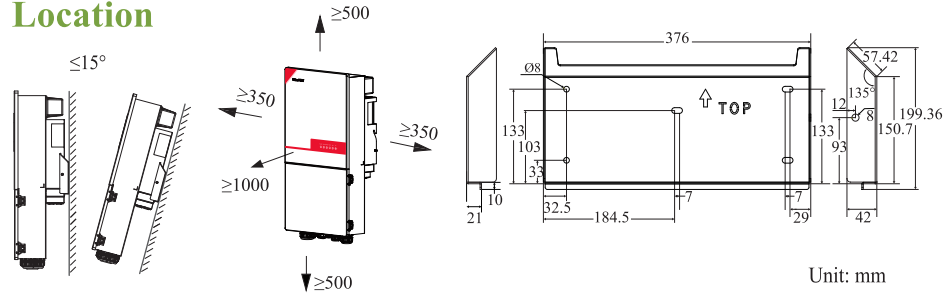


PrimeVOLT

QUICK INSTALLATION GUIDE

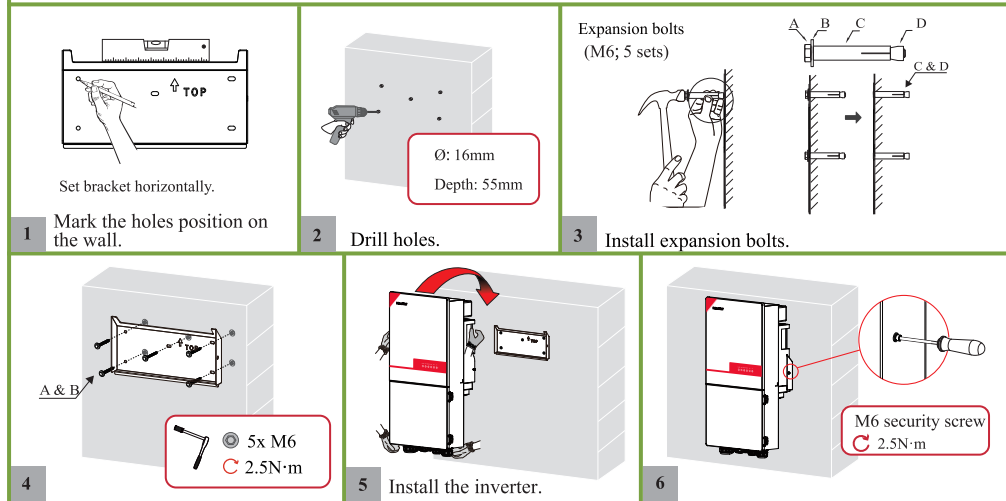
ESS INVERTER PV 8KHB-180 / PV 9K99HB-210 / PV 10KHB-210

1 Location



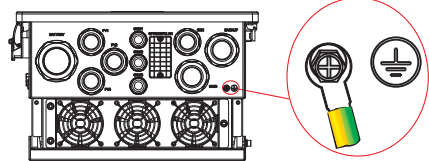
2 Installation

- The installation wall must be fireproof and non-flammable materials, otherwise there is a fire risk.
 - Before drilling holes, check whether there are electrical pipes or other pipes buried in the wall to avoid risks.
- Note: two or three people are recommended to install the inverter.



3 Grounding

- Ensure that the inverter and all cables to be installed have been completely powered off during the whole process of installation and connection. Otherwise, high voltage may result in fatal injury.

