

uxcell a17031000ux0297

uxcell Intelligent 25A Solar Charge Controller User Manual

Model: PV2425 (a17031000ux0297)

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of your uxcell Intelligent 25A Solar Charge Controller. Please read this manual thoroughly before installation and use to ensure optimal performance and longevity of the product.

2. SAFETY INSTRUCTIONS

- Ensure all connections are tight and correct to avoid excessive voltage drop and potential hazards.
- The controller is designed for indoor use. Protect it from water, moisture, and direct sunlight.
- Install the controller in a well-ventilated area to prevent overheating.
- Connect the battery first, then the solar panel, and finally the load. Disconnect in the reverse order.
- Do not attempt to disassemble or repair the controller yourself. Contact qualified personnel for service.
- Keep out of reach of children.

3. PRODUCT OVERVIEW

The uxcell Intelligent 25A Solar Charge Controller is designed to manage the power flow from your solar panel to your battery and load. It features an LCD display for monitoring system status and buttons for adjusting settings.



Image 3.1: Front view of the uxcell Intelligent 25A Solar Charge Controller. This image highlights the display screen, control buttons, and the connection terminals for the solar panel, battery, and load, clearly labeled for identification.

Key Components:

- **LCD Display:** Shows real-time system information such as voltage, current, and charge status.
- **Setting Buttons:** Used to navigate menus and adjust parameters.
- **Solar Panel Terminals:** Connect to your solar photovoltaic array.
- **Battery Terminals:** Connect to your 12V or 24V battery bank.
- **Load Terminals:** Connect to your DC loads.

4. SPECIFICATIONS

Feature	Specification
Brand	uxcell
Model Number	a17031000ux0297 (PV2425)
Rated Current	25A

System Voltage	12V / 24V Auto-sensing
Display Type	LCD or LED
Color	Orange
Item Weight	331 g
Shipping Weight	0.33 Kilograms
UPC	601382631143



Image 4.1: Physical dimensions of the uxcell Intelligent 25A Solar Charge Controller, showing a width of 6.6 inches, height of 3.5 inches, and depth of 1.6 inches.

5. SETUP AND INSTALLATION

Follow the wiring sequence carefully to ensure proper and safe operation of the solar charge controller. Incorrect wiring can damage the controller, battery, or other components.

1. **Connect the Battery:** Connect the battery to the controller's battery terminals first. Ensure correct polarity (positive to positive, negative to negative). The controller will automatically detect the battery

voltage (12V or 24V).

2. **Connect the Solar Panel:** Connect the solar panel to the controller's solar panel terminals. Ensure correct polarity.
3. **Connect the Load:** Connect your DC load to the controller's load terminals. Ensure correct polarity.

Important: Always connect the battery first and disconnect the solar panel and load before disconnecting the battery.

