X1-Hybrid LV

Installation Manual

X1-Hybrid-3.0-LV / X1-Hybrid-3.7-LV / X1-Hybrid-4.0-LV
X1-Hybrid-4.6-LV / X1-Hybrid-5.0-LV / X1-Hybrid-6.0-LV

eManual in the QR code or at
http://kb.solaxpower.com/

www.solaxpower.com

Table of Contents

Safety

General Notice

1. Contents may be periodically updated or revised. SolaX reserves the right to make improvements or changes in the product(s) and the program(s) described in this manual without the prior notice.
2. The installation, maintenance and grid-related setting can only be performed by qualified personnel who:
   - Are licensed and/or satisfy state and local jurisdiction regulations;
   - Have good knowledge of this manual and other related documents.
3. Before installing the device, carefully read, fully understand and strictly follow the detailed instruction of the user manual and other related regulations. SolaX shall not be liable for any consequences caused by the violation of the storage, transportation, installation, and operation regulations specified in this document and the user manual.
4. Use insulated tools when installing the device. Individual protective tools must be worn during installation, electrical connection and maintenance.
5. Please visit the website www.solaxpower.com of SolaX for more information.

Descriptions of Labels

CE	CE mark of conformity		TUV certification
UKCA	UKCA mark of conformity		Caution, hot surface
	Caution, risk of electric shock		Caution, risk of danger
	Read the enclosed documentations		Do not dispose of the inverter together with household waste.
	Additional grounding point		
	Do not operate this inverter until it is isolated from mains and on-site PV generation suppliers.		
5min	Danger of high voltage. Do not touch live parts for 5 minutes after disconnection from the power sources.		

DANGER!

Lethal danger from electrical shock due to the inverter

- Only operate the inverter when it is technically faultless. Otherwise, electric shock or fire may occur.
- Do not open the enclosure in any case without authorization from SolaX. Unauthorized opening will void the warranty and cause lethal danger or serious injury due to electric shock.

DANGER!

Lethal danger from electrical shock due to the PV

- When exposed to sunlight, high DC voltage will be generated by PV modules. Death or lethal injuries will occur due to electric shock.
- Never touch the positive or negative pole of PV connecting device. Touching both of them at the same time is prohibited as well.
- Do not ground the positive or negative pole of the PV modules.
- Only qualified personnel can perform the wiring of the PV panels.

WARNING!

Risk of personnel injury or inverter damage

- During operation, do not touch any parts other than DC switch and LCD panel of the inverter.
- Never connect or disconnect the AC and DC connectors when the inverter is running.
- Turn off the AC and DC power and disconnect them from the inverter, wait for 5 minutes to fully discharge the voltage before attempting any maintenance, cleaning or working on any circuits connected.
- Make sure that the input DC voltage ≤ Maximum DC input voltage of the inverter. Overvoltage may cause permanent damage to the inverter, which is NOT covered by the warranty.

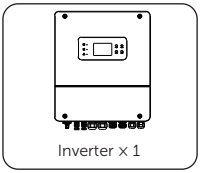
CAUTION!

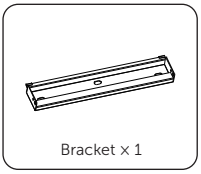
- Keep children away from the inverter.
- Pay attention to the weight of the inverter. Personal injuries may be caused if not handled properly.

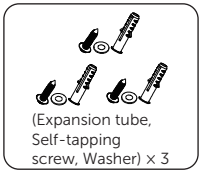
NOTICE!

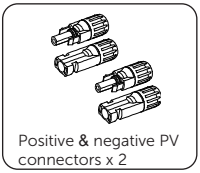
- If an external RCD is required by local regulations, check which type of RCD is required for relevant electric codes. It is recommended to use a Type-A RCD with the value of 300 mA.
- All the product labels and nameplate on the inverter shall be maintained clearly visible.

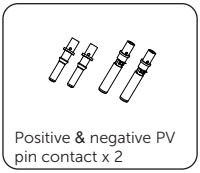
Packing List / Packliste / Liste du matériel livré / Lista de piezas / Lista da embalagem / Paklijst / Contenuto della confezione / Zawartość opakowania / Seznam balení / Packlista / Listă de ambalare / **Опаковъчен лист** / Pakkeliste / **Λίστα συσκευασίας** / Pakkeleht / Pakkausluettelo / Popis pakiranja / Csomaglista / Pakuotės turinys / Iepakojuma saraksts / Zoznam položiek balenia / Seznam pakiranja / Kutu Listesii / Lista de Embalagem

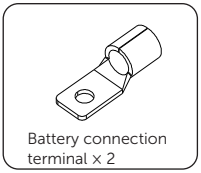

Inverter × 1

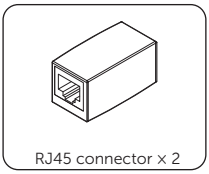

Bracket × 1

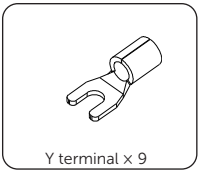

(Expansion tube, Self-tapping screw, Washer) × 3

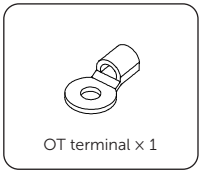

Positive & negative PV connectors x 2

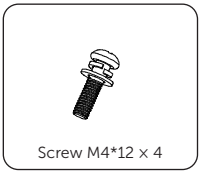

Positive & negative PV pin contact x 2

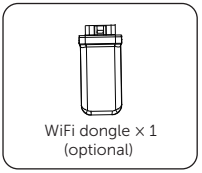

Battery connection terminal × 2

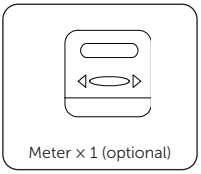

RJ45 connector × 2

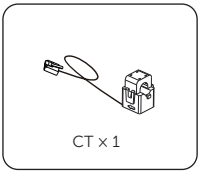

Y terminal × 9

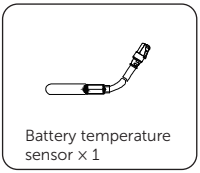

OT terminal × 1

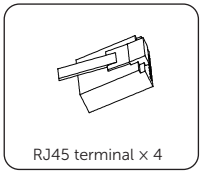

Screw M4*12 × 4

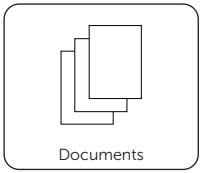

WiFi dongle × 1 (optional)


Meter × 1 (optional)


CT × 1

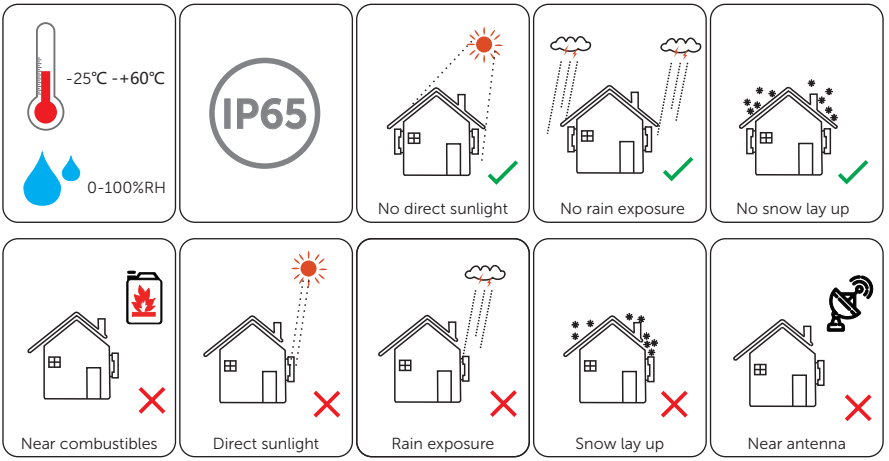

Battery temperature sensor × 1


RJ45 terminal × 4

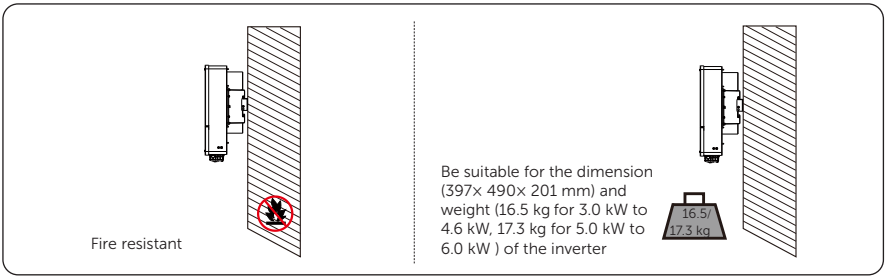

Documents

* Please refer to the actual delivery for the optional accessories.

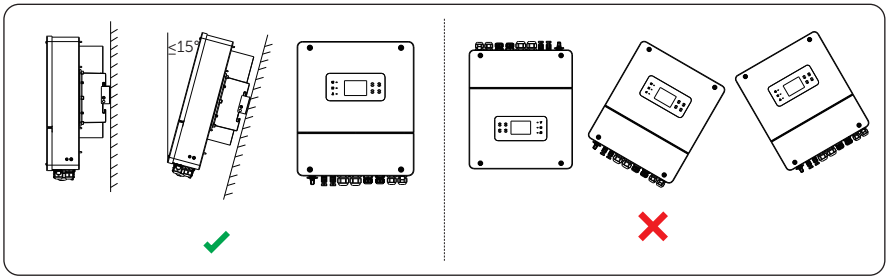
Installation Site / Installationsort / Site d'installation / Sitio de instalación / Local de instalação / Installatiesite / Sito di installazione / Miejsce instalacji / Místo instalace / Installationsplats / Loc de instalare / **Монтажен обект** / Monteringssted / **Τόπος εγκατάστασης** / Paigaldamise koht / Asennuspaikka / Lokacija ugradnje / Telepítési helyszín /Montavimo vieta / Uzstādīšanas vieta / Miesto inštalácie / Mesto namestitve / Kurulum Yeri / Local de Instalação



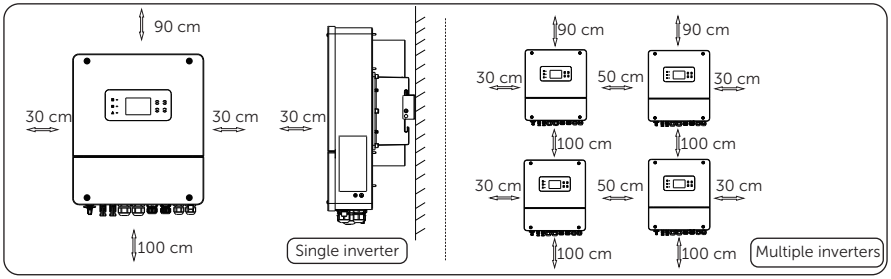
Installation Carrier / Installationsträger / Partie porteuse / Soporte de instalación / Suporte de Instalação / Installatiedrager / Supporto di installazione / Powierzchnia montażowa / Nosič instalace / Installationsfästen / Suport instalație / **Монтажна основа** / Monteringsholder / **Μεταφορέας εγκατάστασης** / Paigalduskandja / Asennusteline / Nosač za ugradnju / Telepítési szolgáltató / Montavimo pagrindas / Instalācijas turētājs / Nosná konštrukcia pre inštaláciu / Namestitveni nosilec / Kurulum Taşıyıcı / Portador de Instalação



Installation Angle / Installationswinkel / Angle d'installation / Ángulo de instalación / Ângulo de instalação / Installatiehoek / Angolazione di installazione / Kąt instalacji / Instalační úhel / Installationsvinkel / Unghi de instalare / **Монтажен ъгъл** / Monteringsvinkel / **Γωνία εγκατάστασης** / Paigaldusnurk / Asennuskulma / Kut ugradnje /Telepítési szög / Montavimo kampas / Uzstādīšanas leņķis / Uhol inštalácie / Namestitveni kot / Kurulum Açısı / Ângulo de Instalação

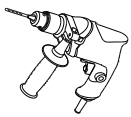


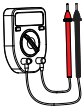
Installation Space / Installationsraum / Espace d'installation / Espacio de instalación / Espaço de instalação / Installatieruimte / Spazio di installazione / Przestrzeń instalacyjna / Instalační prostor / Installationsutrymme / Spațiu de instalare / **Монтажно пространство** / Monteringsplads / **Χώρος εγκατάστασης** / Paigaldusruum / Asennustila /Mjesto ugradnje / Telepítési tér / Montavimo erdvė / Uzstādīšanas telpa / Priestor pre inštaláciu / Prostor za namestitev / Kurulum Alanı / Espaço de Instalação

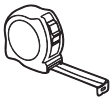


* The heat dissipation space from inverter to the ground is 50 cm. It is recommended to install the inverter more than 100 cm above the ground.

