Quick Installation Guide



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Thank you for purchasing our products.

Congratulations!

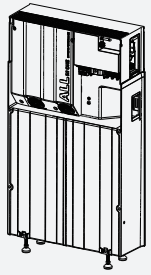
If you have any questions, please contact your local after-sales service or send an email to: service@fox-ess.com.

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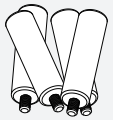
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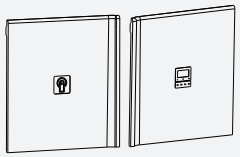
Packing List

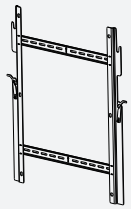
Open the package and take out the product, please check the accessories first.
The packing list is shown as below.
WILAN / 4G / WiFi / Meter (optional)


Bare enclosure*1


Cover*1 (optional)

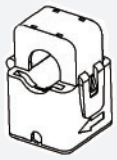

Handles*1


Side panels*1

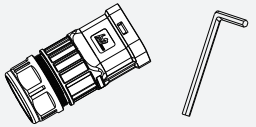

Bracket*1


PV connectors
2*positive, 2*negative（5-6kW）
3*positive, 3*negative（7-10kW）


Expansion screws*4


CT*1


OT terminal*1


AC connector*1



Quick installation guide*1


Ethernet cable connector*1


Countersunk head screws*2


PV pin contacts
2*positive, 2*negative（5-6kW）
3*positive, 3*negative（7-10kW）


COM connector*1


Resistor*1

Installation Precaution

Make sure the installation site meets the following conditions:

- Not in areas where highly flammable materials are stored, e.g. pressurized gas cylinders, natural gas lines, gunpower products and so on.
- Not in potential explosive areas.
- Not higher than altitude of about 4000m above sea level.
- The slope of the wall should be within +5*.
- The mounting carrier shall meet the following requirements:

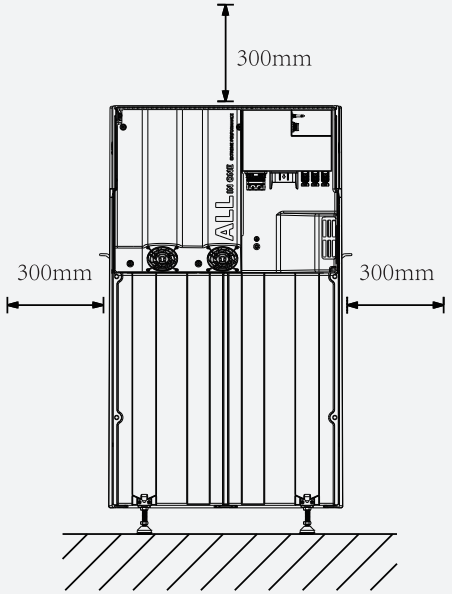
(1) The installation carrier must not be flammable materials;

(2) The maximum load bearing capacity of the carrier is greater than or equal to 4 times the weight of the machine.

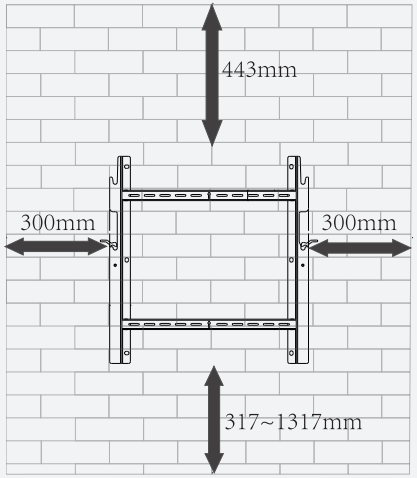


Space Requirement

For the machine:



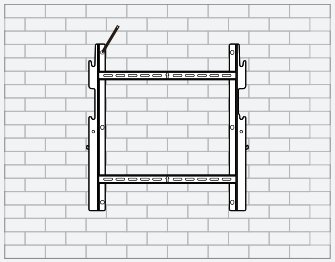
For the bracket:



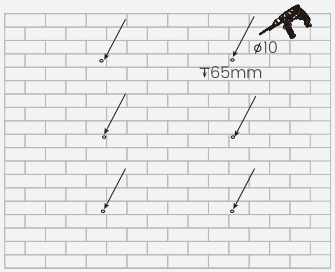
NOTE: If the bearing capacity of the installation surface is poor, it is recommended that the feet contact the ground, that is, the bottom of the bracket is 317mm away from the ground; if the installation surface is a cement wall, please ensure the height of the bottom of the machine from the ground does not exceed 1000 mm to prevent the product from falling and causing damage to the battery or any other danger.

