

K-xdc-406

# Generic 48V 12.8Ah Lithium-ion E-bike Battery User Manual

Model: K-xdc-406

## 1. IMPORTANT SAFETY WARNINGS

Read all safety instructions carefully before using the battery. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Use a Special Charger:** Always use the dedicated charger provided or specified for this battery. Using an incompatible charger can cause damage or fire.
- **Correct Polarity:** Do not reverse the positive and negative poles of the battery. Ensure correct connection during installation and charging.
- **Do Not Disassemble:** The battery pack contains internal safety devices. Do not dissect, open, or alter the battery structure. Tampering with the battery can lead to hazards.
- **Avoid Short Circuits:** Do not use metal objects to directly connect the positive and negative terminals of the battery, as this can cause a short circuit.
- **Water Immersion:** It is strictly forbidden to immerse the battery in water. While the battery is designed to be water and sand resistant for outdoor use, prolonged immersion can cause damage.
- **Storage Conditions:** When not in use, store the battery in a cool, dry environment. Avoid extreme temperatures and direct sunlight.
- **Long-Term Storage:** If the battery will not be used for two months or more, ensure it is fully charged before storage. Recharge the battery before its next use to maintain optimal performance.
- **Integrated Protection:** The battery features built-in protection against overcharge, over-discharge, overload, and short circuits to enhance safety.

## 2. PRODUCT OVERVIEW AND COMPONENTS

This section provides an overview of the battery and its key components.



**Image 2.1:** The 48V 12.8Ah lithium-ion e-bike battery, shown with its keys for securing and removing the unit. The main body is silver, with a black end housing the connection terminals and lock mechanism.



**Image 2.2:** A detailed view highlighting the charging port and the portable handle located at one end of the battery. The charging port is a circular input, and the handle facilitates easy carrying and installation.

### Key Features:

- **Lightweight Design:** The battery is designed to be lightweight for easy handling and installation.
- **Anti-theft Device:** Includes an anti-theft mechanism to secure the battery to your e-bike and prevent loss.
- **Water and Sand Resistant:** The fully sealed design allows for use in various weather conditions, including rain and muddy environments.
- **Portable Handle:** Equipped with a handle for convenient carrying and removal.

## 3. SETUP AND INSTALLATION

Follow these steps to properly install and prepare your battery for use.

### 3.1 Battery Installation on E-bike

1. Locate the battery compartment or mounting bracket on your electric bicycle.
2. Align the battery with the mounting mechanism. The lightweight design facilitates easy placement.

3. Secure the battery in place using the integrated locking mechanism and keys. Ensure it is firmly seated to prevent movement during riding.
4. Connect the battery to the e-bike's power system, ensuring correct polarity.



**Image 3.1:** The battery shown partially removed from the frame of a folding electric bicycle, demonstrating its removable nature. Keys are visible, indicating the locking mechanism.



**Image 3.2:** An orange electric bicycle with a transparent overlay showing the internal battery cells. This illustrates that the battery is built-in but can be unloaded and removed separately for charging.

### 3.2 Initial Charge

Before first use, or if the battery has been stored for an extended period, it is recommended to fully charge the battery.

- Connect the special charger to the battery's charging port (refer to Image 2.2).
- Plug the charger into a standard power outlet.
- Allow approximately 5 to 6 hours for a full charge. The charger's indicator light will typically change color to indicate a full charge.
- Disconnect the charger once charging is complete.

## 4. OPERATING INSTRUCTIONS

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This section covers the general operation of your e-bike battery.

### 4.1 Daily Use

- Ensure the battery is securely installed and locked onto your e-bike before riding.
- Turn on your e-bike's power system. The battery will provide power to the motor.
- The ideal riding distance per charge is typically between 30 to 50 km, depending on factors such as terrain, rider weight, assistance level, and weather conditions.

### 4.2 Charging the Battery

The lithium-ion battery has no memory effect and requires no maintenance in terms of discharge cycles. It can be recharged as needed.

