



X1-IES

**2.5 kW / 3.0 kW / 3.7 kW / 4.6kW /
5.0kW / 6.0kW / 8.0kW**

Installation Manual

Version 5.0

www.solaxpower.com



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

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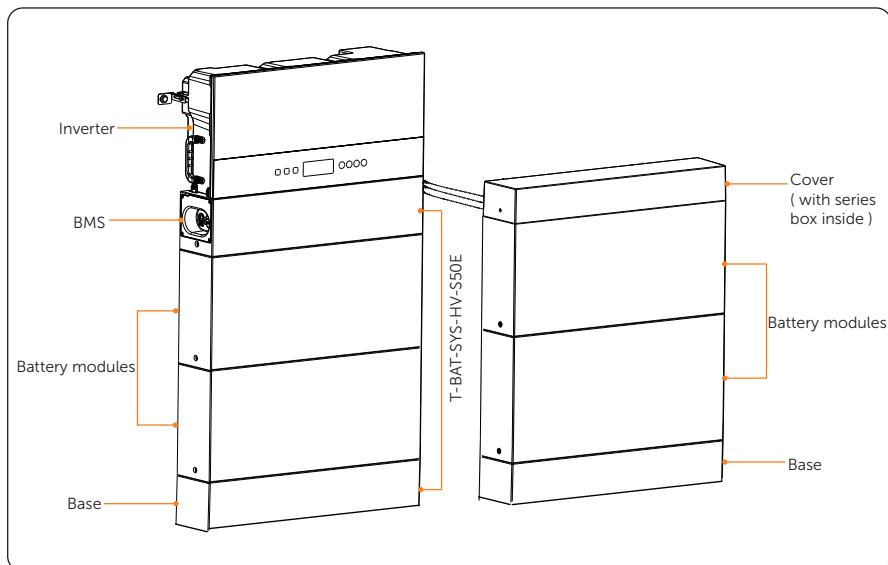
X1-IES Installation



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



An Introduction to X1-IES system

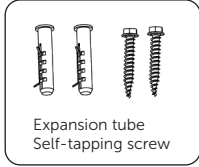
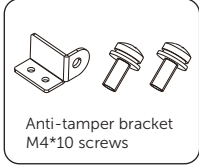
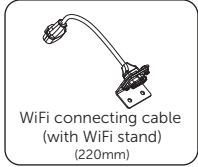
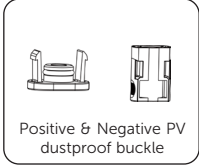
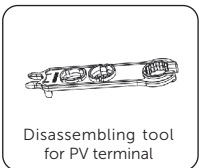
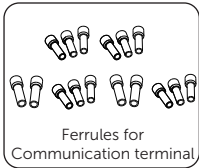
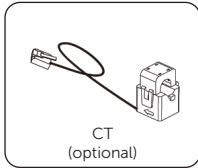
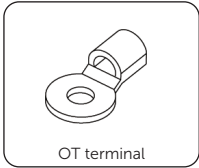
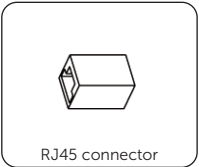
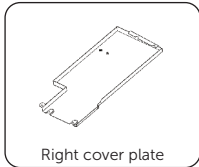
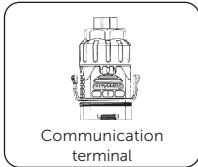
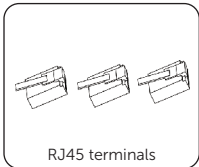
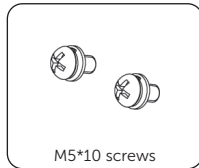
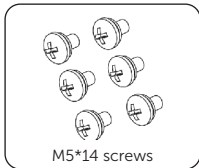
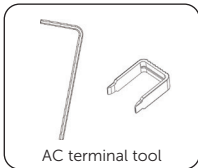
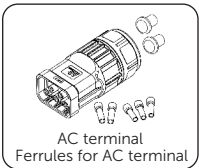
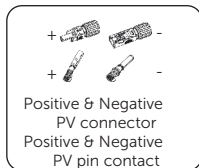
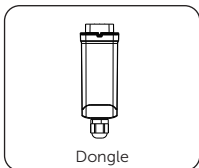
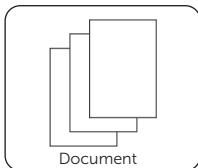
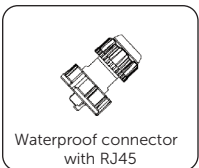
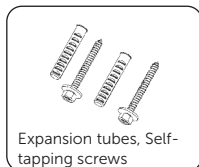
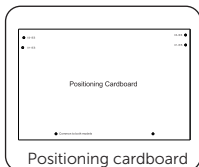
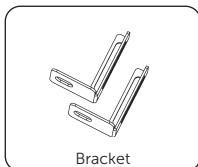
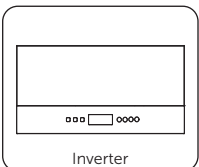


INSTALLATION

- "X1-IES system" is a residential single-phase photovoltaic storage hybrid inverter system.
- "X1-IES series inverter" (inverter for short) refers to the energy storage inverter that supports photovoltaic grid-connected.
- "T-BAT-SYS-HV-S50E" (T-BAT-SYS for short) is the name of battery system. It includes BMS, battery modules, base, cover and series box.
- "BMS" is an electronic system that manages rechargeable batteries. It is installed on battery module (s). Its model name is TBMS-MCS0800E.
- "Battery module" is an electrical battery that can charge or discharge loads. It is installed under a BMS or a cover. Its model name is TP-HS50E.
- "Base" is used to support the batteries. It is installed under the battery module (s).
- "Cover" is installed on the top battery module of the expansion battery tower.
- "Series box" is used to connect the two towers through wiring. It is installed on the top battery module of the expansion battery tower and inside the "cover".

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 / Упаковочный лист / Pakkeliste / Λίστα συσκευασίας / Pakkeleht / Pakkausluettelo / Popis pakiranja / Csomaglista / Pakuotės turinys / Iepakojuma saraksts / Zoznam položiek balenia / Seznam pakiranja / Kutu listesi / Lista de embalagem / قوائم محتويات الكرتون / قوائم محتويات الكرتون

- Inverter



Item	Quantity
Inverter	1 pc
Bracket	2 pcs
Positioning cardboard	1 pc
Expansion tube, Self-tapping screw	2 pairs
Waterproof connector with RJ45	1 pc
Document	/
Dongle	1 pc
Positive & Negative PV connector / pin contact	2 pairs for 2.5kW~3.7kW inverters 3 pairs for 4.6kW~8kW inverters
AC terminal	1 pc
Ferrules for AC terminal *	5 pcs of per type
AC terminal tool	1 pair
M5*14 screw	6 pcs
M5*10 screw	2 pcs
RJ45 terminal	3 pcs
Communication terminal	1 pc
Right cover plate	1 pc
RJ45 connector	1 pc
OT terminal	1 pc
CT (optional) **	1 pc
Ferrules for Communication terminal	16 pcs
Disassembling tool for PV terminal	1 pc
Positive & Negative PV dustproof buckle	2 pairs for 2.5kW~3.7kW inverters 3 pairs for 4.6kW~8kW inverters
WiFi connecting cable (with WiFi stand) (220 mm)	1 pc
Anti-tamper bracket	1 pc
M4*10 screws	2 pcs
Expansion tube	2 pcs
Self-tapping screw (ST4.8)	2 pcs

For the optional accessories, please be subject to the actual delivery.

**According to the outer carton label, you can determine whether CT is standard. If the "Meter/CT" column on the outer carton label is filled with "CT," it indicates standard CT. If the label does not have a "Meter/CT" column, it indicates no CT.

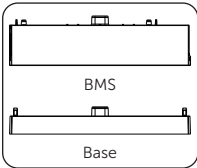
*Ferrules for AC terminal

Model	X1-IES-2.5K	X1-IES-3K X1-IES-3.7K	X1-IES-4.6K X1-IES-5K X1-IES-6K	X1-IES-8K
Ferrules	E 4012 (5 pcs)	E 4012 , E 6012 (5 pcs of per type, 10 pcs in total)	E 6012, E 1012 (5 pcs of per type, 10 pcs in total)	E 1012 (5 pcs)
Applicable wire diameters	4 mm ²	4 mm ² , 6mm ²	6 mm ² , 10 mm ²	10 mm ²

For Grid and EPS cables, make sure to choose the appropriate ferrules based on the wire diameters.

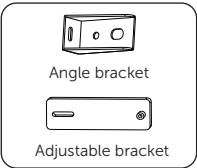
- **Battery (T-BAT-SYS)**

BMS (TBMS-MCS0800E)



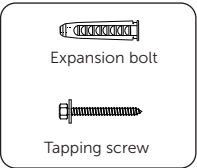
BMS

Base



Angle bracket

Adjustable bracket

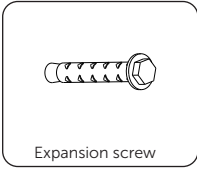


Expansion bolt

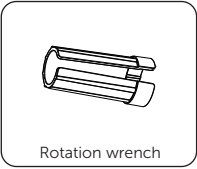
Tapping screw



M5*14 Phillips cheese head screw



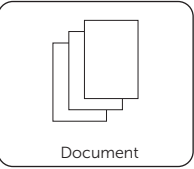
Expansion screw



Rotation wrench



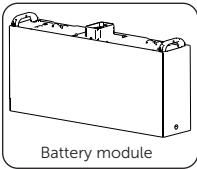
System performance label



Document

Item	Quantity
BMS	1 pc
Base	1 pc
Angle bracket	4 pcs
Adjustable bracket	4 pcs
Expansion bolt, tapping screw	4 pairs
M5*14 Phillips cheese head screw	8 pcs
Expansion screw	2 pcs
Rotation wrench	1 pc
System performance label	1 pc
Document	/

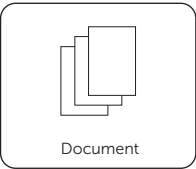
Battery Module (TP-HS50E)



Battery module



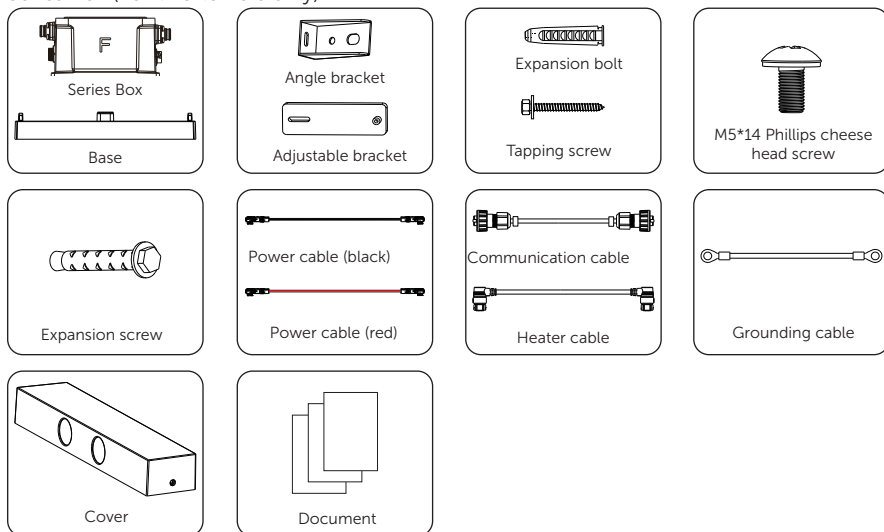
M5*14 Phillips cheese head screw



Document

Item	Quantity
Battery module	1 pc
M5*14 Phillips cheese head screw	2 pcs
Document	/

Series Box (For two towers only)

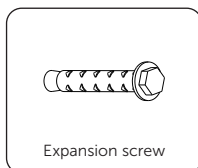
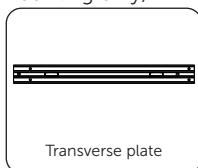
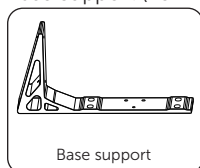


Item	Quantity
Series box	1 pc
Base	1 pc
Angle bracket	4 pcs
Adjustable bracket	4 pcs
Expansion bolt, tapping screw	4 pairs
M5*14 Philips cheese head screw	12 pcs
Expansion screw	2 pcs
Power cable (Black)	1 pc
Power cable (Red)	1 pc
Communication cable	1 pc
Heat cable	1 pc
Grounding cable	1 pc
Cover	1 pc
Document	/



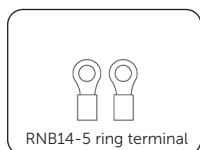
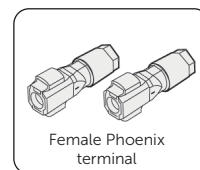
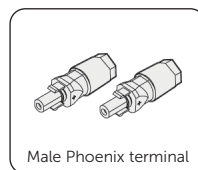
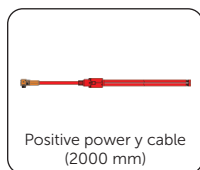
INSTALLATION

Base Support (For wall mounting only)



Item	Quantity
Base support	2 pcs
Transverse plate	1 pc
Expansion screw	6 pcs
M5*20 Philips countersunk head screw	6 pcs
M5*8 Philips countersunk head screw	4 pcs

Cable (Optional)



Item	Quantity
Positive power y cable (2000 mm)	1
Negative power y cable (2000 mm)	1
Male Phoenix terminal	2
Female Phoenix terminal	2
RNB14-5 ring terminal	2

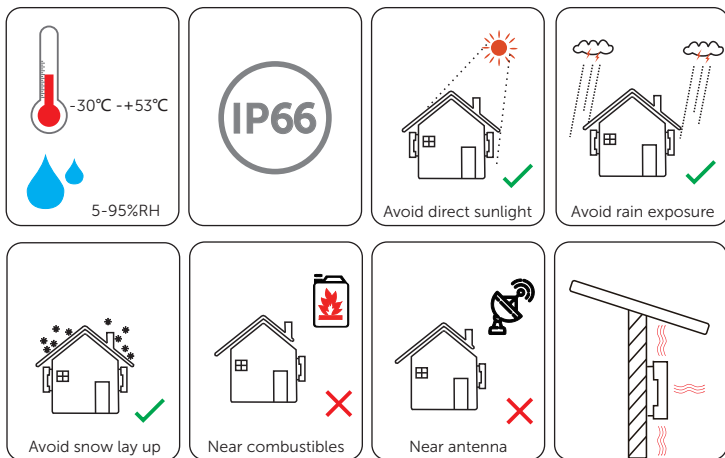
*Note:

1. As for the installation steps for power y cables, please refer to the inverter's *User Manual*.
2. Users can purchase the above-mentioned accessory kit based on their actual needs.
3. Do not use the above-mentioned power y cables if the equipment is in parallel.
4. The RNB14-5 ring terminal is suitable for 10 mm² grounding wire.



