

BF100 Outdoor Air Cooled Battery Cabinet

Autarco XLH series + BF100 installation specification



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1.1 Tools for installation

The following tools are required for installation.

- USB to RS486 adapter
- Mobile phone
- CAN box
- Full set of ratchet wrenches
- Small flat-head screwdriver
- Multimeter

1.2 Inspection Checklist

This section outlines the inspection checklist to be completed after installation.

1. **Appearance Check:** Verify door seals, check for paint scratches or dents
2. **Primary Wiring Check:** Inspect power terminals for cracks and verify connection reliability
3. **Secondary Wiring Check:** Ensure terminal firmness and avoid loose connections
4. **Safety Signage:** Confirm presence of clear safety warning signs
5. **Grounding System:** Check grounding connections and resistance values
6. **Cabinet Doors:** Ensure normal door opening/closing and no wire pinching
7. **Nameplate Check:** Ensure nameplate edges are intact without curling or damage
8. **Cabinet Interior:** Remove any extra screws, nuts, zip ties, or residual materials

2.1 Pre-wiring Inspection

No.	Inspection item	Confirmed
1	Based on manual, Verify cable and terminal specifications meet requirements	<input type="checkbox"/>
2	Ensure cables are labeled and correctly identified	<input type="checkbox"/>
3	Prepare all necessary accessories	<input type="checkbox"/>
4	Confirm installation personnel are equipped with safety gear	<input type="checkbox"/>
5	Ensure all circuit breakers are in the off position	<input type="checkbox"/>

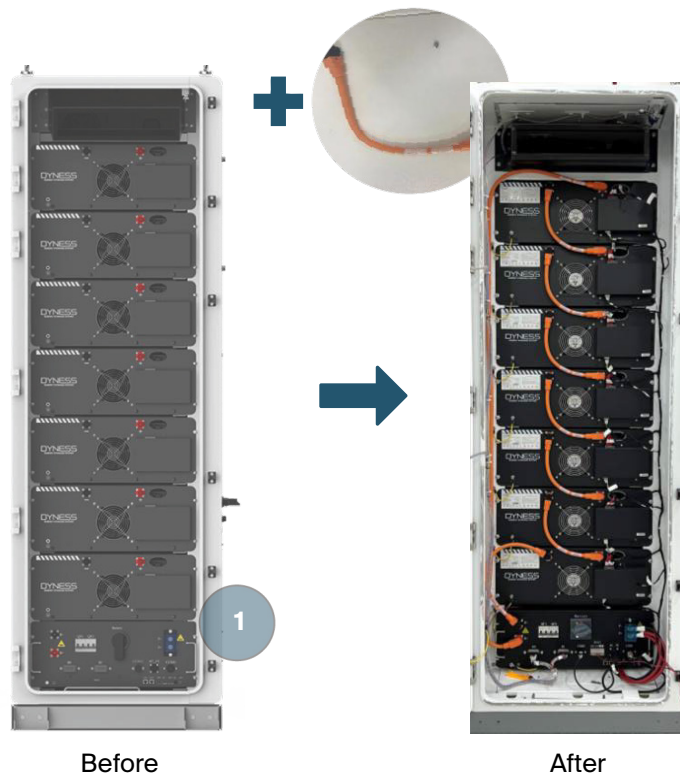
2.2 Wiring

Step 1. Internal Wiring

To ensure product safety, the battery power cables are shipped separately and require on-site installation:

