



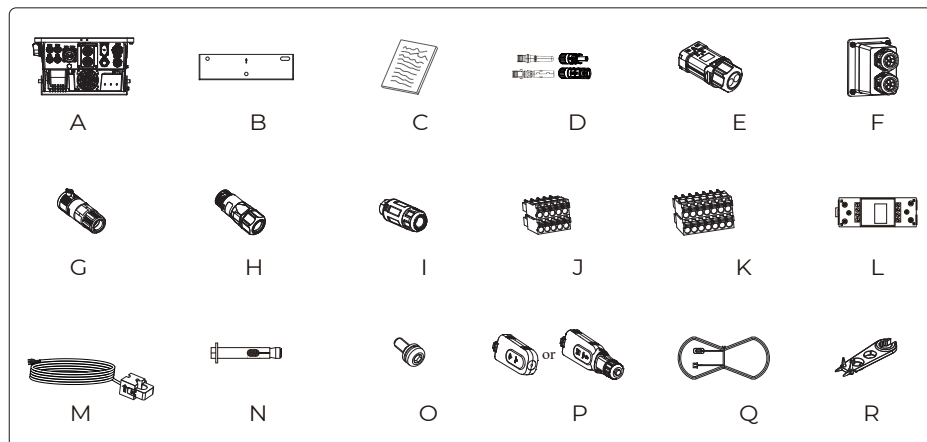
QUICK INSTALLATION GUIDE

SINGLE-PHASE ESS INVERTER

3K/3.6K/3.68K/4.6K/5K/6K

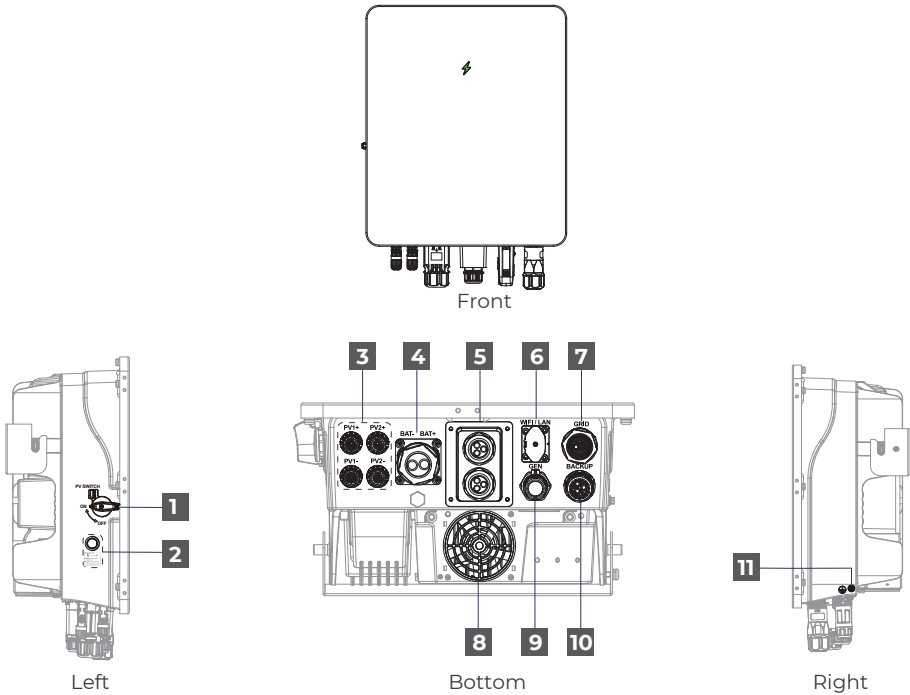
1. Packing List

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Single-phase ESS Inverter 3K/3.6K/3.68K/4.6K/5K/6K



