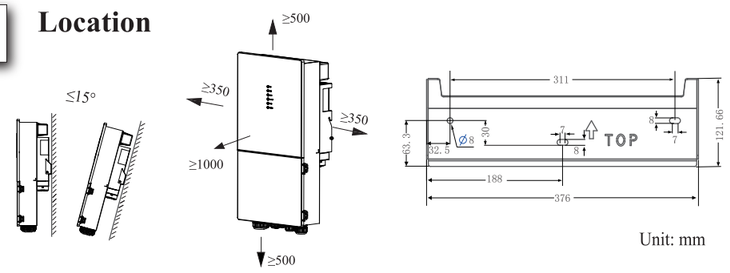
QUICK INSTALLATION GUIDE
ESS INVERTER 8/10K EU

1 Location

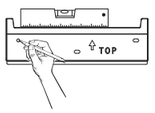


Unit: mm

2 Installation

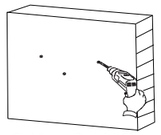
1. The walls must be fireproof and non-flammable materials, otherwise there is a fire risk.
2. Before drilling holes, check whether there are electric power pipes or other pipes buried in the walls to avoid risks.

Note: two or three persons are recommended to install the inverter.



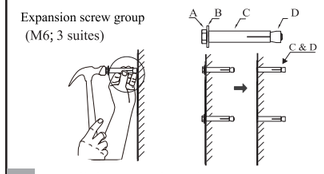
Set bracket horizontally.

1 Mark the holes position on the wall.

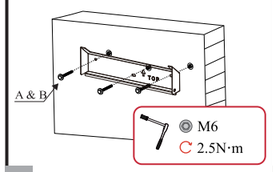


Ø: 16mm; Depth: 55mm

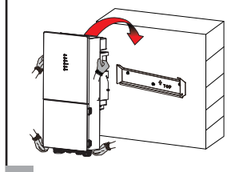
2 Drill the holes.



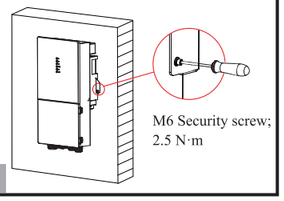
3 Install the expansion tubes.



4



5 Install the inverter.

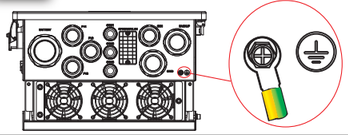


M6 Security screw; 2.5 N·m

6

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, fatal injury could be caused by the high voltage.

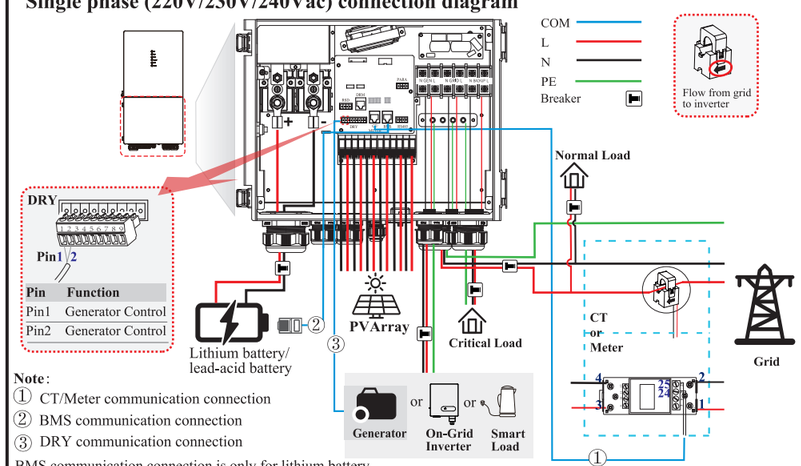


Items	Remark
Yellow green lines	4-2AWG
Screw	M6; 2.5N·m
OT Terminal	OT16-6.4

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, fatal injury could be caused by the high voltage.