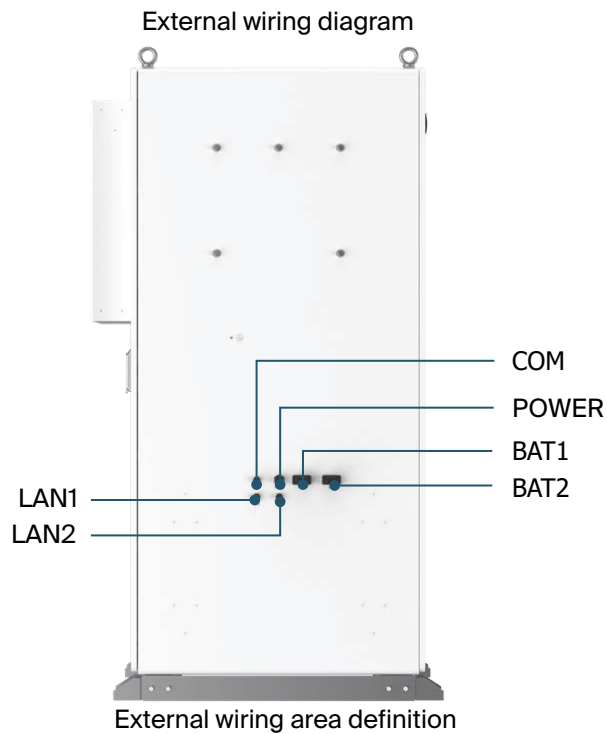
1. Confirm the battery switch on the BDU (Battery Distribution Unit) is in the off position
 2. Connect the battery power cables:
 - a) Use power cables to connect the PACKs in series.
 - b) Connect the negative terminal of the previous PACK to the positive terminal of the next PACK.
 - c) Ensure the black terminal connects to the negative (black) side and the red terminal d) connects to the positive (red) side.
- Connect the battery to the BDU power cables:
- e) Battery positive terminal to BDU positive (red to red).
 - Battery negative terminal to BDU negative (black to black).
3. **Note:** Color coding is crucial—red indicates positive, black indicates negative.

Battery power cable connection diagram



Step 2. External Wiring

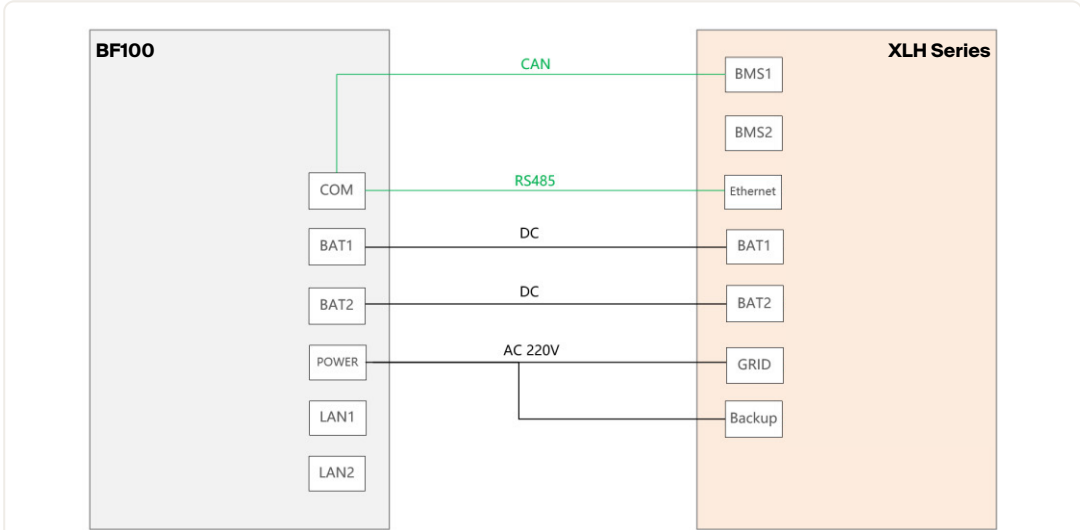
This equipment supports external connection to the XLH series. Below are the interface definitions:



Label	Function Description	
COM	CAN-2H	XLH communication
	CAN-2L	
	7A	
	7B	
POWER	AC230V external power input	
BAT1	Battery Interface 1	
BAT2	Battery Interface 2	
LAN1	Parallel Connection Interface	Same function for Both LAN
LAN2		

