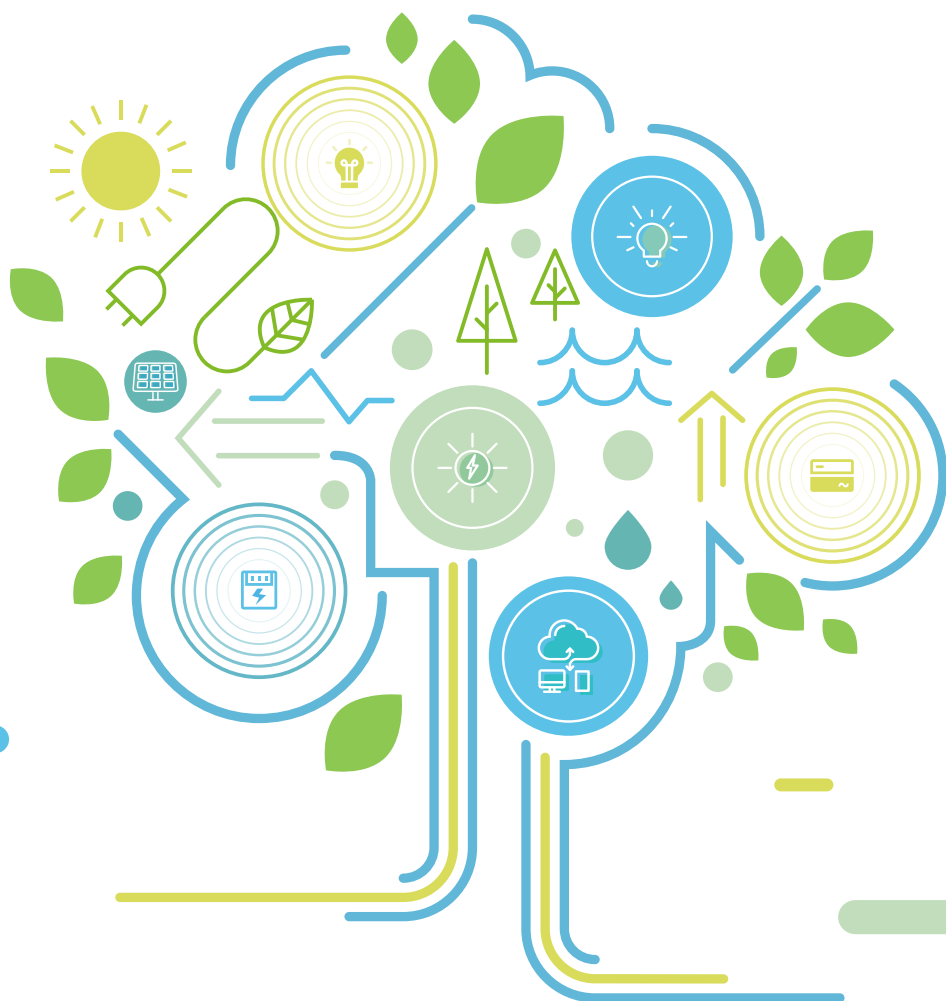


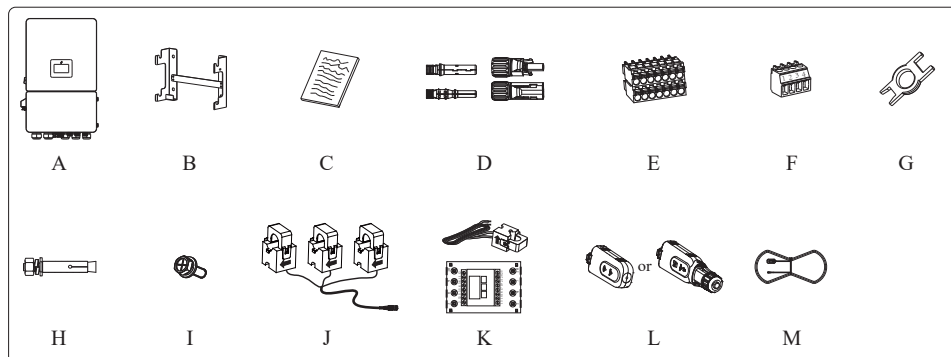
QUICK INSTALLATION GUIDE

THREE-PHASE ESS INVERTER

6K~20K

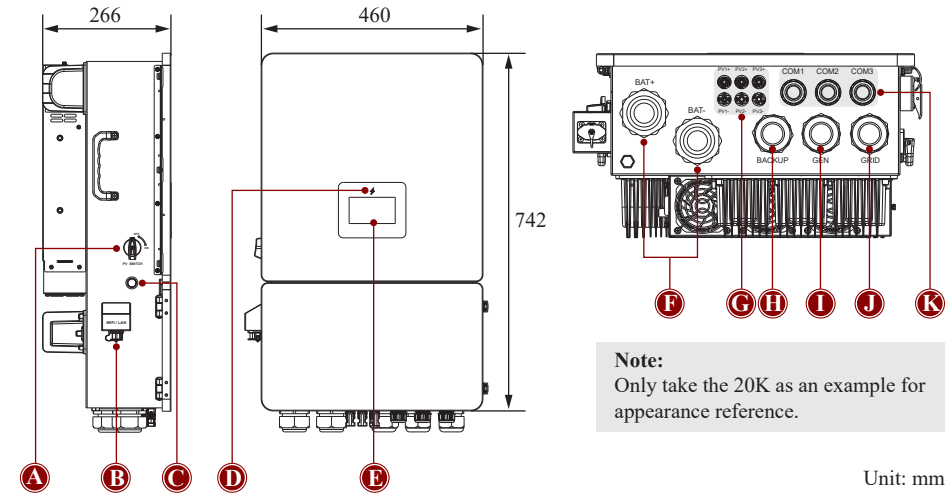


1. Packing List



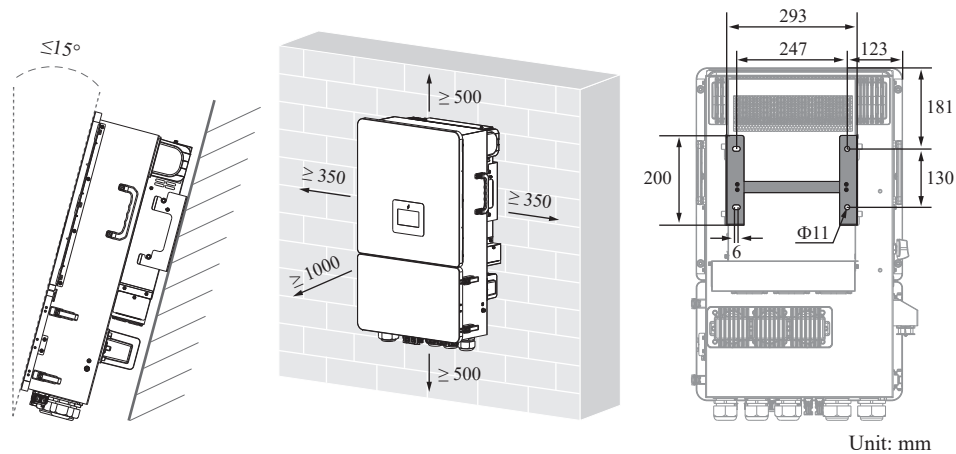
Number	Quantity	Description
A	1	Inverter
B	1	Mounting bracket
C	1	File package
D	2/2 for 6K~8K; 3/3 for 10K~20K	PV connector group (PV+/PV-)
E	1	14-Pin terminal
F	2	4-Pin terminal
G	1	Removal tool for PV connector
H	4	M10 Expansion bolt
I	1	M4 Security screw
J	1	CT pack
K	1	Meter pack (3pcs. CT + 1pc. meter) (Optional)
L	1	Wi-Fi/LAN module (Optional)
M	1	Lead-acid battery temperature sensor (Optional)

2. Appearance and Dimensions



Number	Description	Number	Description
A	PV switch	F	Battery connection ports
B	WIFI/LAN port	G	PV connection terminals
C	ON/OFF button	H	BACKUP connection port
D	LED indicator	I	GEN connection port
E	LCD screen	J	GRID connection port
