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Silscvtt TR-2970485-764238-SS

Brushless Motor Speed Controller 48-72V 2000W User Manual

Model: TR-2970485-764238-SS | Brand: Silscvtt

1. PRODUCT OVERVIEW

This manual provides detailed instructions for the installation, operation, and maintenance of your Silscvtt 48-72V 2000W Brushless Motor Speed Controller. Designed for electric bicycles and scooters, this controller ensures efficient and reliable performance.

1.1 Key Features

- Provides steady speed and sensitive control for braking and direction changes.
- Features a 2-mode controller for stronger climbing power and reduced motor noise.
- Compatible with sine wave, square wave, and no-hall motors.
- Ensures smoother motor start-up for a more comfortable ride.
- Constructed with premium aluminum alloy for excellent heat dissipation, preventing thermal overload and internal circuit damage.

1.2 Package Contents

- 1 x Brushless Motor Speed Controller (48-72V 2000W)



Figure 1.1: The Silsco 48-72V 2000W Brushless Motor Speed Controller, showcasing its robust aluminum casing and integrated wiring harness.

2. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your controller. Please read these instructions carefully before proceeding.

2.1 Safety Precautions

- Always disconnect the battery power before performing any wiring or installation.
- Ensure all connections are secure and insulated to prevent short circuits.
- Consult a qualified technician if you are unsure about any part of the installation process.
- Wear appropriate personal protective equipment (PPE) during installation.

2.2 Wiring Diagram and Connections

The controller features various color-coded wires for different functions. Refer to the diagram below for proper connection.

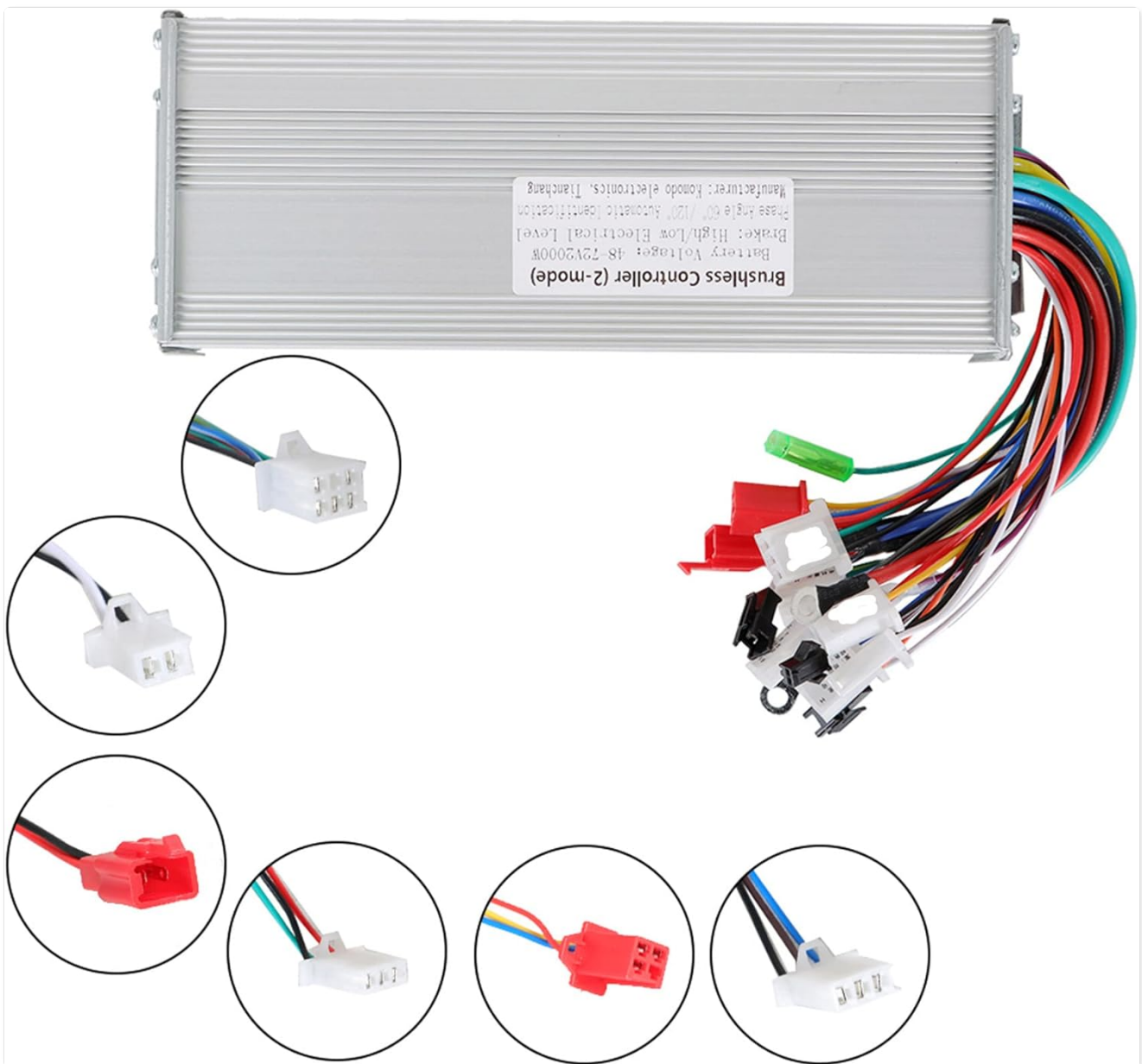


Figure 2.1: Overview of the controller's wiring harness, highlighting various connectors for different functions such as motor, battery, throttle, and brake.

