Silscvtt TR-2387470-736978-SS

Silscvtt 48/72V 1500W Brushless Motor Speed Controller User Manual

Model: 48/72V 1500W

Introduction

This manual provides instructions for the installation, operation, and maintenance of your Silscvtt 48/72V 1500W Brushless Motor Speed Controller. This controller is designed for electric bicycles and scooters, offering efficient and precise motor control.

Key features include:

- Provides steady speed and sensitive control for braking and direction changes.
- Features a 2-mode climbing function for enhanced performance and reduced motor noise.
- Compatible with sine wave, square wave, and no-hall motors.
- Ensures smoother motor start-up for a more comfortable ride.
- Aluminum alloy shell for effective heat dissipation, preventing thermal overload.

Product Overview

The Silscvtt Brushless Motor Speed Controller is a robust unit designed for various electric vehicle applications. It features multiple wiring harnesses for connection to the motor, battery, throttle, brakes, and other components.



Image 1: Front view of the Silscvtt Brushless Motor Speed Controller, showing the main unit and attached wiring harnesses. The label indicates "Brushless Controller (2-mode), Battery Voltage: 48-72V 1500W, Brake: High/Low Electrical Level, Phase Angle 60°/120° Automatic Identification."

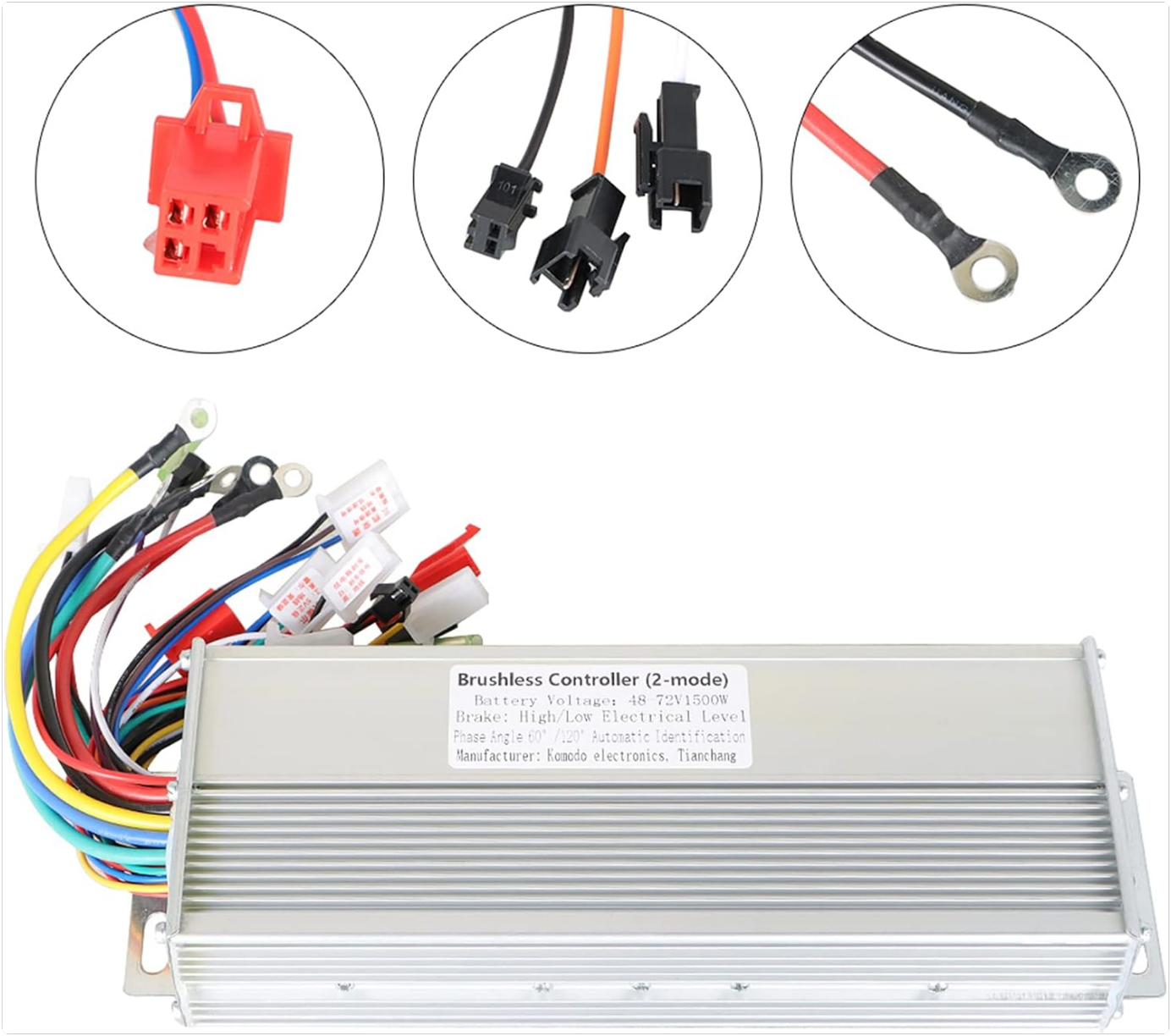


Image 2: Detailed view of the individual wiring connectors and terminals included with the controller. This includes power connectors (red/black), throttle connector (red/black/green), and brake connectors (red/blue).