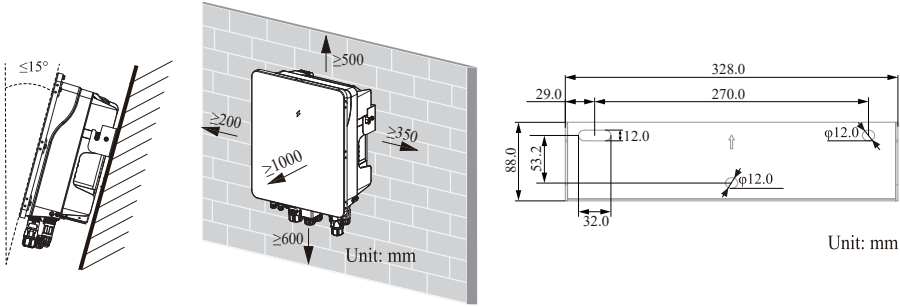
Number	Quantity	Description
A	1	Inverter
B	1	Mounting bracket
C	1	File package
D	2/2	PV connector group (PV+/PV-)
E	1	Battery waterproof cover
F	1	COM waterproof cover
G	1	Generator connector group
H	1	Grid connector group
I	1	Backup connector group
J	2	10-Pin terminal
K	1	14-Pin terminal
L	1	Meter (Optional)
M	1	CT
N	3	M10 Expansion bolt
O	1	M6 Security screw
P	1	WIFI/LAN module (Optional)
Q	1	Lead-acid Battery Temperature sensor (Optional)
R	1	Removal tool for PV connector

2. Appearance



Number	Description
1	PV switch
2	ON/OFF button and instruction lable
3	PV connection port
4	Battery connection port
5	Communication port
6	WIFI/LAN port
7	GRID connection port
8	External fan (It is only suitable for fan cooling series)
9	GEN connection port
10	BACKUP connection port
11	Grounding port

3. Location



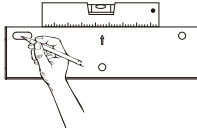
4. Installation



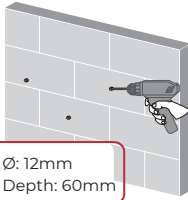
DANGER

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 walls to avoid risks.

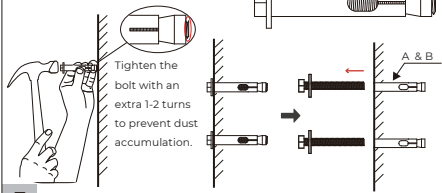


Set bracket horizontally.



ϕ : 12mm
Depth: 60mm

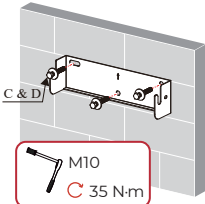
Expansion bolt
(M10; 3 suites)



1 Mark the holes position on the wall.

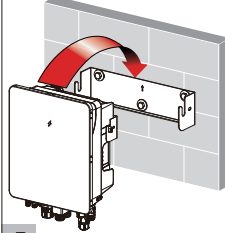
2 Drill the holes.

