

Dilwe Multifunctional 12 Magnets Dual Hall

Dilwe Multifunctional 12 Magnets Dual Hall Electric Pedal Sensor User Manual

Model: KD-2PS-L

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Dilwe Multifunctional 12 Magnets Dual Hall Electric Pedal Sensor. This sensor is designed to enhance your electric bike's pedal-assist system, offering accurate and responsive power assistance. Please read this manual thoroughly before installation and use to ensure optimal performance and safety.

2. SAFETY INFORMATION

- Always disconnect the e-bike battery before performing any installation or maintenance.
- Ensure all connections are secure and waterproof to prevent electrical shorts or damage.
- Use appropriate tools for installation. Incorrect tools can damage components.
- If you are unsure about any step, consult a professional e-bike technician.
- Keep children and pets away from the work area during installation.

3. PRODUCT OVERVIEW

The Dilwe KD-2PS-L Electric Pedal Sensor is a high-quality component designed for electric bicycles. It features 12 magnets and a dual Hall sensor system for improved accuracy and responsiveness in detecting pedal rotation. The sensor is constructed from durable PC plastic, ensuring a long service life.



Figure 1: Dilwe Electric Pedal Sensor (KD-2PS-L)

Key Features:

- **Premium Material:** Made from high-quality PC plastic for durability and longevity.
- **Dual Hall Sensor:** Incorporates a dual Hall system for precise and reliable pedal detection.
- **12 Magnets:** Enhanced accuracy and responsiveness compared to sensors with fewer magnets.
- **Easy Installation:** Designed for straightforward mounting on the left side of the e-bike crank.
- **Wide Compatibility:** Suitable for various electric bike models.



Figure 2: Waterproof Connector Detail

4. SETUP AND INSTALLATION

The KD-2PS-L sensor is designed for left-side mounting. Follow these steps for proper installation:

1. **Prepare the Crank:** You will need a crank removal tool to detach the left crank arm from your e-bike's bottom bracket. Ensure the area is clean and free of debris.
2. **Position the Sensor:** Place the sensor onto the bottom bracket spindle on the left side of the bike. The sensor should fit snugly against the bottom bracket shell.
3. **Reinstall Crank Arm:** Carefully reinstall the left crank arm, ensuring it is properly aligned and tightened to the manufacturer's specifications. The sensor should be securely held in place between the crank arm and the bottom bracket.
4. **Connect Wiring:** Connect the sensor's cable to the corresponding port on your e-bike's controller or wiring harness. Ensure the connection is firm and the waterproof connector is fully seated.
5. **Secure Cable:** Route and secure the sensor cable along the bike frame using zip ties or cable clips to prevent it from interfering with moving parts or getting damaged.

Left mounted assistant sensor (12 magnetic)



Steps 1



Steps 2



Steps 3



Figure 3: Installation Steps for Left-Mounted Sensor

Video 1: Overview of the Electric Bikes Sensor. This video demonstrates the physical appearance and some features of the sensor, which can aid in understanding its components before installation.



Figure 4: Sensor Installed on an Electric Bike

5. OPERATING INSTRUCTIONS

Once installed, the Dilwe KD-2PS-L sensor operates automatically as part of your e-bike's pedal-assist system. It detects the rotation of your pedals and signals the controller to provide motor assistance based on your e-bike's settings.

- **Pedal for Assist:** Begin pedaling your e-bike. The sensor will detect the pedal movement.
- **Motor Engagement:** The e-bike's controller will then engage the motor to provide assistance according to the selected assist level.
- **Smooth Operation:** The 12-magnet, dual Hall design ensures a smooth and immediate response to your pedaling input.



Figure 5: Sensor in Operation

6. MAINTENANCE

The Dilwe pedal sensor requires minimal maintenance. Follow these guidelines to ensure its longevity:

- **Regular Cleaning:** Periodically wipe the sensor and surrounding area with a damp cloth to remove dirt and grime. Avoid using harsh chemicals.
- **Inspect Connections:** Regularly check the wiring and connectors for any signs of wear, damage, or loose connections.
- **Avoid Impact:** Protect the sensor from physical impact, which could damage its internal components.
- **Storage:** If storing your e-bike for an extended period, ensure it is in a dry, temperate environment.

