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› Redodo 12V 165Ah LiFePO4 Battery with Bluetooth User Manual

Redodo R12V165-165-2

Redodo 12V 165Ah LiFePO4 Battery with Bluetooth User Manual

Model: 12V 165Ah Bluetooth (R12V165-165-2)

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient use of your Redodo 12V 165Ah LiFePO4 Battery with Bluetooth. This high-capacity lithium iron phosphate battery is designed for various applications, including RVs, marine vessels, and solar energy systems. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your battery.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the battery and connected equipment:

- Wear appropriate personal protective equipment (PPE), including eye protection and insulated gloves, when handling batteries.
- Do not short-circuit the battery terminals. This can cause severe damage to the battery and pose a fire hazard.
- Ensure all connections are tight and secure to prevent arcing and overheating.
- Do not expose the battery to fire, excessive heat, or direct sunlight for prolonged periods.
- Do not immerse the battery in water or other liquids.
- Keep the battery away from children and pets.
- Use only compatible chargers and charge controllers designed for LiFePO4 batteries.
- Do not attempt to open, disassemble, or repair the battery. Contact qualified personnel for service.
- In case of fire, use a Class D fire extinguisher. Water can exacerbate lithium battery fires.

3. WHAT'S IN THE BOX

Upon unpacking, verify that all items listed below are present and undamaged:

- 12V 165Ah Battery
- Protective Caps for Bolts
- M8 Terminal Bolts



Figure 1: Package Contents. The image displays the Redodo 12.8V 165Ah battery along with its accessories: M8 terminal bolts, and the product manual.

4. PRODUCT OVERVIEW

The Redodo 12V 165Ah LiFePO4 Battery is a high-performance, long-lasting power solution. It features a robust Battery Management System (BMS) and integrated Bluetooth connectivity for convenient monitoring.

4.1 Key Features

- **High Capacity:** 2112Wh capacity in a Group 31 size, offering significant energy density.
- **Powerful Output:** 165A BMS supports 2112W continuous output for high-demand devices.
- **Smart Bluetooth Monitoring:** Real-time monitoring of voltage, capacity, State of Charge (SOC), and remote power control via a smartphone application.

- **Enhanced Structure Design:** Optimized for heat dissipation and cell fixation, contributing to safety and extended battery life.
- **Advanced BMS Protections:** Includes safeguards against over-charging, over-discharging, over-current, short circuit, high-temperature, and low-temperature conditions. Features auto-recovery after overload protection, salt-spray resistance, and moisture-proof design.
- **Long Lifespan:** Built with EV-grade cells for an estimated 10-year lifespan.
- **Scalability:** Can be connected in configurations up to 4P4S (16 units) to create a 48V 33.79kWh energy system.
- **Certifications:** UL 1973 tested, FCC/CE/RoHS/UN38.3 certified for safety.

4.2 Physical Dimensions and Components



Figure 2: Redodo 12.8V 165Ah LiFePO4 Battery. This image shows the main product with its branding and key specifications printed on the casing.



Figure 3: Customized Structure Design. This diagram shows the internal components of the battery, emphasizing features for improved heat dissipation and cell stability.

5. SETUP AND INSTALLATION

Proper installation is critical for the safety and performance of your battery. If you are unsure about any steps, consult a qualified professional.

5.1 Pre-Installation Checks

- Inspect the battery for any visible damage. Do not install a damaged battery.
- Ensure the installation environment is dry, well-ventilated, and free from flammable materials.
- Verify that your charger, inverter, and other connected equipment are compatible with LiFePO4 batteries and their voltage/current requirements.
- Confirm that the cables and connectors are appropriately sized for the expected current draw.

5.2 Connection Instructions

1. **Prepare Cables:** Ensure all cable ends are properly crimped with suitable lugs.
2. **Connect Positive Terminal:** Connect the positive (+) cable from your load/charger to the positive terminal of the battery. Secure with an M8 terminal bolt and protective cap.
3. **Connect Negative Terminal:** Connect the negative (-) cable from your load/charger to the negative terminal of the battery. Secure with an M8 terminal bolt and protective cap.
4. **Series/Parallel Connections (if applicable):**
 - **Parallel Connection:** For increased capacity (Ah), connect positive to positive and negative to negative terminals of multiple batteries. Ensure all batteries are at a similar State of Charge (SOC) before connecting in parallel.
 - **Series Connection:** For increased voltage (V), connect the positive terminal of one battery to the negative terminal of the next. This battery supports up to 4S (four batteries in series).
5. **Final Check:** Double-check all connections for tightness and correct polarity before applying power.



Figure 4: Example Wiring Diagram. This diagram illustrates a typical solar power system setup, connecting a solar panel to an MPPT controller, then to a battery, and finally to an inverter.

