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Renogy RMS-LFPS-US

Renogy Monitoring Screen for Smart Lithium Battery Series User Manual

Model: RMS-LFPS-US

INTRODUCTION

The Renogy Monitoring Screen is a high-precision meter designed specifically for the Renogy Smart Lithium Iron Phosphate Battery Series. It provides accurate and real-time data by communicating directly with the battery management system (BMS), eliminating the need for a traditional shunt. This manual provides detailed instructions for the setup, operation, and maintenance of your monitoring screen.



Image: The Renogy Monitoring Screen connected to a Smart Lithium Iron Phosphate Battery, illustrating its primary function.

PRODUCT OVERVIEW

The monitoring screen features a clear LCD display and intuitive controls for easy access to battery information.



Image: Diagram illustrating the key components of the Renogy Monitoring Screen, including the LCD, control buttons, and communication port.

- 1. LCD Screen:** Displays various battery parameters.
- 2. Page Down Button:** Navigates through display pages.
- 3. Page Up Button:** Navigates through display pages.
- 4. Power Button:** Used for power control and shelf mode activation.
- 5. Front Cover Plate:** Protective casing.
- 6. RJ45 Communication Port:** Connects to the battery's BMS.

SETUP

The Renogy Monitoring Screen is designed for plug-and-play operation, requiring no complex system configuration or calibration.

Installation Steps

- 1. Prepare the Mounting Surface:** Choose a flat, stable surface near your Smart Lithium Iron Phosphate Battery.
- 2. Remove Front Cover:** Carefully detach the front cover plate from the monitoring screen.
- 3. Mark Drilling Points:** Use the monitoring screen as a template to mark the four screw holes on your chosen surface.
- 4. Secure the Screen:** Mount the monitoring screen to the surface using the provided M2.9 x 13 screws.
- 5. Reattach Front Cover:** Snap the front cover plate back onto the secured monitoring screen.

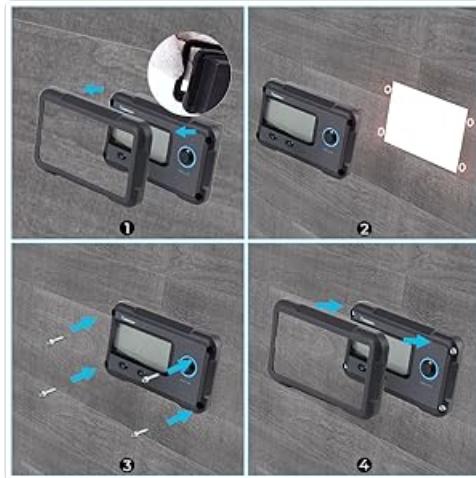


Image: Step-by-step visual guide for mounting the monitoring screen.

Connecting to Battery

Connect the monitoring screen directly to your Renogy Smart Lithium Iron Phosphate Battery using the included RJ45 communication cable.

- Insert one end of the RJ45 communication cable into the RJ45 Communication Port on the back of the monitoring screen.
- Insert the other end of the RJ45 communication cable into the RS485 Up Communication Port on your Renogy Smart Lithium Iron Phosphate Battery.

Accurate Tracking

Tells you everything you need to know about the battery, without any more guesswork.

888.8 ^v

Present Voltage

-888.8 ^A

Present Current

888.8 ^{AH}

Remaining Capacity

888.8 ^{soc%}

State of Charge

888.8 ^h

Remaining Time

88 

Warning Code



Battery Level



Number of Paralleled Batteries



Self-Heating Function
(for compatible batteries)



Image: Illustration of the simple plug-and-play connection between the monitoring screen and the battery using an RJ45 cable.

OPERATING INSTRUCTIONS

Once connected, the monitoring screen will automatically power on and begin displaying battery information. Use the Page Up and Page Down buttons to navigate through different display screens.

Display Information

The screen provides comprehensive data about your battery bank's status:

Battery Bank Monitoring

Monitors the charging/discharging process of the parallel battery bank with inter-battery communication enabled.



Image: Visual representation of the detailed battery information available on the monitoring screen.

- **Present Voltage:** Current voltage of the battery bank.
- **Present Current:** Current flowing in or out of the battery bank.
- **Remaining Capacity (AH):** Available amp-hours in the battery bank.
- **State of Charge (SoC%):** Percentage of charge remaining.
- **Remaining Time:** Estimated time until the battery is fully discharged or charged at current load/charge rate.
- **Warning Code:** Displays codes for abnormal conditions (see Troubleshooting section).
- **Number of Paralleled Batteries:** Indicates how many batteries are connected in parallel.
- **Battery Level:** Graphical representation of battery charge.
- **Self-Heating Function:** Indication for compatible batteries.

