

SIMPO 5000

Quick Start Guide_V1.4

ZYC ENERGY

ZERO YOUR CARBON



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.

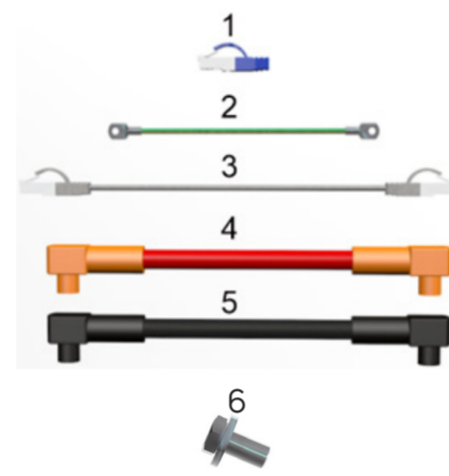
When using different tools, master the tools in advance to prevent the installer from being injured due to improper handling.

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.
- Power Cables and plugs have high voltage from the battery, be careful when wiring.
- 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, it is better to be installed by at least two personnel. With the help of tools if necessary.

Contents in SIMPO 5000 Package



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

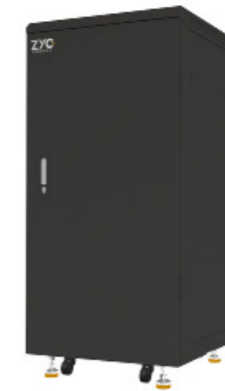
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SIMPO Cabinet

Cabinet 10



Cabinet 6



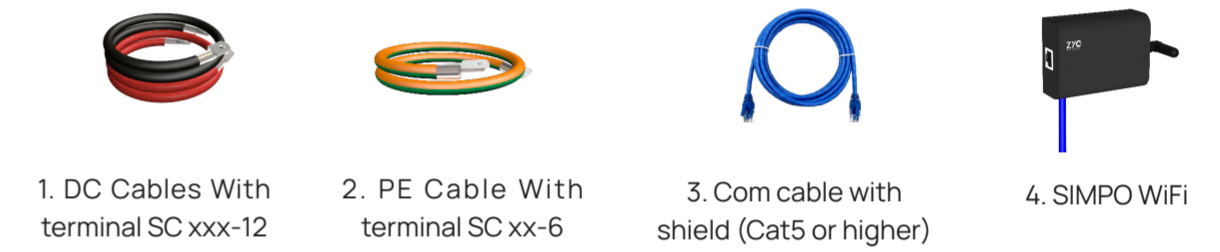
Specification	SIMPO Cabinet 6	SIMPO Cabinet 10
Dimension (W x D x H)	620 x 600 x 1270mm	620 x 600 x 1890mm
Max. Qty of modules	6(30kWh)	10(50kWh)
Max. continuous current	625A	1250A
IP Rate	IP20	
Weight	120 kg	90 kg

Tools



Extra Accessories

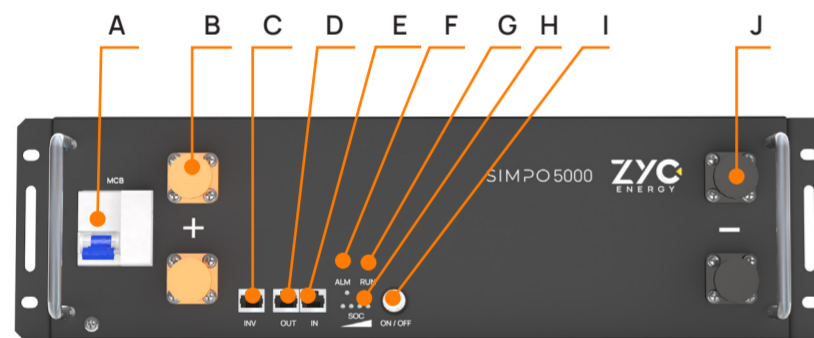
The parts below are not included in the accessories we offered, but necessary for connecting with inverter.



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

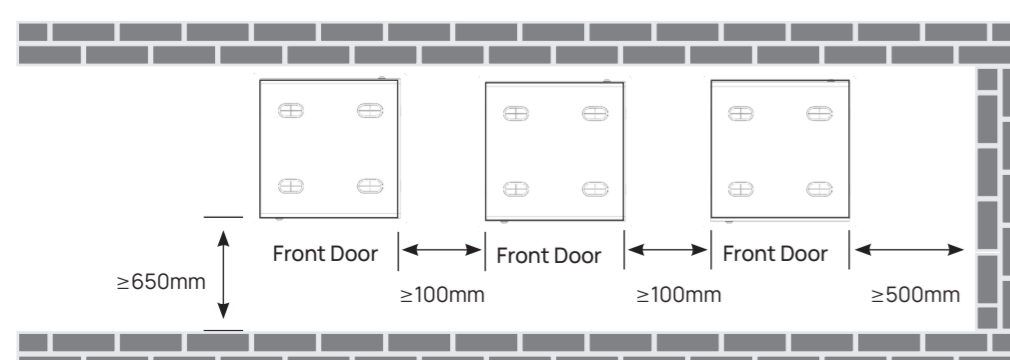


Letter	Label	Function	Letter	Label	Function
A	MCB	Circuit Breaker	F	ALM	Alarming LED
B	+	DC+ Port	G	RUN	Status LED
C	INV	Inverter Com	H	SOC	SOC Indicator
D	OUT	Parallel Com Out	I	ON/OFF	Switch On/OFF
E	IN	Parallel Com In	J	-	DC- Port

