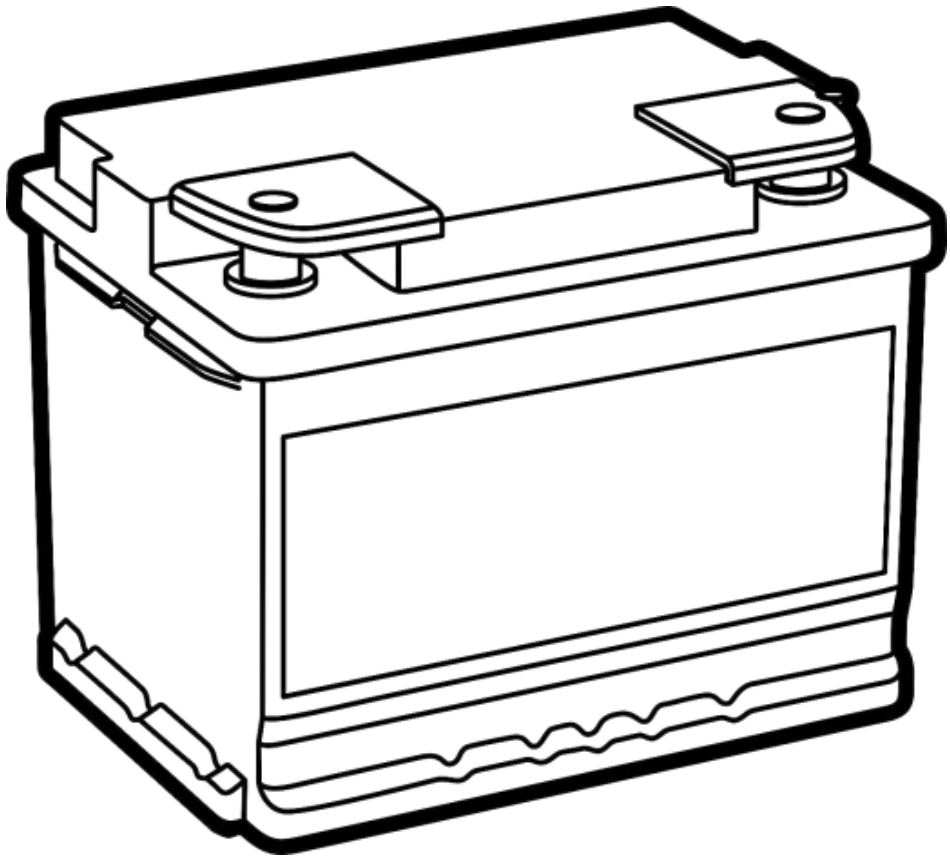
LTEP®
Light Eco Power



LITHIUM CAR BATTERIES

Product manual

N60MF-L/R(12V 60AH)

No.1 Respected User

Sincerely thank you for choosing the starting battery products developed by Longtai International Limited co.,Ltd.

As the core energy component of vehicle starting systems, we adhere to the R&D philosophy of "Safety, Efficiency, and Durability", integrating cutting-edge lithium battery technology with automotive applications to deliver starting solutions that surpass traditional lead-acid batteries.This product is characterized by its aesthetic design, excellent vibration resistance, user-friendly operation, superior starting performance, and lightweight construction. It is widely applicable for ignition and lighting systems across automobiles, motorcycles, marine generators, and other equipment.

Before using the product, please read this manual carefully to understand the product specifications, installation guidelines, and safety precautions. Should you have any questions or require assistance during use, our after-sales team is always available to provide professional support — ensuring every start begins with reliability.

No.2 Safety Instructions

⚠ Short-Circuit & Reverse Polarity Prohibition:
Directly connecting or reversing the positive/negative terminals may cause instant overheating, fire, or even explosion. Always verify polarity before wiring, and insulated tools are strongly recommended.

⚠ Keep away from heat sources:
When not in use, store the product in a dry and ventilated environment, and keep it away from corrosive substances. As electric sparks may be generated during starting, operation in flammable environments is prohibited.

⚠ Usage Instructions:
Do not connect in parallel or series with other battery types. Voltage/capacity mismatch may cause malfunctions.Use only dedicated lithium battery chargers for charging. Incompatible chargers may lead to swelling or thermal runaway, resulting in battery failure.