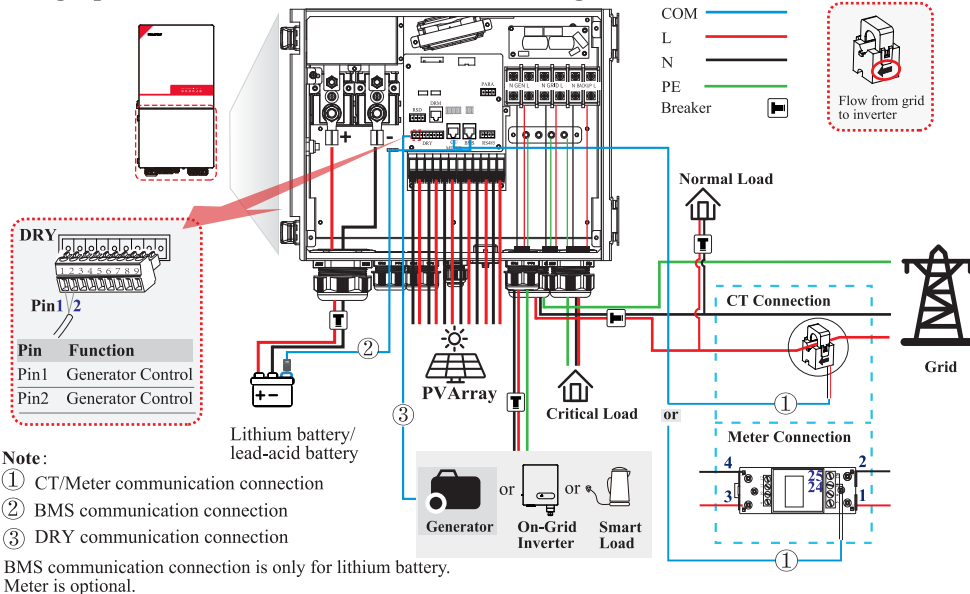


Items	Remark
Yellow green lines	4-2AWG
Screw	M6; 2.5N·m
OT Terminal	OT16-6.4

4 Wiring System

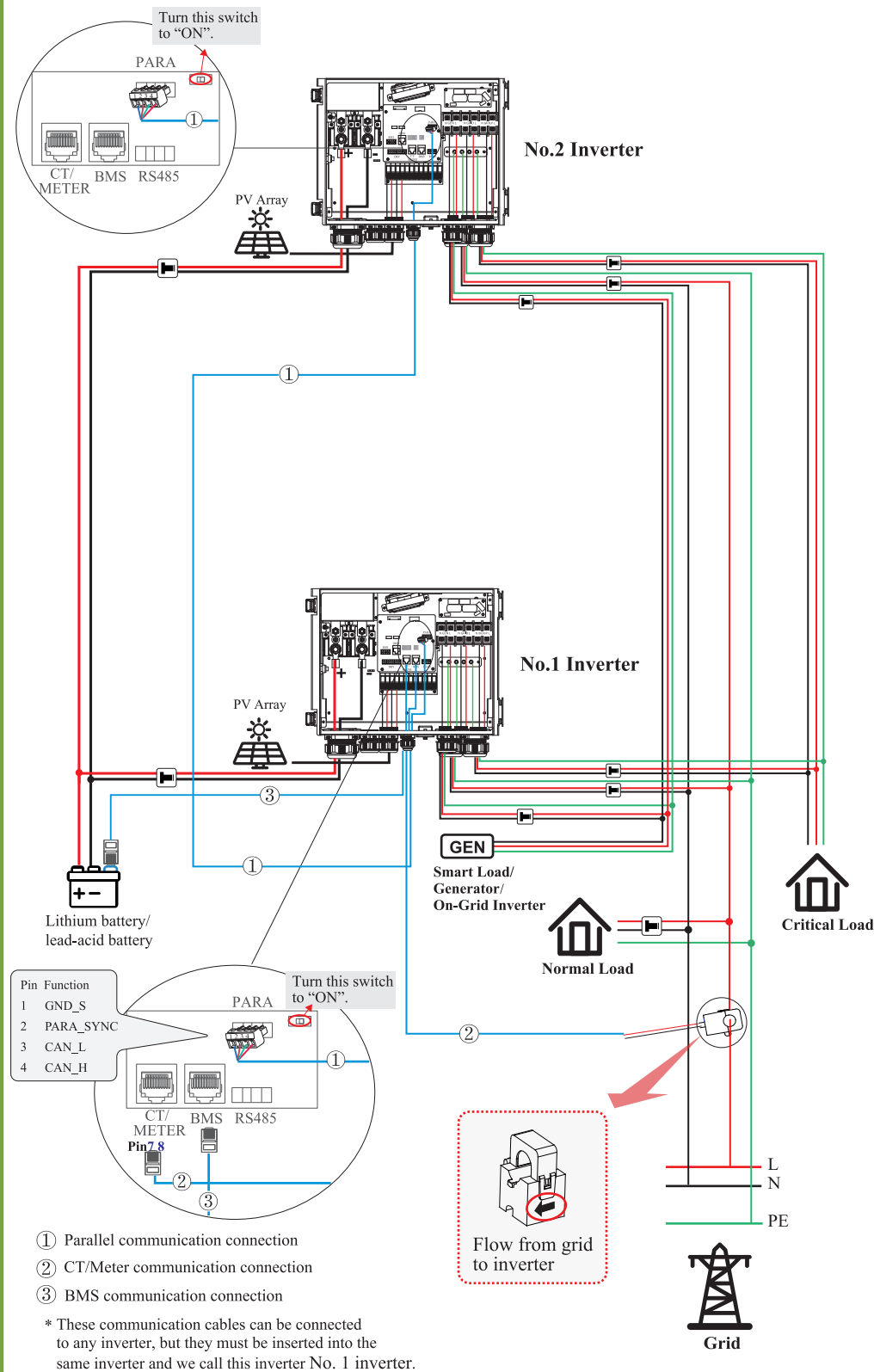
- Ensure that the inverter and all cables to be installed have been completely powered off during the whole process of installation and connection. Otherwise, high voltage may result in fatal injury.