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

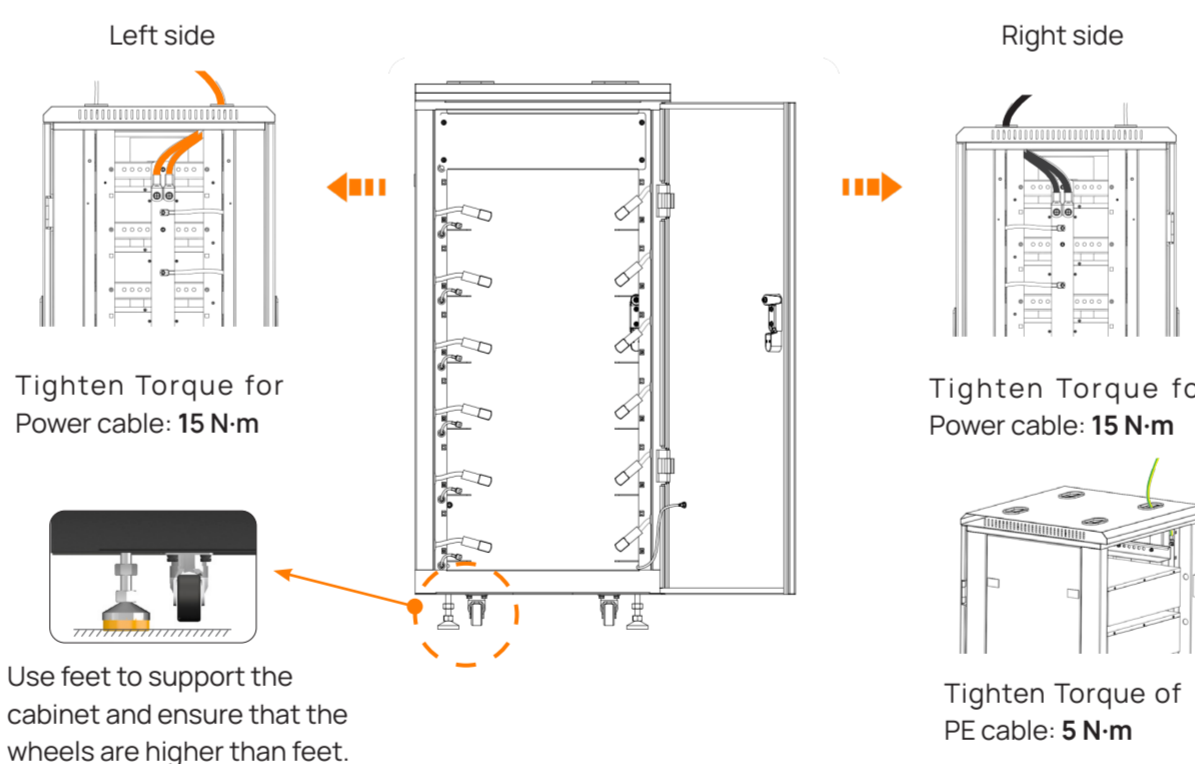
LED	Status	Operational State
ALM	● (Red)	Error occurs
	● (Grey)	There is no error existing
RUN	● (Green) Always On	The battery is ON and working in communication mode
	● (Green) Flashes slowly	The battery is working in no-communication mode
	● (Grey)	The battery is not working
SOC	●●●● (Green)	75% < SOC ≤ 100%
	●●●●● (Green)	50% < SOC ≤ 75%
	●●●●● (Green)	25% < SOC ≤ 50%
	●●●●● (Green)	0% < SOC ≤ 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:

