



# Quick Installation Guide

## X3-Hybrid 5.0KW-15.0KW

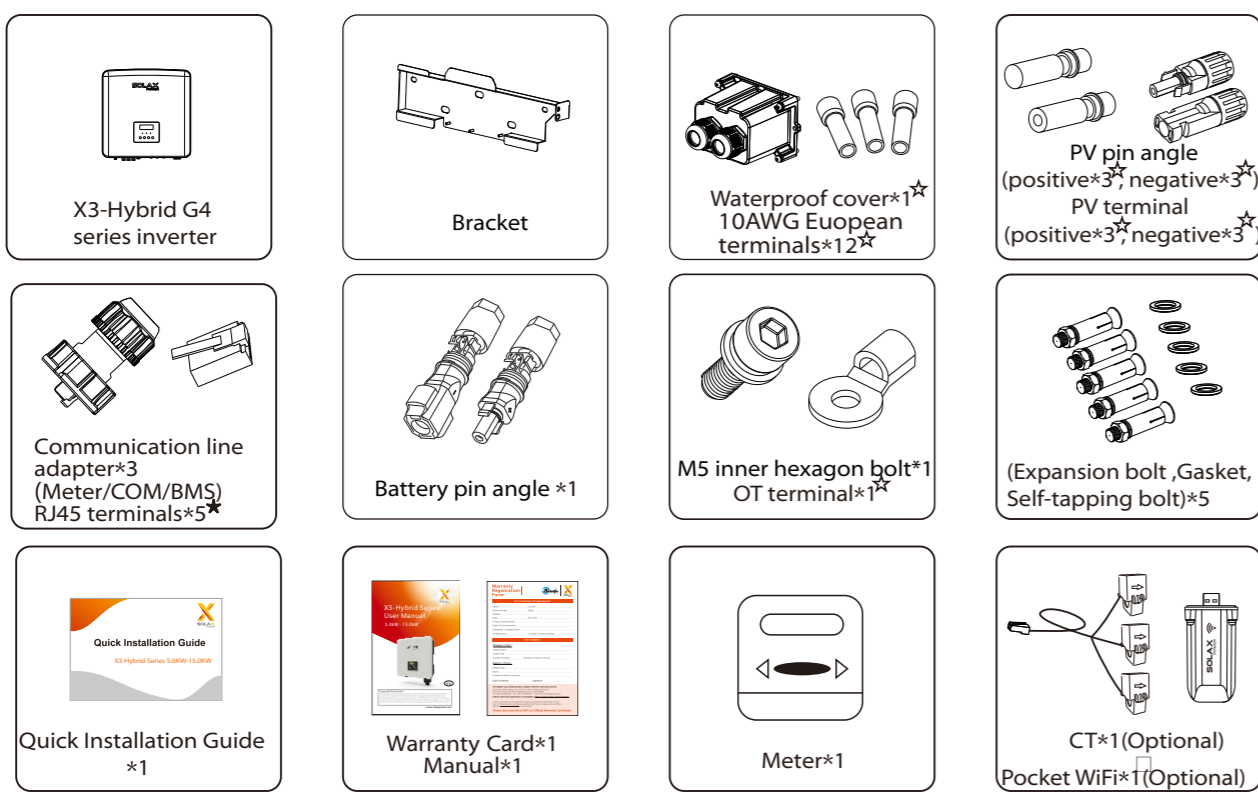
II

## Tool Preparation

Hammer drill (Bit Ø10)	Multimeter DC Voltage range ≥1100 V DC	Torque screwdriver(Crosshead M5)	Socket wrench set(Hexagon)
OT terminals press clamp (0.5-6mm <sup>2</sup> )	Diagonal pliers	Utility knife	Multifunction terminal crimping tool (RJ45)
Diagonal pliers	Hexagon keys	Rubber hammer	Tape ruler
Crimping Tool	Marker	Euro terminal crimping tool	Spirit level

