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Dawnice HZEB-LCT-5

Dawnice 5kWh Solar Battery 51.2V 100Ah LiFePO4 User Manual

Model: HZEB-LCT-5

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Dawnice 5kWh Solar Battery. This 51.2V 100Ah LiFePO4 battery is designed for reliable energy storage in various applications, including home battery backup, off-grid systems, and RV power solutions. Please read this manual thoroughly before installation and use.





Figure 1.1: Front view of the Dawnice 5kWh Solar Battery.

2. SAFETY INFORMATION

Always adhere to the following safety guidelines to prevent injury or damage to the battery and connected equipment:

- Installation should be performed by qualified personnel in accordance with local electrical codes and regulations.
- Do not disassemble, puncture, or modify the battery. Internal components are not user-serviceable.
- Ensure proper ventilation around the battery during operation.
- Avoid exposing the battery to extreme temperatures, direct sunlight, or flammable materials.
- Use only compatible charging equipment and inverters. Refer to the specifications section for voltage and current requirements.
- In case of fire, use a Class D fire extinguisher. Water can exacerbate lithium battery fires.
- Keep out of reach of children and pets.



Figure 2.1: Built-in Protection Features.

The battery is equipped with a built-in 100A Battery Management System (BMS) that provides comprehensive protection against overcharging, over-discharging, over-current, overheating, and short circuits, enhancing safety and optimizing performance.

3. PRODUCT FEATURES

The Dawnice 5kWh Solar Battery offers advanced features for reliable and efficient energy storage:

- **Grade A LiFePO4 Cells:** Utilizes high-quality Grade A lithium iron phosphate battery cells, ensuring high safety, long cycle life, and excellent charge/discharge capabilities.
- **Extended Lifespan:** Designed for a 15-year lifetime with over 6000 cycles, providing long-term reliability.
- **High Power Output:** 51.2V 100Ah configuration with a maximum power output of 5120W and a maximum discharge current of 100A.
- **Integrated BMS:** Built-in 100A BMS for comprehensive protection against various electrical faults.
- **Remote Control & Monitoring:** Features Bluetooth and wireless connectivity for remote control and real-time monitoring via a smartphone application. The color touch screen provides clear operational data.
- **Waterproof Design:** IP54 outdoor waterproof rating for 5Kwh, 10Kwh, and 16Kwh models (note: 20Kwh model is for indoor use only).
- **Flexible Installation:** The 5Kwh model is wall-mounted. 10Kwh and 16Kwh models support both wall and ground installation (with included pulleys).

51.2V 100Ah

LiFePo4 Battery

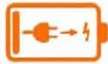


5120Wh



Energy Capacity

100A



Max. Continuous
Charge/Discharge Current

5120W



Max. Load Power

-10~50°C ≥ 15Years



Wide Operation
Temperature Range



Maintenance

Figure 3.1: Key Product Features.

4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and safety of your solar battery. It is highly recommended that installation be performed by a certified electrician or solar professional.

4.1 Unpacking and Inspection

- Carefully unpack the battery and inspect for any signs of damage during transit.
- Verify all components listed in the packing list are present.

4.2 Mounting the Battery

The HZEB-LCT-5 (5Kwh) model is designed for wall-mounted installation. Ensure the mounting surface is structurally sound and can support the battery's weight (approximately 116.8 pounds).

- Select a location that is dry, well-ventilated, and protected from direct sunlight and extreme temperatures.

- Maintain adequate clearance around the battery for ventilation and access.
- Use appropriate mounting hardware (not included) suitable for the battery's weight and wall material.

51.2V 100Ah LiFePo4 Battery

Wall-mounted

Max. Energy 5120Wh

Max. 15 Parallel

Built in 100A BMS

Grade A Cells

6000+ Cycle Life



Weight: 116 lb

Figure 4.1: 5Kwh Battery Dimensions for Wall Mounting.

4.3 Electrical Connections

Refer to the detailed wiring diagram provided with your product for specific connection points. Ensure all connections are secure and correctly polarized.

- Connect the battery to a compatible solar inverter or charge controller.
- Ensure all DC circuit breakers are open before making connections.
- Use appropriately sized cables for the expected current to prevent overheating.
- Connect the ground wire to a proper grounding point.

