

Quick Installation Guide

All-In-One Energy Storage System



Scan the QR code to view more information.

II

Packing List

| | | | | |
|------------------------------|---------------------|-----------------------|------------------------|--------------------------|
| Inverter *1 | Inverter Bracket *1 | Side Frames *2 | Battery Bracket *1 | Middle Cover & Bottom *1 |
| Connection Bracket *1 | Wi-Fi Dongle *1 | Grid Connector *1 | Multi COM connector *1 | EPS Connector *1 |
| Battery power Connectors *2 | Expansion Bolts *10 | Screws *16 | PE terminal *1 | BMS Connector *1 |
| CT/Smart Meter (Optional) *1 | DRM Connector *1 | PV Connectors *2 or 4 | Documents | Battery *1 |

Notice:

- > For all-in-one application, there are three packages (Inverter & Middle cover kit & Battery). Please check and contact your distributor in case of any damaged or missing components.
- > For all-in-one application, the battery can only be LIVOLTEK Li-ion battery.
- > This file is for quick guidance installation only. For details, please refer to the *User Manual*.

I

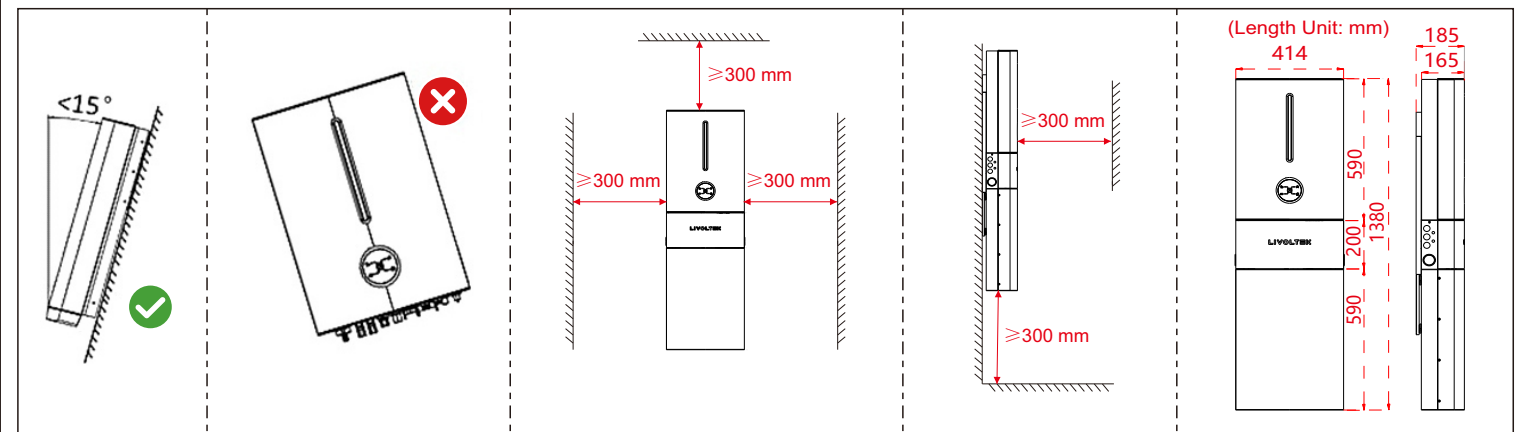
Preparation Tools

| | | | | |
|-----------------------------|---------------|--------------------|--------------------------|------------------------|
| Bit #10 Hammer drill | Rubber hammer | Claw safety hammer | Cross screwdriver | Slotted screwdriver |
| Spirit level/Marker | Tape ruler | Insulation tape | Dustproof cover | Protective glasses |
| Euro terminal crimping tool | Wire stripper | Diagonal pliers | OT terminals press clamp | Crimping tool (RJ45) |
| Utility knife | Marker pen | Hydraulic tong | Multimeter | AC/DC clamp-on ammeter |