I

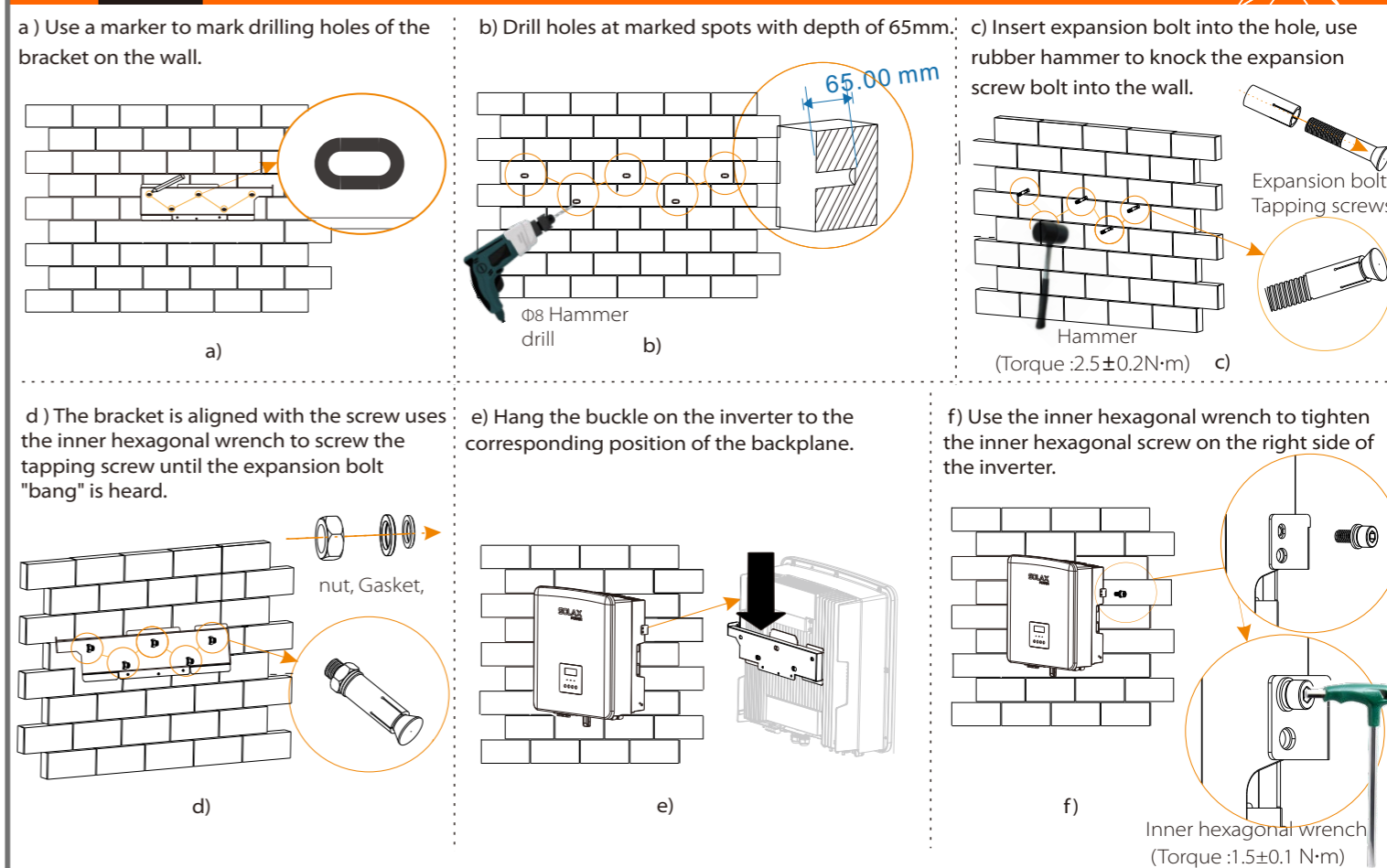
## Packing List



Note: \*★ attachments are not included in the M series inverter attachment package and will be included in the X3-Matebox.  
★ The inverter in Australia needs to be connected to DRM, which is 1 more communication line adapter than that in other countries.  
▲ Is the standard accessory in the M-series inverter and the optional accessory in the D-series inverter.

