

## RICH SOLAR RS-K8004D

# RICH SOLAR 800W Premium Solar Kit User Manual

Model: RS-K8004D

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient installation, operation, and maintenance of your RICH SOLAR 800 Watt Premium Solar Kit. Please read this manual thoroughly before beginning installation or operation. Retain this document for future reference.

## 2. SAFETY INFORMATION

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**WARNING: Electrical Shock Hazard. Always exercise extreme caution when working with electrical systems. Solar panels generate electricity when exposed to light. Batteries store significant energy. Improper installation or handling can result in serious injury or death.**

- Always wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Ensure all components are correctly rated for your system's voltage and current.
- Disconnect all power sources before making or breaking electrical connections.
- Avoid touching live wires or terminals.
- Do not attempt to disassemble or repair damaged components. Contact RICH SOLAR support.
- Install the system in a well-ventilated area, away from flammable materials.

## 3. PACKAGE CONTENTS

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Your RICH SOLAR 800W Premium Solar Kit (Model RS-K8004D) includes the following components:

- 4 x 200W Monocrystalline Solar Panels
- 1 x 60A MPPT Charge Controller
- 1 x BT-1 Bluetooth Module
- 1 x 20' 10 AWG Solar Cable Set (Panel to Controller)
- 1 x 10' 8 AWG Solar Cable Set (Controller to Battery)
- 1 x 30A Inline Fuse Holder with Fuse

- 4 x Z Brackets (Mounting Hardware)



Figure 1: All components included in the RICH SOLAR 800W Premium Solar Kit.

# MPPT Charge Controller



Figure 2: The 60A MPPT Solar Charge Controller, a key component for efficient power management.

## 4. SPECIFICATIONS

Feature	Specification
Brand	RICH SOLAR
Model Number	RS-K8004D
Maximum Power	800 Watts
Panel Type	Monocrystalline Silicon
Panel Dimensions (each)	58.7"L x 26.8"W x 1.4"H
Item Weight (each panel)	26.5 Pounds
Charge Controller	60A MPPT with Bluetooth
System Voltage	12 Volts

Efficiency	High Efficiency (99% tracking, 98% peak conversion)
Material	Aluminum, Monocrystalline Silicon, Tempered Glass
Usage	Outside, RV, Van, Off-grid, DIY, Marine

