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› [Vikye](#) /

› Vikye 80A MPPT L-80 Solar Charge Controller User Manual

Vikye L-80

Vikye 80A MPPT L-80 Solar Charge Controller User Manual

Model: L-80

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Vikye 80A MPPT L-80 Solar Charge Controller. This device is designed to manage power flow from your solar panels to your battery bank, ensuring optimal charging and protecting your batteries from overcharge and over-discharge. Please read this manual thoroughly before installation and use.



Image 1.1: The Vikye MPPT L-80 Solar Charge Controller shown in an outdoor solar power setup.

2. SAFETY INSTRUCTIONS

- Ensure all connections are correct and secure before applying power. Incorrect wiring can damage the controller, battery, or solar panels.
- Always connect the battery first, then the solar panel, and finally the load. Disconnect in the reverse order.
- Work with appropriate safety gear, including insulated tools and eye protection.
- Do not attempt to repair the controller yourself. Refer to qualified personnel for service.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.
- Ensure the battery bank is properly fused and protected.

3. PRODUCT OVERVIEW

The Vikye MPPT L-80 Solar Charge Controller is an intelligent device designed for efficient solar power management. It features an LCD display for real-time monitoring and user-friendly controls.

3.1 Key Features

- **Efficient MPPT Charging:** Automatically tracks the maximum power point of solar panels, improving charging efficiency by 10-30% compared to standard PWM controllers.
- **LCD Display:** Provides clear readings of system status, including PV voltage, battery voltage, load current, and charging parameters.
- **Battery Undervoltage Protection:** Automatically disconnects the load to prevent deep discharge of the battery.
- **Standby Energy Saving:** Low standby power consumption (10mA-15mA), saving over 30% energy compared to ordinary controllers.
- **Automatic 12V/24V System Recognition:** Automatically adapts to 12V or 24V battery systems.

3.2 Components

The controller features clearly labeled terminals for solar panel input, battery connection, and DC load output, along with an LCD screen and control buttons.