Setup and Installation

Proper installation is crucial for the safe and efficient operation of your brushless motor speed controller. It is recommended that installation be performed by a qualified technician if you are unfamiliar with electrical wiring.

Wiring Diagram Overview

The controller features a "simple structure with separate wire," indicating distinct connectors for different functions. Refer to the following general guidelines for connection. **Always consult your motor and vehicle's specific wiring diagrams for precise connections.**

1. **Power Connection:** Connect the thick red wire to the positive (+) terminal of your 48V or 72V battery and the thick black wire to the negative (-) terminal. Ensure a secure connection to prevent arcing.
2. **Motor Phase Wires:** Connect the three thick motor phase wires (typically yellow, green, blue) from the controller to the corresponding phase wires on your brushless motor.
3. **Hall Sensor Wires (if applicable):** If your motor uses Hall sensors, connect the thin Hall sensor wires (typically red, black, yellow, green, blue) from the controller to the motor's Hall sensor harness. If your motor is a "no hall motor," these connections will not be used.

4. **Throttle Connection:** Connect the throttle wires (typically red, black, green) to the throttle unit. Red is usually positive, black is ground, and green is the signal wire.
5. **Brake Levers:** Connect the brake lever wires (High/Low Electrical Level) to the corresponding brake cut-off switches on your brake levers. This allows the motor to cut power when brakes are applied.
6. **Other Connections:** Depending on your vehicle, there may be additional connections for display, speed sensor, anti-theft, cruise control, etc. Identify these wires carefully and connect them according to your vehicle's specific requirements.



Image 3: A detailed view of the numerous colored wires and their respective connectors, illustrating the complexity of the wiring harness. Each color typically corresponds to a specific function (e.g., power, motor phases, throttle, brakes, Hall sensors).

Mounting the Controller

The controller features an aluminum alloy shell designed for heat dissipation. Mount the controller in a location that allows for adequate airflow and protects it from direct water exposure and physical damage. Use the integrated mounting brackets to secure it firmly to the vehicle frame.

