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Comimark XY-L30A

Comimark XY-L30A Lithium Battery Charge Controller User Manual

Model: XY-L30A

1. Introduction

This manual provides detailed instructions for the safe and effective use of the Comimark XY-L30A Lithium Battery Charge Controller. This device is designed to manage the charging and discharging of lithium batteries within a 6-60V range, featuring an LCD display for real-time monitoring and control. Please read this manual thoroughly before operation.

2. Safety Instructions

- Always ensure correct polarity when connecting the battery and power supply to prevent damage to the device and battery.
- Operate the device within its specified voltage range (6-60V). Exceeding this range can cause permanent damage.
- Do not expose the device to moisture, extreme temperatures, or corrosive environments.
- Ensure proper ventilation around the device during operation.
- Disconnect all power sources before performing any wiring or maintenance.
- This device is intended for use with lithium batteries. Do not use with other battery chemistries unless explicitly stated as compatible.

3. Product Overview

The Comimark XY-L30A is a compact and versatile battery charge and discharge control module. It features an LCD display for clear parameter viewing and three control buttons for easy configuration.

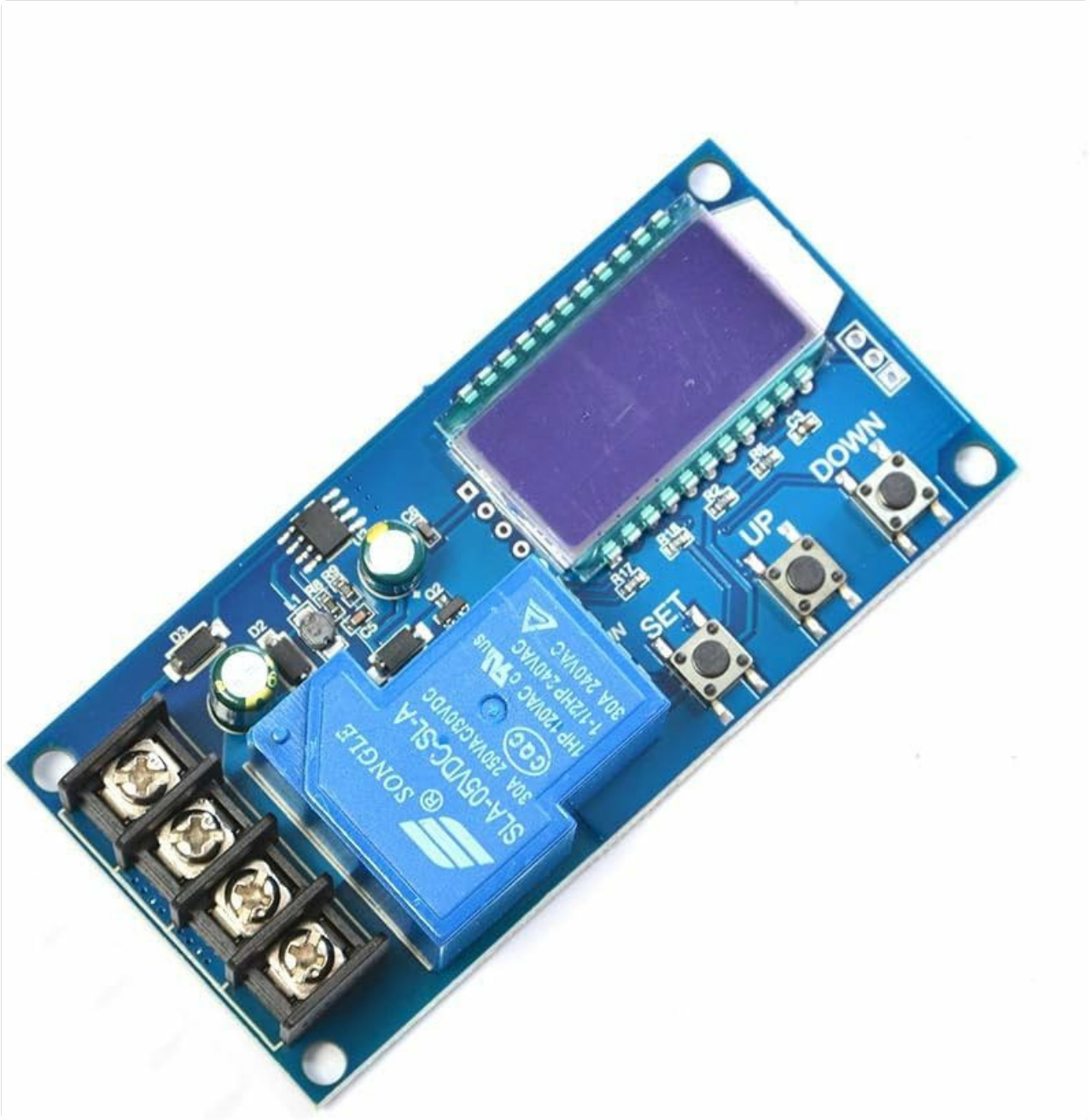


Figure 3.1: Top-down view of the Comimark XY-L30A module, showing the LCD screen, control buttons (SET, UP, DOWN), and terminal blocks.