Mounting Steps

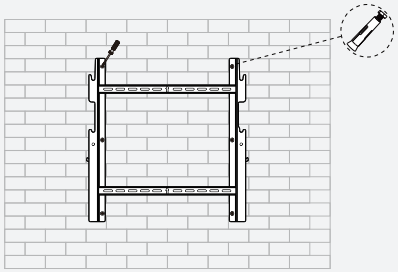
1. Confirm the installation position, place the bracket close to the wall, and mark the position of the installation hole.



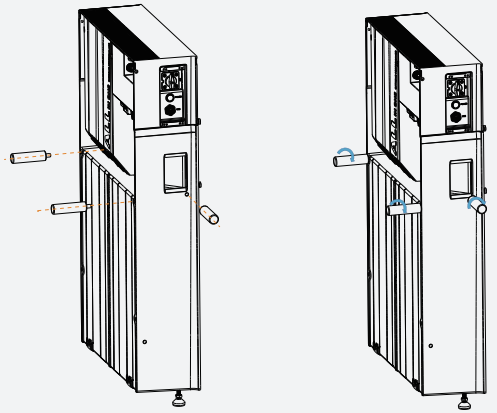
2. Drill six 65mm deep holes at the marked locations with a drill bit of 10mm diameter.



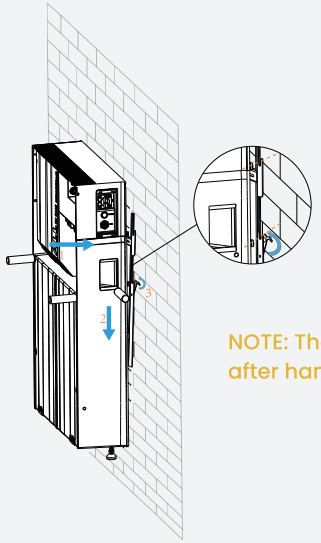
3. Align the bracket with the hole, then knock the expansion screws into the holes and tighten it with a screwdriver.



4. Align the four handle screws to the corresponding holes on the box and rotate to tighten them.



5. Two installers stand on the two sides of the machine, lift the machine by handles and align the screws to the corresponding groove positions of the bracket.

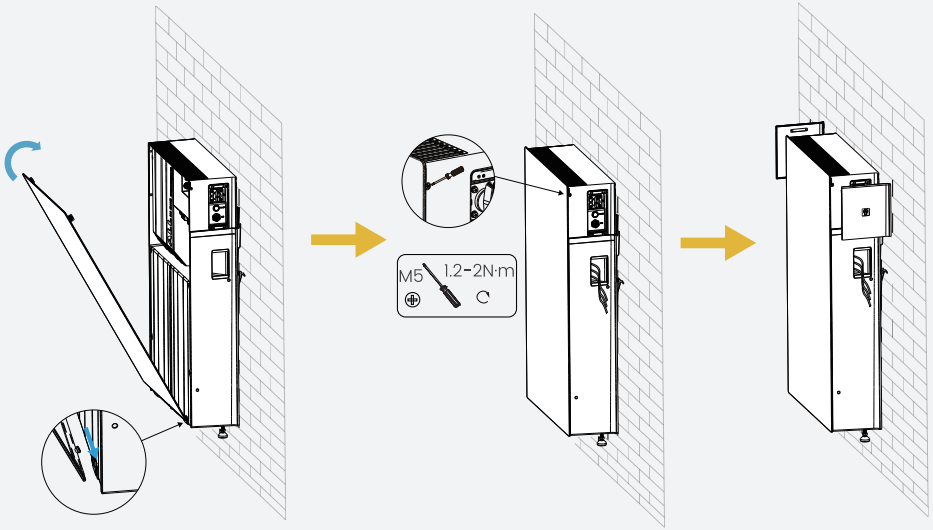


NOTE: The handles and feet can be removed after hanging the machine on the wall.