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

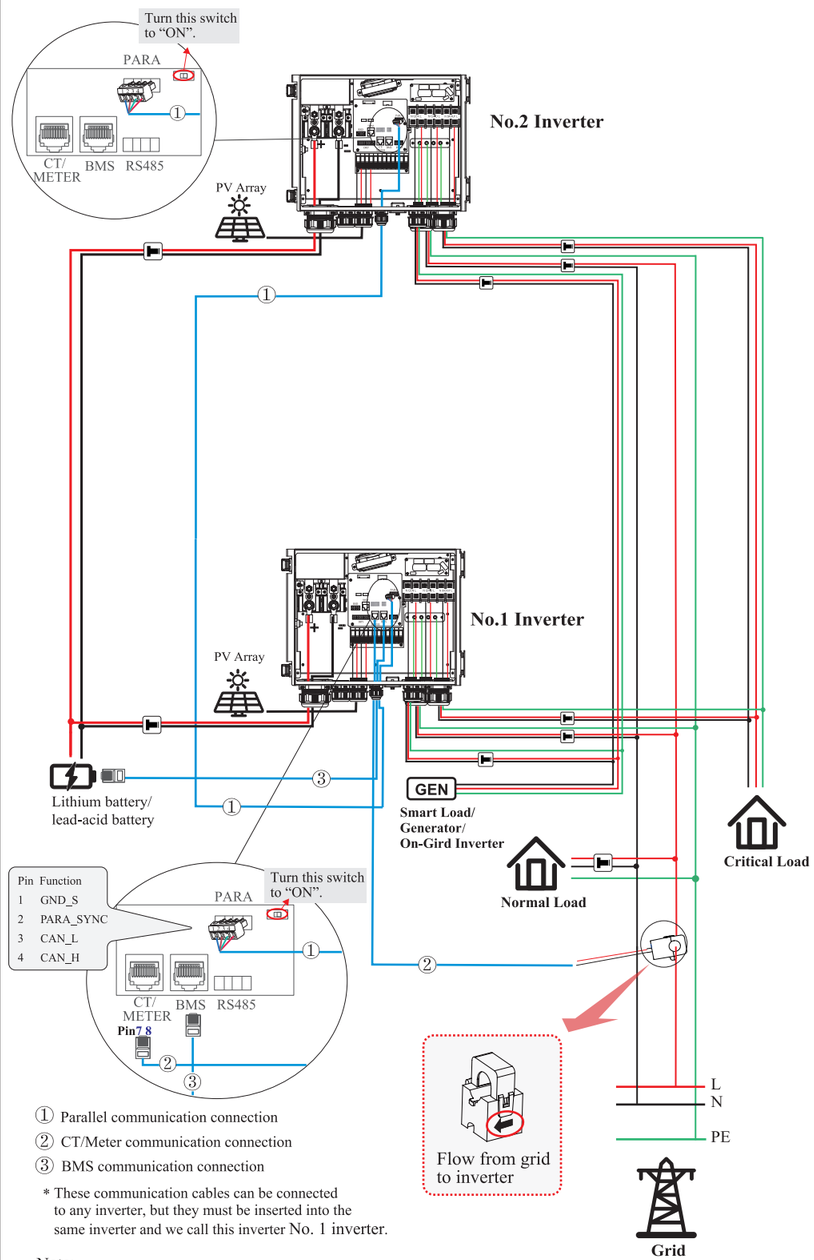


Note:
① CT/Meter communication connection
② BMS communication connection
③ DRY communication connection

BMS communication connection is only for lithium battery.
Meter is optional.

5 Wiring System

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



① Parallel communication connection
② CT/Meter communication connection
③ BMS communication connection