Installation Tools / Installationswerkzeuge / Outils d'installation / Herramientas de instalación / Ferramentas de instalação / Installatiemiddelen / Utensili di installazione / Narzędzia do instalacji / Instalační nástroje / Verktyg för installation / Instrumente de instalare / **Монтажни инструменти** / Monteringsværktøjer / **Εργαλεία εγκατάστασης** /Paigaldamise tööriistad / Asennustyökalut / Alati za ugradnju / Telepítő eszközök / Montavimo įrankiai / Uzstādīšanas instrumenti / Nástroje pre inštaláciu / Orodja za namestitev / Kurulum Araçları / Ferramentas de Instalação

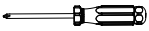

Hammer drill

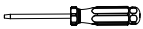

Multimeter

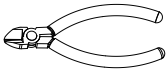

Measuring tape


Utility knife


Marker

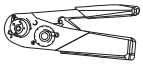

Cross screwdriver

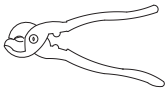

Flat-head screwdriver

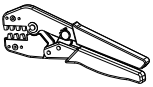

Diagonal plier

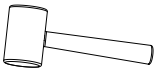

Wire stripper

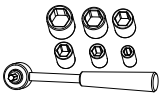

Crimping tool for RJ45


Crimping tool for PV terminal


Wire cutter


Crimping tool


Rubber mallet

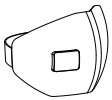

Torque wrench


Spirit level


Heat gun


Ø6 mm Heat shrink tubing


Safety goggles


Anti-dust mask


Safety gloves


Safety boots

Additionally Required Materials / Zusätzlich erforderliche Materialien / Matériaux supplémentaires requis / Materiales adicionales necesarios / Materiais Adicionais Necessários / Extra benodigde materialmen / Materiali aggiuntivi necessary / Materiały wymagane dodatkowo / Další požadované materiály / Ytterligare materialkrav / Materiale suplimentare necesare / **Други необходими материали** / Yderligere nødvendige materialer / **Πρόσθετα απαιτούμενα υλικά** / Täiendavad vajalikud materjalid / Muut vaaditut materiaalit / Potrebni dodatni materijali / További szükséges anyagok / Papildomos reikalingos medžiagos / Papildus vajadzīgie materiāli / Dodatočne požadované materiály / Dodatno zahtevani materiali / Ayrıca Gerekli Malzemeler / Materiais Adicionais Necessários

No.	Required Material	Type	Conductor Cross-section
1	PV cable	Dedicated PV wire withstand voltage 600 V	4 mm^2
2	Communication cable	Network cable CAT5	0.2 mm^2
3	Additional PE cable	Conventional yellow and green wire	4 mm^2-6 mm^2
4	Battery power cable	Conventional copper wire	16-25mm^2 or 35-50 mm^2

Grid cable and micro-breaker recommended:

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Cable (copper)	4-6 mm^2	6-8 mm^2	6-8 mm^2	8-10 mm^2	8-10 mm^2	8-10 mm^2
Micro-Breaker	32 A	40 A	40 A	50 A	50 A	50 A

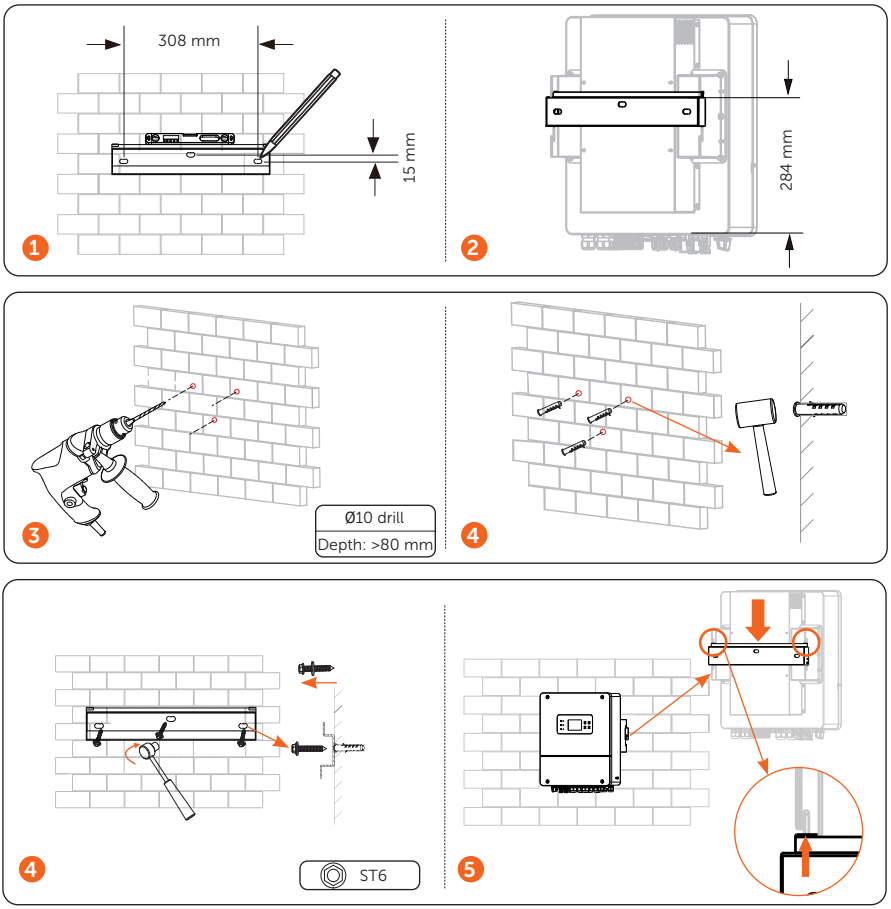
EPS cable and micro-breaker recommended:

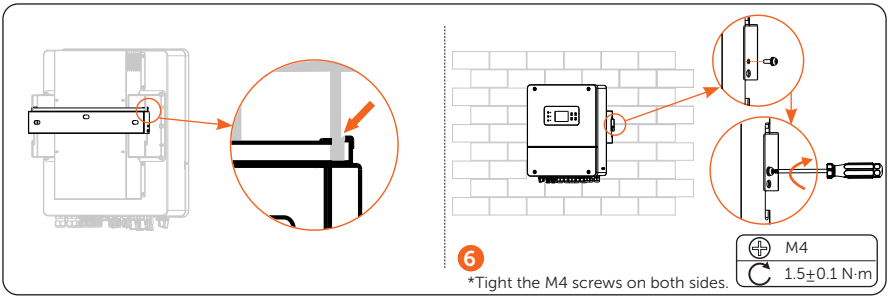
Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Cable (copper)	3-4 mm^2	3-4 mm^2	3-4 mm^2	4-6 mm^2	4-6 mm^2	6-8 mm^2
Micro-Breaker	25 A	25 A	25 A	32 A	32 A	40 A

GEN cable and micro-breaker recommended:

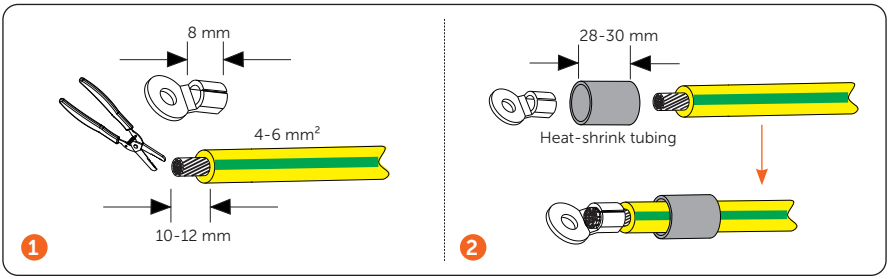
Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Cable (copper)	3-4 mm^2	3-4 mm^2	3-4 mm^2	4-6 mm^2	4-6 mm^2	6-8 mm^2
Micro-Breaker	25 A	25 A	25 A	32 A	32 A	40 A

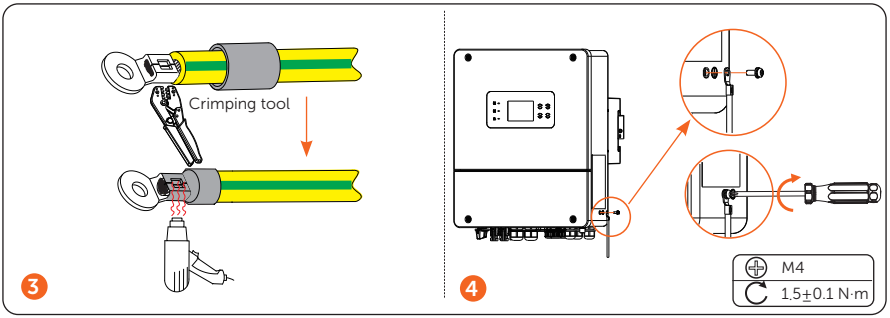
Mechanical Installation / Mechanische Installation / Installation mécanique / Instalación mecánica / Instalação mecânica / Mechanische installatie / Installazione meccanica / Instalacja mechaniczna / Mechanická instalace / Mekanisk installation /Instalare mecanică / **Механичен монтаж** / Mekanisk installation / **Μηχανική εγκατάσταση** / Mehaaniline paigaldus / Mekaaninen asennus / Mehanička ugradnja / Mechanikai telepítés / Mechaninis montavimas / Mehāniskā uzstādīšana / Mechanická inštalácia /Mehanska namestitev / Mekanik Kurulum / Instalação Mecânica



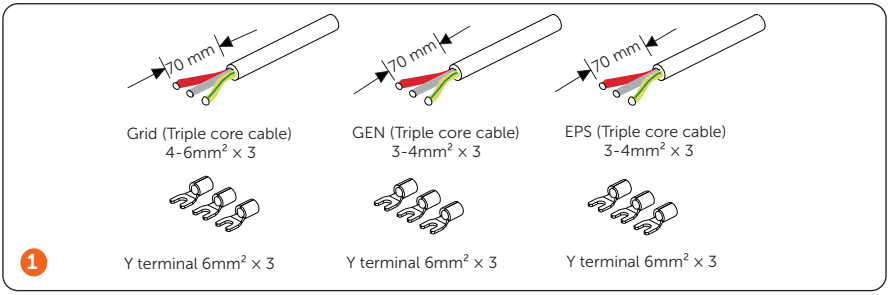


PE Connection / Schutzerdungs-Anschluss / Connexion PE / Conexión PE / Ligação à Terra / PE-aansluiting / Collegamento PE / Połączenie PE / PE připojení / PE-anslutning / Conexiune PE / PE **връзка (земя)** / Jordforbindelse / **Σύνδεση** PE / PE ühendus / PE-yhteys / PE priključak / PE bekötés / PE (apsauginio įžeminimo) kontaktas / PE savienojums / Pripojenie ochranného vodiča / PE povezava / PE Bağlantısı / Conexão PE