Installation Site

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 объект / Monteringssted / Τόπος εγκατάστασης / Paigaldamise koht / Asennuspaikka / Lokacija ugradnje / Telepítési helyszín / Montavimo vieta / Uztādīšanas vieta / Miesto inštalácie / Mesto namestitve / Kurulum Yeri / local de instalação / موقع التركيب



NOTICE!

- For outdoor installation, precautions against direct sunlight, rain exposure and snow accumulation are recommended.
- Exposure to direct sunlight raises the temperature inside the device. This temperature rise poses no safety risks, but may impact the device performance.



INSTALLATION

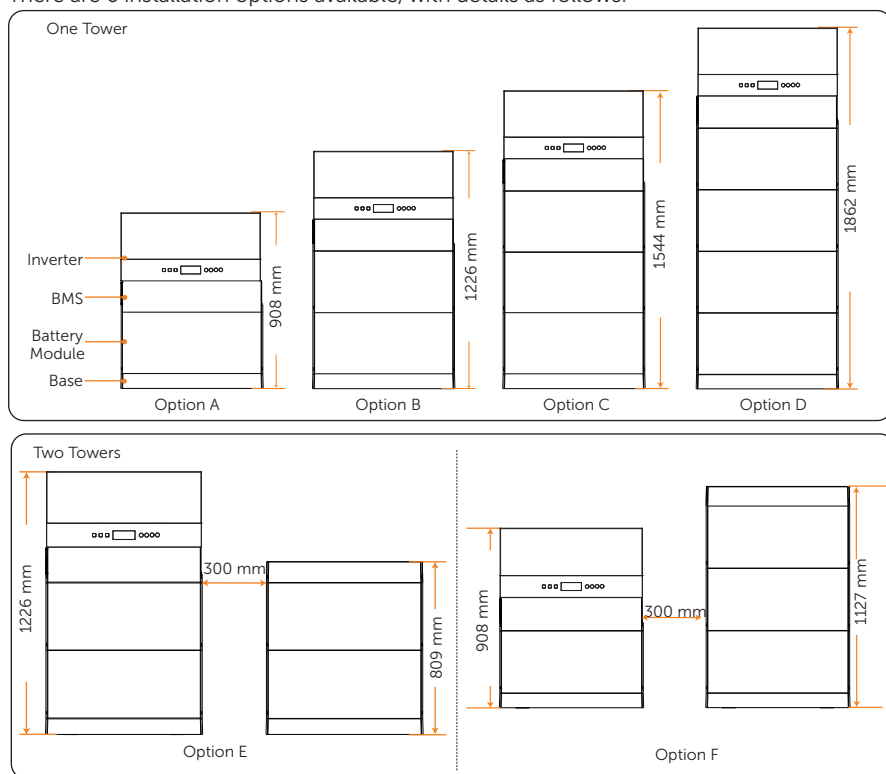
Installation Options

Installation Options / Montageoptionen / Options d'installation / Opciones de instalación / Opções de Instalação / Instalatieopties / Opzioni di installazione / Opcje montażu / Možnosti instalace / Installationsalternativ / Opțiuni de instalare / Опции за монтаж / Installationsmuligheder / Επιλογές εγκατάστασης / Paigaldamisvalikud / Asennusvaihtoehdot / Mogučnosti ugradnje / Felszerelési lehetőségek / Montavimo variantai / Uzstādīšanas iespējas / Možnosti inštalácie / Možnosti namestitve / Kurulum Seçenekleri / Opções de instalação / خيارات التركيب

*Note:

1. X1-IES series inverter matches 1~4 battery modules. It is suitable for "option A/B/C/D" in one tower and "option E/F" in two towers.
2. Wall mounting is recommended.
3. "Option D" (four battery modules in one tower) is recommended when the installation space is limited.
4. The following installation options apply to the modes of floor mounting and wall mounting.

There are 6 installation options available, with details as follows:



Components of different options

	Option A	Option B	Option C	Option D	Option E		Option F	
					Left tower	Right tower	Left tower	Right tower
Inverter	1	1	1	1	1		1	
BMS	1	1	1	1	1		1	
Battery Module	1	2	3	4	2	2	1	3
Base	1	1	1	1	1	1	1	1
Series box						1		1
Cover						1		1

* If the wall mounting is selected, the base support (s) is (are) necessary.

Net weight and dimension of X1-IES system

One Tower

	Option A	Option B	Option C	Option D
Net Weight (kg)	87.2	134.2	181.2	228.2
Dimension (mm)	730*908*210	730*1226*210	730*1544*210	730*1862*210

Two Towers

	Option E		Option F	
	Left tower	Right tower	Left tower	Right tower
Net Weight (kg)	134.2	99.2	87.2	146.2
Dimension (mm)	730*1226*210	730*809*150	730*908*150	730*1127*210

* Note:

1. The maximum net weight of an inverter (27kg) is taken as an example.
2. The net weight of inverters in different powers is different. Please check the specific net weight of the inverter when calculating the total weight of the X1-IES system.
3. Please consider the distance between the left tower and the right tower under limited installation space.

Weight and Dimension of the Inverter

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Weight (kg)		26.2			26.4		27
Dimension (mm)				717*350*210			

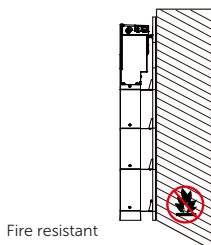
Weight and Dimension of the Battery (T-BAT-SYS)

Item	TBMS-MCS0800E	TP-HS50E	Base	Series Box
Length (mm)	730	730	730	167
Width (mm)	150	150	150	121
Height (mm)	165	318	75	91.5
Net weight (kg)	9.3	47	3.9	1.3



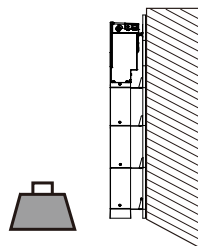
Installation Carrier

Installation Carrier / Installationsträger / Partie porteuse / Soporte de instalación / Suporte de Instalação / Installatiedrager / Supporto di installazione / Powierzchnia montażowa / Nosič instalace / Installationsfästen / Suport instalație / Монтажна основа / Μεταφορέας εγκατάστασης / Paigalduskandja / Asennusteline / Nosač za ugradnju / Telepítési szolgáltató / Montavimo pagrindas / Instalācijas turētājs / Nosnā konstrukcija pre inštalāciju / Namestitveni nosilec / Kurulum Taşıyıcı / Transportadora de instalação / حامل التثبيت



Fire resistant

Be suitable for the dimension and weight of Battery plus Inverter.

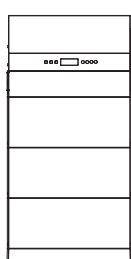


* A cement wall is required for the installation of X1-IES system. When the wall mounting is selected, please ensure that the thickness of the wall should be more than 150 mm; when the floor mounting is selected, the thickness of the wall should be more than 100 mm.

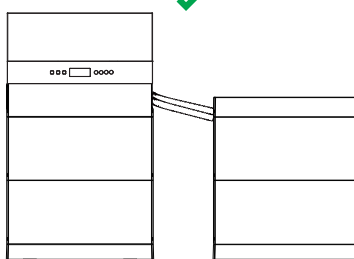
Installation Angle

Installation Angle / Installationswinkel / Angle d'installation / Ángulo de instalación / Ângulo de instalação / Installatiehoek / Angolazione di installazione / Köt instalacj / 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 / زاوية التركيب

One tower



Two towers

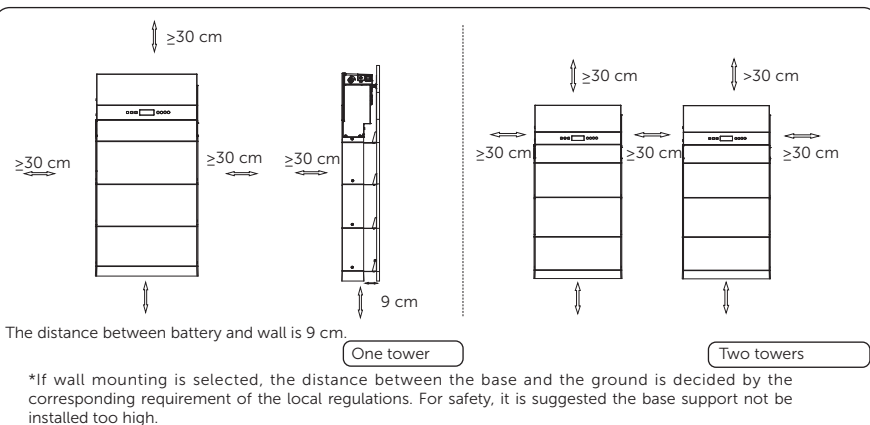


X1-IES system should be installed vertical to the ground.



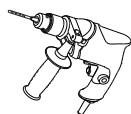
Installation Space

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 / Telepitési tér / Montavimo erdvė / Uzstādišanas telpa / Priestor pre inštaláciu / Prostor za nameštitev / Kurulum Alanı / Espaço de Instalação / مساحة التركيب



Installation Tools

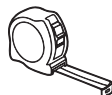
Installation Tools / Installationswerkzeuge / Outils d'installation / Herramientas de instalación / Ferramentas de instalação / Installatiemiddelen / Utensili di installazione / Narzędzia do instalacji / Instalační nástroje / Verktøy för installation / Instrumente de instalare / Монтажни инструменти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



Hammer drill



Multimeter



Measuring tape



Utility knife



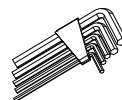
Marker



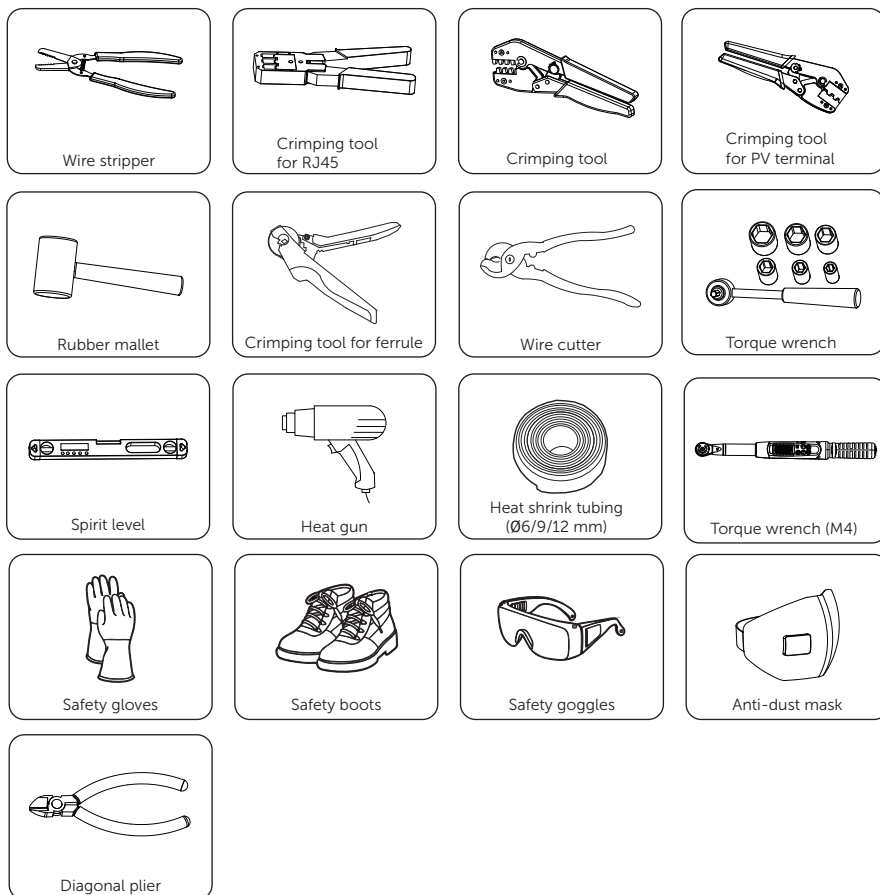
Cross screwdriver



Flat-head screwdriver



Allen key



Additional Required Materials

Additionally Required Materials / Zusätzlich erforderliche Materialien / Matériaux supplémentaires requis / Materiales adicionales necesarios / Materiais Adicionais Necessários / Extra benodigde materialen / Materiali aggiuntivi necessari / Materiały wymagane dodatkowo / Další požadované materiály / Ytterligere materialkrav / Materiale suplimentare necesare / Други необхідні матеріали / Yderligere nødvendige materialer / Πρόσθετα απαιτούμενα υλικά / Täiendavad vajalikud materjalid / Muut vaaditud materiaalit / Potrebni dodatni materijali / További szükséges anyagok / Papildomas reikalingos medžiagos / Papildus vajadzīgie materiāli / Dodatočne požadované materiály / Dodatno zahtevani materiali / Ayrıca Gerekli Malzemeler / Materiais Adicionais Necessários / المواد المطلوبة أيضًا

• Battery (T-BAT-SYS)

No.	Required Material	Type	Diameter
1	Protective pipe	Corrugated pipe	External diameter: over 67.2 mm

• Inverter

No.	Required Material	Type	Conductor Cross-section
1	PV cable	Dedicated PV wire withstand voltage 600 V	6 mm ²
2	Communication cable	Network cable CAT5e	0.2 mm ²
3	Additional PE cable	Conventional yellow and green wire	6 mm ²
4	Protective pipe	White corrugated pipe	External diameter: over 60 mm

Grid cable and breaker recommended

Model	X1-IES- 2.5K	X1-IES- 3K	X1-IES- 3.7K	X1-IES- 4.6K	X1-IES- 5K	X1-IES- 6K	X1-IES- 8K
Three-core copper wire	4 mm ²	6 mm ²			10 mm ²		
Breaker	32 A	32 A	40 A		50 A		