6. OPERATING INSTRUCTIONS

6.1 Initial Activation

When using the battery for the first time or after it has been turned off, connect a LiFePO4 charger or an MPPT charge controller with a lithium activation function to activate the battery.

6.2 Charging the Battery

- Use a LiFePO4 compatible charger with a recommended charging voltage of 14.4V - 14.6V.
- Ensure the charging current does not exceed the maximum continuous charging current specified in the battery's specifications.
- The BMS will protect the battery from overcharging.

6.3 Discharging the Battery

- The battery can be discharged up to 100% Depth of Discharge (DoD) without significant impact on its lifespan,

thanks to the integrated BMS.

- Ensure the continuous discharge current does not exceed the maximum continuous discharge current specified.
- The BMS will protect the battery from over-discharging.

6.4 Bluetooth Monitoring

The Redodo battery features integrated Bluetooth 5.0 for real-time monitoring and control via a smartphone application.

1. **Download the App:** Search for the "Redodo" app on the Apple App Store or Google Play Store.
2. **Connect to Battery:** Open the app and follow the on-screen instructions to connect to your battery via Bluetooth. Ensure your phone's Bluetooth is enabled and you are within range of the battery.
3. **Monitor Data:** The app displays real-time data such as voltage, current, capacity, State of Charge (SOC), and temperature.
4. **Remote Control:** Use the app to manage discharge and remotely power off the battery if supported by the specific app version.

Customized Structure Design



Enhanced heat dissipation,
and cell fixation capabilities



Safer and extended battery life

Figure 5: Bluetooth Monitoring Interface. This image shows a user interacting with the Redodo battery monitoring app on a smartphone, displaying real-time battery data like voltage, capacity, and SOC.

7. MAINTENANCE

LiFePO4 batteries require minimal maintenance compared to lead-acid batteries, but regular checks ensure optimal performance.

- **Terminal Inspection:** Periodically check battery terminals for corrosion, dirt, or loose connections. Clean and tighten as necessary.
- **Cleaning:** Keep the battery casing clean and dry. Use a damp cloth to wipe down the exterior; avoid using solvents or harsh chemicals.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50% SOC and stored in a cool, dry place. Disconnect it from all loads and chargers.
- **Temperature:** Operate and store the battery within the recommended temperature ranges specified in the technical specifications. The BMS provides low-temperature protection.

8. TROUBLESHOOTING

This section addresses common issues you might encounter. For problems not listed here, contact Redodo customer support.

Problem	Possible Cause	Solution
Battery not charging	Charger not connected or faulty. BMS in protection mode (e.g., low temperature, over-discharge). Charger incompatible with LiFePO4.	Check charger connection and functionality. Allow battery temperature to rise above freezing. Connect a compatible charger to reactivate if over-discharged. Ensure charger is specifically designed for LiFePO4 batteries.
Battery not discharging (no power output)	BMS in protection mode (e.g., over-current, short circuit, over-discharge). Loose terminal connections. Battery is off (via Bluetooth app or internal switch).	Disconnect load, wait for BMS to auto-recover (approx. 30s). Check for short circuits or excessive load. Tighten all terminal connections. Check the Bluetooth app to ensure the battery is powered on.
Bluetooth connection issues	Out of range. Phone Bluetooth off. App not updated or malfunctioning.	Move closer to the battery. Enable Bluetooth on your smartphone. Restart the app or reinstall it. Ensure your phone's operating system is compatible.

9. TECHNICAL SPECIFICATIONS

Attribute	Specification
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Attribute	Specification
Brand	Redodo
Model Number	R12V165-165-2
Nominal Voltage	12.8V
Nominal Capacity	165Ah
Energy	2112Wh
Max Continuous Discharge Current	165A
Max Continuous Charge Current	165A (BMS limited)
Recommended Charge Voltage	14.4V - 14.6V
Dimensions (L x W x H)	13"D x 6.77"W x 8.5"H (Group 31 size)
Weight	32.15 lbs
Terminal Type	M8*16 mm
Lifespan	10 years (EV-grade cells)
BMS Protections	Over-charging, over-discharging, over-current, short circuit, high-temp, low-temp, auto-recovery.
Certifications	UL 1973, FCC, CE, RoHS, UN38.3

10. WARRANTY AND SUPPORT

Redodo stands behind its products with comprehensive warranty and customer support services.

- **Warranty:** The Redodo 12V 165Ah LiFePO4 Battery is backed by a 5-year warranty.
- **Customer Support:** Redodo offers 24/7 support and lifetime technical assistance.
- **Contact Information:** For warranty claims, technical assistance, or any product-related inquiries, please refer to the contact details provided in the included product manual or visit the official Redodo website.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

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