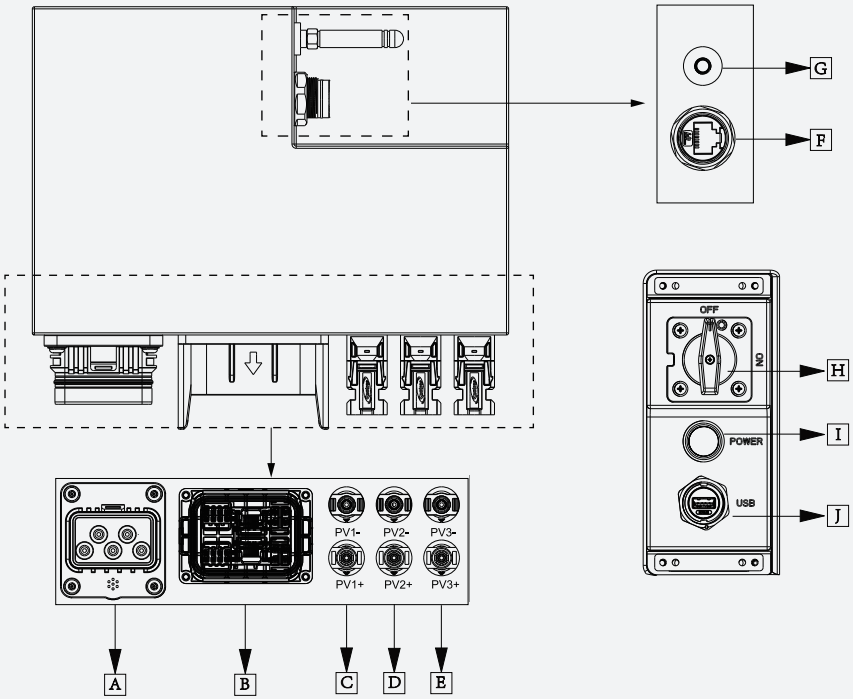
If the package includes the cover, please implement step 6:

6. After connecting each port of the machine, turn on the switch and start the power supply, and then close the cover. Tighten the screws on both sides of the top to fix the cover and close the side panels.

CAUTION: (1)Before installing the cover, please make sure that all wiring is completed. (2)Before removing the machine from the wall, please dismantle the cover and the hook and install the feet. See the user manual for detailed dismantling steps.



Terminals of Inverter

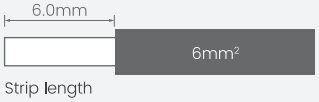


Item	Description
A	Grid & EPS port
B	Communication port
C	PV1
D	PV2
E	PV3

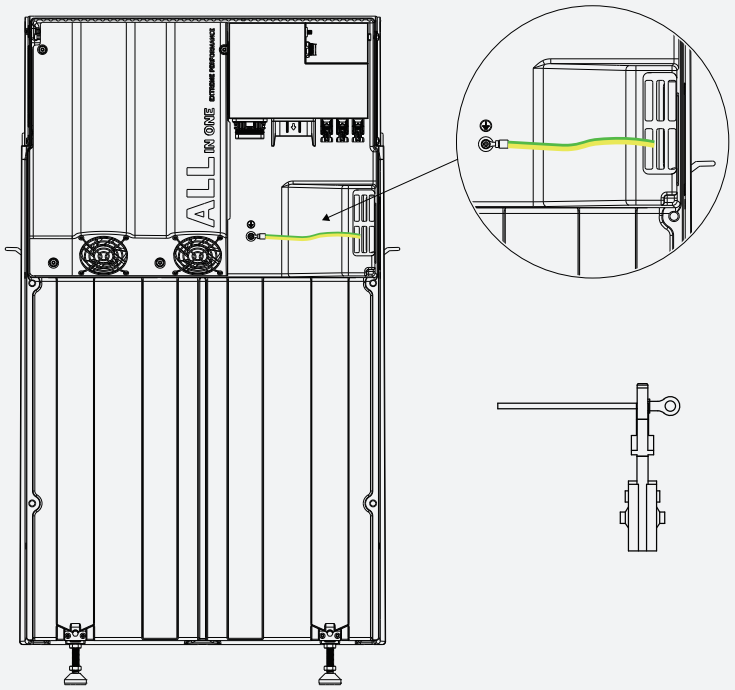
Item	Description
F	LAN
G	Antenna
H	DC switch
I	Power button@Black start
J	USB disk & Dongle

Earth Connection

Trim 6mm of insulation from the wire end.



1. Insert striped cable into earth terminal and ensure all conductor strands are captured in the earth terminal.
2. Crimp earth terminal with crimping pliers. Put the earth terminal with striped cable into the corresponding crimping pliers and crimp the contact.
3. Press the ground cable into the ground terminal, screw the ground screw with screwdriver as shown below:



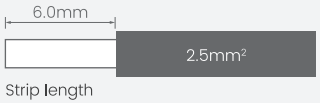
Electrical Connection

PV Wiring

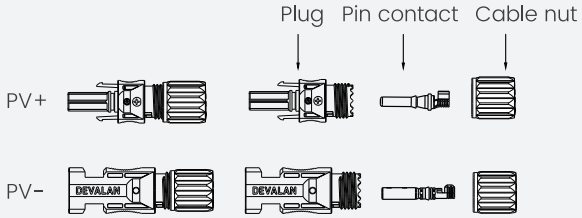
1. Turn off the DC switch.