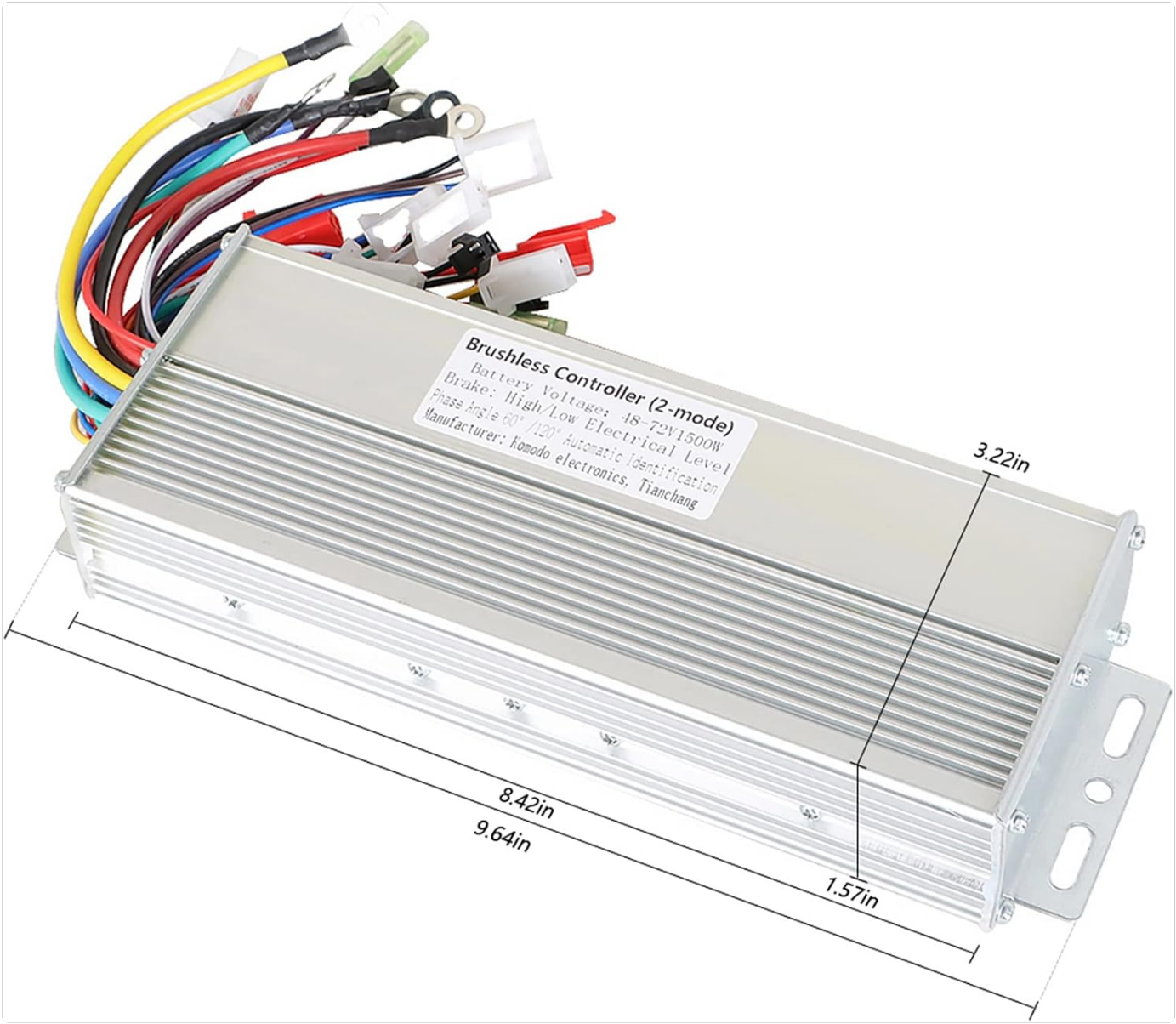


Image 4: The controller shown with its dimensions: approximately 9.64 inches in length, 3.22 inches in width, and 1.57 inches in height. These measurements are important for determining a suitable mounting location on your electric bicycle or scooter.

Operating Instructions

Once properly installed, the controller will manage the power delivery to your motor based on your input.

- **Power On:** Ensure all connections are secure. Turn on the main power switch of your electric vehicle.
- **Throttle Control:** Gently twist the throttle to initiate motor movement. The controller provides sensitive control for smooth acceleration.
- **Braking:** Activating the brake levers will signal the controller to cut power to the motor, ensuring safe deceleration.
- **2-Mode Operation:** The controller supports a "2-mode" operation, which typically refers to different power or speed settings. Consult your vehicle's specific interface (e.g., display unit, switch) to understand how to switch between these modes for optimal climbing or speed performance.
- **Automatic Identification:** The controller features 60°/120° phase angle automatic identification, meaning it can adapt to different motor types without manual configuration for phase angle.

Maintenance

To ensure the longevity and optimal performance of your Silscvtt controller, follow these maintenance guidelines:

- **Regular Inspection:** Periodically check all wiring connections for tightness and signs of wear or corrosion.
- **Cleanliness:** Keep the controller unit clean and free from dust, dirt, and moisture. Use a dry cloth for cleaning. Avoid using water or harsh chemicals.
- **Heat Dissipation:** Ensure the controller's mounting location allows for proper airflow. Do not cover the controller or obstruct its cooling fins.
- **Avoid Overloading:** Do not exceed the specified voltage (48V/72V) or power (1500W) limits of the controller. Overloading can lead to overheating and damage.
- **Environmental Protection:** Protect the controller from extreme temperatures, direct sunlight, and heavy rain.

Troubleshooting

If you encounter issues with your controller, refer to the following troubleshooting steps:

Problem	Possible Cause	Solution
Motor not starting or no power.	Loose or disconnected power wires. Low battery voltage. Faulty throttle. Brake lever engaged (safety cut-off). Controller failure (DOA or damaged).	Check all power connections to the battery and controller. Verify battery charge level. Test throttle functionality. Ensure brake levers are fully disengaged. If new and non-functional, contact support for replacement.
Motor runs intermittently or with reduced power.	Loose motor phase wires or Hall sensor wires. Partial short circuit. Overheating controller.	Inspect all motor and Hall sensor connections. Check for any exposed wires or damaged insulation. Allow controller to cool down. Ensure proper ventilation.
Sparks when connecting wires.	Incorrect wiring polarity. Short circuit.	**Immediately disconnect power.** Double-check all wiring against a diagram, especially battery polarity. Inspect for any bare wires touching. If unsure, seek professional assistance.

If the problem persists after following these steps, please contact customer support.

Specifications

Feature	Detail
Model	48/72V 1500W Brushless Motor Speed Controller
Battery Voltage	48V / 72V (Automatic Identification)
Rated Power	1500W
Brake Type	High/Low Electrical Level
Phase Angle	60° / 120° Automatic Identification
Compatibility	Electric bicycles, scooters, sine wave motors, square wave motors, no hall motors.

Feature	Detail
Shell Material	Aluminum Alloy (for heat dissipation)
Product Dimensions	Approximately 9.45 x 3.94 x 1.18 inches (24 x 10 x 3 cm)
Item Weight	Approximately 1.48 pounds (0.67 kg)
Manufacturer Part Number	TR-2387470-736978-SS

Warranty and Support

For warranty information or technical support, please refer to the retailer or manufacturer's official website. Keep your purchase receipt as proof of purchase.

Manufacturer: Silscvtt

For further assistance, please visit the Silscvtt Store on Amazon.

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