		K	Communication connection ports

3. Location



4. Mounting



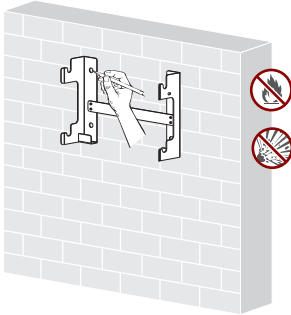
DANGER

- The installation walls must be fireproof and non-flammable materials, otherwise there is a fire risk.
- Before drilling holes, check whether there are electric power pipes or other pipes buried in the wall to avoid risks.



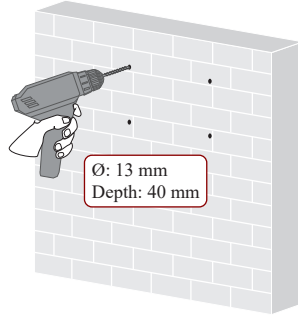
CAUTION

To prevent potential damages and injuries from inverter falling down, please hang the inverter on the bracket, do not loosen grip unless confirm that the inverter is well-mounted.



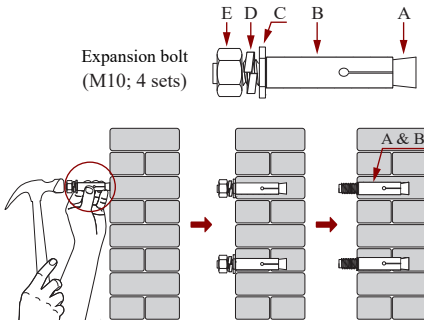
1

Set the mounting bracket horizontally and mark holes position on the wall.



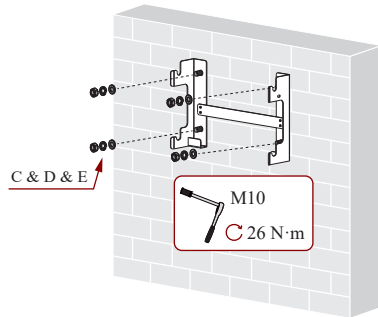
2

Drill holes on the marked position.



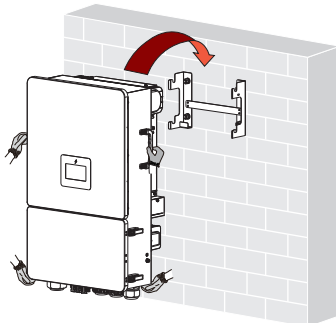
3

Hammer the expansion bolts into the wall.



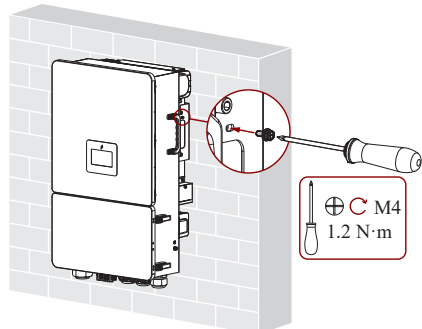
4

Tighten the expansion bolts.