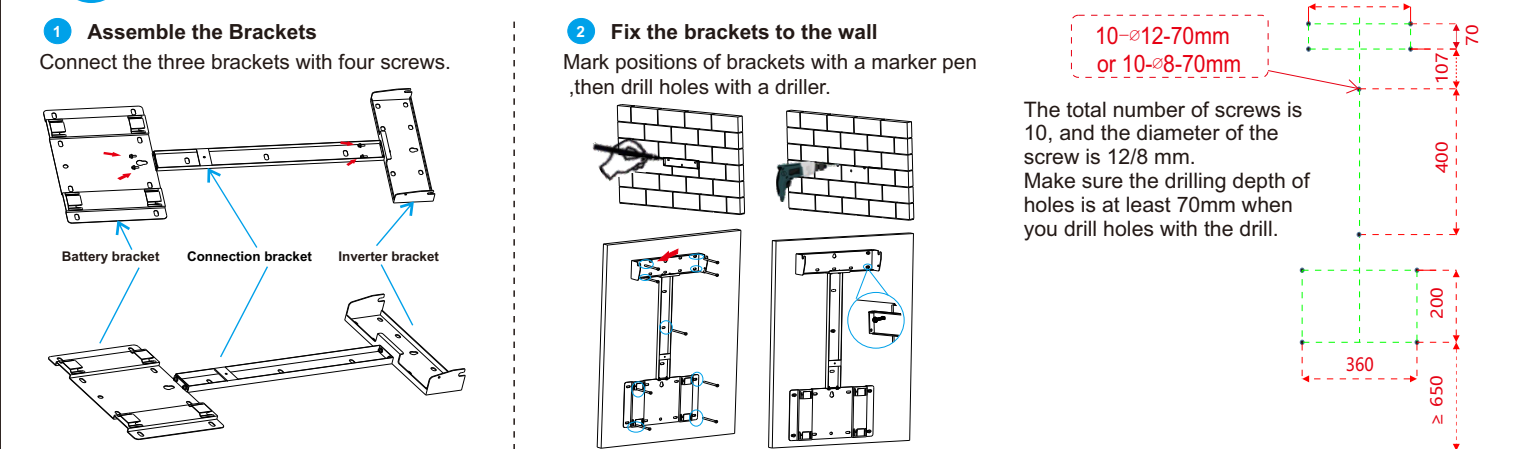
III

Installation instructions

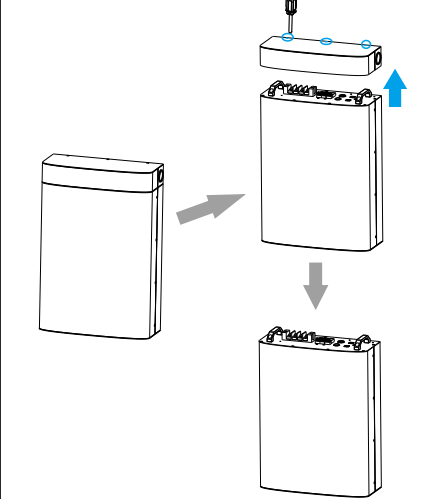
A Installation Requirement



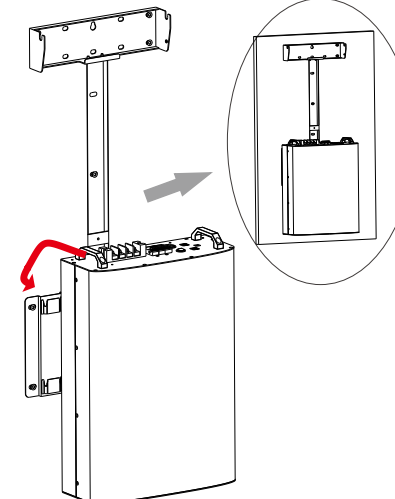
B Installation Procedure



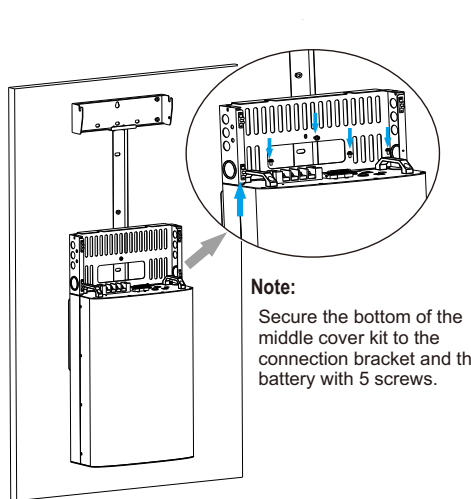
3 Remove upper cover from the battery



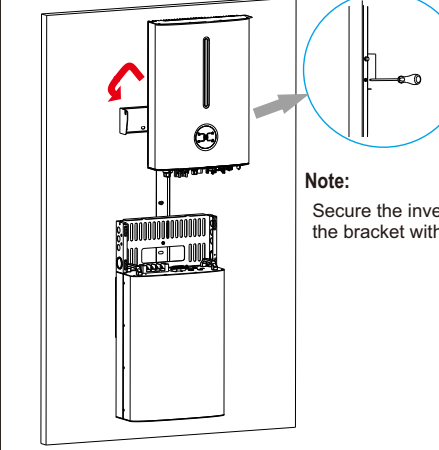
4 Mount the battery on the bracket



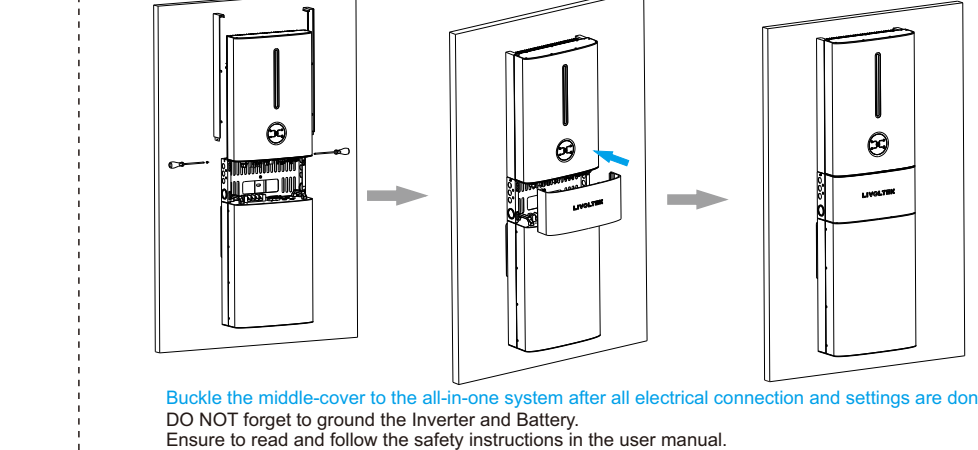
5 Mount the bottom of Middle cover kit



6 Mounting the inverter



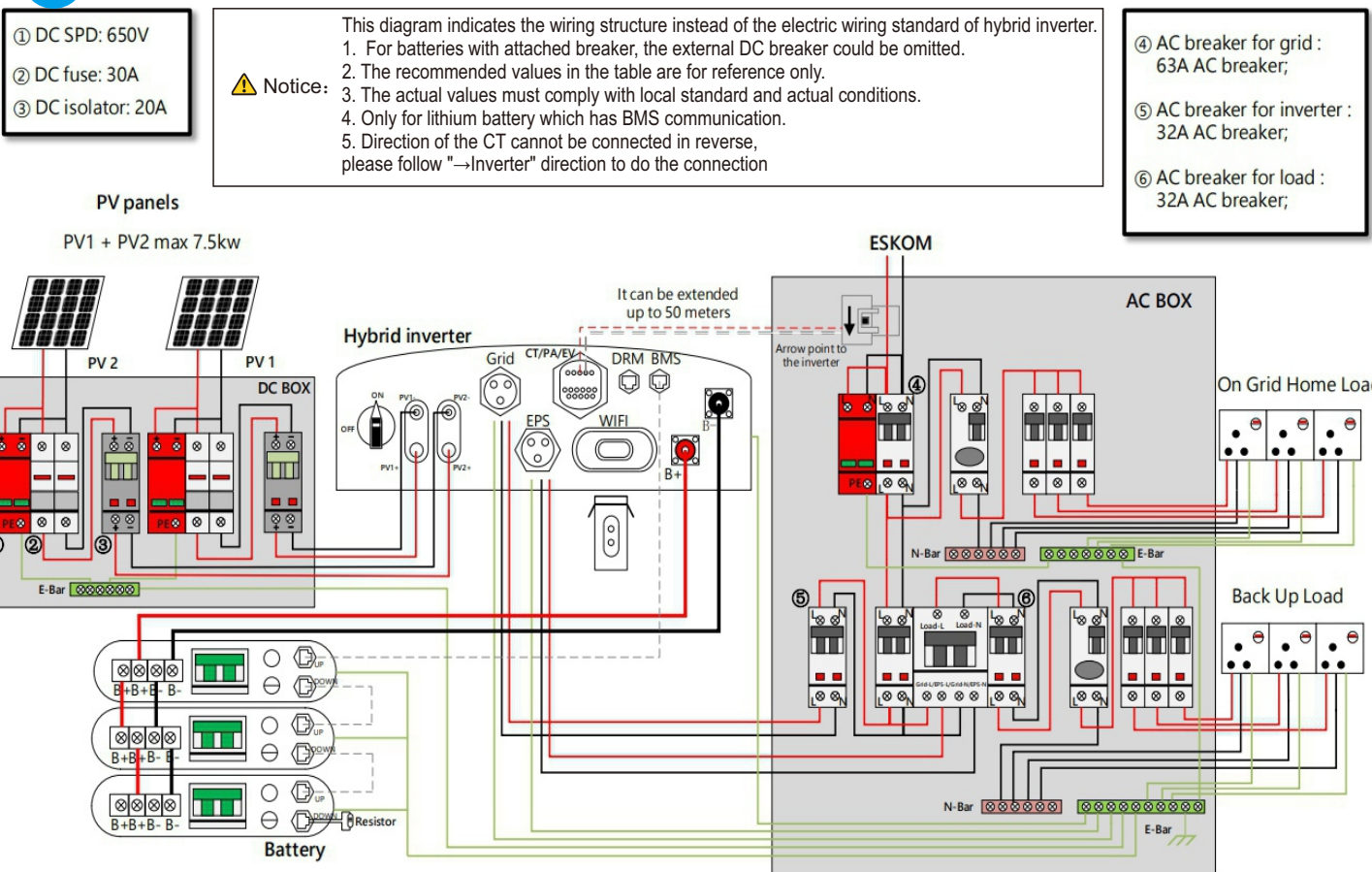
7 Install side frames on both sides and buckle the Middle Cover