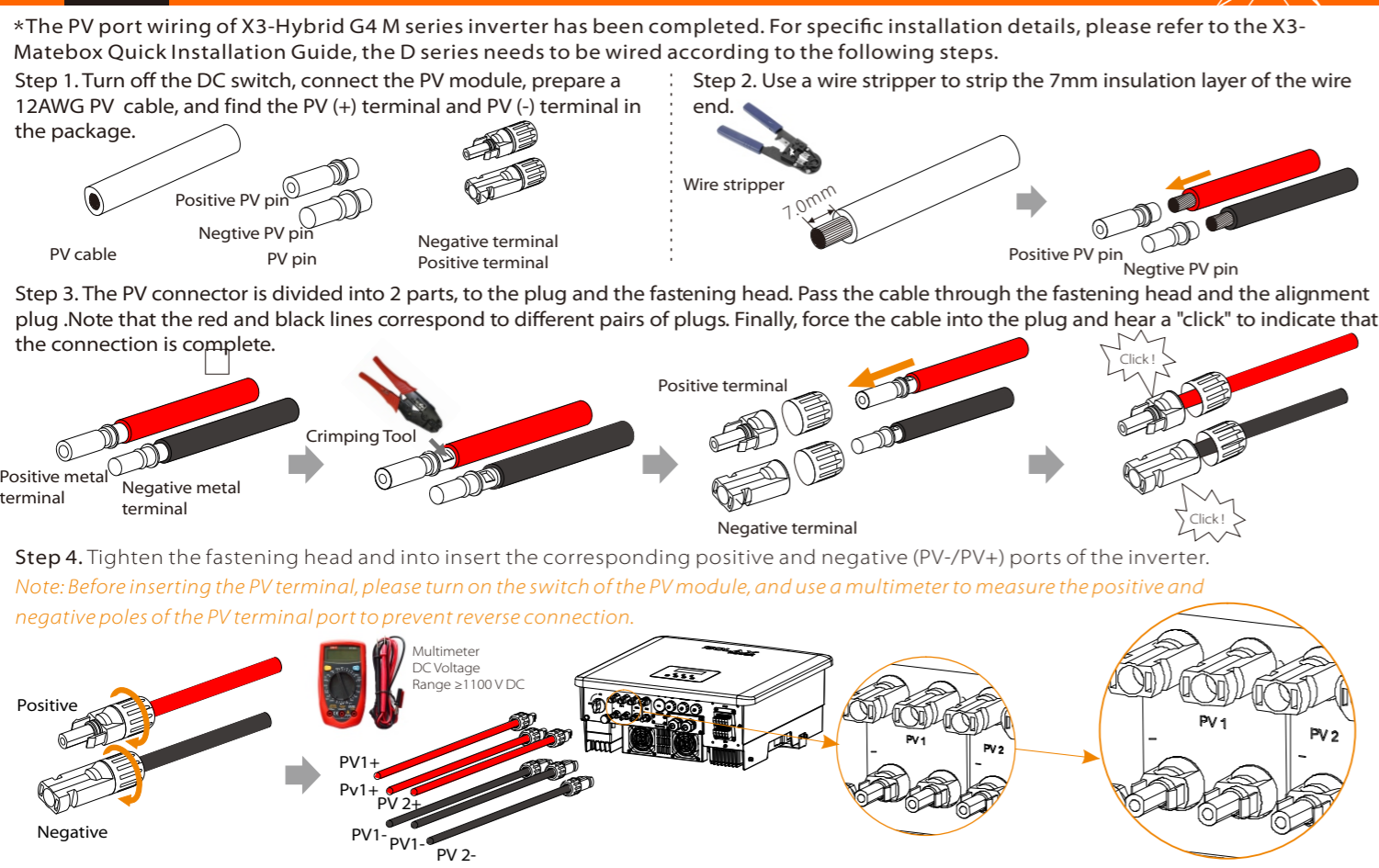
III

## Mounting Steps



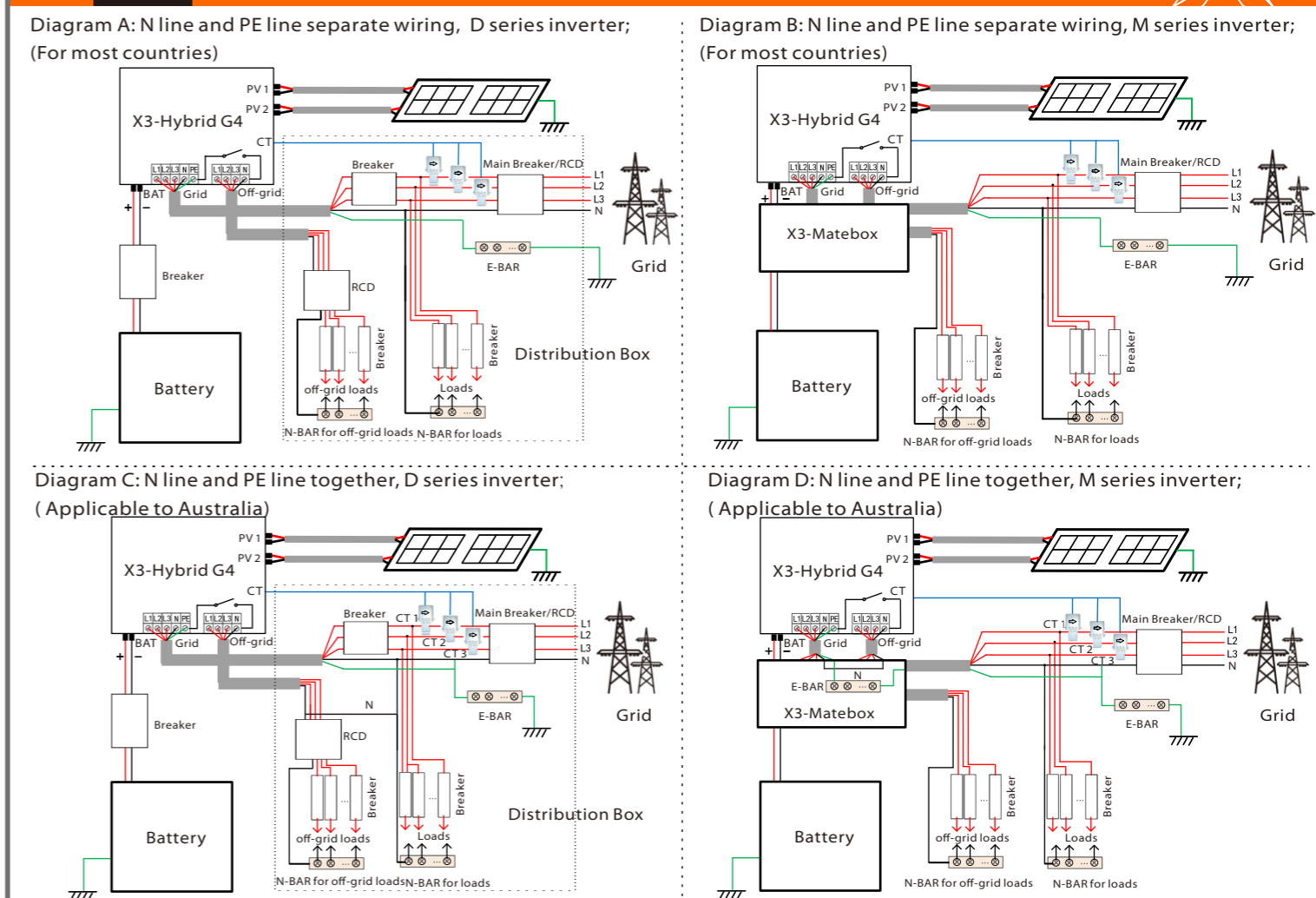
