

SIMPO 5000

Quick Start Guide(EN)

ZYC ENERGY
ZERO YOUR CARBON

Version: V1.7

Released Date: 2024-12-28



Safety

When installing, commissioning, operating and maintaining the product, the safety requirements in the manual should be strictly observed. Incorrect operation or work may lead to damage to the product and other properties or injury or death of the operator or third parties.

When fixing the product with screws or other parts, use the correct tool and reinforce it with the torque indicated in the manual or on the label of the product, otherwise the product may be unstable or damaged.

When using different tools, master the tools in advance to prevent the installer from being injured due to improper handling.

Please read this manual thoroughly before installation to ensure proper and safe installation and use of the product.

Warning & Caution

- Installers and users are obliged to familiarise themselves with this manual.
- Ensure that a fire extinguisher is in place prior to installation and use.
- Installation and operation must be carried out by qualified personnel and the system must be installed in restricted access areas.
- The battery module is with certain weight. With the help of tools if necessary.

Intended Use

SIMPO 5000 is designed for residential use. It is a 51.2 volt lithium-ion battery storage system that operates with compatible inverters in grid-connected, off-grid and backup modes. With a SIMPO WIFI, SIMPO 5000 be connected to the internet for remote monitoring and firmware upgrades.

Please make sure that it is only used in connection with a matched inverter. SIMPO 5000 is not suitable for powering life-sustaining medical equipment.

Battery Module Leakage

Stop using damaged battery immediately and dispose of it in the correct place or return it to a professional.

- Damage to the battery may result in leakage of electrolyte, and lifting into the electrolyte may cause consequences such as breathing difficulties, skin irritation and chemical burns. When the following conditions occur, the following guidelines should be followed promptly.
- Eye contact Rinse gently with running water for at least 15 minutes and seek medical help promptly.
- Skin contact Rinse under running water for more than 15 minutes, remove any contaminated clothing and seek medical attention.
- Inhalation or ingestion Leave the contaminated area and seek medical assistance.

Fire

Fire may occur with the battery if the battery is too close to a flame or the temperature of the environment is unusually high. Carbon monoxide, carbon dioxide, and other gases and emit smoke may occur if the battery is on fire.

Empty the fire area in a timely manner, use a full-face self-contained breathing apparatus (SCBA) with full protective gear during fire fighting and use a dry chemical fire extinguisher to cool and extinguish the battery to prevent the fire from spreading.

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Handling

- Installers should be cautious during installation to prevent damage to the battery.
- If the battery has been damaged before installation, including but not limited to shell damage, terminal port damage. Please do not use and contact us.
- Protect the battery from being damaged during transporting and handling
- Do not clean the battery with corrosive solution or stuff or allow foreign objects to enter the battery.
- Do not unplug any cables directly while the battery is in operation.
- Do not use the battery together with batteries of other brands or types.
- Do not short circuit the battery modules.
- Avoid subjecting the battery to external forces, such as being dragged on the ground, or having heavy objects placed on the battery.

Storage

- Do not store the battery in an environment that exposed to direct sunlight or high humidity, and ensure that it is kept away from heat and water.
- Batteries stored for long periods of time (≥ 6 months) should be charged periodically to prevent irreversible damage caused by low battery power.
- If the battery is stored for a long period of time, the ambient temperature should be maintained at about 25°C. If the battery is only stored for a short period of time, the ambient temperature should also be ensured to be between 0°C and 35°C.
- Do not store the batteries in a high humidity environment.

Transportation

Batteries should be shipped with the terminals covered to prevent contact with metal objects and short circuits during transport. Our batteries are discharged to a certain state of charge before shipment to you in order to comply with international transport regulations. Where possible, batteries should be shipped in the manufacturer's arrangement, horizontally and secured. Prevent shipping vertically if possible, and with a limit on the number of batteries stacked on top of each other. Do not place heavy objects on the battery to prevent damage to the battery

Manufacturer

Manufacturer: ZYC Energy Company Limited
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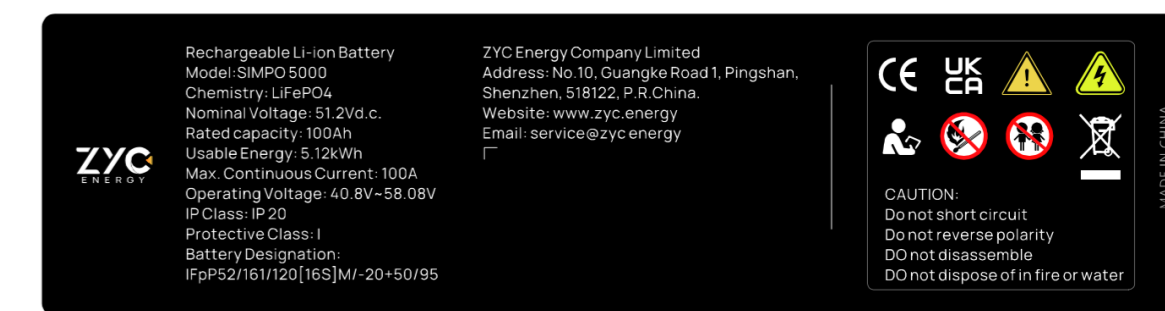
Regional Manager Europe

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Markings

Label on SIMPO 5000 module:



Marking Details:

CE Marking
This system complies with the requirement of the applicable EU directives.

Disposal
Do not dispose of the system together with household waste. Please contact ZYC's service partner to dispose of it in accordance with regulations for electronic waste and used batteries.

Beware of the danger zone
The system must be additionally grounded if additional grounding or equipotential bonding is required at the installation site.

Keep the system away from flame or any fire source.

Please read and follow the manual carefully while operating.

UKCA Marking
This system complies with the requirement of the applicable EU directives.

Beware of the danger zone
The system must be additionally grounded if additional grounding or equipotential bonding is required at the installation site.

Beware of electric shock.

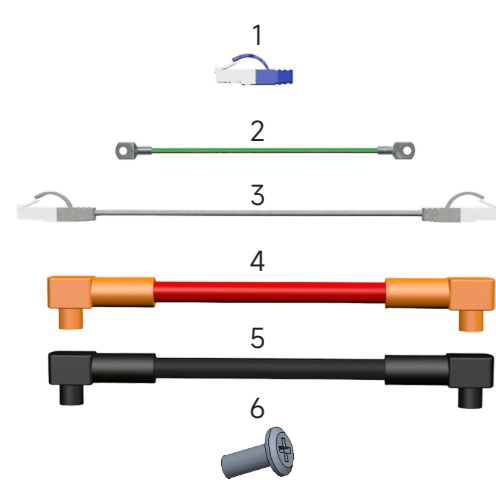
Keep the system away from children.

