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> Ingeosolly 12V 200Ah LiFePO4 Lithium Battery User Manual

Ingeosolly IN-12V200Ah

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Model: IN-12V200Ah | Brand: Ingeosolly

1. INTRODUCTION AND OVERVIEW

The Ingeosolly 12V 200Ah LiFePO4 Lithium Battery is engineered for reliable energy storage across various applications, including RVs, solar power systems, trolling motors, and off-grid setups. This battery provides a substantial 2560Wh capacity and integrates a robust 200A Battery Management System (BMS) for enhanced protection and longevity. With a design life of up to 10 years and over 8000 charge cycles, it offers a durable and efficient power solution. Compared to traditional lead-acid batteries, this LiFePO4 battery offers significantly more usable capacity, is lighter in weight (approximately 20.2 kg / 44.53 lbs), and is environmentally friendly.



Image: Ingeosolly 12.8V 200Ah LiFePO4 battery in a solar energy storage context.

2. SAFETY INFORMATION

WARNING: This Ingeosolly LiFePO4 battery is intended for energy storage purposes only. It is NOT designed for use as a starting battery for vehicles, golf carts, or any device requiring high cranking amps. Do not attempt to use it for engine starting applications.

- Always ensure correct polarity when connecting the battery. Incorrect connections can cause damage to the battery and connected devices.
- Avoid short-circuiting the battery terminals.
- Use only compatible LiFePO4 chargers with appropriate voltage and current ratings.
- Do not expose the battery to extreme temperatures outside its specified operating range.
- Keep the battery away from flammable materials, heat sources, and open flames.
- Ensure adequate ventilation when charging or discharging the battery.
- Do not disassemble, puncture, or modify the battery.
- In case of fire, use a Class D fire extinguisher. Water can exacerbate lithium battery fires.

3. PACKAGE CONTENTS

Upon opening your package, please verify that all items are present and in good condition:

- 1x Ingeosolly 12V 200Ah LiFePO4 Lithium Battery
- 1x 14.6V 7A LiFePO4 Battery Charger



Image: The Ingeosolly 12.8V 200Ah LiFePO4 battery and its accompanying charger.

4. PRODUCT FEATURES

- **High Usable Capacity:** The 12V 200Ah LiFePO4 battery provides 2560Wh of energy, offering approximately 40% more usable power than a lead-acid battery of equivalent nominal capacity due to its deeper depth of discharge (DOD).
- **Advanced BMS Protection:** Equipped with a 200A Battery Management System (BMS) that protects against overcharging, over-discharging, over-current, overheating, and short circuits, ensuring safe and reliable operation.
- **Extended Lifespan:** Offers 8000 to 15000 cycles, significantly outperforming lead-acid batteries (typically 200-500 cycles). This translates to a service life of up to 10 years with proper maintenance.
- **Lightweight and Compact:** Weighing only 20.2 kg (44.53 lbs), it is approximately one-third the weight of a comparable lead-acid battery, making it easier to handle and install.
- **Durable Construction:** Features an ABS flame-retardant plastic housing for acid resistance and drop protection. The IP65 waterproof rating ensures durability in various environments.
- **Flexible Placement:** Designed for 360-degree placement, allowing for versatile installation options.
- **Scalable Energy Solution:** Supports connecting up to 4 batteries in series (Max 4S) for higher voltage (up to 51.2V) or up to 4 batteries in parallel (Max 4P) for increased capacity (up to 800Ah).

UPGRADED **200A** BMS MANAGEMENT SYSTEM MULTIFUNCTIONAL BATTERY

**AUTO BMS
PROTECTION**

**A+ GRADE
BATTERY**

Overvoltage

**4000+ cycles
at 100% DOD**

Undervoltage

Overheating

**8000+ cycles
at 80% DOD**

Overcurrent

**15,000+ cycles
at 60% DOD**

Short Circuits



Image: Internal view highlighting the 200A BMS and its protective functions.

COLD RESISTANT & WATERPROOF & HEAT-RESISTING

Perfect design for outdoor activities



-4°F (-20°C)



140°F (60°C)



IP65 WATERPROOF Meets daily waterproofing requirements
the temperature between 10°C to 35°C / 50°F to 95°F is ideal for long-term storage

Image: Battery designed for outdoor activities, resistant to cold (-20°C) and heat (60°C).

5. SETUP AND INSTALLATION

5.1 Initial Inspection

Before installation, carefully inspect the battery for any signs of physical damage. If damage is found, do not proceed with installation and contact customer support.

5.2 Connecting the Battery

1. Ensure all loads are disconnected and the charger is unplugged before making any connections.
2. Connect the positive (+) terminal of the battery to the positive (+) terminal of your system.
3. Connect the negative (-) terminal of the battery to the negative (-) terminal of your system.
4. Use appropriate M8 terminal bolts and ensure all connections are clean and securely tightened to prevent resistance and overheating.

5.3 Series and Parallel Connections

The Ingeosolly 12V 200Ah battery supports configurations of up to 4 batteries in series or 4 batteries in parallel to achieve desired voltage or capacity. When connecting batteries in series or parallel:

- Always use identical batteries (same brand, model, and capacity).
- Ensure all batteries are fully charged to the same voltage before connecting them in parallel.
- Use appropriate gauge cables for all connections to handle the expected current.
- For series connections, connect the positive terminal of one battery to the negative terminal of the next.
- For parallel connections, connect positive to positive and negative to negative terminals.