3

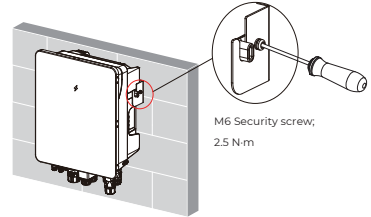


M10
C 35 N·m

4



5



M6 Security screw;
2.5 N·m

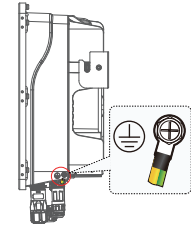
6

5. Installation



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



Right-side view

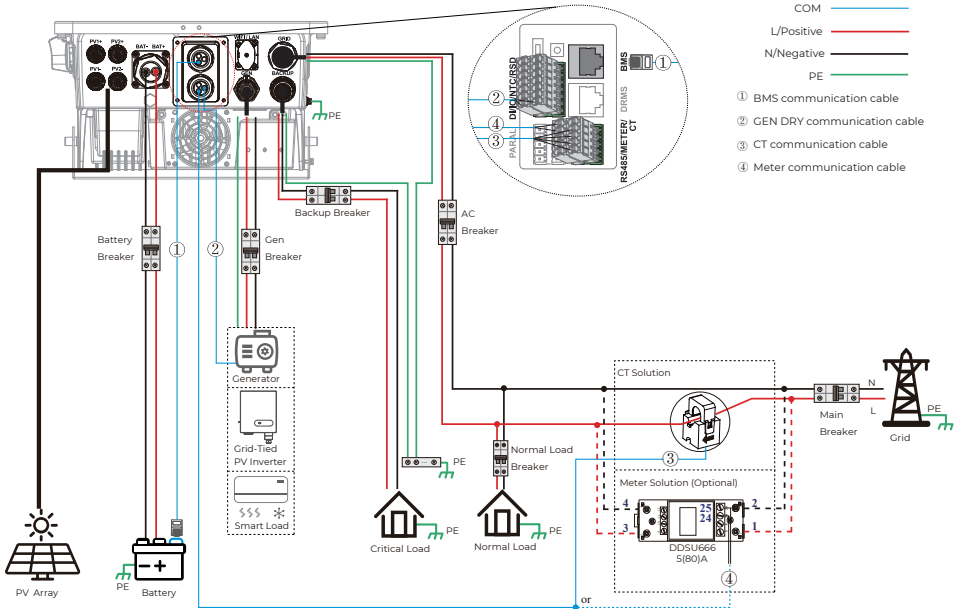
Items	Remark
Screw	M4 X 10 mm; 1.2 N·m
Cross-sectional area (Green-yellow wire)	S (Green-yellow wire) $\geq S$ (PE wire of AC cable) S is the cross-sectional area.
	$\geq 10\text{mm}^2$
	OT terminal must be sized to cross-sectional area of green-yellow wire. E.g., if the cross-sectional area of green-yellow wire is 10mm^2 , OT8-4 terminal should be chosen.