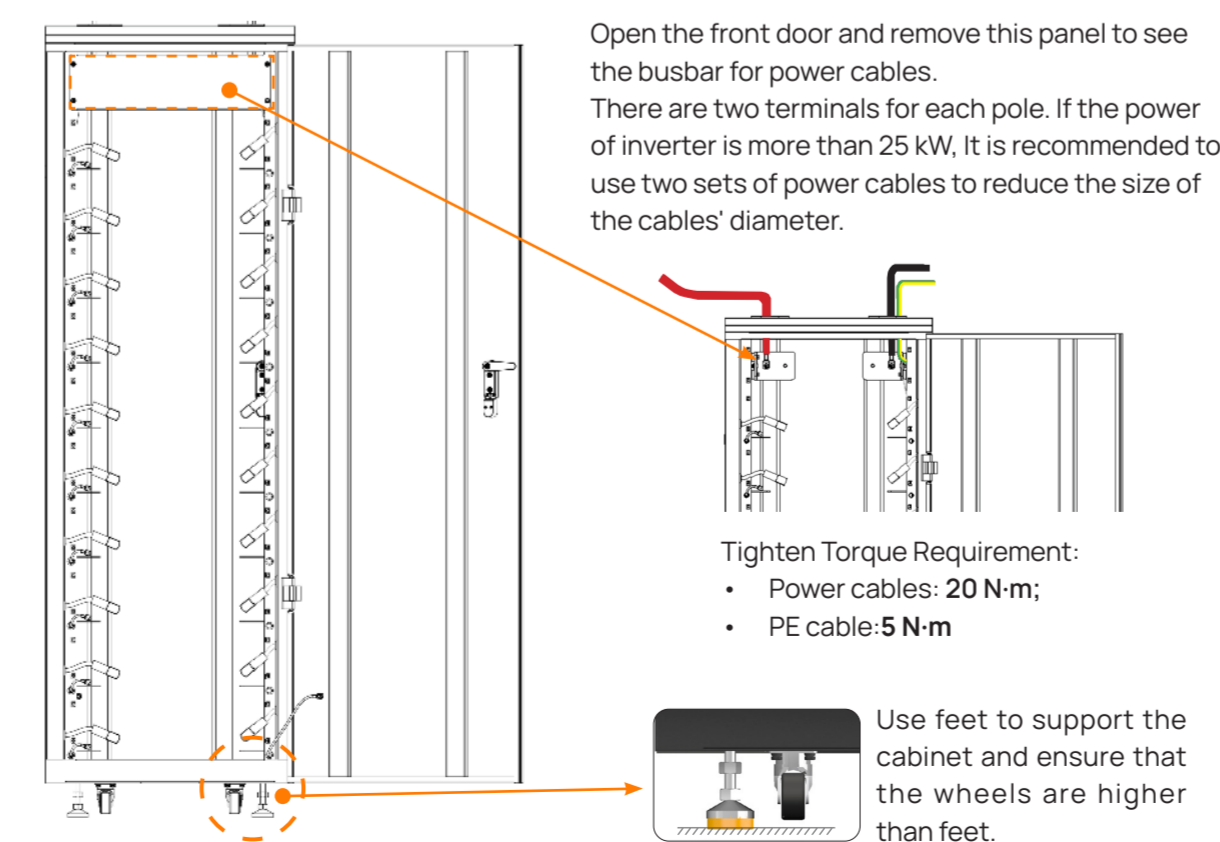


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Connect the Power Cables and PE Cable & Adjust the Feet For SIMPO Cabinet 6

