

SPEDWHEL G2 MAX

SPEDWHEL Original Controller for Kukirin G2 MAX Electric Scooter User Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your SPEDWHEL Original Controller for the Kukirin G2 MAX Electric Scooter. Please read this manual thoroughly before attempting any installation or repair to ensure safe and correct usage. This controller is a critical component for the functionality of your electric scooter, managing motor power and overall performance.

2. PRODUCT OVERVIEW

The SPEDWHEL Original Controller is designed specifically for the Kukirin G2 MAX Electric Scooter. It acts as the central processing unit for the scooter's electrical system, regulating power delivery to the motor, managing acceleration, braking, and other electronic functions. This component ensures optimal performance and responsiveness of your scooter.



Image 2.1: Front view of the SPEDWHEEL Original Controller for Kukirin G2 MAX, showing the main unit and its numerous wire connections. The label on the controller indicates 'Kukirin G2 Max Brushless DC Motor Controller' with voltage, current, and model information.



Image 2.2: Side view of the controller, illustrating the heat sink design for efficient thermal management and the various wire harnesses connected to the unit.

3. SAFETY INFORMATION

- Always disconnect the scooter's power source (battery) before performing any installation, maintenance, or repair work on the controller or any electrical components.
- Wear appropriate personal protective equipment, including safety glasses and insulated gloves, when handling electrical components.
- Ensure all connections are secure and correctly matched to prevent short circuits or damage to the controller and scooter.
- Avoid exposing the controller to water, excessive moisture, or extreme temperatures, as this can lead to malfunction or damage.
- If you are unsure about any step, consult a qualified technician or the manufacturer's support for assistance.

4. SETUP AND INSTALLATION

Installing or replacing the motor controller requires careful attention to detail and electrical safety. It is highly recommended that this procedure be performed by a qualified technician.

General Installation Steps:

1. **Power Disconnection:** Ensure the electric scooter is turned off and the battery is disconnected or removed to

prevent accidental power surges or electrical shock.

2. **Access the Controller:** Locate the existing controller on your Kukirin G2 MAX scooter. This may involve removing covers or panels.
3. **Document Connections:** Before disconnecting any wires, take clear photos or make detailed diagrams of all existing wire connections. Note the color coding and connector types. This is crucial for correct reassembly.
4. **Disconnect Old Controller:** Carefully disconnect all wires from the old controller. Pay attention to any locking mechanisms on connectors.
5. **Remove Old Controller:** Unmount the old controller from its housing.
6. **Mount New Controller:** Securely mount the new SPEDWHEEL Original Controller in the designated location. Ensure it is stable and not subject to excessive vibration.
7. **Reconnect Wires:** Using your documented connections, carefully connect all wires to the new controller. Ensure each connector is fully seated and secure. Double-check all connections before proceeding.
8. **Initial Test:** Before fully reassembling the scooter, reconnect the battery and perform a brief power-on test to ensure basic functionality (e.g., scooter powers on, display works).
9. **Full Reassembly:** Once basic functionality is confirmed, reattach all covers and panels.
10. **Final Test:** Perform a comprehensive test of the scooter's functions, including acceleration, braking, lights, and display, in a safe environment.