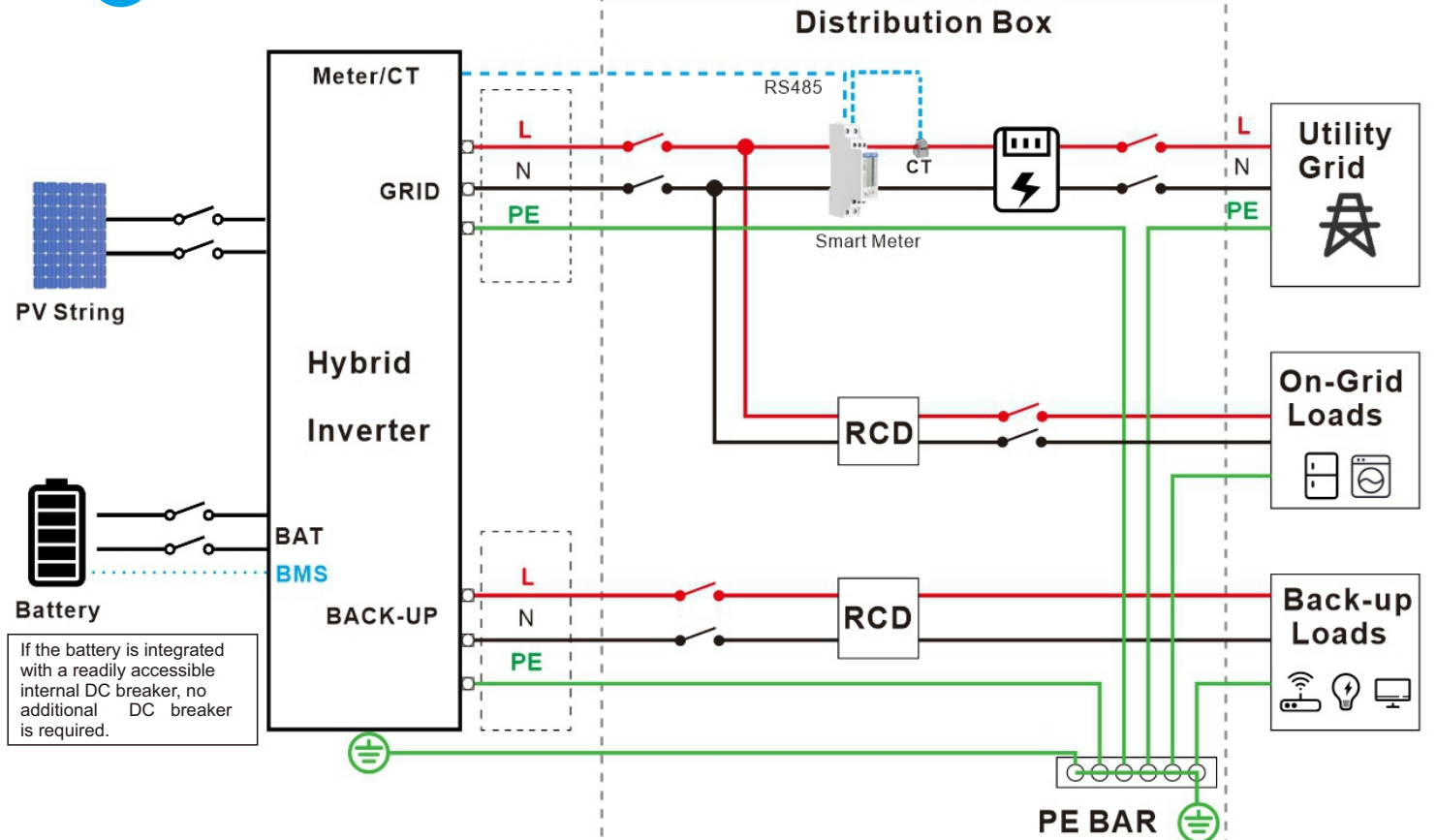
IV

Wiring Diagram

A Electrical Connection Overview



B System Connection Diagram (Applies to most countries)



Notice:

- N and PE wiring via ON-GRID and BACK-UP ports of the inverter are different based on the regulation requirements of different regions.
- Refer to the specific requirements of local regulations.
- Ensure that the grounding of BACK-UP is correctly and tightened. Otherwise, the BACK-UP function may be abnormal in case of grid failure.

V

PE Cable Connection

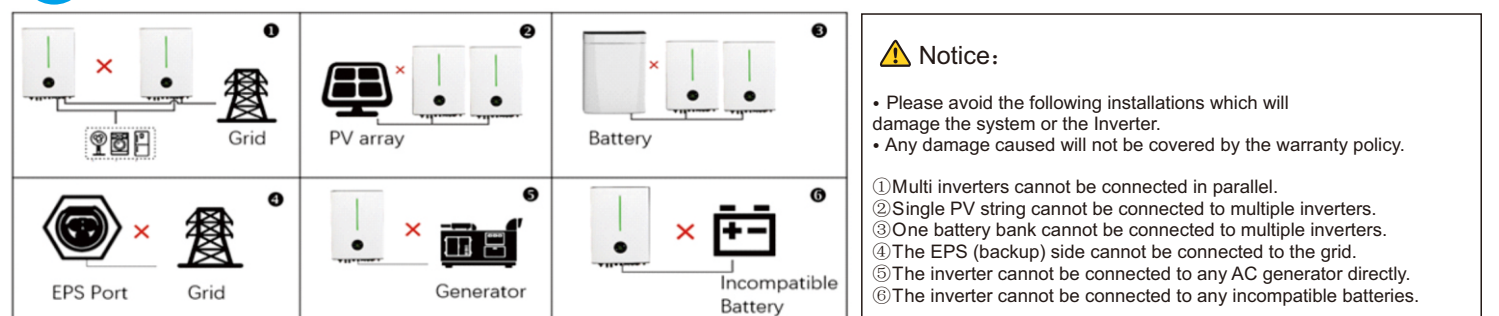
A Please prepare the cable before connecting as follows.