EPS cable and breaker recommended

Model	X1-IES- 2.5K	X1-IES- 3K	X1-IES- 3.7K	X1-IES- 4.6K	X1-IES- 5K	X1-IES- 6K	X1-IES- 8K
Two-core copper wire		4 mm ²			6 mm ²		10 mm ²
Breaker		25 A			32 A		50 A

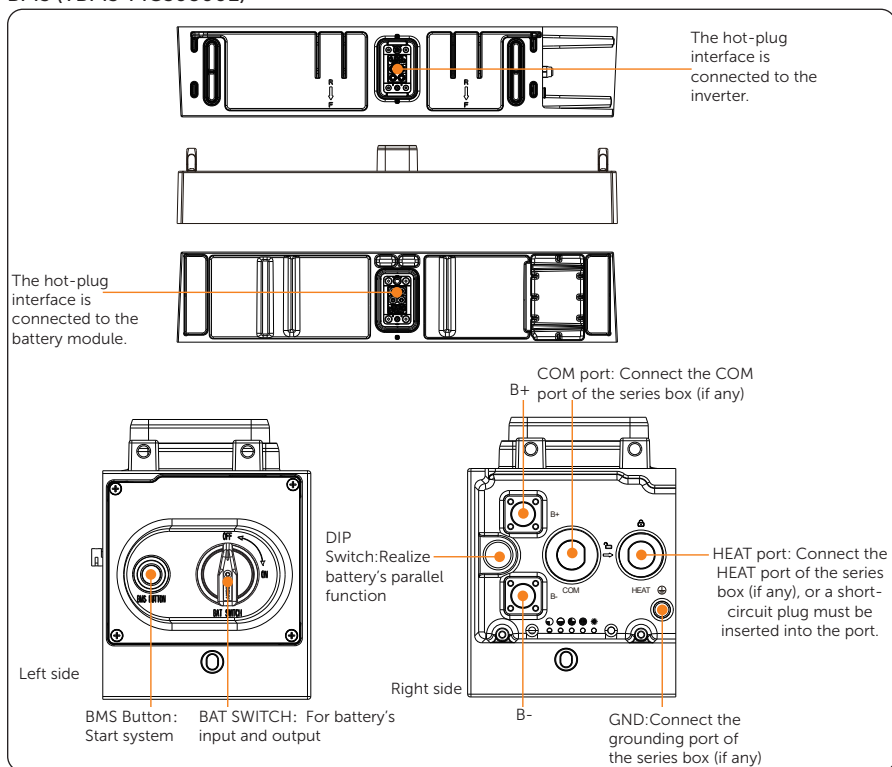
* The wire diameter of Grid and EPS cables should be within 13-21 mm.

Terminals and Parts of Mechanical

Terminals and Parts of Mechanical / Terminals und Teile der Mechanik / Bornes et pièces mécaniques / Terminales y partes mecánicas / Terminais e partes mecânicas / Terminals en onderdelen van de mechanica / Terminali e parti meccaniche / Terminale i części mechaniczne / Terminály a mechanické části / Terminaler och mekaniska delar / Terminale și piese mecanice / Терминали и механични части / Terminaler og mekaniske dele / Τερματικά και μηχανικά μέρη / Terminaalid ja mehaanilised osad / Liittimet ja mekaaniset osat / Terminali i mehanički dijelovi / Terminálok és mechanikai alkatrészek / Terminalai ir mechaninės dalys / Termināļi un mehāniskās daļas / Terminali in mehanski deli / Terminali in mehanski deli / Terminaller ve mekanik parçalar / Terminais e peças mecânicas / ذي كين الديل اءازج أو فارتأ

- Battery (T-BAT-SYS)

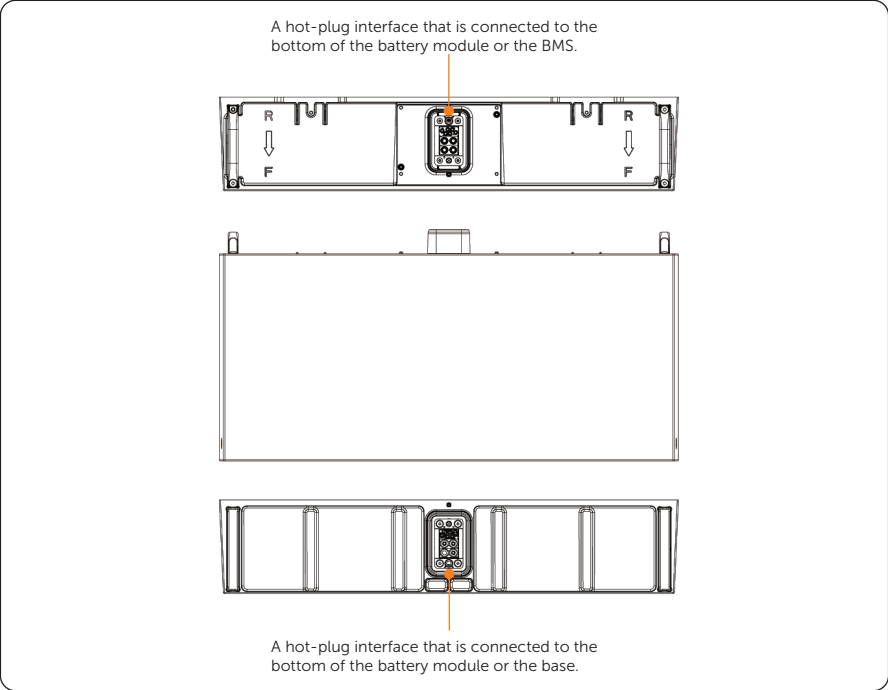
BMS (TBMS-MCS0800E)



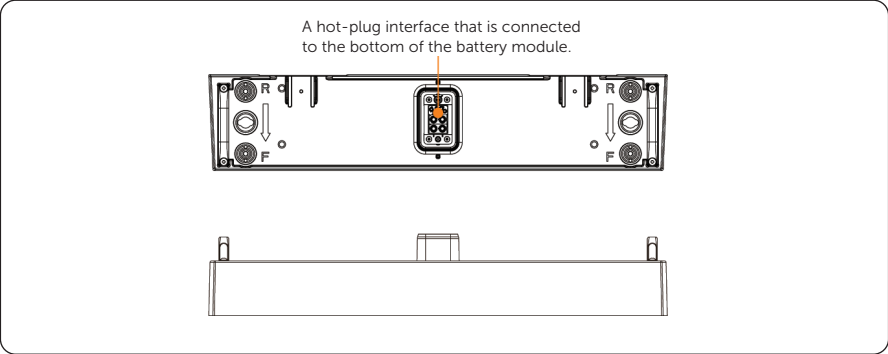
INSTALLATION



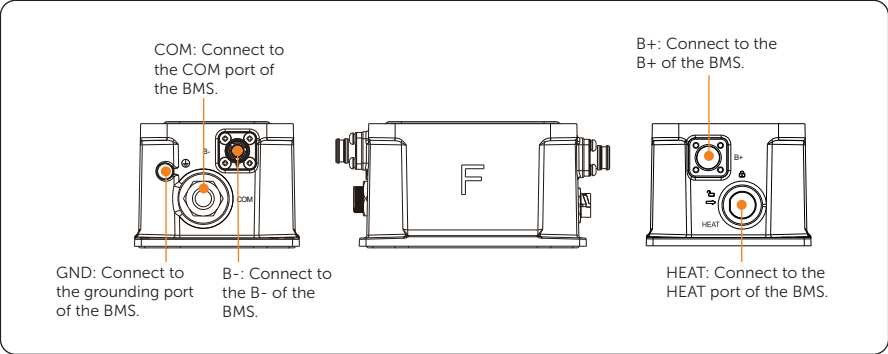
Battery Module (TP-HS50E)



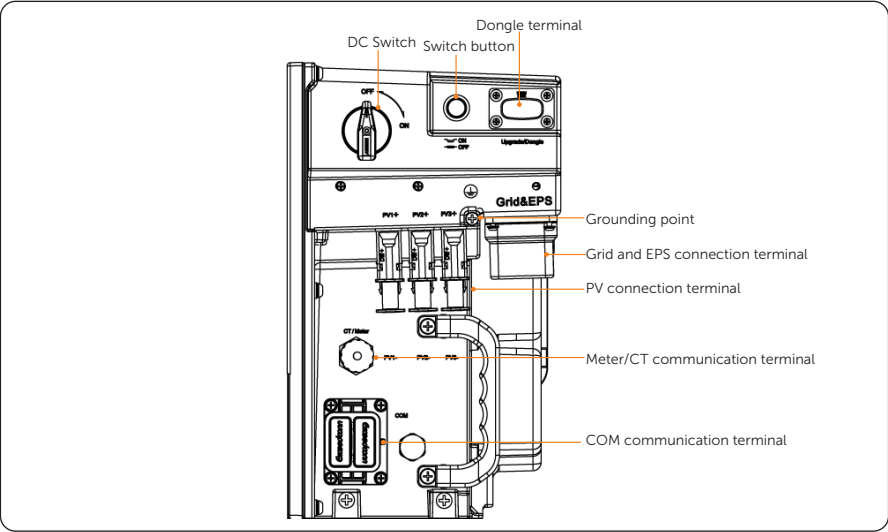
Base



Series Box



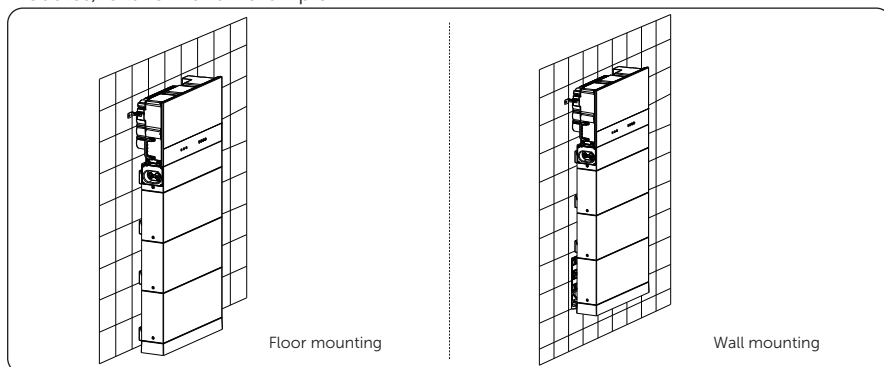
• Inverter



Mechanical Installation

Mechanical Installation / Mechanische Installatie / 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 nameštitev / Mekanik Kurulum / Instalação Mecânica / التركيب الميكانيكي

There are two mechanical installation modes of X1-IES system, floor mounting and wall mounting. The following is the two installation modes. Option C (with three battery modules) is taken for an example.



*Note:

1. Please ensure that the bearing capacity of the ground and the wall, respectively, that enable them to bear the loads of X1-IES system must be over 927 kg, which is determined based on option C. If option D is chosen by the user, the bearing capacity of the ground and the wall, respectively, must be over 1077 kg. (The maximum net weight of an inverter (27kg) is taken as an example.)
2. The device must not be installed on the wood wall.
3. At least two persons are required to move the devices of X1-IES system.
4. Please reserve enough distance from the device to the ceiling (or the grounding) for capacity expansion.

Note for Battery:

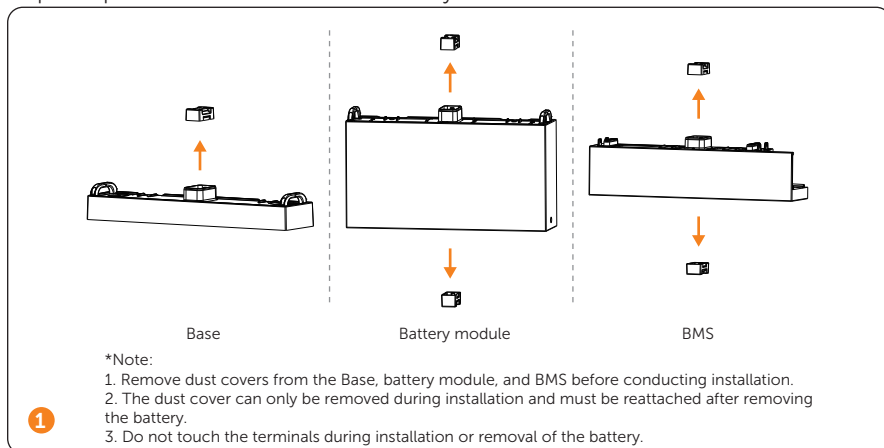
1. The connector of the BMS is completely insulated through insulating head.
2. No circuit presents on male terminals until female terminals or another module connected.
3. Access to directly touch female terminals by fingers is not available as they are IP2X rated.
4. In case of measuring the battery's voltage, the battery must be placed on the base, ensuring male and female terminals are in contact before they present circuit.

- Floor Mounting / Bodenmontage / Montage au sol / Montaje en suelo / Montagem em pavimento / Vloermontage / Montaggio a pavimento / Montaż podłogowy / Montáž na podlahu / Golvmontering / Montare pe pardoseală / Подов монтаж / Gulvmontering / Στερέωση στο δάπεδο / Põrandakinnitus / Lattia-asennus / Montaža na pod / Padlós szerelés / Montavimas ant grindų / Grīdas montāža / Montáž na podlahu / Montaža na tleh / Zemine montaj / Montagem no piso / تصاعد الكلمة

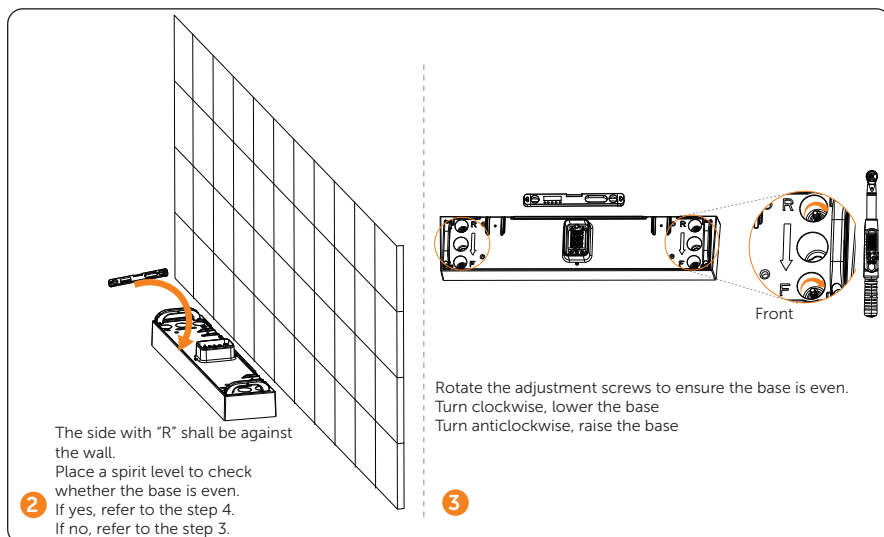
The mode of floor mounting is given priority for installation. Take the installation procedure Option C (with 3 battery modules) as an example.