6. Wiring System Stand-alone Application



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

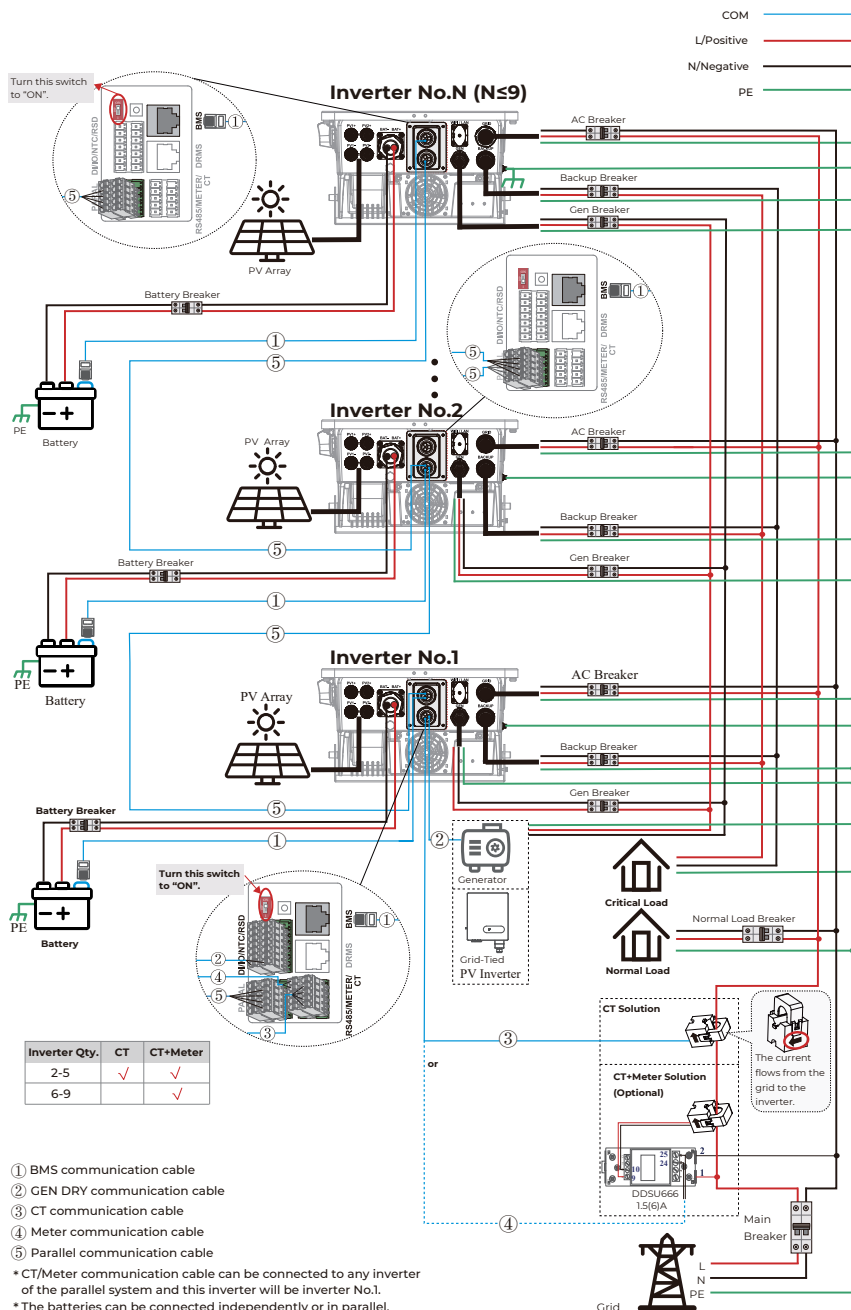


7. Wiring System for Parallel Application ($2 \leq N \leq 9$)



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





Note:

- BMS communication connection is only for lithium battery.
- It is necessary to additionally purchase suitable CT and meter for $N \geq 6$.
- It is necessary to turn the matched resistance switch of inverter No. 1 and inverter No. N to "ON" in parallel connection mode
- With parallel connection mode, it is necessary to connect APP to one of the inverters and then go to Console > Hybrid Setting > Other page to enable Parallel mode on APP. Setting/modifying these parameters requires logging into an administrator account.
- In one parallel system, the smart load is only allowed to be connected to GEN port in a non-parallel way.
- In one parallel system, the batteries can be connected independently or in parallel, the manual only shows the batteries connected independently. In one system connected with parallel batteries, the CT/ meter and BMS communication cables should be connected to the same inverter, and the inverter connecting with these two types of cables is the main inverter, i.e., Inverter No. 1.

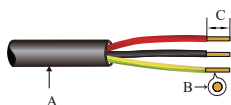
Inverter	Battery breaker	Backup/Gen breaker	AC breaker	Normal load breaker	Main breaker
3K	100 A / 80 V DC	45 A / 230 V AC	45 A / 230 V AC	Depends on household loads	Depends on household loads
3K6					
3K68					
4K6	150 A / 80 V DC	63 A / 230 V AC	63 A / 230 V AC		
5K					
6K					

8. Grid Connection



DANGER

Before connecting the GRID terminal, 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 right voltage shock.



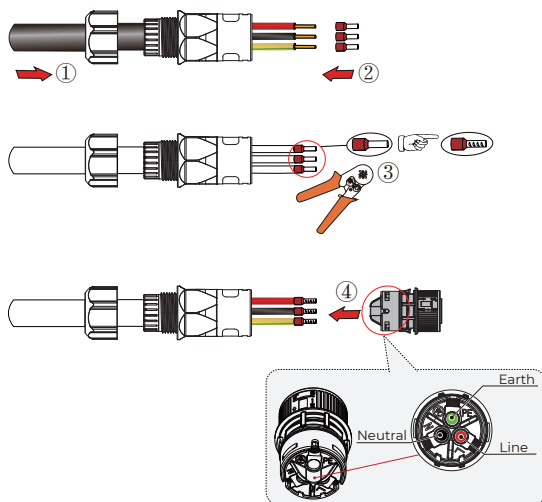
A. Diameter 11.8-16.8 mm

B. Cross Section 8-10 mm²

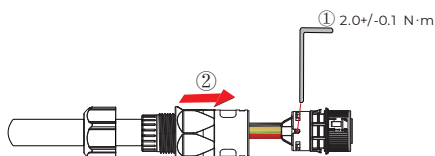
C. Strip Length ~10 mm

It is recommended to use outdoor dedicated cables with multiple copper cores.

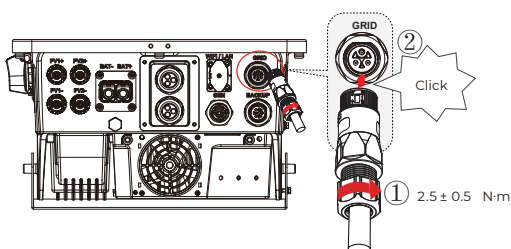
1 Select the cable.



