

OAE MP-60A

OAE 60A MPPT Solar Charge Controller User Manual

Model: MP-60A

INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your OAE 60A MPPT Solar Charge Controller. This device is designed to regulate power flow from solar panels to various battery types, ensuring efficient charging and optimal system performance. It supports 12V, 24V, 36V, and 48V auto battery systems and is compatible with sealed, gel, flooded, and lithium batteries.

The controller features advanced Maximum Power Point Tracking (MPPT) technology to maximize energy harvest from your solar array, achieving transfer efficiency of up to 97%. A multi-function LCD screen provides real-time operating data, energy statistics, and fault records for easy troubleshooting.

SAFETY INFORMATION

- Read all instructions carefully before installation and operation.
- Ensure all wiring is correctly sized and properly insulated.
- Always disconnect power from the solar panels and battery before performing any installation or maintenance.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.
- Do not disassemble or attempt to repair the controller yourself. Refer to qualified personnel for service.
- Wear appropriate personal protective equipment (PPE) during installation, including gloves and eye protection.
- Ensure proper grounding of the system.

PRODUCT OVERVIEW

The OAE 60A MPPT Solar Charge Controller is a robust unit designed for efficient solar power management. Key components and features include:

- **LCD Display:** Provides clear operating data and working conditions.
- **Control Buttons:** Menu, Down, Up, and Enter buttons for navigation and settings adjustment.
- **Cooling Fan:** Integrated fan for thermal management.
- **Hang Bracket:** For secure mounting.

- **Connection Terminals:** Clearly labeled terminals for solar panel input, battery connection, and DC load output.
- **Temperature Interface:** For external temperature sensor connection.
- **RS485 Communication Port:** Enables Wi-Fi remote monitoring with an additional module (sold separately).



Figure 1: Front view of the OAE 60A MPPT Solar Charge Controller, showing the LCD display and control buttons.