Single phase (220V/230V/240Vac) connection diagram



5 Wiring System

Single phase parallel connection mode-Scheme A (N=2)



- Parallel communication connection
- CT/Meter communication connection
- BMS communication connection

* These communication cables can be connected to any inverter, but they must be inserted into the same inverter and we call this inverter No. 1 inverter.

Note:

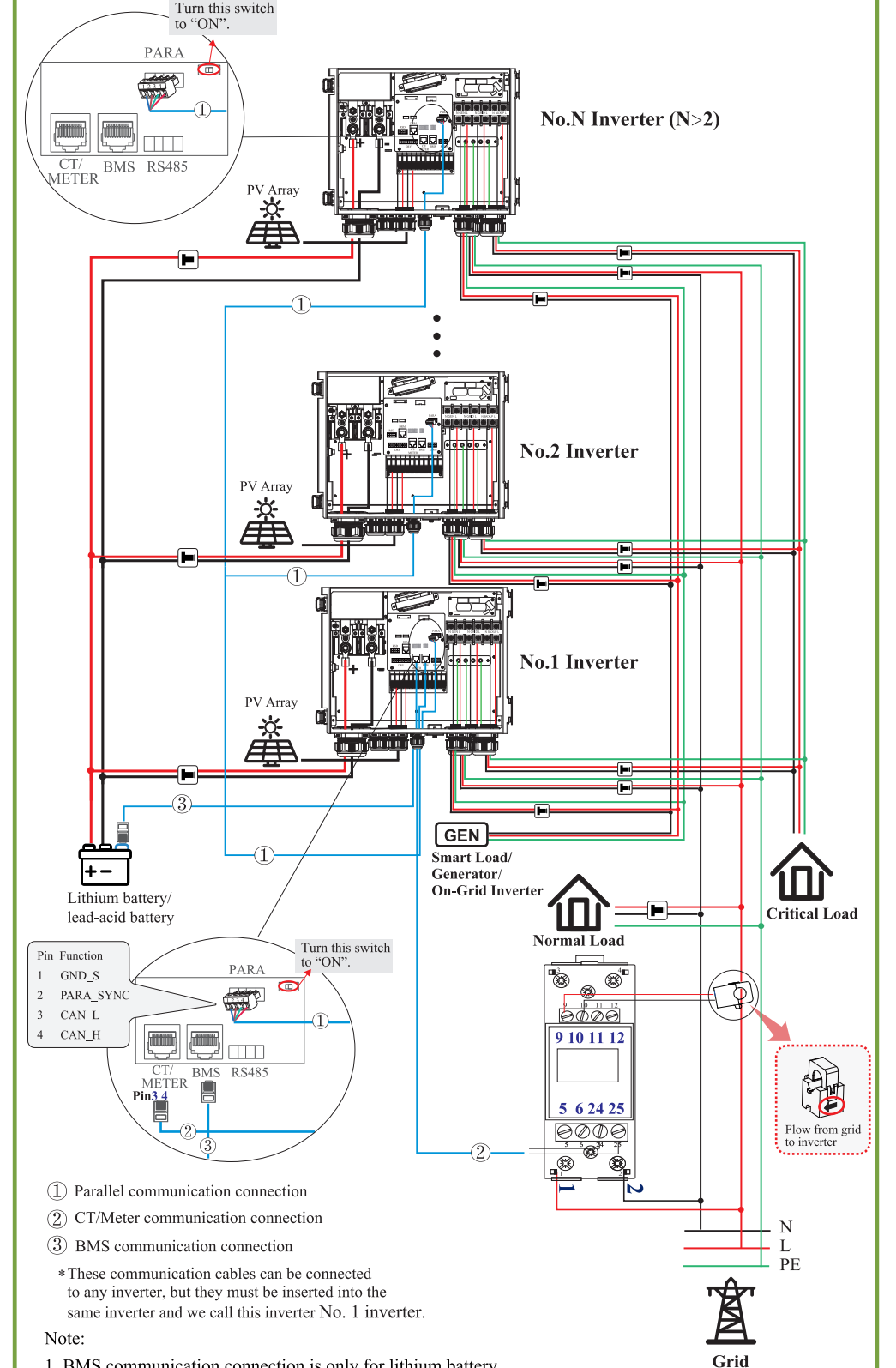
- BMS communication connection is only for lithium battery.
- It is necessary to turn the matched resistance switch of No. 1 inverter and No. 2 inverter to "ON" in parallel connection mode.
- Under parallel connection mode, it is necessary to connect APP to one of inverters and then go to [Console > Hybrid Setting > Other > Parallel mode](#) page to enable parallel mode on APP.



DANGER Ensure that the inverter and all cables to be installed have been completely powered off during the whole process of installation and connection. Otherwise, high voltage may result in fatal injury.

6 Wiring System

Single phase parallel connection mode-Scheme B (2 < N < 9)



- Parallel communication connection
- CT/Meter communication connection
- BMS communication connection

* These communication cables can be connected to any inverter, but they must be inserted into the same inverter and we call this inverter No. 1 inverter.

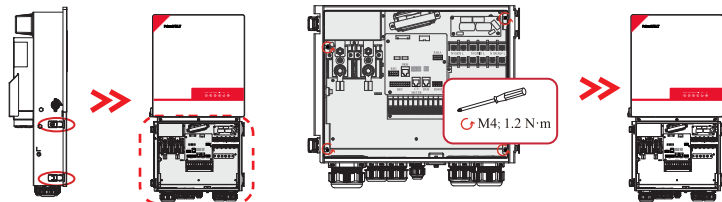
Note:

- BMS communication connection is only for lithium battery.
- It is necessary to additionally purchase applicable CT and meter according to the specific requirements in parallel connection mode-Scheme B.
- It is necessary to turn the matched resistance switch of No. 1 inverter and No. N inverter to "ON" in parallel connection mode.
- With parallel connection mode, it is necessary to connect APP to one of inverters and then go to [Console > Hybrid Setting > Other > Parallel mode](#) page to enable parallel mode on APP.



