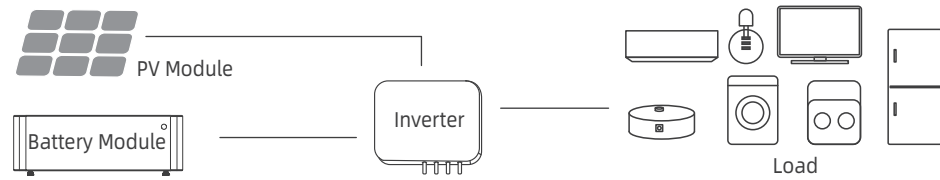




# FinDreams Battery FD-LV5.0 Battery Module Quick Start Guide

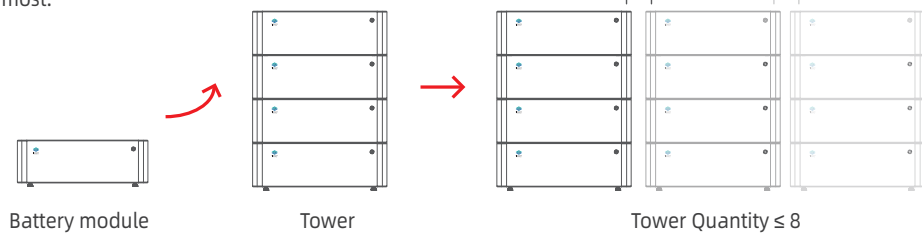
EN-QSG Dec-2023 Version02

## DC Topology



## Scalability

One tower could be made up by 1 to 4 battery modules, and 8 towers could be connected in parallel at most.



## Safety

### IMPORTANT SAFETY INSTRUCTIONS

The battery module has been designed and tested in accordance with international safety requirements. However, in order to prevent personal injury and property damage and ensure long-term operation of the battery module, please read this section carefully and observe all safety information at all times.

### Battery Module Leakage

If the battery modules leak electrolytes, contacting with the leaking liquid or gas should be avoided. The electrolyte is corrosive, and the contact may cause skin irritation and chemical burns. If one is exposed to the leaked substance, follow these steps:

Accidental inhalation: Evacuate the contaminated area, and seek medical help immediately.

Eye exposure: Rinse eyes with flowing water for 15 minutes and seek medical help immediately.

Skin contact: Wash the affected area thoroughly with soap and water and seek medical help immediately.

Accidental ingestion: Induce vomiting and seek medical help immediately.

### Fire fighting Measures

The battery modules may catch fire when it is put into the fire. In case of fire, please make sure that an ABC or carbon dioxide extinguisher is nearby. Water cannot be used to extinguish the fire.

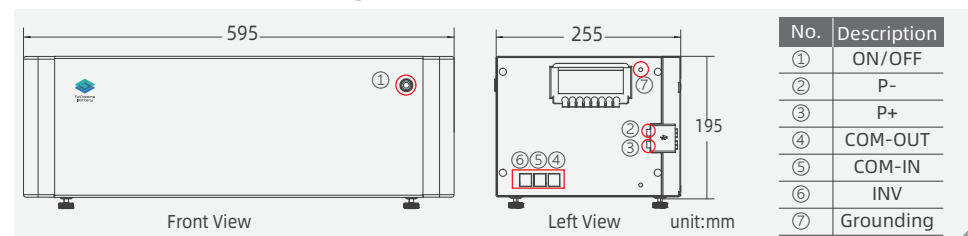
Full protective clothing and self-contained breathing apparatus are required for the firefighters to extinguish the fire.

