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Redodo BLUETOOTH 12V 100AH GROUP 24 LOW TEMP

Redodo 12V 100Ah LiFePO4 Battery with 12V 20A Charger User Manual

Model: BLUETOOTH 12V 100AH GROUP 24 LOW TEMP

1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your Redodo 12V 100Ah LiFePO4 Battery and the accompanying 12V 20A Charger. This battery features integrated smart BMS with Bluetooth 5.0 connectivity and low-temperature protection, making it suitable for various applications including marine, RV, solar, and off-grid systems. The included charger is specifically designed for LiFePO4 batteries.



Image 1.1: Redodo 12V 100Ah LiFePO4 Battery and 12V 20A Charger. This image displays the main product, a 12V 100Ah LiFePO4 battery with its dedicated 12V 20A charger.

2. SAFETY INFORMATION

Please read and understand all safety instructions before operating the battery or charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Important Restriction:** Do not use this battery as a car starting battery or for golf cart applications. It is designed for deep cycle applications.
- Ensure proper ventilation when charging or discharging the battery.
- Avoid short-circuiting the battery terminals. Use insulated tools.
- Do not expose the battery or charger to water, excessive heat, or direct sunlight.
- Always wear appropriate personal protective equipment, such as safety glasses and gloves, when handling batteries.
- Keep out of reach of children.

3. SETUP AND INSTALLATION

3.1 Initial Charging

Upon arrival, it is essential to charge the battery with a dedicated lithium iron phosphate charger with 0V capability in order for it to function properly. The included Redodo 14.6V 20A LiFePO4 charger is designed for this purpose.

3.2 Connecting the Charger

1. Connect the charger's output cables to the battery terminals: positive (+) to positive (+), and negative (-) to negative (-).
2. Plug the charger into a standard AC power outlet.
3. Monitor the charging status indicators on the charger. The charger will automatically stop when the battery is fully charged.



Image 3.1: Redodo 14.6V 20A LiFePO4 Charger. This image shows the dedicated charger with its built-in cooling fan for efficient heat dissipation.



Image 3.2: Charger Protection Features. This image illustrates the various protection mechanisms integrated into the charger, including output short-circuit, temperature, output over-voltage, and reverse polarity connection protection.

3.3 Battery Connections (Series/Parallel)

The battery supports up to 4 series (4S) and 4 parallel (4P) connections, allowing for a maximum system capacity of 20.48 kWh. When connecting multiple batteries, ensure all batteries are of the same model and state of charge. Consult a qualified electrician for complex installations.



Image 3.3: Example Solar System Diagram. This diagram shows a typical setup for a solar system using a Redodo 12V 100Ah battery, an MPPT charge controller, and an inverter.

4. OPERATING INSTRUCTIONS

4.1 Bluetooth Monitoring

The integrated Bluetooth 5.0 allows for real-time monitoring of battery parameters. Download the dedicated Redodo app from Google Play or the App Store to your smartphone or tablet.

- **Real-time Data:** Monitor voltage, current, power levels, and remaining capacity.
- **Remote Control:** Control discharge/cutoff functions within a 10-meter range.

Always know

how much capacity is left



Capacity anxiety

Image 4.1: Bluetooth Monitoring App. This image displays the user interface of the Redodo app, showing real-time battery data such as voltage, current, power, and remaining capacity.

Real-Time Battery Status Monitoring



- Remaining Usage Time
- SOC
- Voltage
- Current
- Remote Control

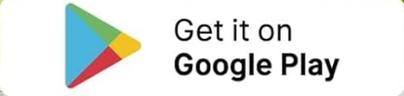
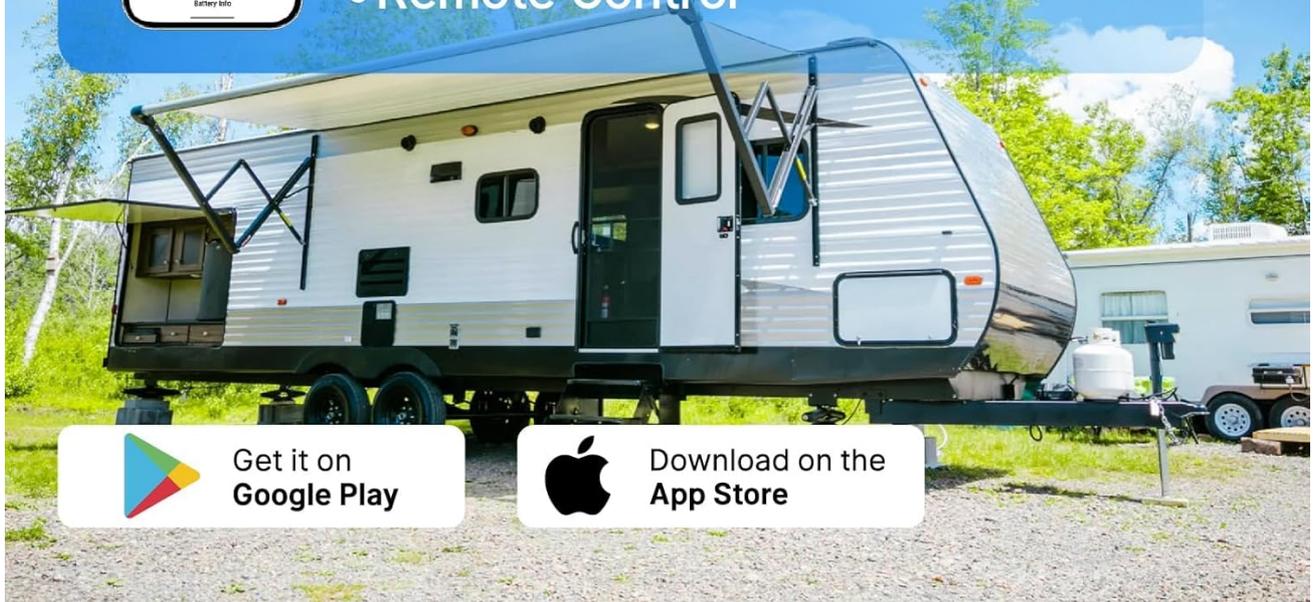