5

Mount the inverter onto the mounting bracket.



6

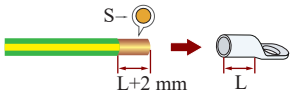
Lock the security screw.

5. External Grounding Protection Connection



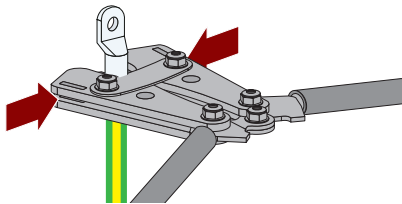
DANGER

Ensure that inverter and all cables to be installed are completely powered off during whole installation and connection. Otherwise, high voltage may result in fatal injury.

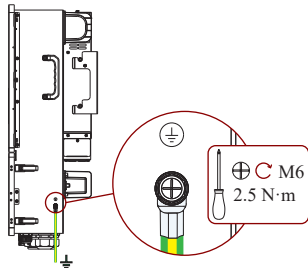


Items	Description
Green-yellow wire	S: 8 mm ² to 10 mm ² S(Green-yellow wire) ≥ S(PE wire of AC cable) S is the cross-sectional area.
OT terminal	OT10-6.4

1 Make the wire.



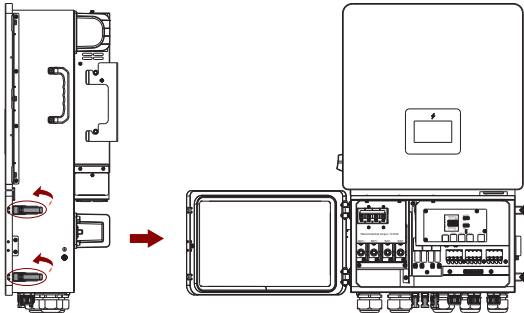
2 Crimp the OT terminal.



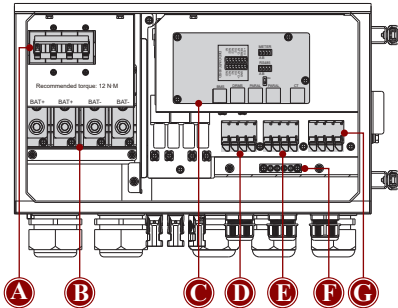
3 Connect the wire.

6. Cover Removing

Removing the Cover



Wiring Box Overview



Number	Description	Number	Description
A	Battery breaker (Optional)	E	GEN connection terminals
B	Battery connection terminals	F	Grounding busbar
C	Communication interfaces	G	GRID connection terminals
D	BACKUP connection terminals		

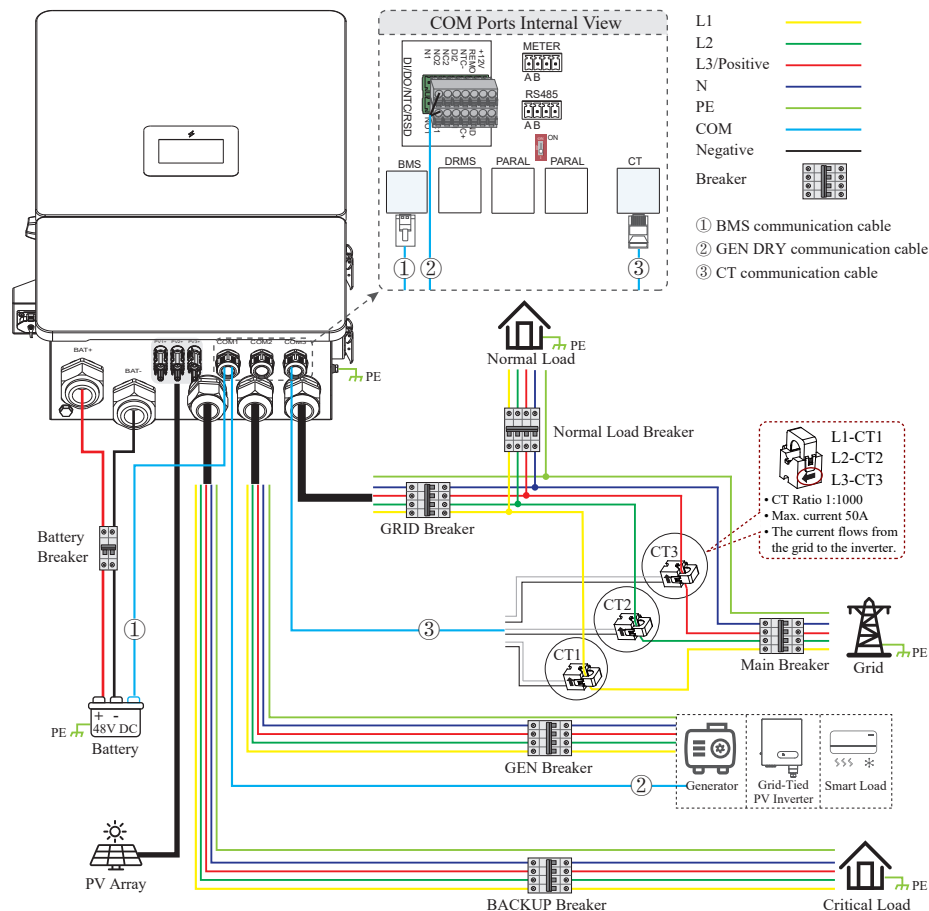
7. Wiring Diagram



DANGER

Ensure that inverter and all cables to be installed are completely powered off during whole installation and connection. Otherwise, high voltage may result in fatal injury.