| No. | Cable | Cross Section | Cable diameter (mm) |
|-----|----------------------|-------------------------------------|---------------------|
| 1 | PV cables | 4mm ² - 6mm ² | 12~10 AWG |
| 2 | AC cables | 4mm ² - 6mm ² | 12~10 AWG |
| 3 | Battery power cables | 25mm ² | 4 AWG |
| 4 | PE cable | 4mm ² - 6mm ² | 10 AWG |

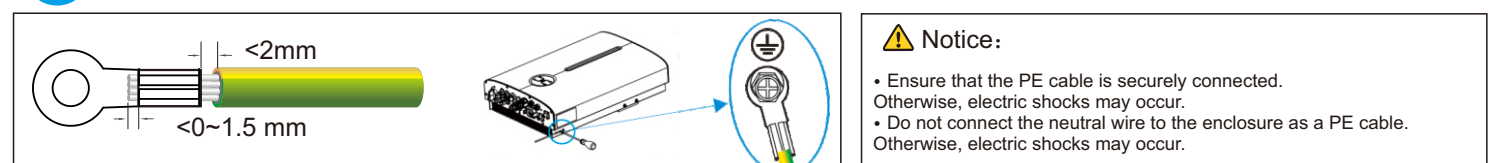
Notice:

- Do not work with power on. All operations, cables and parts specification during the electrical connection shall be in compliance with local laws and regulations.
- Disconnect the DC switch of the inverter to power off the inverter before any electrical connections.

B Unacceptable Installations



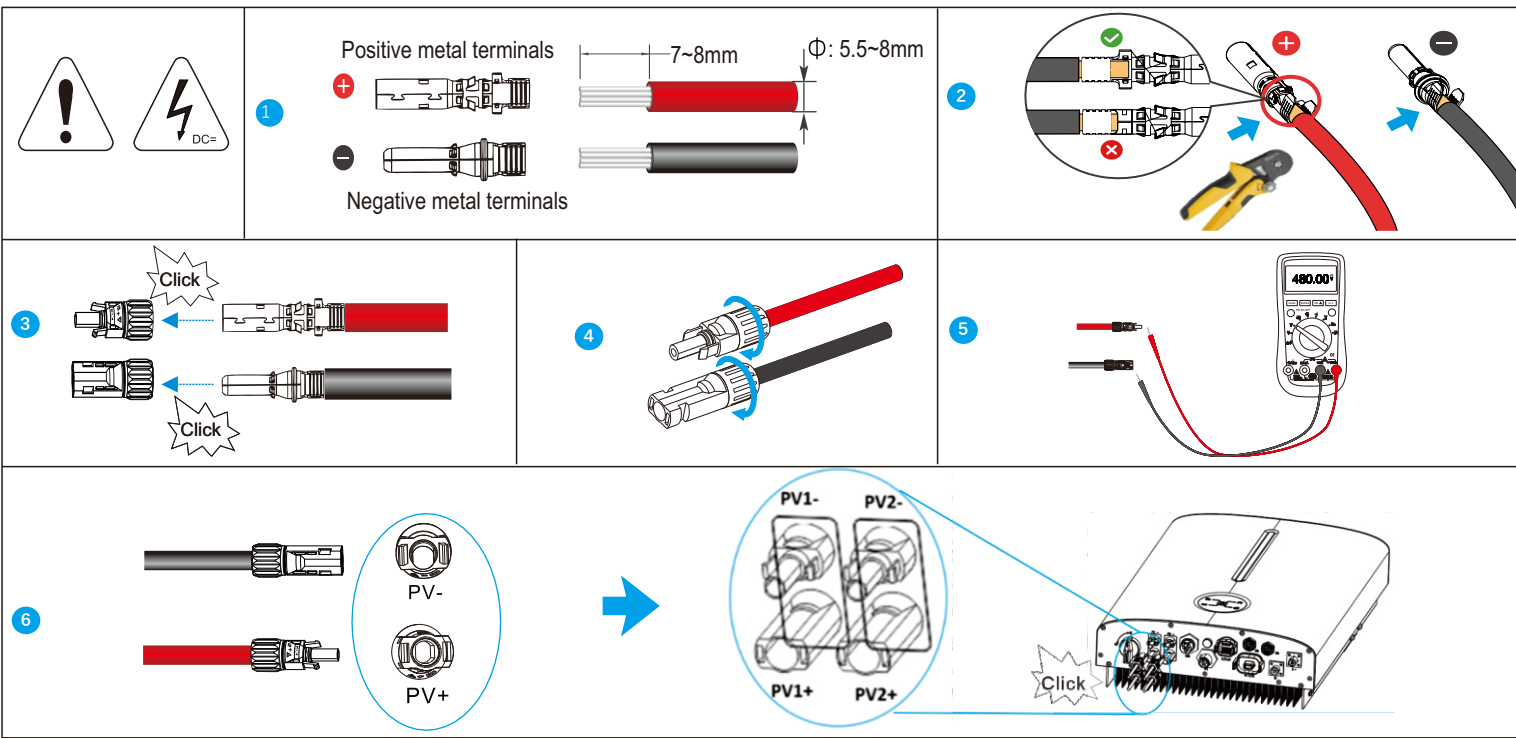
C External Grounding (PE Cable) Connection