Image 4.2: Real-Time Battery Status Monitoring. This image shows a user monitoring their battery status via the app, highlighting features like remaining usage time, State of Charge (SOC), voltage, current, and remote control capabilities.

4.2 Charging Methods

In addition to the included AC charger, the battery supports charging via solar panels (with a suitable MPPT controller), generators, and alternators (with a DC-DC charger).

4.3 Discharge Rates

The battery has a maximum continuous discharging current of 100A and can handle peak discharge currents of 500A for 1 second, suitable for big power surges.

4.4 Low-Temperature Protection

The integrated Smart BMS includes low-temperature protection, which prevents charging or discharging the battery when temperatures are below safe operating limits, extending battery life and ensuring safety.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your Redodo LiFePO4 battery.

- **Regular Charging:** For optimal lifespan, avoid leaving the battery in a fully discharged state for extended periods. Recharge promptly after use.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% State of Charge (SOC) and stored in a cool, dry place.
- **Terminal Cleaning:** Periodically inspect and clean battery terminals to ensure good electrical contact and prevent corrosion.
- **BMS Protection:** The Smart BMS provides protection against overcharge, over-discharge, short-circuit, and low-temperature conditions, minimizing the need for manual intervention.

6. TROUBLESHOOTING

If you encounter issues with your Redodo battery or charger, refer to the following common troubleshooting steps:

- **Battery Not Charging:**
 - Ensure the charger is properly connected to both the battery and the AC outlet.
 - Check the charger's indicator lights for error codes or charging status.
 - Verify that the battery terminals are clean and connections are secure.
 - Confirm the ambient temperature is within the safe charging range (above 0°C/32°F). The low-temperature protection will prevent charging below this threshold.
- **Battery Not Powering Devices:**
 - Check the battery's State of Charge (SOC) using the Bluetooth app. The battery may be discharged.
 - Ensure all connections to your devices are secure and correctly polarized.
 - Verify that the device's power requirements do not exceed the battery's maximum discharge current.
 - Check for any fault indicators on the battery or connected inverter/charge controller.
- **Bluetooth Connectivity Issues:**
 - Ensure Bluetooth is enabled on your mobile device.
 - Make sure you are within the 10-meter range of the battery.
 - Restart the Redodo app and/or your mobile device.

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

7. SPECIFICATIONS

Feature	Specification
Model Number	BLUETOOTH 12V 100AH GROUP 24 LOW TEMP
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Nominal Voltage	12.8 Volts
Capacity	100Ah
Max Continuous Discharge Current	100A

Feature	Specification
Peak Discharge Current	500A (1 second)
Charger Input Voltage	14.6V
Charger Current	20A
Bluetooth Version	5.0
BMS Features	Overcharge/Discharge/Short-circuit/Low-Temp Protection
Cycle Life	4,000-15,000 cycles
Expected Lifespan	10+ years
Product Dimensions (L x W x H)	10.24 x 6.61 x 8.27 inches
Item Weight	22.2 pounds
Group Size	Group 24 (Drop-in replacement for Group 31/27/24)

25% Smaller

Compare with BCI Group 31

The Most **Versatile** Battery in **Size**



Image 7.1: Battery Size Comparison. This image illustrates the compact size of the Redodo Group 24 battery compared to Group 27 and Group 31 batteries, highlighting its versatility.



Image 7.2: Battery Weight. This image shows the Redodo 100Ah battery weighing 21.8 lbs, emphasizing its lightweight design.

ONE Replacing 2*12V 100Ah Lead-acid Batteries

 **100lbs**
Weight Saving

 **62%**
Space Saving



Image 7.3: LiFePO4 vs. Lead-Acid Comparison. This image compares the Redodo 12.8V 100Ah LiFePO4 battery (1280Wh) to two 12V 100Ah lead-acid batteries (1200Wh), illustrating the weight and space savings.

8. WARRANTY AND SUPPORT

Redodo is committed to providing reliable products and excellent customer service.

- **Warranty:** The Redodo 12V 100Ah LiFePO4 Battery comes with a 5-year guarantee.
- **Expected Lifespan:** With proper care, the battery is designed for a lifespan of 10+ years.
- **Customer Support:** Redodo offers 24-hour response customer support.
- **Service:** Local warehouses are available for efficient service and support.



10 Years Lifespan



5 Years Guarantee



24 Hrs Response



Local Warehouses

For warranty claims, technical assistance, or any other inquiries, please visit the official Redodo website or contact their customer service department directly.