Non-parallel Connection Mode



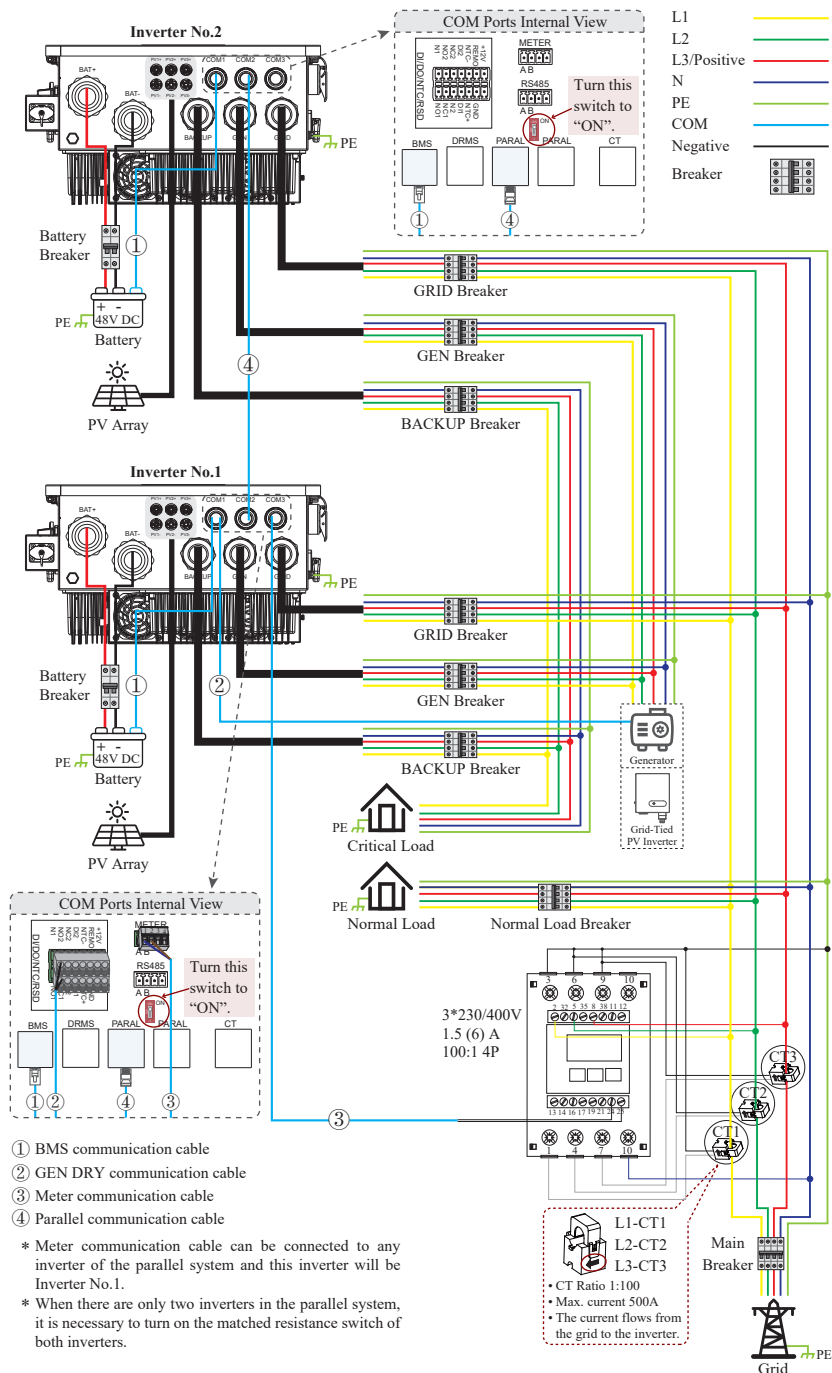
Note:

1. BMS communication connection is only for lithium battery.
2. The external DC/AC breakers are not supplied with the inverter and must be purchased separately. The specifications of main breaker and normal load breaker depend on household loads. For other breakers, please refer to the table below.