VI

PV Cable Connection

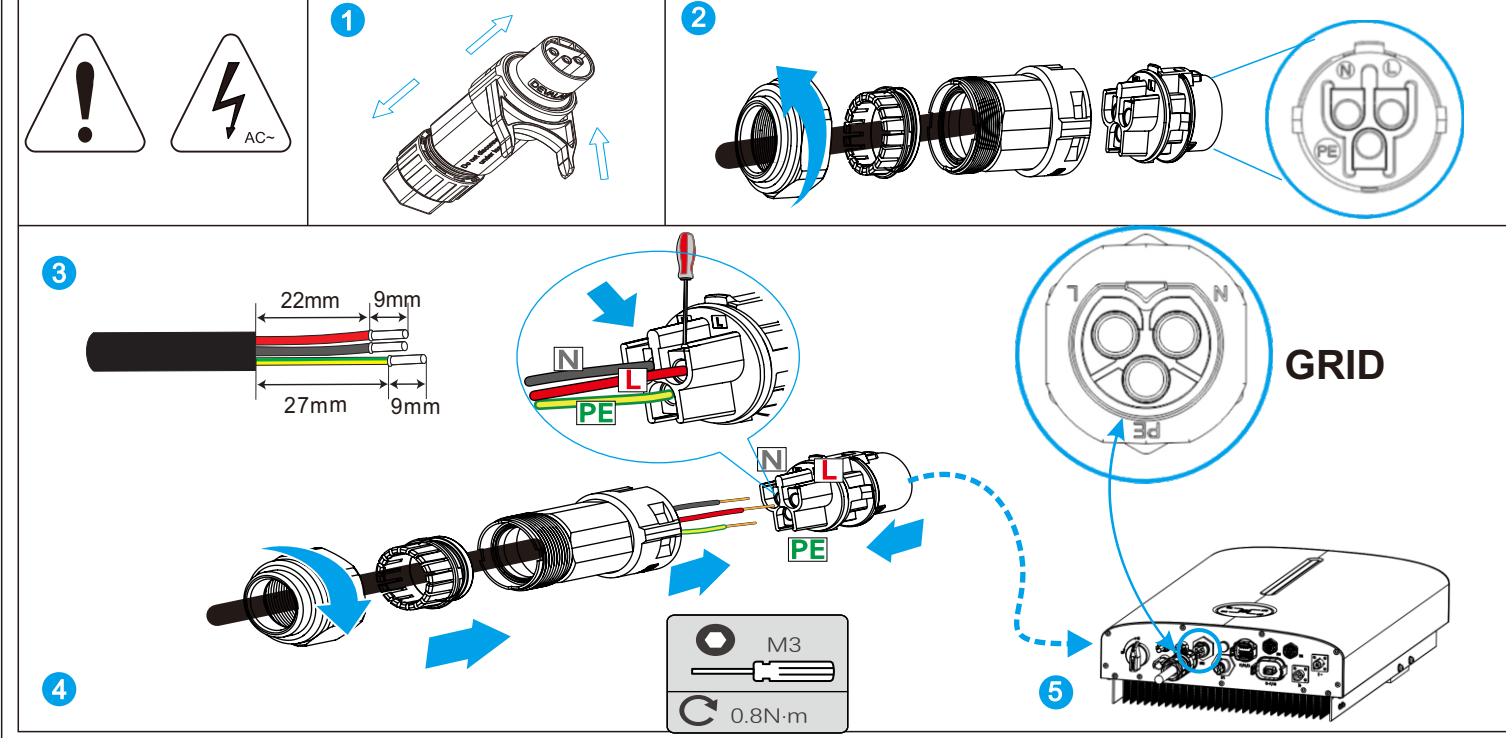
- Step 1 Remove an appropriate length of the insulation layer from the PV Strings power cables.
- Step 2 Connect the red wire to the positive metal terminal, and the black to the negative and crimp them using a crimping tool.
- Step 3 Insert the crimped positive and negative power cables into the corresponding connectors until a "click" sound is heard.
- Step 4 Tighten the locking nuts on the positive and negative connectors.
- Step 5 Measure the voltage of every route Strings using a multimeter. Ensure that the polarities of the DC input power cables are correct.
- Step 6 Insert the positive and negative connectors into their corresponding terminals of the inverter until a click sound is heard.



VII

AC GRID Connection

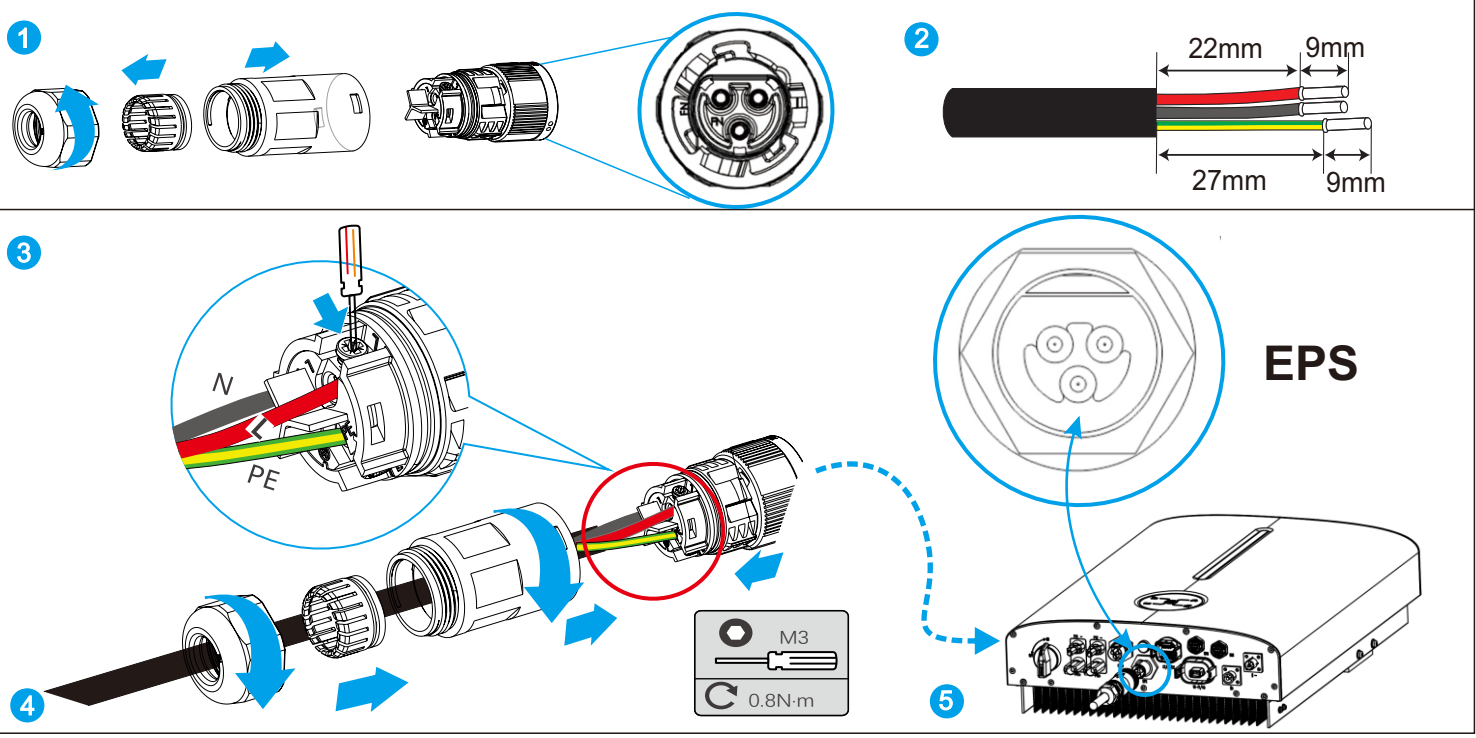
- Step 1 Take out the AC terminal from the package box and uninstall it as below chart.
- Step 2 Put the AC cables through the terminal cap, threaded sleeve in sequence.
- Step 3 Remove the cable jackets and strip the wire insulation then insert cables into connection terminals according to polarities indicates on it and tighten the screws.
- Step 4 Push threaded sleeve onto the connection terminal until both are locked tightly. Then screw up the terminal cap.
- Step 5 Unscrew the cap on the Grid port. Then insert the Grid connector into the Grid port on the bottom of the inverter.



