

DROK B0CL6Q8GJG

DROK 12V Battery Capacity Volt Monitor for Iron Phosphate Lithium Batteries User Manual

Model: B0CL6Q8GJG

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the DROK 12V Battery Capacity Volt Monitor. This device is designed to accurately measure and display the voltage and remaining capacity (State of Charge - SOC) of 12V Iron Phosphate Lithium (LiFePO₄) batteries. It is suitable for various applications including marine, RV, automotive, and solar systems.

2. PRODUCT FEATURES

- **Multifunction Display:** Measures battery voltage and remaining capacity (SOC), displayed on a color LCD for clear readability.
- **Integrated ON/OFF Switch:** Features a convenient power switch for daily use.
- **Specific Battery Compatibility:** Designed for 12V Iron Phosphate Lithium (LiFePO₄) batteries.
- **Wide Application Range:** Suitable for motorcycles, golf carts, cars, marine vessels, RVs, boats, and solar generators.
- **Splash-Proof Design:** The panel is designed with splash resistance for enhanced durability.

3. PACKAGE CONTENTS

The package includes the following items:

- 1x DROK 12V Battery SOC Meter

4. SPECIFICATIONS

Working Voltage	10-12V DC
Power Consumption	8-10mA
Product Dimensions	61.8 x 33.6 x 16mm (2.43 x 1.32 x 0.63 inches)
Installation Dimensions	56.5 x 28.5mm (2.22 x 1.12 inches)
Display Type	Color LCD
Applicable Battery Type	12V Iron Phosphate Lithium (LiFePO4) Battery

