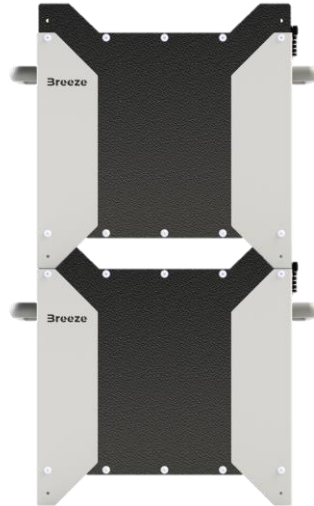




Manual for the BREEZE LC 48100 Battery Module



1. Introduction

The BREEZE LC 48100 battery is a modular energy storage system designed for installation in photovoltaic and industrial applications. The modules are connected in parallel with the inverter using cables equipped with Anderson connectors. The set includes a dedicated cable, ensuring a quick and safe connection of the module to the inverter.

2. Safety Precautions

- Before starting the installation, ensure that the system is completely disconnected from the power supply.
- Always wear protective gloves and safety goggles during installation.
- Batteries are heavy—use proper lifting techniques or appropriate lifting tools.
- Connect the cables to the battery only after completing all other connections.
- Before mounting, connect to each module via the Breeze BMS application and power it off.

3. Tools and Materials Required for Installation

- Screwdriver or power drill
- Mounting screws – for securing battery modules together

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- Expansion plugs and screws – for securing the topmost module
 - Level
 - Voltage meter
 - Pre-assembled cable set with Anderson connectors
-

4. Step-by-Step Installation Guide

Step 1: Battery Preparation

1. Pobierz Download the Breeze BMS application on your mobile device.

Android:

<https://play.google.com/store/apps/details?id=com.breezeenergies.breezebms&hl=en>

iPHONE:

<https://apps.apple.com/sa/app/breeze-bms/id1645532722>

2. Connect to each module using the Breeze BMS application and power it off before starting the installation.

2. Ensure that the modules are powered off and ready for installation.

Step 2: Preparation of the Installation Site

1. Select a stable, level, and dry surface.
2. Ensure proper ventilation at the installation site, avoiding direct sunlight and excessive humidity.

Step 3: Positioning and Assembling the Modules

1. Place the first BREEZE LC 48100 module on the prepared surface.

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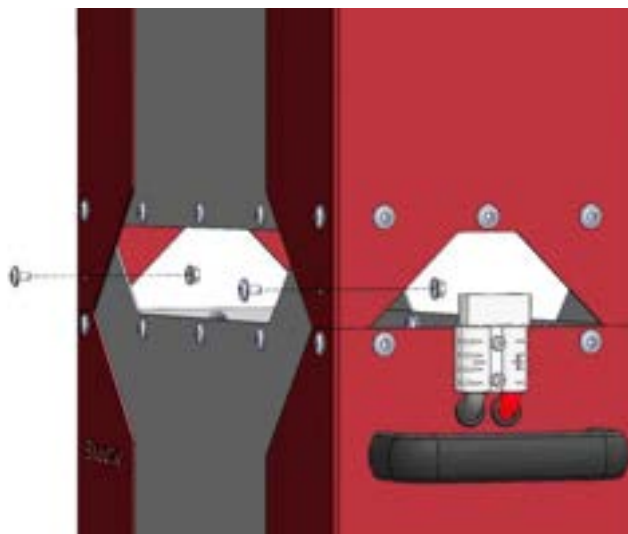
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2. Carefully place the next module on top of the first one, aligning the mounting holes.