2 Thread the cable and crimp the wire ferrules.



3 Tighten three screws and ensure each screw cap does not exceed the surface.



4 Install the connector to the «GRID» port.

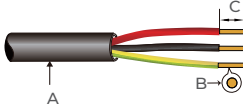
9. Backup Connection

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DANGER

Before connecting the BACKUP terminal, 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.



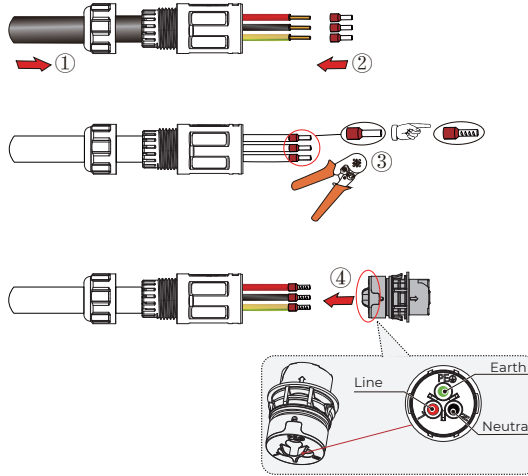
A. Diameter 11.5-13.5 mm

B. Cross Section 5.3-6 mm²

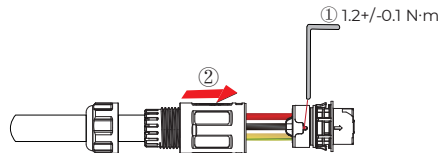
C. Strip Length ~10 mm

It is recommended to use outdoor dedicated cables with multiple copper cores.

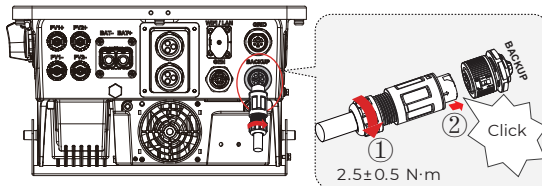
1 Select the cable.



2 Thread the cable and crimp the wire ferrules.



3 Tighten three screws and ensure each screw cap does not exceed the surface.



4 Install the connector to the «BACKUP» port.

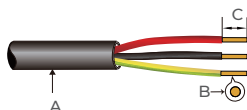
10. GEN Connection

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DANGER

Before connecting the GEN terminal, 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.



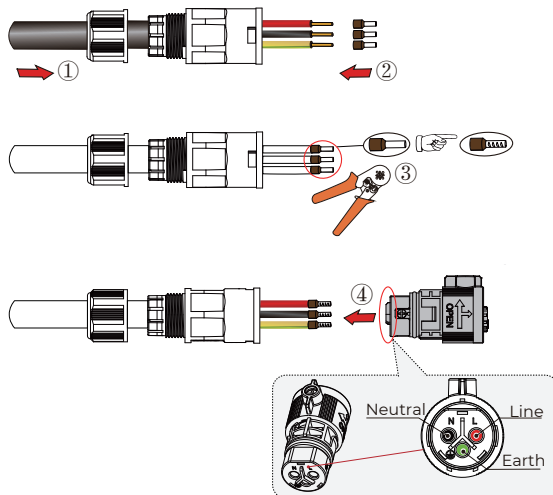
A. Diameter 11.5-13.5 mm

B. Cross Section 5.3-6 mm²

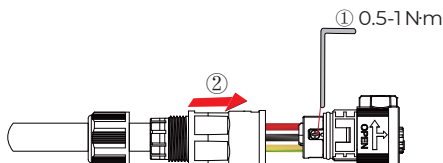
C. Strip Length ~10 mm

It is recommended to use outdoor dedicated cables with multiple copper cores.

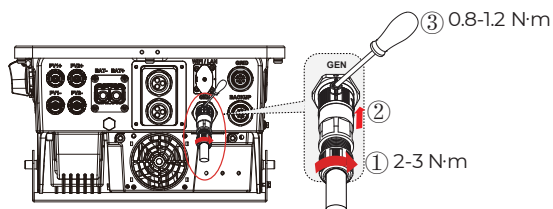
1 Select the cable.