IV

## PV Connection



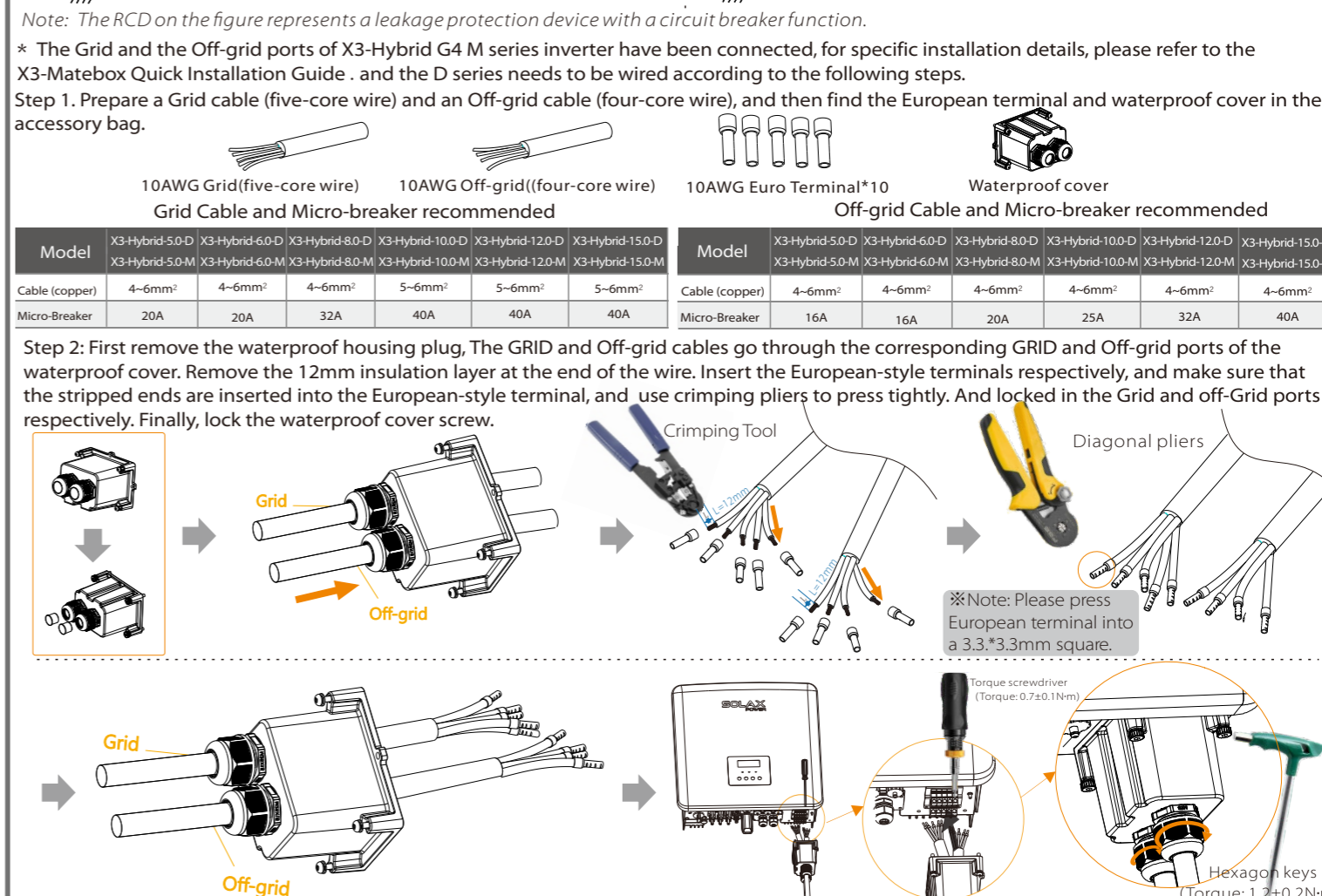
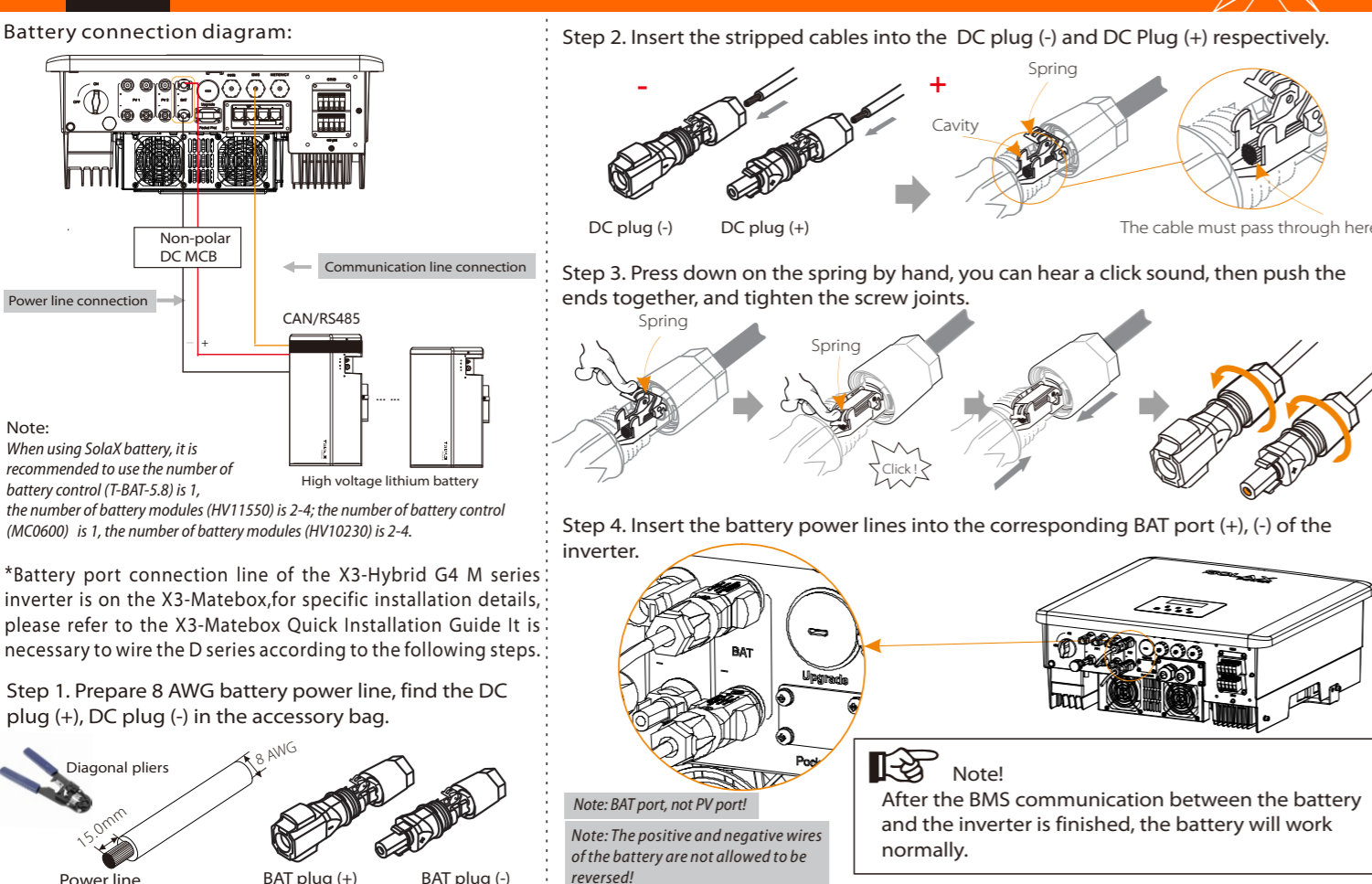
V