VIII

Emergency Load Connection (Backup)

- Step 1 Take out the EPS terminal from the package box and unscrew it as below chart.
- Step 2 Thread the AC cable of appropriate length through the terminal cap, the sealing ring and the housing.
- Step 3 Remove the cable jackets and strip the wire insulation then insert cables into connection terminals according to polarities indicates on it and tighten the screws.
- Step 4 Push threaded sleeve onto the connection terminal until both are locked tightly. Then screw up the terminal cap.
- Step 5 Insert the EPS connector into the EPS port on the bottom of the inverter. Connect the other ends to the backup loads.

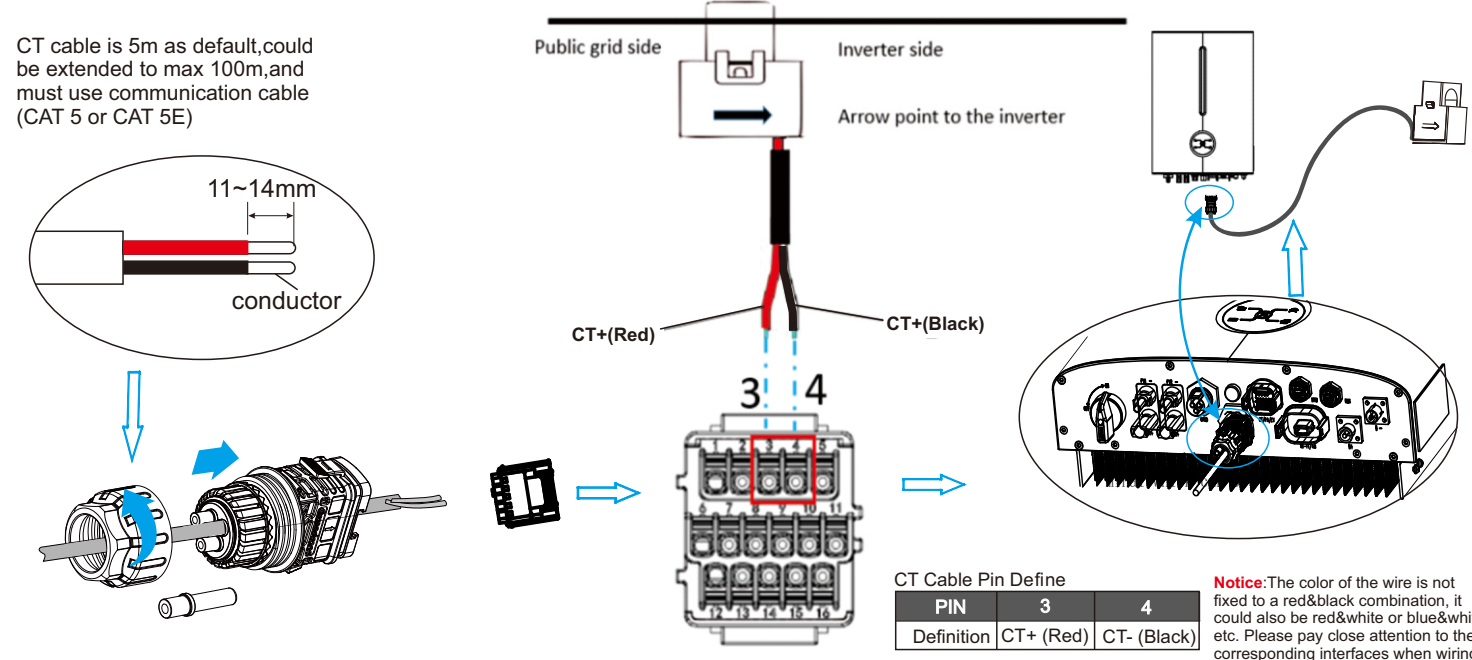


IX

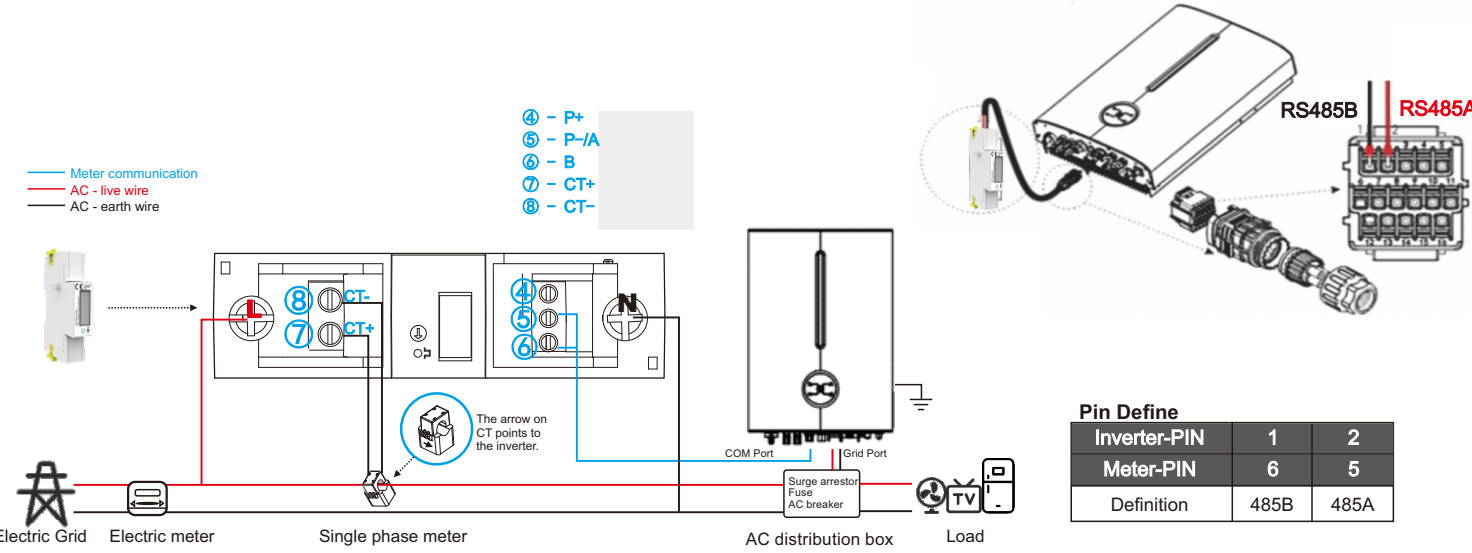
COM(Meter/CT) Connection

A: CT Connection

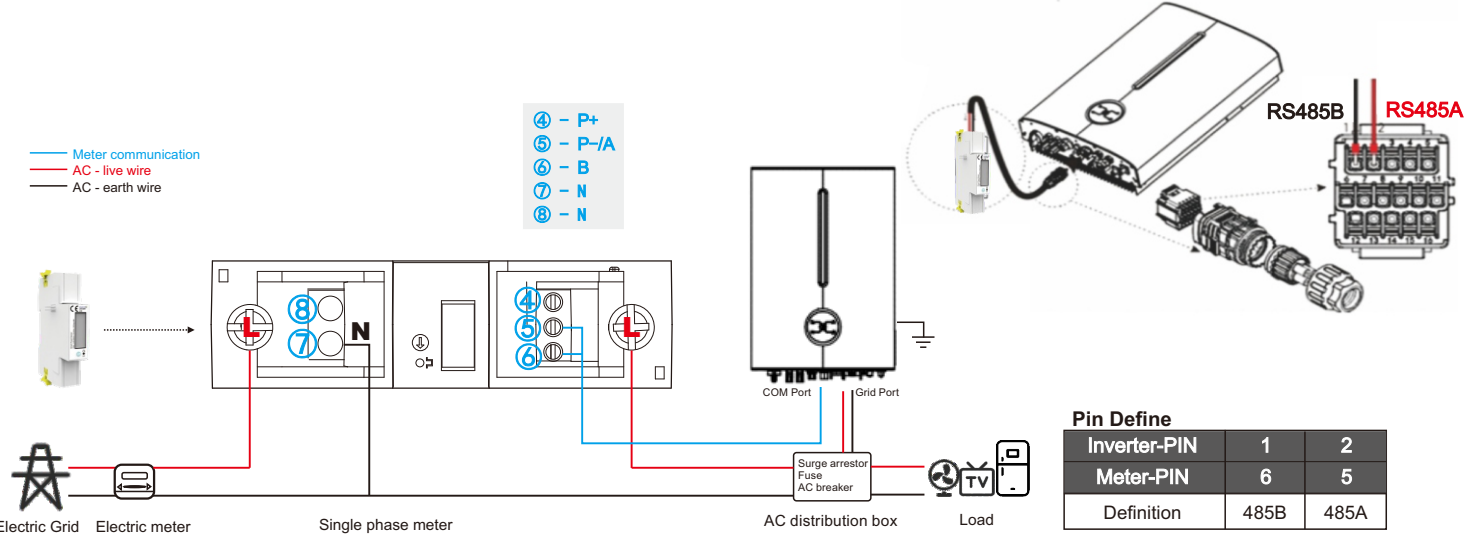
CT cable is 5m as default, could be extended to max 100m, and must use communication cable (CAT 5 or CAT 5E)