GRID, EPS and GEN Connection / Netz-, EPS- und GEN-Verbindung / Connexion au réseau, à l'EPS et au GEN / Conexión de red, EPS y GEN / Conexão de rede, EPS e GEN / Net-, EPS- en GEN-verbinding / Collegamento alla rete, all'EPS e al GEN / Połączenie z siecią, EPS i GEN / Připojení k síti, EPS a GEN / Nät-, EPS- och GEN-anslutning / Conexiune la rețea, EPS și GEN / **Връзка с мрежата, EPS и GEN** / Grid-, EPS- og GEN-tilslutning / **Σύνδεση με το δίκτυο, το EPS και το GEN** / Võrgu-, EPS- ja GEN-ühendus / Verkko-, EPS- ja GEN-liitäntä / Povezivanje na mrežu, EPS i GEN / Hálózat-, EPS- és GEN-csatlakozás / Tinklo, EPS ir GEN ryšys / Tīkla, EPS un GEN savienojums / Pripojenie k sieti, EPS a GEN / Povezava na omrežje, EPS in GEN / Ağ, EPS ve GEN Bağlantısı / Conexão à rede, EPS e GEN

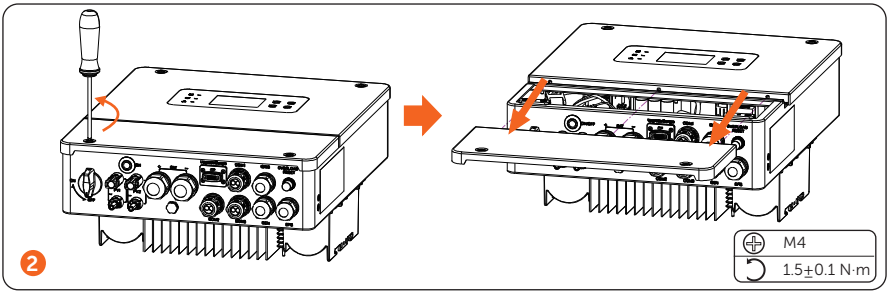


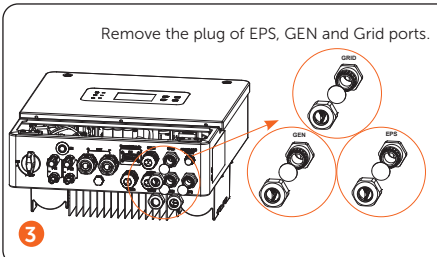
* Please refer to the table in **Additionally Required Materials** to view the recommended wire sizes for GRID, EPS, and GEN.

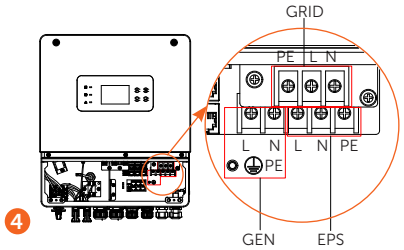
* It is recommended to use copper wire. Non-triple or non-dual core cables shall be sealed with glue or fireproof mud.

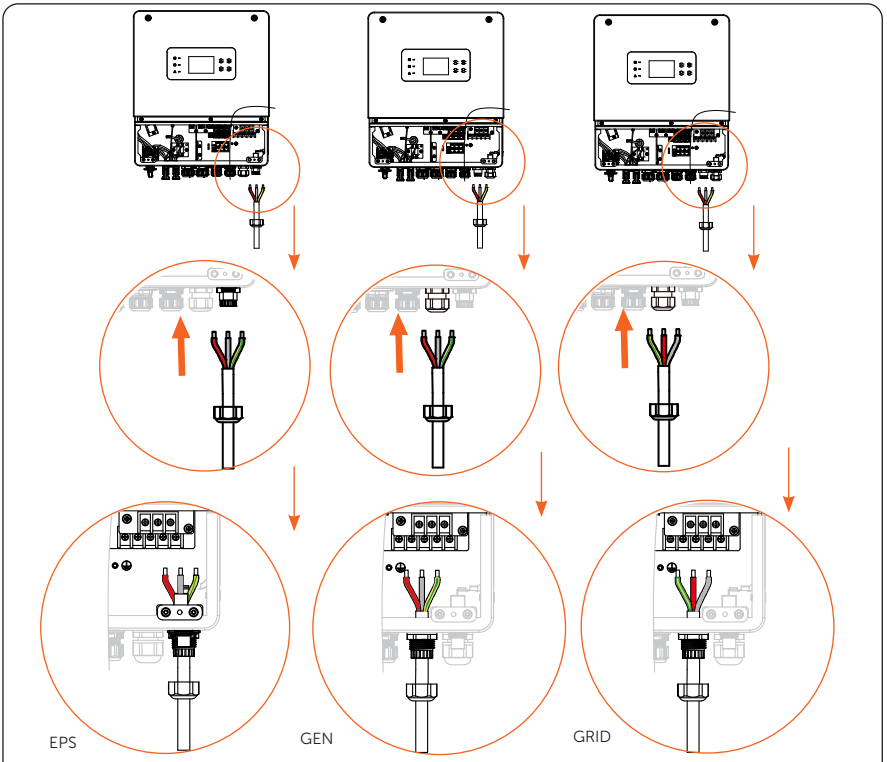
* When using wire sizes of 6 mm² and above, only 2-core wires can be used because the 3-core wire cannot pass through the waterproof terminal. In the case of using 2-core wire, the PE wire should only be connected to the inverter shell and does not need to be connected to the internal terminals.

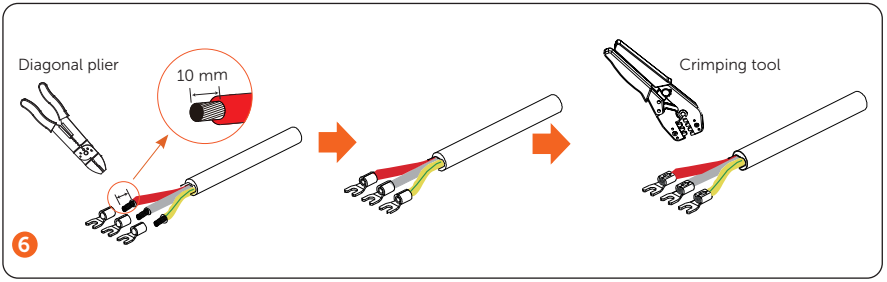
* All connection diagrams provided here are based on the use of a 3-core wire, with X1-HYB-3.0-LV serving as an example.

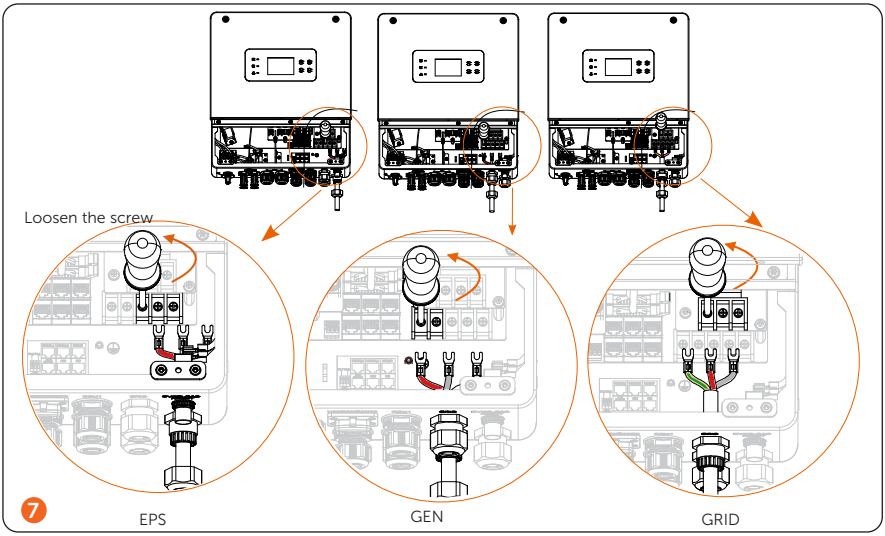


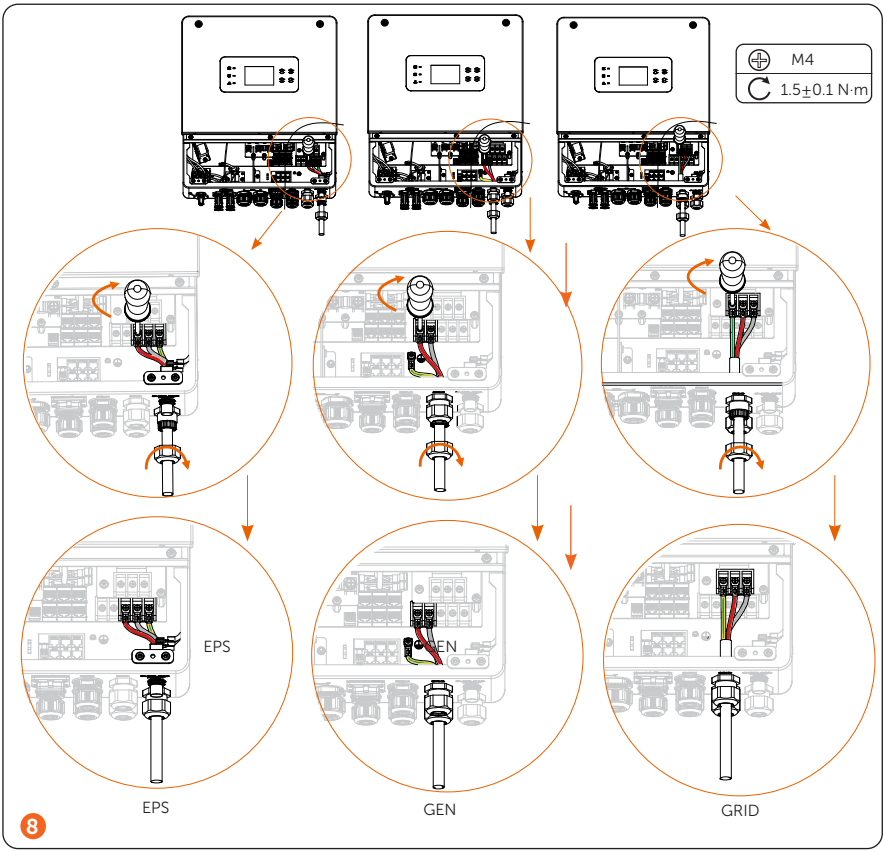

Remove the plug of EPS, GEN and Grid ports.
GRID
GEN
EPS
3


GRID
PE L N
L N L N PE
PE
GEN
EPS
4

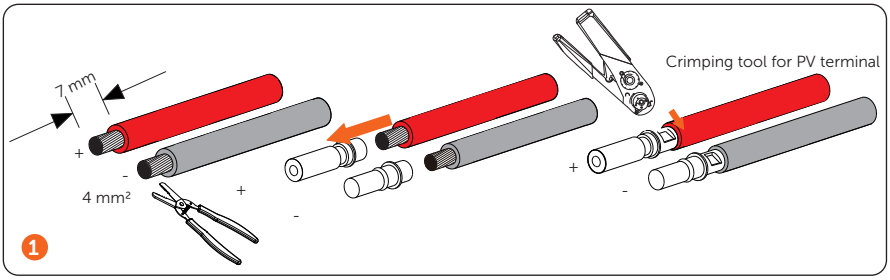

EPS
GEN
GRID
5
* The EPS, GEN and Grid cables go through the corresponding EPS, GEN and Grid ports.