## Grid and Off-grid Connection



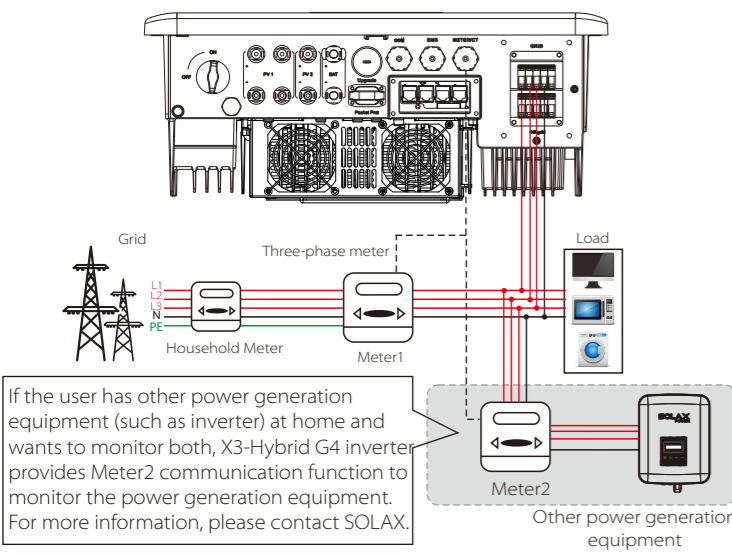
IV

## Battery Connection

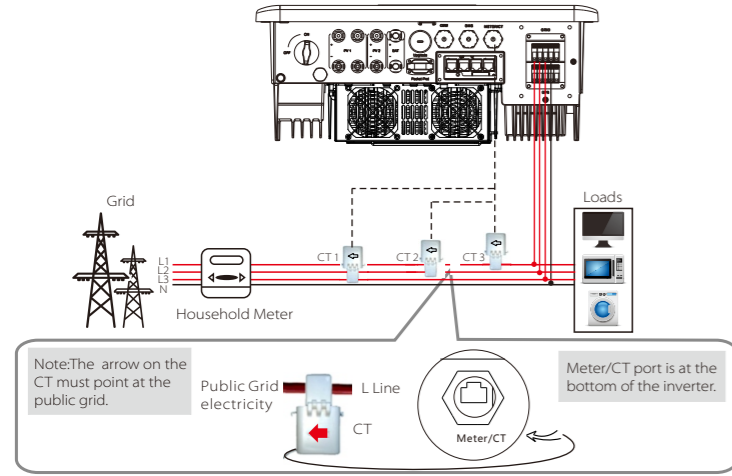


# VI Communication Connection (BMS/Meter/CT/COM/DRM)

## Electric meter connection diagram

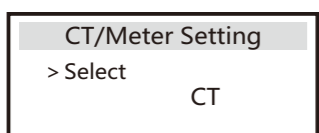


## CT connection diagram



## LCD settings

To select CT, you need to enter Use setting, then enter CT/Meter Setting.

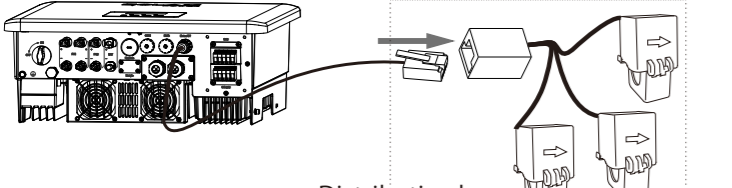
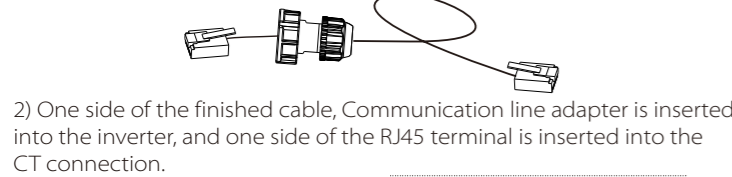


## Meter/CT PIN is defined as follows:

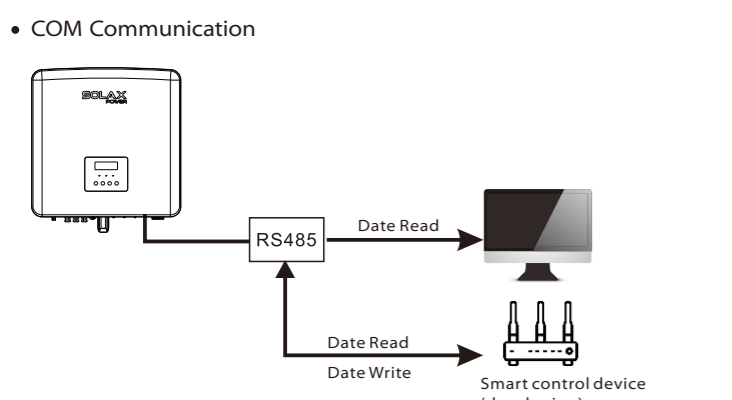
1	2	3	4	5	6	7	8
CT1-1	CT2-1	CT3-1	485A	485B	CT3-2	CT2-2	CT1-2

Note! Only one of the Meter and CT connections can be selected. Meter cable goes to pin terminal 4 and 5; CT1 cable to PIN Terminal 4 and 5; CT2 cable to PIN Terminal 1 and 8; CT3 cable is connected to terminals 3 and 6.

1) To connect the Communication line of the CT line, the lines need to be made on both sides, connecting the RJ45 terminal on one side and the Communication line Adapter on the other.



## COM Communication



## COM PIN Definition

1	2	3	4	5	6	7	8
Drycontact_Aln	Drycontact_Bln	+13V	485A	485B	GND	Drycontact_Aout	Drycontact_Bout

The BMS pin is defined as follows:

1	2	3	4	5	6	7	8
X	X	X	BMS_CANH	BMS_CANL	X	BMS_485A	BMS_485B

The DRM pin is defined as follows:

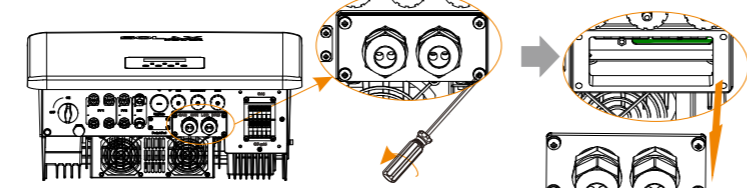
1	2	3	4	5	6	7	8
DRM1/5	DRM2/6	DRM3/7	DRM4/8	+3.3V	DRM0	GND	GND

## Communication Connection Steps

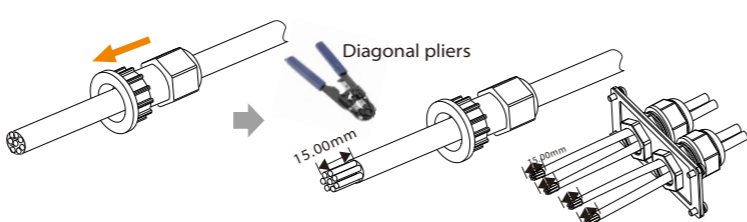
Step 1. Prepare a communication cable, and then find the communication adapter in the accessory bag.