Battery Bank Monitoring

The screen monitors the charging and discharging process of parallel battery banks with inter-battery communication enabled.

Battery Shelf Mode

When not in use, switch the battery/battery bank to shelf mode to save power.



Image: The monitoring screen actively displaying data from a setup with two parallel Renogy Smart Lithium Iron Phosphate Batteries.

SPECIAL FEATURES

Battery Shelf Mode

To preserve power when the battery or battery bank is not in use for an extended period, you can switch it to shelf mode.

- To activate shelf mode, press and hold the Power Button for 3 seconds.
- The screen will indicate when shelf mode is active.
- To exit shelf mode, press the Power Button again.

Comprehensive Protection



Error Code	Battery Status
01	Battery High Temp Warning (Charge / Discharge)
02	Battery Low Temp Warning (Charge)
03	Battery Low Temp Warning (Discharge)
04	Over-Voltage Protection (Battery / Battery Cell)
05	Battery Under-Voltage Warning
06	Charge Over-Current Warning
07	Discharge Over-Current Warning
08	Battery High Temp Protection (Charge)
09	Battery Low Temp Protection (Charge)

Image: Demonstrates how to activate the battery shelf mode by holding the power button for three seconds.

MAINTENANCE

The Renogy Monitoring Screen requires minimal maintenance. Keep the screen clean and free from dust and moisture. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.

- Ensure the RJ45 communication cable is securely connected at all times.
- Periodically check for any physical damage to the screen or cable.
- Store the device in a dry environment when not in use for extended periods.

TROUBLESHOOTING

The monitoring screen provides warning codes to help identify and address potential issues with your battery bank. Refer to the table below for common warning codes and their meanings.

Dimension



Additional Components



RJ45 Communication Cable (16.4 ft / 5 m)



M2.9 x 13 Screws (4)

Image: A comprehensive table detailing various error codes displayed on the monitoring screen and their corresponding battery status descriptions.

Warning Codes and Battery Status

Error Code	Battery Status
01	Battery High Temp Warning (Charge / Discharge)
02	Battery Low Temp Warning (Charge)
03	Battery Low Temp Warning (Discharge)
04	Over-Voltage Protection (Battery / Battery Cell)
05	Battery Under-Voltage Warning
06	Charge Over-Current Warning

Error Code	Battery Status
07	Discharge Over-Current Warning
08	Battery High Temp Protection (Charge)
09	Battery Low Temp Protection (Charge)

If you encounter a warning code, refer to this table to understand the issue. For persistent problems or issues not listed, please contact Renogy customer support.

SPECIFICATIONS

Parameter	Value
Brand	Renogy
Model	RMS-LFPS-US
Product Dimensions	7.01 x 11 x 3.18 cm
Item Weight	63.5 g (0.14 Pounds)
Voltage	12 Volts (DC Min. Operating)
Color	Black
Measurement Type	Voltmeter
Upper Temperature Rating	113 Degrees Fahrenheit
UPC	810009714323

Plug and Play

Simply plug and play, no system configuration or calibration needed.

