

GODIYMODULES Mod-5aDCmpt-001

GODIYMODULES 5A MPPT Solar Panel Controller

MODEL: MOD-5ADCMP-001 INSTRUCTION MANUAL

1. Introduction

This manual provides essential information for the safe and efficient operation of your GODIYMODULES 5A MPPT Solar Panel Controller. This DC-DC step-down module features constant current (CC) and constant voltage (CV) charging capabilities, a blue LED display, and is designed for regulating power from solar panels. Please read this manual thoroughly before installation and use.

2. Safety Information

- Always ensure correct polarity when connecting input and output terminals. Incorrect connections can damage the module and connected devices.
- Do not exceed the specified input voltage (6-36V) or output current (5A maximum, 3A for long-term operation).
- Keep the module away from moisture, dust, and extreme temperatures.
- Ensure adequate ventilation to prevent overheating, especially during high current operation.
- This device operates with electrical current. Exercise caution to avoid electric shock.
- Do not attempt to disassemble or modify the module. Refer all servicing to qualified personnel.

3. Product Overview

The GODIYMODULES 5A MPPT Solar Panel Controller is a compact and versatile power management module. Below is a diagram illustrating its key components and controls.

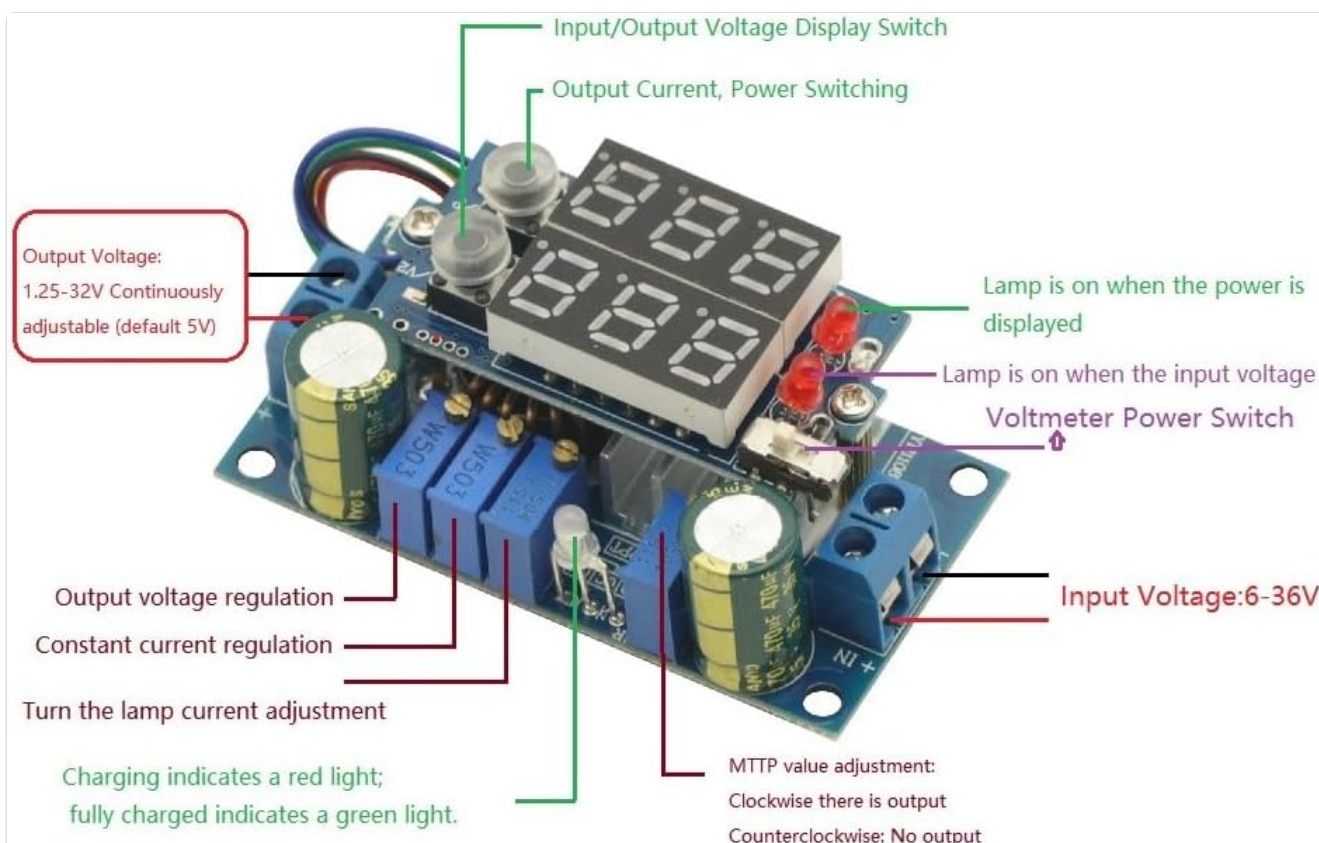


Figure 3.1: Labeled diagram of the controller showing input/output terminals, display, switches, and adjustment potentiometers.