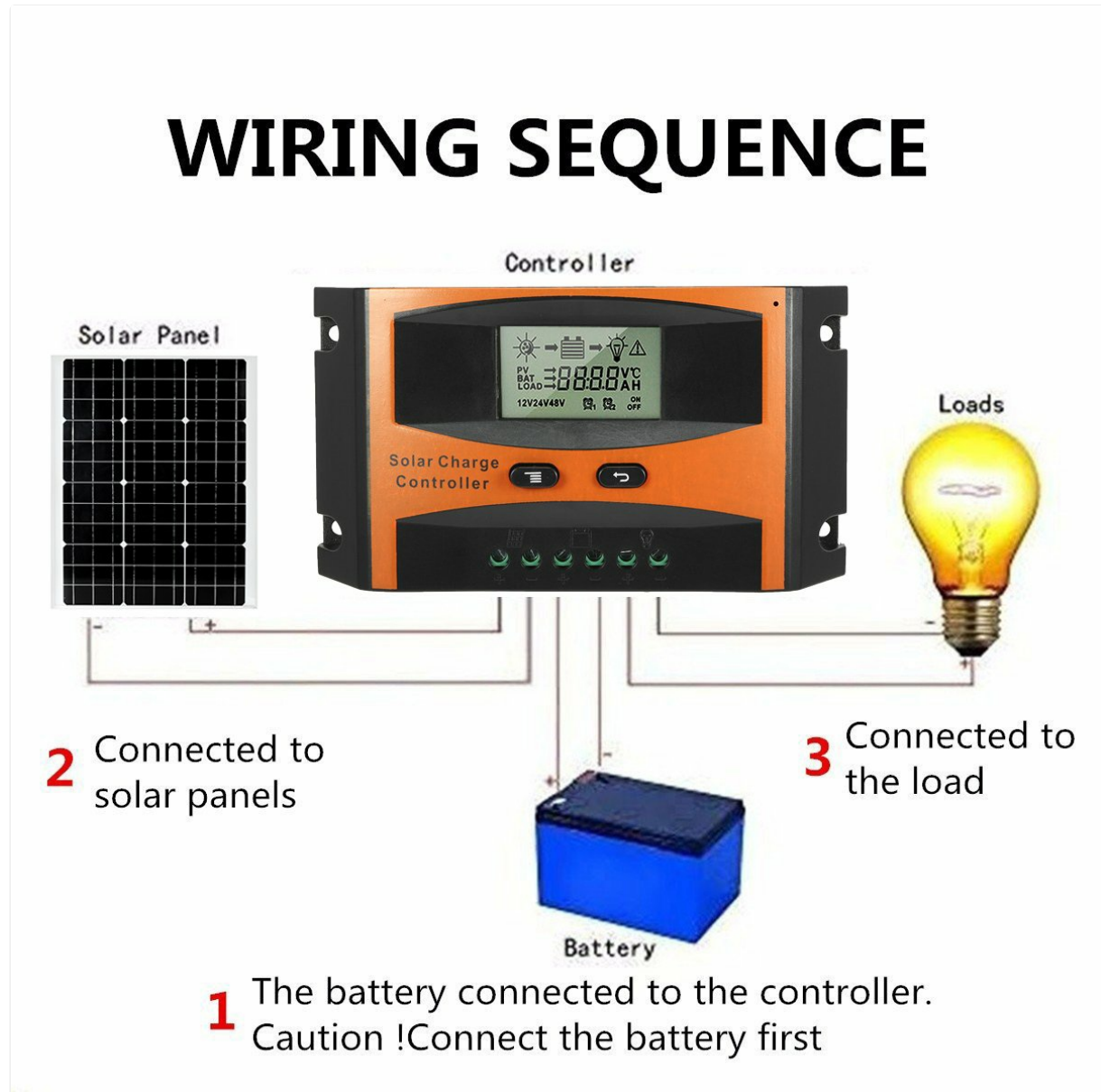


Image 5.1: Wiring sequence diagram. This illustration shows the correct order of connections: 1) Battery to controller, 2) Solar panel to controller, and 3) Load to controller. It emphasizes connecting the battery first.

6. OPERATING INSTRUCTIONS

Once connected, the controller will begin operating automatically. The LCD display provides real-time information about your solar system.

6.1. LCD Display Information

The display typically shows:

- **PV Voltage:** Voltage from the solar panel.

- **Battery Voltage:** Current battery voltage.
- **Load Status:** Indicates if the load is on or off.
- **Charge Status:** Shows if the battery is charging.
- **Battery Type:** (If adjustable)
- **Temperature:** Controller's internal temperature.

6.2. Adjusting Settings

Use the setting buttons (usually labeled with symbols like 'menu' and 'up/down' or 'enter' and 'return') to navigate through the display menus and adjust parameters such as:

- Battery type (e.g., Gel, Sealed, Flooded)
- Load control mode (e.g., 24-hour, dusk-to-dawn, timer)
- Over-discharge protection voltage
- Float charge voltage

Refer to the on-screen prompts for specific button functions and parameter adjustments.

7. MAINTENANCE

- Regularly inspect all wiring for loose connections, corrosion, or damage.
- Keep the controller clean and free from dust and debris. Use a dry cloth for cleaning.
- Ensure adequate ventilation around the controller.
- Monitor the battery voltage and charge status periodically to ensure proper system function.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display/Controller not powering on	Battery not connected or low voltage; reversed polarity.	Check battery connections and voltage. Ensure correct polarity. Charge battery if too low.
Battery not charging	Solar panel not connected; insufficient sunlight; faulty solar panel; reversed polarity.	Check solar panel connections and polarity. Ensure adequate sunlight. Test solar panel output.
Load not working	Load not connected; reversed polarity; battery low; load protection activated.	Check load connections and polarity. Ensure battery is sufficiently charged. Check load settings on controller.
Overheating	Poor ventilation; excessive load.	Ensure controller is in a well-ventilated area. Reduce load if necessary.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact your retailer. Keep your purchase receipt as proof of purchase.

Documents - uxccl – a17031000ux0297

no relevant documents