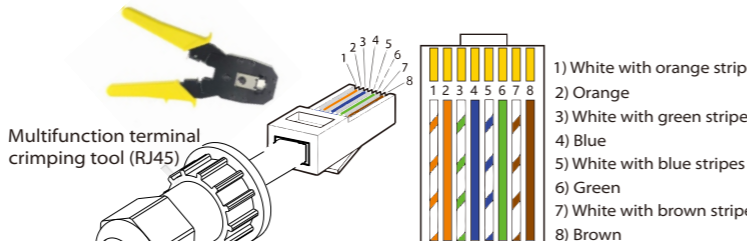
Step 2. Remove the cover plate on the inverter. Will make the communication line.



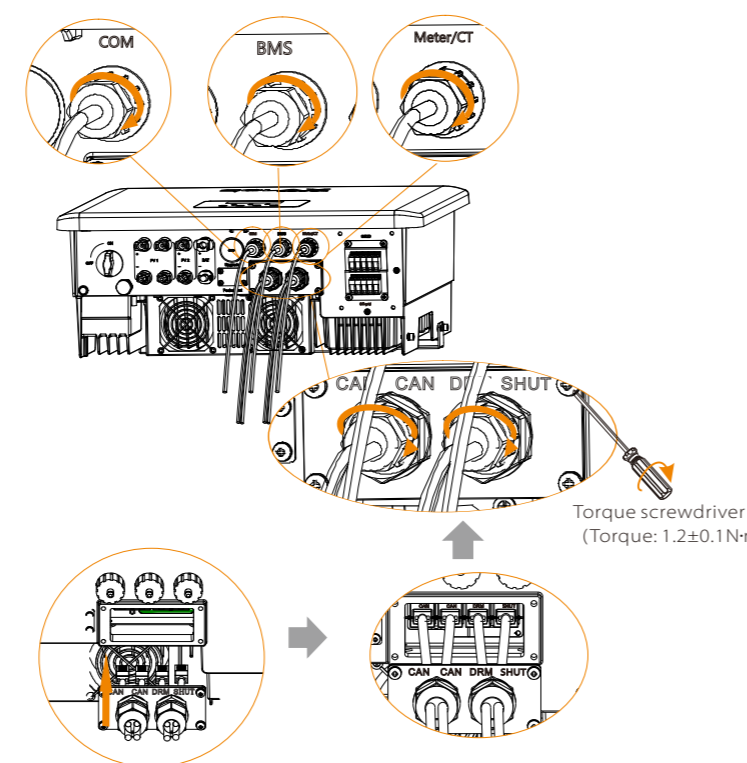
Step 3. Insert the communication cable through the communication adapter, and peel off the outer insulation layer of 15 mm.



Step 4. Insert the prepared communication cables into the RJ45 terminals in sequence, and then use network cable crimping pliers to press them tightly.



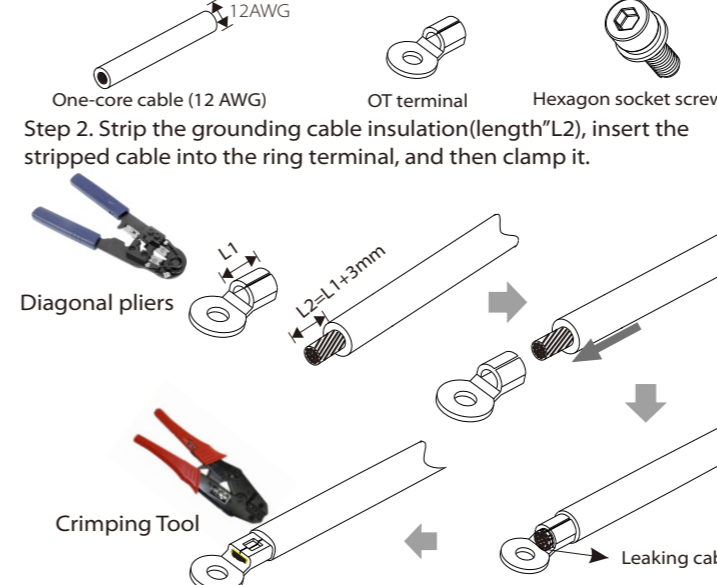
Step 5. Insert the communication line (CAN/DRM/SHUT) into the corresponding port, lock the cover plate, and tighten the fastening head. Finally, the corresponding COM, METER, CT and BMS can be found to insert the corresponding ports of the inverter communication cable.



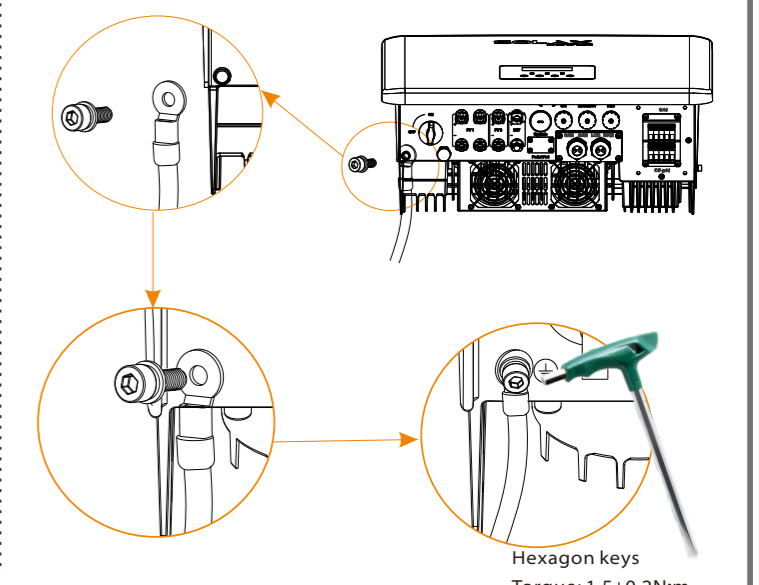
# IX Grounding Connection (mandatory)

\* The ground wire port of X3-Hybrid G4 M series inverter has been connected, and the D series needs to be wired according to the following steps.

Step 1. Prepare a one-core cable (12AWG), and then find the ground terminal in the accessories.

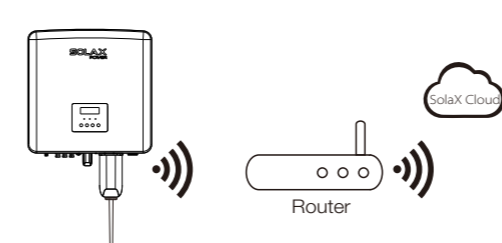


Step 4. Find the ground connection port on the inverter, and screw the ground wire on the inverter with an M5 Allen key.

