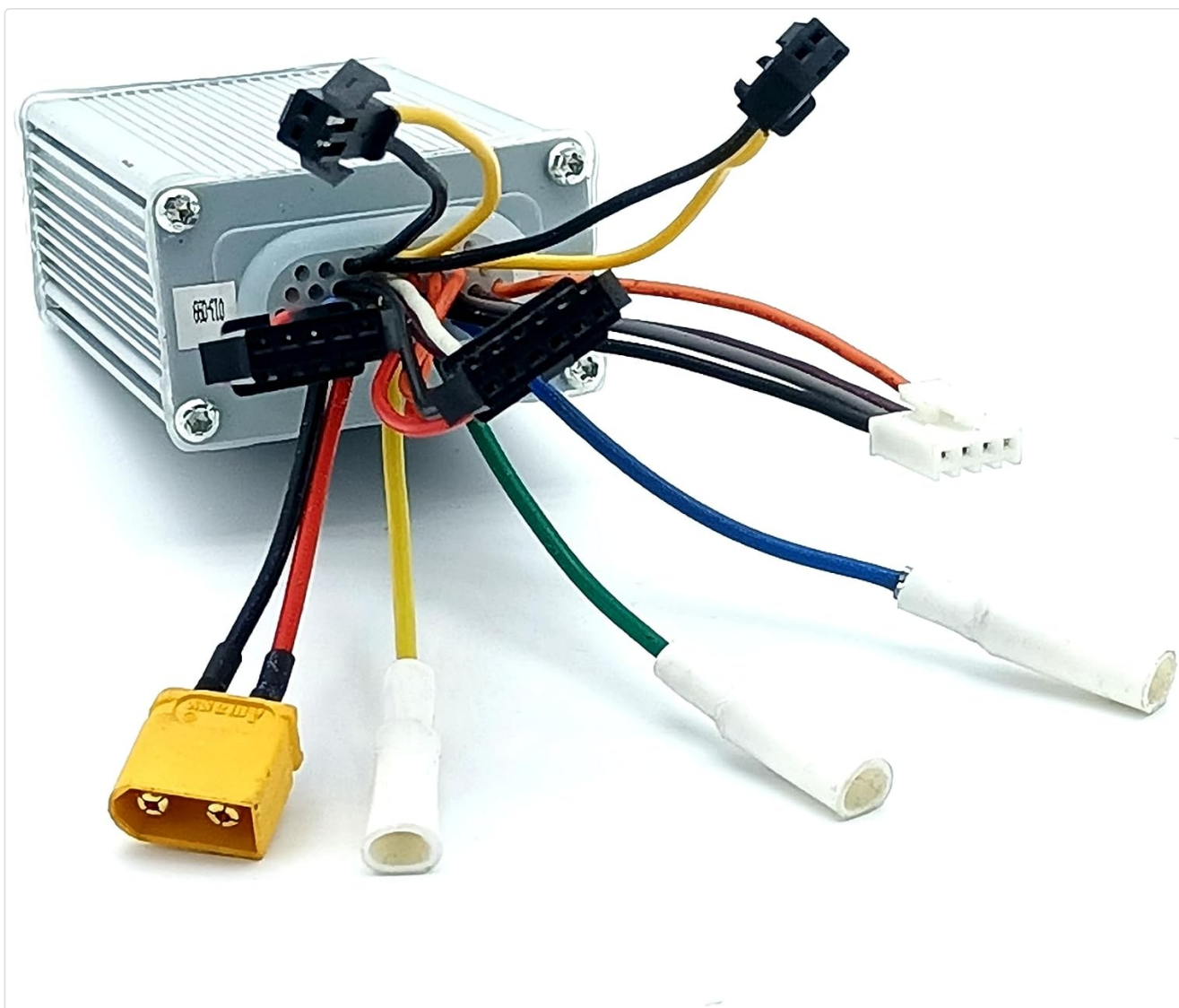


Figure 2.2: Rear view of the controller, highlighting the various connectors and their arrangement.



Figure 2.3: Detailed view of the wiring harness, showing the individual wires and their protective sheathing as they emerge from the controller housing.



Figure 2.4: Close-up of the product label, displaying key specifications such as voltage, undervoltage, current limit, motor phase angle, and model type.