### Battery Modules Handling and Storage Guide

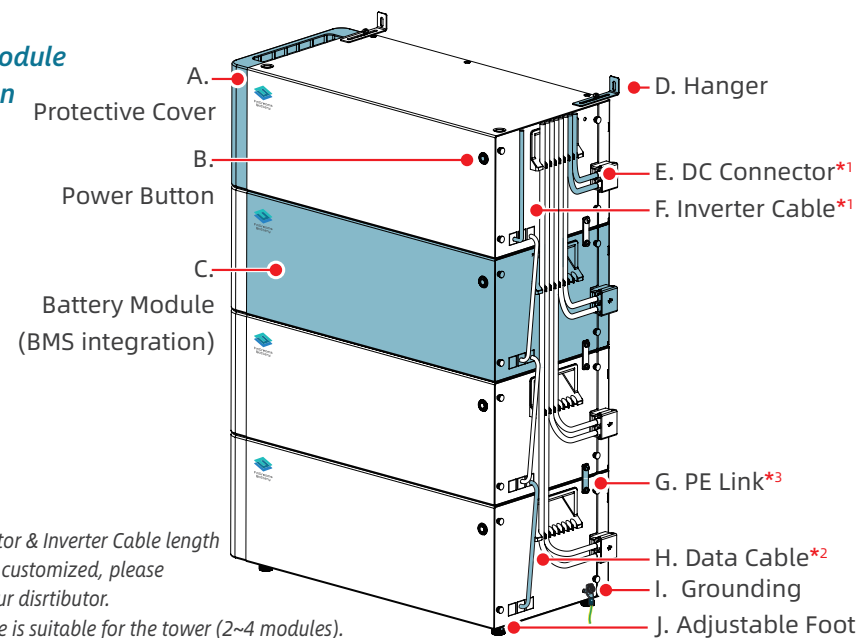
- The battery module and its components should be protected from damage when transporting and handling.
- Do not impact, pull, drag, or step on the battery module.
- Do not insert unrelated objects into any part of the battery module.
- Do not throw the battery module into a fire.
- Do not soak the battery module in water or seawater.
- Do not expose to strong oxidizers.
- Do not short circuit the battery module.
- The battery module cannot be stored at high temperatures ( $\geq 50^{\circ}\text{C}$ ).
- The battery module cannot be stored directly under the sun.
- The battery module cannot be stored in a high humidity environment.
- Do not use the battery module if it is defective, or appears cracked, broken or other wise damaged, or fails to operate.
- Do not attempt to open, disassemble, repair, tamper with, or modify the battery modules. The battery modules are not user-serviceable.
- Do not use cleaning solvents to clean the battery module.

## Battery Module Overview

### Structure Dimension Drawing



### Battery Module Description



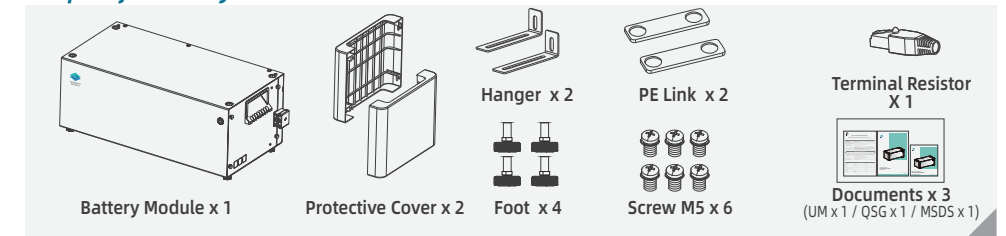
\*1. DC Connector & Inverter Cable length need to be customized, please contact your distributor.

\*2. Data Cable is suitable for the tower (2~4 modules).

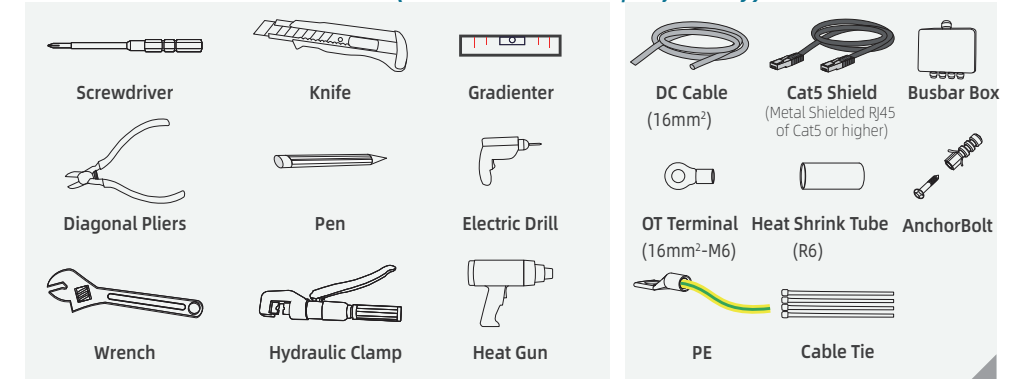
\*3. PE Link must be used for more than one battery module.