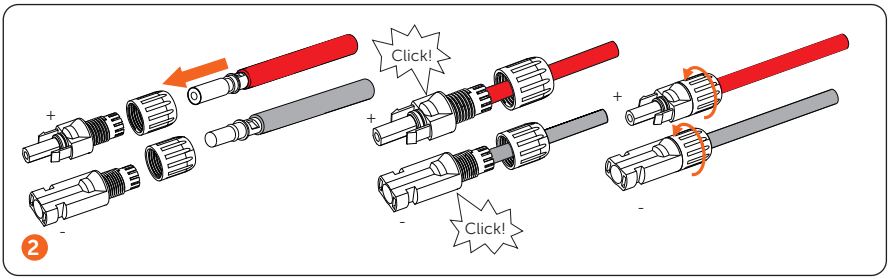

Diagonal plier
10 mm
Crimping tool
6

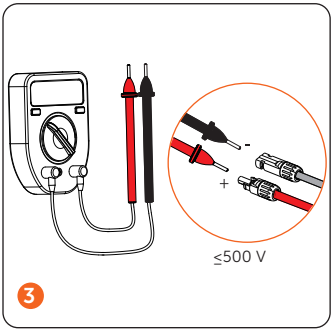

Loosen the screw
7
EPS
GEN
GRID

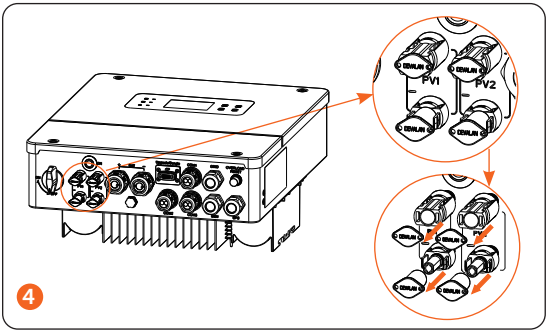

M4
1.5±0.1 N·m
EPS
EPS
GEN
GRID
8

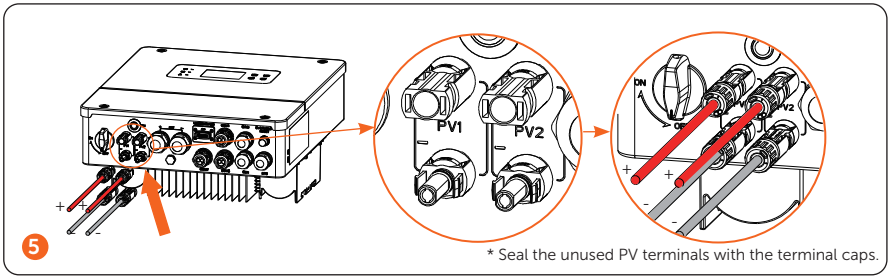
PV Connection / PV-Anschluss / Connexion PV / Conexión FV / Ligação PV (Fotovoltaica) / PV-aansluiting / Collegamento PV / Połączenie PV / Připojení FV / Anslutning av solcellsanläggning / Conexiune PV / **Връзка с** PV / PV-tilslutning / **Σύνδεση φωτοβολταϊκού** / PV-ühendus / PV-liitäntä / Fotonaponski priključak / PV bekötés / Fotovoltinė jungtis / PV savienojums / Pripojenie fotovoltaiky (FV) / Povezava fotonapetostnega kabla (PV) / PV Bağlantısı / Conexão PV





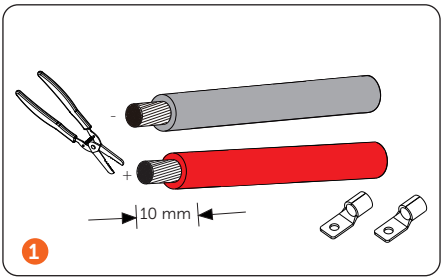


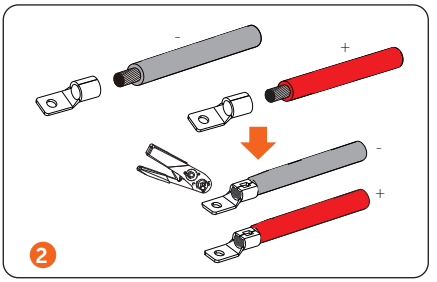


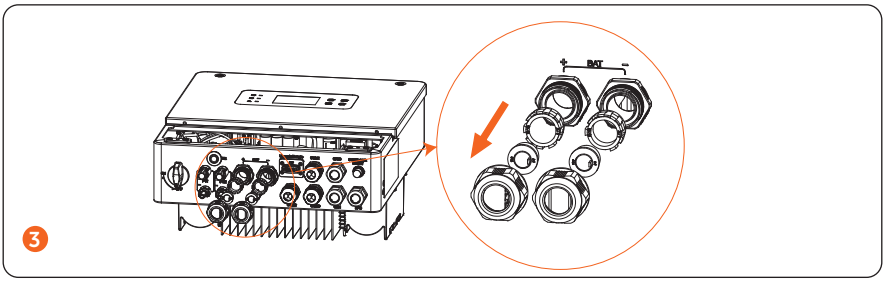


* Seal the unused PV terminals with the terminal caps.

Battery Connection / Batterieanschluss / Branchement de la batterie / Conexión de la batería / Ligação da bateria / Batterij-aansluiting / Collegamento della batteria / Połączenie akumulatora / Připojení baterie / Batterianslutning / Conectare baterie / **Връзка с батерията** / Batteritilslutning / **Σύνδεση μπαταρίας** / Akuühendus / Akun liitäntä / Priključak za bateriju / Akkumulátor bekötés / Akumuliatoriaus jungtis / Akumulatora savienojums / Pripojenie batérie / Povezava baterije / Pil Bağlantısı / Conexão da bateria

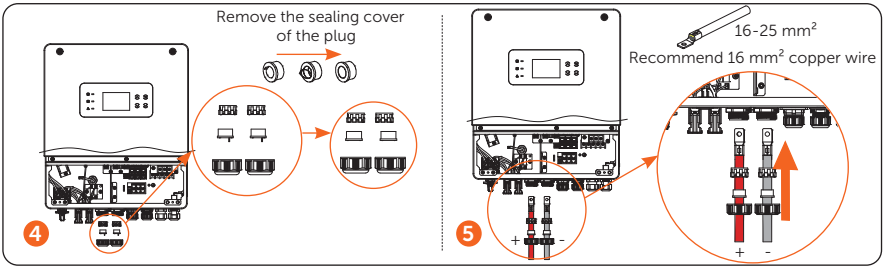


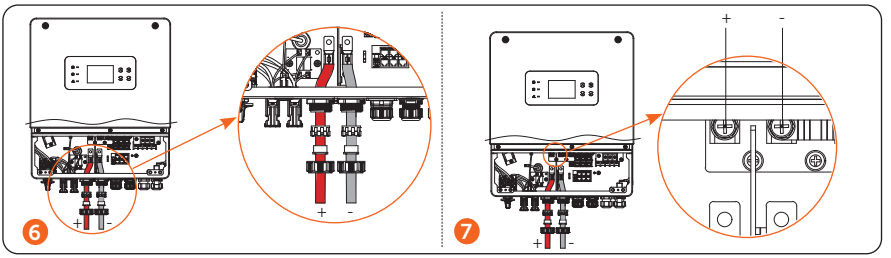


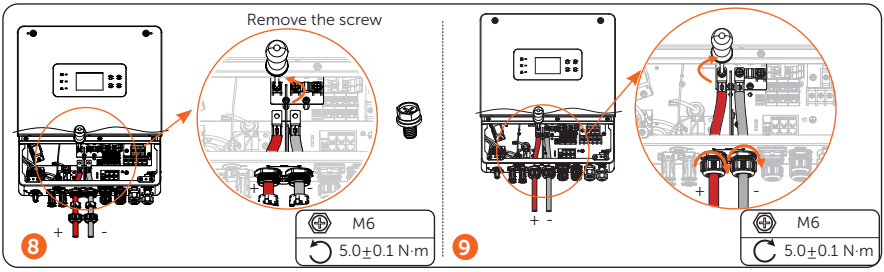


* If only the battery is connected but the PV, GRID, and GEN are not connected, to start the inverter, press and hold the battery power on button until the screen is on.

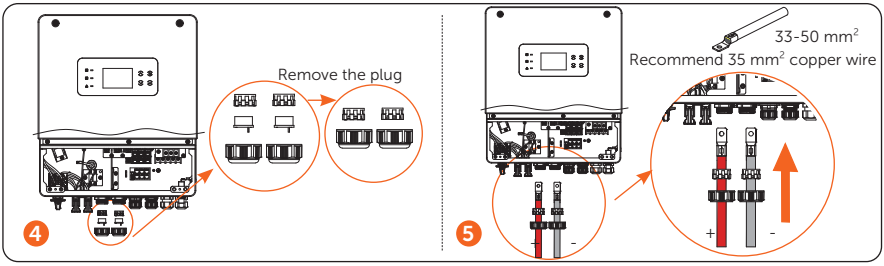
• Battery connection for 3.0 kW to 4.0 kW

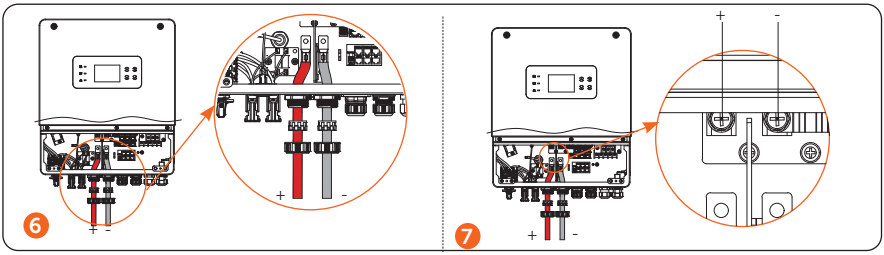


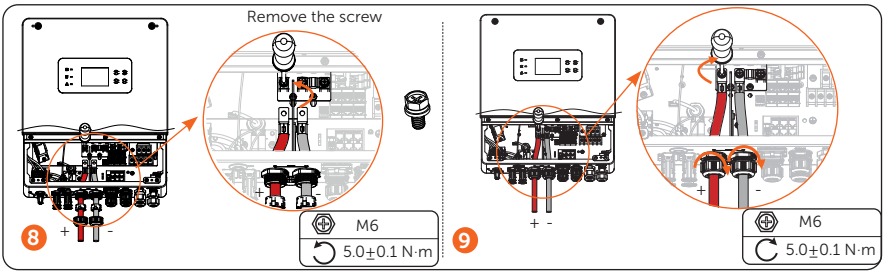




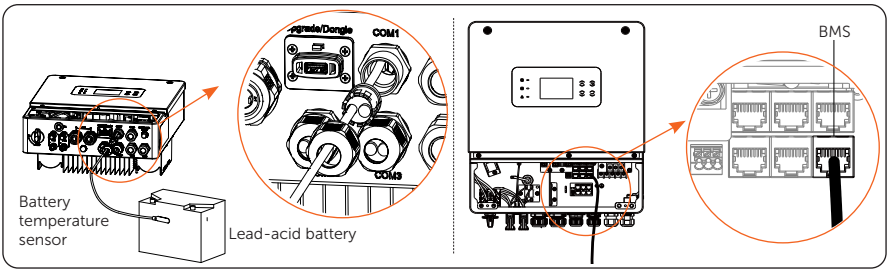
- Battery connection for 4.6 kW to 6.0 kW



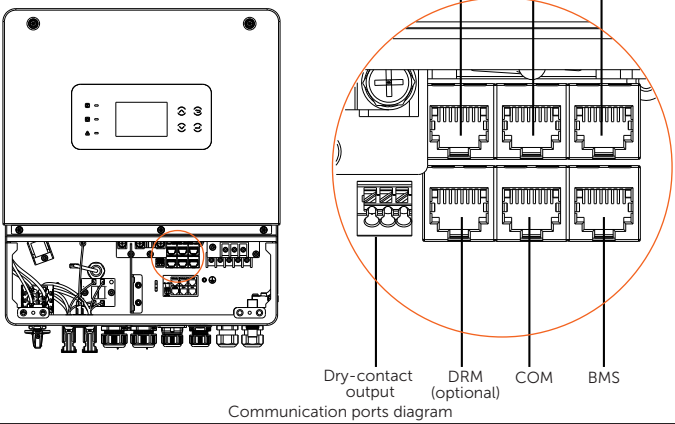




- Battery temperature sensor connection



Communication Connection / Kommunikations-Anschluss / Branchement de communication / Conexión de comunicación / Ligação à Comunicação / Communicatie-aansluiting / Collegamento comunicazione / Połączenie komunikacyjne / Komunikační připojení / Kommunikationsanslutning / Conexiune de comunicare / **Комуникационна връзка** / Kommunikationsforbindelse / **Σύνδεση επικοινωνίας**/Sideühendus / Tiedonsiirtoliitäntä / Priključak za komunikaciju / Kommunikációs bekötés / Duomenų ryšys / Sakaru savienojums / Pripojenie komunikácie / Komunikacijska povezava / İletişim Bağlantısı / Conexão de Comunicação

