

## GOLDENMATE CRIUS 12

# GOLDENMATE 12V 12Ah LiFePO4 Lithium Battery User Manual

Model: CRIUS 12

## INTRODUCTION

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The GOLDENMATE 12V 12Ah LiFePO4 Lithium Battery (Model: CRIUS 12) is engineered for superior performance and longevity. This battery offers high energy density, an extended cycle life, and advanced safety features, making it an ideal power solution for a wide range of applications.

Key features include:

- **Superior Performance:** Designed for demanding applications, offering high energy density and a long cycle life.
- **Built-in BMS:** Integrated Battery Management System protects against overcharging, over-discharging, over-current, and short circuits.
- **Extended Lifespan:** Provides over 5000 deep cycles and an impressive 10-year lifespan, significantly outperforming traditional lead-acid batteries.
- **IP67 Waterproof:** Newly upgraded with IP67 waterproof protection, ensuring durability in various environments.
- **Lightweight Design:** Weighing just 3.31 pounds, it offers portability without compromising power.
- **Flexible Expansion:** Can be connected in series or parallel to increase voltage or capacity, supporting up to 8 batteries.
- **Easy Recharge & Maintenance:** Simple to recharge with compatible LiFePO4 chargers, solar panels, or generators, requiring no regular maintenance.



Figure 1: The GOLDENMATE 12V 12Ah LiFePO4 Lithium Battery.

## SETUP

### Initial Charging

Before first use, ensure the battery is fully charged using a compatible LiFePO4 battery charger. The maximum charge current is 6A. Solar panels with MPPT controllers or generators can also be used for recharging.

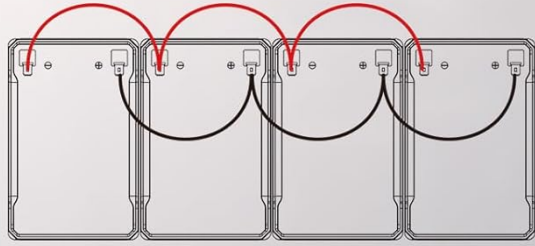
### Connecting Multiple Batteries (Series/Parallel)

The GOLDENMATE 12V 12Ah LiFePO4 battery supports flexible expansion for increased voltage or capacity. You can connect up to 8 batteries in series or parallel configurations.

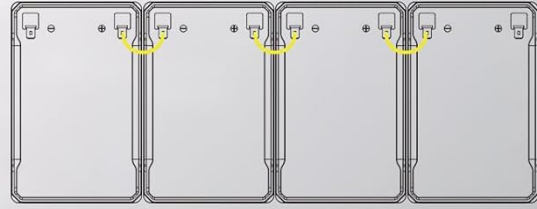
- **Parallel Connection:** Connect batteries in parallel to increase total capacity while maintaining the same voltage (e.g., 12V 24Ah with two batteries).
- **Series Connection:** Connect batteries in series to increase total voltage (e.g., 25.6V 12Ah with two batteries).

Ensure all batteries are at a similar state of charge before connecting them in series or parallel. Use appropriate cables and connectors rated for the expected current and voltage.

# Scalable for Greater Power



Parallel Connection



Series Connection



Figure 2: Illustration of Parallel and Series Connection options for multiple batteries.

## OPERATING INSTRUCTIONS

This 12V 12Ah LiFePO4 battery is designed for versatile applications, providing reliable power for various devices and systems. The built-in Battery Management System (BMS) ensures safe operation by protecting against common electrical issues.

### Typical Applications

- Emergency lighting (LED strips, etc.)
- 12V routers
- RV and outdoor camping power
- Kids' ride-on toys and Power Wheels
- Scooters
- Fish finders and kayaks
- Small UPS systems and backup power

- Ham radios
- Home alarms and remote cameras
- Fire security systems
- Solar/wind power setups

The battery has a continuous discharge capability of up to 12A, suitable for demanding off-grid applications.

**Note:** This battery is not intended for vehicle starting purposes.



Figure 3: Versatile applications of the GOLDENMATE LiFePO4 battery.

## MAINTENANCE

One of the significant advantages of the GOLDENMATE 12V 12Ah LiFePO4 battery is its minimal maintenance requirement. Unlike traditional lead-acid batteries, this lithium battery does not require regular water refills or other upkeep.

- **Storage:** The battery's low self-discharge rate allows for hassle-free storage of up to one year without significant capacity loss. For prolonged storage, it is recommended to store the battery at a partial charge

(around 50%).

- **Cleaning:** Keep the battery terminals clean and free from corrosion. Use a dry cloth to wipe down the battery casing as needed.
- **Inspection:** Periodically inspect the battery for any physical damage or loose connections.



Figure 4: The IP67 waterproof design minimizes maintenance needs.

## TROUBLESHOOTING

The built-in Battery Management System (BMS) is designed to protect the battery from various issues. If you experience problems, consider the following:

- **No Power Output:** Check if the battery is fully charged. Ensure all connections are secure and free from corrosion. The BMS might have activated a protection mode (e.g., over-discharge protection); try connecting to a charger to reset.
- **Slow Charging:** Verify that your charger is compatible with LiFePO<sub>4</sub> batteries and provides the correct voltage (14.4V max) and current. Ensure the charging environment temperature is within the recommended range (0°C to 45°C).

- **Battery Not Holding Charge:** This could indicate a fault with the battery or charger. Ensure the charger is functioning correctly. If the issue persists, contact customer support.
- **Overheating:** The BMS includes overheating protection. If the battery feels excessively hot, disconnect it immediately and allow it to cool down. Ensure proper ventilation around the battery during operation and charging.

For persistent issues not resolved by these steps, please refer to the Warranty & Support section for assistance.



Figure 5: The Intelligent Protection Built-In BMS safeguards the battery.

## SPECIFICATIONS

Feature	Specification
Brand	GOLDENMATE
Model	CRIUS 12

Size	12V 12Ah
Battery Cell Composition	Lithium-Phosphate (LiFePO4)
Product Dimensions (D x W x H)	3.86"D x 5.94"W x 3.66"H
Item Weight	3.25 pounds
Resistance	50 Milliohms
Terminal Type	T2
Cycle Life	5000+ Deep Cycles
Expected Lifespan	10 Years
Waterproof Rating	IP67
Max Charge Current	6A
Continuous Discharge Capability	Up to 12A
Max Series/Parallel Connections	Up to 8 batteries

#### What's in the Box:

- 12.8V 12Ah LiFePO4 Battery

## WARRANTY & SUPPORT

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GOLDENMATE provides a 10-year lifetime for this product when used correctly according to the manual instructions. We are committed to empowering lives with high-quality LiFePO4 batteries and ensuring customer satisfaction.

For any inquiries, technical assistance, or warranty claims, please contact our customer support. We offer US Local Warehouse Technical Aftersales Service and aim to respond within 24 hours with professional and friendly support.

Our support team can assist with:

- Analyzing customer problems
- Restoring battery usage
- Introducing optimal use methods
- New battery replacement for defective units (if problem cannot be solved)