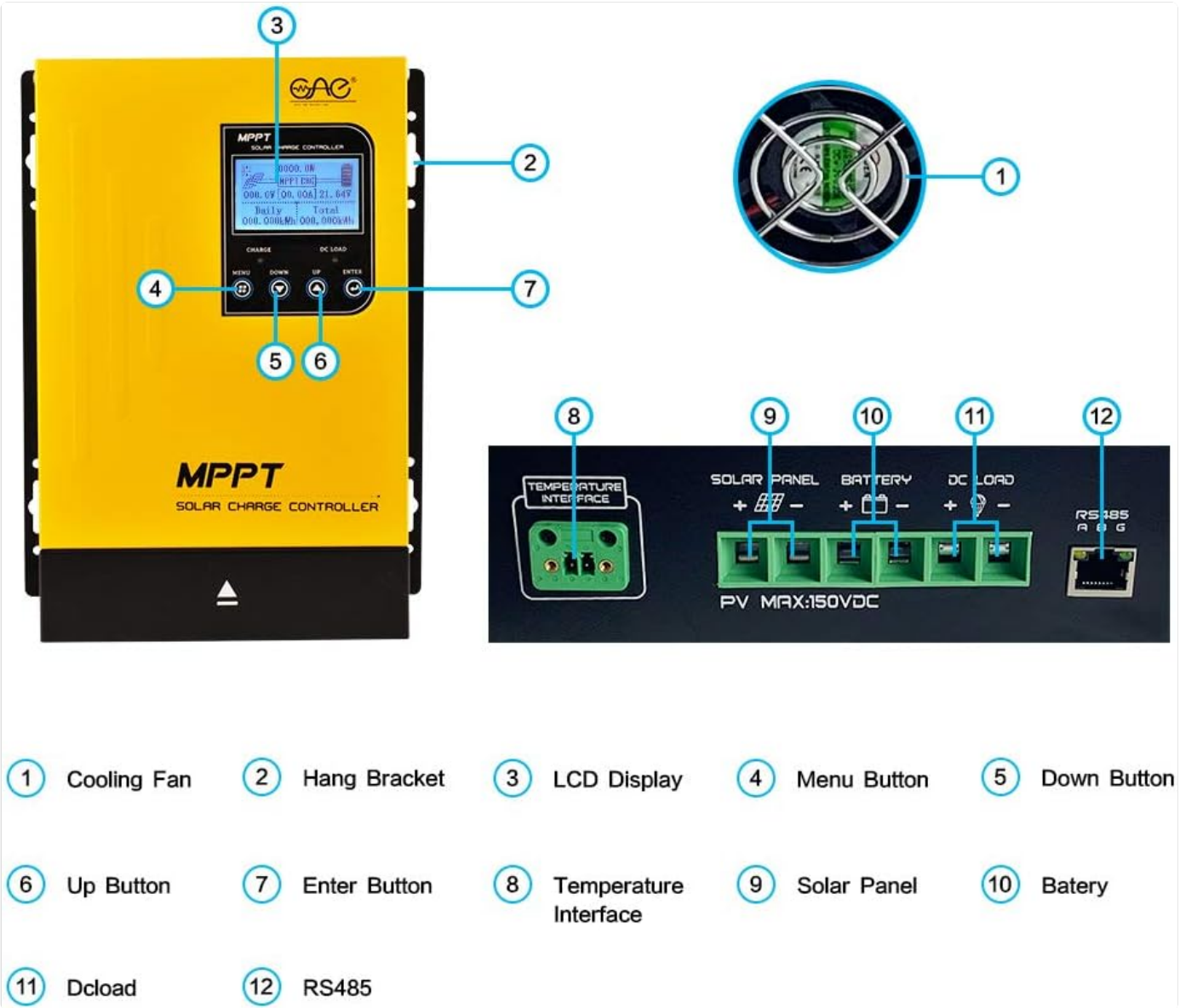


Figure 2: Diagram illustrating the main components of the controller, including the cooling fan, hang bracket, LCD display, control buttons, temperature interface, solar panel terminals, battery terminals, DC load terminals, and RS485 port.

60A

Weight:3.62KG



Figure 3: Side view of the controller with key dimensions: 230mm (length), 313mm (width), and 91mm (height).

SETUP

Installation Steps:

1. **Mounting:** Securely mount the controller using the provided hang bracket. Ensure adequate clearance around the unit for proper ventilation, especially for the cooling fan.
2. **Wiring Preparation:** Before connecting any wires, ensure all power sources (solar panels and battery) are disconnected. Loosen the screws on the bottom of the MPPT controller to access the wiring terminals.
3. **Battery Connection:** Connect the battery to the controller first. Ensure correct polarity (+ to + and - to -). This is crucial for the controller to detect the system voltage.
4. **Solar Panel Connection:** Connect the solar panels to the controller. Again, observe correct polarity. Ensure the solar panel's open-circuit voltage (Voc) does not exceed the controller's maximum input voltage (150V).
5. **DC Load Connection:** Connect your DC loads (e.g., lights, fans) to the DC load terminals. Ensure the total current draw of your loads does not exceed the controller's rated load current.

6. **Temperature Sensor (Optional):** Connect the external temperature sensor to the temperature interface for accurate battery temperature compensation during charging.
7. **RS485 Communication (Optional):** If using Wi-Fi remote monitoring, connect the RS485 module to the RS485 port.
8. **Power On:** Once all connections are secure and verified, reconnect the battery power, followed by the solar panel power. The controller will boot up and display system information.