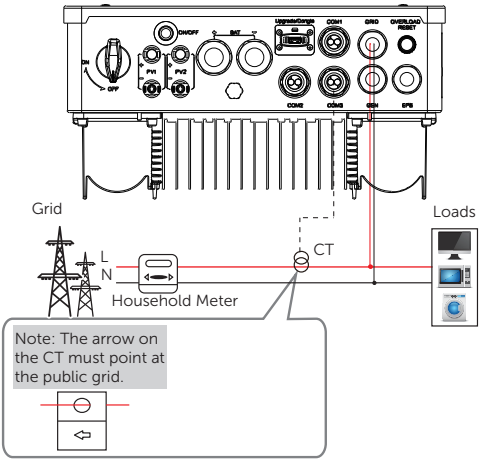


Communication ports diagram

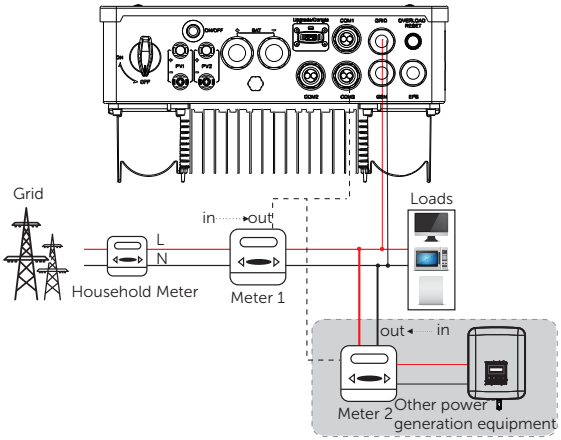
* For Communication connection, you can select any port from COM 1, COM 2 and COM3.

- CT/ Meter port connection

1. CT connection diagram



2. Meter connection diagram



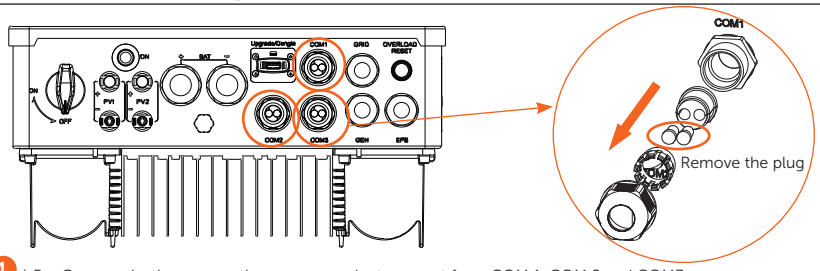
* If two meters were to be connected in the system,the communication cables of the meters should be connected in parallel, i.e. 485A & 485A, 485B & 485B.

3. Pin definition for Meter/CT

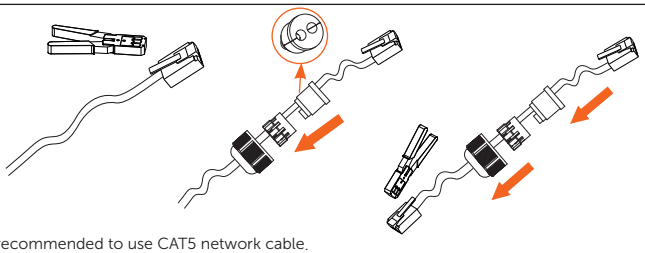
Pin	1	2	3	4	5	6	7	8
Pin Definition	CT1-1	X	X	RS485_A	RS485_B	X	X	CT1-2

* Only one of the Meter and CT connections can be selected. Meter cable goes to pin terminal 4 and 5; CT cable goes to pin terminal 1 and 8; reserve CT cable goes to pin terminal 3 and 6.

4. CT/Meter connection steps



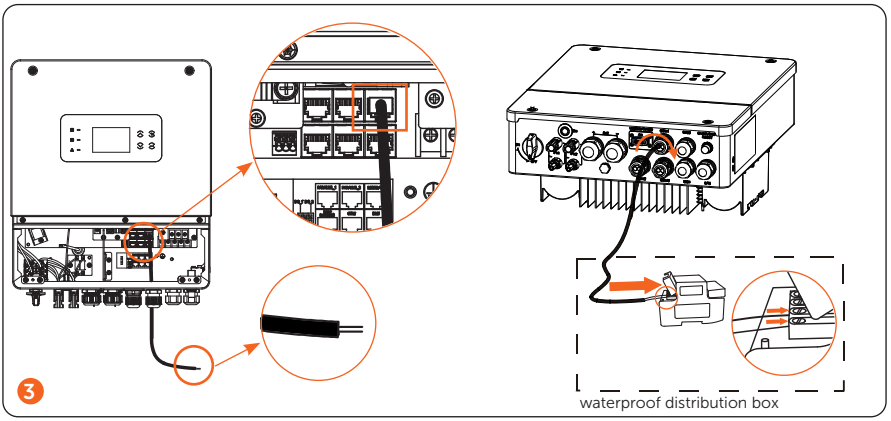
1 * For Communication connection, you can select any port from COM 1, COM 2 and COM3.



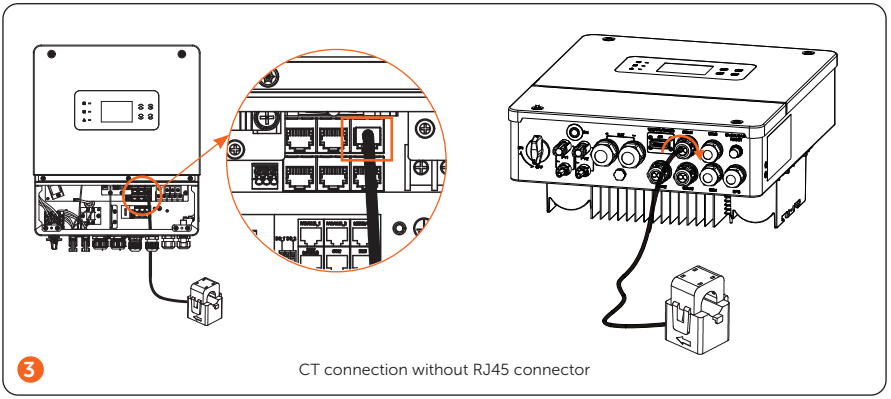
B

2 * It is recommended to use CAT5 network cable.
* For Meter connection, crimp only one RJ45 terminal.
* For CT connection without RJ45 connector, there is no need to crimp another RJ45 terminal.
* For CT connection with RJ45 connector, crimp two RJ45 terminals.

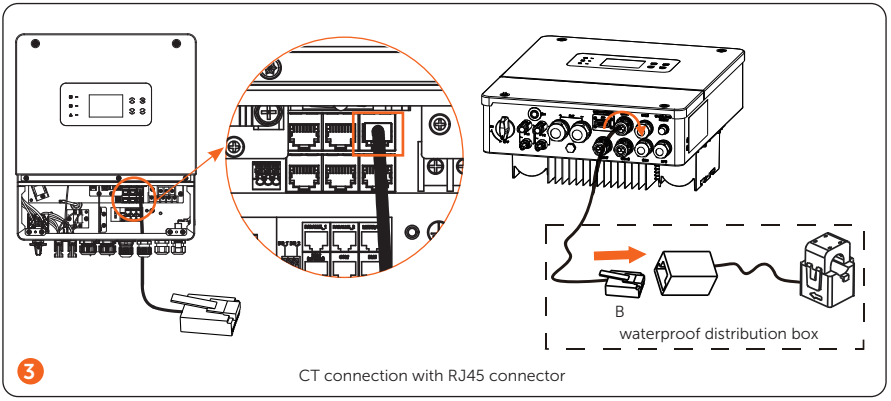
• Meter connection



• CT connection



CT connection without RJ45 connector

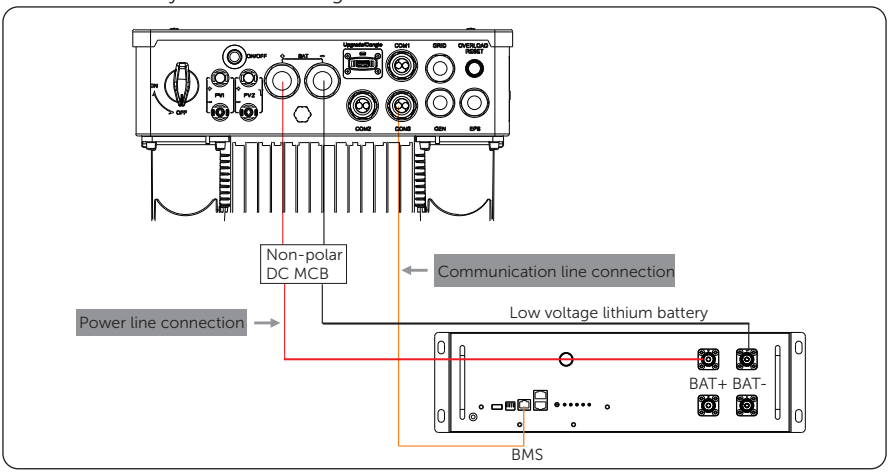


CT connection with RJ45 connector

- BMS/DRM/COM port connection

1. BMS

1.1 Lithium battery connection diagram



1.2 Pin definition for BMS

Pin	1	2	3	4	5	6	7	8
Pin Definition	BMS_ 485B	BMS_ 485A	GND	BMS_ CANH	BMS_ CANL	X	GND	BAT_ TEMP

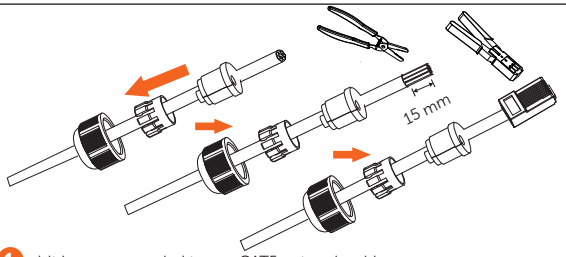
2. Pin definition for DRM (0)

Pin	1	2	3	4	5	6	7	8
Pin Definition	DRM1/5	DRM2/6	DRM3/7	DRM4/8	RG/0	CL/0	X	X

3. Pin definition for COM

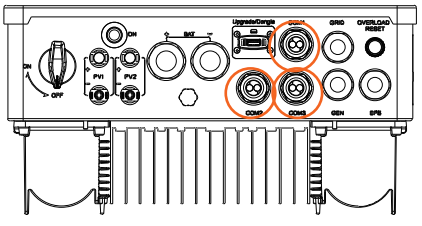
Pin	1	2	3	4	5	6	7	8
Pin Definition	Dry-contact_ in1	Dry-contact_ in2	X	RS485_A	RS485_B	GND	X	X

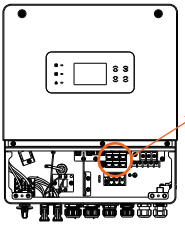
4. BMS/DRM/COM connection steps

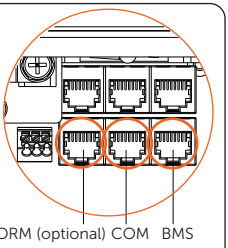


1) White with orange stripes
2) Orange
3) White with green stripes
4) Blue
5) White with blue stripes
6) Green
7) White with brown stripes
8) Brown

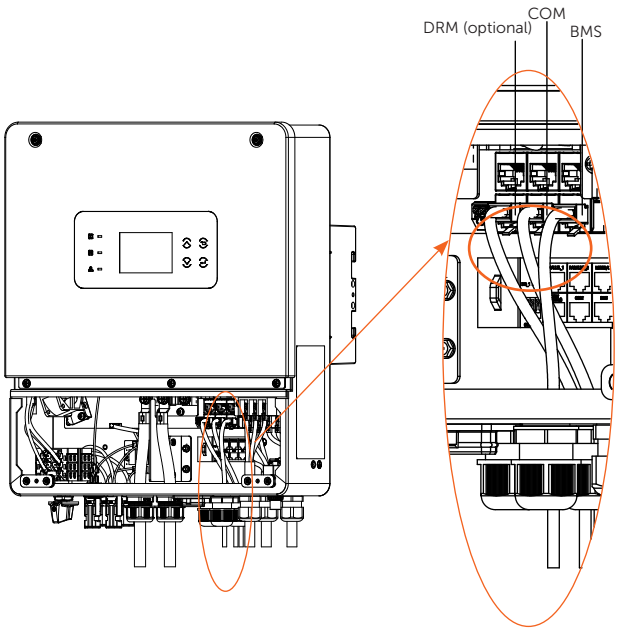
1 * It is recommended to use CAT5 network cable.