3.1 Components

- **LCD Display:** Shows current voltage, charge/discharge status, and parameter settings.
- **SET Button:** Enters parameter setting mode and confirms selections.
- **UP Button:** Increases parameter values or navigates menus.
- **DOWN Button:** Decreases parameter values or navigates menus.
- **Input/Output Terminals:** Screw terminals for connecting power supply and battery.
- **Relay:** Controls the charging/discharging circuit.

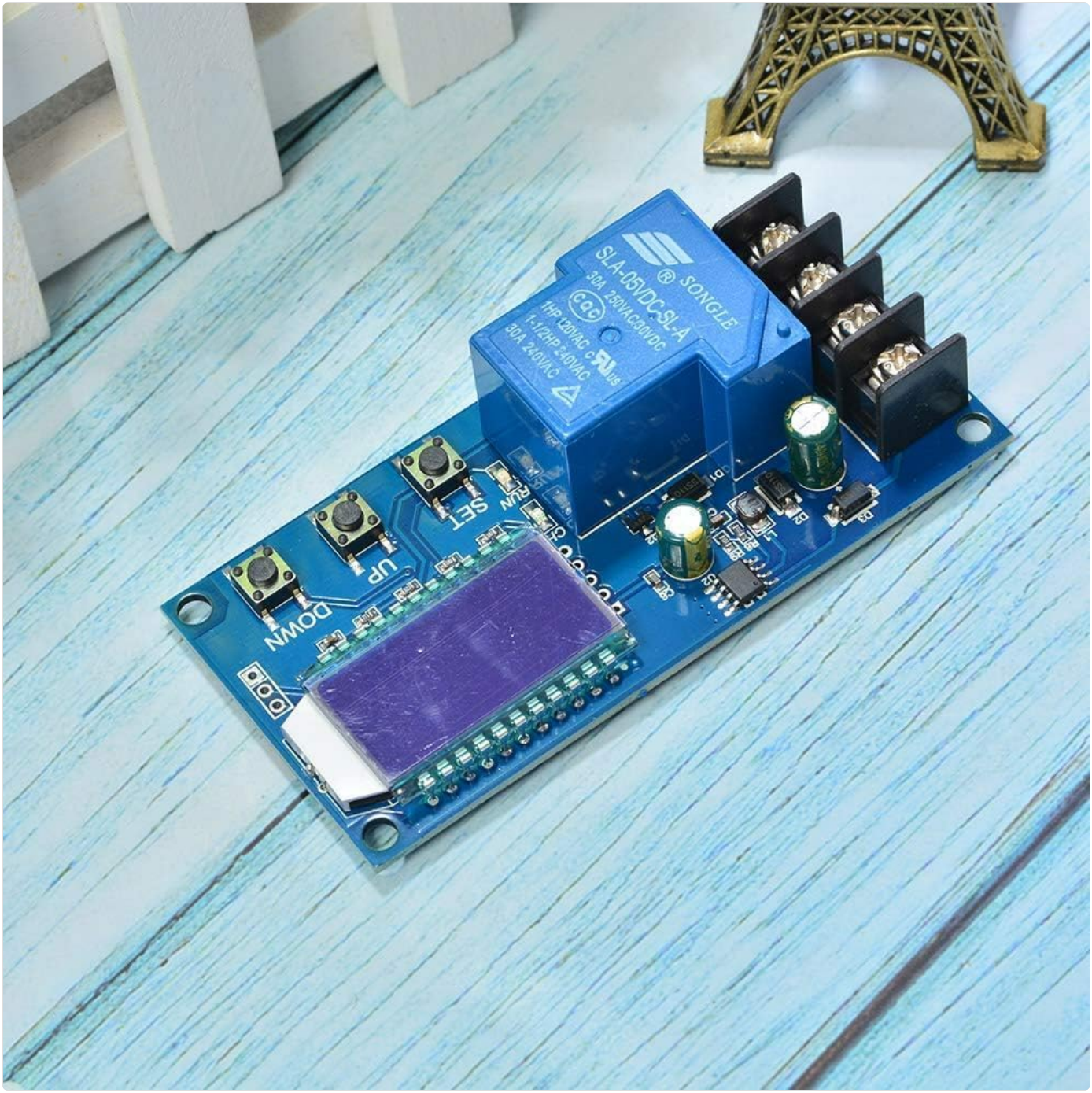


Figure 3.2: Angled view highlighting the blue relay module and the screw terminal blocks for connections.