1. You can charge the battery while it is installed on the e-bike, or remove it for separate charging (refer to Image 3.1 and 3.2).

2. Connect the special charger to the battery's charging port.
3. Plug the charger into a suitable power outlet.
4. Charging typically takes 5 to 6 hours for a full charge. Monitor the charger's indicator for completion.
5. Always disconnect the charger from both the battery and the power outlet once charging is complete.

## 5. MAINTENANCE AND CARE

Proper maintenance ensures the longevity and optimal performance of your battery.

- **Regular Charging:** Recharge the battery after each significant use to maintain its health. Avoid completely draining the battery frequently.
- **Storage:** Store the battery in a cool, dry place away from direct sunlight and extreme temperatures. The ideal storage temperature is between 0°C and 20°C (32°F and 68°F).
- **Long-Term Storage:** If the battery will not be used for two months or more, ensure it is fully charged before storage. Recharge the battery every two months during long-term storage to prevent deep discharge.
- **Cleaning:** The battery is water and sand resistant. You can wipe it clean with a damp cloth. Do not use harsh chemicals or abrasive cleaners. Ensure the charging port is dry before charging.
- **Inspection:** Periodically inspect the battery casing and connections for any signs of damage or wear. If any damage is observed, discontinue use and contact customer support.

## 6. TROUBLESHOOTING

This section addresses common issues you might encounter with your battery.

Problem	Possible Cause	Solution
Battery not charging	<ul style="list-style-type: none"> <li>Charger not properly connected.</li> <li>Charger malfunction.</li> <li>Battery deeply discharged (if stored for long).</li> <li>Damaged charging port or battery.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure charger is securely plugged into both battery and power outlet.</li> <li>Test charger with another compatible device if possible, or contact support.</li> <li>If battery was stored for a long time without charge, it might need a longer initial charge or professional assessment.</li> <li>Inspect for visible damage. Contact customer support if damaged.</li> </ul>
Reduced riding range	<ul style="list-style-type: none"> <li>Battery not fully charged.</li> <li>Aging battery.</li> <li>Extreme weather conditions (cold).</li> <li>Heavy load or steep terrain.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure battery is fully charged before each ride.</li> <li>Battery capacity naturally degrades over time.</li> <li>Battery performance can be reduced in cold temperatures.</li> <li>Adjust riding style or assistance level.</li> </ul>

Problem	Possible Cause	Solution
Battery not powering e-bike	<p>Battery not properly installed or locked.</p> <p>Battery completely discharged.</p> <p>Connection issues between battery and e-bike.</p>	<p>Check that the battery is securely seated and locked.</p> <p>Charge the battery fully.</p> <p>Inspect connections for looseness or damage.</p>