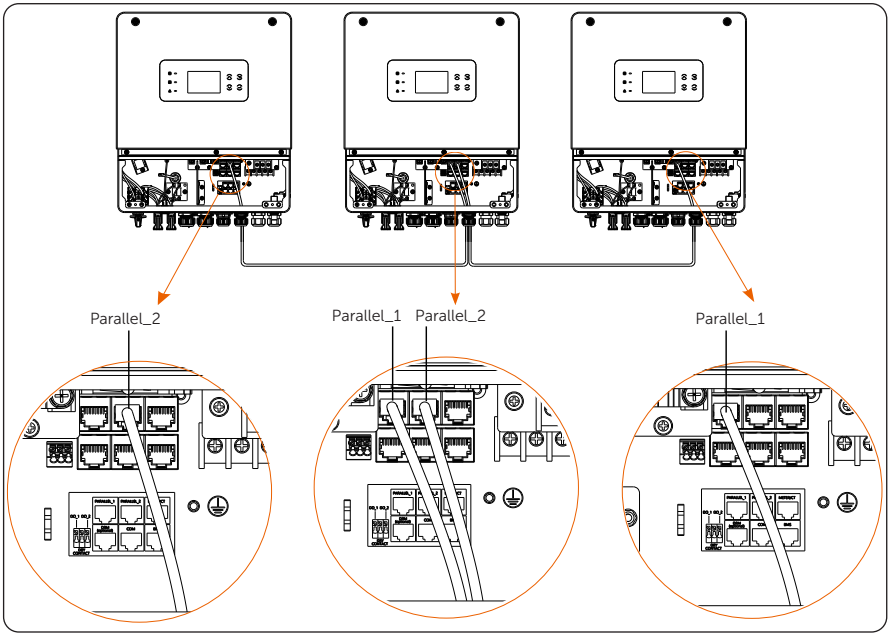


2 * For Communication connection, you can select any port from COM 1, COM 2 and COM3.



3

- Parallel connection connection

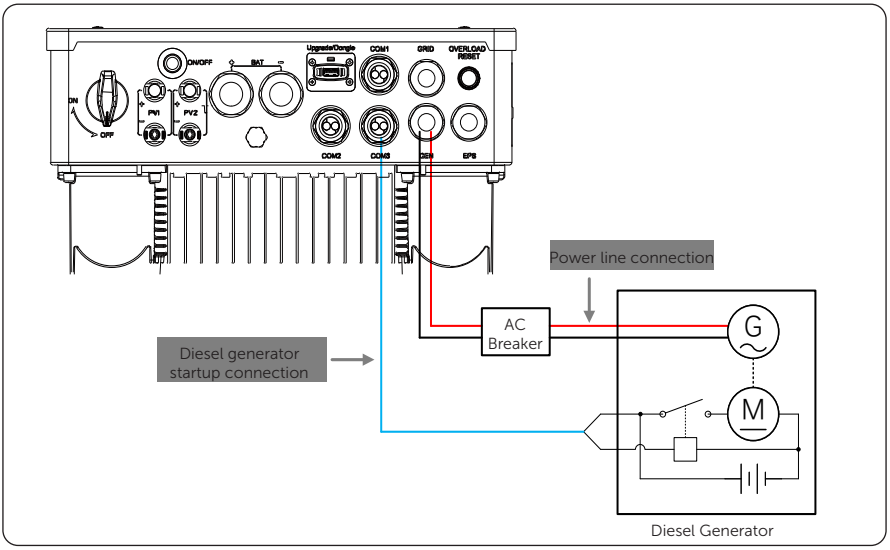


Parallel connection diagram

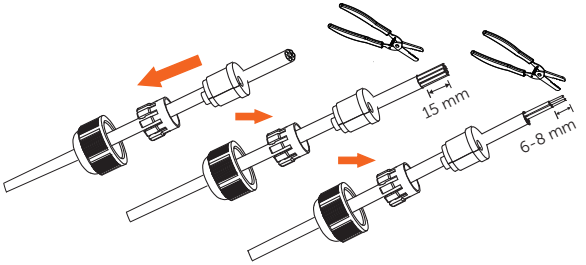
* Parallel cable making method is the same as BMS/DRM/COM.

- Dry-contact output connection

1. Dry-contact output connection diagram

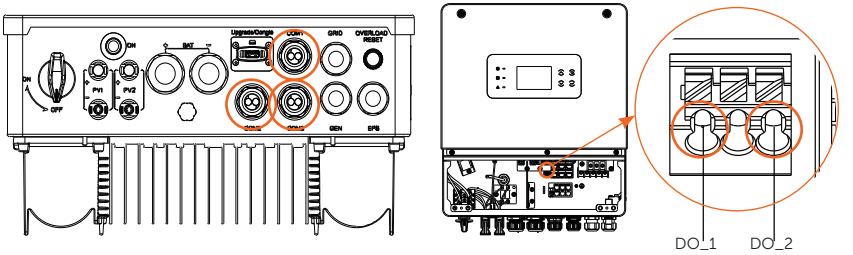


2. Dry-contact output connection steps

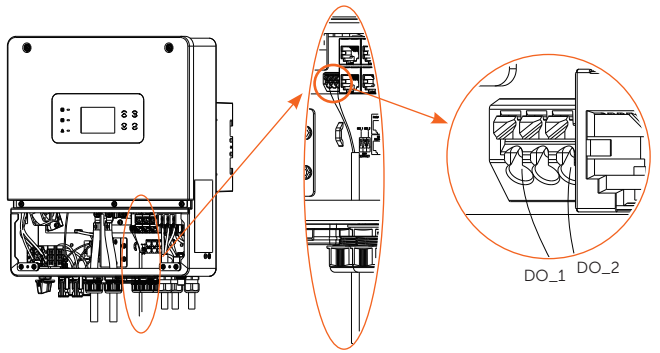


1) White with orange stripes
2) Orange
3) White with green stripes
4) Blue
5) White with blue stripes
6) Green
7) White with brown stripes
8) Brown

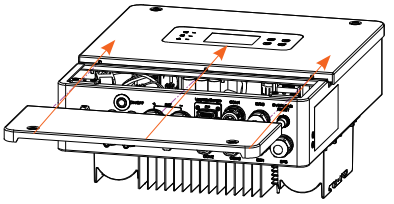
1 * It is recommended to use CAT5 network cable.
* For dry-contact output connection, you can select any two cables from the following four groups: white with orange stripes, Orange; white with green stripes, blue; white with blue stripes, green; white with brown stripes, brown.



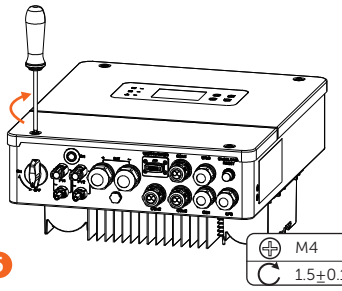
2 * For Communication connection, you can select any port from COM 1, COM 2 and COM3.



3

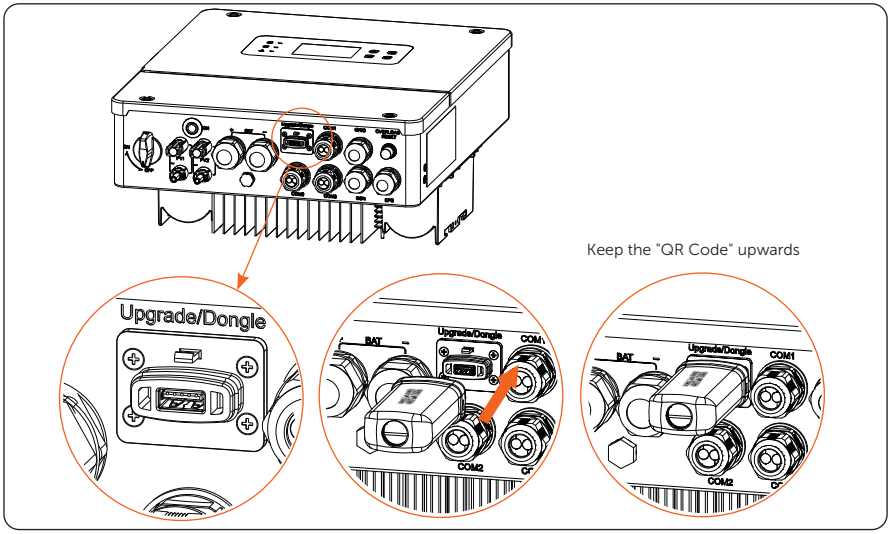


4

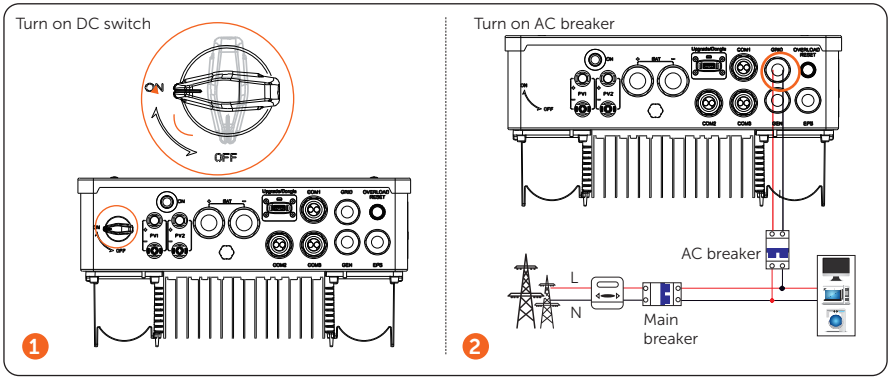


5

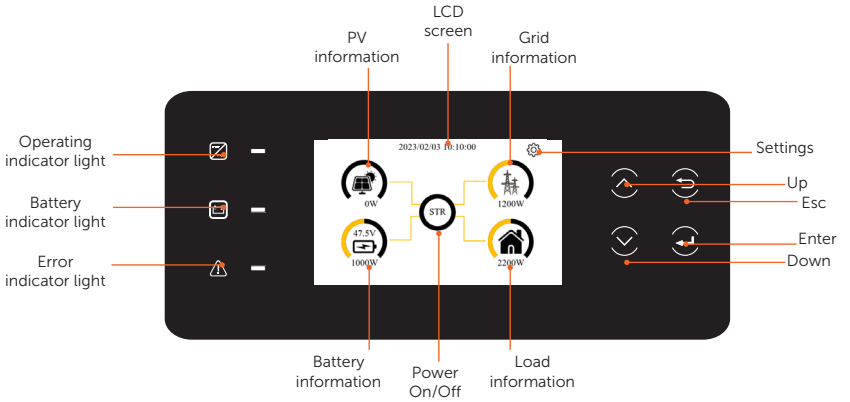
Monitoring Connection / Überwachungs-Anschluss / Branchement de surveillance / Conexión de monitorización / Ligação à Monitorização / Monitoring-aansluiting / Collegamento monitoraggio / Połączenie na potrzeby monitorowania / Připojení ke sledování / Övervakningsanslutning / Conexiune de monitorizare / **Мониторингова връзка** / Overvågningsforbindelse / **Σύνδεση παρακολούθησης** / Seire ühendus / Valvontaliitäntä / Priključak za nadzor / Monitoring bekötés / Stebėjimo ryšys / Uzraudzības savienojums / Pripojenie monitorovania / Povezava za spremljanje / İzleme Bağlantısı / Conexão de Monitoramento