2. Choose 2.5mm² wire to connect the PV module.

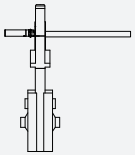
3. Trim 6mm of insulation from the wire end.



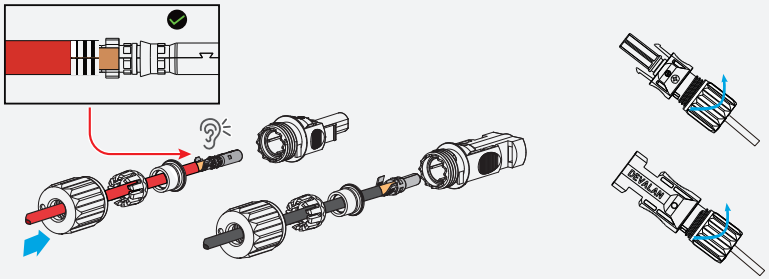
4. Separate the DC connector (PV) as below.



5. Crimp the pin contact with crimping pliers. Put the pin contact with striped cable into the corresponding crimping pliers and crimp the contact.



6. Insert pin contact through the cable nut to assemble into back of the male or female plug. When you feel or hear a "click" the pin contact assembly is seated correctly.

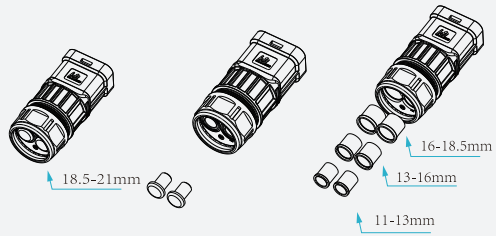


AC Connection

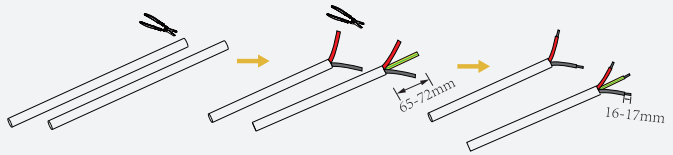
Cable dimensions

Power (kW)	5.0	6.0	7.0	8.0	9.0	9.9	10.0
Cable (ON-GRID)	6mm²		10mm²				
Cable (EPS)	6mm²		10mm²	10mm²	10mm²	10mm²	10mm²
Micro-Breaker	40A	40A	63A	63A	63A	63A	63A

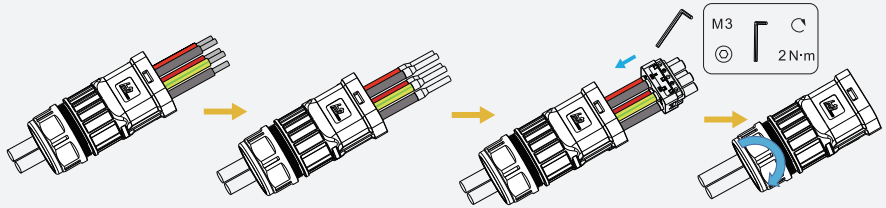
1. Remove the plug before passing through the cable, and select appropriate sealing ring size.



2. Prepare a 2-core and 3-core cable. Peel 65 to 72 mm of the outer skin from each of the cables, and then 16 to 17 mm of the insulation from each of the front ends of the wires.

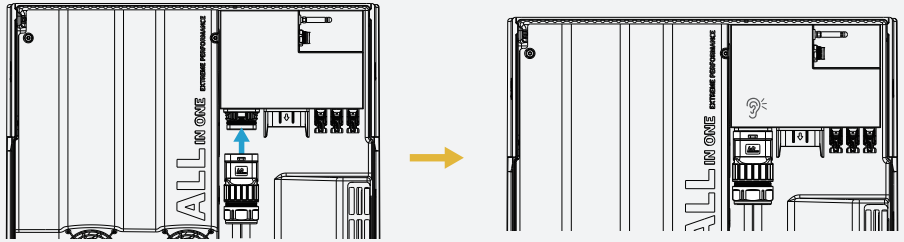


3. Thread the cables into the connectors respectively, then sleeve the sleeves on the cables with the stripped insulation layer, then insert them into the terminal strips, and finally put them into the connectors and tighten the nuts.