## Requirements for Installation

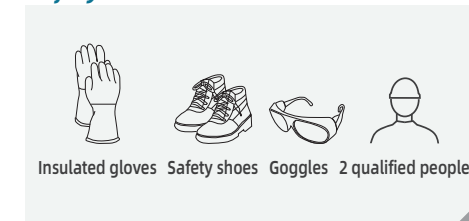
### Scope of Delivery



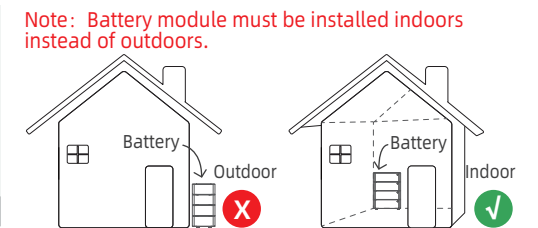
### Tools & Additional Accessories (not included in the scope of delivery)



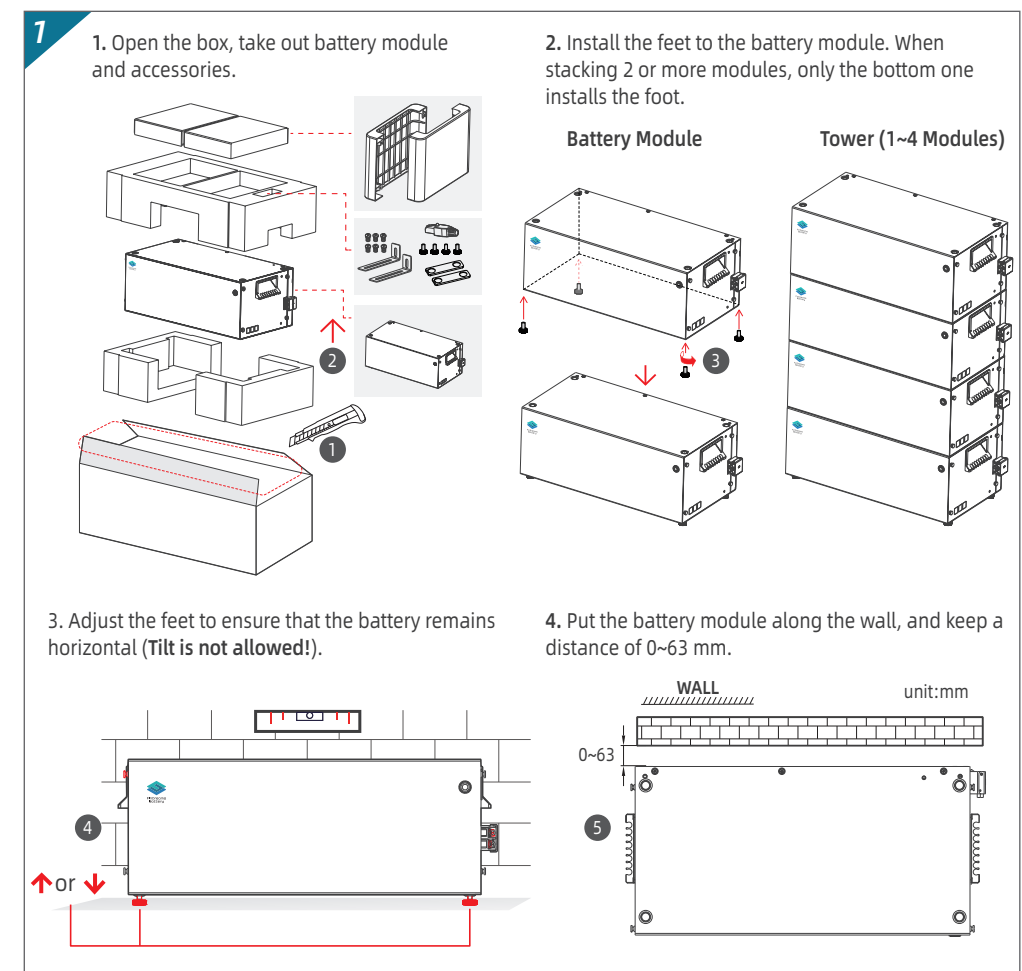
### Safety Gear



### Installation Scene



## Floor Installation



Preparation for Wiring

2

DC Connection ( DC cable 16mm<sup>2</sup> / OT 16mm<sup>2</sup>-M6 / Heat Shrink Tubing R6 )

1

DC Cable

1. Wire stripping.

2

OT Terminal

2. Connect the OT terminal to the core cable.

3

Heat Shrink Tubing

3. Press the hydraulic clamp to the OT terminal and the wire core.

4

4. Put a heat shrink tube on the DC cable, and then heat it with a heat gun.

5

P- P+

5. Another DC cable is processed in the same way.

6

M6 7Nm

6. Unscrew and connect the DC cable.

DC Cable Connection

1. Connect the Battery Module and Inverter with Inverter cable into INV port.  
2. Data cable is connected between the battery modules in the tower.