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Contents in SIMPO 5000 Package

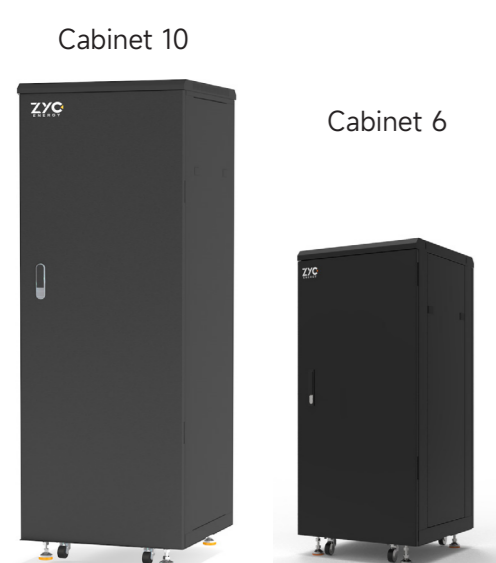


SIMPO 5000 Module



Number	Part Name	Quantity
1	Terminal Resistor	1
2	PE Cable	1
3	Com Cable	1
4	Power Cable(+)	1
5	Power Cable(-)	1
6	Bolt M6 x 16	4

SIMPO Cabinets



Specification	SIMPO Cabinet 6	SIMPO Cabinet 10
Dimension (W x D x H)	620 x 600 x 1270mm	620 x 600 x 1890mm
Max. Qty of modules	6(30kWh)	10(50kWh)
Max. continuous current	625A	1250A
IP Rate		IP20
Weight	120 kg	90 kg

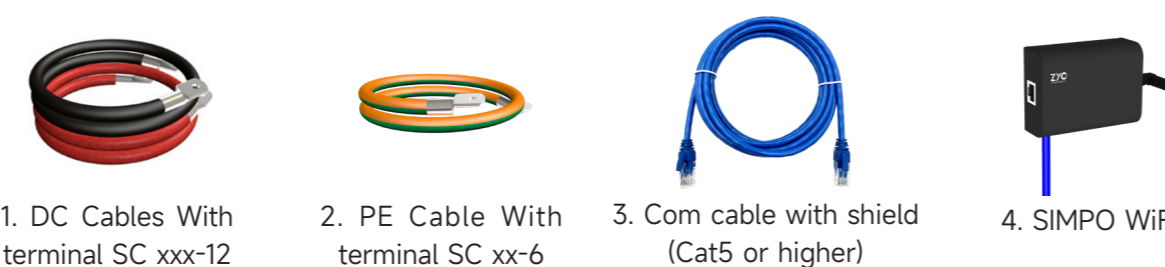
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Tools



Extra Accessories

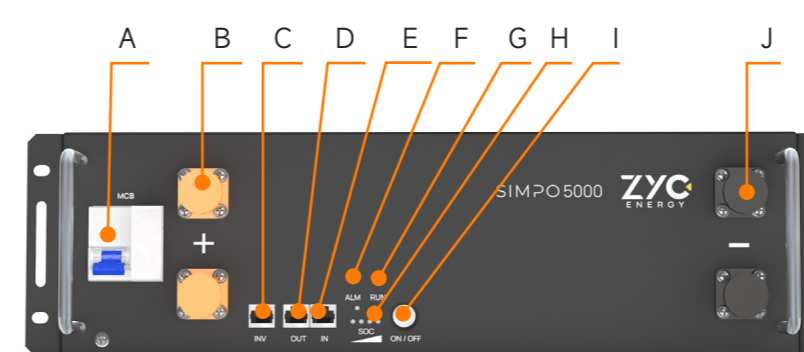
The parts are not included in the accessories we offered, but necessary for connecting with inverter.



1. Select appropriate cables according to the power of your system and electrical requirements.
2. PE Cables(CSA ≥ 25 mm) with Terminal(SCxx-6).
3. Communication cable with shield (Cat5 or higher).
4. SIMPO WiFi can be bought from ZYC's dealers.

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SIMPO 5000 Interface & LED Status

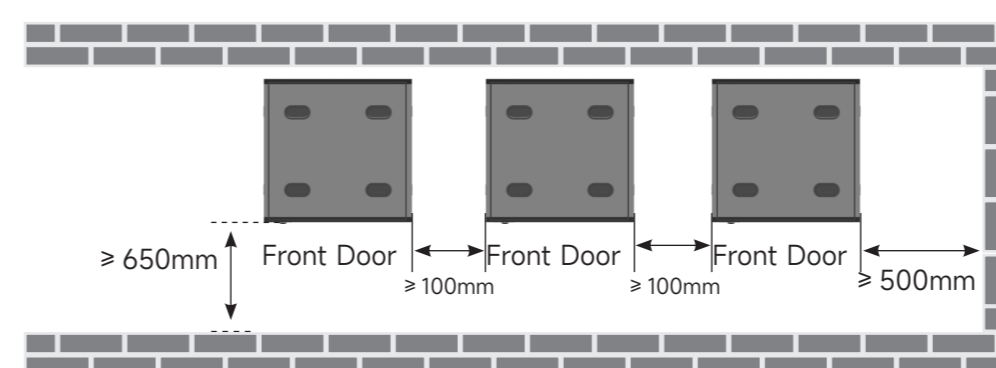


Letter	Label	Function	Letter	Label	Function
A	MCB	Circuit Breaker	F	ALM	Alarming LED
B	+	DC+ Port	G	RUN	Status LED
C	INV	Inverter Com	H	SOC	SOC Indicator
D	OUT	Parallel Com Out	I	ON/OFF	Switch On/OFF
E	IN	Parallel Com In	J	-	DC- Port

There are three LEDs on the front panel of SIMPO 5000 that indicate battery status, ALM, RUN and SOC.

LED	Status	Operational State
ALM	● (Red)	Error occurs
	● (Grey)	There is no error existing
RUN	● (Green) Always On	The battery is ON and working in communication mode
	● (Green) Flashes slowly	The battery is working in no-communication mode
SOC	● (Green) ● (Green) ● (Green)	75% < SOC \leq 100%
	● (Green) ● (Green) ● (Grey)	50% < SOC \leq 75%
	● (Green) ● (Green) ● (Red)	25% < SOC \leq 50%
	● (Green) ● (Red) ● (Red)	0% < SOC \leq 25%
While SOC < 5%, the first LED flashes quickly (0.5s ON, then 0.5s OFF) 1 Hz		
While discharging, the last LED flashes normally (1s ON, then 1s OFF) 0.5 Hz		
While charging, the last LED flashes slowly (2s ON, then 2s OFF) 0.25 Hz		

Minimum Clear Space Requirement of Cabinets:

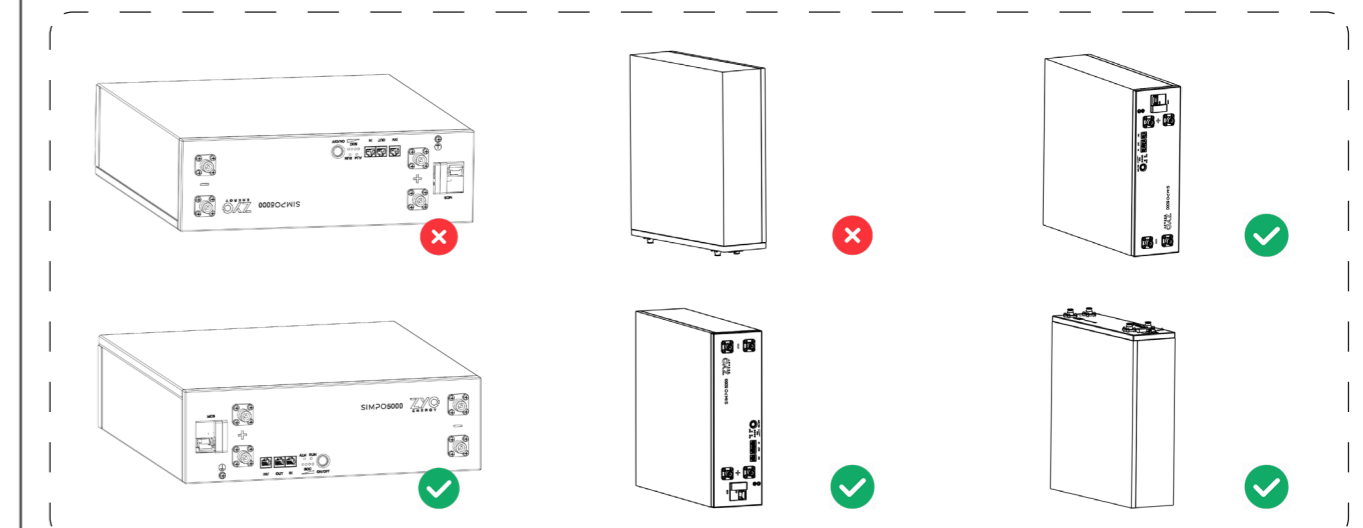


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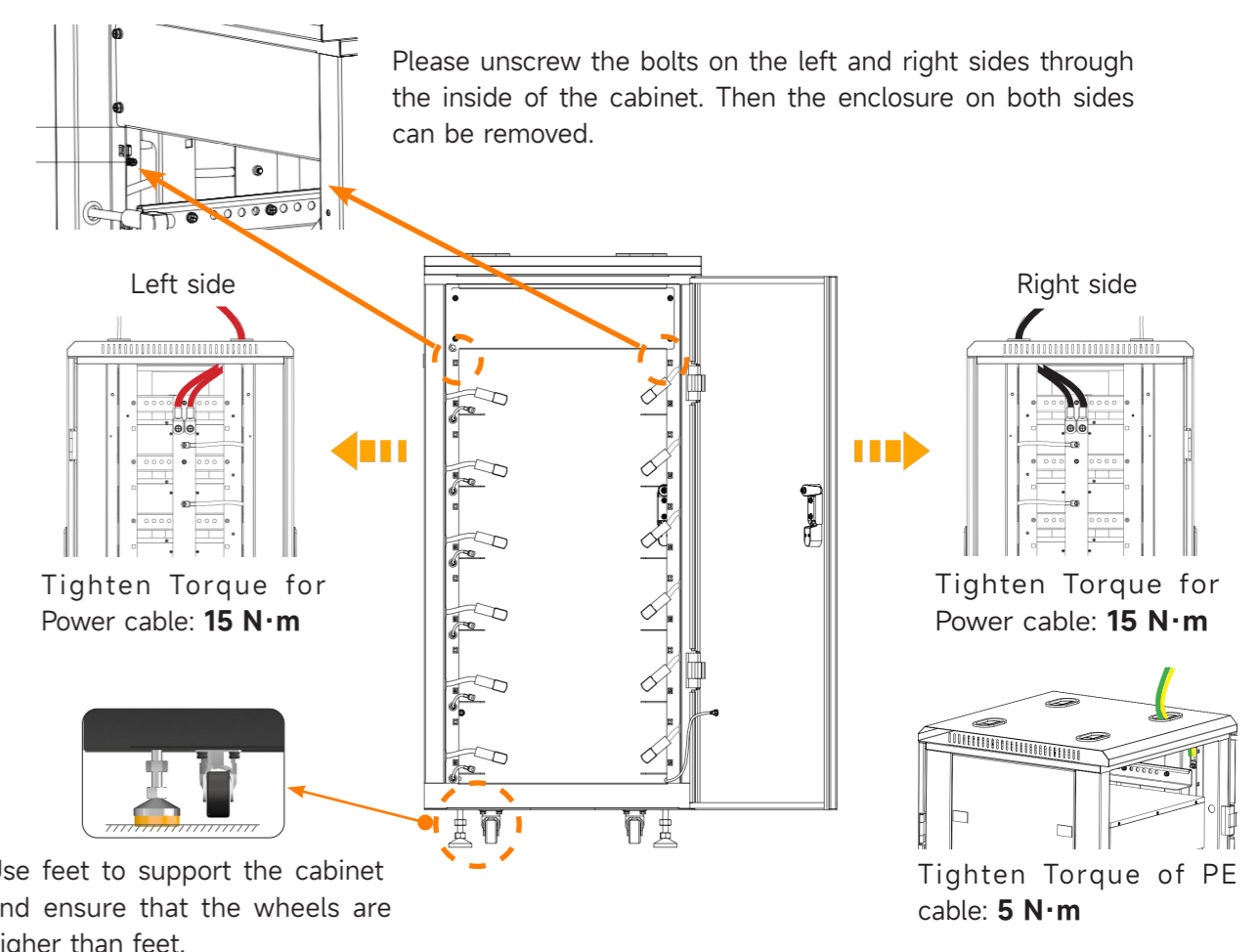
Battery Orientation

When mount SIMPO 5000 without cabinets or bracket. **Please do not placing the battery upside down or placing the front panel directly on the ground.**

There are certain requirements for the orientation of the battery, please install it correctly according to the following contents:



SIMPO Cabinet 6 Placement and Wiring

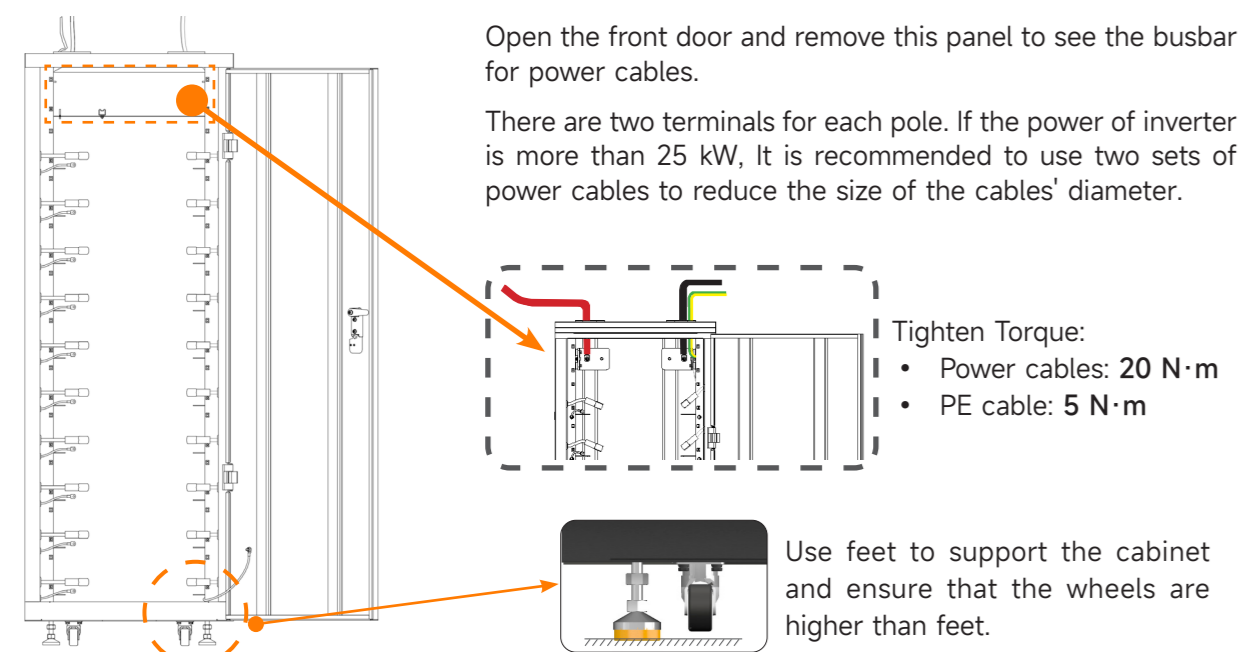


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SIMPO Cabinet 10 Placement and Wiring