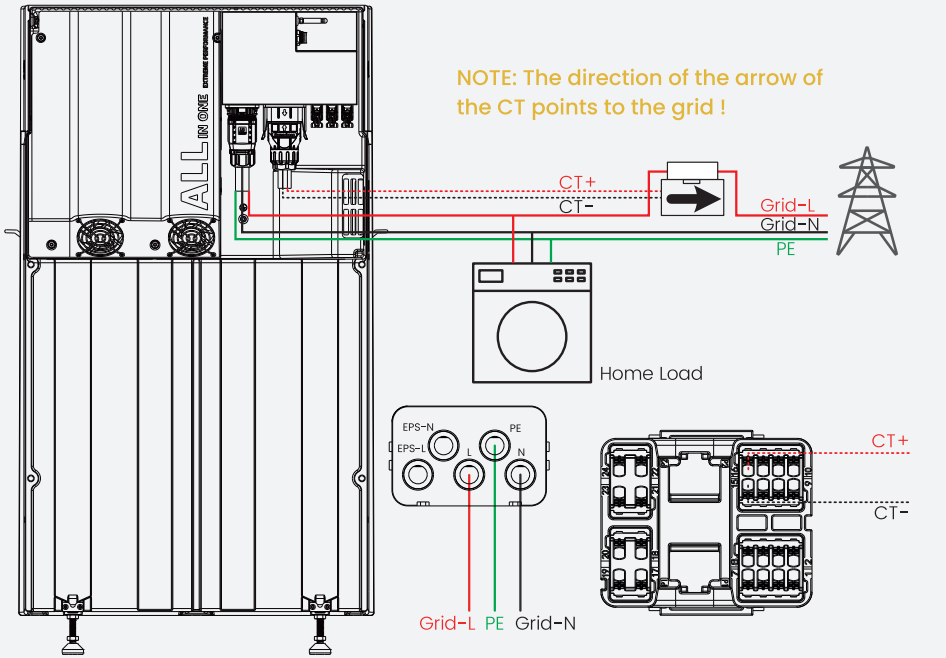


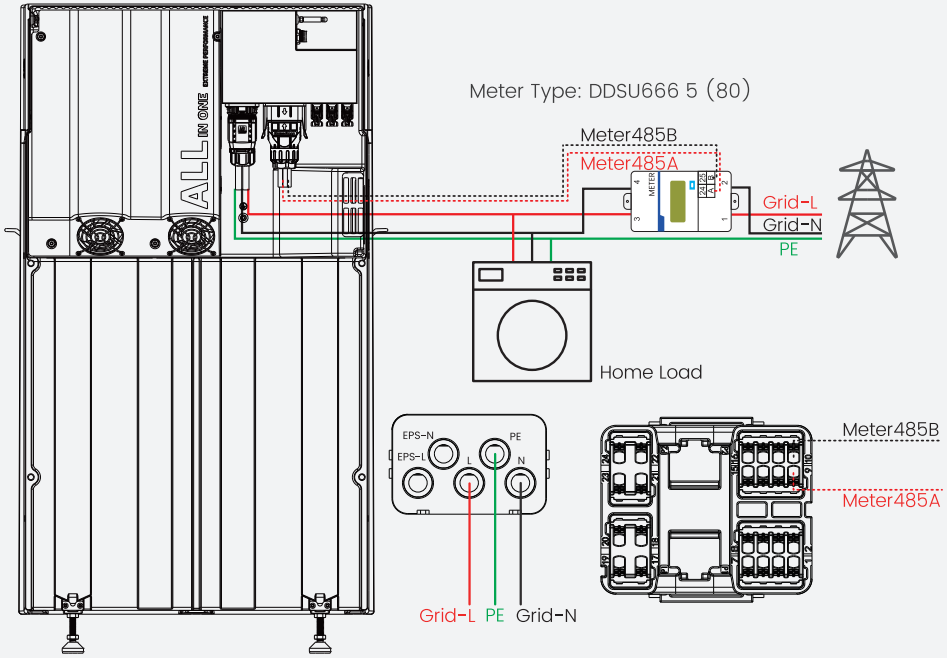
NOTE: See the user manual for dismantling method if incorrect AC connection occurs.