Power on the System / Schalten Sie das System ein / Mise sous tension du système / Encienda el sistema / Ligue o sistema / Het systeem inschakelen / Accensione del sistema / Włączanie systemu / Zapnutí systému / Slå på systemet / Pornire sistem / **Включване на системата** / Tænd for systemet / **Ρεύμα στο σύστημα** / Süsteemi sisselülitamine / Kytke järjestelmän virta päälle / Napajanje sustava / Rendszer áram alá helyezése / Įjungti sistemą / Ieslēdziet sistēmu / Zapnite system / Vklopite sistem / Sistemin Gücü / Ligar o Sistema



LCD Panel / LCD-Bildschirm / Panneau LCD / Panel LCD / Painel de LCD / LCD-paneel / Pannello LCD / Panel LCD / LCD panel / LCD-panel / Panou cu LCD / **LCD панел** / LCD-panel / **Πάνελ LCD** / LCD-paneel / LCD-paneeli / LCD ploča / LCD panel / LCD skydas /LCD panelis / LCD Panel / LCD plošča/ LCD Panel / Painel LCD

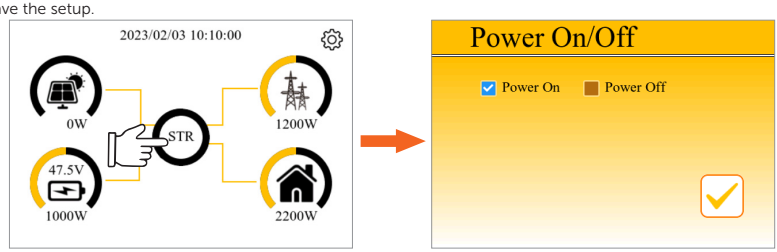


- While upgrading, the green, blue and red indicator lights will flash in turns, indicating that the upgrade is in progress.
- In error state, the fault message and error code will be displayed at the bottom of the LCD screen, please refer to corresponding solutions in the user manual.

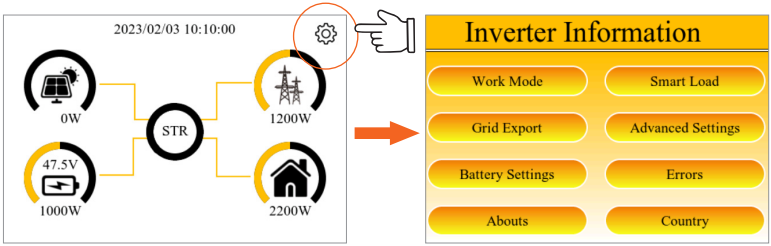
Item	Description
LCD screen	Display the information of the inverter.
Operating indicator light	Light in green: The inverter is in grid-connected operation state or off-grid operation state. Flash in green: The inverter is in the process of grid connection or off-grid. Light off: The inverter is in a fault or manual shutdown state.
Battery indicator light	Light in blue: The battery is online and the voltage is normal. Light off: Low battery voltage or no battery.
Error indicator light	Light in red: The inverter is in fault status. Flash in red:The inverter has alarm information. Light off: There are no faults and alarms in the inverter.
Up key	Turn to the previous page.
Esc key	Return to the superior menu or cancel setting value.
Down key	Turn to the next page.
Enter key	Confirm the selection.

General Setting / Allgemeine Einstellungen / Paramètres généraux / Configuración general / Definição Geral / Algemene instelling / Impostazione generale / Ustawienia ogólne / Obecné nastavení / Generell inställning / Setare general / **Обща настройка** /Generel indstilling / **Γενική τοποθέτηση** / Üldine seadistus / Yleisasetus / Opće postavke / Általános beállítás / Bendrasis nustatymas / Vispārīgs iestatījums / Všeobecné nastavenie / Splošna nastavitev / Genel Ayar / Configuração Geral

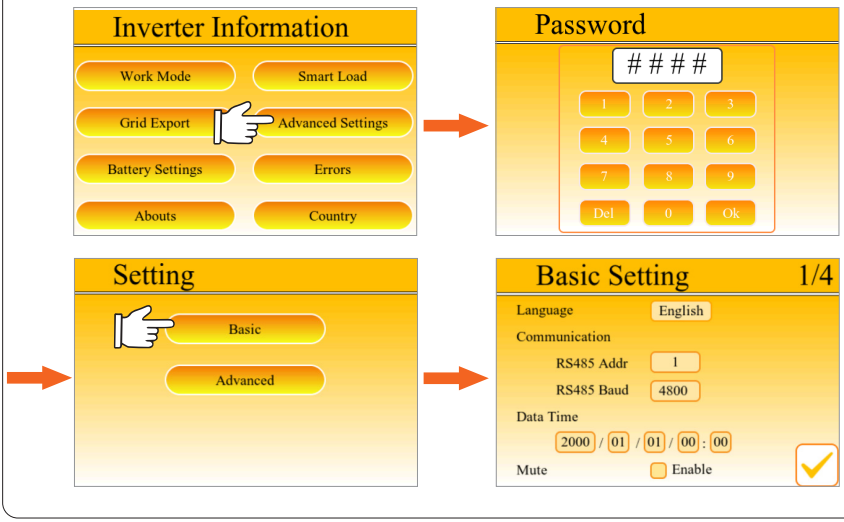
1 Set the Power On/Off. Tap the "√" on the screen or press the Enter button after completing the modification to save the setup.



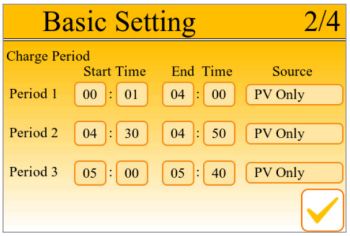
2 Tap the settings icon in the upper right corner to enter the main menu.

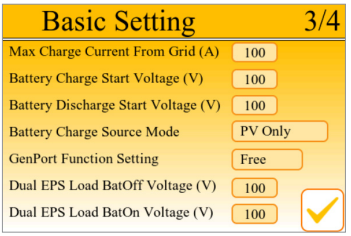


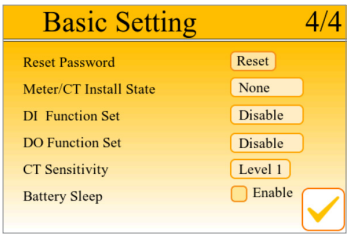
3 Set the basic settings including system time, date and language. The initial password is 0000 which should be changed for the consideration of account security.



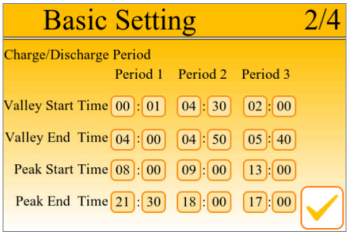
Basic settings for Pakistan:

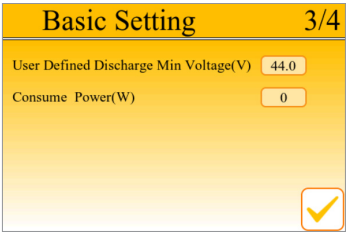


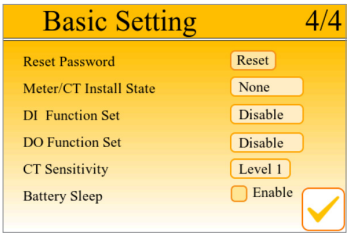




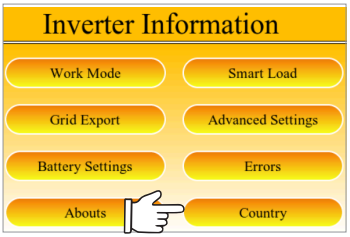
Basic settings for other countries:

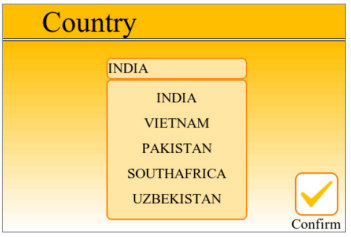




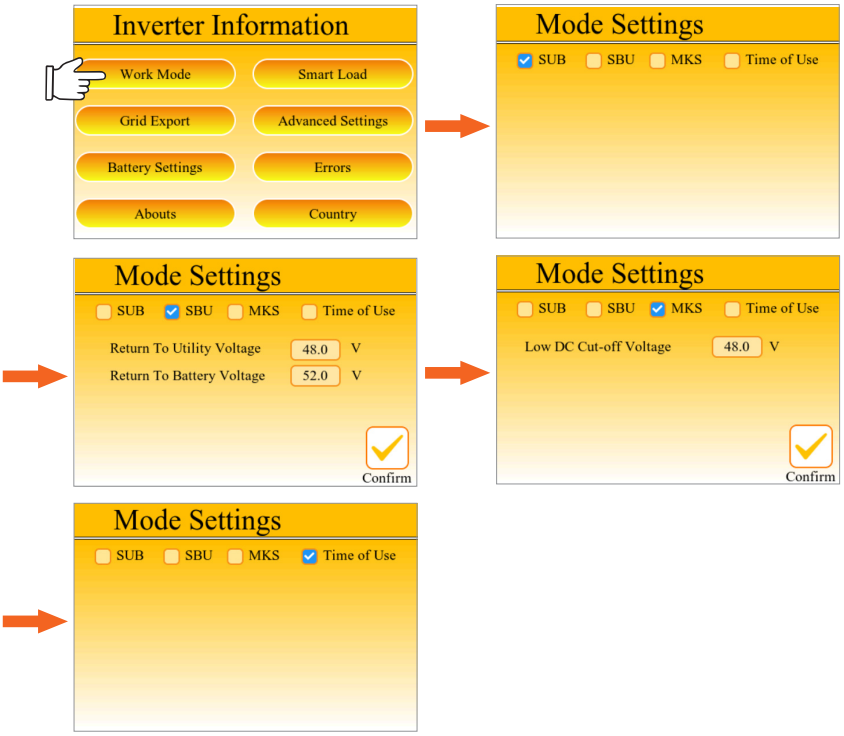


4 Select the country. Please note that only when "Pakistan" is selected here will Pakistan's 4 modes be displayed in "Work Mode" and the "Basic Settings" interface will be different accordingly.