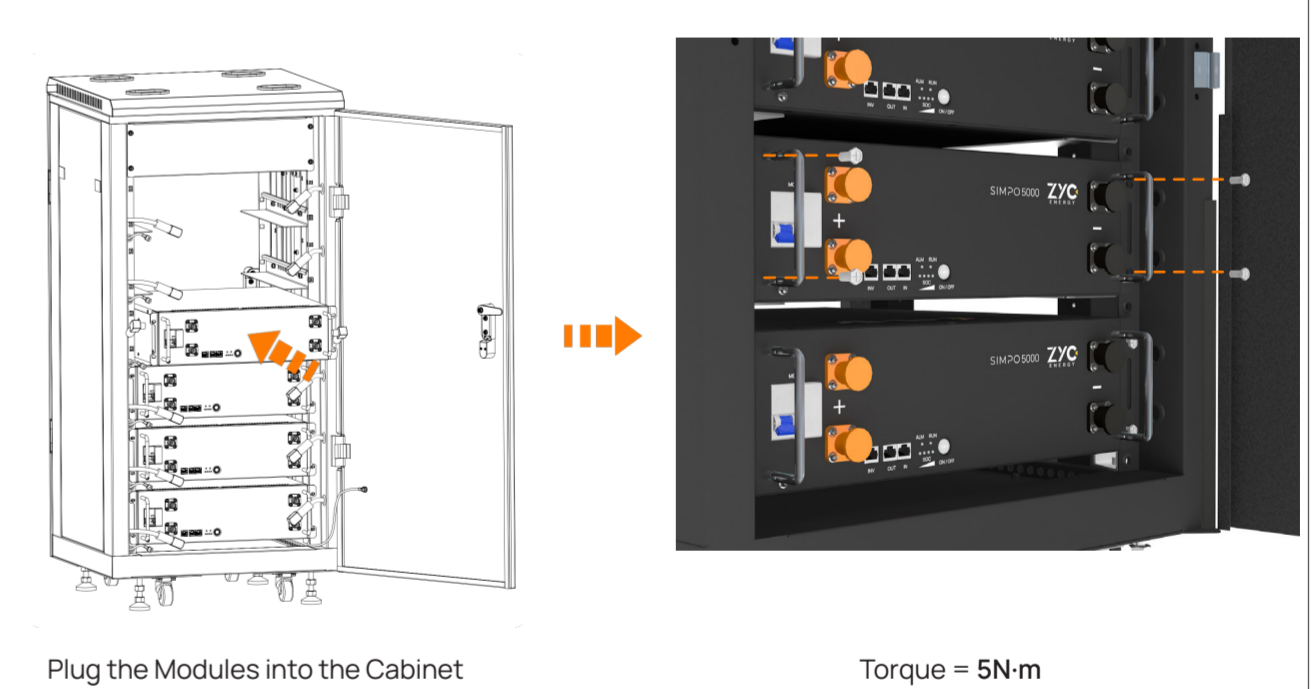


Connect the Power Cables and PE Cable & Adjust the Feet For SIMPO Cabinet 10

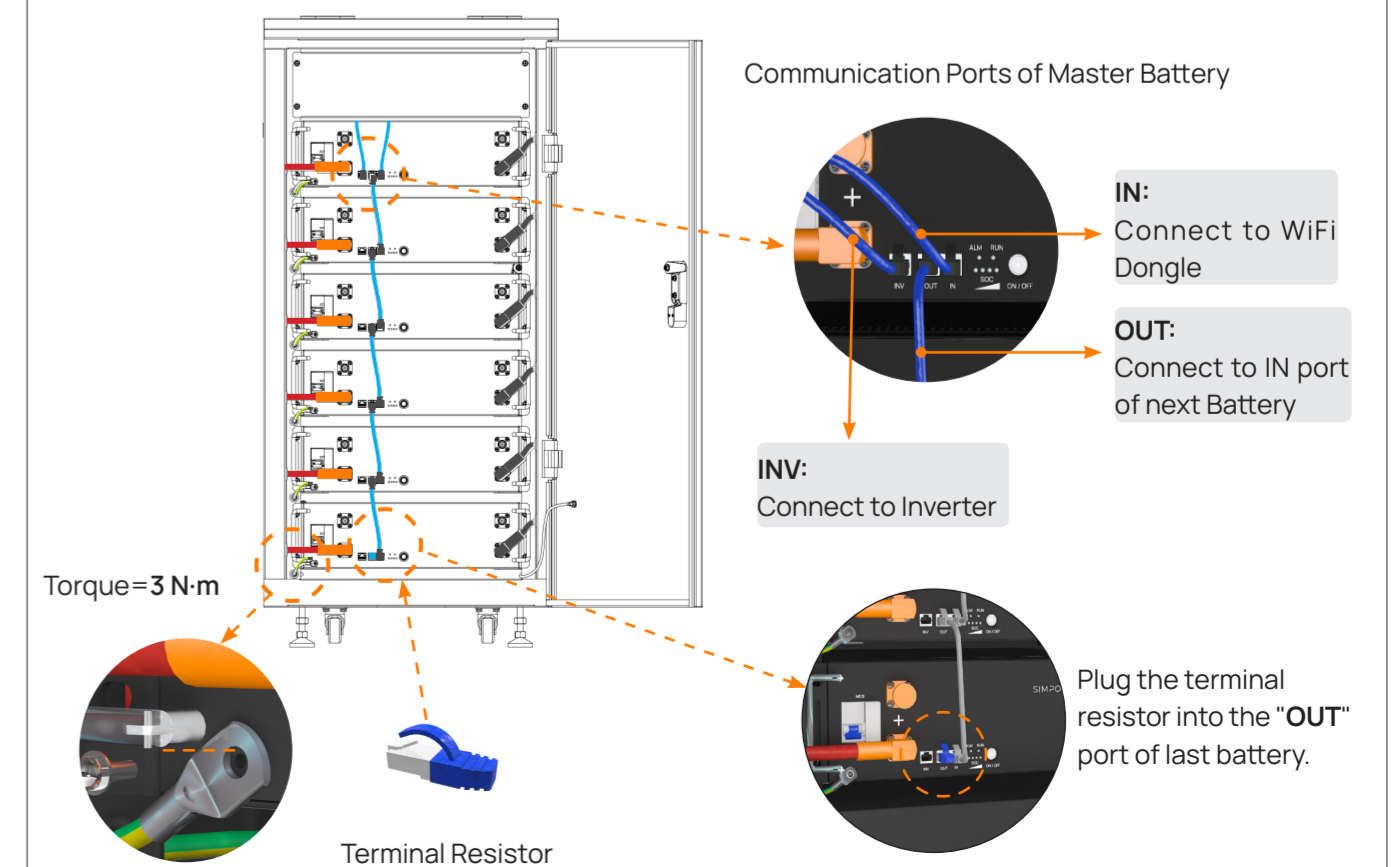


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Fix The Modules to The Cabinet