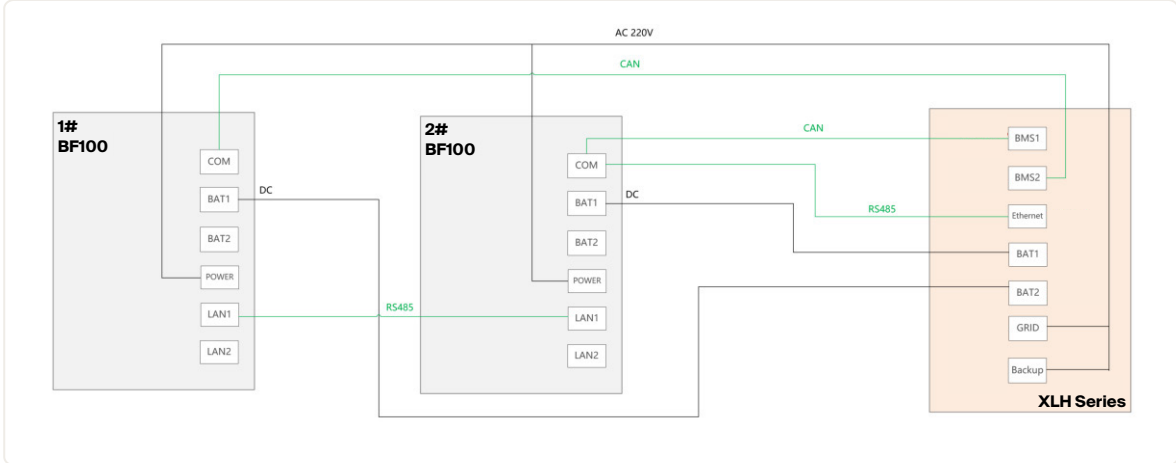
Wiring guide

One battery cabinet connects to one inverter



Note: "DC" contains positive and negative battery wires.

Two batteries cabinets connect to one inverter.



2.3 BF100 Fixed installation

Check Before Installation

Warning

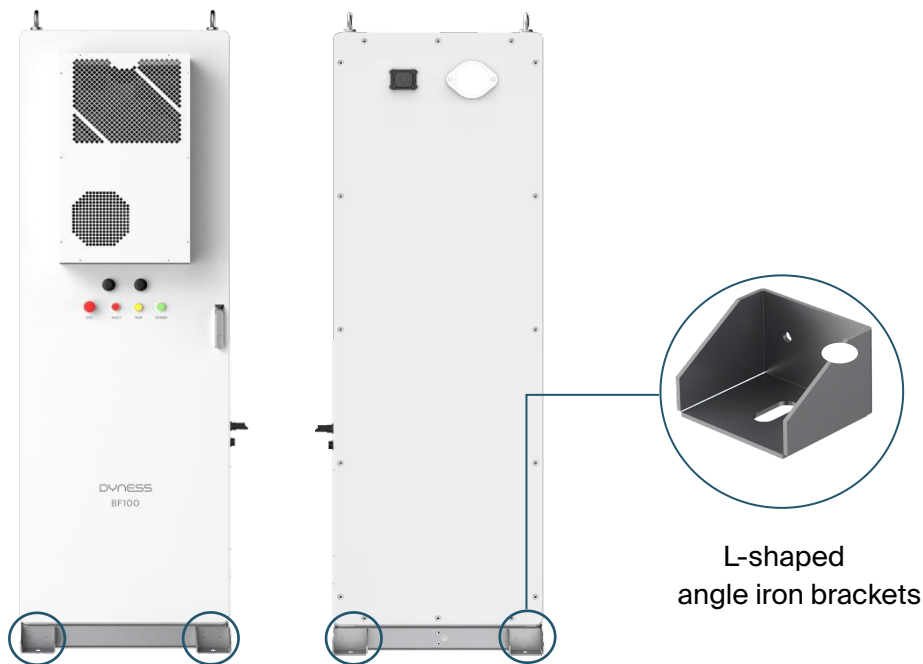
Please comply with local safety regulations and operational rules during installation.

Only complete and undamaged equipment can be installed! Please ensure that before installation:

- The product cabinet itself should be complete and intact;
- All equipment in the cabinet should be complete and intact.

Install Angle Iron Brackets & Expansion Bolts

The product adopts right side cable outlet, concrete column is not necessary. After shipping the product to the installation site, it shall be fixed. Four L-shaped angle iron brackets are pre-reserved at the front/back of the product base, as shown in the below diagram.



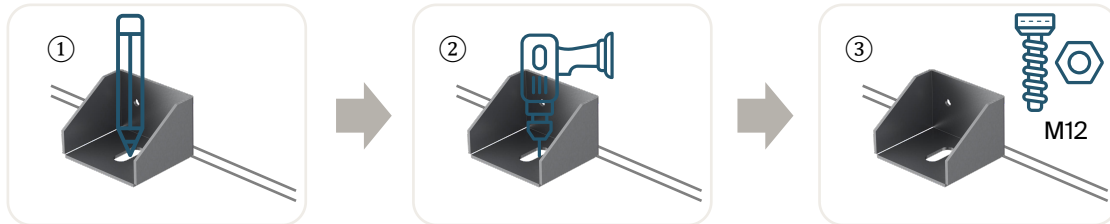
Notice: The L-shaped angle iron brackets can be rotated, so the angle iron brackets could be installed at the side of the product too.