- **Input/Output Voltage Display Switch:** Toggles the blue LED display between input voltage and output voltage readings.
- **Output Current / Power Switching Button:** Used to switch the display to show output current or power.
- **Voltmeter Power Switch:** Controls the power to the integrated voltmeter display.
- **Input Voltage Terminals (IN+ / IN-):** Connect your solar panel or DC power source here (6-36V).
- **Output Voltage Terminals (OUT+ / OUT-):** Connect your battery or load here (1.25-32V adjustable).
- **Output Voltage Regulation Potentiometer:** Adjusts the output voltage.
- **Constant Current Regulation Potentiometer:** Sets the maximum output current.
- **Turn Lamp Current Adjustment Potentiometer:** Adjusts the threshold for the charging indicator lamp (default 0.3A).
- **MPPT Value Adjustment Potentiometer:** Adjusts the Maximum Power Point Tracking setting. Clockwise rotation typically increases output, counter-clockwise decreases it.
- **Charging Indicator LEDs:** A red LED indicates charging, and a green LED indicates a fully charged state.

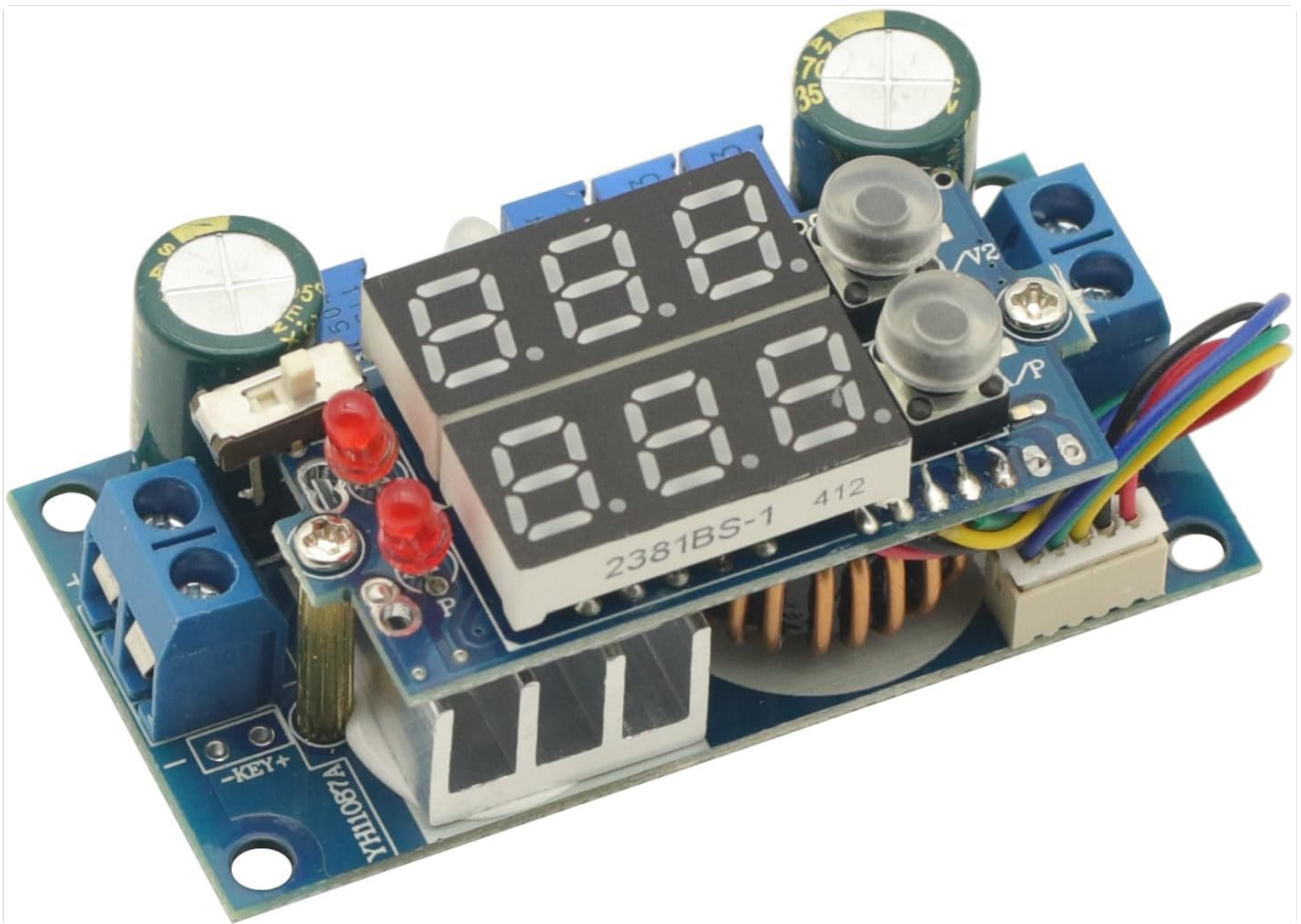


Figure 3.2: Top view of the controller, showing the display and adjustment points.

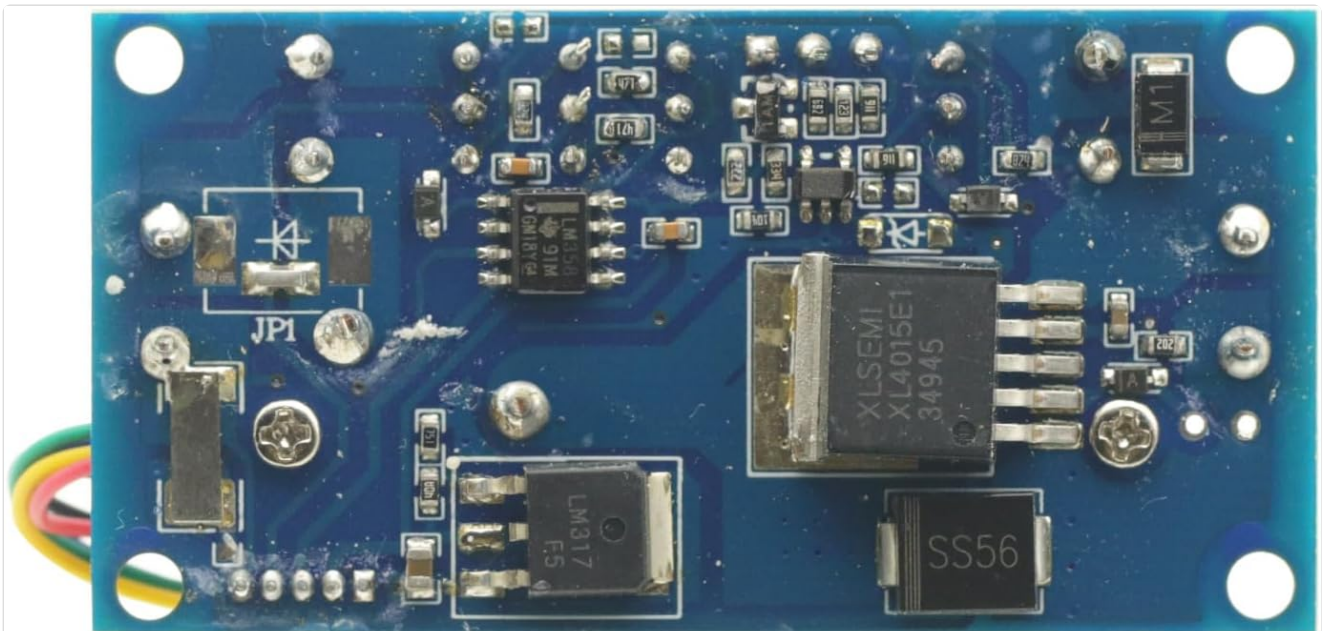


Figure 3.3: Bottom view of the controller, revealing the circuit board components.

4. Setup

Follow these steps for initial setup:

1. **Prepare Connections:** Ensure all power sources and loads are disconnected before making any connections to the module.
2. **Connect Input:** Connect your solar panel or DC power supply to the **IN+** and **IN-** terminals. Observe correct

polarity. The input voltage must be between 6V and 36V.

