

Sriya Sriyamrdocskqh6-13

Sriya MPPT Solar Controller User Manual

Model: MPK2-60A (Sriyamrdocskqh6-13)

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Sriya MPPT Solar Controller, model MPK2-60A. This device is designed to maximize the power output from your solar panels to efficiently charge various battery types, ensuring optimal performance for your solar power system.

The controller features high conversion efficiency, comprehensive safety protections, a universal design for lithium batteries with self-activation, and an intuitive digital display for easy parameter setting and monitoring.

2. PRODUCT FEATURES

- **High Conversion Rate:** Utilizes high-efficiency chip technology with Maximum Power Point Tracking (MPPT) to achieve up to 99% solar energy utilization.
- **High Safety:** Integrated protections against high and low voltage, overload, overheating, reverse polarity (positive and negative), output short circuit, overcurrent, and general damage.
- **Universal Use:** Compatible with various battery types, including lithium batteries, and includes a lithium battery self-activation function.
- **Digital Display:** Features an intelligent human-computer interaction display for straightforward parameter configuration and real-time data monitoring.
- **Wide Application:** Ideal for solar power generation systems, solar street lights, solar chargers, solar light boxes, RVs, and other similar applications.

3. SPECIFICATIONS

Specification	Value
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Item Type	Solar Controller
Material	Aluminum Alloy, ABS
Rated Voltage	DC12V, 24V, 36V, 48V
Color	Blue
Maximum Photovoltaic Voltage	DC150V
Package Dimensions	12.2 x 9.84 x 5.91 inches
Item Weight	8.69 pounds
Model Number	Srliyamrdockqh6-13

4. PACKAGE CONTENTS

Upon opening the package, please verify that all components are present and undamaged:

- 1 x Srliya MPPT Solar Controller (MPK2-60A)
- 1 x User Manual (this document)
- 1 x Connection Cable

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your solar controller. Please follow these steps carefully:

1. **Choose a Suitable Location:** Install the controller in a cool, dry, and well-ventilated area, away from direct sunlight, flammable materials, and moisture. Ensure there is sufficient space around the controller for air circulation, especially around the cooling fan.
2. **Mounting:** Securely mount the controller to a vertical surface using appropriate fasteners. Ensure it is stable and will not vibrate.
3. **Wiring Sequence:**
 - **Connect Battery First:** Connect the battery to the controller's battery terminals. Ensure correct polarity (positive to positive, negative to negative). The controller will power on and display battery voltage.
 - **Connect Load (if applicable):** Connect the DC load to the controller's load terminals. Ensure correct polarity.
 - **Connect Solar Panel Last:** Connect the solar panel array to the controller's PV terminals. Ensure correct polarity and that the PV open-circuit voltage does not exceed the maximum PV voltage (DC150V).

***Important:** Always connect the battery first and disconnect the solar panel first when disassembling the system. Incorrect wiring sequence can damage the controller.*

4. **Connect Temperature Sensor:** If included, connect the temperature sensor to the designated port. This helps the controller compensate for battery charging voltage based on ambient temperature.
5. **Verify Connections:** Double-check all connections for tightness and correct polarity before applying power.



Figure 5.1: Front view of the Sriya MPPT Solar Controller, showing the digital display and control buttons.



Figure 5.2: Detailed view of the connection terminals located at the bottom of the controller.

6. OPERATING INSTRUCTIONS

Once installed and powered, the controller will automatically begin operation. The digital display provides real-time information and allows for parameter adjustments.

6.1. Digital Display Overview



Figure 6.1: Close-up of the controller's digital display.

The display typically shows:

- **PV (Photovoltaic) Input:** Current and voltage from the solar panels.
- **BATT (Battery) Status:** Battery voltage, charge status, and battery type.
- **OUTPUT (Load) Status:** Current and status of the DC load.

- **System Indicators:** Icons for charging, discharging, errors, etc.

6.2. Button Functions

The controller typically features three buttons:

- **Up/Increase Button (▲):** Navigates up through menus or increases parameter values.
- **Menu/Confirm Button (M):** Enters menu, confirms selections, or cycles through display screens.
- **Down/Decrease Button (▼):** Navigates down through menus or decreases parameter values.

6.3. Parameter Settings

Refer to the on-screen menu for specific parameter adjustments such as battery type, charge voltage settings, load control modes, etc. Use the Up/Down buttons to navigate and the Menu button to select and confirm.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your solar controller.

- **Cleanliness:** Keep the controller clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Ventilation:** Ensure that the cooling fan and ventilation openings are not obstructed. Periodically check for dust buildup on the fan and clean if necessary.



Figure 7.1: Side view highlighting the cooling fan.

- **Connection Checks:** Periodically inspect all wiring connections for tightness and corrosion. Loose connections can lead to overheating and poor performance.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your solar controller. For problems not listed here, please contact customer support.

Problem	Possible Cause	Solution
Controller not powering on	No battery connected or reverse polarity; Battery voltage too low.	Ensure battery is connected with correct polarity; Charge battery externally if voltage is too low.

No charging from solar panels	Solar panels not connected or reverse polarity; Insufficient sunlight; PV voltage too low or too high.	Check PV connections and polarity; Ensure panels are in direct sunlight; Verify PV voltage is within controller's operating range (below DC150V).
Load not working	Load not connected or reverse polarity; Overload on load output; Battery voltage too low; Load control setting.	Check load connections and polarity; Reduce load or check for short circuit; Charge battery; Adjust load control settings on the display.
Overheating	Poor ventilation; Excessive ambient temperature; Overload.	Ensure adequate airflow around the controller; Relocate to a cooler area; Reduce system load.

9. WARRANTY AND SUPPORT

Srliya products are manufactured to high quality standards. For warranty information specific to your purchase, please refer to the documentation provided at the time of purchase or contact your retailer.

For technical support, troubleshooting assistance beyond this manual, or inquiries regarding parts and service, please contact Srliya customer service through the platform where you purchased the product or visit the official Srliya website for contact details.

Please have your product model number (MPK2-60A) and serial number (if applicable) ready when contacting support.