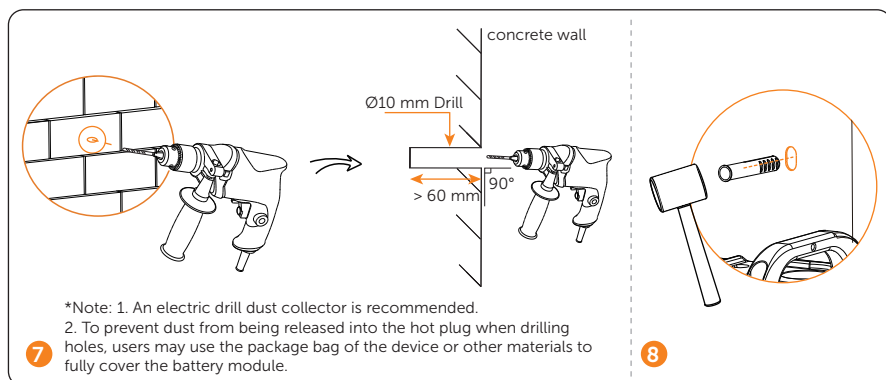
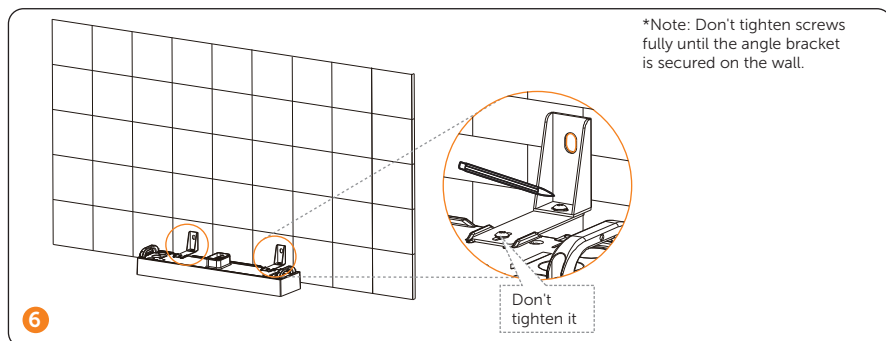
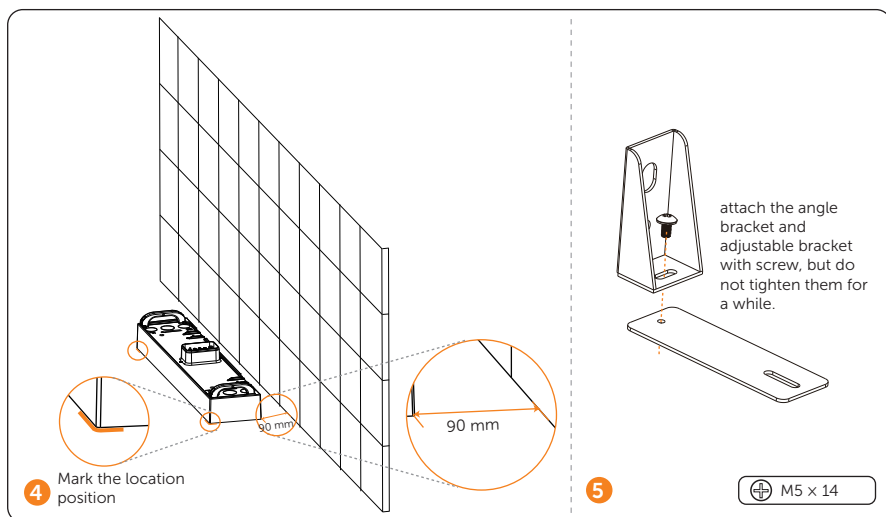
One Tower

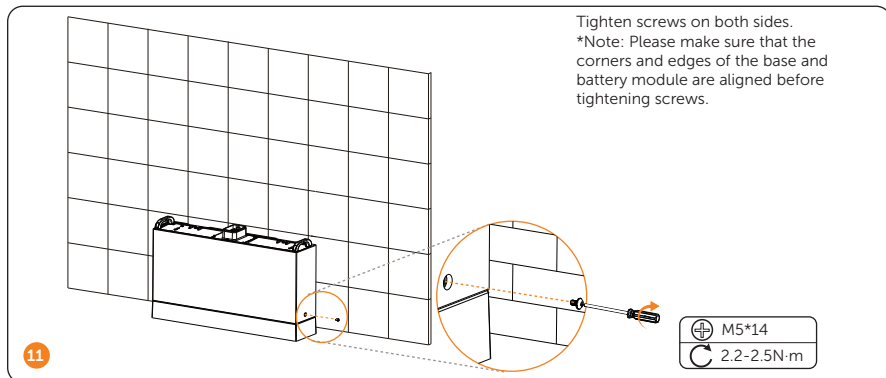
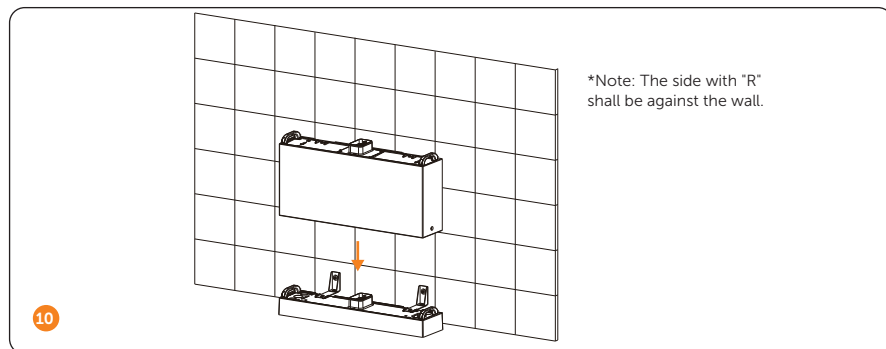
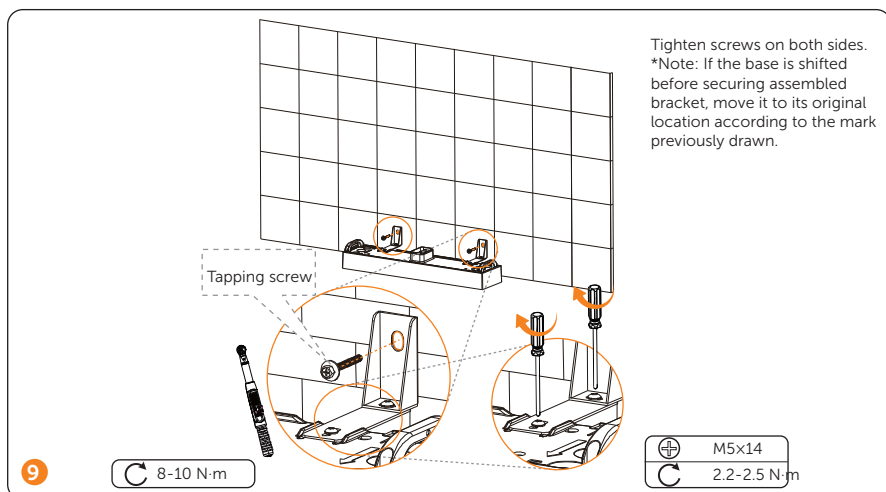
Step 1 Prepare and install the base and battery modules.

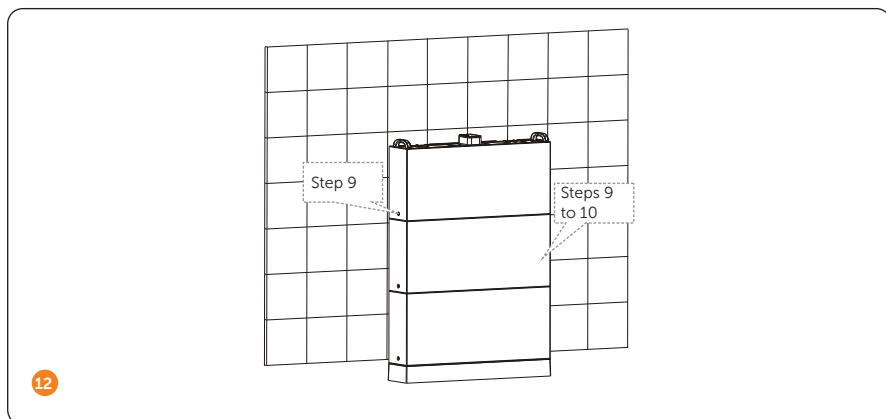


INSTALLATION

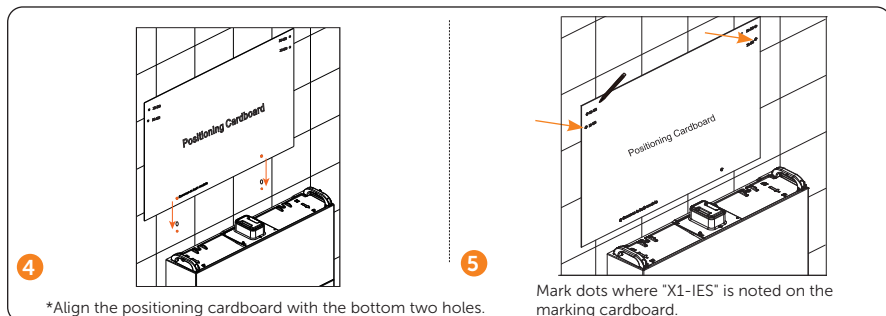
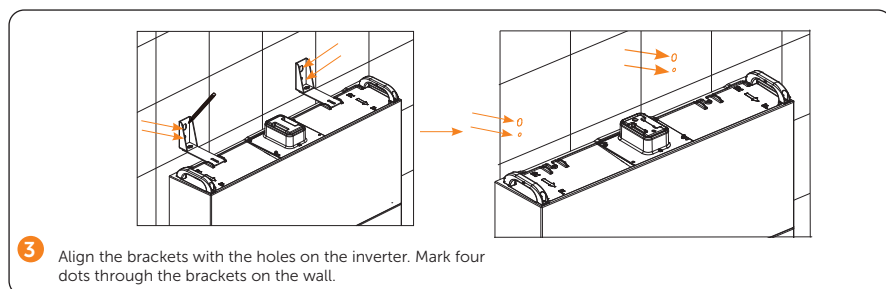
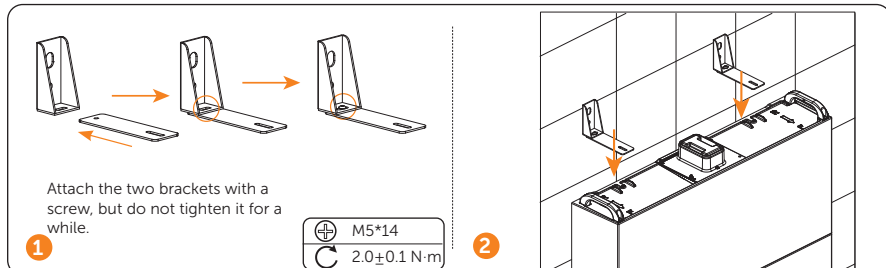




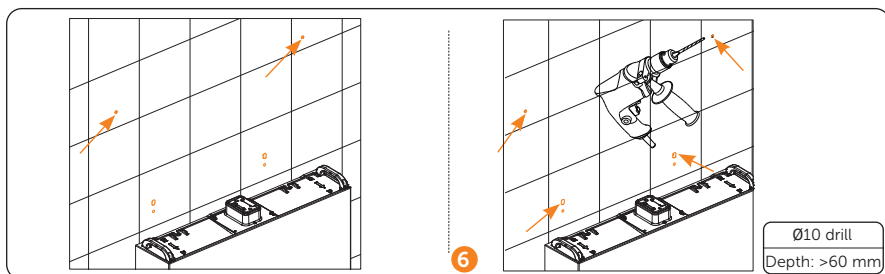




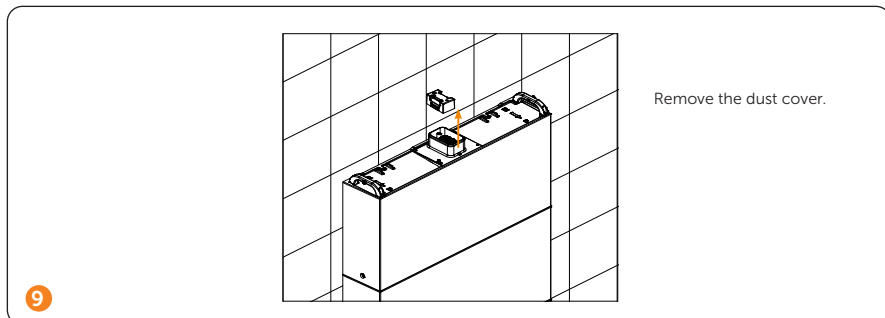
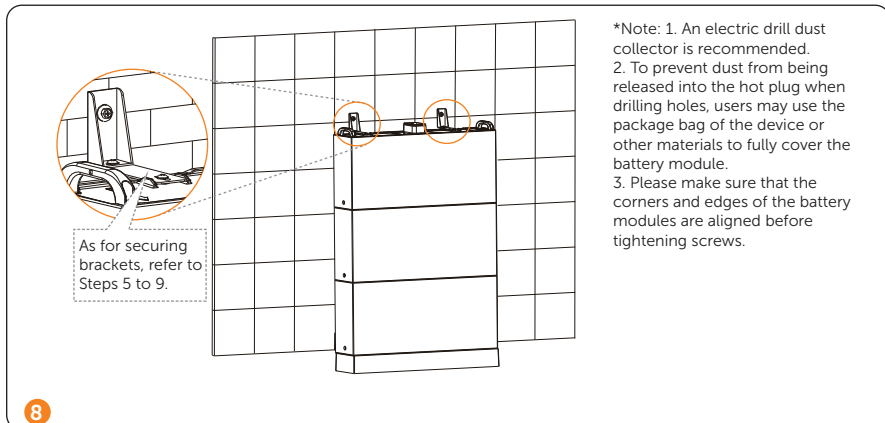
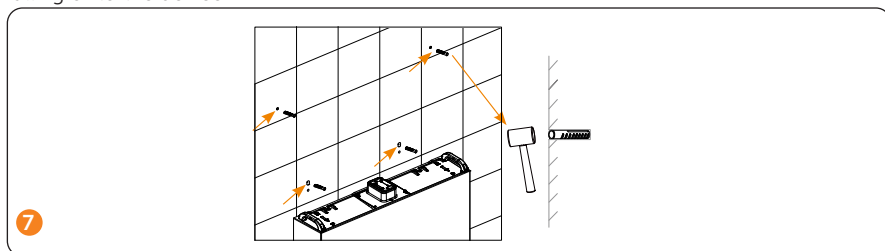
Step 2 Install the bracket of the top battery module