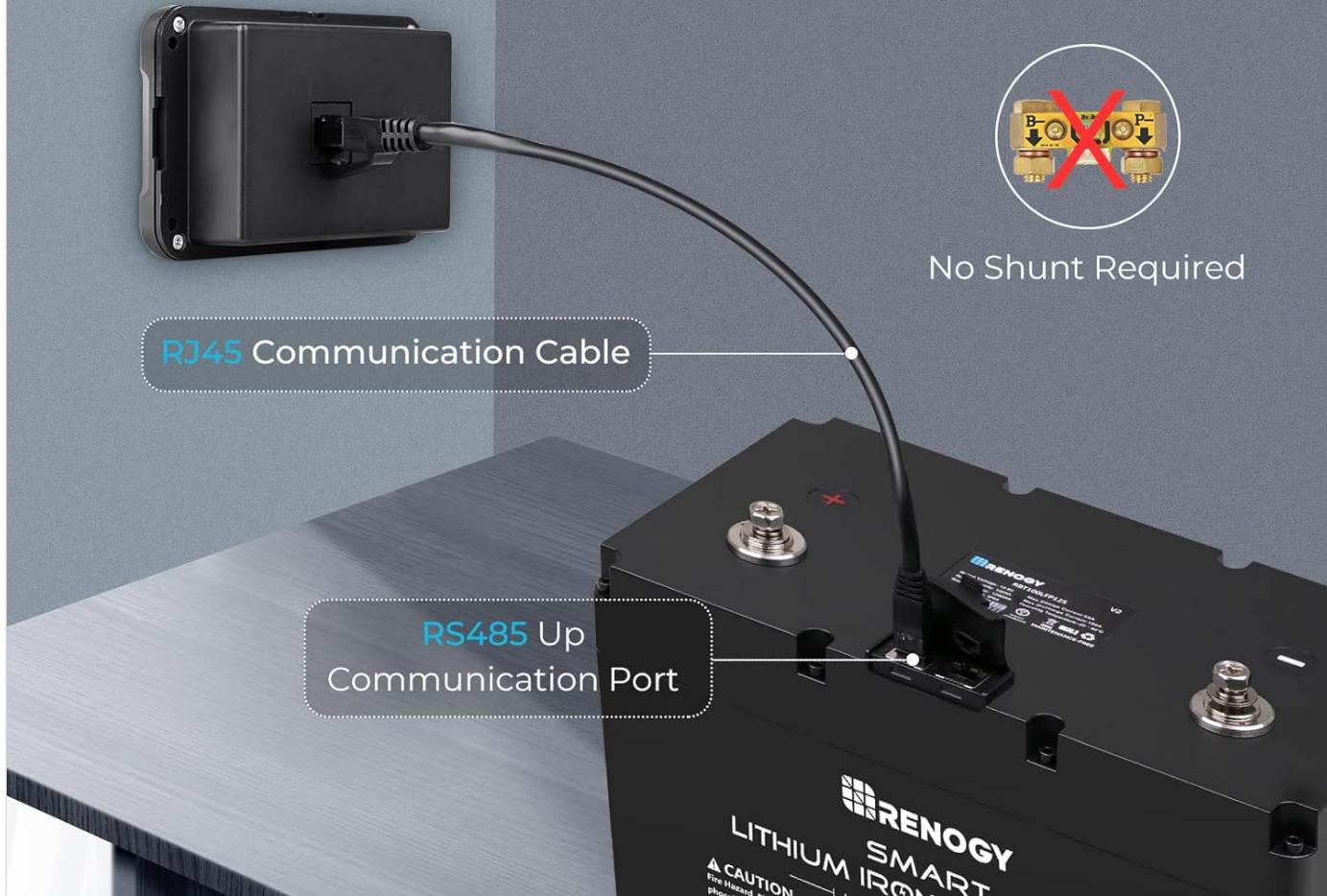


Image: The monitoring screen displaying voltage, highlighting its primary measurement capability.

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Renogy website or contact their customer service directly. Ensure you have your product model number (RMS-LFPS-US) and purchase details available when seeking support. Renogy is committed to providing reliable renewable energy products and support for energy independence.

Renogy Official Website: www.renogy.com

	<p>Renogy Monitoring Screen for Smart Lithium Battery Series - Installation and Operation Manual</p> <p>This manual provides detailed installation, operation, and troubleshooting instructions for the Renogy Monitoring Screen designed for Smart Lithium Iron Phosphate Battery Series. Learn about its features, specifications, and how to connect and use it with your battery system.</p>
	<p>Renogy Monitoring Screen for Smart Lithium Battery Series User Manual</p> <p>User manual for the Renogy Monitoring Screen (RMS-LFPS), providing installation, operation, and troubleshooting guidance for Smart Lithium Iron Phosphate Batteries. Details key features, specifications, safety instructions, and FCC compliance for off-grid energy storage systems.</p>
	<p>Renogy BT-2 Bluetooth Module User Manual and Technical Specifications</p> <p>Comprehensive guide to the Renogy BT-2 Bluetooth Module, detailing its features, identification of parts, operation, technical specifications, and app connection for solar charge controllers.</p>
	<p>Renogy RMS-DCDC Monitoring Screen User Manual for DC-DC Battery Chargers</p> <p>Comprehensive user manual for the Renogy RMS-DCDC monitoring screen, covering installation, operation, features, troubleshooting, and technical specifications for DC-DC MPPT battery chargers. Includes detailed guides on setup, parameter settings, and error code resolution.</p>
	<p>Renogy RMS-DCDC Monitoring Screen User Manual</p> <p>User manual for the Renogy RMS-DCDC Monitoring Screen, providing detailed information on installation, operation, LCD icons, troubleshooting, and technical specifications for DC-DC MPPT battery chargers.</p>
	<p>Renogy BT-2 Bluetooth Module User Manual</p> <p>Learn about the Renogy BT-2 Bluetooth Module, a device that enhances the monitoring and control capabilities of Renogy solar charge controllers, smart lithium batteries, and inverter chargers. This manual provides general information, key features, identification of parts, app download instructions, operation guidance, and technical specifications for the BT-2 module.</p>