

[Manuals.plus](#) /

› [GLCE ENERGY](#) /

› GLCE ENERGY 12V 200Ah LiFePO4 Battery User Manual

GLCE ENERGY 12200

GLCE ENERGY 12V 200Ah LiFePO4 Battery User Manual

Model: 12200

1. INTRODUCTION

Thank you for choosing the GLCE ENERGY 12V 200Ah LiFePO4 Lithium Iron Phosphate Battery. This battery is designed for reliable and long-lasting power storage, offering advanced technology, safety features, and a long cycle life. It is suitable for a wide range of applications including RVs, marine use, solar energy systems, home energy storage, and off-grid setups. This manual provides essential information for the safe and efficient use of your battery.



Image: The GLCE ENERGY 12V 200Ah LiFePO4 battery, showcasing its compact design and terminals.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before operating the battery. Failure to follow these instructions may result in serious injury, property damage, or voiding the warranty.

- **Do Not Use as a Starting Battery:** This LiFePO4 battery is designed for deep cycle applications and energy storage, not for engine starting.
- **Proper Charging:** Always use a charger specifically designed for LiFePO4 batteries. Using an incompatible charger can damage the battery and pose a safety risk.
- **Temperature Range:** Operate and store the battery within the recommended temperature ranges. Avoid extreme heat or cold.
- **Avoid Physical Damage:** Do not puncture, drop, or expose the battery to severe impacts.
- **Water and Dust Resistance:** The battery features an IP65 rated casing, providing protection against dust and water splashes. However, it is not designed for submersion.
- **Internal Structure:** The innovative design avoids the use of glue for internal fixation, mitigating concerns about

battery expansion.

- **Integrated BMS:** The built-in 200A Battery Management System (BMS) protects against overcharge, over-discharge, over-current, short circuit, over-voltage, and over-heating.



Image: Diagram illustrating the various protections offered by the Smart BMS, including over-voltage, short circuit, over-discharge, over-current, over-charge, and over-heating protection.

3. PRODUCT FEATURES

The GLCE ENERGY LiFePO₄ battery incorporates several advanced features for optimal performance and longevity:

- **Advanced LiFePO₄ Technology:** Utilizes safe, non-toxic, and renewable lithium iron phosphate chemistry, offering superior performance compared to traditional lead-acid batteries.
- **Long Cycle Life:** Provides over 10,000 deep cycles, ensuring a lifespan of up to 10 years.
- **Integrated 200A BMS:** Smart Battery Management System protects against common battery failures, enhancing safety and durability.
- **Lightweight and Compact:** Significantly lighter and more compact than lead-acid batteries of similar capacity, weighing approximately 22 kg (49.38 lbs).

- **Robust Casing:** Constructed with high-quality IP65 material, making it water and dust resistant.
- **Stable Internal Design:** Innovative internal construction prevents battery expansion issues.

Compact Size & Light Weight & Long Lifespan

LiFePO4 battery

38.9lbs

10-Year Life

BMS Protections

4000-15000 Cycles

Environmentally friendly

SLA battery

✗ Lead-acid Battery

✗ 138lbs

✗ 3-Year Life

✗ No BMS

✗ 300-500 Cycles

✗ polluted environment

Image: A comparison chart highlighting the advantages of LiFePO4 batteries (e.g., 38.9 lbs, 10-year life, BMS protections, 4000-15000 cycles, environmentally friendly) over SLA batteries (e.g., 138 lbs, 3-year life, no BMS, 300-500 cycles, polluted environment).

4. SPECIFICATIONS

Detailed technical specifications for the GLCE ENERGY 12V 200Ah LiFePO4 Battery:

Specification	Value
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Nominal Voltage	12 Volts
Capacity	200 Ampere-hours (Ah)
Integrated BMS	200A

Specification	Value
Cycle Life	10,000+ Deep Cycles
Expected Lifespan	10 Years
Dimensions (L x W x H)	50 x 18.5 x 24.5 cm (19.76 x 7.32 x 9.56 inches)
Weight	22 Kilograms (49.38 lbs)
Water/Dust Resistance	IP65
Reusability	Rechargeable
Recommended Uses	RV, Marine, Overland, Home Energy Storage, Wheelchairs, Off-Grid, Solar Energy Systems, Trolling Motors

GLCE ENERGY LiFePO4 Battery

Battery Type

LiFePO4

Voltage

12.8V

Capacity

200AH

Weight

17.65kg

Cycle Life

15000+

Energy

2560Wh

Battery Size



Image: Visual representation of the GLCE ENERGY LiFePO4 Battery, detailing its type, voltage, capacity, weight, cycle life, energy, and physical dimensions (34.5cm length, 19cm width, 24.5cm height).