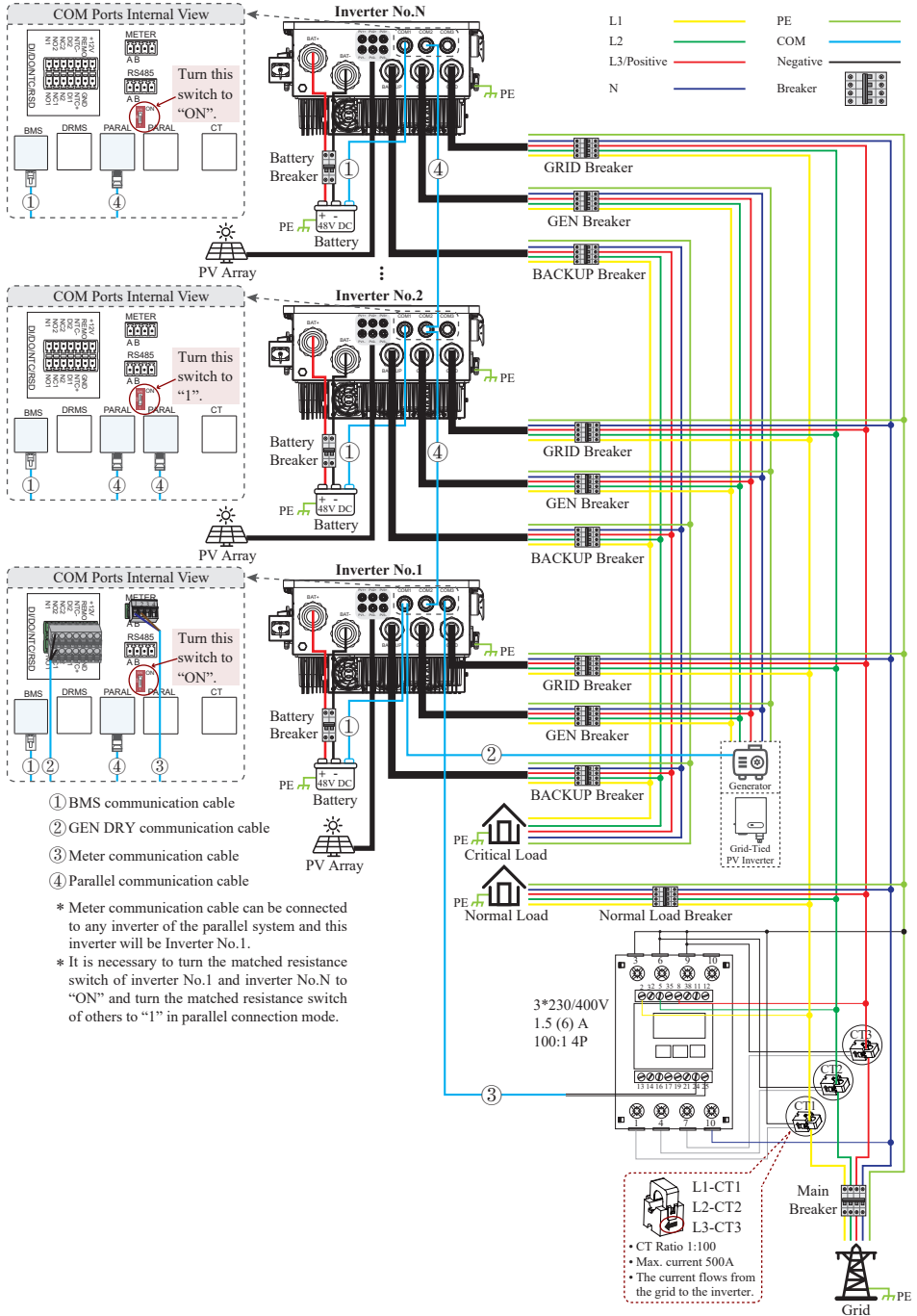
Breaker Recommendation Table

Inverter	Battery breaker	BACKUP breaker/GEN breaker/GRID breaker
6K~20K	≥ 400 A	≥ 50 A

Parallel Connection Mode (Inverter number: N=2)



Parallel Connection Mode (Inverter number: N=3)



Note:

1. BMS communication connection is only for lithium battery.
2. It is necessary to additionally purchase suitable meter and CT for parallel connection mode.
3. In one parallel system, batteries can be connected independently or in parallel, this manual only shows the batteries connected independently. In one system connected with parallel batteries, the inverter connected with the meter communication cable and BMS communication cable is the main inverter, i.e., Inverter No. 1.
4. With parallel connection mode, please go to **Settings > Advanced > Inverter** page to enable **Parallel Mode** and select the **Battery Connection Type** on the LCD of any of the inverters.
5. The external DC/AC breakers are not supplied with the inverter and must be purchased separately. The specifications of main breaker and normal load breaker depend on household loads. For other breakers, please refer to the table below.

Breaker Recommendation Table

Inverter	Battery breaker	BACKUP breaker/GEN breaker/GRID breaker
6K~20K	≥ 400 A	≥ 50 A

6. The BACKUP output port of the inverter has UPS functionality. When the grid is disconnected, the system automatically switches to off-grid mode. Under this mode, the inverter must work with the battery and the critical loads connected to the BACKUP port can work continuously without power failure.

	NOTICE	• Under off-grid mode, please complete the output voltage and frequency settings. • It is better to choose the battery with sufficient capacity to ensure BACKUP function works normally. • If BACKUP output loads are inductive or capacitive loads, to make sure the stability and reliability of system, it is recommended to configure the power of these loads to be within 50% BACKUP output power range.
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8. Battery Connection



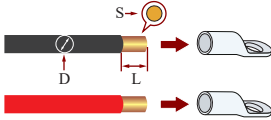
DANGER

Before connecting the battery terminals, ensure that both the AC terminal and the DC terminal are powered off and the PV switch is OFF. Otherwise there is a risk of high voltage shock.



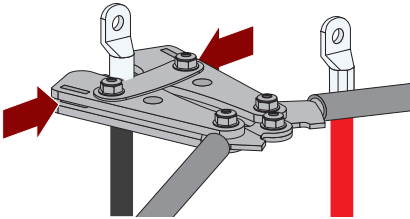
CAUTION

When connecting two battery banks to the inverter, the model and brand of the two battery banks should be the same. Additionally, the SOC and voltage of the two battery banks should be as consistent as possible.

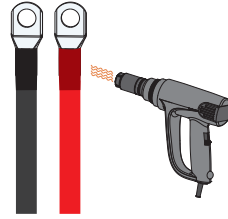


D	S	L	OT terminal
15 mm	70 mm ²	20 ± 0.5 mm	SC70-8

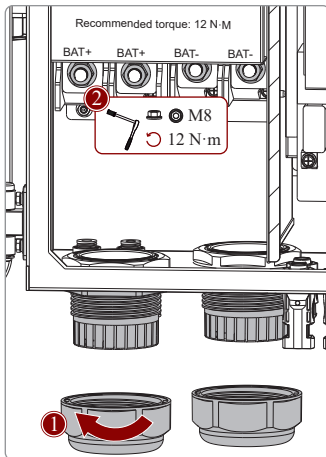
1 Make the cables.