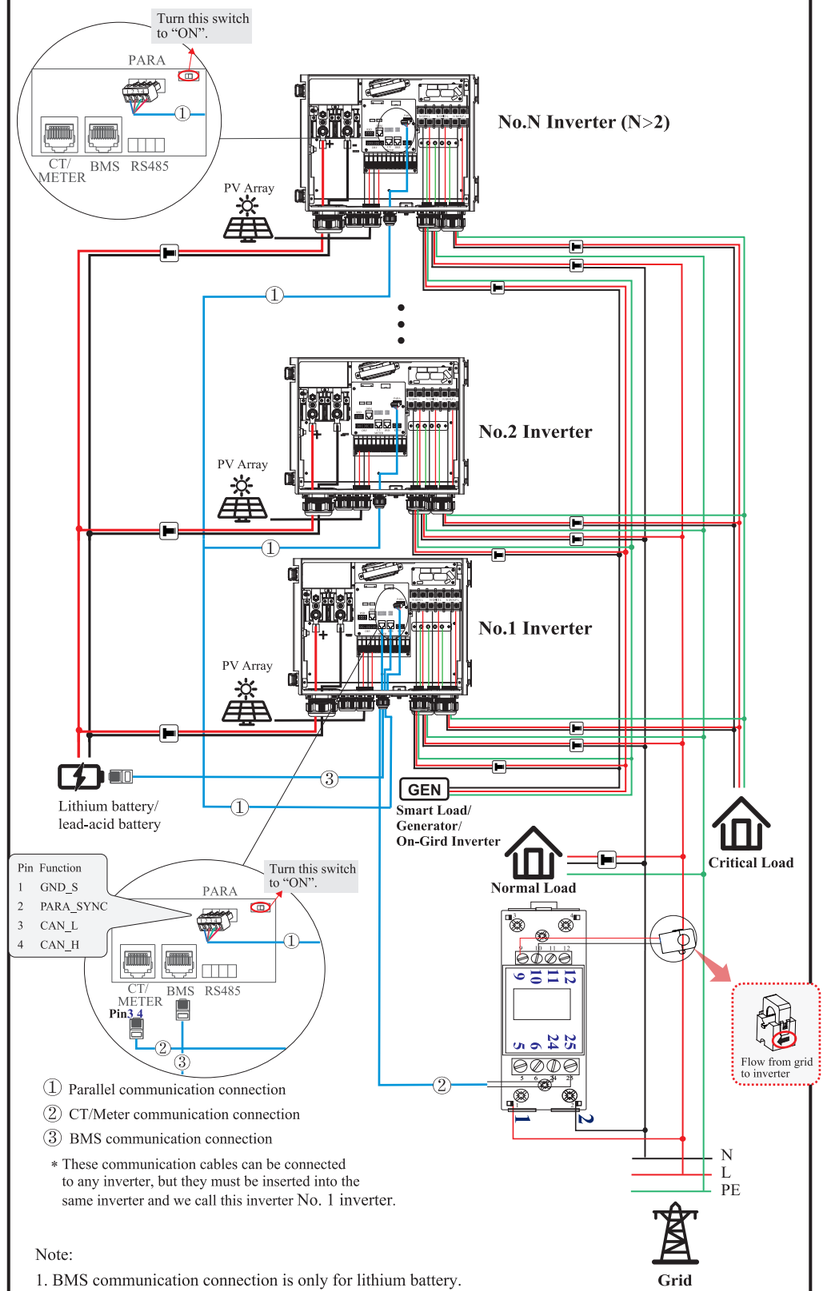
* These communication cables can be connected to any inverter, but they must be inserted into the same inverter and we call this inverter No. 1 inverter.

Note:
1. BMS communication connection is only for lithium battery.
2. It is necessary to turn the matched resistance switch of No. 1 inverter and No. 2 inverter to "ON" in parallel connection mode.
3. With parallel connection mode, it is necessary to connect APP to one of inverters and then go to Console > Other Setting 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, fatal injury could be caused by the high voltage.

6 Wiring System

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



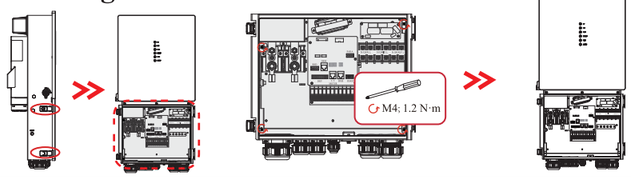
① Parallel communication connection
② CT/Meter communication connection
③ BMS communication connection

* 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:
1. BMS communication connection is only for lithium battery.
2. It is necessary to additionally purchase suitable CT and meter according to the specific requirements in parallel connection mode-Scheme B.
3. It is necessary to turn the matched resistance switch of No. 1 inverter and No. N inverter to "ON" in parallel connection mode.
4. With parallel connection mode, it is necessary to connect APP to one of inverters and then go to Console > Other Setting 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, fatal injury could be caused by the high voltage.

7 Removing Insulation Piece

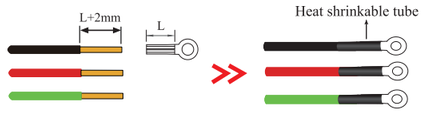


8 GRID/BACKUP/GEN Connection

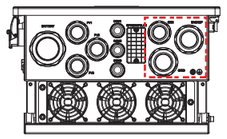
Before connecting the GRID/BACKUP/GEN terminal, ensure that both the AC terminal and the DC terminal are powered off and the PV switch is OFF. Otherwise there is a risk of high voltage shock.

It is recommended to use outdoor dedicated cables.