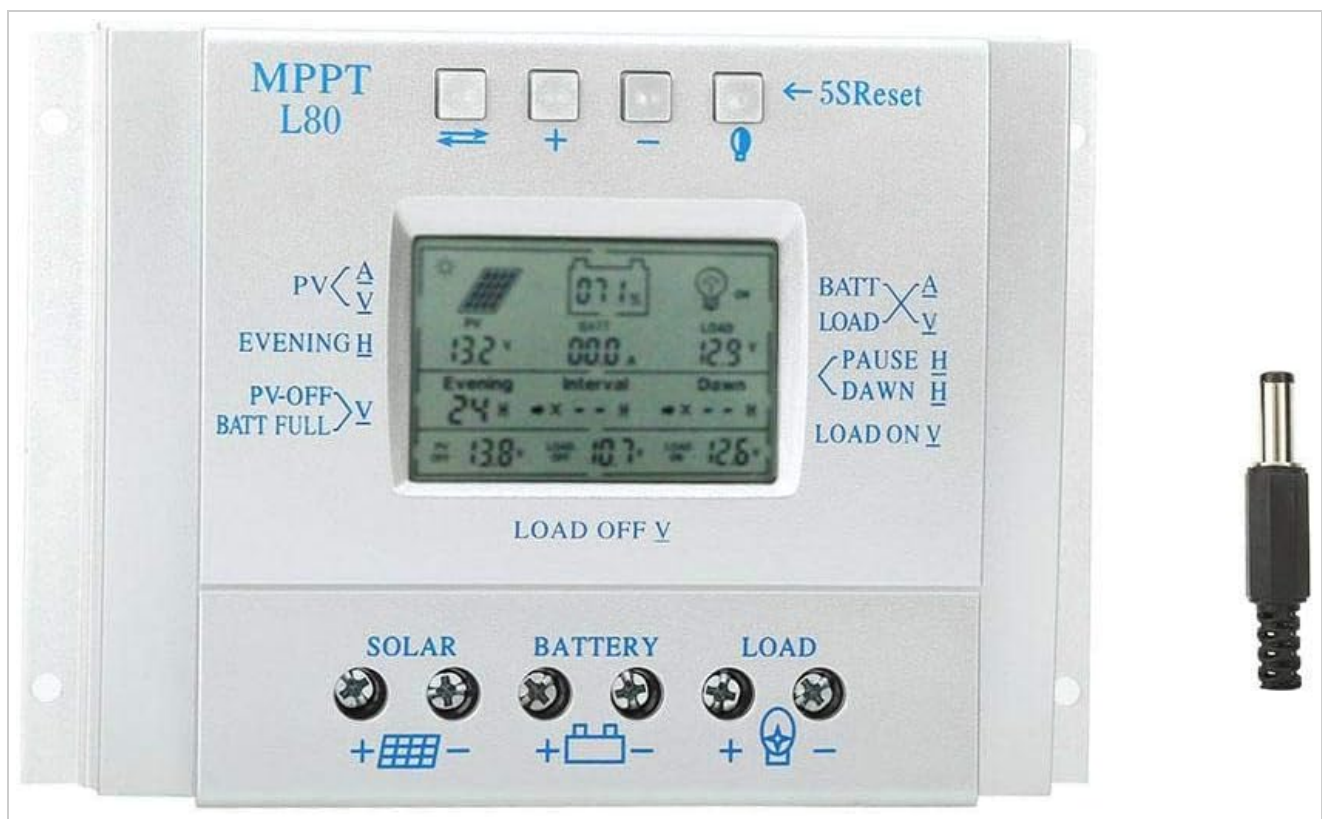


Image 3.1: Front view of the controller, showing the LCD display, control buttons, and terminal labels.

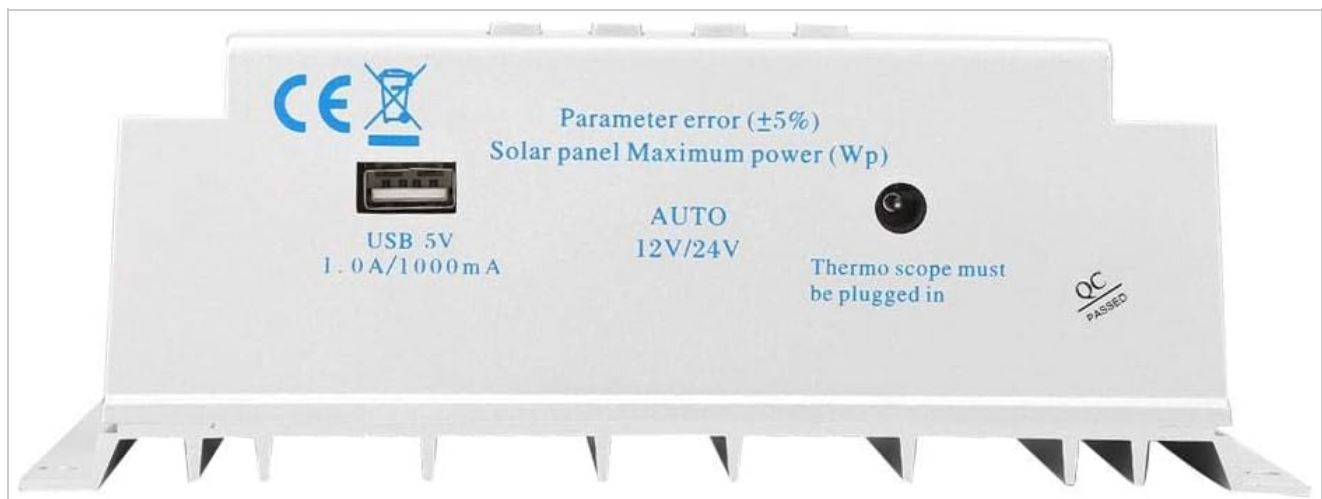


Image 3.2: Rear view of the controller, highlighting the USB 5V output and the 12V/24V auto-detection feature.

4. SPECIFICATIONS

Refer to the table below for detailed technical specifications of the Vikye MPPT L-80 Solar Charge Controller.

