AIMS Power KITHY230VBATMS

AIMS Power Lithium Battery Dual Battery Cabinet Set User Manual

Model: KITHY230VBATMS
Brand: AIMS Power

Introduction

This user manual provides essential information for the safe and efficient operation of your AIMS Power Lithium Battery Dual Battery Cabinet Set. This system is designed to integrate with AIMS Power hybrid inverters, providing robust power storage for critical loads, load sharing, and optimizing energy consumption.
The dual battery cabinet set combines two lithium batteries to create a 230VDC 192 AH battery bank, storing 44,228 Watts of usable power. Lithium battery technology offers significant advantages in terms of deeper discharge cycles, lighter weight, and more compact size compared to traditional lead-acid batteries.

Product Overview

Figure 1: The AIMS Power Lithium Battery Dual Cabinet Set. One cabinet door is open, showing the internal lithium battery modules and wiring connections. The system is designed for robust energy storage.

Figure 2: Dimensional view of the AIMS Power Lithium Battery Cabinet. The image indicates a height of 68.75 inches including eye hooks, a depth of 33.75 inches, and a width of 24.75 inches.

Figure 3: Detailed view of the internal wiring and battery connections. This shows the B+, B-, and COM ports, along with an ON/OFF switch and address settings, indicating the modular nature of the battery system.

Setup and Installation

The AIMS Power Lithium Battery Dual Battery Cabinet Set is delivered by freight with a lift gate. Ensure your shipping location can accept freight deliveries and that someone is available to accept and sign for the shipment.

1. Site Preparation

- Ensure the installation area is level, dry, well-ventilated, and protected from direct sunlight and extreme temperatures.
- Verify that the floor can support the weight of the cabinet set (approximately 650 pounds).
- Maintain adequate clearance around the cabinets for ventilation and maintenance access.

2. Positioning the Cabinets

- Carefully move the cabinets to their designated installation location. Utilize appropriate lifting equipment due to the weight.
- Secure the cabinets to the floor using the provided mounting hardware to prevent tipping.

3. Electrical Connections

This battery cabinet set is designed to work seamlessly with AIMS Power hybrid inverters. Refer to your specific AIMS

Power hybrid inverter manual for detailed wiring diagrams and connection procedures.

- Connect the battery cables from the cabinet to the designated battery terminals on the AIMS Power hybrid inverter. Ensure correct polarity (positive to positive, negative to negative).
- Connect communication cables (COM ports) between the battery cabinets and the inverter as per the inverter's instructions to enable proper battery management system (BMS) communication.
- Verify all connections are secure and properly insulated.

4. Initial Power-Up

- Before powering on, double-check all wiring and ensure no loose connections or exposed wires.
- Follow the power-up sequence outlined in your AIMS Power hybrid inverter manual. Typically, this involves turning on the battery cabinet's internal breaker (if present) and then the inverter.
- Observe the inverter's display for any error codes or warnings.

Operating Instructions

Once properly installed and connected to an AIMS Power hybrid inverter, the battery cabinet set operates as an integral part of your energy system. The inverter manages the charging and discharging of the batteries based on your programmed settings.

Figure 4: Example of an AIMS Hybrid Inverter display. This interface provides real-time information on solar input, battery state of charge, energy flow, emergency power supply, load, and grid status, allowing for comprehensive system monitoring and control.

Energy Management Modes

The AIMS Power hybrid inverter allows for various programmable modes to optimize energy usage:

- **Time-of-Use (TOU) Shifting:** Program the system to charge the batteries when grid electricity rates are low (e.g., off-peak hours) and discharge them to power your loads when grid rates are high (e.g., peak hours). This helps reduce your electricity bill.
- **Solar Priority:** Configure the system to prioritize charging the batteries using solar power. If solar generation is insufficient, the system can draw power from the grid as needed.
- **Backup Power:** In the event of a grid outage, the battery cabinet set, in conjunction with the hybrid inverter, can automatically provide uninterrupted power to critical loads.
- **Self-Consumption:** Maximize the use of generated solar power by storing excess energy in the batteries for later use, reducing reliance on the grid.

Refer to your AIMS Power hybrid inverter's user manual for detailed instructions on configuring these operating modes and monitoring system performance.

Maintenance

The AIMS Power Lithium Battery Dual Battery Cabinet Set requires minimal maintenance due to the inherent characteristics of lithium iron phosphate (LiFePO4) batteries. However, regular checks are recommended to ensure optimal performance and longevity.