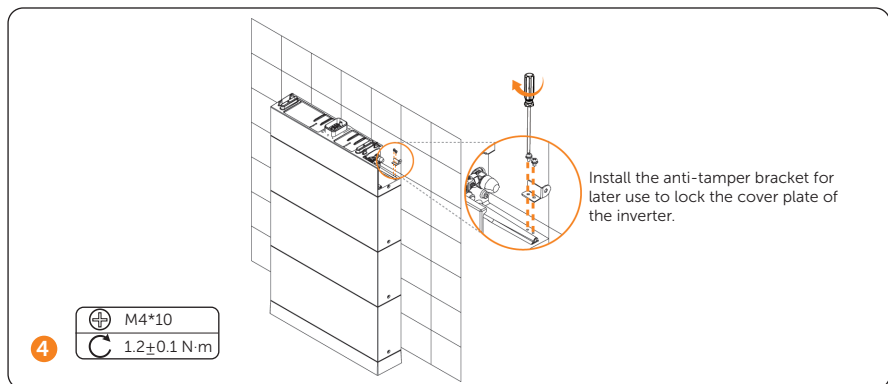
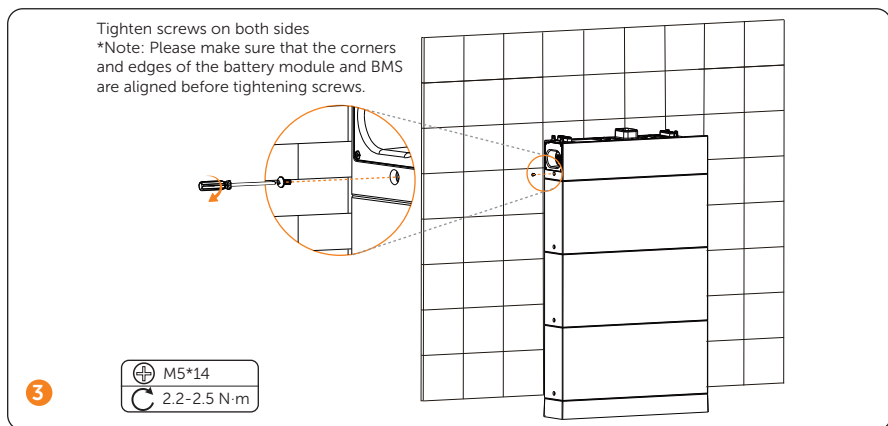
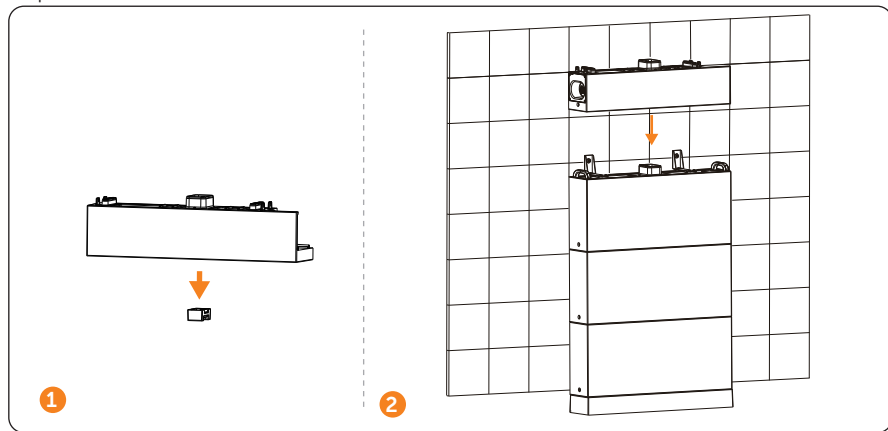
*Align the positioning cardboard with the bottom two holes.



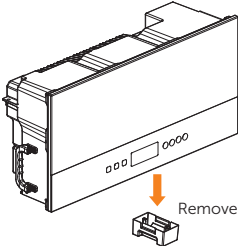
*When drilling holes, make sure the already installed part is covered to prevent dust from falling onto the device.



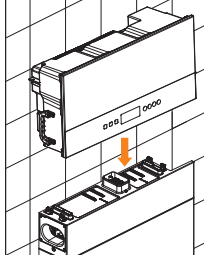
Step 3 Install the BMS



Step 4 Install the inverter

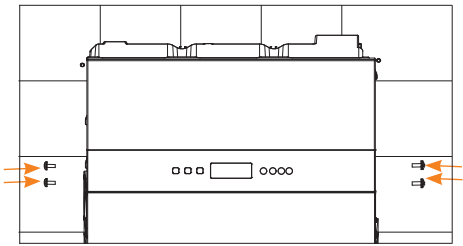


Remove the dust cover



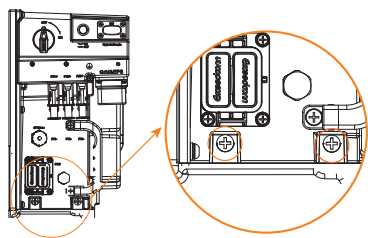
Stack the inverter

1

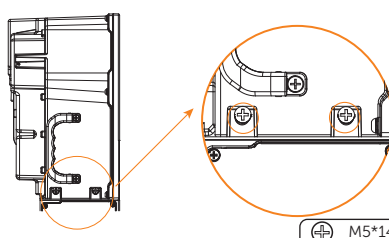


Lock the screws between the inverter and the BMS.

2

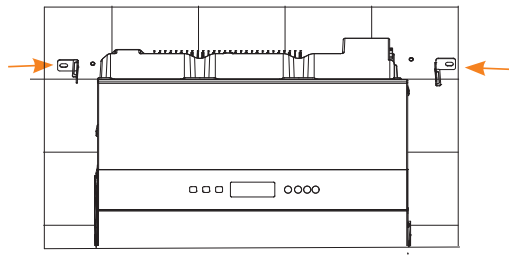


The right side screws



The left side screws

⊕	M5*14
C	2.0±0.1 N·m

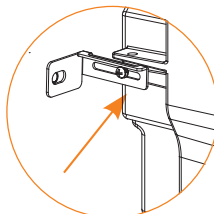
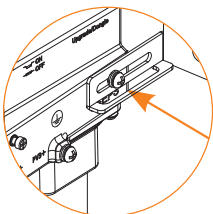


Install the bracket of the inverter.

3



The right side screws

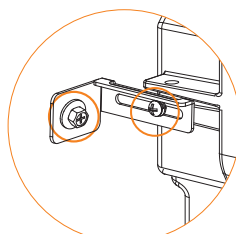
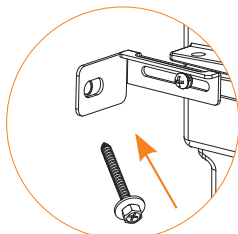


The left side screws

Slightly tighten but not lock the screws on both sides

⊕ M5*10
C 2.0 ± 0.1 N·m

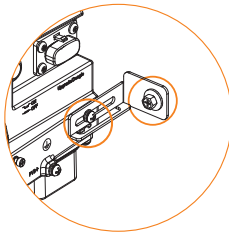
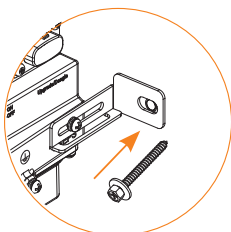
4



Lock the left side self-tapping screw, then lock the left side M5*10 screw



INSTALLATION



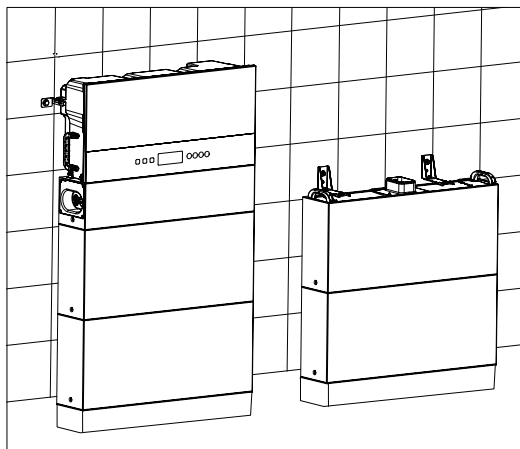
Lock the right side self-tapping screw, then lock the left side M5*10 screw

* Users can choose to lock the bracket with a lock, thus providing the device a double guarantee.

Two Towers

Take the installation procedure Option E (with 2+2 battery modules) as an example.

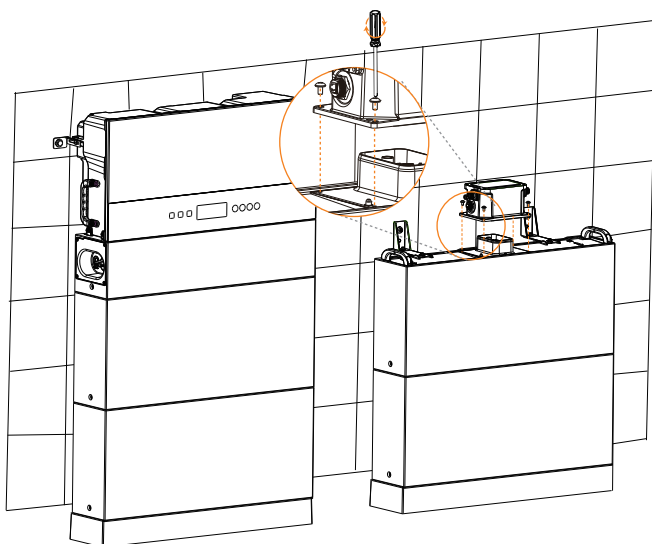
As for the installation steps for the following figure, please refer to the Step 1 to Step 4.



1

Totalling 4 screws shall be tightened

*Note: The side of the series box with "R" shall be against the wall.



2

M5*14
C 2.2-2.5 N·m

*Note: The cover that covers on the series box shall be installed after finishing wiring. As for the installation procedure of the cover, please refer to the section of "Installation of Cover".

INSTALLATION



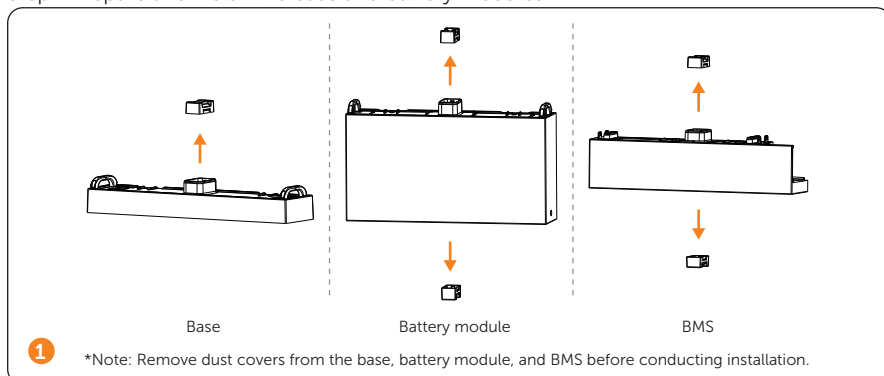
- Wall Mounting / Wandmontage / Montage mural / Montaje en pared / Montagem na parede / Wandmontage / Montaggio a parete / Montaž naścienny / Montáž na stěnu / Vægmontering / Montare pe perete / Стенен монтаж / Vægmontering / Στερέωση σε τοίχο / Seinakinnitus / Seinäasennus / Montaža na zid / Fali szerelés / Montavimas ant sienos / Sienas montāža / Montáž na stenu / Montaža na steno / Duvara montaj / Montagem na parede / التثبيت على الحائط

Take the installation procedure Option C (with 3 battery modules) as an example.

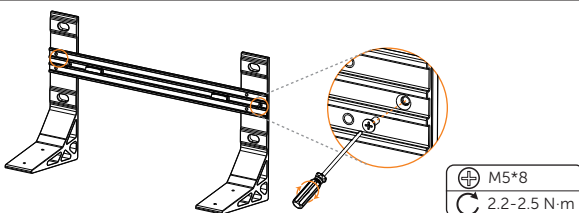
*Ensure that the bearing capacity of ground and the wall is greater than the weight of X1-IES series. Otherwise, the wall mounting mode is not recommended.

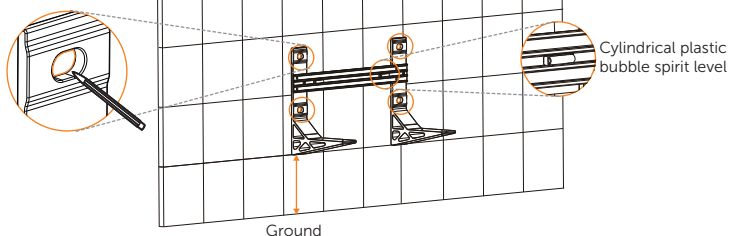
One Tower

Step 1 Prepare and install the base and battery modules.



Before installing, please refer to the Step 1 of the Floor Mounting to remove the dust covers. Tighten screws on both sides.



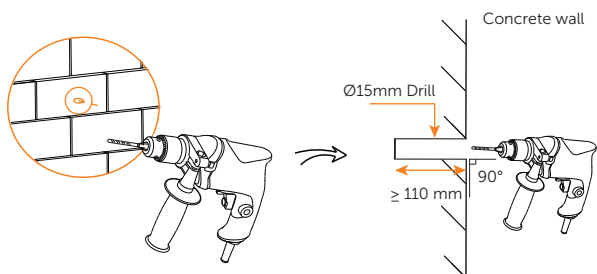


*Note: 1. The distance from the base support to the ground is decided according to the local regulations. And it is also the distance from the base to the ground. For the safety concerns, it is suggested that the height from the ground not be too high.