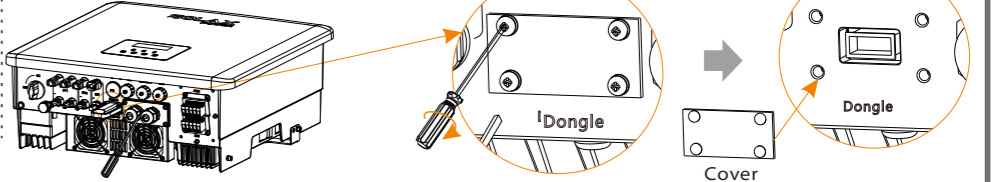


# VII Monitoring Operation

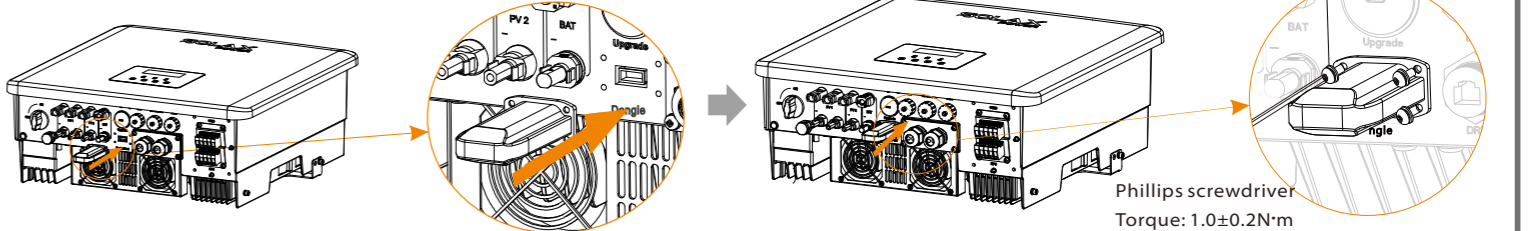
## DONGLE connection diagram



Wireless monitoring accessories connection steps:  
\* DONGLE port connection line of the X3-Hybrid G4 M series inverter is on the X3-Matebox, for specific installation details, please refer to the X3-Matebox Quick Installation Guide. It is necessary to wire the D series according to the following steps. Step 1. Of the DONGLE port of the inverter needs to unscrew the screw and take off the cover.



Step 2. Plug the Pocket WiFi Plus into the DONGLE port, use the screws in the Pocket WiFi Plus accessory to tighten it.



# VIII Start Guide

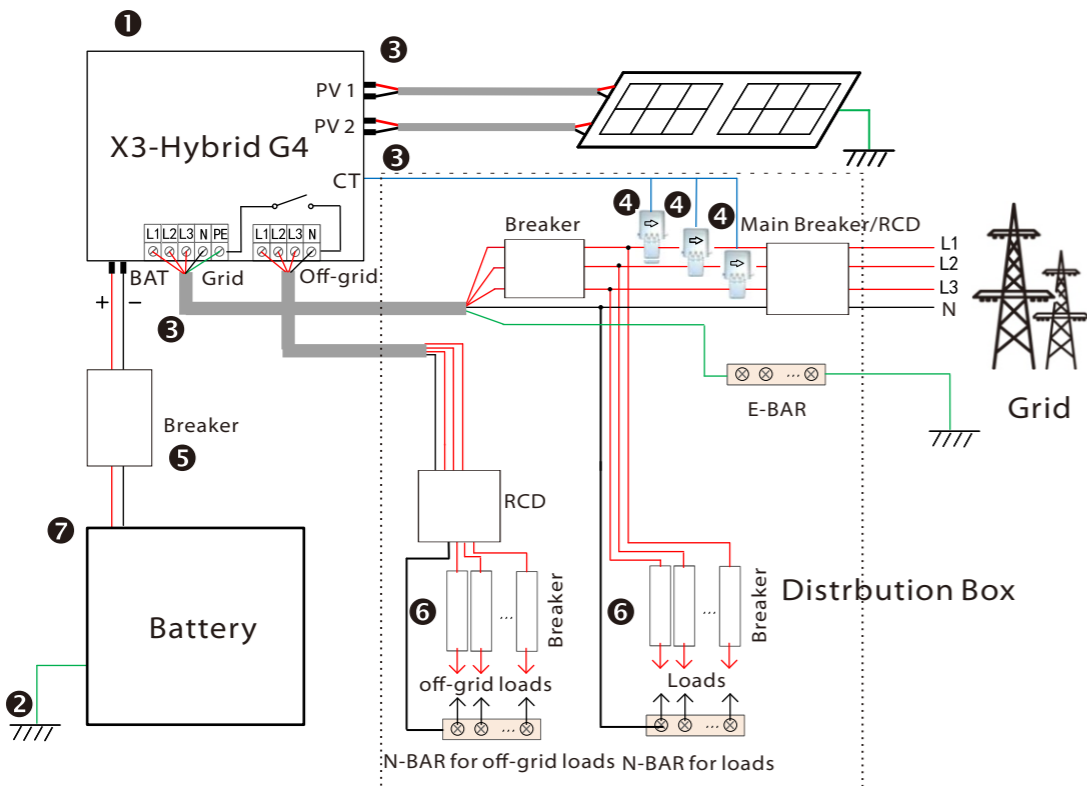
<b>1. Set date time</b> Date time 2017-->06 <06 10:19	<b>2. Set language</b> Language English Deutsch Italian	<b>6*. Set work mode</b> There are 4 work modes for choice. Self-use / Back Up Mode / Feed in Priority / Force Time Use All these work modes is available for on-grid condition only: <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Self Use</td> <td>The self-use mode is suitable for areas with low feed-in subsidies and high electricity prices. ① When the power of PV is sufficient: Active Charging or Discharge time period: PV will power the loads firstly, and surplus power will charge to the battery. If the battery is fully charged, then sell the surplus power to the grid. (The inverter will limit the output if Feed-in limit or zero feed-in is needed.) (PV &gt; Load, PV -&gt; Load -&gt; Battery -&gt; Grid) ② When the power of PV is insufficient: Active Discharge time period: PV + BAT will power the loads together. 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<b>3. Set the safety standard</b> Safety Country > VDE0126	<b>4. CT/Meter Setting</b> CT/Meter Setting > Meter											
<b>5*. Set export control</b> Export Control Use Value: 10000W	<b>6*. Set work mode</b> Work Mode > Mode Select self use											
<b>7. X3-Matebox Setting</b> X3-Matebox Setting > disable enable	<b>5*. Export Control</b> This function allows the inverter able to control energy exported to the grid. There are user value and factory value. The factory value is default which can not be changed by user. The user value set by installer must be less than the factory value.											