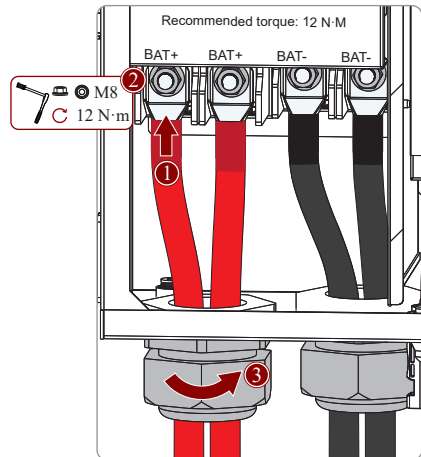
2 Crimp the OT terminals.



3 Use the heat shrinkable tubing to protect the cables.



4 Loosen the rubber nuts and unscrew the M8 nuts on the battery connection terminals.



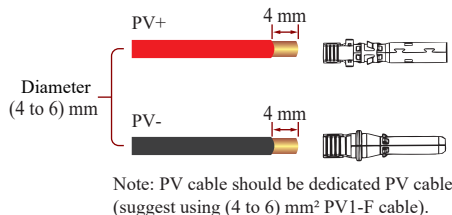
5 Thread the cables into the wiring box through the BAT ports, then tighten them on the battery connection terminals and fasten the rubber nuts.

9. PV Connection

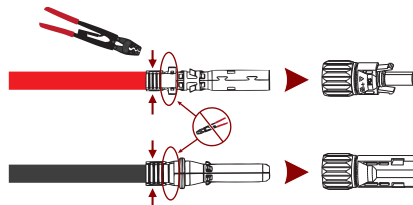


DANGER

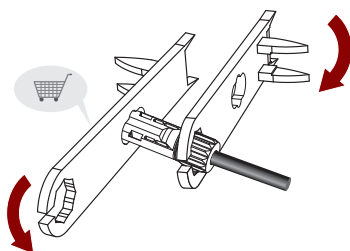
- Photovoltaic arrays exposed to sunlight will generate dangerous voltages!
- Before connecting the PV terminals, ensure that both the AC terminal and the DC terminal are powered off and the PV switch is OFF. Otherwise there is a risk of high voltage shock.



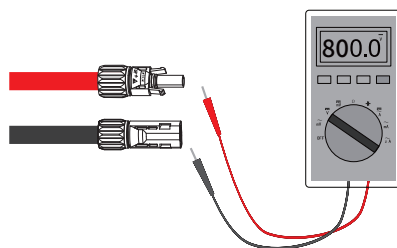
1 Make the cables.



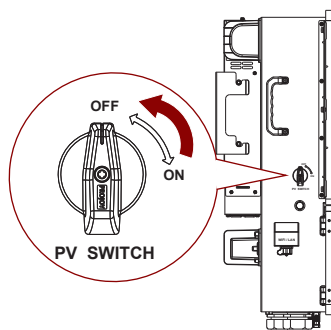
2 Assemble the cables.



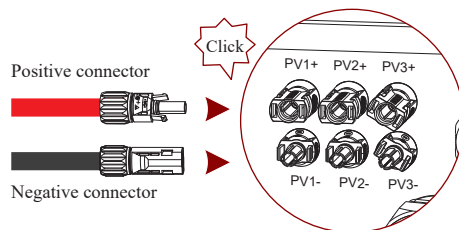
3 Tighten the waterproof nuts on each connector to avoid loosening.



4 Test string voltage and confirm string polarity.



5 Ensure that the PV switch is OFF.



Insert the positive and negative connectors into the PV+/PV- ports until a "click" sound is heard.

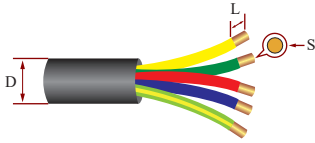
6

10. GRID/GEN/BACKUP Connection



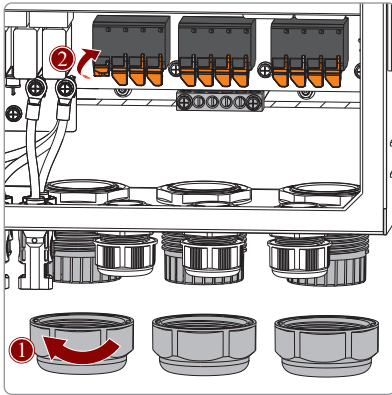
DANGER

Before connecting the GRID/GEN/BACKUP terminals, ensure that both the AC terminal and the DC terminal are powered off and the PV switch is OFF. Otherwise there is a risk of high voltage shock.

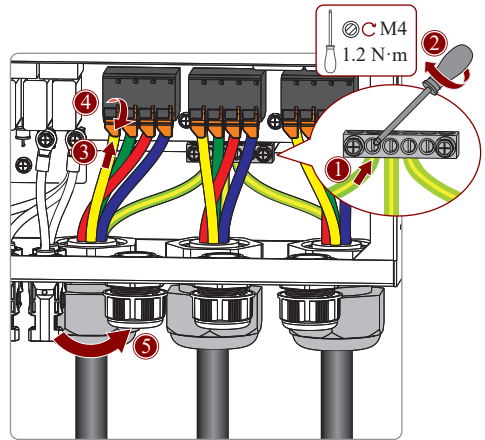


Model	D	S	L
GRID	13.5 mm to 16.8 mm	8 mm ² to 10 mm ²	18 mm
GEN			
BACKUP			

1 Strip the wires insulation.



2 Loosen the rubber nuts and flip up the levers of terminal blocks.



3 Thread the wires into the grounding busbar and the terminal blocks through the GRID/GEN/BACKUP connection ports. Then, fasten the screws, release the levers and finally fasten the rubber nuts.