3

2. Leave enough distance to the ceiling to install the inverter.

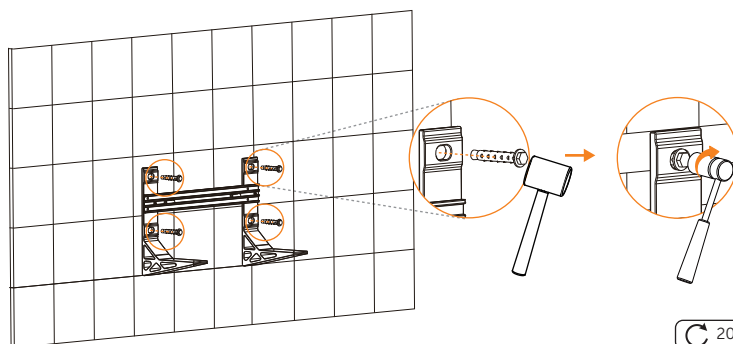
3. Check whether the bubble is in the centre, if not, slightly bow it to the horizontal.



4

*Note: 1. An electric drill dust collector is recommended.

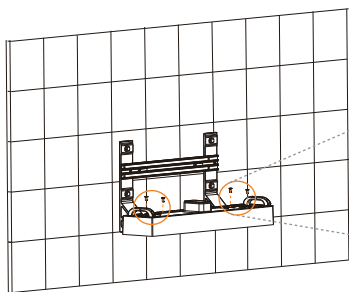
2. Prevent dust from being released into the hot plug when drilling holes.



5



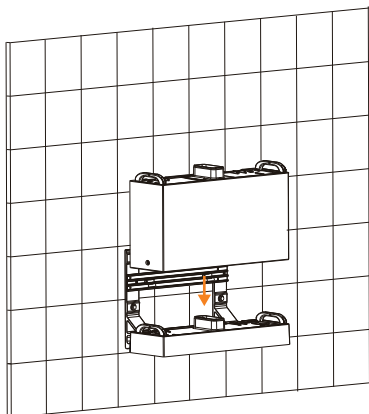
6



Totalling 4 screws
shall be tightened.

⊕ M5*20
C 2.2-2.5 N·m

7



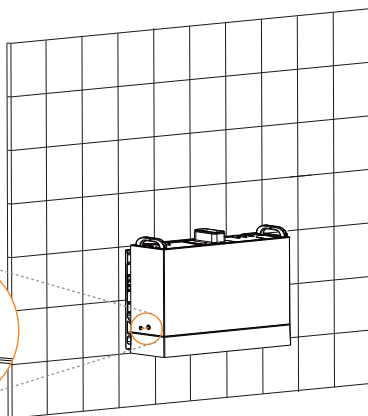
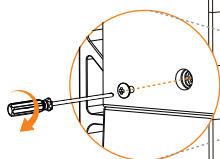
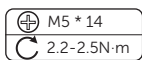
*Note: The side with "R"
shall be against the wall.



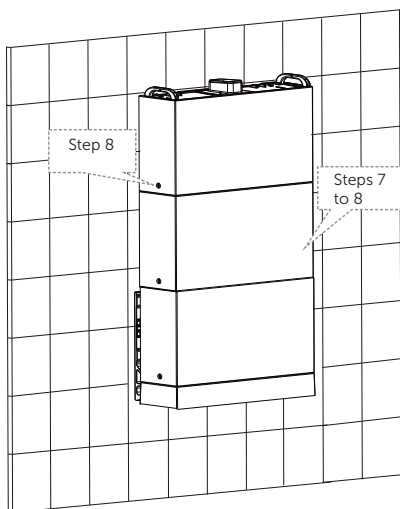
INSTALLATION

Tighten screws on both sides.
 *Note: Please make sure that the corners
 and edges of the base and battery module
 are aligned before tightening screws.

8



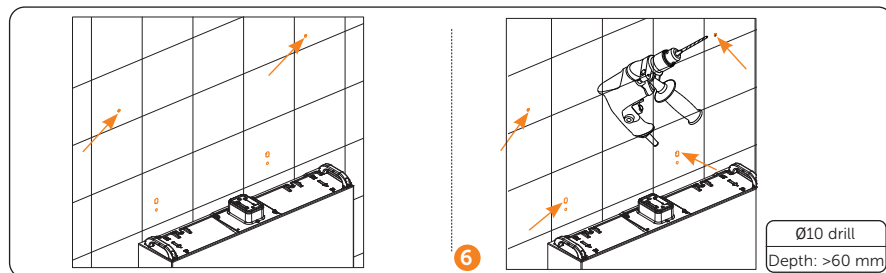
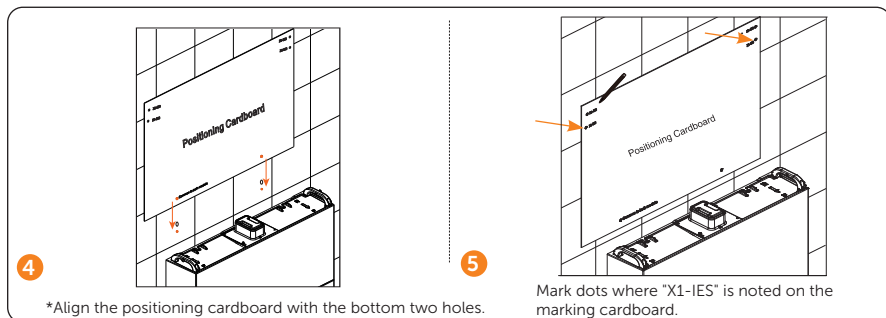
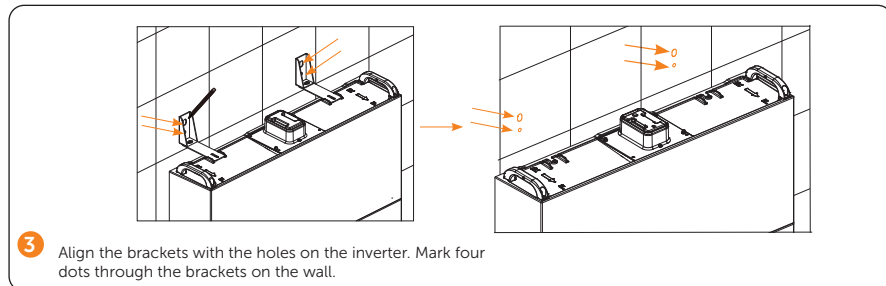
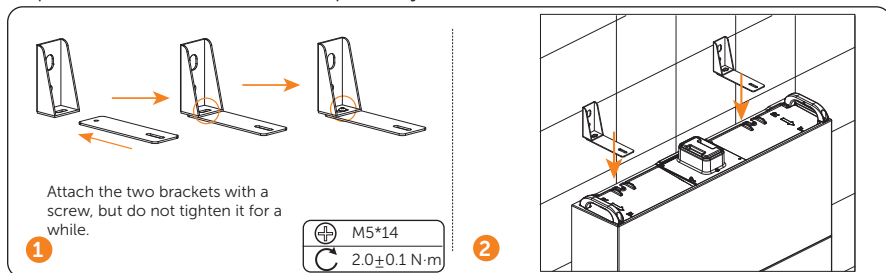
9



INSTALLATION

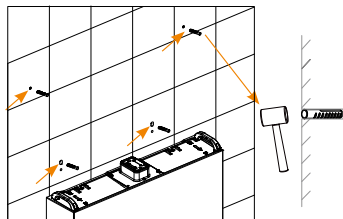


Step 2 Install the bracket of the top battery module



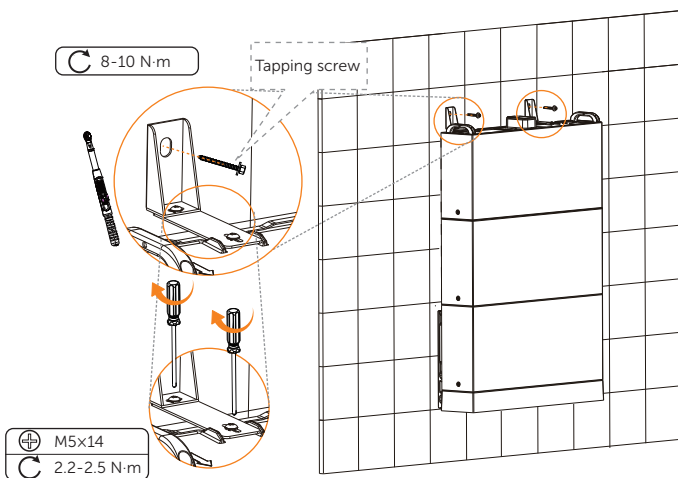
*When drilling holes, make sure the already installed part is covered to prevent dust from falling onto the device.

7

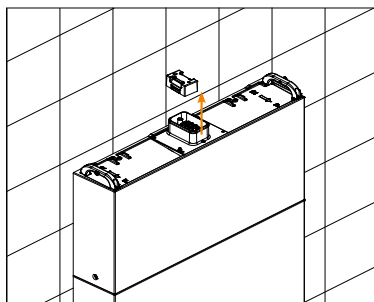


Tighten screws on both sides.

8

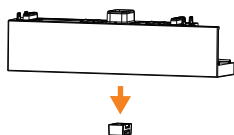


9

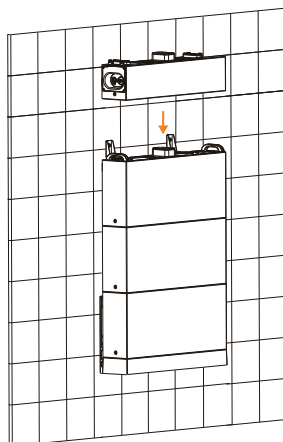


Remove the dust cover.

Step 3 Install the BMS



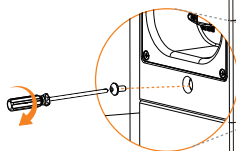
1



2

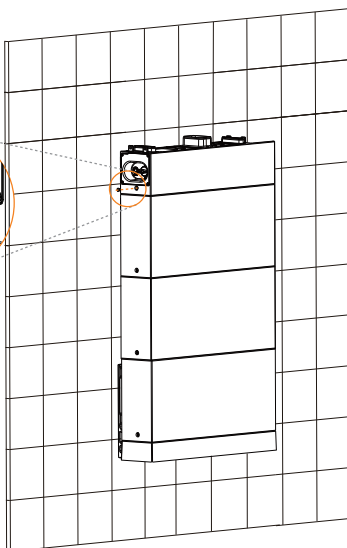
Tighten screws on both sides

*Note: Please make sure that the corners and edges of the base and battery module are aligned before tightening screws.



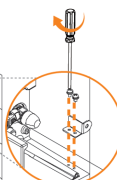
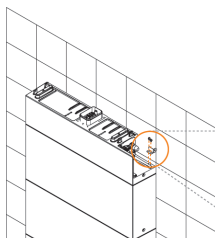
3

⊕ M5 * 14
Ⓒ 2.2-2.5 N·m



4

⊕ M4*10
Ⓒ 1.2±0.1 N·m

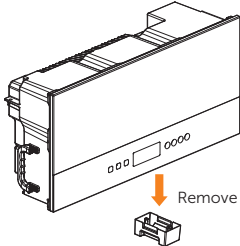


Install the anti-tamper bracket for later use to lock the cover plate of the inverter.

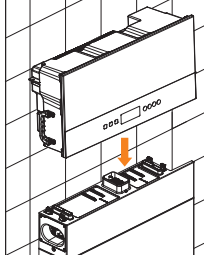


INSTALLATION

Step 4 Install the inverter

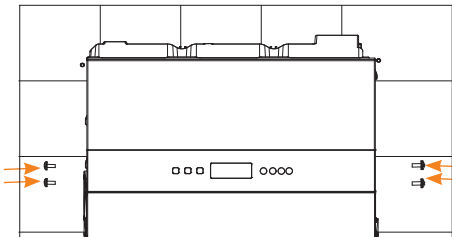


Remove the dust cover



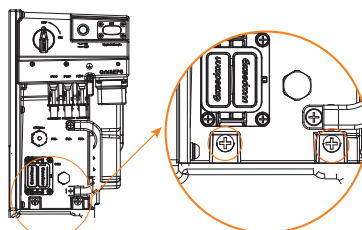
Stack the inverter

1

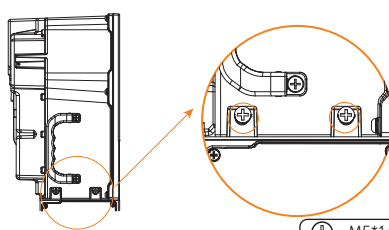


Lock the screws between the inverter and the BMS.

2

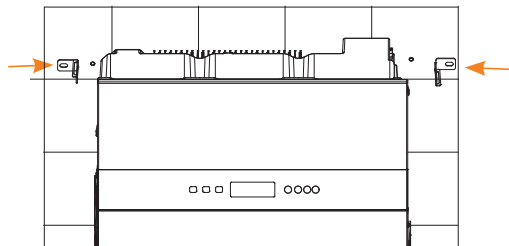


The right side screws



The left side screws

	M5*14
	2.0±0.1 N·m

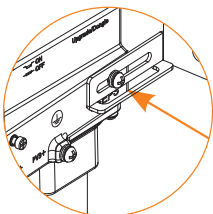


Install the bracket of the inverter.