Routine Checks

- **Visual Inspection:** Periodically inspect the cabinets for any signs of physical damage, corrosion, or loose connections. Ensure ventilation openings are clear of obstructions.
- **Connection Integrity:** Check all electrical connections for tightness. Loose connections can lead to resistance and heat buildup.
- **Environmental Conditions:** Ensure the operating environment remains within the recommended temperature and humidity ranges specified in the technical specifications.
- **Software Updates:** Keep your AIMS Power hybrid inverter's firmware updated as recommended by AIMS Power to ensure compatibility and optimal battery management.

Battery Care

Lithium batteries do not require watering or equalization charges like lead-acid batteries. Their advanced Battery Management System (BMS) handles cell balancing and protection.

- Avoid operating the batteries outside their specified voltage and temperature limits.
- While lithium batteries can be deeply discharged, avoiding consistent full discharge cycles can extend overall lifespan.
- If the system is to be stored for an extended period, ensure the batteries are charged to approximately 50% State of Charge (SOC) and stored in a cool, dry place.

Troubleshooting

This section provides guidance for common issues you might encounter. For more complex problems, contact AIMS Power technical support.

Problem	Possible Cause	Solution
System not powering on.	Loose battery connections, battery breaker off, inverter fault.	Check all battery cable connections. Ensure the battery cabinet's internal breaker is ON. Consult the inverter manual for fault codes.
Batteries not charging.	Inverter settings, solar input issue, communication error.	Verify inverter charging settings. Check solar panel connections and output. Ensure communication cables are properly connected between batteries and inverter.
Reduced battery capacity/runtime.	High discharge rates, extreme temperatures, aging batteries.	Ensure loads are within system capacity. Verify operating temperature. While lithium batteries have long lifespans, capacity can gradually decrease over many years of use.
Communication error on inverter display.	Loose or faulty communication cable, incorrect address settings.	Check communication cable connections. Refer to the inverter and battery cabinet manuals for correct address settings.

If you are unable to resolve an issue using the information above, please contact AIMS Power technical support. They are

located in Nevada and have a proven history of support.

Specifications

Attribute	Value
Model Number	KITHY230VBATMS
Brand	AIMS Power
Battery Type	Lithium Metal (LiFePO4)
Nominal Voltage	230 VDC
Battery Capacity	192 Amp Hours (AH)
Total Energy Storage	44,228 Watt Hours (WH)
Item Weight	650 pounds
Recommended Uses	Office, Home
Power Source	Battery Powered
Country of Origin	China
Date First Available	September 26, 2023

Warranty and Support

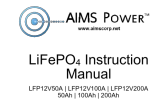
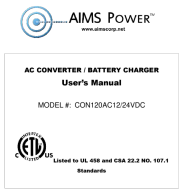
Warranty Information

For detailed warranty terms and conditions, please refer to the official warranty documentation provided by AIMS Power at the time of purchase or visit the AIMS Power official website. The warranty typically covers manufacturing defects and performance within specified parameters.

Technical Support

AIMS Power provides technical support for their products. For assistance with installation, operation, troubleshooting, or any other technical inquiries, please contact AIMS Power directly. Their technical support team is based in Nevada and is available to assist customers.
For contact information, please visit the official AIMS Power website or refer to your product packaging.

Related Documents

	[AIMS Power LiFePO4 Battery Instruction Manual] Comprehensive instruction manual for AIMS Power's 12V LiFePO4 batteries (LFP12V50A, LFP12V100A, LFP12V200A), covering features, safety, installation, specifications, and warranty.
	[AIMS Power All-in-One Solar Power Box User's Manual] User's manual for the AIMS Power All-in-One Solar Power Box (Model AIO-12V), detailing product description, safety information, installation, inverter, solar PV, battery, startup, specifications, and warranty.
	[AIMS Power CON120AC12/24VDC AC Converter and Battery Charger User's Manual] User's manual for the AIMS Power CON120AC12/24VDC AC Converter and Battery Charger, providing detailed information on installation, operation, troubleshooting, and specifications for charging 12V and 24V batteries.
	[AIMS Power SCC30AFM 30A PWM Solar Charge Controller User Manual] This manual provides detailed instructions and specifications for the AIMS Power SCC30AFM 30A PWM Solar Charge Controller, covering installation, operation, features, and troubleshooting for solar power systems in RVs, boats, and vehicles.

Documents - AIMS Power – KITHY230VBATMS

[pdf] Instructions

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Lithium Batery Cabinet LFP230V96A-M LFP230V96A-S The AIMS Power pre-wired lithium battery cabinet is easy to set up and only requires a few connections to the AIMS Power hybrid inverter. Unpacking the cabinet Make sure there is no damage to the cabinet, all wires are secure, and the cabinet is stabl...

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