PRODUCT DETAILS

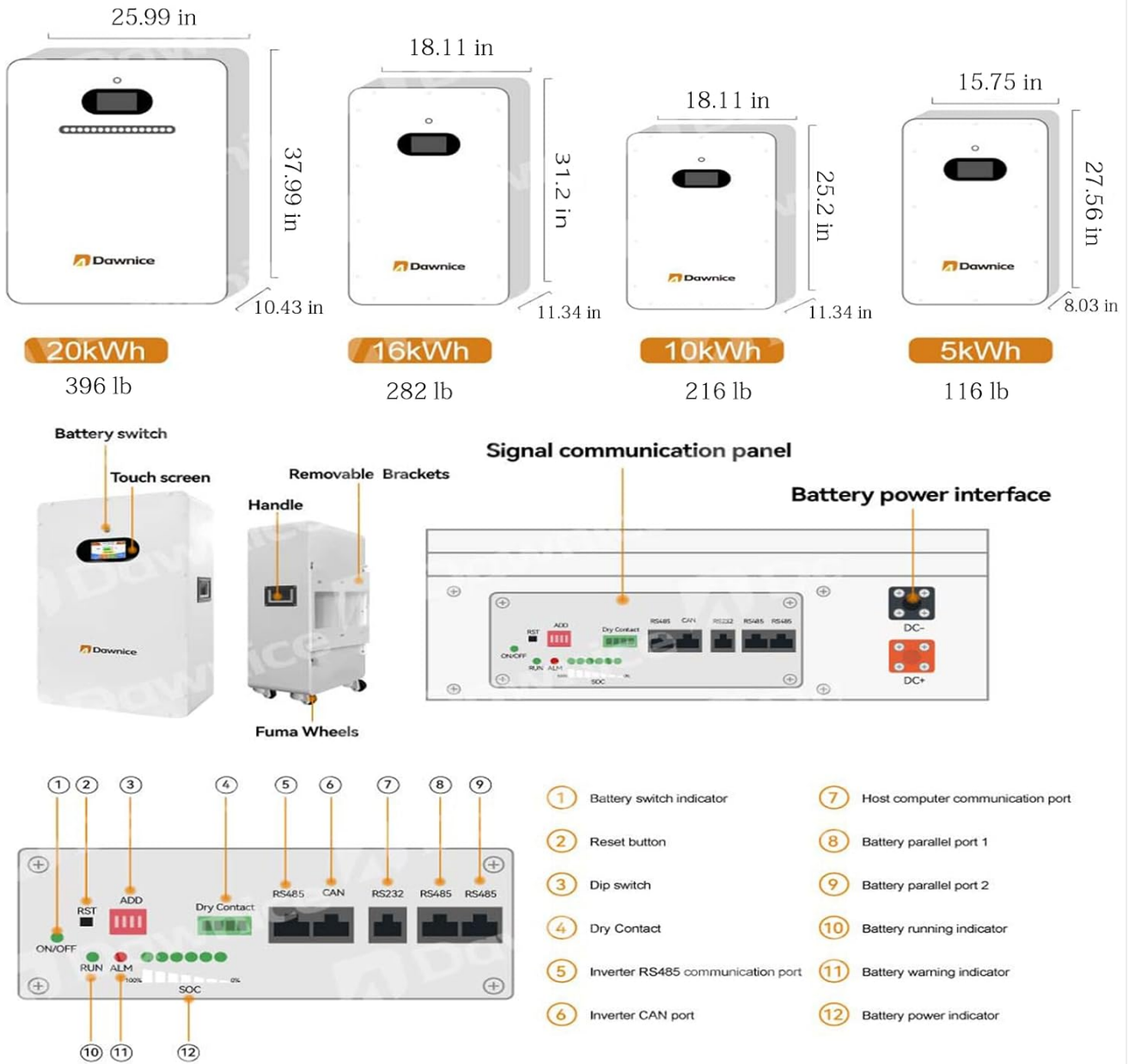


Figure 4.2: Product Details and Interface Diagram.

Note: The image above illustrates the various ports and indicators on the battery, including the battery switch, touchscreen, signal communication panel, and battery power interface. Consult this diagram for correct wiring.

5. OPERATING INSTRUCTIONS

Once installed, the Dawnice solar battery can be operated and monitored through its integrated touchscreen and a dedicated mobile application.

5.1 Initial Power-Up

- After all electrical connections are verified, close the DC circuit breakers to power on the battery.
- The touchscreen display will illuminate, showing the main status and battery parameters.

5.2 Touchscreen Operation

The integrated color touchscreen allows for direct configuration and monitoring of the battery system.

- Navigate through menus to view real-time data such as charge status, voltage, current, and temperature.
- Adjust settings as required (refer to the detailed product manual for specific menu options).

5.3 Mobile Control (Bluetooth & WiFi)

The battery supports remote control and monitoring via a smartphone application, utilizing Bluetooth and WiFi connectivity.

- Download the official Dawnice mobile application from your device's app store.
- Follow the in-app instructions to pair your smartphone with the battery via Bluetooth or connect to your local WiFi network.
- The app provides real-time monitoring of battery status, charge/discharge management, fault diagnosis, and data visualization.



Figure 5.1: Mobile Control Interface.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Dawnice solar battery.