Connect Power Cables & PE Cables & Com Cables & Terminal Resistor



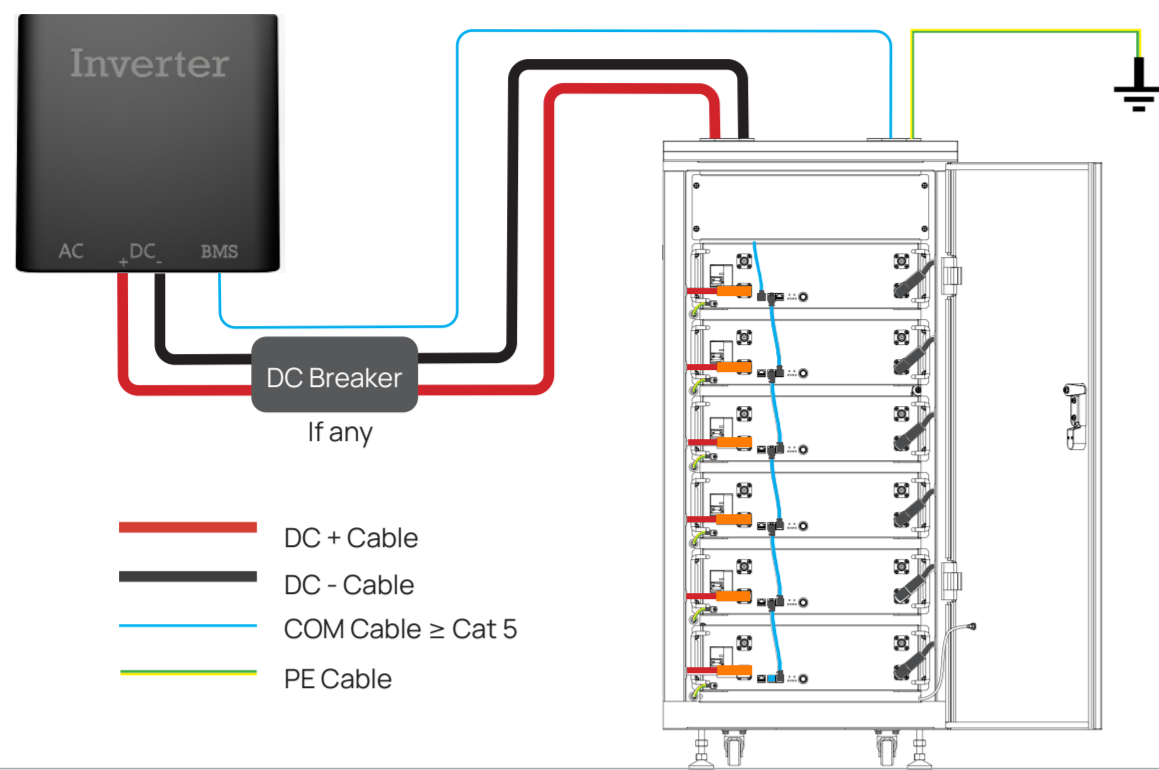
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Connect To The Inverter

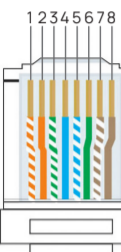
Connect the power cables and communication cable between battery system and inverter.

Notice:

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



- DC + Cable
- DC - Cable
- COM Cable ≥ Cat 5
- PE 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:

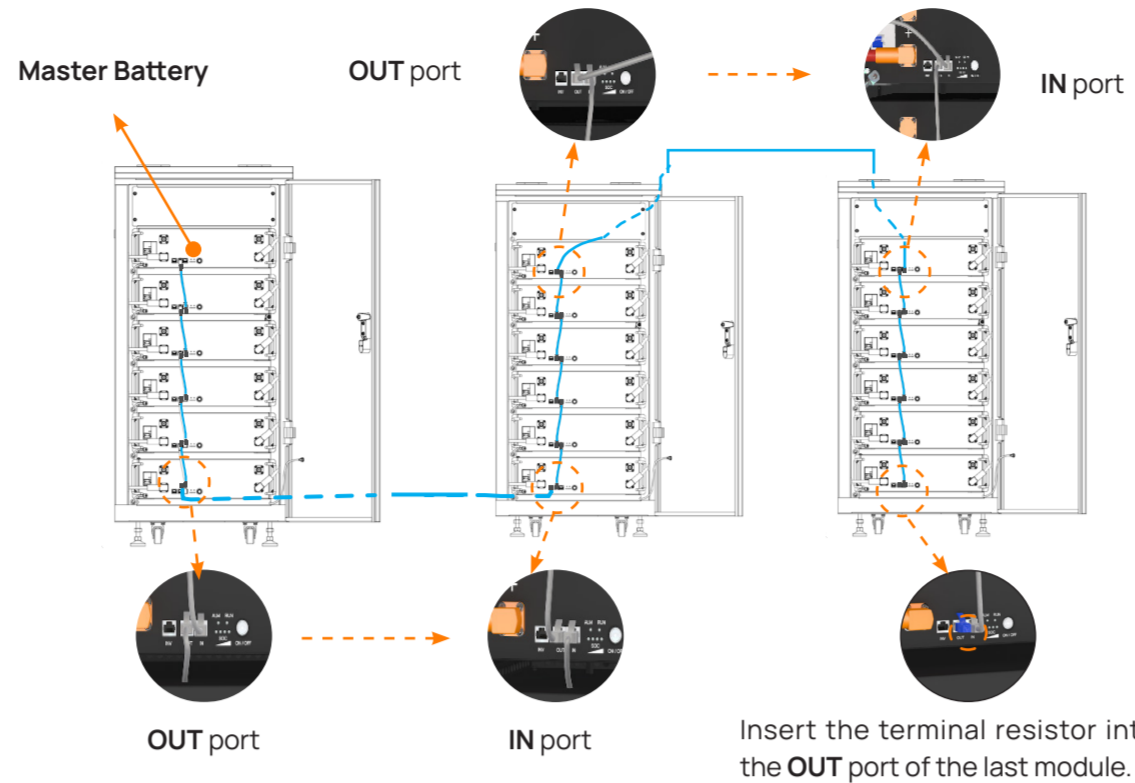
	SIMPO 5000	Victron*	Selectronic	SMA	Studer	Steca	Deye	Noark	GoodWe
CAN_H	4	7	1	4	4	4	4	4	4
CAN_L	5	8	2	5	5	5	5	5	5