Cat5 Shield

Data Cable

Connection between Inverter and Battery module

Connect Inverter		Connect Module/Tower	
No.	Assignment	No.	Assignment
1	485-A	1	Unused
2	485-B	2	Unused
3	Unused	3	CAN_H
4	CAN_H	4	Unused
5	CAN_L	5	Unused
6	Unused	6	CAN_L
7	Unused	7	CAN_L
8	Unused	8	CAN_H

Connecting the PE

Battery module & tower require only one grounding wire.

M5 5Nm

Floor Installation

3

Battery Module

unit:mm

H:210~795

15

15

H

Install the Anchor Bolt in the wall.

Floor Installation

1. Fasten hangers to the battery module by screws.  
2. Then fix the battery module to the wall.

Cable Connection

3. Connect ground cable.  
4. Connect data cable.  
5. Connect DC cable.

Tower (1~4 modules)

Floor Installation

1. Stack the battery modules one by one.  
2. Connect the battery modules with PE links.  
3. Fasten hangers to the battery module by screws.  
4. Then fix the battery module to the wall (PE links have the functions of connecting battery and grounding).

No Feet

Cable Connection

5. Connect ground cable.  
6. Connect data cable between the battery modules in the tower.  
7. Connect data cable.  
8. Connect DC cable.  
9. Connect terminal resistor (IN & OUT).

Busbar Box

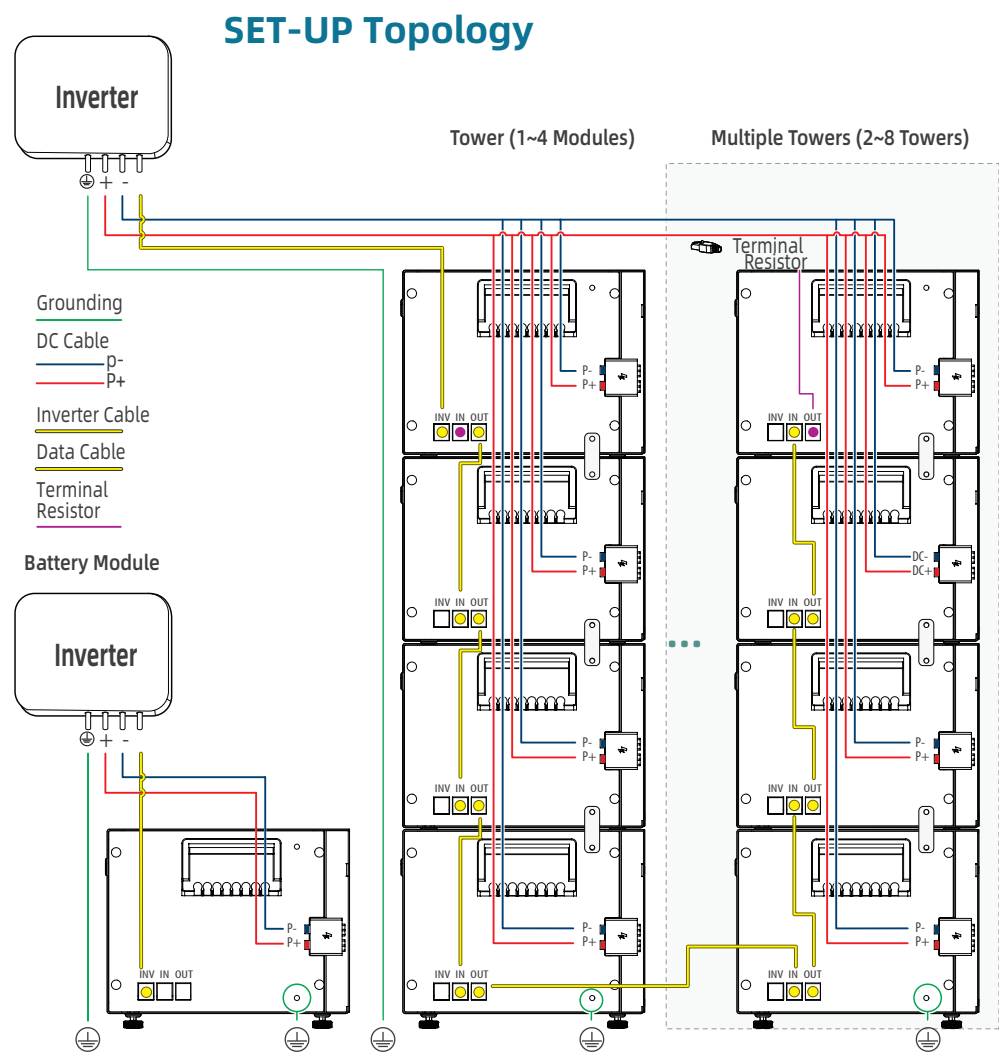
Withstand Voltage: 1000V ; Overcurrent Capacity: 300A.