- **Regular Inspection:** Periodically inspect the battery for any physical damage, loose connections, or signs of corrosion.
- **Cleaning:** Keep the battery's exterior clean and free of dust. Use a dry, soft cloth for cleaning. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure that the area around the battery remains clear and well-ventilated to prevent heat buildup.
- **Firmware Updates:** Check the mobile application or manufacturer's website for any available firmware updates to ensure the battery's software is up-to-date.
- **Environmental Conditions:** While the 5Kwh model has an IP54 rating for outdoor use, it is recommended to protect it from prolonged exposure to harsh weather conditions. The 20Kwh model is strictly for indoor use.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter. For problems not listed here, please contact customer support.

Problem	Possible Cause	Solution
Battery not powering on	Battery switch off; Loose power connections; Low battery voltage	Ensure battery switch is ON; Check all power cables are securely connected; Connect to a charging source to initiate charging.
No display on touchscreen	Battery not powered; Display fault	Verify battery is powered on; If issue persists, contact customer support.
Mobile app not connecting	Bluetooth/WiFi off; App not updated; Battery out of range	Ensure Bluetooth/WiFi is enabled on phone and battery; Update app to latest version; Move closer to the battery.
Battery not charging	Inverter/charger issue; BMS protection active; Incorrect wiring	Check inverter/charger status; Verify no BMS fault codes on display/app; Re-check wiring according to manual.
Unusual noises or smells	Internal fault	Immediately disconnect power and contact customer support. Do not attempt to fix.

8. SPECIFICATIONS

Detailed technical specifications for the Dawnice 5kWh Solar Battery (Model: HZEB-LCT-5).

MECHANICAL SPECIFICATIONS				
Product weight(KGS)	55 KGS	98 KGS	128 KGS	180 KGS
Dimension(L/W/H)(mm)	400*204*700mm	460*288*640mm	460*288*800mm	265*650*965mm
Installation Mode	Wall / Ground Mounted(20kWh battery ground-mounted only)			
IP Grade	IP54	IP54	IP54	IP21
SECURITY AND CERTIFICATIONS				
Safety(Pack)	UN38.3,MSDS,JEC62619(CB),CE-EMC			
Safety(Cell)	UN38.3,MSDS,JEC62619,CE,UL1973,UL2054			
Protection	Short- circuit protection/overcurrent protection/over-temperature protection			
ENVIRONMENTAL SPECIFICATIONS				
Operating Temperature(°C)	Charge 0°C~50°C; Discharge -10°C~50°C			
Working Altitude(m)	≤2000m			
Humidity	≤90% (Non-condensing)			

Figure 8.1: Performance and Mechanical Specifications Table.

8.1 General Specifications

- **Product Dimensions (L x W x H):** 15.75 x 8.03 x 27.56 inches
- **Item Weight:** 116.8 pounds
- **Model Name:** HZEB-LCT-5
- **Recommended Uses:** Indoor/Outdoor (for 5Kwh, 10Kwh, 16Kwh models)
- **Unit Count:** 1.0 Count

8.2 Performance Specifications (HZEB-LCT-5)

- **Nominal Voltage:** 51.2V
- **Cell Model/Configuration:** 3.2V/100Ah/16S1P
- **Capacity (Ah):** 100Ah
- **Rated Energy (kWh):** 5.120kWh
- **Max. Charge/Discharge Current (A):** 100A
- **Voltage Range (Vdc):** 44.8~57.6V
- **Scalability:** Up to 15 parallel units
- **Communication:** CAN/RS485
- **Cycle Life (@25°C, 80% DOD):** ≥6000 Cycles
- **Design Life:** ≥15 Years (Cycle Life ≥15 Years @ 25°C)

8.3 Mechanical Specifications (HZEB-LCT-5)

- **Product Weight (KGS):** 55 KGS
- **Dimension (L/W/H)(mm):** 400*204*700mm

- **Installation Mode:** Wall Mounted
- **IP Grade:** IP54

8.4 Security and Certifications

- **Safety (Pack):** UN38.3, MSDS, IEC62619(CB), CE-EMC
- **Safety (Cell):** UN38.3, MSDS, IEC62619, CE, UL1973, UL2054
- **Protection:** Short-circuit protection, overcurrent protection, over-temperature protection

8.5 Environmental Specifications

- **Operating Temperature (°C):** Charge 0°C~50°C; Discharge -10°C~50°C
- **Working Altitude (m):** ≤2000m
- **Humidity:** ≤90% (Non-condensing)

9. WARRANTY AND SUPPORT

Dawnice is committed to providing high-quality products and customer satisfaction.

- **Product Lifetime:** The battery is designed for a 15-year lifetime with over 6000 cycles.
- **Customer Service:** If you have any questions or require assistance after receiving your product, please contact Dawnice customer service directly through your Amazon order history. Customer support is available 24 hours a day.
- **Contact Information:** For specific inquiries regarding product size, weight, or other details beyond Amazon's processing range, please contact Dawnice customer service directly via email.

Note: As per the product information, the product is shipped from Dawnice Energy and offers 30-day easy returns.