3. SPECIFICATIONS

Feature	Specification
Model Type	YCKH013-099-36(LX001)
Voltage	DC36V
Undervoltage Protection	30V ±1V
Current Limiting	13A ±1A
Motor Phase Angle	120°
Brake Type	Low Level
Speed Limit Adjustment	APP (Application)
Dimensions (Package)	5.5 x 4 x 3.5 inches
Item Weight	7 ounces
Manufacturer	SPEDWHEEL

4. SETUP AND INSTALLATION

Installation of the SPEDWHEEL 36V Brushless Motor Controller requires technical knowledge and familiarity with electric bicycle components. It is highly recommended that installation be performed by a qualified technician to

ensure safety and proper functionality.

4.1 Safety Precautions

- Always disconnect the battery power before beginning any installation or maintenance work.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- Refer to your Inmotion P1 or P1F electric bicycle's original service manual for specific wiring diagrams and component locations.

4.2 Installation Steps (General Guidance)

1. **Locate the Existing Controller:** Identify the current motor controller on your Inmotion P1 or P1F electric bicycle.
2. **Disconnect Wiring:** Carefully disconnect all wires from the old controller, noting their positions and functions. It is advisable to take photos for reference.
3. **Remove Old Controller:** Unmount the old controller from its housing or mounting bracket.
4. **Mount New Controller:** Securely mount the new SPEDWHEEL 36V Controller in the designated location.
5. **Connect Wiring:** Connect the new controller's wires to the corresponding components (motor, battery, throttle, brake levers, display, etc.). Pay close attention to color coding and connector types. The controller features various connectors for different functions, including power (often yellow XT60/XT90), motor phase wires, hall sensor wires, throttle, brake, and display connections.
6. **Initial Power-Up:** Once all connections are verified, reconnect the battery. Perform a preliminary check of basic functions (e.g., power on, display functionality).
7. **Test Operation:** With the bicycle safely supported (e.g., on a stand), test the motor's operation at low speeds. Gradually increase throttle input to ensure smooth and controlled acceleration.

If you encounter any difficulties or are unsure about any step, consult a professional electric bicycle repair service.

5. OPERATING INSTRUCTIONS

The SPEDWHEEL 36V Brushless Motor Controller operates automatically once installed and powered. Its primary function is to translate your throttle input into motor power, regulating speed and torque. There are no direct user controls on the controller itself.

- **Power On/Off:** The controller powers on and off with the electric bicycle's main power switch, typically located on the battery or display unit.
- **Throttle Control:** Speed is controlled via the bicycle's throttle. The controller interprets the throttle signal to adjust motor output.
- **Brake Cut-off:** The controller is designed to cut power to the motor when the brake levers are engaged (low-level brake signal), enhancing safety.
- **Speed Limit Adjustment:** As indicated on the product label, speed limits can be adjusted via a compatible application (APP). Refer to your Inmotion P1/P1F documentation or manufacturer's website for details on the specific application and connection method.

6. MAINTENANCE

The SPEDWHEEL 36V Brushless Motor Controller is designed for durability and requires minimal maintenance. However, periodic checks can help ensure its longevity and reliable performance.

- **Keep Clean:** Ensure the controller and its housing remain free from excessive dirt, dust, and moisture. Use a

dry, soft cloth for cleaning.

- **Inspect Wiring:** Periodically check all wiring connections for signs of wear, fraying, or corrosion. Ensure all connectors are firmly seated.
- **Avoid Overheating:** Ensure the controller has adequate ventilation. Avoid covering it or operating the bicycle in conditions that could lead to excessive heat buildup.
- **Protect from Impact:** While robust, avoid subjecting the controller to severe impacts or drops.

7. TROUBLESHOOTING

If you experience issues with your electric bicycle's motor function, the controller may be a factor. Here are some common troubleshooting steps:

- **No Power to Motor:**
 - Check battery charge level.
 - Verify all power connections to the controller are secure.
 - Ensure the main power switch of the bicycle is on.
- **Motor Not Responding to Throttle:**
 - Inspect throttle wiring for damage or loose connections.
 - Check if brake levers are stuck in the engaged position, which would cut motor power.
- **Erratic Motor Behavior:**
 - Check motor phase wires and hall sensor wires for proper connection and damage.
 - Ensure no water or debris has entered the controller housing.
- **Overheating:**
 - Reduce load on the motor (e.g., avoid steep hills or heavy cargo).
 - Ensure the controller is not obstructed and has proper airflow.

For persistent issues, it is recommended to consult a professional electric bicycle technician or contact SPEDWHEEL customer support.

8. WARRANTY AND SUPPORT

Warranty information for the SPEDWHEEL 36V Brushless Motor Controller is not provided within this document. Please refer to the product listing on the retailer's website or contact SPEDWHEEL directly for details regarding warranty coverage and customer support.

For technical assistance or inquiries, please visit the manufacturer's website or contact their customer service department.

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