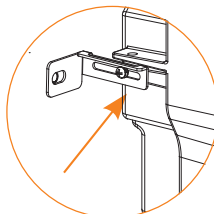
3



The right side screws



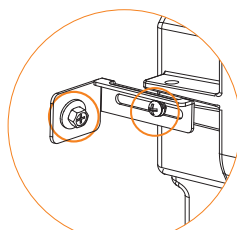
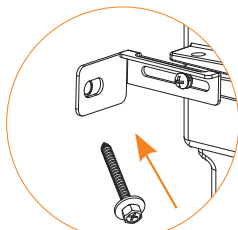
The left side screws



Slightly tighten but not lock the screws on both sides

⊕ M5*10
C 2.0 ± 0.1 N·m

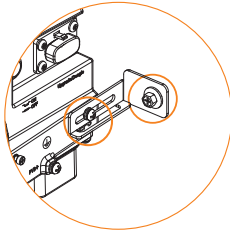
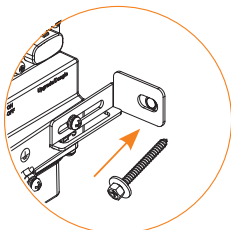
4



Lock the left side self-tapping screw, then lock the left side M5*10 screw



INSTALLATION



Lock the right side self-tapping screw, then lock the left side M5*10 screw

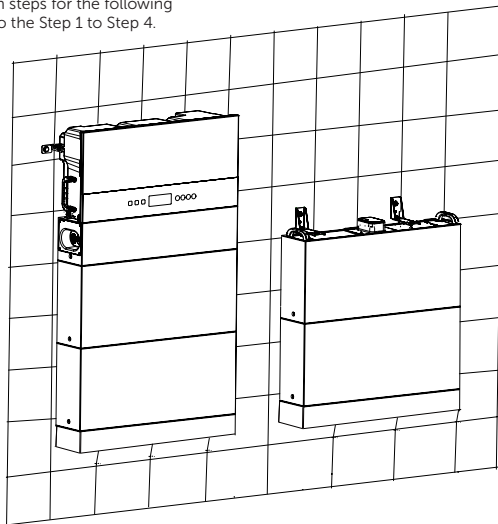
* Users can choose to lock the bracket with a lock, thus providing the device a double guarantee.

Two Towers

Take the installation procedure Option E (with 2+2 battery modules) as an example.

As for the installation steps for the following figure, please refer to the Step 1 to Step 4.

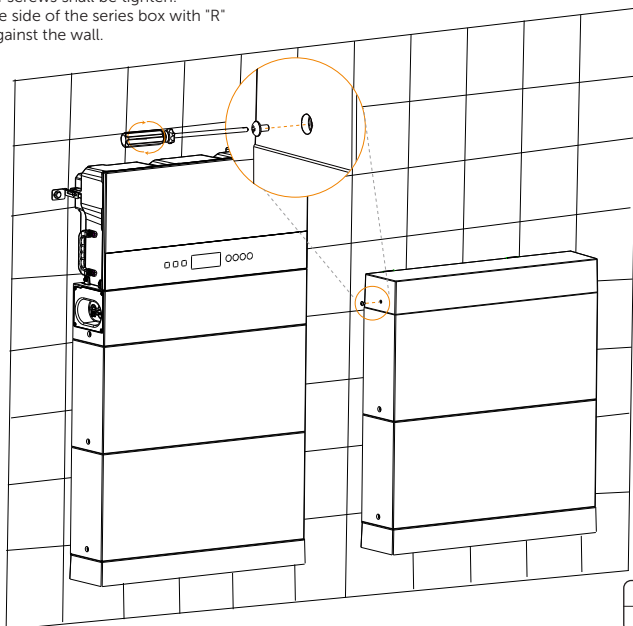
1



Totalling 4 screws shall be tighten.

*Note: The side of the series box with "R" shall be against the wall.

2



⊕ M5*14
C 2.2-2.5 N·m

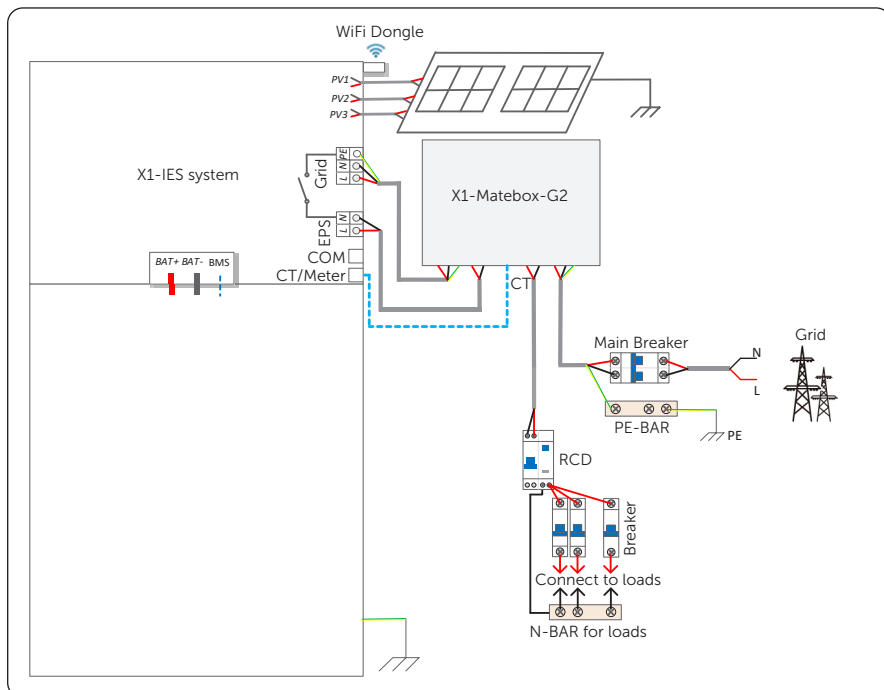
*Note: The cover that covers on the series box shall be installed after finishing wiring. As for the installation procedure of the cover, please refer to the section of "Installation of Cover".



Electrical Connection

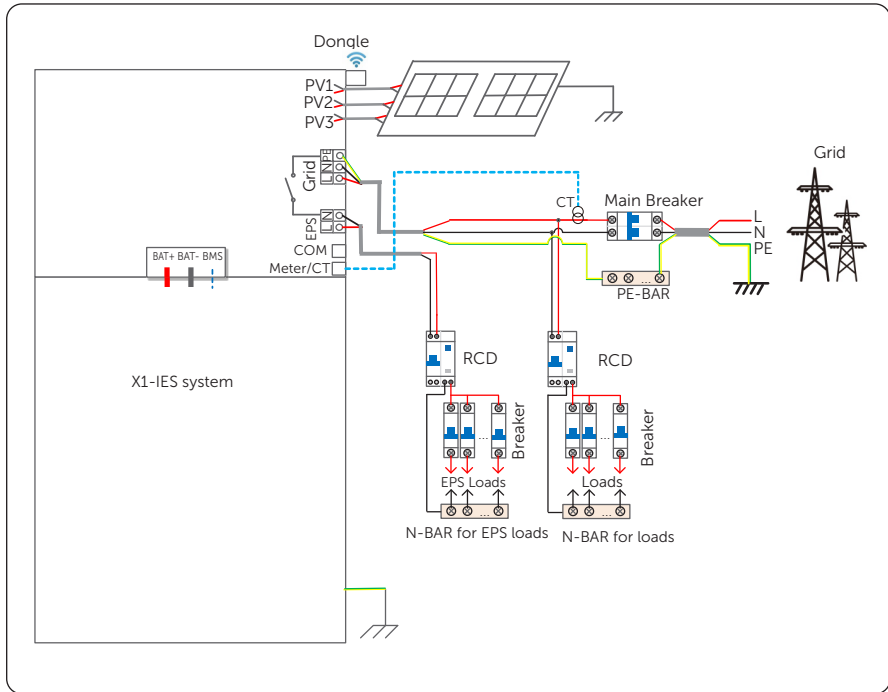
System diagram / Diagramme du système / Diagrama del sistema / Diagrama do sistema / Systeemdiagram / Diagramma di sistema / Diagram systemu / Systeemdiagram / Systemdiagram / Diagramă de sistem / Системная диаграмма / Σχεδιάγραμμα συστήματος / Süsteemidiagramm / Järjestelmäkaavio / Systemski diagram / Rendszerszerkezet / Sistemos diagrama / Sistēmas shēma / Systémový diagram / Sistemska shema / Sistem diyagramı / Diagrama do sistema / رسم بياني للنظام

- System Diagram with Matebox



*For X1-Matebox G2, the Meter/CT port supports only CT connection.

- System Diagram without Matebox



* The inverter supports Meter or CT connection. Here is taken CT connection as an example.

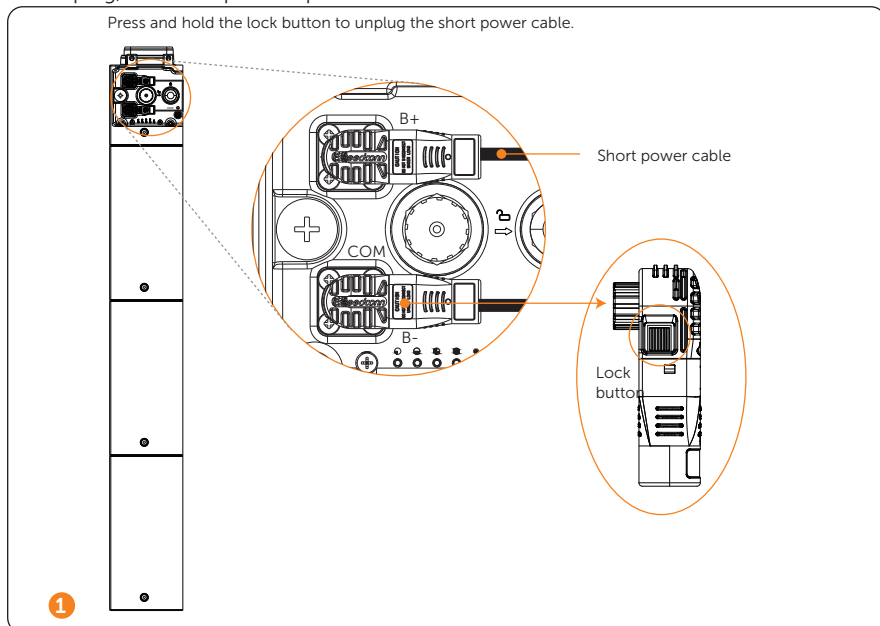
Wiring Connection on the Battery / Verdrahtungsanschluss an der Batterie / Câblage de la batterie / Conexión del cableado en la batería / Conexão da Fiação na Bateria / Bedradingaansluiting op de batterij / Cablaggio della batteria / Połączenie Przewodów Akumulatora / Zapojení kabeláže na baterii / Ledningsanslutning på batteriet / Conexiune Cablurilor în Baterie / Свързване на кабели към батерията / Batteriledninger / Σύνδεσμος Καλωδίων Μπαταρίας / Juhtmistestik akul / Akun johdotus / Ožičenje veze na bateriji / Kábelcsatlakozás az Akkumulátoron / Akumulatoriaus laidų jungtis / Kabelų Savienojums uz Akumulatora / Káblové Pripojenie na Batérii / Kabelski Priključek na Bateriji / Akü üzerindeki kablolama bağlantısı / Conexão de fiação na bateria / توصيل الأسلاك على البطارية

- Wiring / Verkabelung / Câblage / Cableado / LigaçãO / Bedrading / Cablaggio / Połączenie przewodów / Zapojení / Kabeldragnng / Cablare / Свързване / Ledningsføring / Καλωδίωση / Juhtmed / Kytkenät / Ožičenje / Vezetékezés / Elektros instaliacija / Elektroinstalācija / Zapojenie / Ožičenje / Kablolama / Cablagem / توصيلات الأسلاك

*Note: In the case of one tower, the BMS does not need to conduct wiring. The short power cable, short-circuit plug, and waterproof cap will be connected before delivery. And in that case, please don't remove the short power cable, short-circuit plug, or waterproof cap.

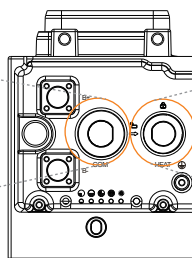
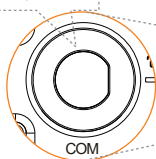
Wiring procedure for two towers

Before conducting wiring between the BMS and series box, the short power cable, short-circuit plug, and waterproof cap shall be removed.

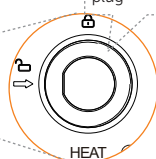


Rotate the waterproof cap anti-clockwise to remove it.

Waterproof cap

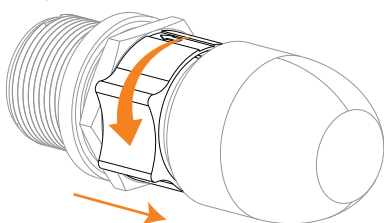


short-circuit plug



2

HEAT port



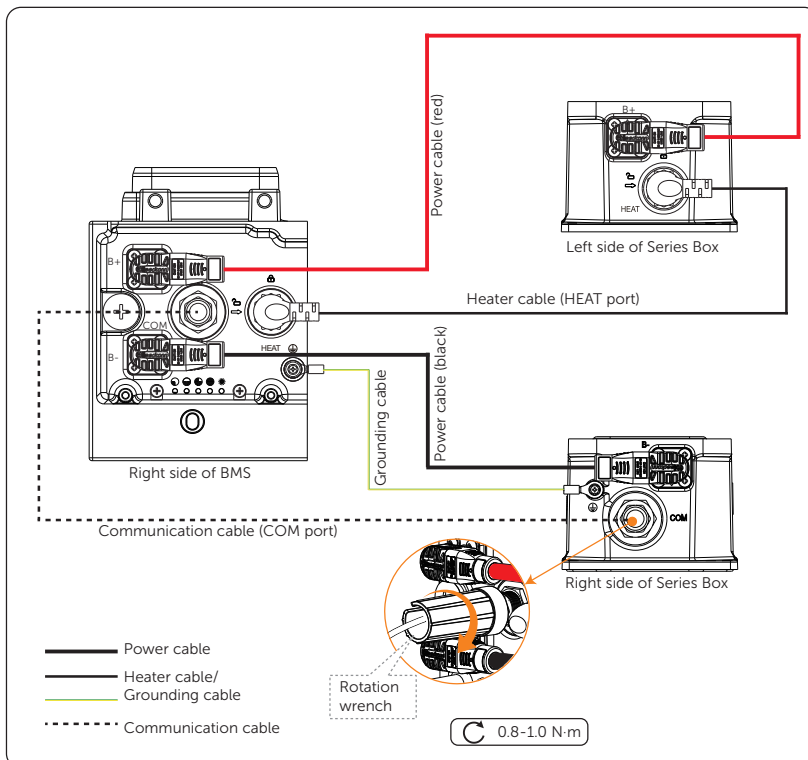
Rotate the short-circuit plug anti-clockwise. When the arrow on the rotating ring is aligned with the arrow on the panel, the short-circuit plug can be removed.