2 Thread the cable and crimp the wire ferrules.



3 Tighten three screws and ensure each screw cap does not exceed the surface.



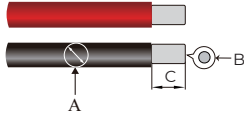
4 Install the connector to the «GEN» port.

11. Battery Connection



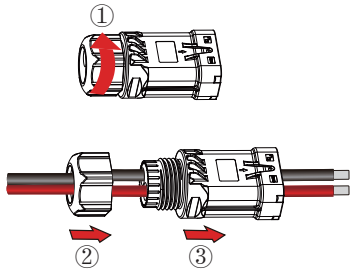
DANGER

Before connecting the battery terminal, 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.

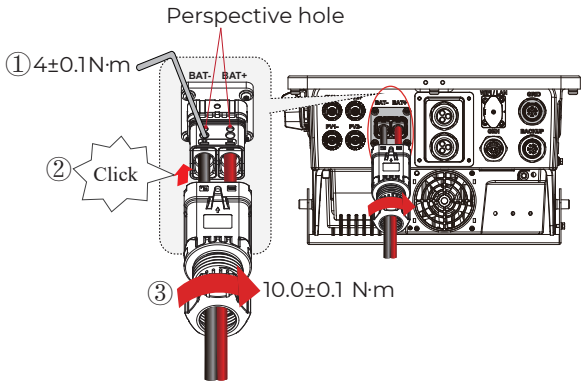


Model	A	B	C
3K/3.6K/3.68K	9-10.5mm	16-21.2 mm ²	~20 mm
4.6K/5K/6K		15-26.7 mm ²	

- 1 Prepare the proper cable we recommended, and strip an appropriate length of the cable insulation.



- 2 Thread the wires.



- 3 Insert the wires into the rubber core according to the line sequence and put the cable in place through the perspective hole.

12. PV Connection

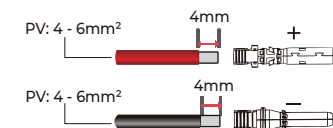
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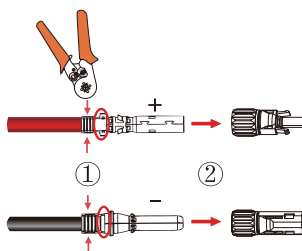
DANGER

Photovoltaic arrays exposed to sunlight will generate dangerous voltages!

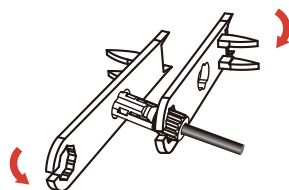
Before connecting the PV terminal, ensure that both the AC terminal and the DC terminal are powered off and the PV switch is OFF. Otherwise there is a risk of high voltage shock.



Note:
PV cable should be dedicated PV cable
(suggest using 4 - 6mm² PVI-F cable).



Use crimping tool to stitch.
Red-circled area can't be
crimped.

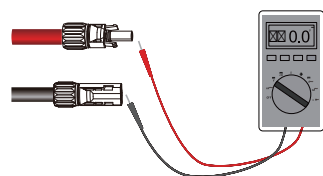


Tighten the waterproof nuts
on each connector to avoid
loosening.

1 Wires making.

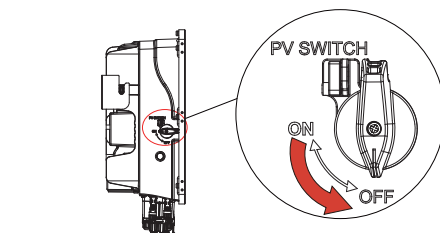
2 crimped.

3 loosening.

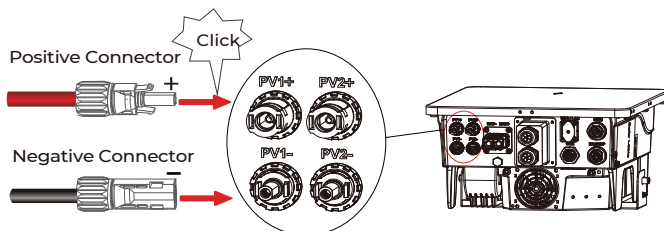


Test string voltage and confirm

4 string polarity.