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

Matching with the RS485 Communication inverters as below:

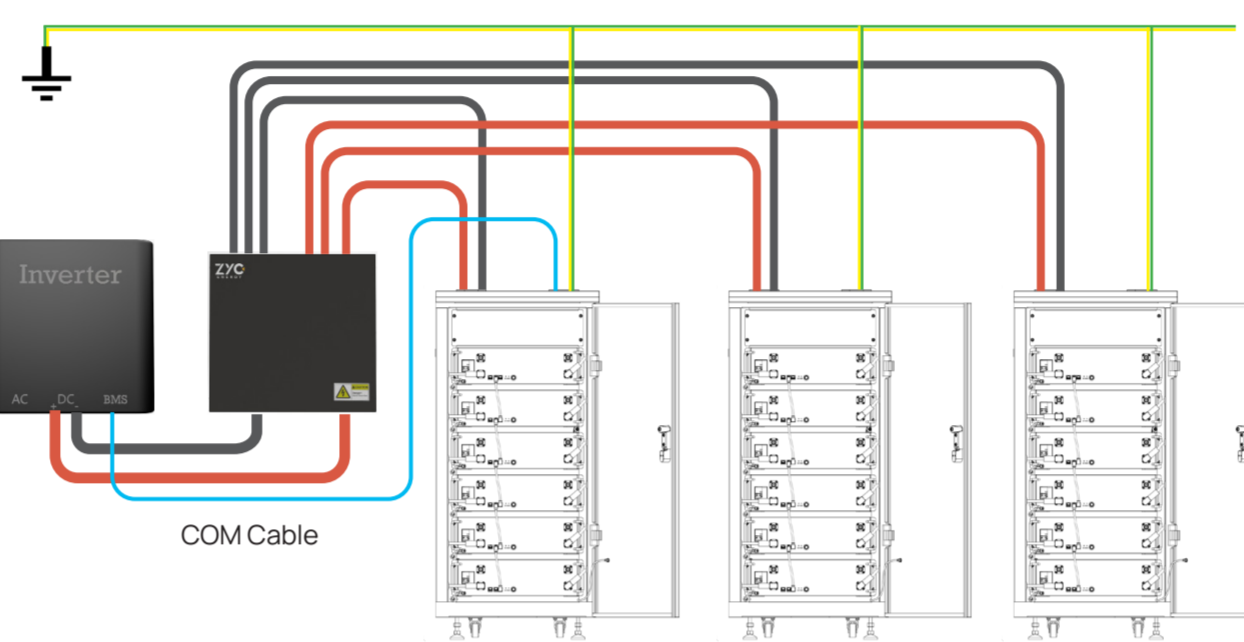
	SIMPO 5000	Lux Power
RS485A	8	2
RS485B	7	1

Connect Communication Cables for Multiple Cabinets In Parallel



Insert the terminal resistor into the OUT port of the last module.