11. Communication Cable(s) Connection

For BMS communication cable

Choose one of the following two ways:

RS485:



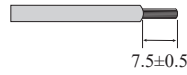
Pin	Color
1	White-orange
2	Orange

CAN:



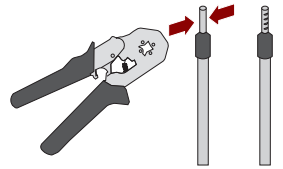
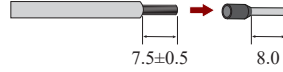
Pin	Color
4	Blue
5	White-blue

For 14-Pin terminal



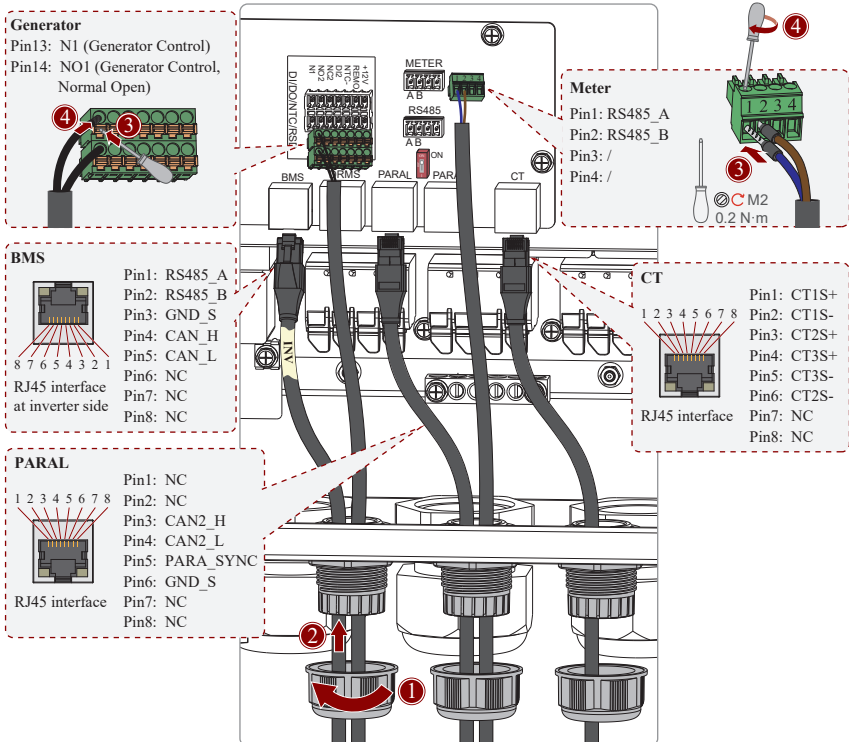
Unit: mm

For 4-Pin terminal

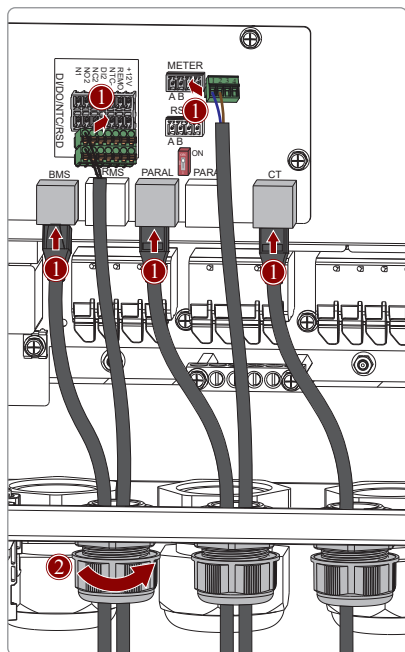


Unit: mm

1 Make the cables.

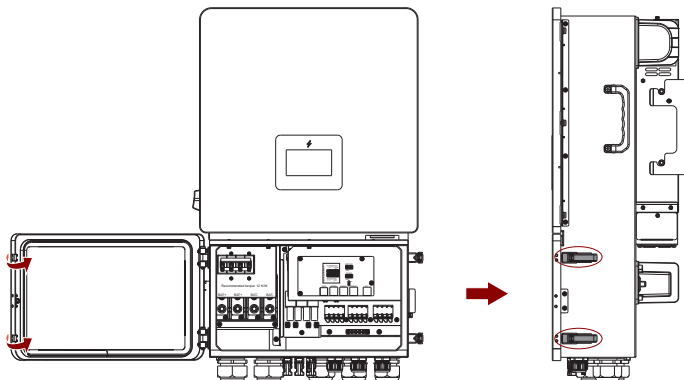


2 Loosen the rubber nuts, then thread the communication cables into the wiring box through the COM ports and assemble the cables according to the pin definition.



- 3 Insert the terminals to the corresponding communication interfaces and fasten the rubber nuts.

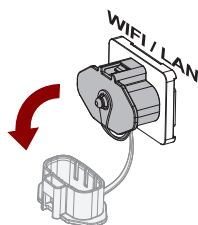
12. Cover Installation



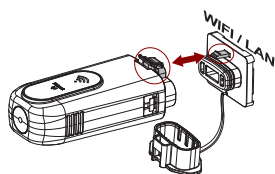
13. Wi-Fi/LAN Module Connection (Optional)

For details, please refer to the corresponding Module Installation Guide in the packing.

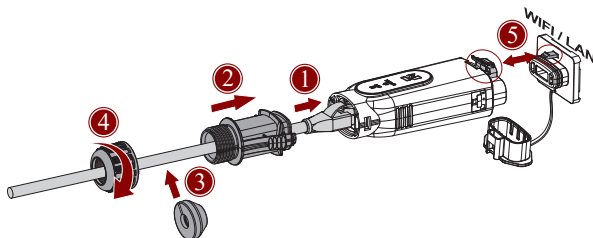
The appearance of modules may be slightly different. The figure shown here is only for illustration.