Parameter	Value
Model	MPPT L-80
Maximum Power Current	80A
Installation Wire Size	20mm ² (2# AWG)
Peaking Power of Solar Panels (Max Wp)	1000W
Battery Capacity Configuration	800Ah
Battery Floating Voltage	13.8V (12V System) / 27.6V (24V System)
Battery (Undervoltage) Protecting	10.6V (12V System) / 21.2V (24V System)
Battery (Undervoltage) Recovery Voltage	12.6V (12V System) / 25.2V (24V System)
System Load Loss	<= 13mA
Loop Buck	<=100mV
Working Temperature	-10°C to 60°C
Storage Temperature	-30°C to 70°C
Working Humidity	<= 90%, No Condensation
Temperature Compensation	-4mv / Cell / °C
Max Open Circuit Voltage of Solar Panels	18V~24V (12V System) / 36V~48V (24V System)
Solar Panel Maximum Open Circuit Voltage	<=48V
Dimensions (L x W x H)	188 x 128 x 61mm (7.4 x 5 x 2.4in)
Weight	731g (1.6 lbs)
Display Type	LCD
USB Output	5V / 1000mA

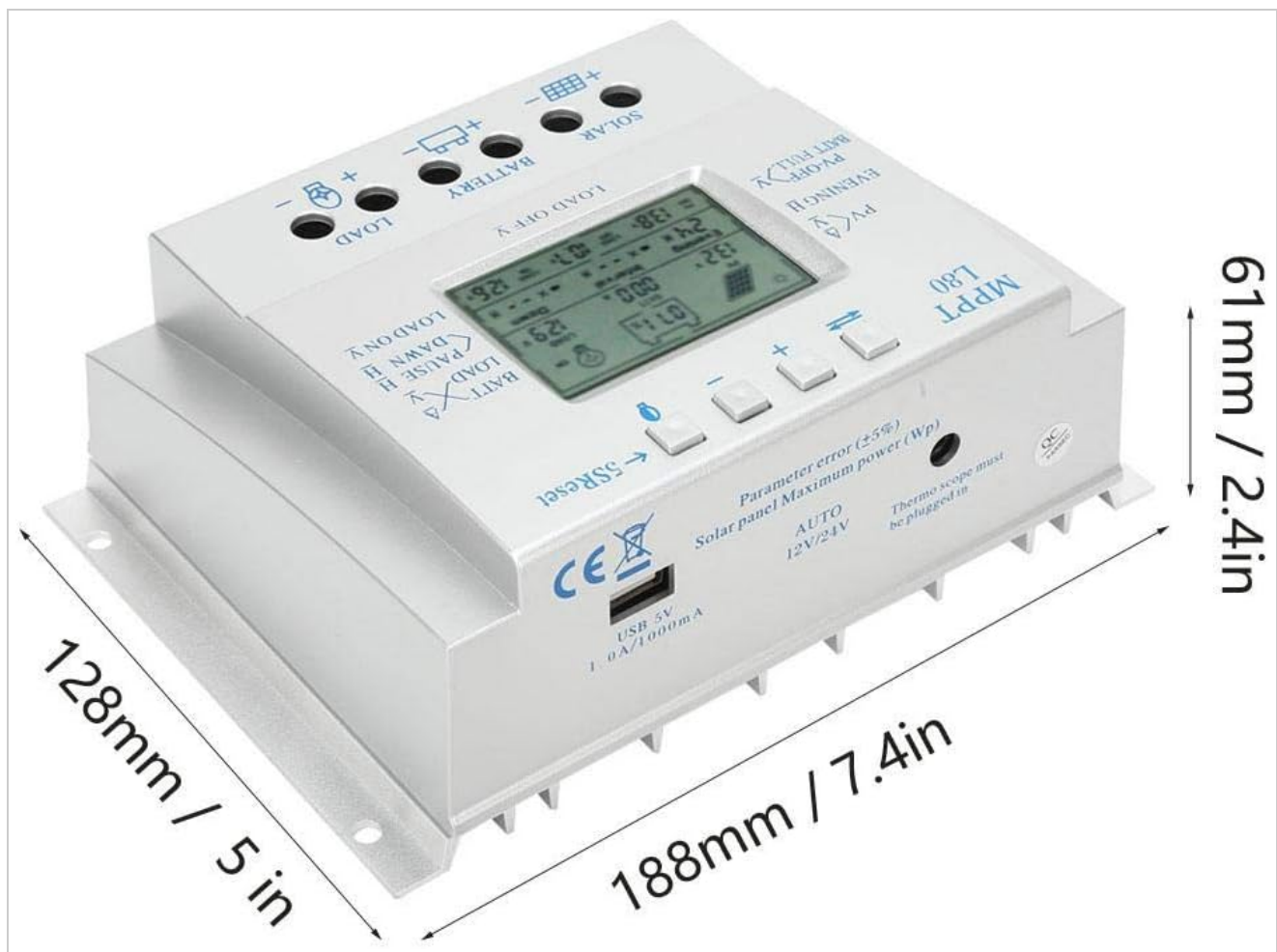


Image 4.1: Dimensions of the Vikye MPPT L-80 Solar Charge Controller.

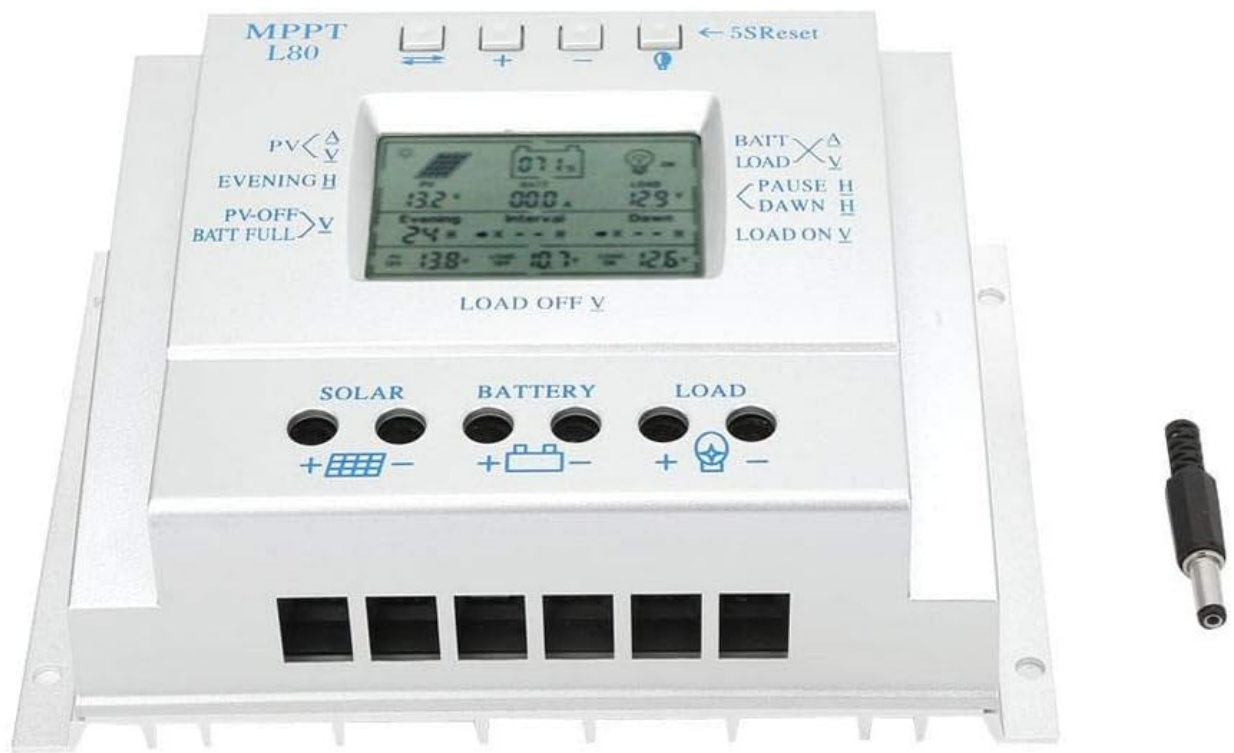
5. SETUP AND INSTALLATION

Follow these steps for proper installation of your solar charge controller. Adhering to the correct connection order is crucial to prevent damage.