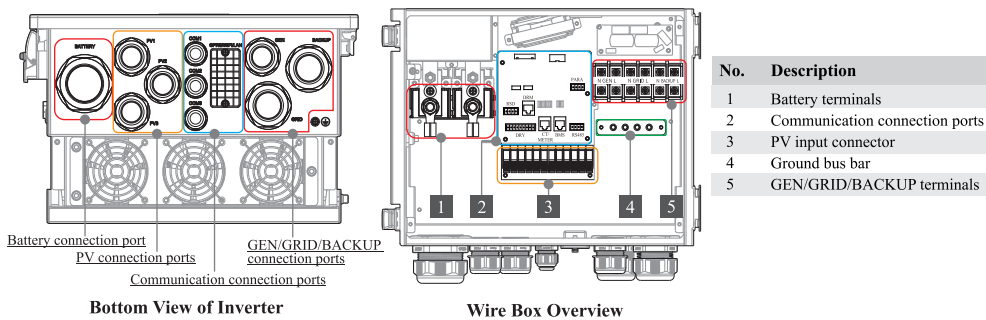
DANGER Ensure that the inverter and all cables to be installed have been completely powered off during the whole process of installation and connection. Otherwise, high voltage may result in fatal injury.

7 Removing Insulation Piece



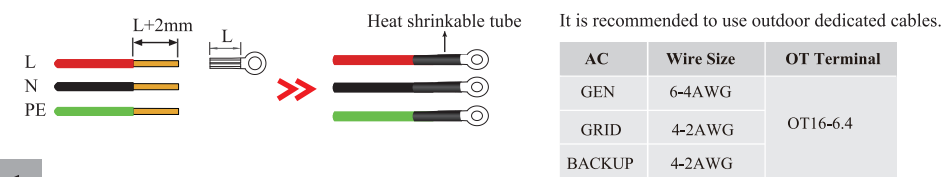
8 Connection Ports Overview

Note:
The connection instructions in 9-13 sections will be based on views here, please read them carefully.



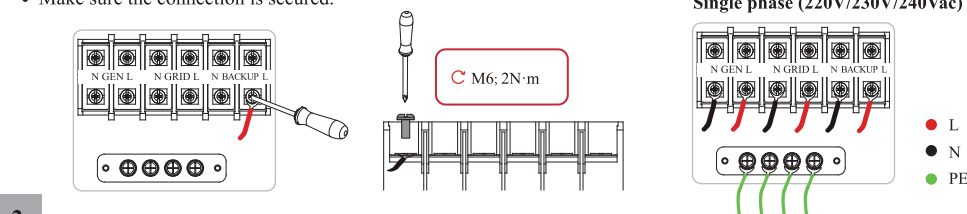
9 GRID/BACKUP/GEN Connection

Before connecting the GRID/BACKUP/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.



1 Wires making.

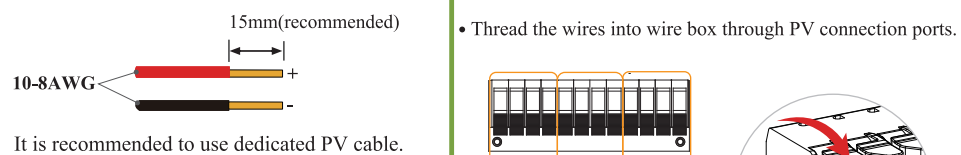
- Thread the wires into wire box through corresponding GEN/GRID/BACKUP ports.
- According to the label on terminal blocks, fit wires' connectors in and tighten terminal screws.
- Make sure the connection is secured.



2

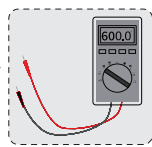
10 PV Connection

- 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.