7. TROUBLESHOOTING

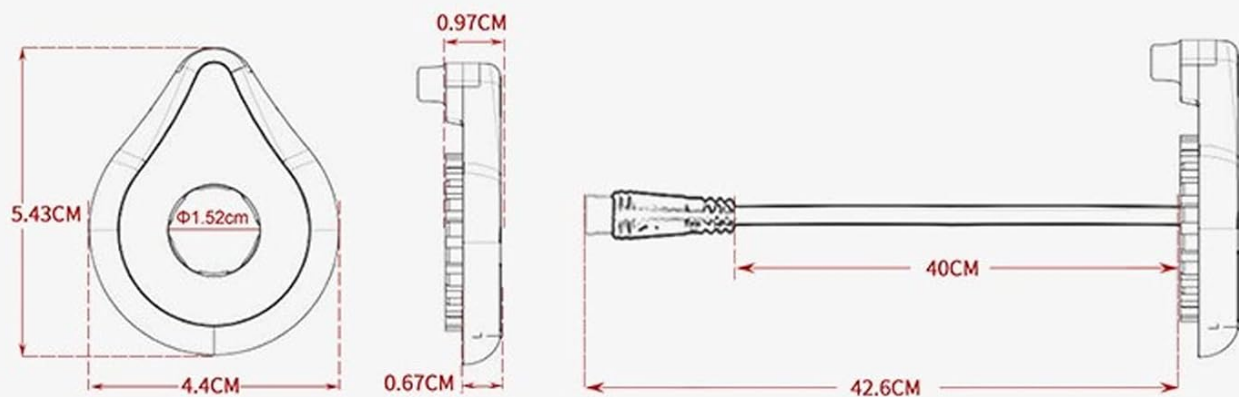
If you experience issues with your pedal sensor, consider the following:

Problem	Possible Cause	Solution
No pedal assist	Loose or disconnected wiring; sensor misalignment; damaged sensor.	Check all cable connections. Ensure the sensor is securely mounted and correctly aligned. Inspect the sensor for visible damage.
Intermittent assist	Sensor slightly loose; debris interfering with magnets; faulty connection.	Verify sensor tightness. Clean the sensor and magnet area. Re-seat connections.
Assist engages too slowly or too quickly	Controller settings; sensor position.	Consult your e-bike's controller manual for pedal assist sensitivity settings. Ensure the sensor is positioned correctly.

If these steps do not resolve the issue, contact customer support or a qualified e-bike technician.

8. SPECIFICATIONS

Feature	Detail
Model	KD-2PS-L
Rated Voltage	4.5-6V (DC)
Current without Brake	<5mA
Current with Brake	<6mA
Lead Tension	>20N
Hall Electrical Life	>20 Million times
Insulation (Dry Condition)	>20M ohm
Insulation (Wet Condition)	>2M ohm
Brake Response Time	<0.001S
Material	PC Plastic
Magnets	12
Sensor Type	Dual Hall
Mounting Position	Left side of crank



Specifications & Reliability

Rated Voltage: 4.5-6V(DC)

Current without Brake: $<5\text{mA}$

Current with Brake: $<6\text{mA}$

Lead Tension: $>20\text{N}$

Hall electrical life: $>20\text{M}$ times

Insulation dry condition: $>20\text{M ohm}$

Insulation wet condition: $>2\text{M ohm}$

Corresponding time when brake: $<0.001\text{S}$

Figure 6: Sensor Dimensions and Electrical Specifications

9. WARRANTY INFORMATION

Please refer to the original purchase documentation or contact the seller for specific warranty details regarding your Dilwe Electric Pedal Sensor. General return policies may apply as per the retailer's terms.

10. CUSTOMER SUPPORT

For further assistance, technical support, or inquiries, please contact Dilwe customer service or the retailer from whom you purchased the product.

Brand: Dilwe

Amazon Store: [Visit the Dilwe Store on Amazon](#)

ASK A QUESTION ABOUT THIS MANUAL

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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.

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