## Fast and Easy Installation

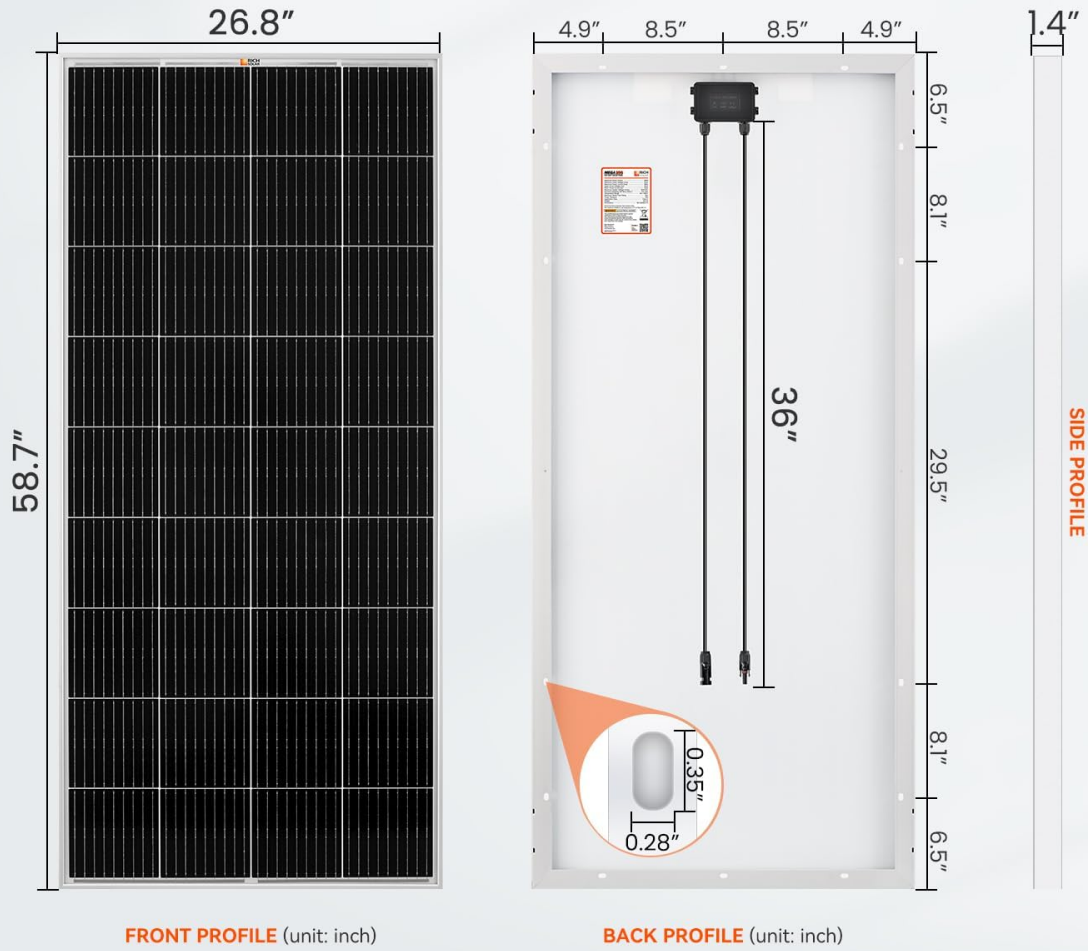


Figure 3: Detailed dimensions of a single 200W Monocrystalline Solar Panel.

# Rugged and Durable

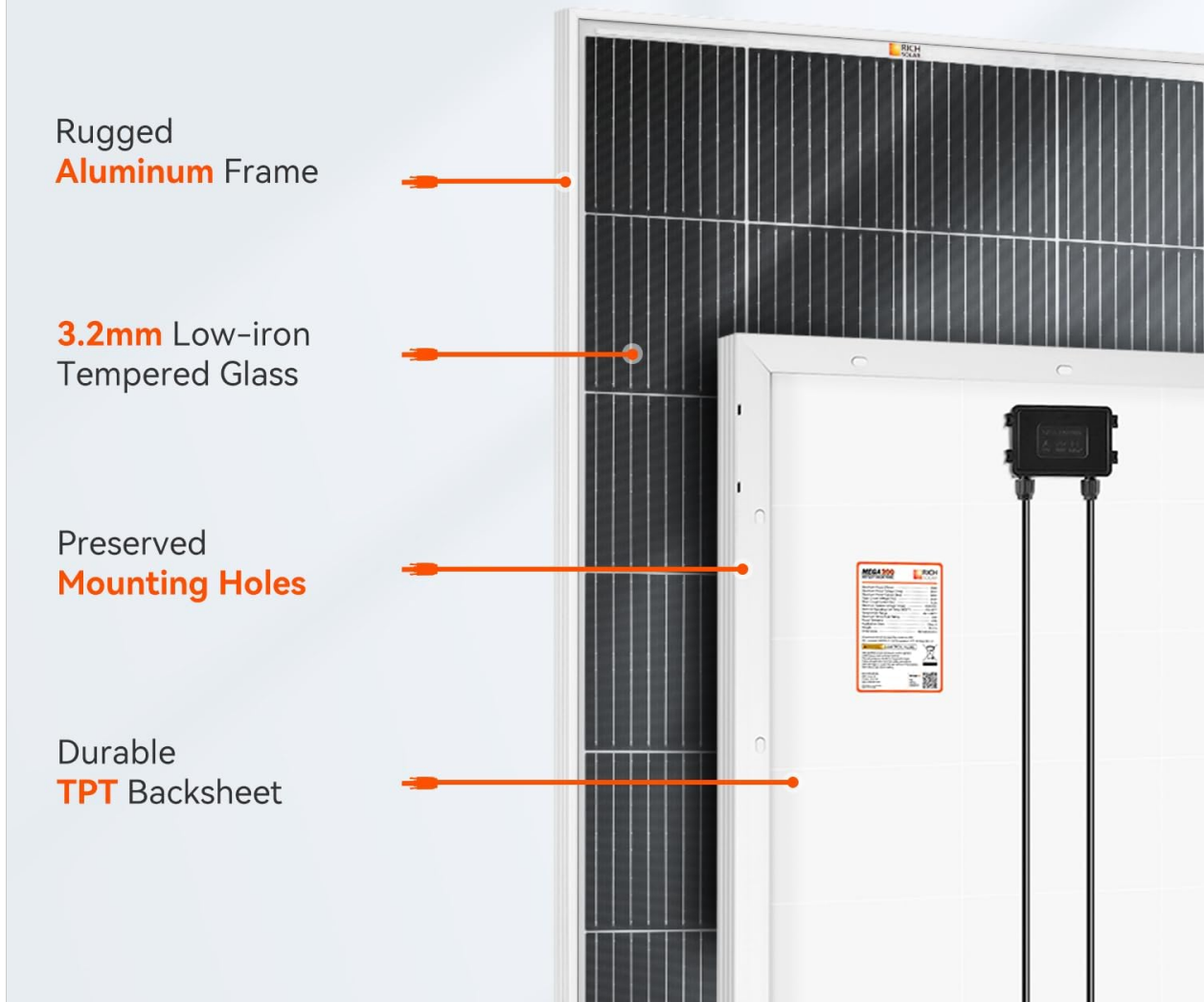


Figure 4: Construction details highlighting the rugged aluminum frame, tempered glass, and durable backsheet.