1 Wires making.

- Check correct polarity of wire connection from PV modules and PV input connectors.
- The test voltage cannot exceed 600V.



2

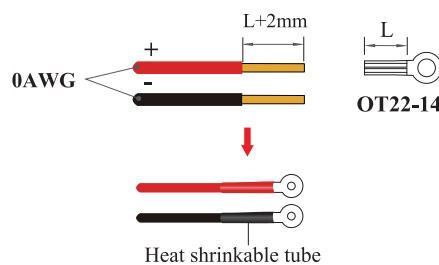
- Ensure that the PV switch is OFF.

3

- Open PV input connector switch.
- Insert positive pole (+) of connection wire into positive pole (+) of PV input connector.
- Insert negative pole (-) of connection wire into negative pole (-) of PV input connector.
- Close the switch and ensure the wires are tightly fixed.

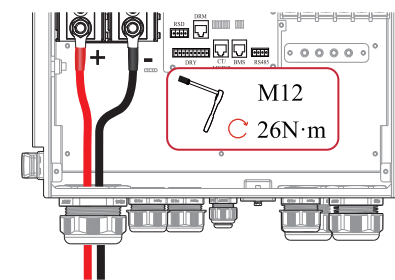
11 Battery Connection

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.



It is recommended that the battery cable be less than or equal to 3 m.

1 Wires making.

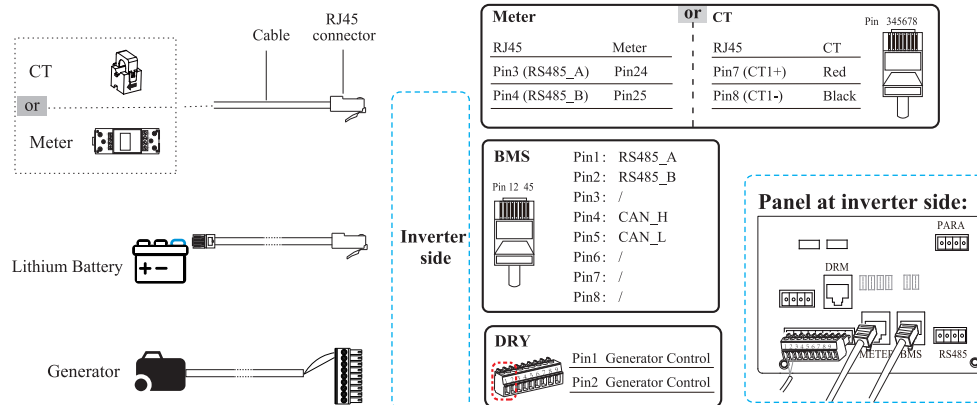


Warning!
Reversed polarity connection will damage the inverter!

2 Wires connection.

12 Communication Cables Connection (CT/Meter, BMS, DRY)

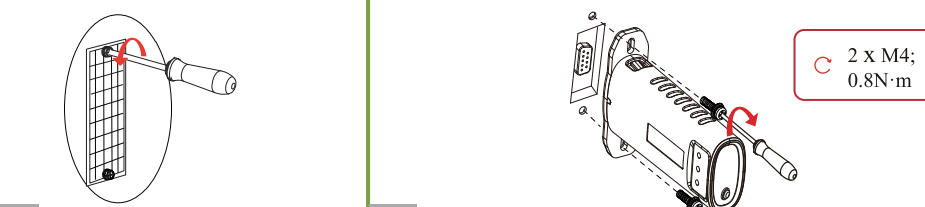
*The inverter is not equipped with RJ45 connectors.



- Assemble the communication cables with an RJ45 connector/9-Pin terminal according to applicable Pin definition.
- Insert these cables into corresponding communication ports according to panel at inverter side.

13 GPRS/WIFI/LAN Module Installation (Optional)

The appearance of modules may be slightly different. The figure shown here is only for illustration. For details, please refer to the corresponding Module Installation Guide in the packing.