Connect Power Cables & PE Cables & Communication Cable



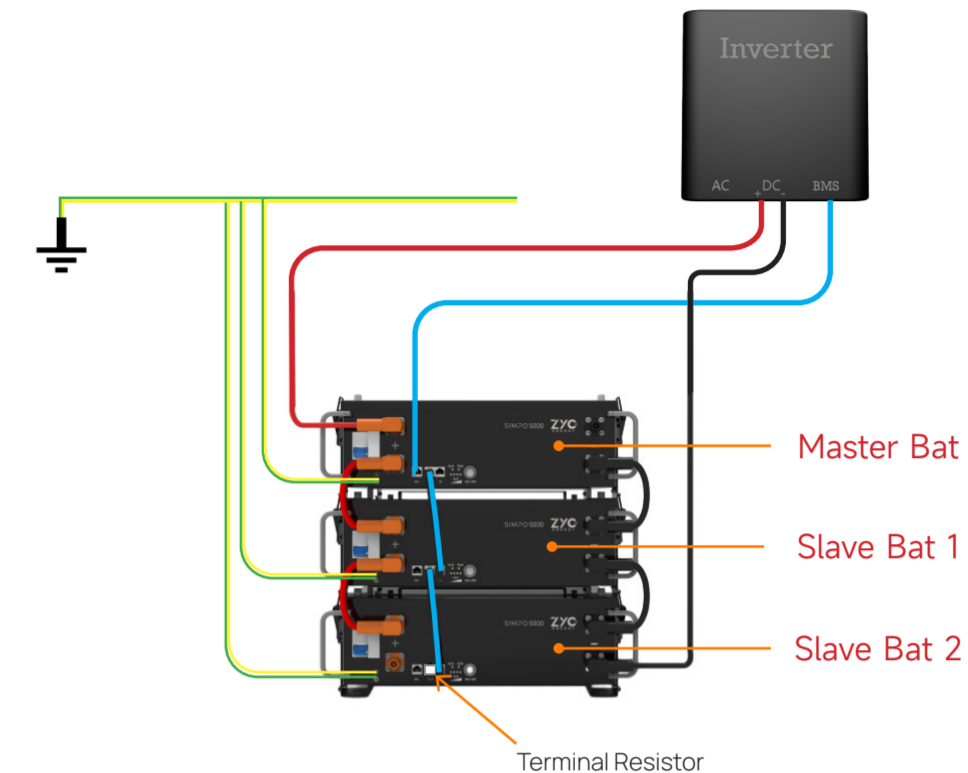
- DC+ Cable
 - DC- Cable
 - COM Cable
 - PE Cable
- Note:
- The maximum number of paralleled SIMPO 5000 modules is 64.
 - When multiple cabinets are connected, a DC box is needed to combine the power cables from the cabinets.
 - The DC power cable length for all the cabinets should be approximately equal.
 - 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.

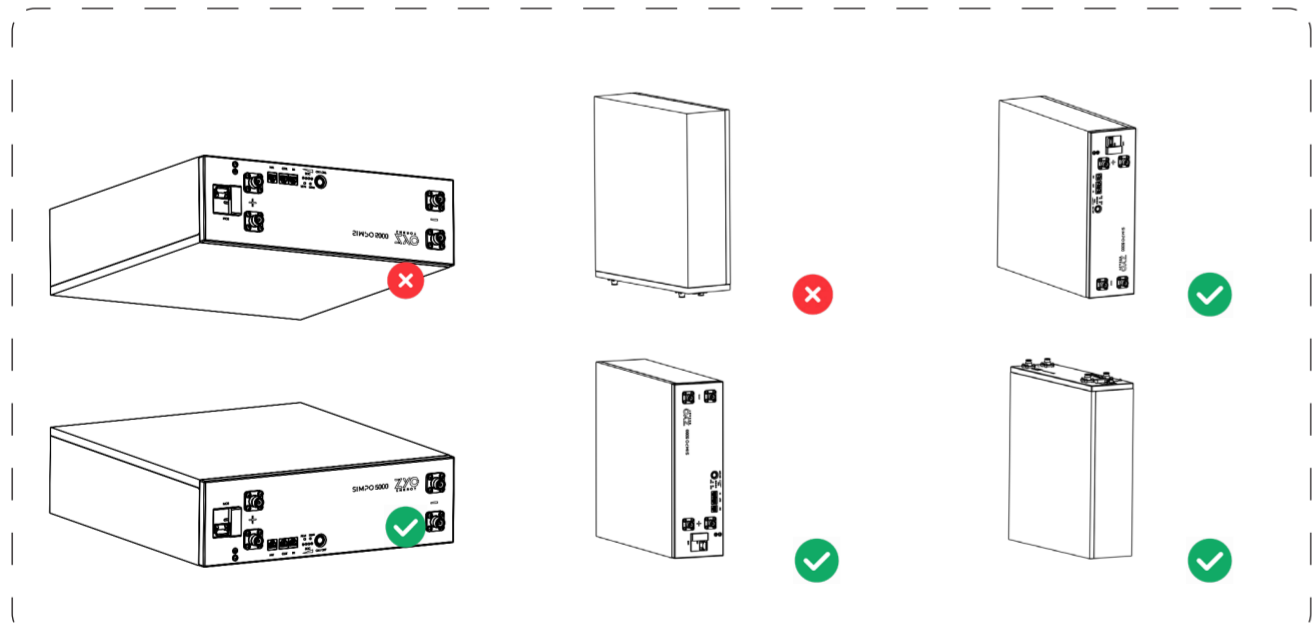
- Connect the power cables and communication cable between modules and to the inverter (Refer to page 5 if necessary).
- Connect all PE cables to the ground separately
- Connect communication cable
- Insert the terminal resistor to the out port of last module (Slave 2 as shown) in parallel.