B: Smart Meter with CT Connection

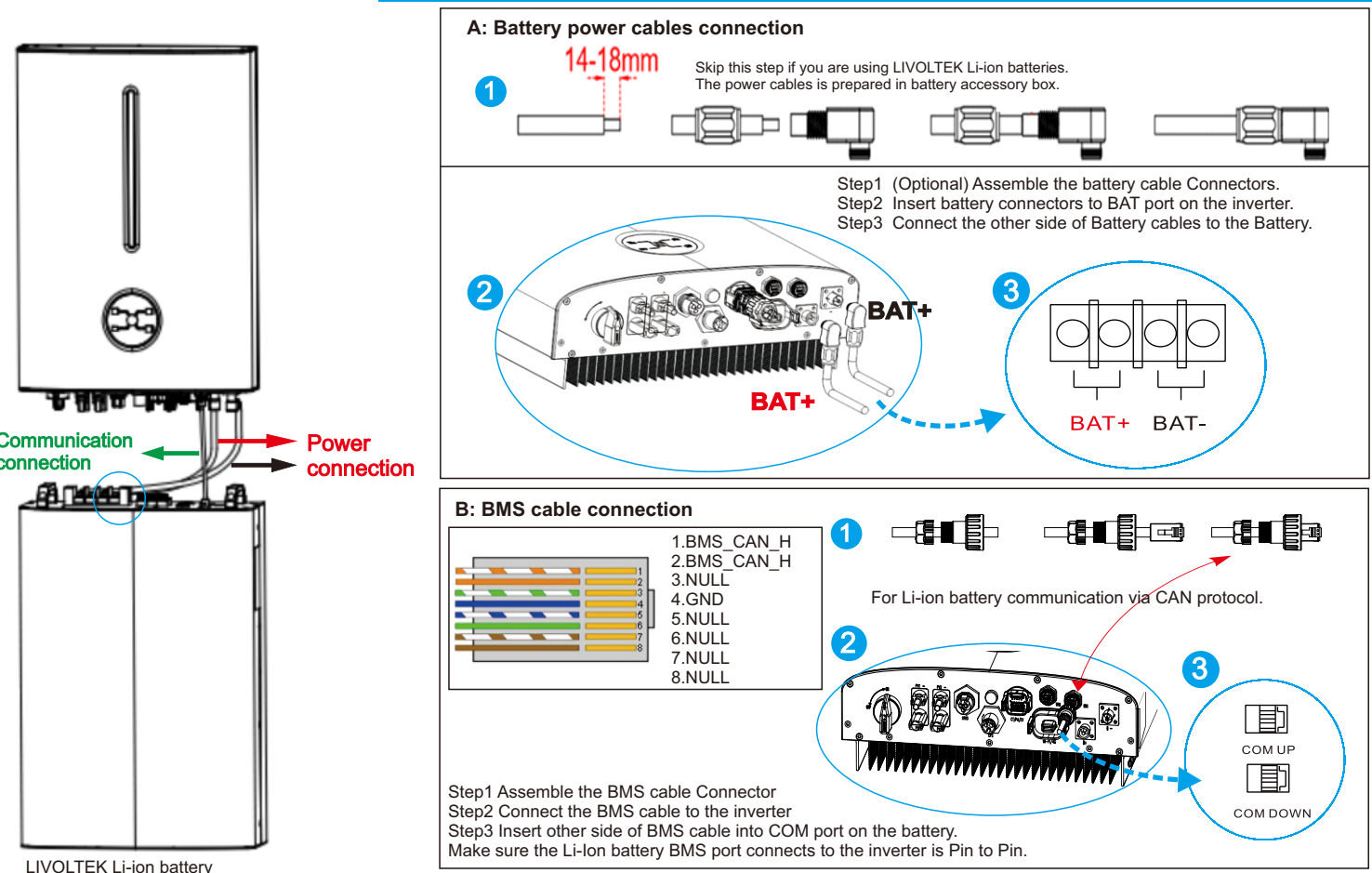


C: Smart Meter without CT Connection



X

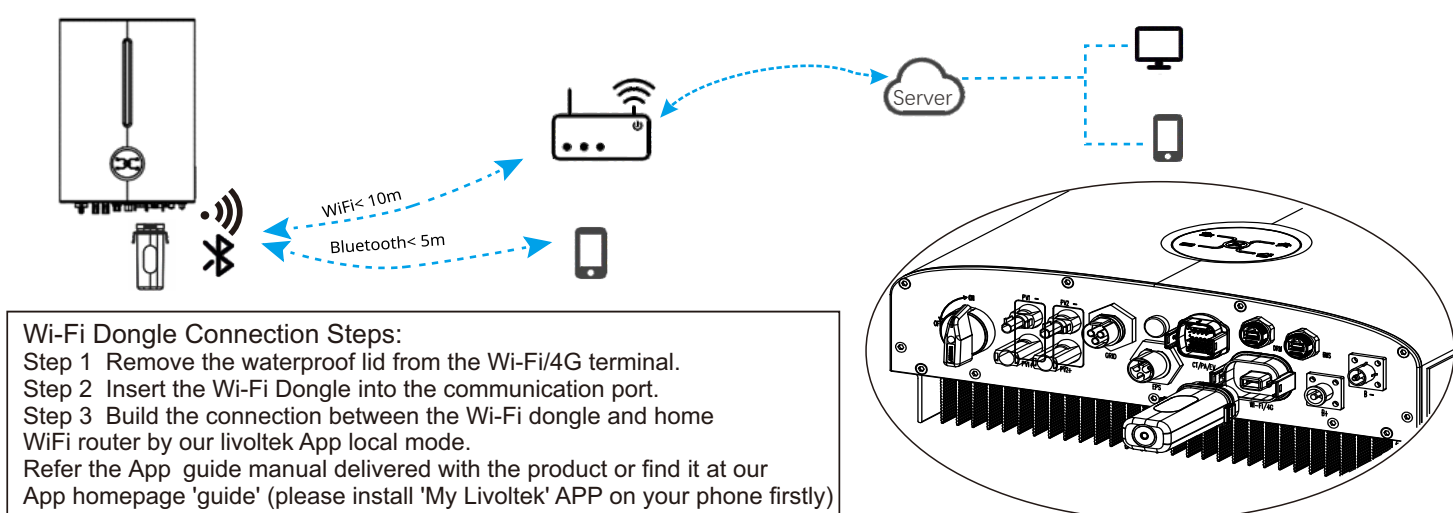
Battery Connection



XI

Wi-Fi Dongle Connection

Wi-Fi Dongle (Wi-Fi & Bluetooth 2in1 function) establish communication connection to the LIVOLTEK portal server through wireless network to provide local or remote monitoring, data logging and maintenance on the inverter.

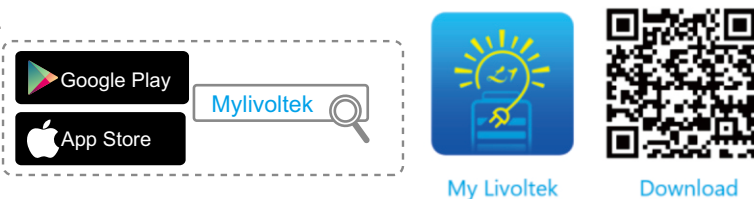


'My Livoltek' is a platform to communicate with your device via WiFi or bluetooth, you can login on our web(link as below) on your computer, also you can scan the QR code to download the APP on your phone.

APP: Search for My Livoltek on Apple App Store, Google Play.

WEB LINK1 : <https://www.livoltek-portal.com/> For Asia, Latin American, Australia and others

WEB LINK2 : <https://evs.livoltek-portal.com/> For Europe, Middle East Regions, Africa



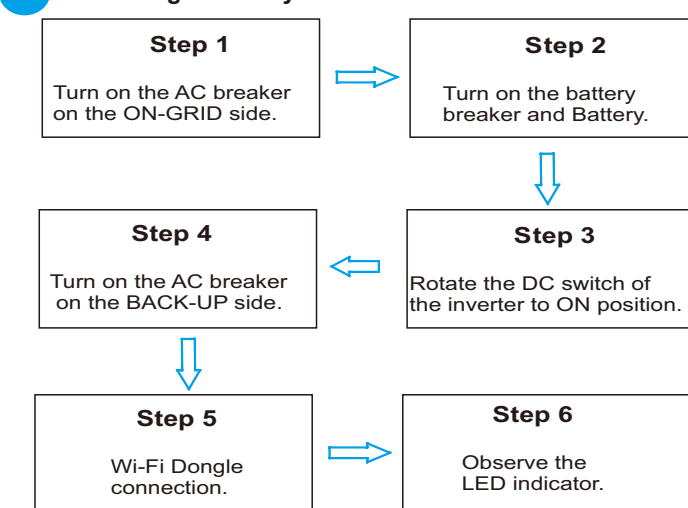