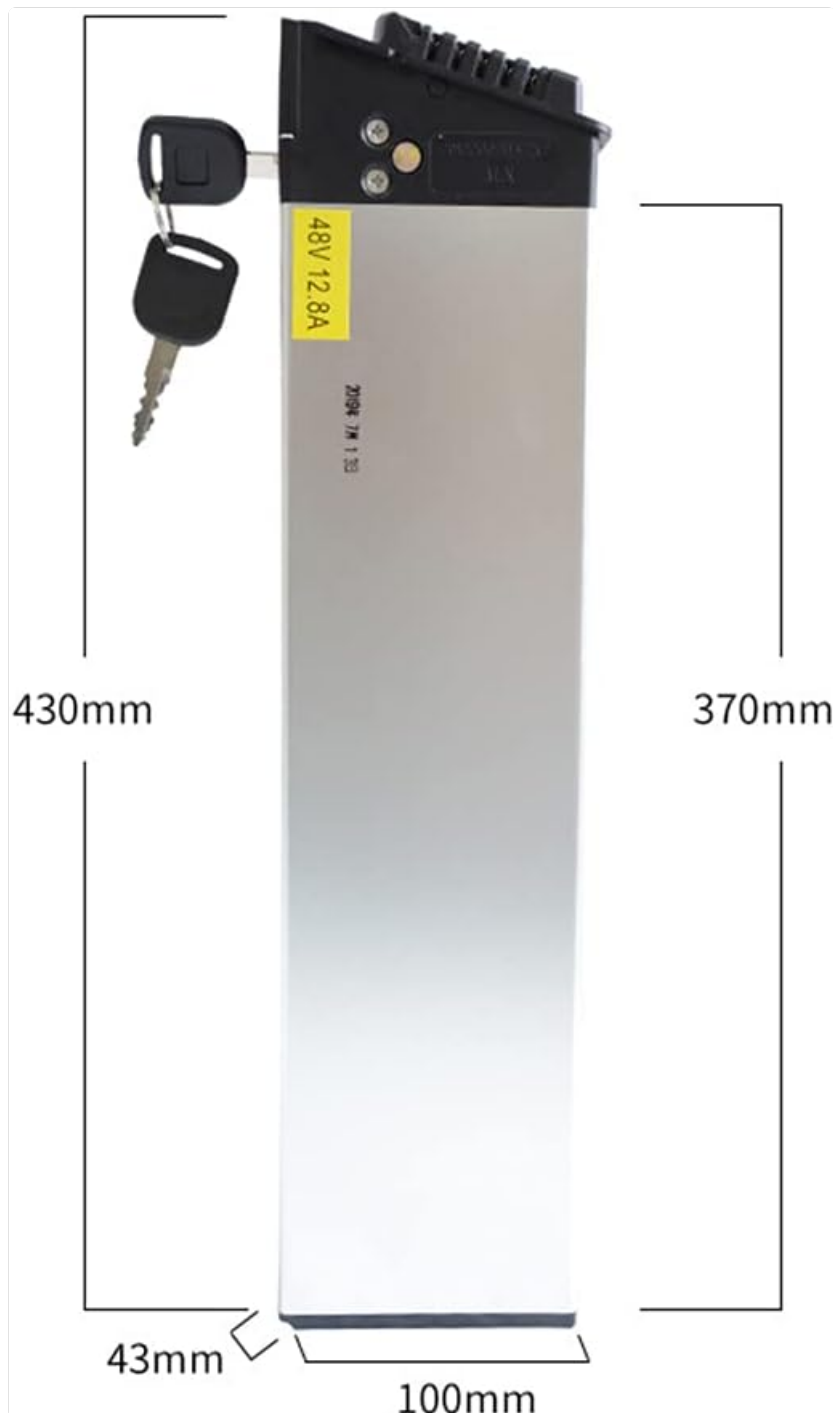
If energy loss occurs during storage or transport, ensure the battery is fully charged before use.

For issues not covered here, or if troubleshooting steps do not resolve the problem, please contact customer support for assistance. We aim to respond within 24 hours.

## 7. SPECIFICATIONS

Detailed technical specifications for the Generic 48V 12.8Ah Lithium-ion E-bike Battery.

<b>Model Number</b>	K-xdc-406
<b>Battery Type</b>	Lithium-ion
<b>Nominal Voltage</b>	48V (Operating range: 47V-54V)
<b>Capacity</b>	12.8 Ah
<b>Dimensions (L x W x T)</b>	430 mm x 100 mm x 46 mm
<b>Weight</b>	Approximately 3 kg
<b>Charging Time</b>	Approximately 5-6 hours
<b>Estimated Riding Range</b>	30-50 km per charge
<b>Motor Compatibility</b>	250-750 W E-bike motors



**Image 7.1:** A diagram illustrating the physical dimensions of the battery: 430mm total length, 100mm width, and 46mm thickness. The main body length is 370mm.

## 8. WARRANTY AND SUPPORT

This product is covered by PICC (People's Insurance Company of China), ensuring a level of product assurance. Please use with confidence.

For any questions, concerns, or support needs regarding your battery, please contact customer service. We are committed to responding to your inquiries within 24 hours.

Before purchasing, please verify the dimensions of your electric vehicle's battery compartment to ensure compatibility. If the dimensions do not match, contact customer service for assistance in finding a suitable size.