## 5. SETUP & INSTALLATION

The RICH SOLAR kit is designed for simple installation with pre-assembled wiring harnesses. Follow these general steps for system setup. For detailed wiring, refer to the provided diagram and consult a qualified electrician if unsure.

### 5.1 Mounting Solar Panels

1. Choose a location for your solar panels that receives maximum direct sunlight throughout the day, free from shading.
2. Use the included Z-brackets to securely mount the panels to your desired surface (e.g., RV roof, cabin). Ensure proper ventilation around the panels.
3. Orient the panels for optimal sun exposure based on your location and seasonal needs.

### 5.2 Wiring Connections

1. Connect the solar panels to the 60A MPPT Charge Controller using the 20' 10 AWG Solar Cable Set. Ensure correct polarity (positive to positive, negative to negative).

2. Install the 30A Inline Fuse Holder on the positive line between the solar panels and the charge controller for overcurrent protection.
3. Connect the 60A MPPT Charge Controller to your 12V battery bank using the 10' 8 AWG Solar Cable Set. Again, observe correct polarity.
4. Connect the BT-1 Bluetooth Module to the RS232 port on the MPPT charge controller.
5. Ensure all connections are tight and secure to prevent loose contacts and potential hazards.

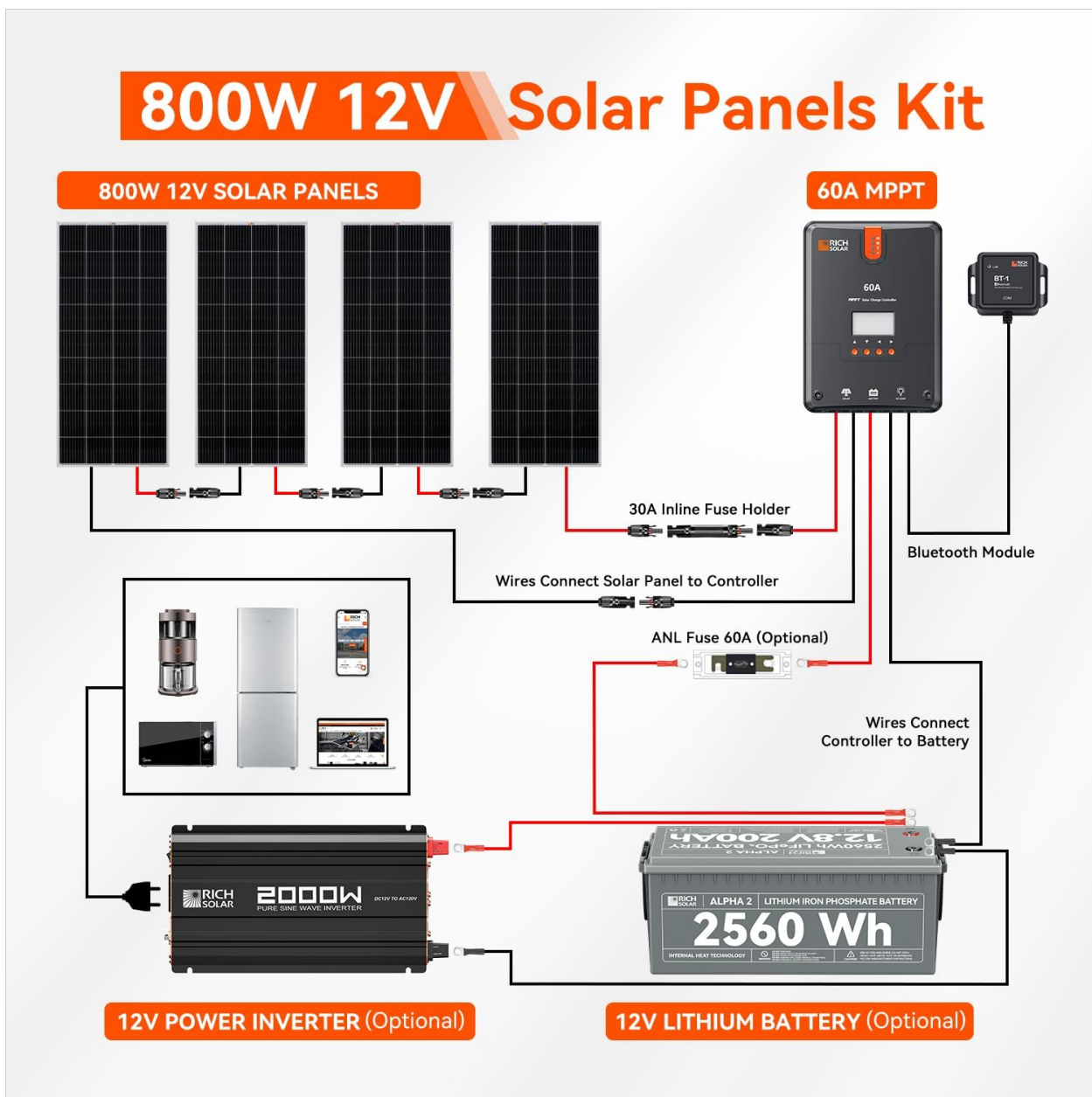


Figure 5: General wiring diagram for the RICH SOLAR 800W Solar Kit, showing connections between panels, controller, and battery.

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Video 1: An overview of the 12V Solar System Bundle, demonstrating components and basic setup principles.

## 6. OPERATING INSTRUCTIONS

Once installed, your RICH SOLAR 800W Premium Solar Kit will automatically begin generating power when exposed to sunlight. The 60A MPPT Charge Controller manages the power flow to your battery bank.

### 6.1 MPPT Charge Controller

The digital MPPT charge controller provides real-time updates on volts, amps, and amp-hours. Use the buttons on the controller to navigate through the display menus and monitor system performance. The controller protects your battery from overcharging and over-discharging.



Figure 6: The 60A MPPT Charge Controller connected to a battery, illustrating its role in power conversion and charging.

## 6.2 Bluetooth Monitoring

The included BT-1 Bluetooth Module allows you to monitor your solar system's performance remotely via a compatible smartphone application. Download the RICH SOLAR app from your device's app store and follow the in-app instructions to connect to your charge controller. This provides convenient access to system data and settings.