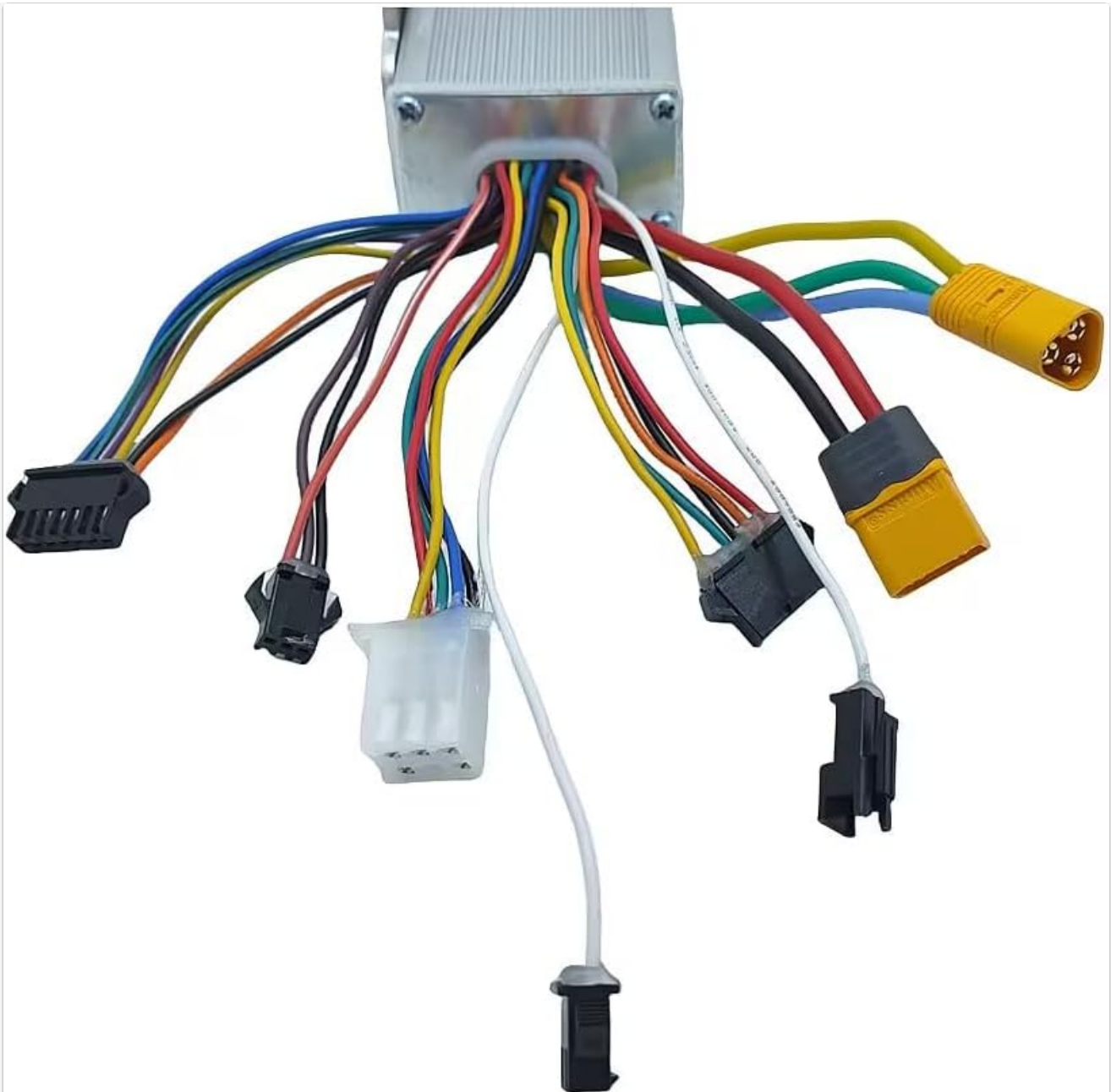


Image 4.1: Detailed view of the multiple wire harnesses and connectors, illustrating the complexity of the electrical connections that need to be carefully managed during installation.

5. OPERATION

The SPEDWHEL Original Controller operates automatically once installed and powered on. Its primary function is to interpret commands from the scooter's throttle, brake levers, and other sensors, then translate these into appropriate power signals for the motor. Users interact with the scooter as usual, and the controller ensures smooth and efficient performance.

- **Acceleration:** The controller regulates motor speed based on throttle input, providing responsive acceleration.
- **Braking:** It manages regenerative braking (if applicable) and cuts power to the motor when brakes are applied.
- **Power Management:** Optimizes power consumption from the battery to the motor for extended range and performance.
- **System Integration:** Communicates with the scooter's display, lights, and other electronic accessories.

6. MAINTENANCE

Proper maintenance of your controller ensures its longevity and the reliable operation of your electric scooter.

- **Keep Dry:** Always protect the controller from water and moisture. Water ingress can cause severe damage to electronic components.
- **Cleanliness:** Periodically inspect the controller and its housing for dirt, dust, or debris. Clean with a dry, soft cloth. Avoid using harsh chemicals or solvents.
- **Inspect Connections:** Regularly check all wire connections to ensure they are secure and free from corrosion or damage. Loose connections can lead to intermittent performance or component failure.
- **Avoid Physical Damage:** Protect the controller from impacts or drops. Ensure its mounting is secure to prevent movement during scooter operation.
- **Temperature:** Operate and store the scooter within recommended temperature ranges to prevent overheating or cold damage to the electronics.

7. TROUBLESHOOTING

If you encounter issues with your electric scooter after controller installation, consider the following common troubleshooting steps:

- **Scooter Not Powering On:**
 - Check battery charge level.
 - Ensure battery connections to the controller are secure.
 - Verify the scooter's main power switch is in the 'ON' position.
- **Motor Not Responding/Erratic Behavior:**
 - Inspect all motor phase wire connections and hall sensor connections to the controller.
 - Check throttle connection and functionality.
 - Ensure no wires are pinched or damaged.
- **Error Codes on Display:**
 - Refer to your scooter's main user manual for specific error code interpretations. Many codes relate to controller or motor issues.
- **Overheating:**
 - Ensure the controller has adequate ventilation.
 - Avoid prolonged heavy loads or steep inclines that can stress the motor and controller.

If problems persist after basic troubleshooting, it is advisable to seek assistance from a professional electric scooter repair service or contact SPEDWHEEL customer support.

8. SPECIFICATIONS

Key specifications for the SPEDWHEEL Original Controller for Kukirin G2 MAX Electric Scooter:



Image 8.1: A close-up of the controller's label, displaying critical operational parameters.

Feature	Detail
Brand	SPEDWHEEL
Model	G2 MAX (Controller Model: QS-C48A294-38105-8)
Material	Aluminum
Color	Silvery
Product Dimensions	3"L x 2"W
Item Weight	12.3 ounces
Voltage	DC48V
Current	25A
Offvoltage	40V
Special Feature	Easy to Install
UPC	744612902276

9. WARRANTY AND SUPPORT

This SPEDWHEEL product is covered by the manufacturer's standard warranty. For specific warranty terms and conditions, please refer to the documentation provided with your purchase or visit the official SPEDWHEEL website. For technical support, troubleshooting assistance, or warranty claims, please contact SPEDWHEEL customer service through their official channels. When contacting support, please have your product model number (G2 MAX) and purchase information readily available.

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Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question