5.1 Wiring Order

1. **Connect the Battery:** First, connect the battery to the controller's battery terminals (marked with '+' and '-'). Ensure correct polarity. The controller will automatically detect the system voltage (12V or 24V).
2. **Connect the Solar Panel:** Next, connect the solar panel to the controller's solar terminals (marked with a solar panel icon and '+' and '-'). Ensure correct polarity.
3. **Connect the DC Load:** Finally, connect your DC load to the controller's load terminals (marked with a light bulb icon and '+' and '-'). Ensure correct polarity.

Important: Always connect the battery first and disconnect the battery last. Failure to follow this order may damage the controller.



Made of high quality material, durable and long service life.
 This is a compatible MPPT charge controller
 PWM intelligent/efficient/energy saving,
 it has efficient MPPT controller charging function
 to automatically track the maximum power point.
 The LCD screen display can provide clear reading.
 The controller has battery undervoltage protecting function.
 This controller has standby energy saving function

Image 5.1: Front view of the controller, indicating the connection points for solar panels, battery, and load.

5.2 Mounting

Mount the controller vertically on a flat surface in a cool, dry, and well-ventilated indoor location. Allow sufficient clearance around the controller for heat dissipation. Avoid mounting in direct sunlight or near heat sources.

6. OPERATING INSTRUCTIONS

The LCD display provides real-time information about your solar power system. Use the control buttons to navigate and adjust settings.

6.1 LCD Display Overview

The LCD shows various parameters such as PV voltage, battery voltage, load current, and charging status. Icons indicate charging, discharging, and battery status.



Image 6.1: Detailed view of the LCD display, showing various system parameters and icons.

6.2 Button Functions

- **↔ (Menu/Select):** Short press to cycle through display screens. Long press to enter/exit setting mode.
- **+ (Up):** In setting mode, increases the value or moves up through options.
- **- (Down):** In setting mode, decreases the value or moves down through options.
- **(Load Control):** Short press to manually turn the DC load ON/OFF.
- **← 5S Reset:** Long press for 5 seconds to reset the controller to factory default settings. Use with caution.

6.3 Parameter Settings

To adjust parameters like battery type, load control mode, or undervoltage protection levels, long press the Menu/Select button to enter setting mode. Use the Up/Down buttons to change values and Menu/Select to confirm and move to the next parameter. Refer to the on-screen prompts for specific adjustments.

7. MAINTENANCE

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

- **Cleanliness:** Keep the controller clean and free from dust. Use a dry cloth to wipe the casing and display.
- **Connections:** Periodically check all wiring connections for tightness and corrosion. Loose connections can lead to power loss or overheating.
- **Ventilation:** Ensure the ventilation openings are not obstructed to allow for proper heat dissipation.
- **Battery Inspection:** Regularly inspect your battery bank for signs of damage, corrosion, or electrolyte levels (if applicable).

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your solar charge controller.

- **No Display/Controller Not Powering On:**

- Check battery connections and ensure they are secure and correctly polarized.
- Verify battery voltage is above the minimum operating voltage for the controller.

- **Battery Not Charging:**

- Check solar panel connections and polarity.
- Ensure solar panels are receiving adequate sunlight.
- Verify solar panel open circuit voltage is within the controller's specified range (18-24V for 12V system, 36-48V for 24V system).
- Check for any shading on the solar panels.

- **Load Not Working:**

- Check load connections and polarity.
- Ensure the load control function is enabled (not manually turned off).
- Verify battery voltage is above the undervoltage protection level.
- Check if the load current exceeds the controller's maximum output current.

- **Inaccurate Readings:**

- Ensure the temperature probe (if used) is correctly plugged in and positioned.
- Verify all connections are tight and free of corrosion.

If issues persist after following these steps, please contact customer support.

9. WARRANTY AND SUPPORT

The Vikye MPPT L-80 Solar Charge Controller is manufactured with high-quality materials and undergoes strict quality control. We guarantee the quality of our products.

For any questions, technical assistance, or warranty claims, please refer to your purchase documentation or contact your retailer. When contacting support, please have your product model (L-80) and purchase date available.

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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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.

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