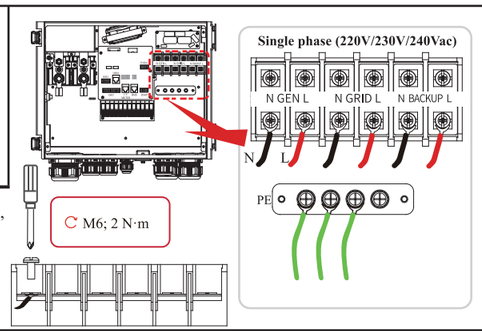
AC Cable	Wire Size	OT Terminal
GEN	6-4AWG	OT16-6.4
GRID	4-2AWG	
BACKUP	4-2AWG	



1 Wires making.



2 Wires threading.



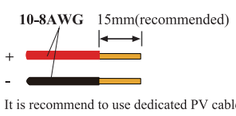
According to labels on the terminal block, fit the wires' connectors in and tighten the terminal screws.
Make sure the connection is complete.

3

9 PV Connection

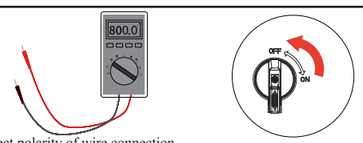
1.Photovoltaic arrays exposed to sunlight will generate dangerous voltages!

2.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.



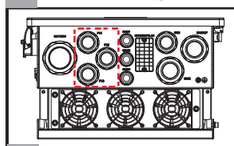
It is recommend to use dedicated PV cable.

1 Wires threading.

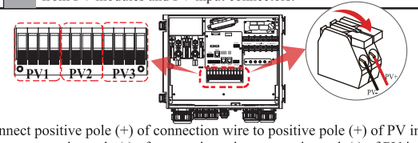


2 Check correct polarity of wire connection from PV modules and PV input connectors.

Ensure that the PV switch is OFF.



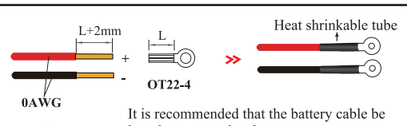
3 Wires threading.



4 Connect positive pole (+) of connection wire to positive pole (+) of PV input connector.
Connect negative pole (-) of connection wire to negative pole(-) of PV input connector.
Close the switch and ensure the wires are tightly fixed.

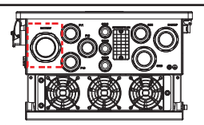
10 Battery Connection

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.

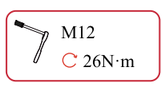


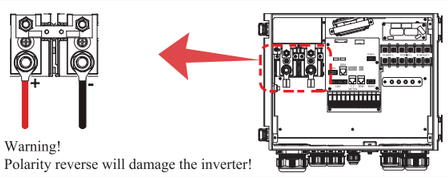
1 Wires making.

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



2 Wires threading.

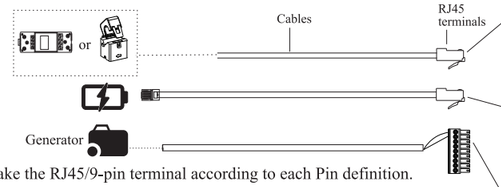




3 Wires connection.

Warning!
Polarity reverse will damage the inverter!

11 Communication Cable(s) Connection (CT/Meter, BMS, DRY)



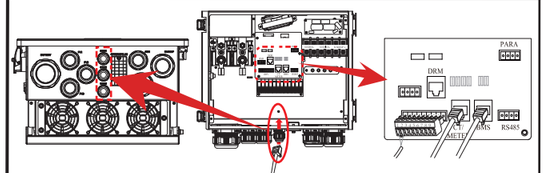
1 Make the RJ45/9-pin terminal according to each Pin definition.

Meter	
Inverter	Meter
Pin3(RS485_A)	Pin24
Pin4(RS485_B)	Pin25
or	Pin 345678
CT	
Inverter	CT
Pin7	CT1+
Pin8	CT1-

BMS	
Pin 12 45	
Pin1:	RS485_A
Pin2:	RS485_B
Pin3:	/
Pin4:	CAN_H
Pin5:	CAN_L
Pin6:	/
Pin7:	/
Pin8:	/

*This product is not equipped with RJ45 terminals.

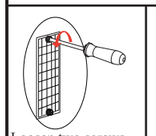
DRY Pin 1 2	
PIN	Function
1	Generator Control
2	Generator Control



2 Route the communication cable(s) into the junction box.
Insert RJ45/9-pin terminals into corresponding ports.
Make sure the connection is complete.

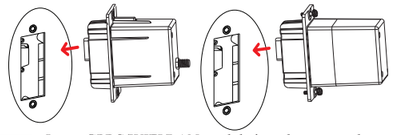
12 GPRS/WIFI/LAN Module Installation (Optional)

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.



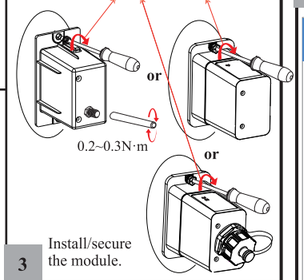
Loosen two screws and remove the cover.