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

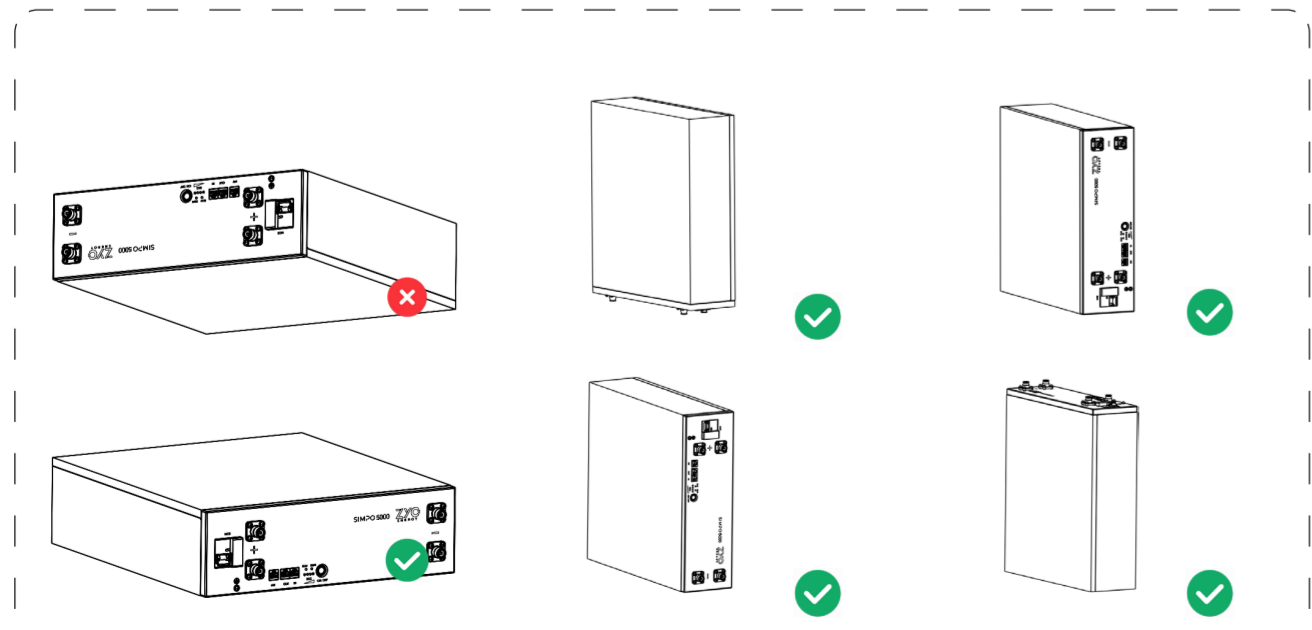
Battery Orientation

When mount SIMPO 5000 without cabinets or bracket. There are certain requirements for the orientation of the battery, please install it correctly according to the following contents.

For Stationary Applications: When brackets and cabinets are not applicable for use with the battery, avoid placing the battery upside down or placing the front panel directly on the ground. In addition to these two cases, SIMPO 5000 allows four other possible orientations for mounting and use:



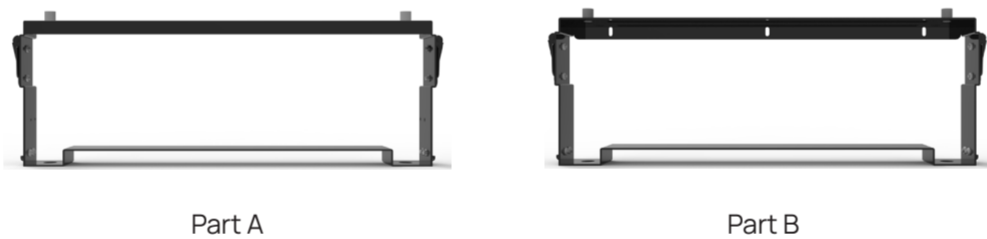
For Wall mounting: When mount the batteries on wall, please make sure that the batteries are fixed firmly, as the weight of a single module is 44kg, and there is a high risk of accidents and serious damage to the battery if it is dropped. Please first check the following permissible battery orientations before installation.



Install SIMPO Bracket

Bracket Overview

SIMPO Bracket is consisted of two parts, part A/B for the front/back of SIMPO 5000



Installation

- Step 1 Remove three screws on the back of top cover.
- Step 2 Install part B to the battery.
- Step 3 Install part A to SIMPO 5000 and screw the two screws on both side in (Torque=3.5 N·m).
- Step 4 Stack up the modules and lock
- Pull up the buckle
- Press down
- Hear 'Pata'

It is suggested to place part B on the floor and install SIMPO 5000 to part B from above. Then screw the three screws on part B in and tighten them. (Torque=3.5 N·m)

Switch to No Communication Mode

SIMPO 5000 can operate normally without communication with the inverter. To switch to no-communication mode, please follow the procedures in the right figure.



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

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

Power ON & Power OFF

System Start Up

- Turn on the DC breaker between battery and inverter (If any).
- Turn on all of the MCBs.
- Press the "ON/OFF" button of Master battery for 1 seconds to power on batteries.
- Turn on the inverter.

System Shutdown

- Shut down the inverter.
- Turn off the DC breaker between battery and inverter (If any).
- Press and hold the ON/OFF button for 3 seconds on the Master battery to shut it down.
- Make sure the LED on the battery is off.

Connect to Internet & WiFi Usage & ZYC Portal & ZYC Assist APP