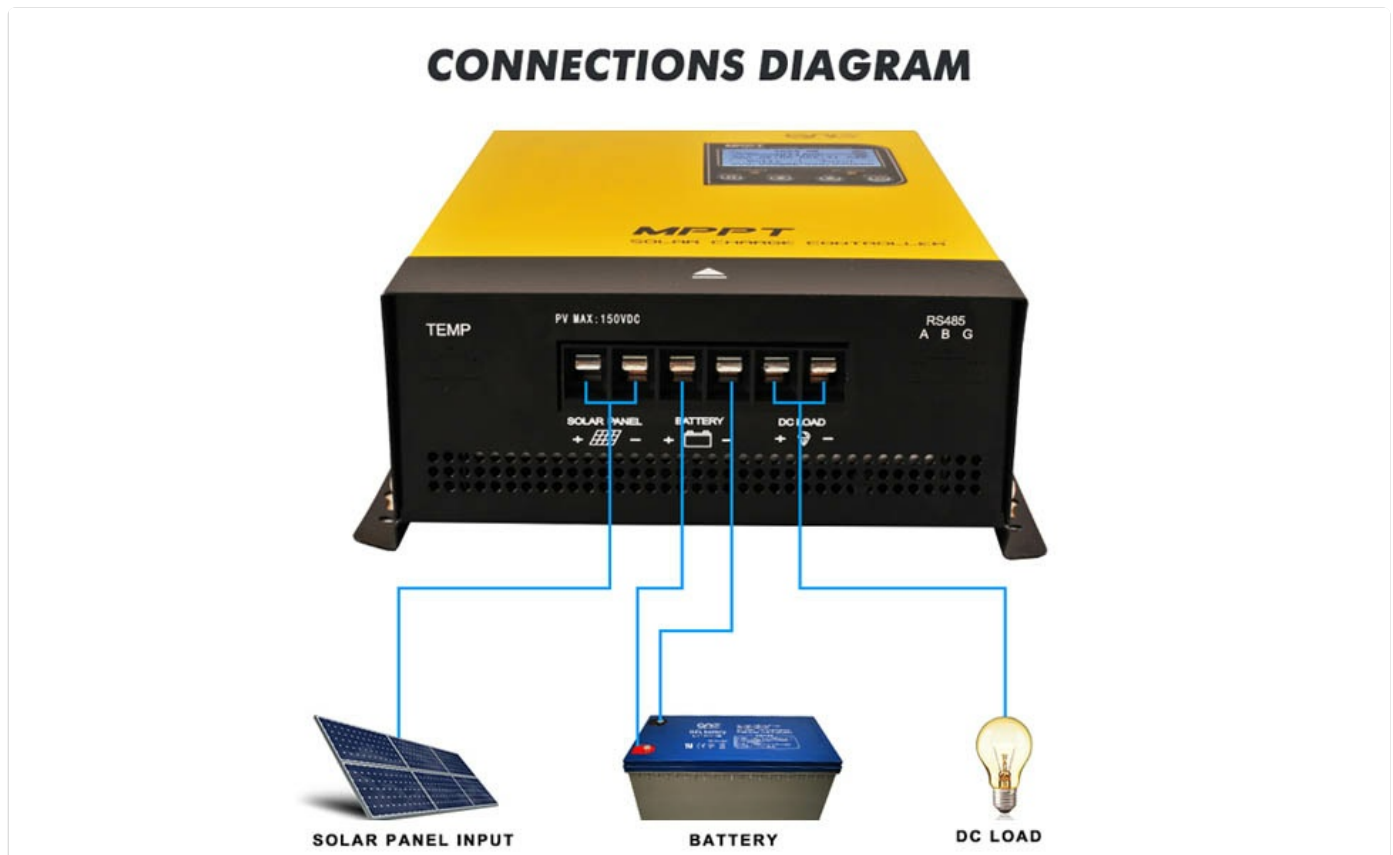


Figure 4: Connections diagram showing solar panel input, battery, and DC load connections.

Your browser does not support the video tag.

Video 1: This video demonstrates the unboxing, physical overview, and wiring connection process for the OAE 60A MPPT Solar Charge Controller, including connecting to solar panels, battery, and DC load. It also shows the initial power-up and basic display settings.

OPERATING INSTRUCTIONS

LCD Display and Menu Navigation:

The LCD display provides real-time information about your solar system. Use the MENU, DOWN, UP, and ENTER buttons to navigate through the various screens and adjust settings.

MPPT Solar Controller



► Package Display

Figure 5: Detailed description of the main interface display, showing PV module voltage, daily power generation, charging power, charging current, battery capacity indication, battery voltage, total power generation, date, charging state, external temperature, internal temperature, battery type/system voltage current level, and real-time.



Figure 6: Menu navigation flow for various settings including Sound Set, Brightness Set, Contrast Set, Time/Date Set, Language Set, Record Query, Delete Record, SYS.INFO.Query, DC Output Set, COMM. Set, and Parameter Set.

Setting Battery Type:

The controller supports four charging options: Sealed, Gel, Flooded, and User-defined. It is crucial to select the correct battery type for optimal charging and battery longevity.

1. Press the MENU button to enter the main menu.
2. Navigate to "Parameter Set" using the UP/DOWN buttons and press ENTER.
3. Locate the "Battery Type" setting and select your battery type (Sealed, Gel, Flooded, or User-defined) using the UP/DOWN buttons.

4. Press ENTER to confirm your selection.

Load Control Modes:

The controller offers multiple load control modes for the DC output. These modes allow you to manage when your connected loads receive power.

1. Press the MENU button to enter the main menu.
2. Navigate to "DC Output Set" and press ENTER.
3. Select the desired output mode (e.g., Automatic, Time Control, Telecontrol, Off) using the UP/DOWN buttons.
4. Press ENTER to confirm. If selecting "Time Control," further settings for ON/OFF times will be available.

MAINTENANCE

- **Regular Inspection:** Periodically inspect all wiring connections for tightness and corrosion.
- **Cleaning:** Keep the controller clean and free from dust and debris. Ensure the cooling fan and ventilation openings are not obstructed.
- **Battery Health:** Monitor battery voltage and health regularly. Ensure batteries are properly maintained according to their type (e.g., checking electrolyte levels for flooded batteries).
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates to ensure optimal performance and new features.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No display on LCD	No power from battery or solar panel; incorrect wiring.	Check battery and solar panel connections and voltage. Ensure correct polarity.
Battery not charging	Solar panel issue; incorrect battery type setting; wiring problem.	Verify solar panel output. Check battery type setting on the controller. Inspect all wiring for loose connections.
Load not working	Load control mode set to OFF; overloaded load; wiring issue.	Check DC output settings. Reduce load if overloaded. Inspect load wiring.
Overheating	Poor ventilation; excessive load.	Ensure adequate airflow around the controller. Reduce load if necessary.

For persistent issues, please contact OAE customer support.

SPECIFICATIONS

Feature	Detail
Model Number	MP-60A
Brand	OAE
Display Type	LCD
Battery System Voltage	12V/24V/36V/48V Auto

Feature	Detail
MPPT Charge Current	60A
Solar Panel Max Input Voltage	150V
Supported Battery Types	Sealed, Gel, Flooded, Lithium, User-defined
Efficiency	Up to 97% transfer efficiency
Communication	RS485 (Wi-Fi remote monitoring capable with additional purchase)
Product Dimensions	7.9 x 3.5 x 12.4 inches
Item Weight	8.05 pounds
Material	Metal

WARRANTY & SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact details provided by OAE at the time of purchase or visit the official OAE website. Protection plans may be available for additional coverage.

- **Protection Plans:** 3-Year and 4-Year protection plans are available for purchase.
- **Complete Protect:** A monthly plan covering eligible past and future purchases may also be available.

For further assistance, you may visit the [OAE Store on Amazon](#).

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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

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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