4. Plug the connector into the Grid & EPS port on the board end of the all-in-one unit.



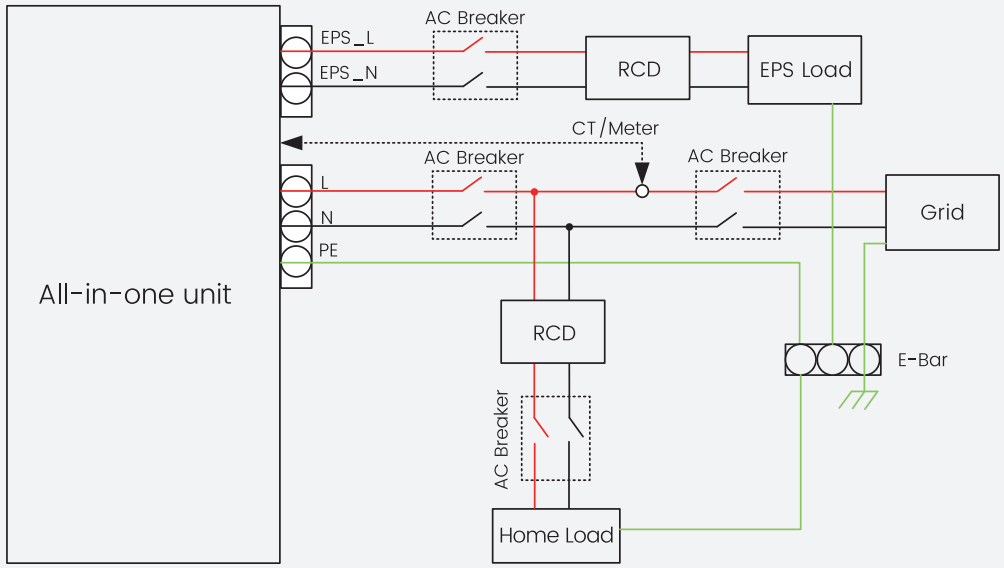
CT/Meter Connection



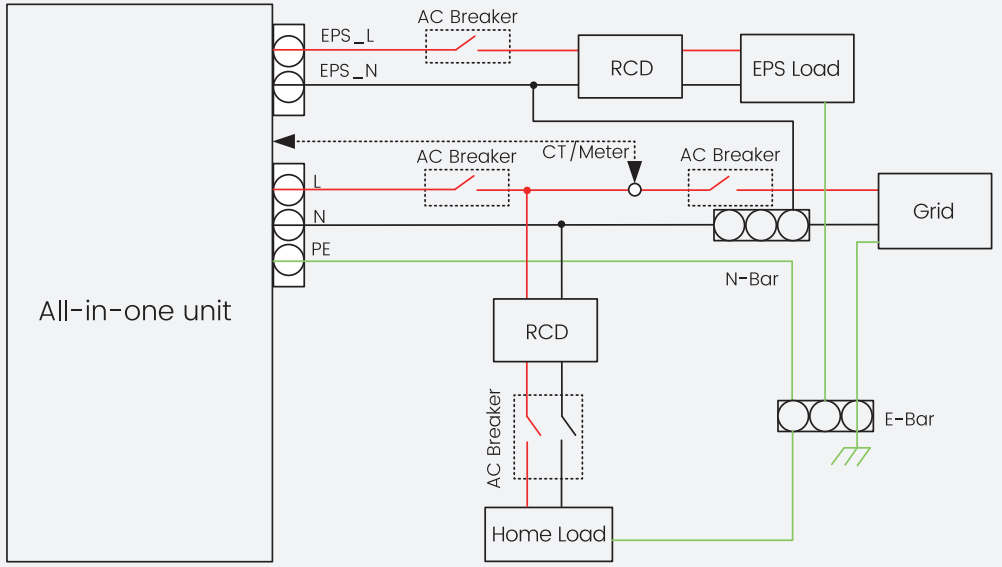


EPS Wiring

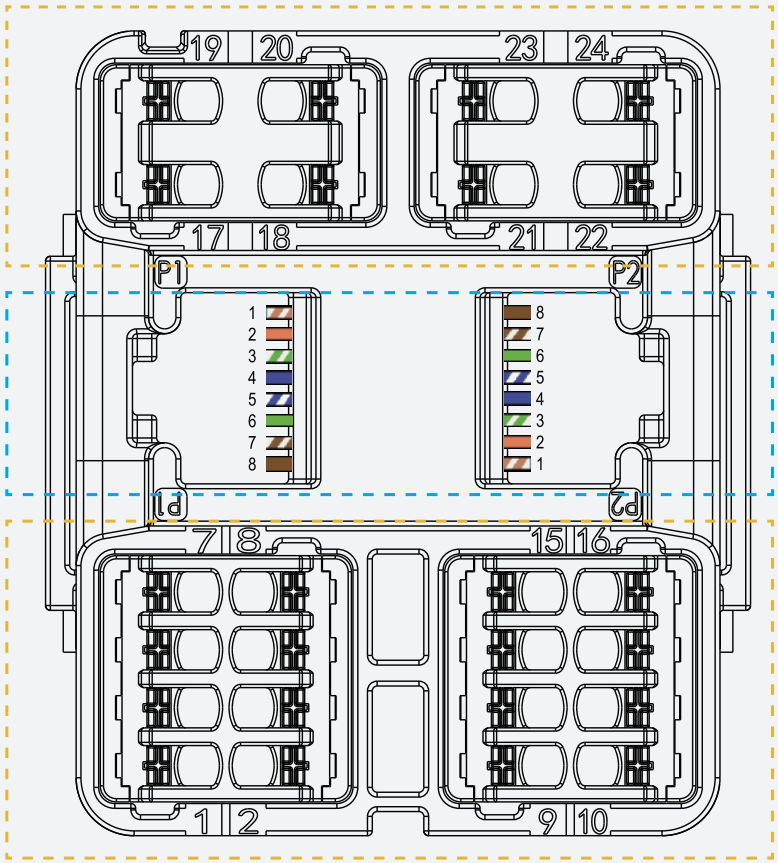
Neutral line of alternative supply must be disconnected after the grid is off. For countries such as China, Germany, the Czech Republic, Italy, etc., please follow local wiring regulations!



Neutral line of alternative supply must not be isolated or switched. For countries such as Australia, New Zealand, South Africa, etc., please follow local wiring regulations!



Pin Assignment



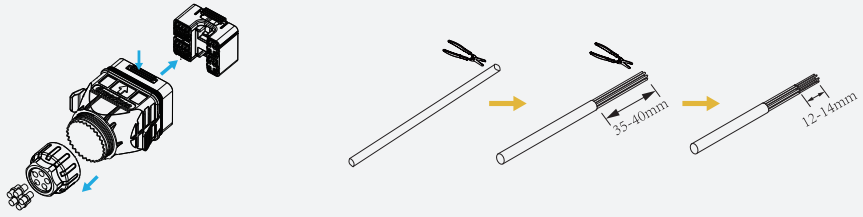
COM port RJ45 port

	PIN	PIN Definition		
RJ45 port	1	Paralle_CANH		
	2	Paralle_CANL		
	3	Wifi_485A		