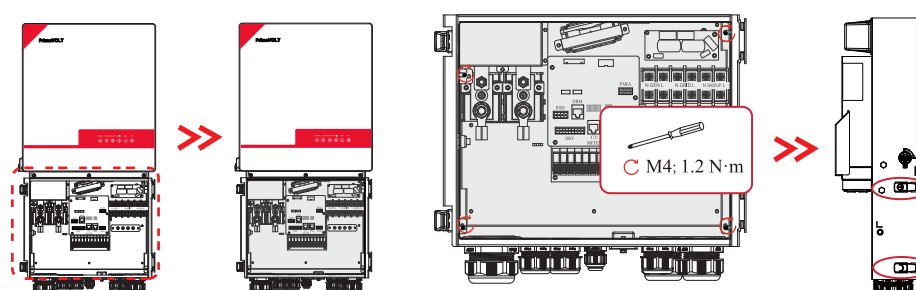


1 Unscrew and remove the cover.

2 Insert and secure module.

14 Insulation Piece Installation

Before installing insulation piece, please turn on all circuit breakers in junction box.



15 Startup/shutdown Procedure

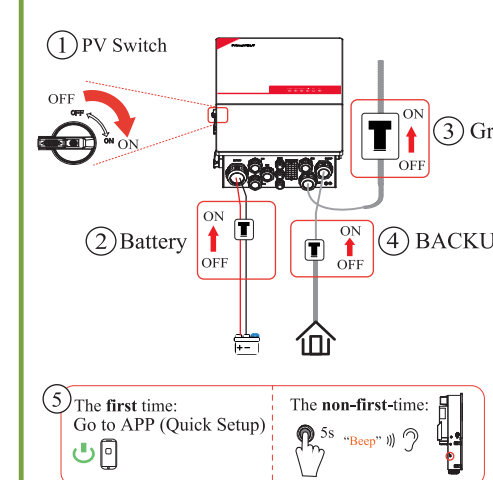
Inspection

No. Items

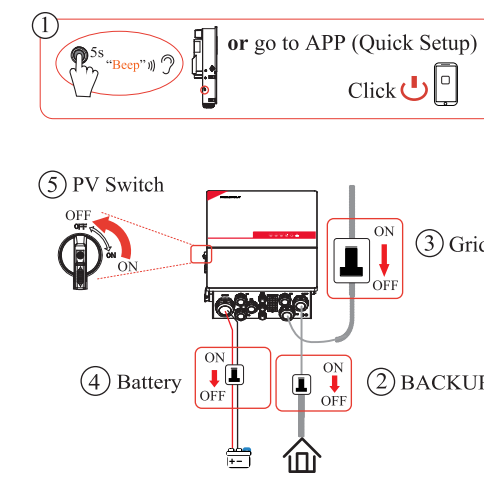
- The inverter is firmly installed.
- There is enough heat dissipation space, no external objects or parts left on the inverter.
- It is convenient for operation and maintenance.
- The wiring of the system is correct and firm.
- Check whether the DC and AC connections are correct with a multimeter, and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

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

Startup Procedure



Shutdown Procedure



16 Display



LED	Status	Description	LED	Status	Description
PV	On	PV input is normal.	COM	Blink	Data are communicating.
	Blink	PV input is abnormal.		Off	No data transmission.
	Off	PV is unavailable.		On	BACKUP power is available.
BAT	On	Battery is charging.	BACKUP	Blink	BACKUP output is abnormal.
	Blink	Battery is discharging.		Off	BACKUP power is unavailable.
	Off	Battery is unavailable.		ALARM	On
On	GRID is available and normal.	Blink	Alarms have occurred but inverter doesn't shut down.		
Blink	GRID is available but abnormal.	Off	No fault.		
Off	GRID is unavailable.				

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.

For more installation instructions, please scan the QR code on the right.



Installation Manual



Installation video (WiFi+Smart meter)