# IX Start Inverter

## Start inverter

After the inverter is checked, the inverter will take the following steps:

Applies to most countries



- Make sure that the inverter is fixed on the wall.
  - Ensure that all ground wires are grounded.
  - Confirm that all DC lines and AC lines are connected.
  - Make sure the CT are connected.
  - Make sure the battery is well connected.
  - Turn on the Load switch and Off-grid switch
  - Turn on the battery switch.
- Long press Enter for 5 seconds to exit the shutdown mode. Mode is the mode when it is turned off for the first time; factory default: off mode)

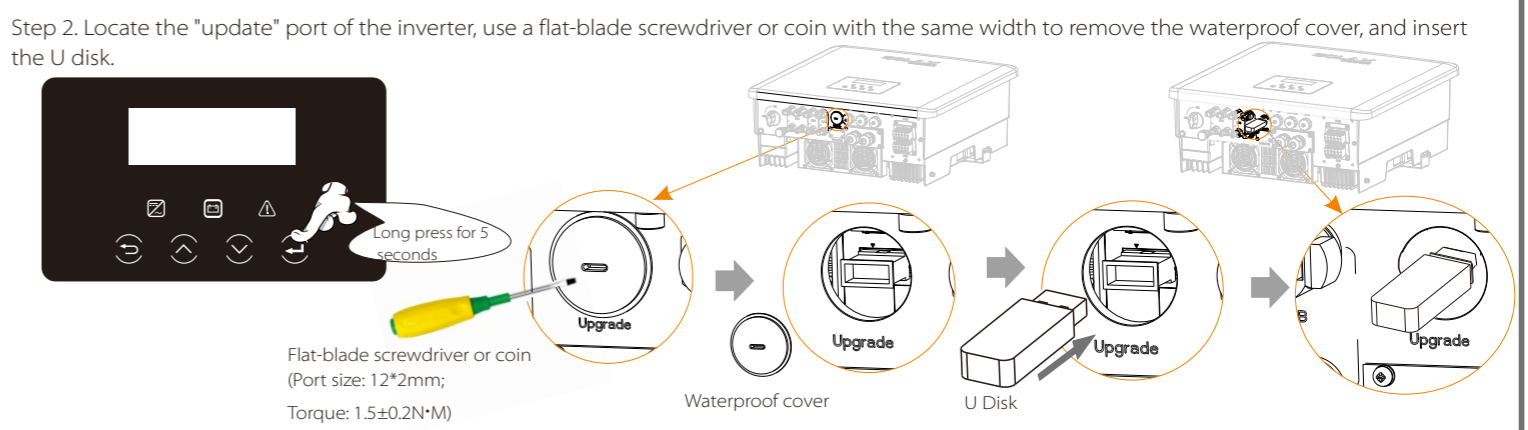
Note: The RCD on the figure represents a leakage protection device with a circuit breaker function.

# X Firmware Upgrading

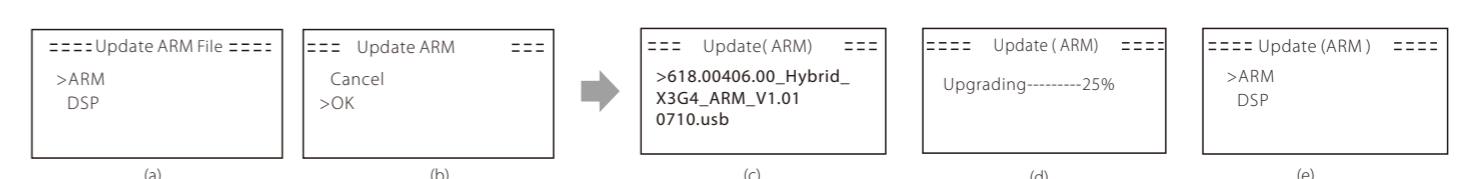
-In order to upgrade the firmware smoothly, if the DSP and ARM firmware needs to be upgraded, please note that ARM firmware must be upgraded first, then DSP firmware!  
-Make sure that this directory is completely consistent with the above table, do not modify the firmware file name, otherwise, the inverter may not work!  
-For X3-Hybrid G4, ensure that the PV input voltage is greater than 180V (upgrade on sunny days), please ensure that the battery SOC is greater than 20% or the battery input voltage is greater than 180V. Otherwise, it may cause serious failure during the upgrade process!  
-If the ARM firmware upgrade fails or stops, please do not unplug the U disk and power off the inverter and restart it. Then repeat the upgrade steps.

**Upgrade preparation**  
 1) Please check the inverter version and prepare a U disk (USB 2.0) and personal computer before upgrading.  
 2) Please contact our service support through service@solaxpower.com to obtain the firmware, and store the firmware in the U disk according to the following path.  
 Update:  
 For ARM file: "update\ARM\618.00406.00\_Hybrid\_X3G4\_ARM\_V1.01.0710.usb";  
 For DSP file: "update\DSP\618.00405.00\_Hybrid\_X3G4\_DSP\_V1.01.0710.usb";

**Upgrade steps**  
 Step 1. Please save the "Update" firmware in your U disk first, and press the "Enter" button on the machine screen for 5 seconds to enter the shutdown mode. Then unscrew the waterproof cover, insert the U disk into the "update" port at the bottom of the inverter.



Step 3. LCD operation, enter the upgrade interface "update", as shown below (a); Please press the up and down keys to select ARM, then press the bottom of the page to select "OK", press the enter key to enter the software version interface;



Step 4. Please confirm the new firmware version again and select the firmware to upgrade. The upgrade takes about 20 seconds. (d) When it is completed, the LCD screen returns to the "Update" page.