The following tools may be needed for installing the brackets: marker pen, electric drill, angle iron, M12 expansion bolts. These tools are not included in the supply list and need to be provided by the customer.

L-shaped Angle Iron Brackets Installation Steps

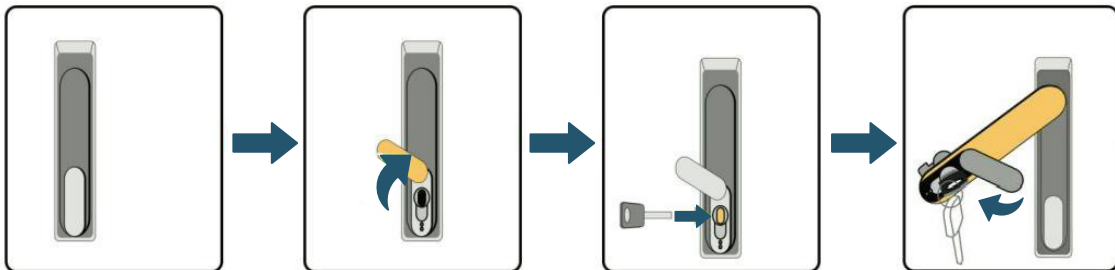
Angle iron brackets installation steps

1. Use a marker pen to mark the drilling positions;
 - Choose an electric drill with a diameter matching the bolt's outer diameter, drill holes according to the bolt's length (hole depth slightly greater than the bolt length) until reaching the desired depth for installation;
 - Insert the bolt and expansion sleeve into the hole, tighten the nut to the end of the bolt, and use a wrench to tighten it.



Door open steps

1. Make sure that the equipment is under lock state;
2. Moving the lid up above the locking hole;
 - Plug in the key in the door and revolve it clockwise;
 - Rotating the handle clockwise to the position shown in the figure to open the door.

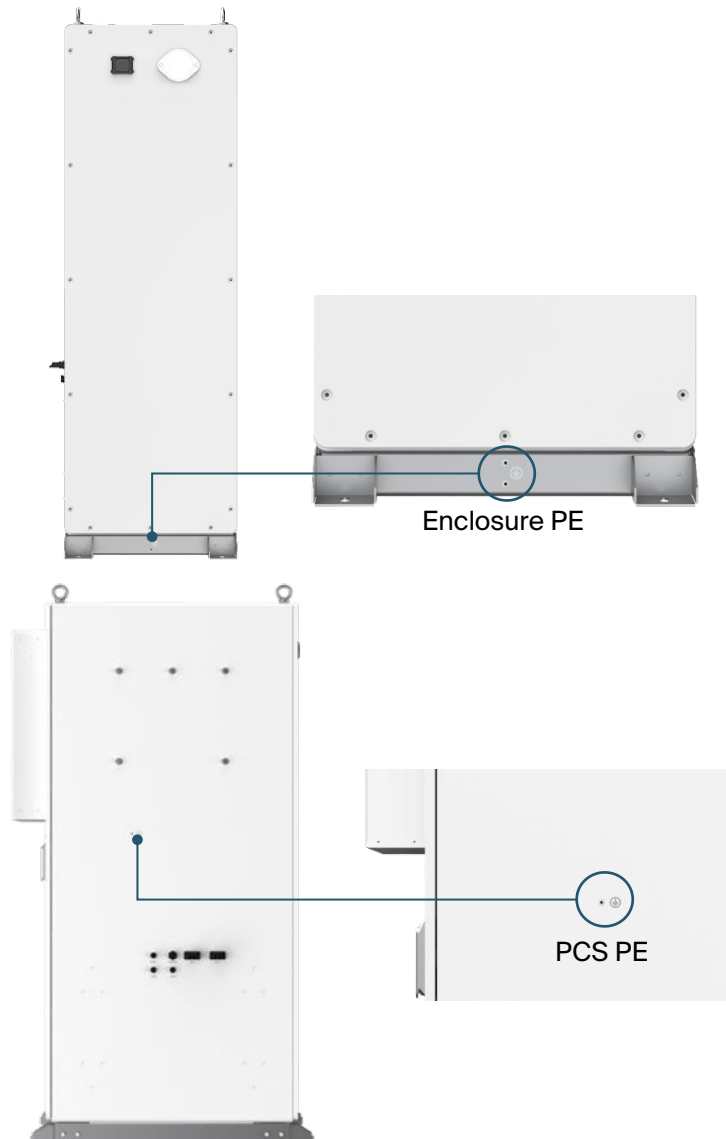


2.4 BF100 PE Wiring

Battery cabinet grounding

The grounding connection must comply with local laws and regulation. Please consider the actual situation at project site and follow the instructions of the power station staff during the process of ground connection, the grounding connection is shown as follows:

1. Reserve grounding point, which can be grounded by cable/flat steel;
2. Use 6AWG grounding cable, grounding cables and terminal requirements should refer to 5.5.2.



After the grounding connection, the grounding resistance must be measured, and the specific grounding resistance value must comply with relevant region/local standards and regulations.

2.5 Checking after wiring

No.	Checklist	Confirmed
1	Please disconnect the user's grid-side switch and the DC-side switch of the battery cabinet, please ensure the AC side and DC side of PCS not energized;	<input type="checkbox"/>
2	Please check if the negative and positive connection of battery, the AC phase of PCS are connected correct. Measure the resistance between the three phase, which should be in the M Ω level, if it is in k Ω level or smaller, please check the circuit;	<input type="checkbox"/>
3	Check if External cables, PE cables and communication cables are well connected	<input type="checkbox"/>
4	The PE cable resistance should be less than 0.1 Ω , the cable is intact and has no damage or cracks;	<input type="checkbox"/>
5	Clean the installation area and ensure that there are no tools or other unrelevant objects left inside the ESS cabinet;	<input type="checkbox"/>
6	Use fireproof and waterproof materials to tightly seal the openings and gaps around the ESS cabinet's entry and exit holes.	<input type="checkbox"/>

3.1 Powering On

1. Turn off the battery circuit breaker ("Battery" breaker) on the BDU.
2. Sequentially turn off the "QF1" and "QF2" switches on the BDU.

BDU operation diagram



Indicator Check:

- Power indicator ("POWER") and running indicator ("RUN") should light up.
- Fault indicator ("FAULT") should remain off.
- The screen should display system status and parameters.

3.2 Powering Off

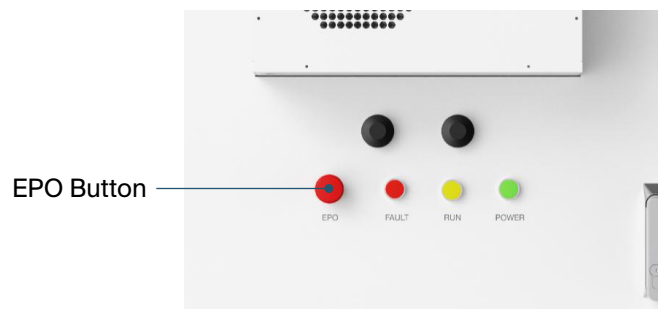
1. Sequentially turn off the "QF1" and "QF2" switches.
2. Turn off the "Battery" circuit breaker on the BDU.

Warning

Wait five minutes after power-off for the system to fully discharge before performing maintenance.

3.3 Emergency Shutdown

In emergencies, press the red emergency stop button (marked "EPO") on the cabinet door.



4.1 HMI Log In

Access Levels:	Directions
Not Logged In:	View system data only.
General User:	View system data and configure basic parameters. Default password: 1111.

4.2 System Overview

Main Window	Main Menu	1st Submenu	2nd Submenu	3rd Submenu	
Main Interface	Run Information	Grid			
		Battery			
		Load			
		DC photovoltaic			
		Electric generator			
	Data Query	EMS		Online status	
				Parallel state	
				Charge and discharge data	
				peak and valley data	
		BMS Data		Basic	
				Voltage	
				Temperature	
				Alarm	
		XLH Data		Basic	
				Alarm	
		System Data		Meter	
				Fire protection	
				AC	
		Alerting		Real-time alarm	
			History		
		Version			
	Device Settings	EMS		Operating data	
				Parameter setting	system parameter
				System settings	basic setting
	Login Permissions		User selection		
			Password modification		

HMI screen provides access to system information and parameter settings. Features include:

- Run Information: Displays connected device details.
- Data Query: View detailed data from subsystems and alarms.
- Device Settings: Configure system operation parameters (EMS-related only).
- Login Permissions: Manage user roles and passwords.