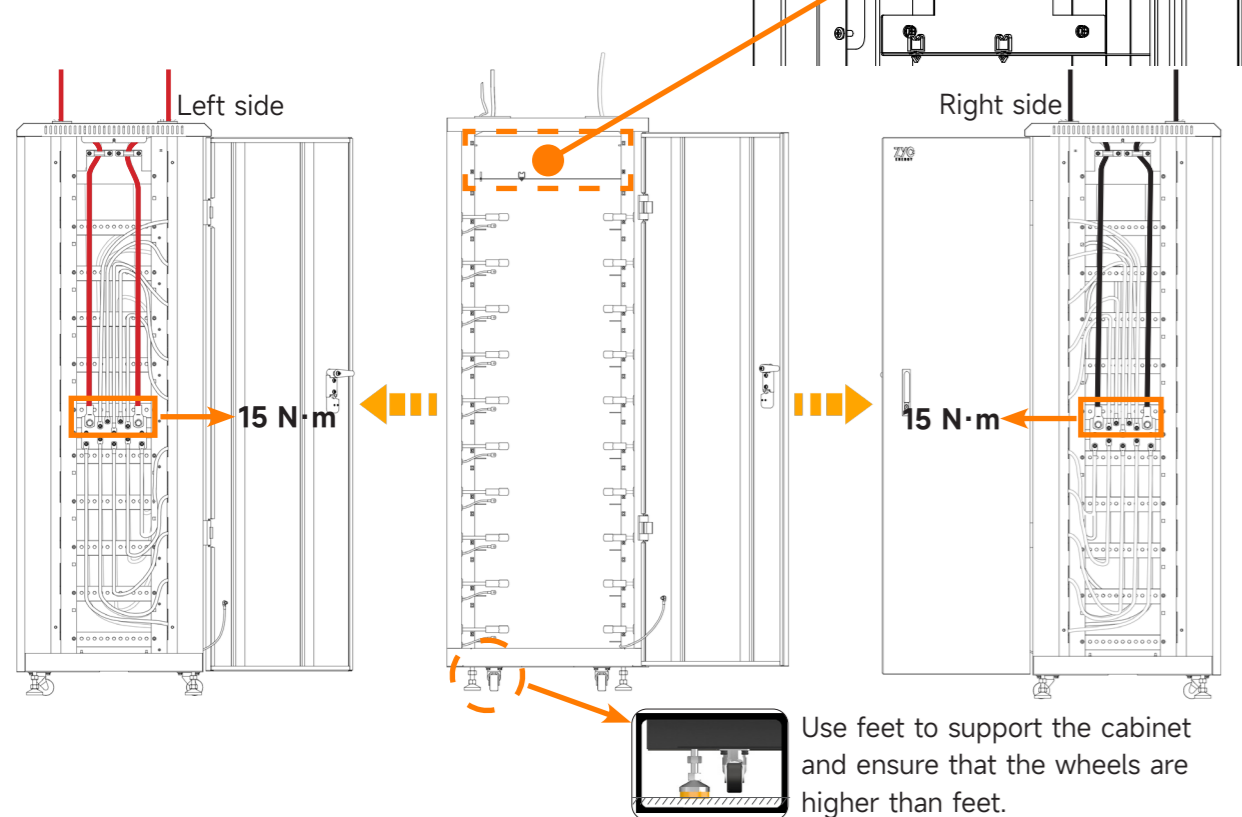
Due to the update of SIMPO Cabinet 10, there are some changes in the installation. Please confirm your cabinet version, and then follow the descriptions below to install.

Previous Version:

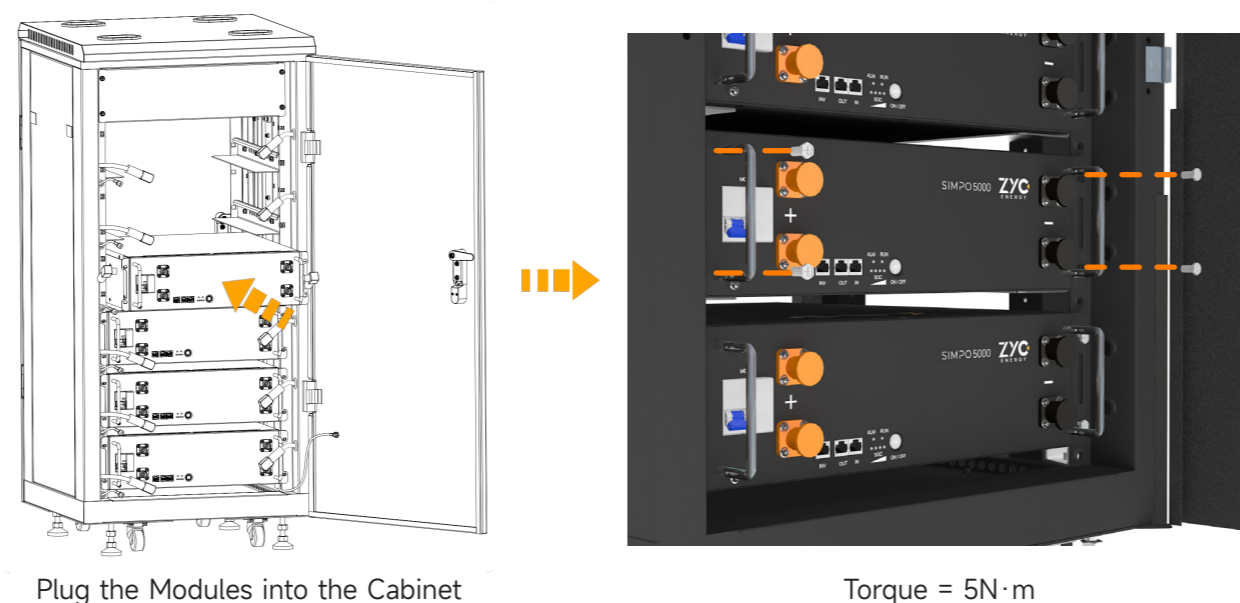


Latest Version:

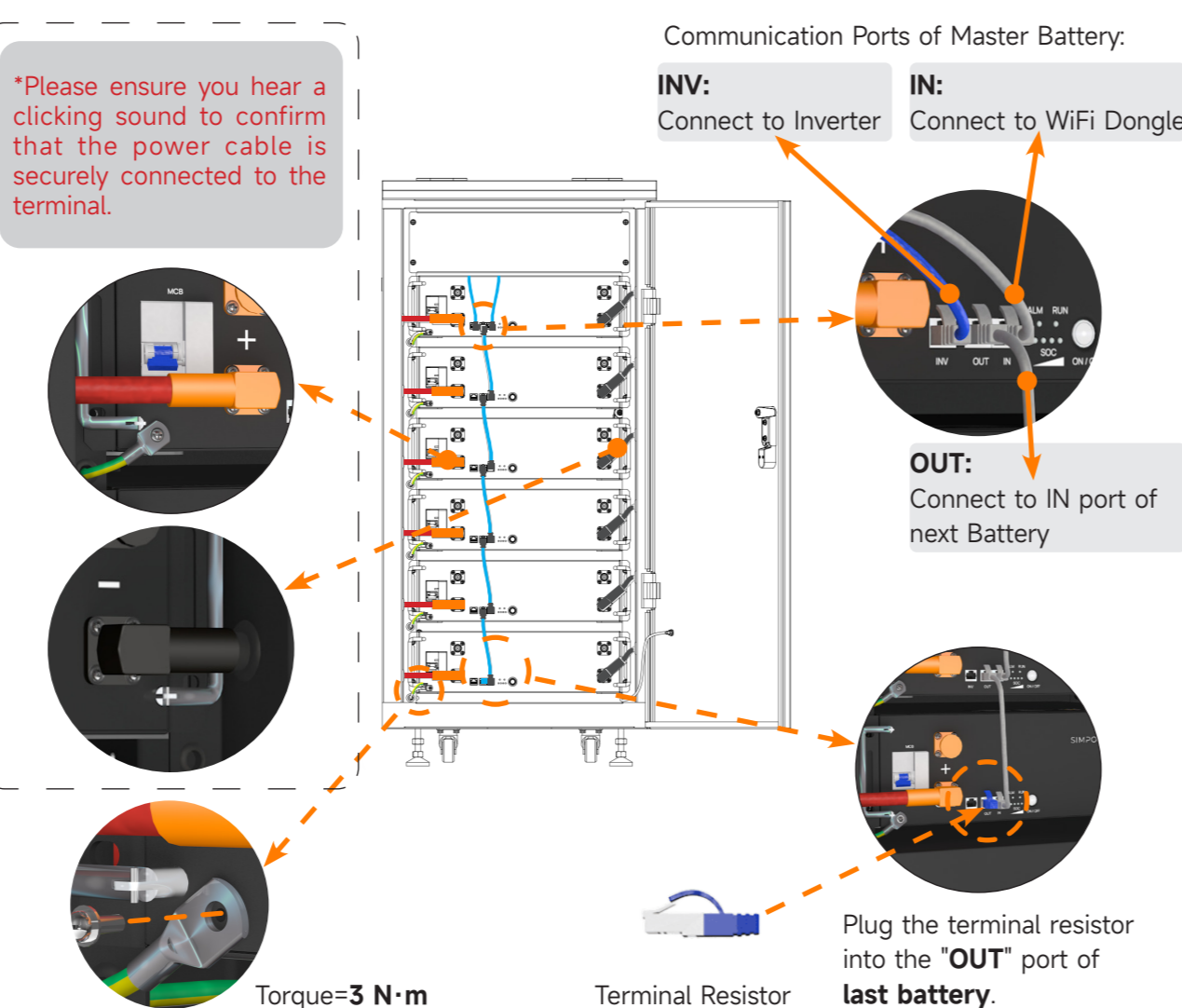
Please remove the front top panel, and unscrew the bolts on the left and right sides through the inside of the cabinet. Then the enclosure on both sides can be removed.



Fix The Modules to The Cabinet



Connect Cables & Terminal Resistor

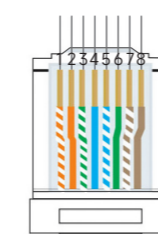
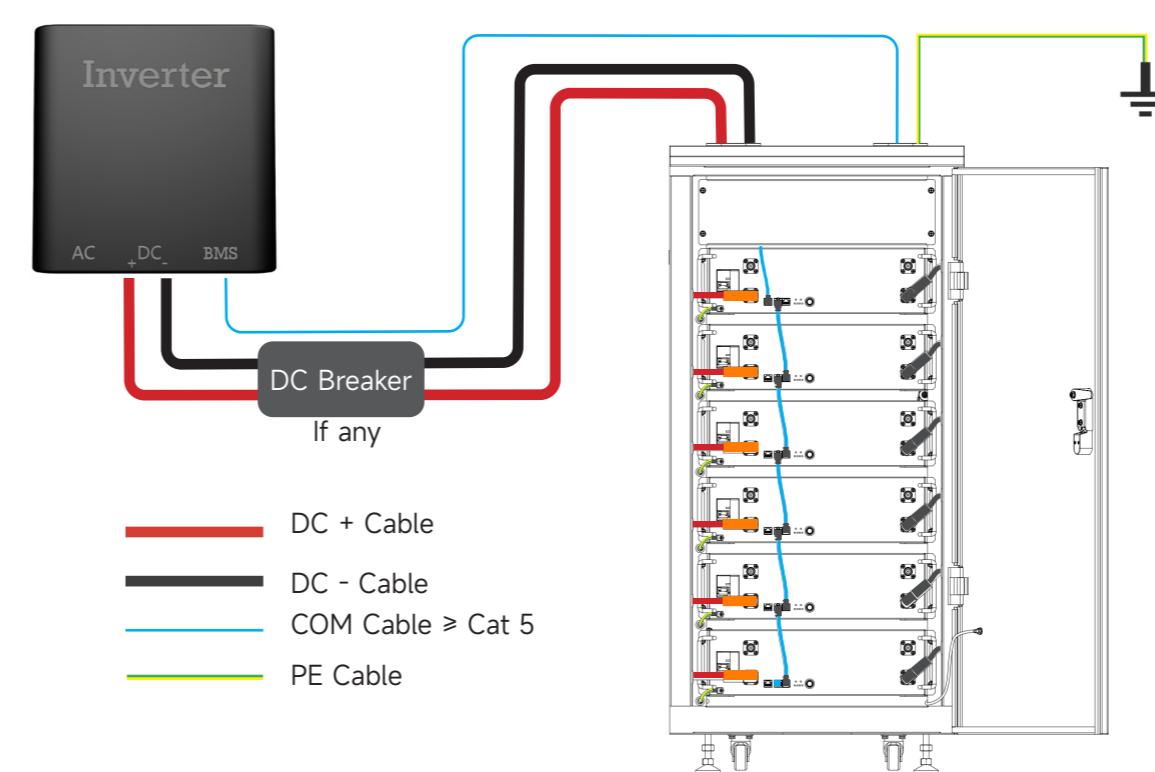


Connect To The Inverter

Connect the power cables and communication cable between battery system and inverter.

Notice:

- The communication cable should be Cat 5 or upper.
- For no communication mode, there is no need to connect the communication cable.