3. **Connect Output:** Connect your battery or load to the **OUT+** and **OUT-** terminals. Observe correct polarity.
4. **Initial Voltage Setting (Optional but Recommended):** Before connecting a sensitive load, it is advisable to adjust the output voltage. Power on the module (with input connected) and use the output voltage regulation potentiometer to set the desired output voltage (e.g., 14.4V for a 12V lead-acid battery).
5. **Initial Current Setting (Optional but Recommended):** If charging a battery, set the constant current regulation potentiometer to the desired charging current. For long-term operation, it is recommended to keep the current below 3A.

5. Operating Instructions

Once connected, operate the module as follows:

- **Power On:** Apply power to the input terminals. The blue LED display will illuminate.
- **Display Control:** Use the **Input/Output Voltage Display Switch** to toggle between displaying the input voltage and the output voltage. Use the **Output Current / Power Switching Button** to view output current or power.
- **Output Voltage Adjustment:** Turn the **Output voltage regulation potentiometer** clockwise to increase the output voltage, and counter-clockwise to decrease it. The output voltage range is 1.25V to 32V.
- **Constant Current Adjustment:** Turn the **Constant current regulation potentiometer** to set the maximum current the module will deliver. This is crucial for battery charging to prevent overcurrent.
- **MPPT Adjustment:** The **MPPT value adjustment potentiometer** allows fine-tuning of the Maximum Power Point Tracking. Adjust this to optimize power extraction from your solar panel. Clockwise rotation typically increases the output power, while counter-clockwise decreases it.
- **Charging Indicators:** Observe the charging indicator LEDs. A red light indicates that charging is in progress. A green light indicates that the battery is fully charged or the output current has dropped below the 'turn lamp current' threshold.
- **Turn Lamp Current Adjustment:** The **Turn lamp current adjustment potentiometer** sets the current threshold at which the charging indicator switches from red to green. The default is 0.3A.

6. Specifications

- **Input Voltage:** 6-36V
- **Output Voltage:** 1.25-32V (Continuously adjustable, default 5V)
- **MPPT Voltage Setting Range:** 6-36V
- **Output Current Range:** 0.05-5A (Recommended for long-term operation: below 3A)
- **Turn Lights Output Range:** 0.01-5A (Default 0.3A)
- **Display:** Blue LED Digital Display
- **Module Type:** DC-DC Step-Down, CC/CV Charging Module
- **Brand:** GODIYMODULES
- **Model Number:** Mod-5aDCmpt-001
- **ASIN:** B0FQMW5X1W

7. Maintenance

To ensure the longevity and optimal performance of your controller, follow these maintenance guidelines:

- **Keep Clean:** Regularly clean the module with a soft, dry cloth to remove dust and debris. Do not use liquid cleaners.
- **Avoid Moisture:** Protect the module from water and high humidity environments.
- **Check Connections:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to poor performance or damage.
- **Ventilation:** Ensure the module has adequate airflow, especially when operating at higher currents, to prevent overheating.

8. Troubleshooting

If you encounter issues with your controller, refer to the following common problems and solutions:

- **No Display / No Output:**
 - Check input power supply: Ensure the input voltage is within the 6-36V range and connected with correct polarity.
 - Verify Voltmeter Power Switch: Ensure the voltmeter power switch is in the 'on' position.
 - Check connections: Confirm all wires are securely connected to the terminals.
- **Output Voltage Incorrect:**
 - Adjust the **Output voltage regulation potentiometer** to set the desired voltage.
 - Ensure the input voltage is sufficient and stable.
- **Charging Indicator Not Working as Expected:**
 - Check the **Turn lamp current adjustment potentiometer** setting. The green light will only activate when the current drops below this threshold.
 - Verify the battery is actually charging (red light) or fully charged (green light).
- **Low Output Current:**
 - Adjust the **Constant current regulation potentiometer** to increase the maximum output current.
 - Ensure the load is capable of drawing more current.
 - Check the MPPT setting; adjust the **MPPT value adjustment potentiometer** to optimize power from the solar panel.

9. Warranty and Support

For warranty information or technical support, please refer to the product packaging or contact the seller directly through the platform where the product was purchased. Keep your purchase receipt as proof of purchase.

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

Anonymous

Email

you@example.com

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

Open the live page

<https://manuals.plus/asin/B0FQMW5X1W>

More documents and user manuals: **<https://manuals.plus/>**