Key connections include:

- **Thick Red/Black Wires:** Battery power input (Red: Positive, Black: Negative).
- **Thick Blue/Green/Yellow Wires:** Motor phase wires.
- **Thin Red/Black/Yellow/Green/Blue Wires (Hall Sensor):** Connect to motor's Hall sensors.
- **Throttle Wires:** Typically Red, Black, Green (or Blue) for throttle input.
- **Brake Wires:** For high/low electrical level brake signals.
- **Ignition/Key Switch Wires:** For power activation.
- **Other Wires:** May include wires for speed display, anti-theft, cruise control, etc. Refer to your specific vehicle's wiring for detailed matching.



Figure 2.2: A detailed view of the various connectors and wire bundles extending from the controller, showing the different types of plugs for specific functions.

2.3 Installation Steps

1. **Mount the Controller:** Securely mount the controller in a well-ventilated area, away from direct heat or moisture. Use the integrated mounting tabs for stability.
2. **Connect Battery Wires:** Connect the thick red wire from the controller to the positive (+) terminal of your battery and the thick black wire to the negative (-) terminal. Ensure polarity is correct.
3. **Connect Motor Phase Wires:** Connect the thick blue, green, and yellow wires from the controller to the corresponding phase wires of your brushless motor.
4. **Connect Hall Sensor Wires:** Connect the thin red, black, yellow, green, and blue wires (Hall sensor wires) from the controller to the Hall sensor wires of your motor.
5. **Connect Throttle:** Connect the throttle wires (typically Red, Black, Green/Blue) to the throttle unit.
6. **Connect Brake Levers:** Connect the brake signal wires from your brake levers to the controller's brake input. The controller supports high/low electrical level brakes.
7. **Connect Ignition/Key Switch:** Connect the ignition wires to your vehicle's key switch or power button.
8. **Secure All Connections:** Double-check all connections for tightness and proper insulation. Use zip ties or cable clamps to manage wires neatly.

3. OPERATING INSTRUCTIONS

Once installed, operating the controller is straightforward. The controller automatically identifies phase angle (60°/120°).

3.1 Initial Power-On

1. Ensure all connections are correct and secure.
2. Turn on the vehicle's main power switch or key. The controller will perform a self-check.
3. The motor should be ready for operation.

3.2 Basic Operation

- **Throttle Control:** Gently twist the throttle to accelerate. The controller provides smooth and responsive speed control.
- **Braking:** Engage the brake levers to activate the motor cut-off function and apply brakes.
- **Mode Switching (if applicable):** Some controllers may have a mode switch for different power outputs or riding styles. Refer to your vehicle's specific controls.

4. MAINTENANCE AND CARE

Regular maintenance helps prolong the lifespan and ensure optimal performance of your brushless motor speed controller.

4.1 Cleaning

- Keep the controller clean and free from dust, dirt, and moisture.
- Use a soft, dry cloth to wipe the exterior. Avoid using harsh chemicals or abrasive cleaners.
- Do not spray water directly onto the controller.

4.2 Storage

- If storing the vehicle for an extended period, disconnect the battery from the controller.
- Store the controller in a cool, dry place, away from direct sunlight and extreme temperatures.

4.3 Inspection

- Periodically inspect all wiring connections for signs of wear, corrosion, or looseness.
- Check the controller casing for any physical damage or cracks.
- Ensure the mounting is secure and the controller is not vibrating excessively during operation.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your brushless motor speed controller.

Problem	Possible Cause	Solution
Motor does not run.	No power to controller; Loose connections; Faulty throttle; Motor or Hall sensor issue.	Check battery connection and voltage; Verify all wiring connections are secure; Test throttle functionality; Inspect motor and Hall sensors.
Motor runs intermittently or with jerks.	Loose Hall sensor wires; Incorrect phase wire connection; Overheating.	Check Hall sensor connections; Verify correct phase wire matching; Ensure proper ventilation for the controller.
Controller gets excessively hot.	Overload; Insufficient ventilation; Internal fault.	Reduce load on the motor; Ensure controller is mounted in a well-ventilated area; If problem persists, contact support.
Brakes do not cut off motor power.	Brake lever switch faulty; Brake signal wire disconnected.	Test brake lever switch; Check brake signal wire connection to controller.

6. TECHNICAL SPECIFICATIONS

Detailed specifications for the Silscvtt 48-72V 2000W Brushless Motor Speed Controller.

Parameter	Value
Battery Voltage	48-72V
Rated Power	2000W
Brake Type	High/Low Electrical Level
Phase Angle Identification	60° / 120° Automatic Identification
Item Weight	1.41 pounds (approx. 0.64 kg)
Product Dimensions (L x W x H)	9.45 x 3.94 x 1.18 inches (approx. 24 x 10 x 3 cm)
Model Number	TR-2970485-764238-SS

7. WARRANTY AND SUPPORT

7.1 Warranty Information

This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please retain your proof of purchase for warranty claims. Specific warranty terms and duration may vary; refer to the

product packaging or contact the seller for details.

7.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact Silscvtt customer support through the retailer where the product was purchased. Provide your product model number and a detailed description of the issue for prompt assistance.

You can also visit the official [Silscvtt Store on Amazon](#) for more information and product updates.