3. Use mounting screws to securely fasten the modules together.



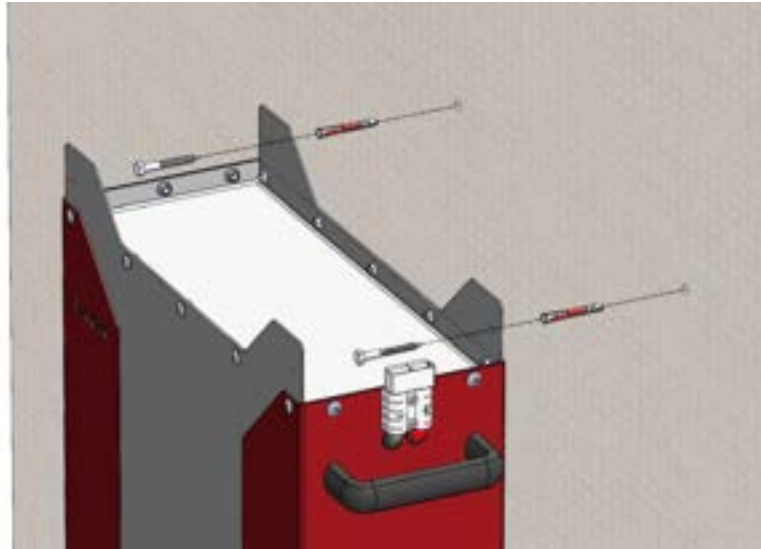
3. Repeat the steps until a maximum of 4 modules are stacked vertically.

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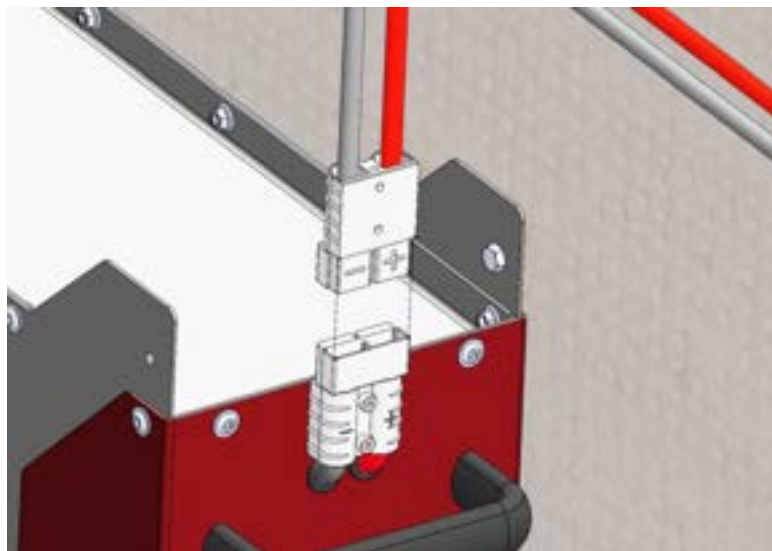
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4. Anchor the top module to the wall using the mounting holes in the enclosure. Use expansion plugs and screws suitable for the wall type.



Step 4: Cable Connection

1. Prepare the cable set with pre-installed Anderson connectors.
2. First, connect the cables to the inverter or Breeze CONNECT BOX, following the manufacturer's instructions.
3. Finally, connect the cables to the Anderson connectors on each module, ensuring the correct polarity (red – positive, black – negative).



4. Verify the integrity of all connections using a voltage meter.

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Step 5: Installation Finalization

1. Use the Breeze BMS application to connect to each module sequentially and activate it.
 2. After activating all modules, turn on the inverter and configure its parameters.
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5. Inverter Configuration

Voltage Levels

Set the inverter parameters according to the values below:

- FLOAT Voltage: 57.6V
- ASORPTION Voltage: 58.4V
- CUT-OFF Voltage: 46V
- Sustain Voltage: 50V
- BattLow Voltage: 48V
- Equalization Voltage: 58.4V
- GridStart Voltage: 47V
- Batt Empty Voltage: 46V
- Batt Shutdown Voltage: 45V

Capacity

The total system capacity should be calculated based on the battery datasheet and the number of installed modules.

Current Limitations

For a single battery in the system – Set the maximum charging and discharging current according to the maximum values specified in the battery datasheet..

For multiple batteries in the system – Set the maximum charging and discharging current based on the maximum values specified in the battery datasheet, reduced by 10% and multiplied by the number of modules.



EXAMPLE

For two modules:

Maximum current = 50 A

Number of batteries = 2

Current limit setting = $0,9 \times 50 \text{ A} \times 2 = 90 \text{ A}$

6. System Testing

1. Monitor the status of each module using the Breeze BMS application.
 2. Test the system under load and verify its proper operation
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7. Additional Notes

- **Structural Stability:** All modules must be securely fastened with screws, and the top module must be anchored to the wall.
- **Parallel Connections:** Modules are individually connected to the inverter using Anderson connectors.
- **Regular Maintenance:** Inspect mechanical and electrical connections once a month
- **Operating Temperature Range:** from +5°C to +55°C.

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