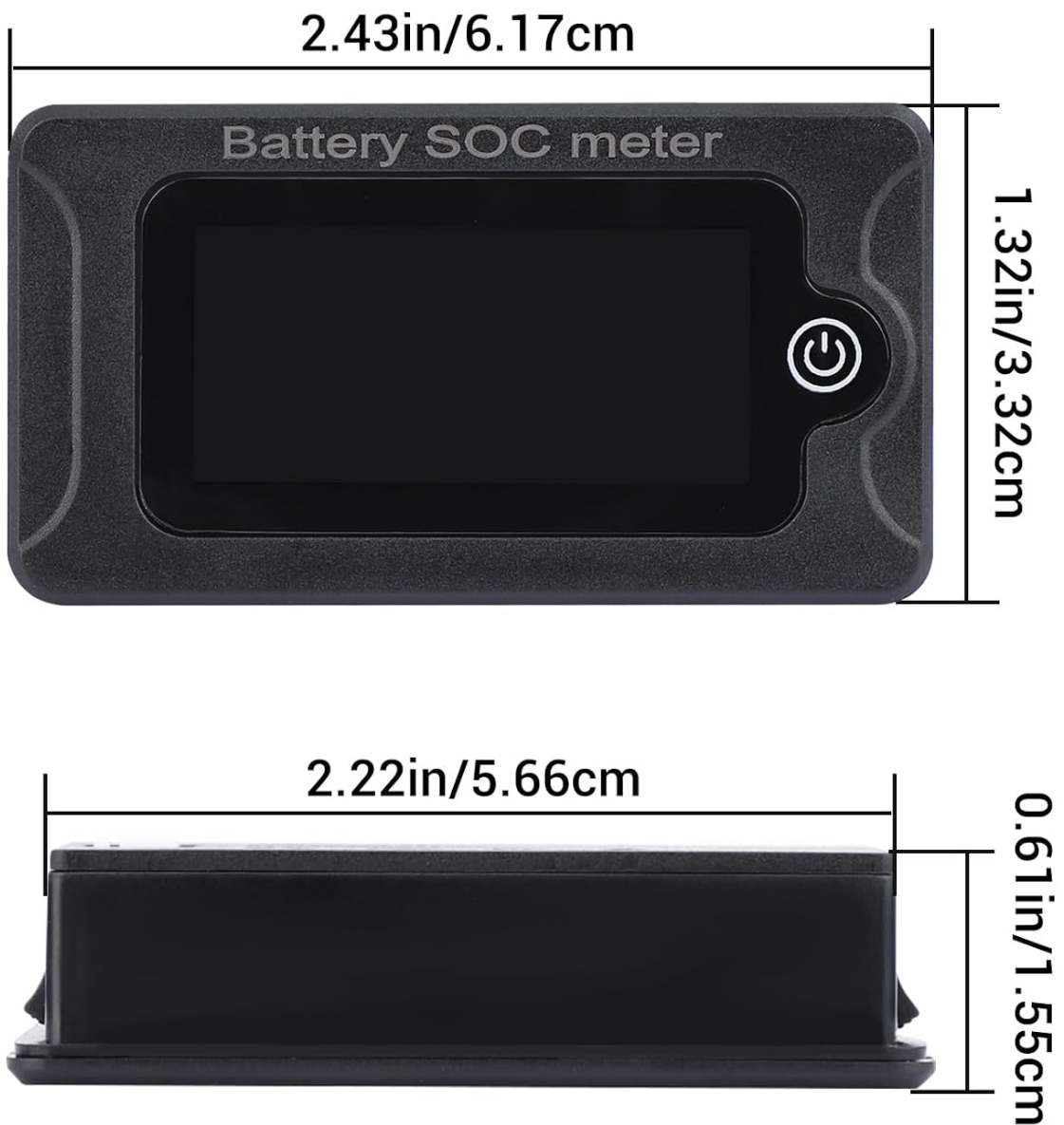


Figure 1: Product dimensions for the DROK 12V Battery Capacity Volt Monitor.

5. INSTALLATION

Follow these steps for proper installation of your DROK Battery Capacity Volt Monitor:

1. **Prepare Mounting Location:** Choose a suitable location for the meter. Ensure the installation dimensions (56.5 x 28.5mm) are met for a secure fit. The meter features side mounts for installation.
2. **Wiring Connection:** Connect the meter to your 12V Iron Phosphate Lithium battery.
 - Connect the **Red wire** to the **positive (+) terminal** of the battery.
 - Connect the **Black wire** to the **negative (-) terminal** of the battery.

Ensure all connections are secure and correctly polarized to prevent damage to the device or battery.

3. **Secure the Meter:** Once wired, insert the meter into the prepared opening and secure it using its side mounts.



Figure 2: Back view of the DROK Battery Capacity Volt Monitor showing the lead wire connector.