Definition of INV Port on Battery interface

PIN No.	1	2	3	4	5	6	7	8
Definition	Null	Null	Null	CAN_H	CAN_L	Null	RS485B	RS485A

Change the communication cable's wires order if necessary.

Matching with the CAN Communication inverters as below:

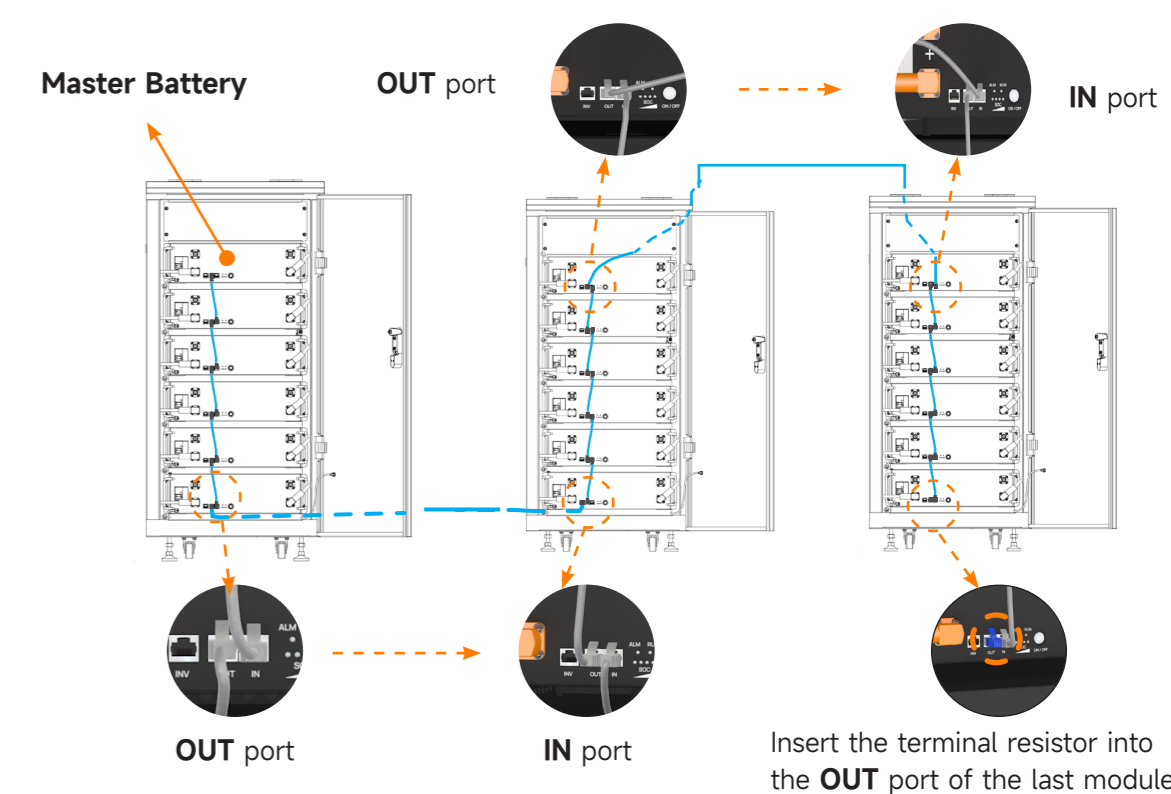
	SIMPO 5000	Victron*	Selectronic	SMA	Studer	Steca	Deye	Noark	GoodWe
CAN_H	4	7	1	4	4	4	4	4	4
CAN_L	5	8	2	5	5	5	5	5	5

*For Victron devices, recommended to use the VE.Can to CAN-bus BMS type A cable.

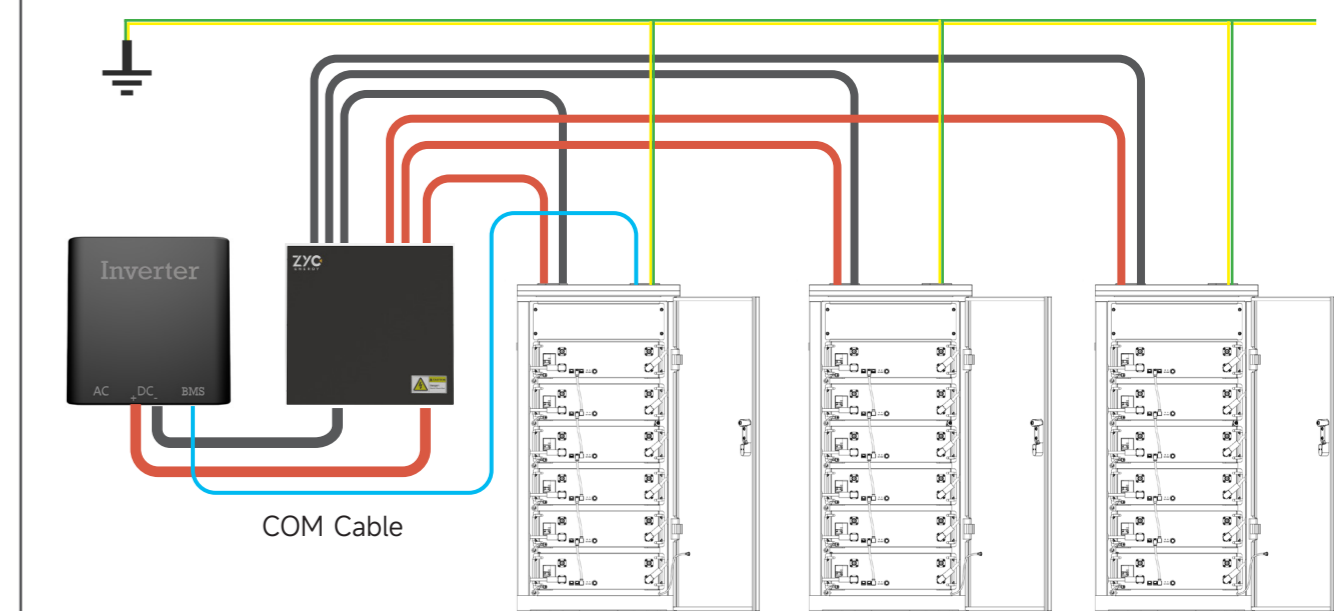
Matching with the RS485 Communication inverters as below:

	SIMPO 5000	Lux Power
RS485A	8	2
RS485B	7	1

Communication Cables for Multiple Cabinets In Parallel



Connect Cables for Multiple Cabinets In Parallel



Notice:

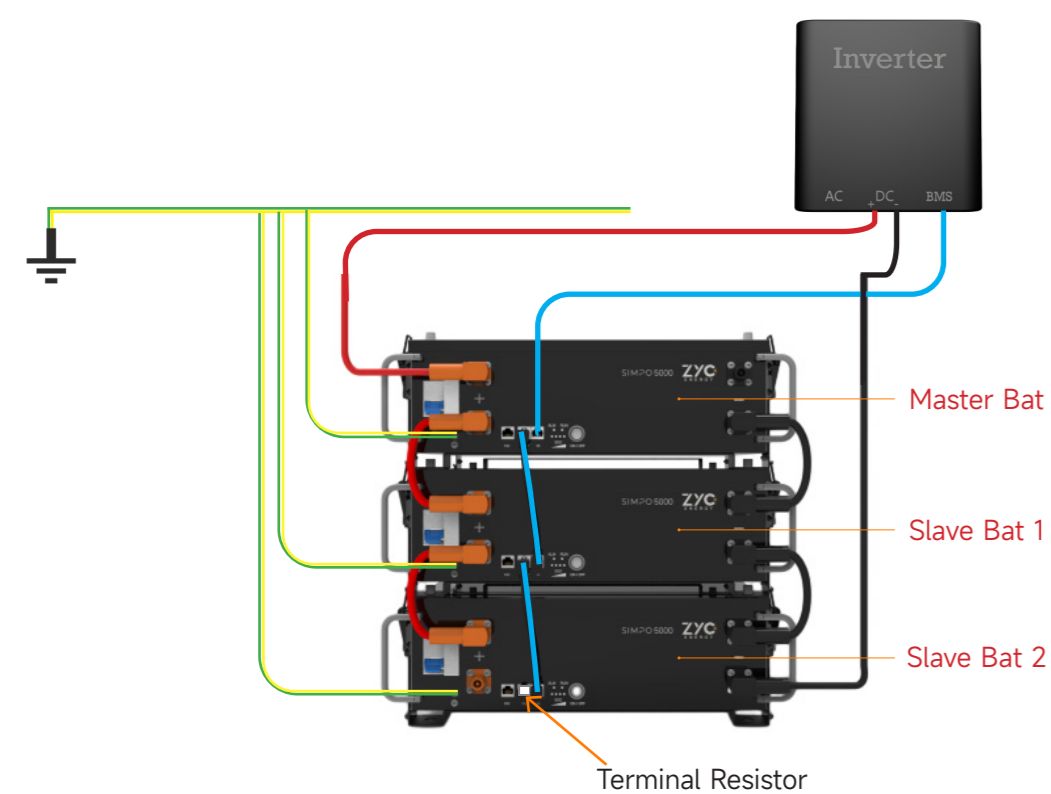
- The maximum number of paralleled SIMPO 5000 modules is 64.
- When multiple cabinets are connected, a DC box is needed to combine the power cables from the cabinets.
- The DC power cable length for all the cabinets should be approximately equal.
- The communication cable length ≤ 5 m.

Install SIMPO 5000 in non-SIMPO Cabinet

SIMPO 5000 can be slid into any 19-inch cabinets seamlessly. When using other cabinets, notice below should be followed:

- SIMPO 5000 should not be installed in the reverse direction.
- For safety reasons, please install SIMPO 5000 from the bottom to the top of the cabinet.
- Select proper size power cables according to the power of system.
- Make sure the PE cable is connected properly.
- Connect the communication cable between modules following the guidance in previous contents.
- For multiple cabinets, connect the communication cables base on previous contents and the selected cabinets.

Install and use SIMPO 5000 without Cabinets



When parallel multiple modules without SIMPO Cabinet or any pre-wired cabinets, please use SIMPO Bracket and connect the power cables and PE cables as shown.

- Connect the power cables and communication cable between modules and to the inverter (Refer to page 5 if necessary).

*Please ensure you hear a clicking sound to confirm that the power cable is securely connected to the terminal.

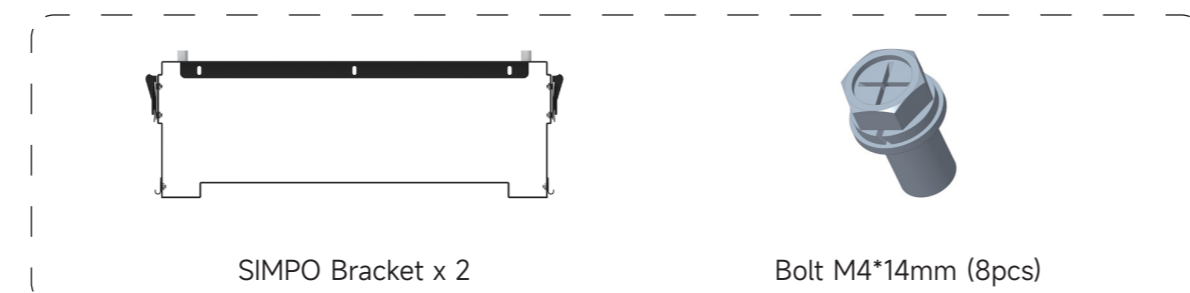
- Connect all PE cables to the ground separately
- Connect communication cable
- Insert the terminal resistor to the out port of last module (Slave 2 as shown) in parallel.

Notice: When parallel modules in this way, limit the constant current of each pair of cable to 100A and power to 5kW.

Install with SIMPO Bracket

SIMPO Bracket Package

SIMPO Bracket package is consisted of two parts for the front & back of SIMPO 5000.



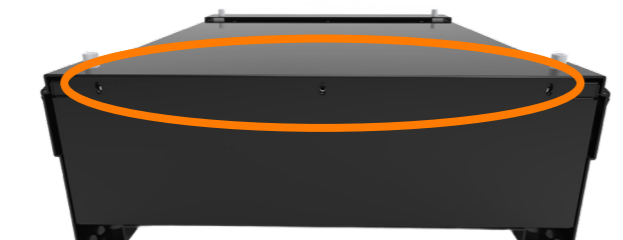
Installation

Back Part Installation

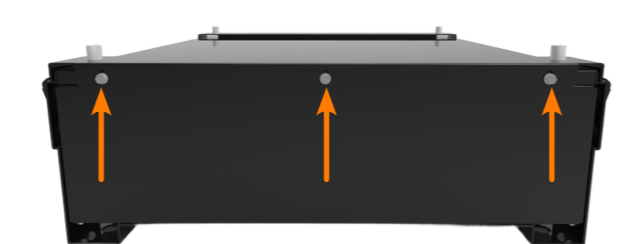
Step 1: Remove three screws on the back of top cover.



Step 2: Install the bracket to battery.

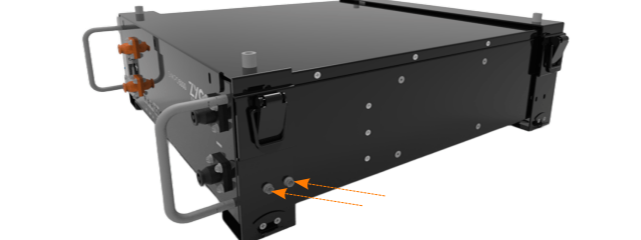


Step 3: Please use three of bolt M4 to fix bracket to the back of the battery with a torque of 3.5 N·m.