No.3 Product Parameters

Model	N60MF-L/R
Dimensions	230×175×200mm
Nominal Voltage	12V
Capacity	60Ah
Cold Cranking Amps	640A
Recommended Applications	Engine starting for automobiles, motorcycles, marine generators, and related equipment.
Design Features	High-rate discharge performance, vibration-resistant construction, and low-temperature starting optimization

No.4 Charging Instructions

1. Use only a 12V lithium iron phosphate ($LiFePO_4$) dedicated charger. Strictly prohibit using lead-acid battery chargers, chargers with mismatched voltage, or devices without BMS (Battery Management System) protection.
2. When charging, first connect the charger's positive terminal to the battery's positive terminal, then connect the charger's negative terminal to the battery's negative terminal. Ensure the terminals are tightly attached to avoid charging anomalies caused by poor contact.
3. For batteries installed in vehicles but not frequently used, a monthly supplemental charge is recommended to prevent power depletion due to self-discharge.

No.5 Installation Instructions

1. Before installation, inspect the battery for any swelling or cracks before installation.Apply a small amount of anti-oxidation conductive grease to the terminals to prevent corrosion.
2. Pay attention to the safety marks on the battery label before installation to avoid safety accidents.
3. During installation, secure the battery firmly on the battery bracket using top or bottom fixing methods to prevent damage from looseness. First connect the battery's positive terminal to the vehicle generator's positive terminal, then connect the battery's negative terminal to the generator's negative terminal.

No.6 Transportation & Storage Guidelines

1. The product should be stored in a dry, clean, and well-ventilated environment at -10~35℃ to prevent the battery casing and terminals from moisture-induced oxidation. Avoid direct sunlight, heat sources, flammable and explosive materials, etc. Excessively high ambient temperatures will accelerate battery aging and shorten the cycle life.
2. During transportation, secure the battery on the vehicle's shock-proof shelf to avoid severe shaking, impact, heavy pressure, or dropping. Do not transport together with flammable materials.
3. If the battery is found damaged, deformed, or rapidly heating/emitting odors, immediately isolate it and implement cooling measures.

No.7 Maintenance Guidelines

1. Regularly check the positive/negative terminals for looseness or oxidation. Clean terminals with a dry cloth or lightly sand with fine-grit sandpaper, then apply anti-corrosion conductive grease to ensure proper contact.
2. Recharge immediately if the battery is undercharged due to any operational cause to prevent performance degradation.
3. Never disassemble, puncture, or compress the battery casing. Internal high-voltage components and electrolyte are corrosive and toxic. Improper handling may cause safety incidents.
4. If there are signs of cracks, swelling, or deformation on the battery casing, stop using it immediately and contact after-sales service.

No.8 Frequently Asked Questions

1. What are the advantages of $LiFePO_4$ batteries compared to traditional lead-acid batteries?

$LiFePO_4$ batteries demonstrate significant superiorities over lead-acid batteries, including higher energy density, lighter weight (≥50% weight reduction and more compact size at equivalent capacity), extended cycle life, superior cold-cranking performance, and enhanced environmental friendliness."

2. Why can it improve fuel economy?

Lithium iron phosphate batteries feature high-rate discharge capability and low internal resistance, enabling efficient charging/discharging with stable voltage, which significantly shortens the generator's operating time and reduces engine load, thus enhancing fuel economy.

3. How reliable is the starting performance in extreme climates?

This product utilizes an innovative material formula, delivering exceptional cold-cranking performance and high-temperature endurance, ensuring stable and reliable starting capability in both freezing winters and scorching summers."

4. How does it perform in terms of safety?

The $LiFePO_4$ battery exhibits exceptionally high safety stability, with a thermal runaway threshold exceeding 270°C. Even under nail penetration, overcharging, or short-circuit conditions, it will not ignite or explode, making it the most reliable automotive starting power solution recognized industry-wide.

No.9 After-Sales Instructions

The following conditions are excluded from warranty coverage and are not eligible for returns/exchanges：

- Battery damage caused by unauthorized modifications, disassembly, or improper wiring connections.
- Battery damage caused by human factors such as collision, impact, dropping, etc.
- Damage resulting from charging with non-compatible/non-dedicated chargers.
- Battery damage caused by use for purposes other than vehicle starting.
- Starting batteries already installed and in service (excluding manufacturing defects).
- Battery depletion caused by improper usage contrary to the manual or vehicle electrical leakage.
- Water immersion/submersion-induced battery failure.

Disclaimer: The content of this manual is for reference only. Always refer to the actual product specifications for accurate information. Prior to use, carefully read and comply with all safety regulations. Contact your distributor promptly if any questions arise.







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