1



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

Proper strength to avoid damage to the module.
2 x M4 screws; 0.8N·m



3 Install/secure the module.

13 Insulation Piece Installation

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

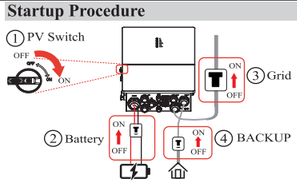
14 Startup/shutdown Procedure

Inspection

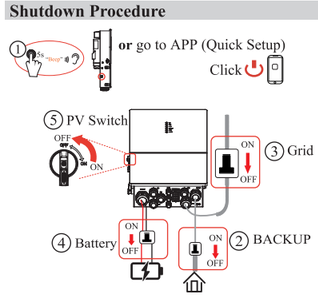
No.	Items
1	The inverter is firmly installed.
2	There is enough heat dissipation space, no external objects or parts left on the inverter.
3	It is convenient for operation and maintenance.
4	The wiring of the system is correct and firm.
5	Check whether the DC and AC connections are correct with a multimeter, and whether there is a 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.

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 these parts of inverter.

Startup Procedure



Shutdown Procedure



15 Quick Setup

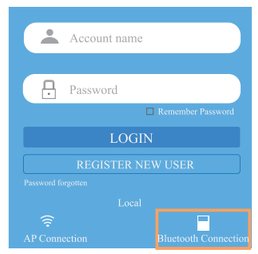
A Preparation

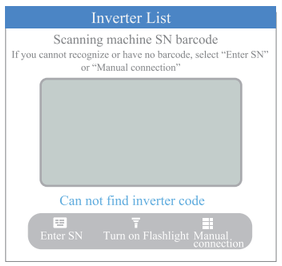
1. Download the APP.
   - Scan the QR code on the inverter to download the APP.
   - Download the APP from the App Store or Google Play.

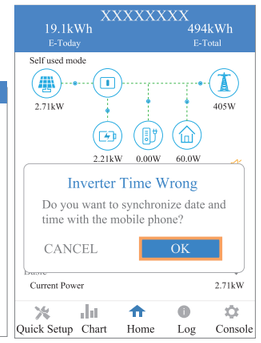
   Note: the APP should access some permissions such as the device's location. You need to grant all access rights in all pop-up windows when installing the APP or setting your phone.
2. Power on the inverter.

B Connecting the Inverter

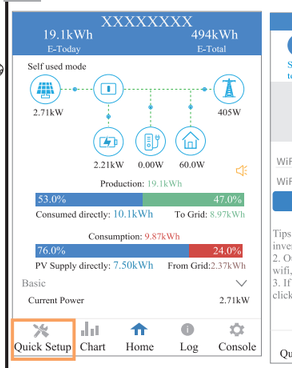
1. Open the Bluetooth on your own phone, then open the APP.
2. Then follow the instructions below.

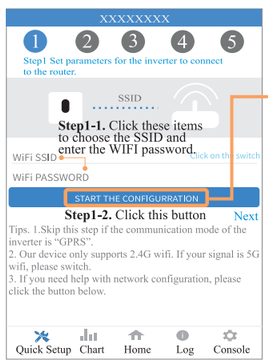


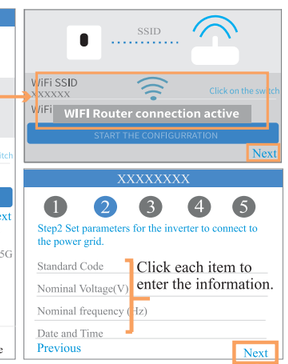


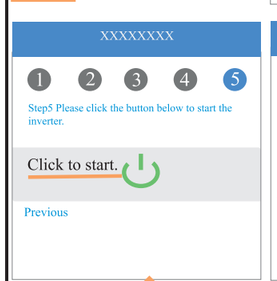


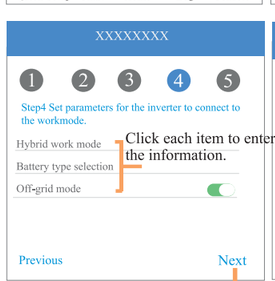
C Quick Setup

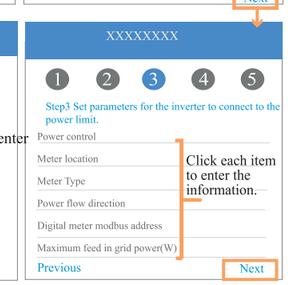












16 Display

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

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