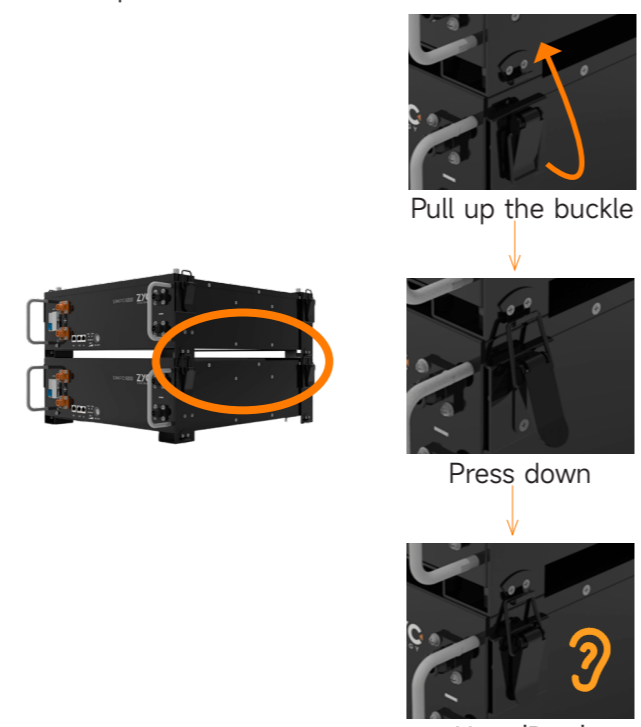


Front Part Installation

Step 4: Remove the hangers from two sides of battery. Then install bracket to front and tighten two bolt M4 on each side with a torque of 3.5 N·m.



Step 5: Stack up the modules and lock.



Switch to No Communication Mode

Switch to no-communication mode:

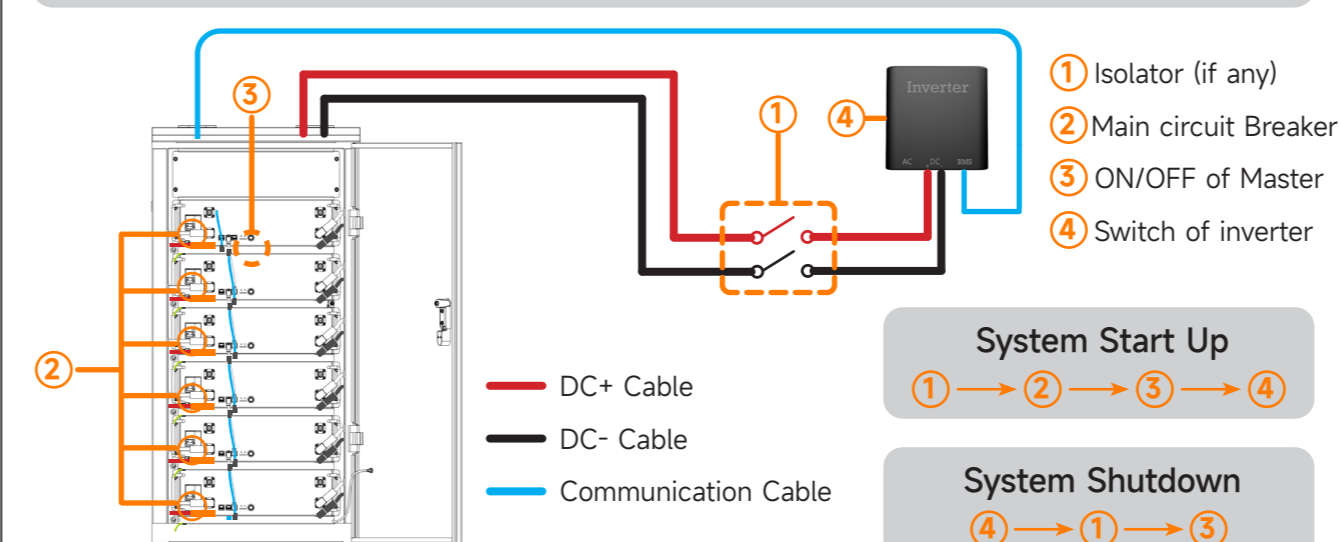
- Power on the battery.
- Double click the "ON/OFF" button within 3 seconds.
- The SOC indicators will flash 2 times.



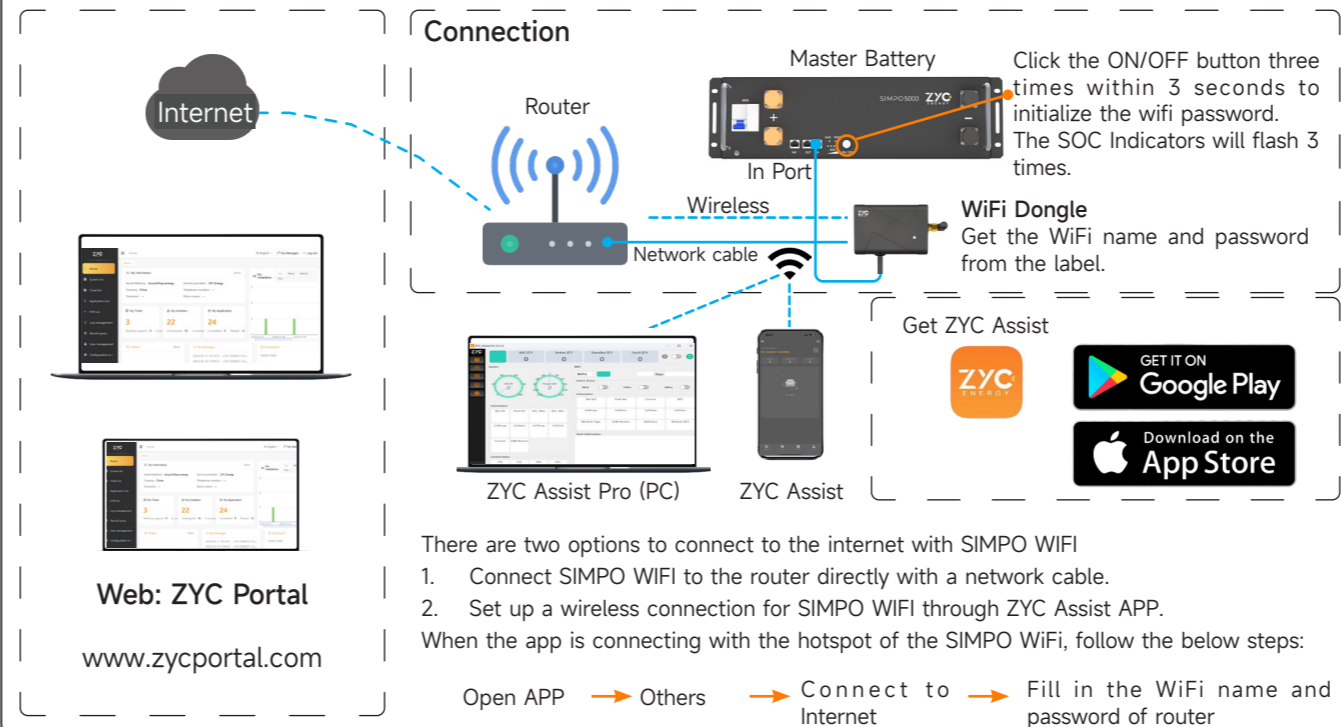
Note: Once the BMS is connected to the inverter with a communication cable, it will automatically switch to communication mode.

System Start Up & Shutdown for SIMPO 5000

Must turn on the isolator (if any) first before powering the battery on



Connect to Internet & WiFi Usage



Contact us

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