	4	Wifi_485B		
	5	Wifi_485A		
	6	DI		
	7	GND		
	8	12V		
COM port	PIN	PIN Definition	PIN	PIN Definition
	1	DRM1/5	13	CT2+
	2	DRM2/6	14	CT2-
	3	DRM3/7	15	CT1-
	4	DRM4/8	16	CT1+
	5	DRM0	17	K1
	6	RefGen	18	K2
	7	GND	19	K3
	8	Estop	20	K4
	9	Meter_485A	21	Termina_H
	10	Meter_485B	22	Termina_L
	11	485B	23	BMS_CANH
	12	485A	24	BMS_CANL

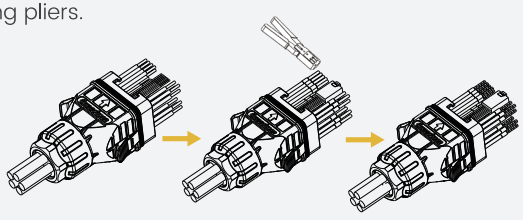
COM-Connector Wiring

1. Unscrew the screw at the rear end of the COM connector, unplug the waterproof plug, press the position marked by the arrow and pull it out, and remove the terminal block.

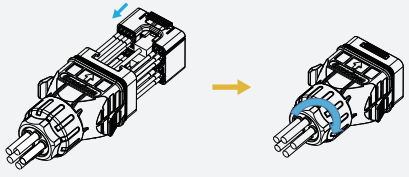
2. Prepare five CAT5E network cables. Peel 35 to 40 mm of the outer skin of the network wires, and then peel 12 to 14 mm of the insulation from the front ends of the wires.