5 Ensure that the PV switch is OFF.



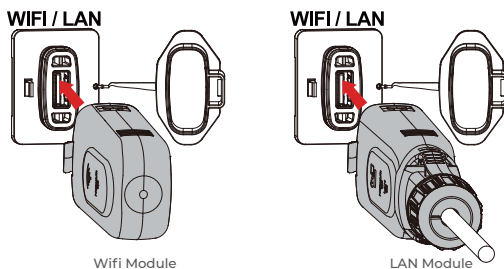
6 Insert the positive and negative connectors into the PV+/PV- ports until a "click" sound is heard.

13. WIFI/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

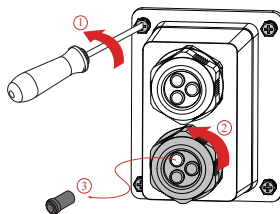


1 Move the cover.



2 Insert WIFI/LAN module into WIFI/LAN port, and ensure that it does not fall off.

14. Communication Cable(s) Connection (CT/Meter and BMS)

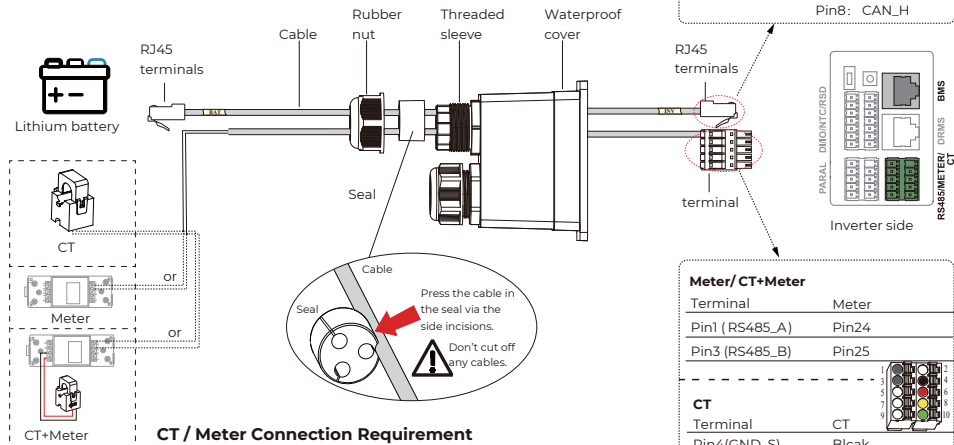
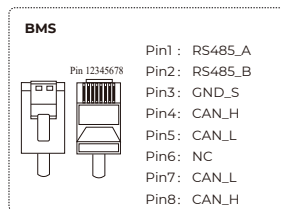


1 Unscrew the waterproof cover and loosen the rubber nut.

CT / Meter Connection Requirement NOTE

Inverter Qty	Distance	CT	Meter	CT+Meter
1	≤ 3m	✓	✓	✓
	3 - 10m	✓	✓	
	> 10m		✓	
2 - 5	≤ 3m	✓		✓
	3 - 10m	✓		
	> 10m			
> 5	≤ 3m			✓
	3 - 10m			
	> 10m			

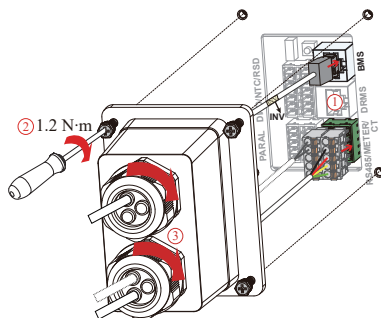
- CT: 3m cable length (default); 10m cable length (optional). Do not extend the CT cable.
- Meter (optional): wire length up to 100m.
- For **CT+Meter** connection, it is necessary to additionally purchase suitable CT and meter from customer service according to the specific requirements.