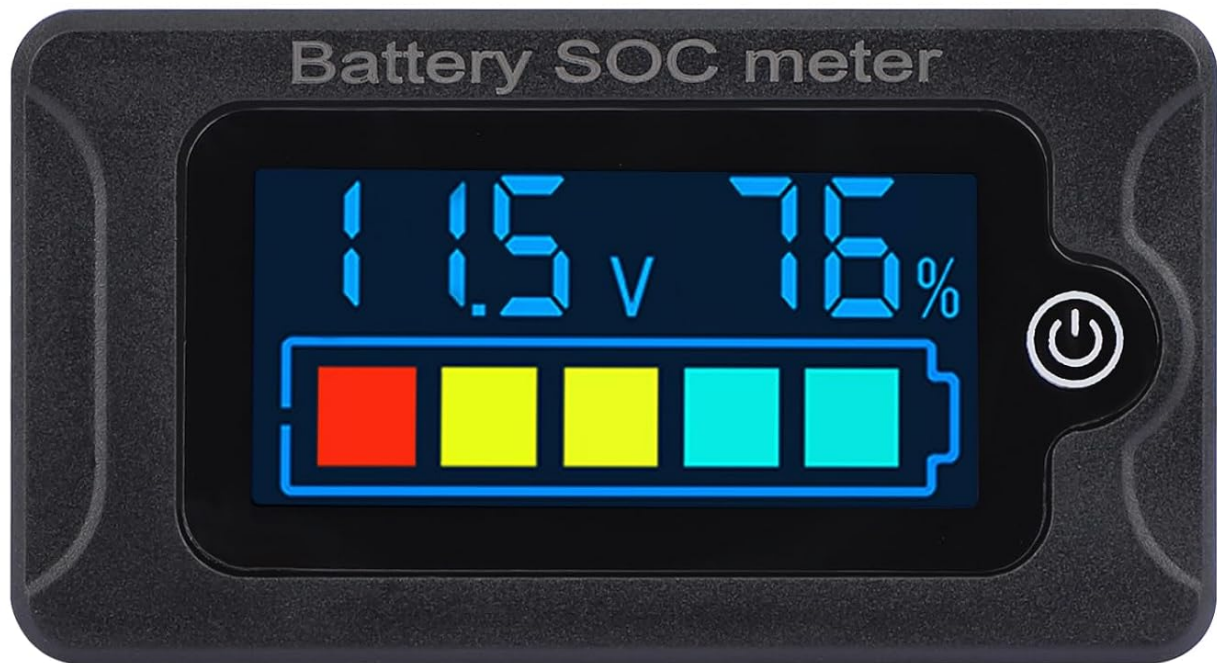


Figure 3: Wiring diagram illustrating connections for the DROK Battery Capacity Volt Monitor.

6. OPERATION

The DROK Battery Capacity Volt Monitor is designed for straightforward operation:

1. **Power On/Off:** The device features a power button (press key) on the front panel. Press this button to turn the display on or off.
2. **Display Reading:** Once powered on, the color LCD will display the current battery voltage (V) and the remaining battery capacity as a percentage (%). A five-cell battery symbol provides a visual representation of the charge level.



Figure 4: Front view of the DROK Battery Capacity Volt Monitor showing the display and power button.



Figure 5: Detailed view of the DROK Battery Capacity Volt Monitor highlighting the press key, side mount, and lead wire connector.

7. BATTERY PERCENTAGE CALIBRATION (LiFePO4)

For optimal accuracy with LiFePO4 batteries, it is recommended to calibrate the battery percentage display. The default settings may not accurately reflect the State of Charge for LiFePO4 chemistry. This procedure allows you to set custom voltage thresholds for 100% (H) and 20% (L) capacity.

Calibration Procedure:

1. **Connect Power:** Ensure the meter is connected to your battery for power.
2. **Turn On:** Press the power button to turn the display on.
3. **Enter Calibration Mode:** Once the voltage reading appears, press and hold the power button for 1-2 seconds.
4. **Set 100% Voltage (H):** The display will show "12.0v H" (default 100% voltage). Each digit will flash in sequence. To change a flashing digit, press the power button repeatedly until the desired value is reached. For LiFePO4, a common 100% voltage is 13.2V or higher.
5. **Set 20% Voltage (L):** After setting the "H" value, the display will switch to "10.5v L" (default 20% voltage). Adjust

this value similarly. For LiFePO₄, a common 20% voltage is 12.0V.

6. **Save Settings:** To save your new settings, press and hold the power button for 1-2 seconds.
7. **Discard Changes:** To discard changes, simply wait for the display to time out (approximately 10 seconds) without pressing the button.

Note: Accurate calibration significantly improves the reliability of the percentage display for LiFePO₄ batteries. Consult your battery's specifications for precise voltage thresholds.

8. TROUBLESHOOTING

- **No Display:**
 - Check all wiring connections to ensure they are secure and correctly polarized (Red to +, Black to -).
 - Verify that the battery voltage is within the operating range (10-12V).
 - Ensure the power button has been pressed to turn on the display.
- **Inaccurate Percentage Reading:**
 - Perform the battery percentage calibration procedure as described in Section 7, especially for LiFePO₄ batteries.
 - Ensure the meter is correctly configured for a 12V Iron Phosphate Lithium battery.
- **Limited Viewing Angle:**
 - The LCD display may have a limited optimal viewing angle. Adjust your viewing position or the meter's mounting angle for better visibility.

9. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the display and casing. Avoid abrasive cleaners or solvents.
- **Environmental Protection:** While the panel is splash-proof, avoid submerging the device in water or exposing it to extreme moisture.
- **Connection Checks:** Periodically inspect wiring connections for corrosion or looseness, especially in marine or RV environments.

10. WARRANTY AND SUPPORT

DROK products are designed for reliability and performance. For any issues or support inquiries, please refer to the seller's return and warranty policy. Typically, DROK offers a one-year service period for products, including replacements for quality issues.

For further assistance, please contact DROK customer support through their official channels or the platform where the product was purchased.

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.

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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