5. SETUP

Before initial use, perform the following setup steps:

1. **Unpacking and Inspection:** Carefully remove the battery from its packaging. Inspect for any visible damage during transit. If damage is found, contact customer support immediately.
2. **Initial Charge:** It is recommended to fully charge the battery before its first use. Refer to the 'Charging' section for proper procedures.
3. **Connections:** Ensure all connections are clean, secure, and correctly polarized (positive to positive, negative to negative). Use appropriate gauge cables for your application to prevent overheating.
4. **Parallel and Series Connections:** For increased capacity or voltage, multiple GLCE ENERGY batteries of the same capacity and brand can be wired in parallel or series. Parallel connections support a maximum of 8 batteries, while series connections support a maximum of 4 batteries. It is suggested to use batteries bought within 3 months for optimal performance in such configurations.

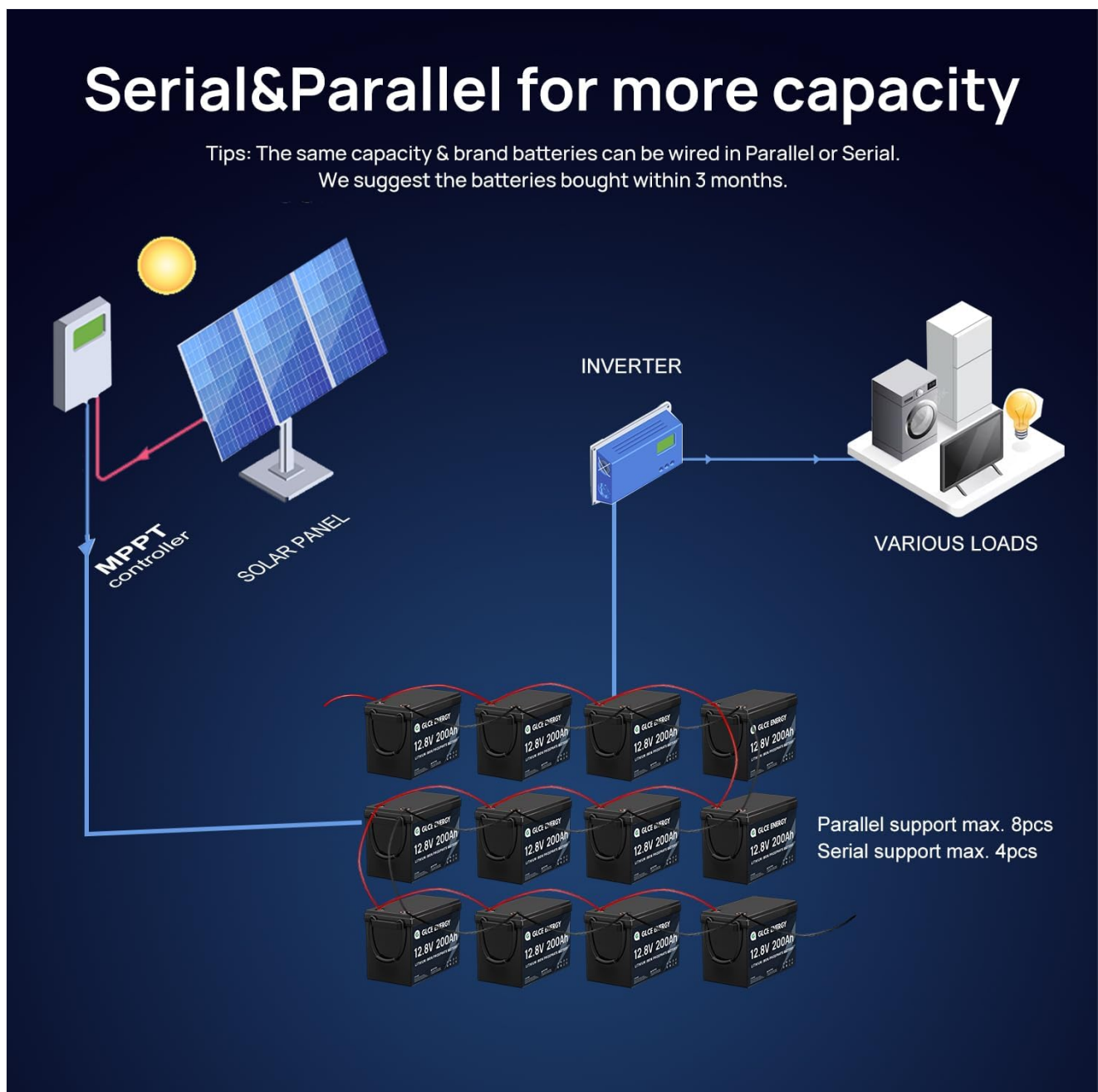


Image: A diagram illustrating how to connect multiple batteries in series and parallel configurations to an inverter and various loads, powered by a solar panel and MPPT controller. It specifies support for max 8 batteries in parallel and max 4 batteries in series.

6. OPERATING INSTRUCTIONS

6.1. Charging

The GLCE ENERGY LiFePO4 battery can be charged using various methods:

- **Solar Panel:** Connect to a solar panel system with an appropriate charge controller (e.g., MPPT controller) designed for LiFePO4 batteries.
- **Generator:** Use a generator connected to a compatible LiFePO4 battery charger.
- **Dedicated Charger:** Utilize a specific LiFePO4 battery charger. Ensure the charger's voltage and current settings are compatible with a 12V 200Ah LiFePO4 battery.

Always ensure the charger is suitable for LiFePO4 batteries to prevent damage and ensure safety.

3 ways to charge



Solar+Panel



Generator



Charger

Image: Illustrations showing three methods for charging the GLCE ENERGY battery: via a solar panel system, a generator, and a dedicated battery charger.

6.2. Discharge and Applications

This 12V 200Ah LiFePO4 battery is ideal for deep cycle applications. Its robust design and high energy density make it

suitable for:

- Trolling motors
- Solar energy systems
- Household appliances
- Boats and marine applications
- Caravans and RVs
- Sump pumps
- Industrial tools
- Lawn and garden equipment
- Home solar energy storage systems
- Digital cameras/CCTV
- E-robots and electric vehicles
- Off-grid applications



Image: A collage depicting various applications for the GLCE ENERGY LiFePO4 battery, including children's electric vehicles,

7. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your GLCE ENERGY LiFePO₄ battery:

- **Regular Inspection:** Periodically check the battery terminals for corrosion or loose connections. Clean terminals as needed.
- **Cleaning:** Keep the battery casing clean and free from dust and debris. Use a dry cloth for cleaning. Avoid using harsh chemicals or abrasive materials.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50-70% of its capacity. Store in a cool, dry place, away from direct sunlight and extreme temperatures. Disconnect from all loads and charging sources.
- **Avoid Deep Discharge:** While the BMS protects against over-discharge, consistently avoiding extremely low states of charge can extend battery life.

8. TROUBLESHOOTING

If you encounter issues with your GLCE ENERGY LiFePO₄ battery, consider the following common problems and solutions:

- **Battery Not Charging:**
 - Ensure the charger is specifically designed for LiFePO₄ batteries and is functioning correctly.
 - Check all connections for looseness or corrosion.
 - Verify that the charging source (e.g., solar panel, generator) is operational and providing adequate power.
 - The BMS may have activated a protection mode (e.g., over-discharge protection). If the battery voltage is very low, a specialized LiFePO₄ charger with a pre-charge function might be needed.
- **Battery Not Providing Power:**
 - Check if the battery is sufficiently charged.
 - Inspect all load connections for proper contact and polarity.
 - The BMS may have activated a protection mode (e.g., over-current, short circuit, over-discharge). Disconnect the load, wait a few minutes, and reconnect. If the issue persists, check the load for faults.
- **Unusual Odor or Swelling:**
 - Immediately disconnect the battery from all sources and loads.
 - Contact customer support. Do not attempt to use or repair the battery.

For issues not covered here or if troubleshooting steps do not resolve the problem, please contact GLCE ENERGY customer support.

9. WARRANTY AND SUPPORT

GLCE ENERGY is committed to providing high-quality products and customer satisfaction. Your 12V 200Ah LiFePO₄ battery is designed for a long operational life, with an expected lifespan of 10 years and over 10,000 deep cycles.

If you have any questions, require technical assistance, or experience any issues with your product, please do not hesitate to contact our professional team of lithium battery engineers. Contact information can typically be found on the product packaging or the official GLCE ENERGY website.

Please retain your proof of purchase for warranty claims.