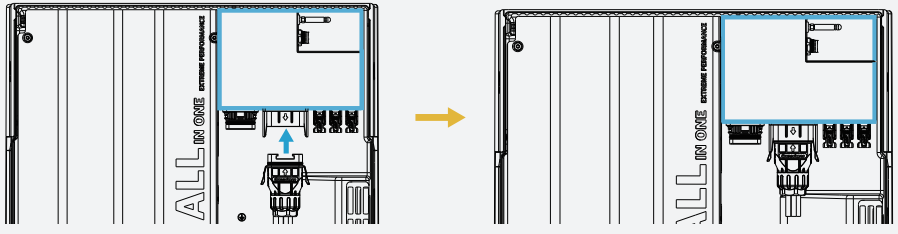
3. Unplug the waterproof plug, thread the cables into the connectors respectively, then sleeve the sleeves on the cables with the insulation stripped off, and crimp the sleeves with sleeve crimping pliers.



4. Insert the crimped connector into the terminal block and tighten the nut. The COM connector assembly is completed.

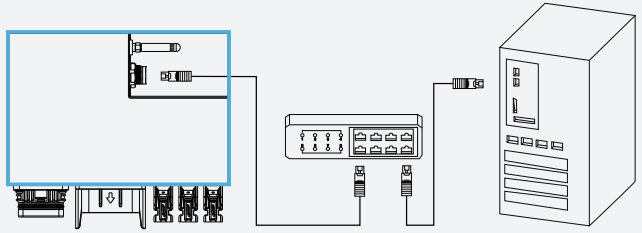


5. Plug the wired connector into the communication port on the board end of the all-in-one machine.

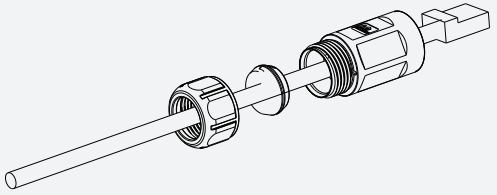


LAN Connection

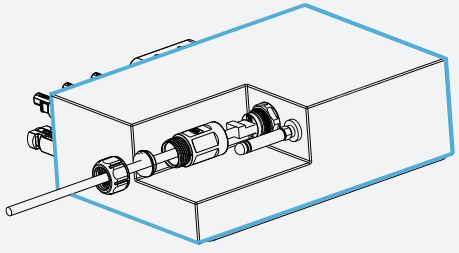
The LAN interface can be adapted to conventional T586A and T586B network cables. The wiring method is as follows.



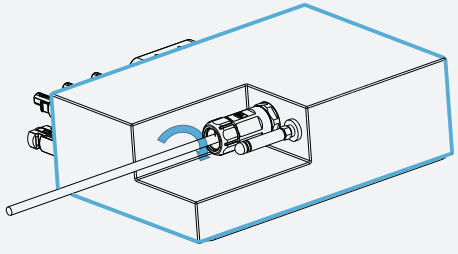
1. Insert the network cable into the wire-locking nut, sealing plug and mainbody in turn.



2. Insert the network cable plug into the matched RJ45 panel mount connector.



3. Tighten the connector mainbody by an open-ended wrench into the RJ45 panel mount connector with a torque 1.2±0.2N·m. Then insert the sealing plug into the main body of RJ45 cable end connector. Finally, tighten the connector's nut by an open-ended wrench with a torque 1.2±0.2N·m.



System Start-up and Shutdown

System Start-up

Please refer to the following steps to start up the all-in-one unit.

- Ensure the unit is securely fixed in place.
- Verify all DC and AC connections are properly completed.
- Confirm the CT/meter is correctly connected.
- Ensure the external EPS contactor is connected (if applicable).
- Turn on the DC switch.
- Access the settings menu (default password: 0000), select START/STOP and set to START.

NOTE:

- When starting the inverter for the first time, the country code will be set by default to the local settinas. Please check if the countny code is correct.
- Set the time on the inverter using the button or by using the APP.

System Shutdown

Please refer to the following steps to switch off the all-in-one unit.

- Access the settings menu, select START/ STOP, and set it to STOP.
- Access the menu settings, enter the Feature page, select BMS Power Ctrl, and choose OFF.
- Turn off the DC switch.
- Wait 5 minutes before opening the enclosure cover (if required for maintenance).

System Black Start

In special cases, such as when the grid and solar panels are not in use, the battery can be activated through the "Black Start" function. This means that our energy storage inverter and battery can continue to operate. The startup steps for black start are as follows:

- First turn on the DC switch.
- Please press and hold the POWER Switch for 7 seconds.

NOTE:

Ensure all connections are correct prior to Black Start. No wiring modifications during black start.

APP Installation

Scan the QR Code below to install the FOX CLOUD 2.0 APP, view the WiFi distribution network process or download the full manual.

FOX CLOUD 2.0

User Manual

V1.0.0
99-203-00462-00-X