Meter/ CT+Meter	
Terminal	Meter
Pin1 (RS485_A)	Pin24
Pin3 (RS485_B)	Pin25
CT	
Terminal	CT
Pin4 (GND_S)	Black
Pin6 (L_CT+)	Red
Pin8 (+3.3V)	Yellow
Pin10 (CT_DET)	Green

① Lead the cables through the rubber nut, seal and waterproof cover in turn.

2 ② Make the terminals according to the above pin definition.



① Insert the terminal into corresponding port.

② Screw the waterproof cover back to inverter firmly with 4xM4 screws(1.2 N m)

3 ③ Install the seal into the threaded sleeve, fasten the rubber nut.

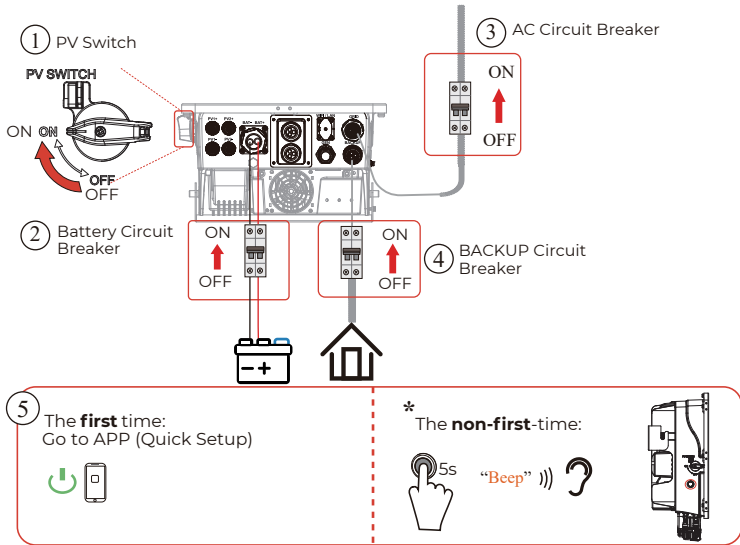
15. Startup/Shutdown Procedure

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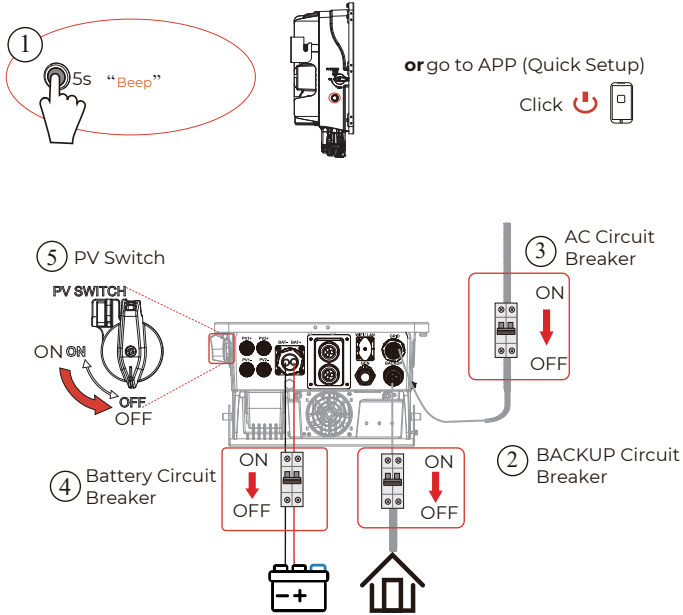
Inspection

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.
9	<p>Confirm the parameters and configurations conform to relevant requirements.</p> <ul style="list-style-type: none"> ● AC Frequency: 50/60 Hz ● PV Voltage: 70 V to 550 V ● Battery Voltage: 40 V to 65 V ● Grid AC Voltage: 176 V to 264 V

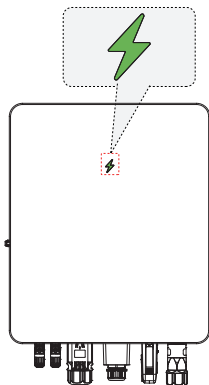
Startup Procedure






Shutdown Procedure



16. Display



LED Indicator	Status	Description
	On	On-Grid status
	Blink	Standby status
	On	Off-Grid status
	On	Fault has occurred

NOTE



QUICK INSTALLATION GUIDE

Single-phase ESS Inverter