Choose Ingeosolly Lifepo4 Battery



Image: Illustration of series and parallel connection capabilities for the Ingeosolly LiFePO4 battery.

6. OPERATING INSTRUCTIONS

6.1 Charging

Use the provided 14.6V 7A charger or a compatible LiFePO4 charger. Connect the charger to the battery terminals first, ensuring correct polarity, then plug the charger into an AC power source. The charger will indicate the charging status. Disconnect the charger once the battery is fully charged.

6.2 Discharging

Connect your electrical loads to the battery terminals, ensuring correct polarity. The maximum continuous discharge current for this 200Ah battery is 200A (1C). Do not exceed this limit to prevent damage to the battery and connected devices. The built-in BMS will protect the battery from over-discharge.

6.3 Operating Temperature

The battery is designed to operate within a wide temperature range. For optimal performance and longevity, avoid prolonged operation at the extreme ends of the range. The recommended operating temperature for charging and discharging is between -4°F (-20°C) and 140°F (60°C).

INCREDIBLE 2560WH



Refrigerator
(100W)

25.6hrs



Coffee Maker
(800W)

3.2hrs



Hay mower
(450W)

5.6hrs



Television
(200W)

12.8hrs



Water Pump
(500W)

5.1hrs

Image: Examples of appliances and their estimated runtimes when powered by the 2560Wh battery.

7. MAINTENANCE

- **Regular Charging:** To prevent damage from disuse, charge and discharge the battery at least once every six months.
- **Terminal Care:** Periodically inspect battery terminals for corrosion. Clean terminals with a wire brush and ensure they are securely tightened.
- **Storage:** When storing the battery for extended periods, ensure it is charged to approximately 50-70% of its capacity. Store in a cool, dry place, ideally between 10°C to 35°C (50°F to 95°F).
- **Environmental Conditions:** While the battery is IP65 waterproof, avoid submerging it in water or exposing it to excessive moisture for prolonged periods.

8. TROUBLESHOOTING

If you encounter issues with your Ingeosolly LiFePO4 battery, consider the following troubleshooting steps:

• **Battery Not Charging:**

- Verify that the charger is properly connected to both the battery and the AC power source.
- Check if the charger is functioning correctly (e.g., indicator lights).
- Inspect battery terminals for loose connections or corrosion.

• **Battery Not Providing Power:**

- Ensure all connections to your load are secure and have correct polarity.
- Confirm that the load's power requirements do not exceed the battery's maximum discharge current (200A).
- The BMS may have triggered a protection mode (e.g., over-discharge, over-current). Disconnect the load, wait a few minutes, and attempt to recharge the battery to reset the BMS.
- Check the battery voltage. If it's very low, the battery might be deeply discharged.

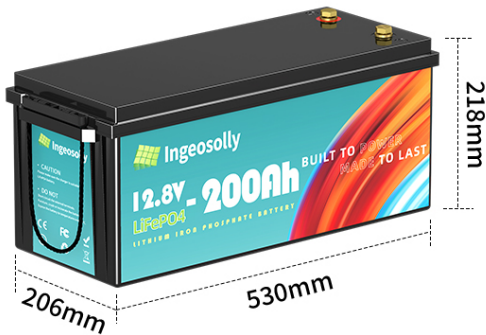
• **Reduced Capacity or Short Runtime:**

- Ensure the battery has been fully charged.
- Review your load's power consumption to ensure it aligns with expectations.
- If the battery has been stored for a long period without charging, its capacity might temporarily decrease. Follow maintenance guidelines for regular charging.
- Operating in extreme temperatures can affect performance.

If these steps do not resolve the issue, please contact Ingeosolly customer support for further assistance.

9. SPECIFICATIONS

SPECIFICATION PARAMETERS



Voltage:	12.8V
Capacity:	200Ah
Weight:	20.7KG
Size (L*W*H) :	530*206*218mm/20.9*8.1*8.6inch
Energy:	2560Wh
Material:	200BMS

Image: Detailed specification parameters for the battery.

Parameter	Value
Nominal Voltage	12.8V
Nominal Capacity	200Ah
Energy	2560Wh
Built-in BMS	200A

Parameter	Value
Cycle Life	8000+ cycles (at 80% DOD)
Dimensions (L×W×H)	530 × 206 × 218 mm (20.88 × 8.12 × 8.59 inches)
Weight	20.7 kg (45.5 lbs)
Terminal Type	M8
Operating Temperature	-20°C to 60°C (-4°F to 140°F)
Waterproof Rating	IP65

10. WARRANTY AND SUPPORT

Ingeosolly stands behind the quality of its products. The 12V 200Ah LiFePO4 Lithium Battery comes with a**Five-Year Warranty** from the date of purchase.

For any questions, technical assistance, or warranty claims, please contact Ingeosolly customer service. We have local warehouses and a maintenance team in the US to provide prompt support. Our 24-hour customer service team is available to assist you.

Please refer to your purchase documentation or the official Ingeosolly website for specific contact details.

11. IMPORTANT NOTES

- Voltage and current readings may deviate by 1% to 5% due to variations in measurement methods, instruments, and environmental conditions (temperature/humidity).
- This battery is designed for energy storage applications. It is not suitable for high-current starting applications such as engine starting, golf carts, or jacks.

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Details

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