## 7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your solar kit.

- **Solar Panels:** Periodically clean the surface of the solar panels with a soft cloth and mild, non-abrasive cleaner to remove dirt, dust, and debris that can reduce efficiency. Ensure panels are dry before reconnecting if disconnected for cleaning.
- **Connections:** Annually inspect all electrical connections for tightness and corrosion. Loose or corroded

connections can lead to power loss or safety hazards.

- **Charge Controller:** Keep the charge controller in a dry, well-ventilated area. Ensure its cooling fins are free from obstructions.
- **Battery (Optional):** If using a lead-acid battery, check electrolyte levels and terminal cleanliness regularly. For lithium batteries, follow the manufacturer's specific maintenance guidelines.

## 8. TROUBLESHOOTING

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If your solar system is not performing as expected, refer to the following common issues and solutions:

Problem	Possible Cause	Solution
No power output from panels	No sunlight, shaded panels, loose connections, faulty fuse.	Ensure panels are in direct sunlight. Check for obstructions. Verify all wiring connections are secure. Inspect the inline fuse.
Low power output	Partial shading, dirty panels, incorrect panel angle, low sunlight intensity.	Clean panels. Adjust panel angle for optimal sun exposure. Check for partial shading.
Battery not charging	Loose battery connections, faulty charge controller, battery issues.	Check battery wiring. Monitor charge controller display for error codes. Test battery health.
Bluetooth module not connecting	Module not properly connected, app issues, device compatibility.	Ensure module is securely plugged into the controller. Restart the app and your device. Check app compatibility.

For issues not listed here or if troubleshooting steps do not resolve the problem, please contact RICH SOLAR customer support.

## 9. WARRANTY

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RICH SOLAR provides a **25-Year Output Warranty** for the solar panels included in this kit. This warranty covers the power output performance of the panels under standard test conditions. Specific terms and conditions apply. Please refer to the official RICH SOLAR warranty documentation for full details.

## 10. CUSTOMER SUPPORT

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RICH SOLAR is committed to providing free, lifetime After-Sale Support for all its products. If you have any questions, require technical assistance, or need to report an issue, please contact our customer service team:

- **Website:** [www.richsolar.com](http://www.richsolar.com)
- **Email:** [support@richsolar.com](mailto:support@richsolar.com)
- **Phone:** 1-800-831-9889