- 1 Move the cover.
-



Wi-Fi Module



LAN Module

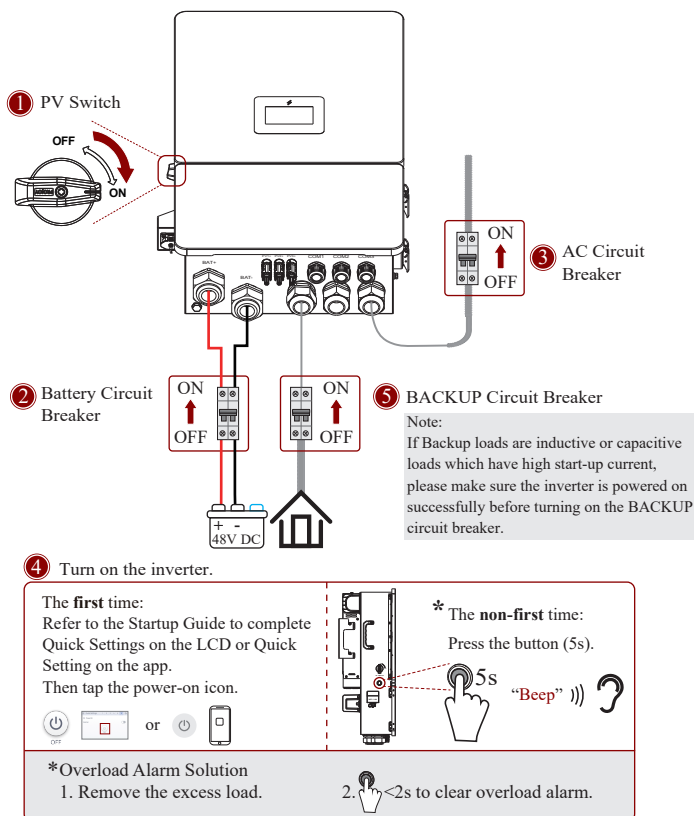
- 2 Insert the Wi-Fi/LAN module into the WIFI/LAN port and ensure that it does not fall off.
-

14. Startup/Shutdown Procedure

Inspection

No.	Items
1	The inverter is firmly installed.
2	There is enough heat dissipation space, no external objects or parts left on the inverter.
3	It is convenient for operation and maintenance.
4	The wiring of the system is correct and firm.
5	Check whether the DC and AC connections are correct with a multimeter, and ensure there is no short circuit, break, or wrong connection.
6	Check whether the waterproof nuts of each part are tightened.
7	The vacant ports have been sealed. All gaps at the cable inlet and outlet holes have been plugged with fireproof/waterproof materials, such as fireproof mud.
8	All safety labels and warning labels on the inverter are complete and without occlusion or alteration.

Startup Procedure



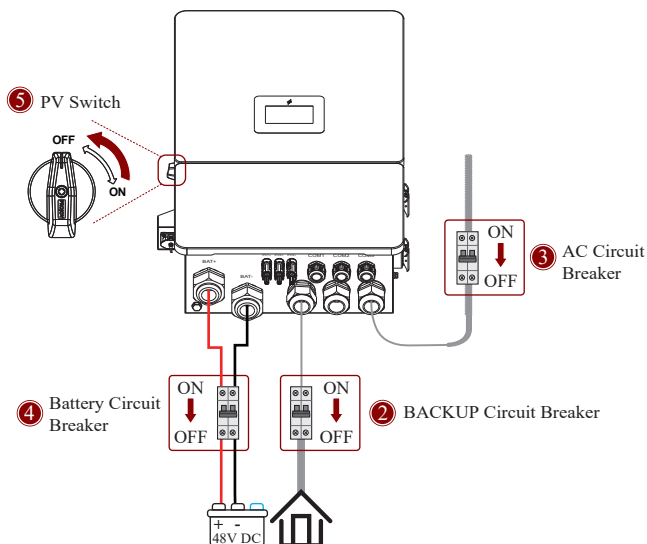
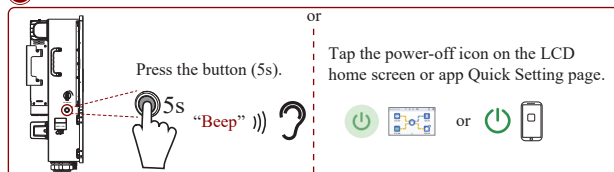
Shutdown Procedure



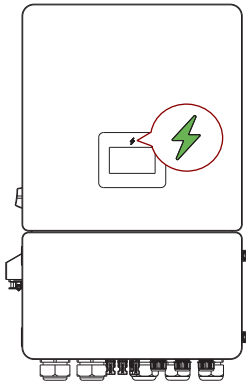
DANGER

After the inverter is powered off, the remaining electricity and heat may still cause electric shock and body burns. If you need to disconnect the inverter cables, please wait at least 10 minutes before touching these parts of inverter.

① Turn off the inverter.



15. Display



LED Indicator	Status	Description
Green led 	On	On-Grid status
	Blink	Standby status
Blue led 	On	Off-Grid status
Red led 	On	Fault has occurred
 →  → 	Light alternately (1 color /0.25s)	Burning code

As the technology is constantly updated and improved, the illustrations in this document are for reference only. Contents including illustrations in this document are subject to change without notice.



QUICK INSTALLATION GUIDE

Three-phase ESS Inverter