Protective Cover Installation

Tighten protective covers on both sides.

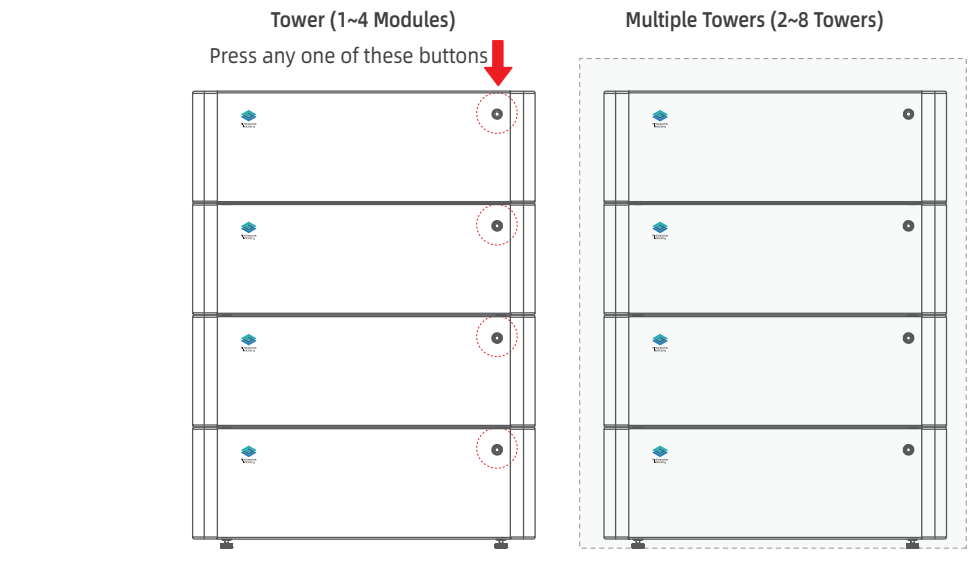
Battery module

Tower (1~4 modules)



Operation

Requirements:  
1. After the battery and inverter are installed, the equipment starts up in this order: **Battery → Switch\* → Inverter**.  
\* Turn on the air switch between battery and inverter if there is any.  
Press the button, after 1s, the battery module or tower will be activated. Then they will match automatically. The green LED light indicates that the battery runs normally.  
2. Press the button for around 2~3s to shut down the equipment, the equipment shuts down in this order: **Inverter → Battery → Switch\***.  
\* Switch off the air switch between battery and inverter if there is any.



LED Signals

Constantly red	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		An error has occurred: short-circuit Cell failure BMS communication failure
Flashing red quickly	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		Protection: Low cell's voltage / low battery's voltage / charge overcurrent / discharge overcurrent / too low or too high temperature / high module's voltage / charging short circuit / discharging short ciecuit / parallel short circuit
Flashing red slowly	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		Warning: Low cell's voltage / discharge overcurrent / too low or too high temperature / low capacity / high module's voltage
Constantly green	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		Idle (the battery is neither charging nor discharging).
Flashing green slowly	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		The battery is charging.
Flashing green quickly	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		The battery is discharging.
Flashing green quickly	Red <span>●</span> ON OFF Green <span>●</span> ON OFF		The battery firmware is upgrading.
Flashing orange slowly	orange <span>●</span> ON OFF		The battery attempts to shut down.
Flashing orange quickly	orange <span>●</span> ON OFF		The battery communication timeout.