

Toursor JingBo Intelligent Controller 72V50A

JingBo Intelligent Controller 72V50A User Manual

Efficient Drive for Electric Scooter, Strong Performance and Intelligent Protection

1. INTRODUCTION

The JingBo Intelligent Controller is specifically designed for electric scooters and other electric transportation vehicles. It utilizes advanced sine wave technology to deliver a quiet and smooth riding experience. With its 72V50A high-power output, this controller is capable of efficiently driving high-performance motors, meeting the power demands of various application scenarios.



Figure 1.1: Two JingBo Intelligent Controllers with their wiring harnesses. These controllers are designed for high-performance electric scooter applications.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation to prevent injury or damage to the product. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Professional Installation Recommended:** Installation should be performed by qualified personnel to ensure correct wiring and safe operation.
- **Power Disconnection:** Always disconnect the power source before performing any installation, maintenance, or troubleshooting.
- **Voltage Compatibility:** Ensure the controller's voltage (72V) matches your motor and battery system. Using incompatible voltages can cause severe damage.
- **Proper Wiring:** Double-check all wiring connections according to the provided diagrams. Incorrect wiring can lead to short circuits or component failure.
- **Heat Dissipation:** Ensure adequate ventilation around the controller to prevent overheating, especially during prolonged high-power operation.
- **Environmental Conditions:** Avoid exposing the controller to water, excessive moisture, dust, or extreme temperatures.

3. PACKAGE CONTENTS

Verify that all components are present and undamaged upon opening the package:

- Foc Controller A

- Foc Controller B
- Wiring Harness



Figure 3.1: The two FOC controllers included in the package, displaying their numerous connection points for various system components.

4. SETUP AND INSTALLATION

The JingBo Intelligent Controller is designed for easy installation, but careful attention to wiring is crucial for proper function and safety. Refer to the wiring diagram provided with your specific motor and battery system for detailed connections.

4.1 General Wiring Guidelines

1. **Identify Main Power Cables:** Connect the thick red cable to the positive (+) terminal of your 72V battery and the thick black cable to the negative (-) terminal. Ensure a secure connection.
2. **Motor Phase Wires:** Connect the three motor phase wires (typically green, blue, yellow) from the controller to the corresponding wires on your brushless motor.
3. **Hall Sensor Wires:** Connect the smaller Hall sensor wires (usually a bundle of five wires: red, black, yellow, green, blue) from the controller to the motor's Hall sensor port.
4. **Throttle Connection:** Connect the throttle signal wire, power wire, and ground wire to the appropriate throttle input on the controller.
5. **Brake Levers:** Connect the brake signal wires. The controller supports low-level brake signals.
6. **Ignition/Key Switch:** Connect the ignition wire to your key switch or power button.
7. **Other Auxiliary Connections:** Connect any additional features such as speed limit, reverse, cruise control, or anti-theft as per your system's requirements and the controller's specific wiring harness.



Figure 4.1: Close-up view of one FOC controller, highlighting the robust aluminum casing and the comprehensive wiring harness for various connections.

4.2 Mounting the Controller

Mount the controller in a secure location that is protected from direct water exposure and allows for adequate airflow to prevent overheating. Use appropriate fasteners to secure it firmly to the vehicle's frame.

5. OPERATING INSTRUCTIONS

Once the controller is correctly installed and all connections are verified, you can begin operation.

- Power On:** Turn on the main power switch or key switch connected to the controller.
- Self-Learning (if applicable):** Some controllers have a self-learning function to optimize motor parameters. Refer to your specific model's advanced features for this process.
- Throttle Control:** Gently twist the throttle to engage the motor. The sine wave technology ensures a smooth and quiet acceleration.
- Braking:** Apply the brake levers to activate the electronic braking function, which also cuts off motor power.
- Monitoring:** Pay attention to any unusual noises, vibrations, or performance issues during operation.

6. FEATURES

The JingBo Intelligent Controller offers several key features designed to enhance performance and safety:

- High Performance Output:** Provides a robust 72V50A power output, making it suitable for a wide range of electric scooters, e-bikes, and other electric transportation vehicles requiring significant power.
- Sine Wave Technology:** Incorporates advanced sine wave control technology, resulting in reduced noise, minimal vibration, and improved motor efficiency for a superior riding experience.
- Intelligent Protection Functions:** Equipped with multiple built-in safety mechanisms including over-voltage protection, over-current protection, over-heating protection, and short-circuit protection. These features ensure the safe and stable operation of the device and contribute to extending the lifespan of both the controller and the motor.
- Universal Compatibility:** Designed to support a broad spectrum of brushless motors, making it compatible with various 72V motorized devices such as electric scooters and electric motorcycles, facilitating easy power system upgrades.
- Easy to Install:** Features a compact design and comes with clear wiring instructions, simplifying the installation process.

7. TROUBLESHOOTING

If you encounter issues with your JingBo Intelligent Controller, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Motor not running	No power, loose connections, faulty throttle, motor or Hall sensor issue.	Check battery charge, verify all wiring connections, test throttle, inspect motor and Hall sensors.
Motor runs intermittently or with jerks	Loose Hall sensor wires, incorrect phase wire connection, motor damage.	Ensure Hall sensor wires are secure, recheck phase wire connections, inspect motor for damage.
Controller overheating	Insufficient ventilation, excessive load, short circuit.	Improve airflow around controller, reduce load, check for short circuits in wiring.
No power to display/accessories	Loose accessory wiring, blown fuse (if applicable).	Check accessory connections, inspect and replace fuse if necessary.

If the problem persists after attempting these solutions, it is recommended to consult a qualified technician or contact customer support.

8. SPECIFICATIONS

Detailed technical specifications for the JingBo Intelligent Controller:

- Brand:** Toursor
- Model:** JingBo Intelligent Controller 72V50A
- Voltage:** 72 Volts
- Current:** 50 Amperes (implied by 72V50A)
- Material:** Aluminum
- Color:** Silver
- Product Dimensions:** 7"L x 5.4"W x 2"H (17.78 cm x 13.72 cm x 5.08 cm)
- Item Weight:** 3.3 pounds (1.5 Kilograms)
- Manufacturer:** Dongguan Zhuopuxin Energy Technology Co.,Ltd.
- ASIN:** B0DRHX5FV3

9. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your controller:

- **Regular Inspection:** Periodically check all wiring connections for tightness and signs of wear or corrosion.
- **Cleaning:** Keep the controller clean and free from dust, dirt, and debris. Use a dry, soft cloth for cleaning. Do not use liquid cleaners.
- **Environmental Protection:** Ensure the controller remains protected from moisture and extreme temperatures.
- **Ventilation:** Verify that the mounting location allows for adequate airflow to prevent heat buildup.

10. WARRANTY AND SUPPORT

For information regarding warranty coverage, technical support, or service inquiries, please refer to the

documentation provided at the time of purchase or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.

Manufacturer: Dongguan Zhuopuxin Energy Technology Co.,Ltd.

Brand: Toursor

For further assistance, visit the [Toursor Store on Amazon](#).