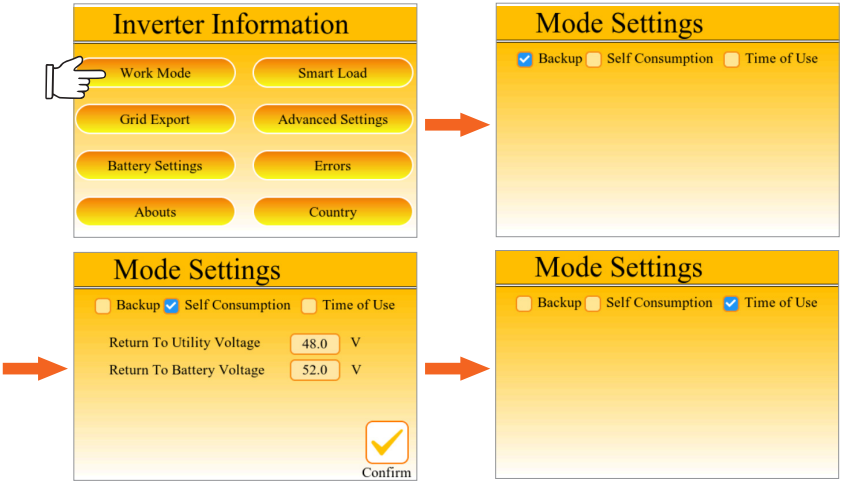




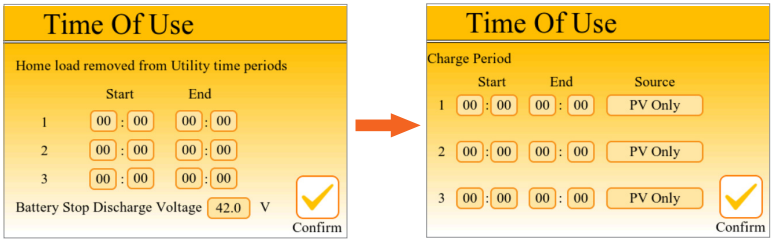
5 Select the work modes.
Work modes for Pakistan:



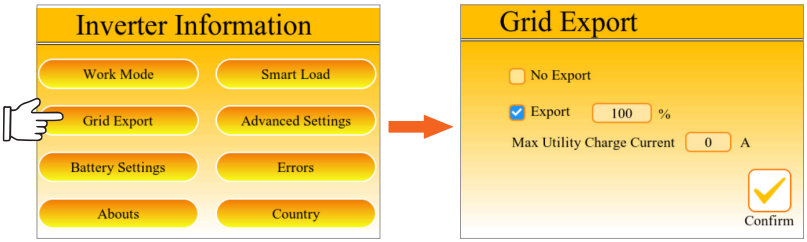
Work modes for other countries:



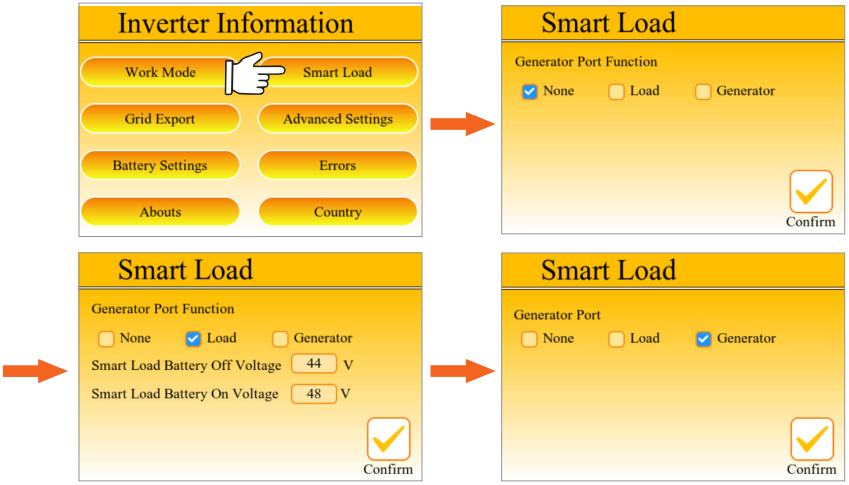
When "Time Of Use" mode is selected, there will be two interface pages for setting the charging period and discharging period. You can switch between the two pages using the up and down buttons:



6 Select the grid export. Here users can choose between feeding excess PV power into the grid or limiting it.

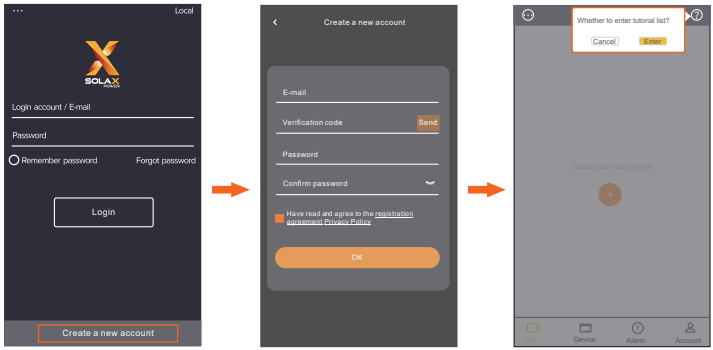


7 Select the smart load.



Wi-Fi Configuration / WLAN-Konfiguration / Configuration Wi-Fi / Configuración de wifi / Configuração de Wi-Fi/Wi-Fi-configuratie / Configurazione del Wi-Fi / Konfiguracja Wi-Fi / Konfigurace Wi-Fi / Wi-Fi-konfiguration / Configurare Wi-Fi / Wi-Fi **конфигурация** / WiFi-konfiguration / **Ρυθμίσεις παραμέτρων** Wi-Fi / Wi-Fi konfiguratsioon / Wi-Fi-kokoonpano / Konfiguracija Wi-Fi mreže / Wi-Fi konfiguráció /„Wi-Fi" konfigūracija / Wi-Fi konfigurācija / Konfigurácia Wi-Fi / Konfiguracija Wi-Fi / Wi-Fi Yapılandırması / Configuração Wi-Fi

1 Scan the QR code to download SolaXCloud App.



2 Create a new account and follow the tutorial on the SolaXCloud APP or the App guide at https://www.solaxcloud.com/ to set the WiFi configuration.

Or scan the QR code to watch the WiFi configuration video on YouTube.

Technical Data / Technische Daten / Fiche technique / Datos técnicos / Dados Técnicos / Technische gegevens / Dati tecnici / Dane techniczne / Technické údaje / Tekniska data / Date tehnice / **Технически данни** / Tekniske data / **Τεχνικά δεδομένα** / Tehnilised andmed / Tekniset tiedot / Tehnički podaci / Műszaki adatok / Techniniai duomenys / Tehniskie dati / Technické údaje / Tehnični podatki / Teknik Bilgiler / Dados Técnicos

- DC input

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Max. PV array power [Wp]	4500	5500	6000	6900	7500	9000
Max. PV input voltage [V]	550					
Start output voltage[V]	110					
Nominal input voltage [V]	360					
MPPT voltage range[V]	80 ~ 520					
No. of MPPT/Strings per MPPT	2 (1/1)					
Max. input current[A]	16/16					
Max. short circuit current[A]	20/20					

- AC output/ input

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Nominal AC Output Current[A]	13	16	17.4	20	21.7	26.1
Nominal AC output power[W]	3000	3680	4000	4600	5000	6000
Max. AC output apparent power[VA]	3300	3680	4400	4600	5000	6000
Max. AC output current [A]	15	16	20	20.9 (Germany 20)	22.7	27.3
Max. AC input apparent power [VA]	6000	7360	8000	9200	9200	9200
Max. AC input current [A]	26.1	32	34.8	40	40	40
Nominal voltage [V], frequency [Hz]	220/230/240, 50/60					
Displacement power factor	0.8 leading ~ 0.8 lagging					
THDi (rated power) [%]	<3					
AC Connection	L/N/PE					
DC Disconnection Switch	Optional					

- EPS output

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Nominal output power [W]	3000	3680	4000	4600	5000	6000
Peak apparent power[VA][1]	2 times of nominal, 10s					
Nominal Output Current[A]	13	16	17.4	20	21.7	26.1
Nominal voltage [V], frequency [Hz]	230, 50/60					
Switch Time[ms]	<10					

* "1" Depend on PV and battery capacity.

- Battery data

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Battery type	Lithium/Lead-Acid					
Battery voltage range [V]	40~60					
Nominal Battery Voltage[V]	48					
Max. Charging Voltage[V]	<=60 (Adjustable)					
Max. Charging/Discharging Current[A]	75			120		
Charging Strategy for Li-Ion Battery	Self-adaption to BMS					
Charging Strategy for Lead-Acid Battery	3 stages curve					
Temperature Sensor	Optional					

- System data

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
MPPT Efficiency	>99.9%					
Max. efficiency [%]	97.6					
Euro. efficiency [%]	97.0					
Battery charge/discharge effciency [%][2]	96.0/95.0					

* "[2]" PV to BAT Max. efficiency 96.0%, BAT to AC Max. efficiency 95.0%.

- Protection device

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Anti-Islanding Protection	Yes					
PV String Input Reverse Polarity Protection	Yes					
Insulation Resistor Detection	Yes					
Residual Current Monitoring Unit	Yes					
Output Over Current Protection	Yes					
Output Short Protection	Yes					
Output Over Voltage Protection	Yes					
Surge Protection	AC Type III/DC Type III					
Battery Terminal Temp Protection	Yes					

- Power consumption & Environment limit

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Self Consumption(night) [W]	Standby < 40, Shutdown < 10					
Degree of protection	IP65					
Operating temperature range[°C]	-25 ~ +60 (derating above +45)					
Relative humidity [%]	0 ~ 100 (condensing)					
Max. operation altitude [m]	<3000					
Storage Temperature[°C]	-25 ~ +70					
Noise Emission(typical)[dB]	<39				<50	

- General data

Model	X1-HYB-3.0-LV	X1-HYB-3.7-LV	X1-HYB-4.0-LV	X1-HYB-4.6-LV	X1-HYB-5.0-LV	X1-HYB-6.0-LV
Dimensions(WxHxD) [mm]	397x490x201					
Net weight [kg]	16.5				17.3	
Cooling concept	Natural				Smart cooling	
Topology	Transformerless for PV Side/HF for battery Side					
HMI Interface	LED+LCD					
Communication interfaces	CAN, RS485, CT, Meter, WiFi, LAN, 4G (Optional), USB , NTC, wifi+lan, wifi+4G					

Contact Information

UNITED KINGDOM

Unit 10, Eastboro Fields, Hemdale Business Park, Nuneaton, CV11 6GL
+44 (0) 2476 586 998
service.uk@solaxpower.com

AUSTRALIA

12-18 Lascelles St, Springvale VIC 3171
+61 1300 476 529
service@solaxpower.com

TURKEY

Esenşehir Mah. Hale Sk. No:6/1 Ümraniye / İSTANBUL
+90 (216) 622 58 00 (pbx)
service.eu@solaxpower.com

GERMANY

Eisenstraße 3, 65428 Rüsselsheim am Main, Germany
+49 (0) 6142 4091 664
service.eu@solaxpower.com

USA

3780 Kilroy Airport Way, Suite 200, Long Beach, CA, US 90806
+1 (408) 690 9464
info@solaxpower.com

NETHERLANDS

Twekkeler-Es 15 7547 ST Enschede
+31 (0) 8527 37932
service.eu@solaxpower.com
service.bnl@solaxpower.com

POLAND

WARSAW AL. JANA P. II 27. POST
+48 662 430 292
service.pl@solaxpower.com

SPAIN

+34 9373 79607
tecnico@solaxpower.com

ITALY

+39 348 2786 409
support.it@solaxpower.com

BRAZIL

+55 (34) 9667 0319
info@solaxpower.com

Warranty Registration Form

For Customer (Compulsory)

Name _____ Country _____

Phone Number _____ Email _____

Address _____

State _____ Zip Code _____

Product Serial Number _____

Date of Commissioning _____

Installation Company Name _____

Installer Name _____ Electrician License No. _____

For Installer

Module (If Any)

Module Brand _____

Module Size(W) _____

Number of String _____ Number of Panel Per String _____

Battery (If Any)

Battery Type _____

Brand _____

Number of Battery Attached _____

Date of Delivery _____ Signature_____

Please visit our warranty website: https://www.solaxcloud.com/#/warranty or use your mobile phone to scan the QR code to complete the online warranty registration.

For more detailed warranty terms, please visit SolaX official website: www.solaxpower.com to check it.

SolaX Power Network Technology (Zhejiang) Co., Ltd.

Add.: No. 288, Shizhu Road, Tonglu Economic Development Zone,
Tonglu City, Zhejiang Province, 310000 P. R. CHINA

Tel.: +86 (0) 571 5626 0011

E-mail: info@solaxpower.com / service@solaxpower.com

320102062803