4. Setup and Wiring

Proper wiring is crucial for the safe and correct operation of the charge controller.

4.1 Connection Diagram



Figure 4.1: Rear view of the module indicating the input (CH+, CH-) and battery (BT+, BT-) connection points.

The module has two sets of screw terminals:

- **CH+ / CH-:** These are the input terminals for the charging power supply (e.g., a DC power adapter). Connect the positive (+) of your power supply to CH+ and the negative (-) to CH-.
- **BT+ / BT-:** These are the terminals for connecting the battery. Connect the positive (+) of your battery to BT+ and the negative (-) to BT-.

Caution: Always double-check polarity before applying power. Incorrect connections can damage the device and battery.

5. Operating Instructions

The XY-L30A offers various operating modes and parameter settings. The LCD displays real-time voltage and operational status.

5.1 Power On

After connecting the power supply and battery, the LCD will light up, displaying the current battery voltage and the selected operating mode.

5.2 Setting Parameters

Press and hold the **SET** button for 3 seconds to enter the parameter setting mode. The display will show a parameter code (e.g., 'UP', 'DN', 'OP', 'CL', 'LP'). Use the **UP** and **DOWN** buttons to adjust the value. Press **SET** briefly to move to the next parameter. To exit setting mode, press and hold **SET** for 3 seconds or wait for 6 seconds without input.

Parameter Descriptions:

- **UP (Upper Voltage Limit):** When the battery voltage reaches this value, charging stops.
- **DN (Lower Voltage Limit):** When the battery voltage drops to this value, discharging stops (or charging starts, depending on mode).
- **OP (Charge/Discharge Time):** Sets the maximum charge or discharge time in minutes. Set to '---' for infinite time.
- **CL (Delay Time):** Sets a delay before the relay activates/deactivates, in seconds.
- **LP (Low Power Mode):** 'ON' for low power mode (LCD turns off after 10 seconds), 'OFF' for always-on LCD.

5.3 Operating Modes

The module supports different operating modes, typically selected by a combination of button presses or specific parameter settings. Refer to the specific product variant documentation for detailed mode selection procedures.

- **Charge Mode:** The relay activates (charging starts) when battery voltage is below 'DN' and deactivates (charging stops) when voltage reaches 'UP'.
- **Discharge Mode:** The relay activates (discharging starts) when battery voltage is above 'UP' and deactivates (discharging stops) when voltage reaches 'DN'.

6. Maintenance

- Keep the device clean and free from dust. Use a soft, dry cloth for cleaning.
- Avoid exposing the device to direct sunlight or high humidity.
- Regularly check all wiring connections to ensure they are secure.
- Store the device in a cool, dry place when not in use.

7. Troubleshooting

Problem	Possible Cause	Solution
LCD not lighting up	No power input; incorrect wiring; faulty power supply.	Check power supply connection and voltage. Verify wiring polarity.
Battery not charging/discharging	Incorrect voltage limits (UP/DN); faulty relay; battery issue.	Review UP/DN settings. Check battery health. Ensure relay clicks when conditions are met.
Parameters cannot be set	Not in setting mode; buttons not responding.	Press and hold SET for 3 seconds. Check for physical damage to buttons.

Problem	Possible Cause	Solution
Inaccurate voltage reading	Calibration needed; external interference.	Compare with a multimeter. Some models may have a calibration feature (refer to specific model documentation).

8. Specifications

Feature	Specification
Model	XY-L30A
Input Voltage	DC 6-60V
Output Voltage	Equal to battery voltage (controlled by relay)
Control Current	Max 30A (Relay rating)
Display Type	LCD
Voltage Measurement Accuracy	0.1V
Dimensions	Approx. 4.6 x 3.1 x 1 inches (Item Package Dimensions)
Weight	0.07 Kilograms

9. Warranty and Support

Comimark products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the retailer where the product was purchased or visit the official Comimark website. Please have your product model number (XY-L30A) and purchase details available when contacting support.

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