XII

Power ON/OFF the Inverter

A Inspection before Commissioning

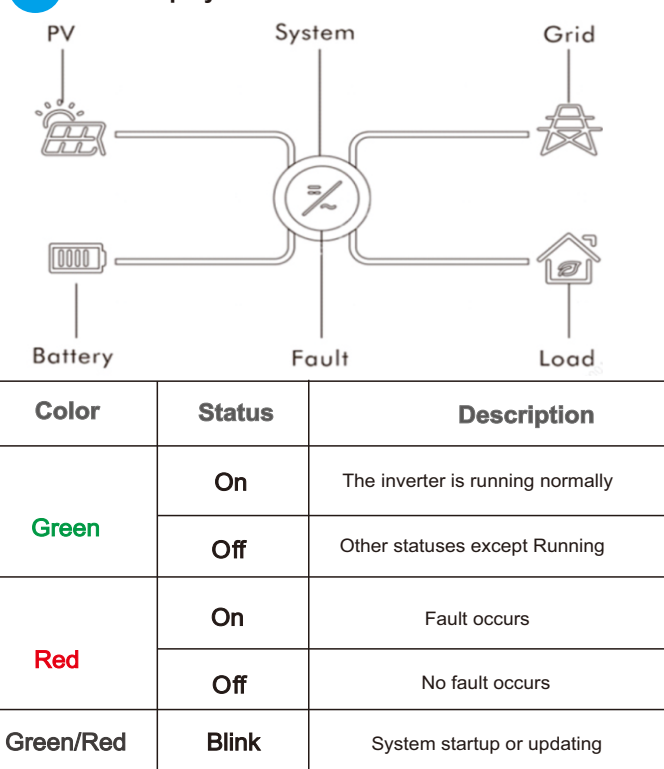
| No. | Content | State |
|-----|---|--------|
| 1 | All the switches connected to the inverter are set to the OFF position. | Yes/No |
| 2 | The inverter is installed correctly and securely. | |
| 3 | All cables are connected correctly and securely. | |
| 4 | Unused cable holes are fitted using the waterproof nuts. | |
| 5 | The Wi-Fi Dongle is installed correctly and securely. | |
| 6 | The electrical conduit holes are sealed. | |
| 7 | The CT or smart meter is connected. | |
| 8 | The battery is well connected. | |

B Powering on the System



Note: The shutdown steps are opposite to the above order.

C LED Display



WARNING Before maintaining and commissioning inverter and its peripheral distribution unit switch off all the charged terminals of the inverter, and wait at least 10 minutes after the inverter is powered off.