3

Short-circuit plug

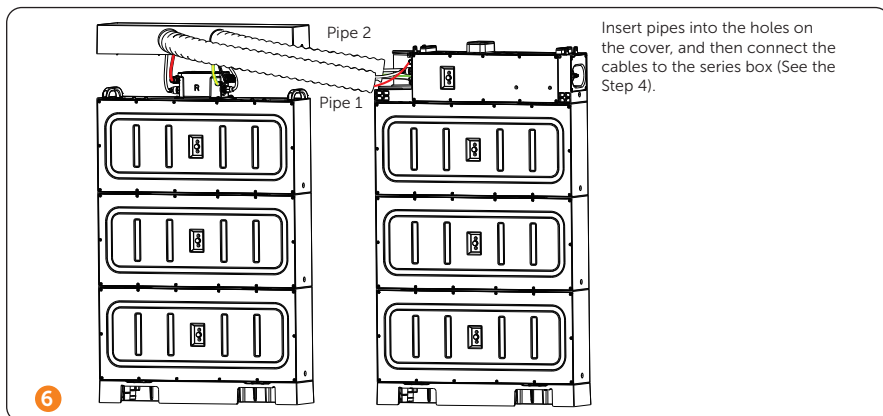
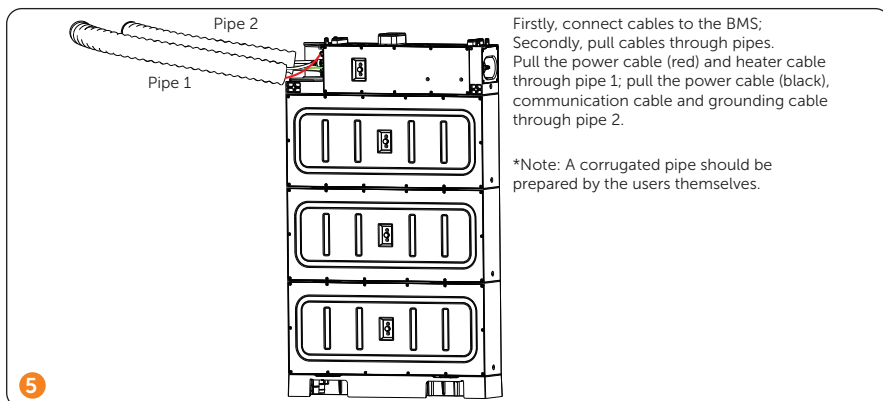


Connect B+ of the BMS to B+ of the series box;
 Connect B- of the BMS to B- of the series box;
 Connect COM port of the BMS to COM port of the series box;
 Connect HEAT port of the BMS to HEAT port of the series box;
 Connect the grounding of the BMS to the grounding terminal of the series box

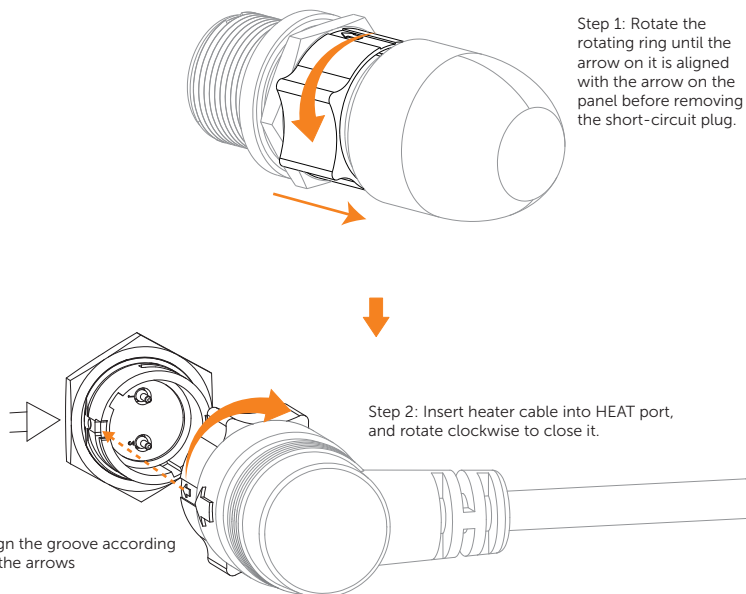


4

*Note: 1. There are two terminals on both ends of the power cables.
 2. Both ends of the communication cable shall be closed using a rotation wrench.



Make sure that the heater cable is locked. For the detailed steps, see below figure.



*Note:

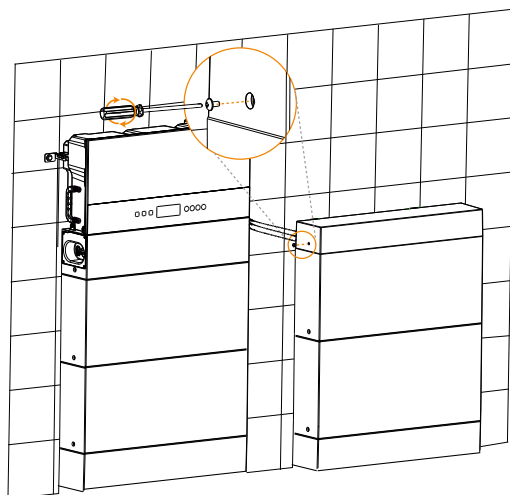
1. A rotation wrench is used to tighten both ends of the communication cable, and it may be removed after tightening.
2. Don't violently remove the cable when it is locked.
3. A corrugated pipe with an external diameter of 67.2 mm is recommended for use to keep cable insulation in place and avoid potential damages.



- Installation of Cover / Montage der Abdeckung / Installation du couvercle / Instalación de cubierta / Instalação da Cobertura / Installatie van de afdekplaat / Installazione del coperchio / Montaż pokrywy / Instalace krytu / Installation av hölje / Instalarea capacului / Монтаж на капак / Montering af dæksel / Εγκατάσταση καλύμματος / Katte paigaldamine / Kannen asentaminen / Ugradnja pokrova / Fedél felszerelés / Dangtelio montavimas / Pārsega uzstādīšana / Inštalácia krytu / Namestitev pokrova / Kapağin Montajı / Instalação de Tampa / تركيب الغطاء

After finishing wiring, please install the cover according to the following steps.

Push the cover, and then tighten screws on both sides.



M5 x 14
2.2-2.5 N·m

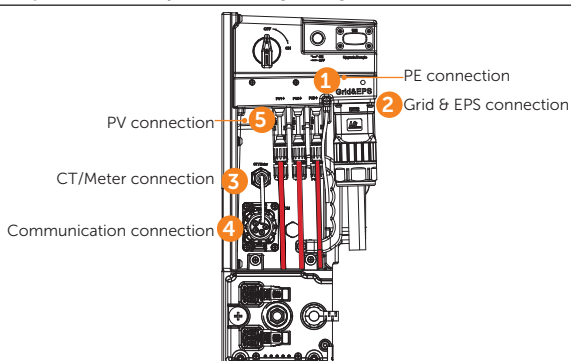
INSTALLATION



*Note: The above step for installing the cover also applies to the mode of wall mounting.

Wiring Connection on the Inverter / Verkabelungsanschluss am Wechselrichter / Câblage de l'onduleur / Conexión del cableado en el inversor / Conexão da Fiação no Inversor / Bedradingsaansluiting op de omvormer / Cablaggio dell'inverter / Potâczenie Przewodów w Falowniku / Zapojení kabeláže na střídači / Ledningsanslutning på växelriktaren / Conexiune Cablurilor în Invertor / Свързване на кабели към инвертора / Inverter ledninger / Σύνδεσμος Καλωδίων στον Μετατροπέα / Juhtmistik inverteril / Inverterin johdotus / Ožičenje veze na pretvaraču / Kábelcsatlakozás az Inverteren / Laidų jungtis ant keitiklio / Kabelų Savienojums ar Pārveidotāju / Káblové Pripojenie na Menič / Kabelski Priključek na Pretvornik / Invertör üzerindeki kablolama bağlantısı / Conexão de fiação no inversor / توصيل الأسلاك على العاكس

- Wiring Sequence / Verkabelungssequenz / Séquence de câblage / Secuencia de cableado / Sequência de Fiação / Bedradingsvolgorde / Sequenza di cablaggio / Kolejność Przewodów / Sekvence zapojení / Ledningssekvens / Secvență de Cablurilor / Последовательность на свързване / Ledningsrækkefølge / Ακολουθία Καλωδίου / Juhtmete järjestus / Kytentäjäjärjestys / Slijed ožičenja / Kábelszekvencia / Laidų seka / Kabelų Seciba / Káblové Sekvencia / Kabelski Zaporedje / Kablolama Sırası / Sequência de fiação / تسلسل توصيل الأسلاك

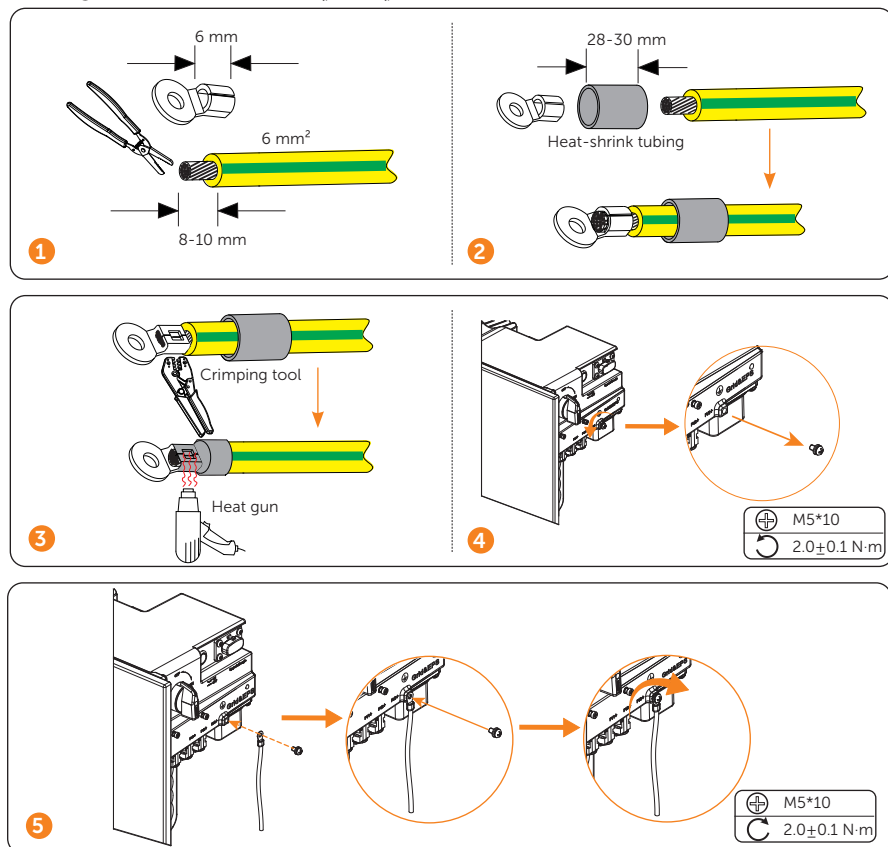


Recommended wiring sequence: PE connection, Grid & EPS connection, CT/Meter connection, Communication connection and PV connection.



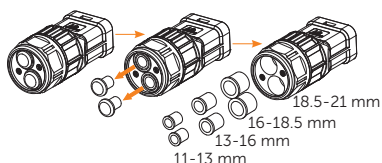
INSTALLATION

- 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 / توصيل (الأرضي) PE

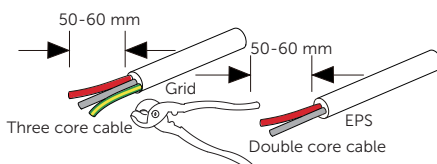


* The other end of the PE cable should be connected to the PE bar on the grid inlet wire.

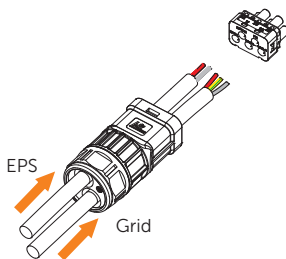
- Grid and EPS (Off-grid) Connection / Netz- und EPS (netzunabhängig)-Verbindung / Branchement Réseau et EPS (Hors-réseau) / Conexión de red y EPS (fuera de la red) / Ligação à Rede e Off-grid (fora da rede) / Aansluiting op het net en EPS (niet aangesloten op het net) / Collegamento GRID e EPS (off-grid) / Połączenie z siecią i EPS (off-grid) / Pripojení k síti a EPS (off-grid) / Elnäts- och EPS-anslutning (utanför elnätet) / Conectare la rețea și EPS (în afara rețelei) / Връзка с мрежата и аварийното захранване (автономно) / Elnet- og EPS-tilslutning (uden for elnettet) / Σύνδεση στο δίκτυο και σε Σύστημα ηλεκτρικής ενέργειας (EPS) (εκτός δικτύου) / Võrgu- ja EPS- (võrgust väljas) ühendus / Verkon ja EPS:n (Off-grid) liitântä / Priklučak mreže i EPS priklučak (izvan mreže) / Rácsos és EPS (rácson kívüli) bekötés / Tinklo ir EPS (neprijungto prie tinklo) jungtis / Tīkla un EPS (ārpustīkla) savienojums / Pripojenie do siete a k núdzovému napájaníu EPS (mimo sieť) / Povezava z omrežjem in EPS zasilno napajanje (izven omrežja) / Şebeke ve EPS (Şebeke Dışı) Bağlantı / Conexão de Rede e EPS (Fora da rede) / اتصال الشبكة و EPS (خارج الشبكة)



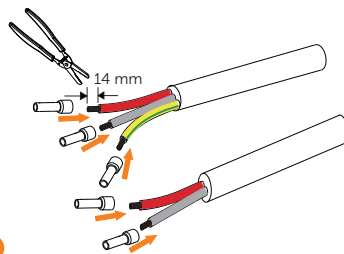
- 1 Select the appropriate sealing plug according to the outer diameter of the cable.



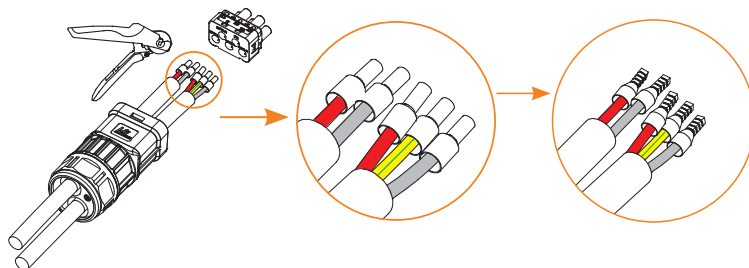
2



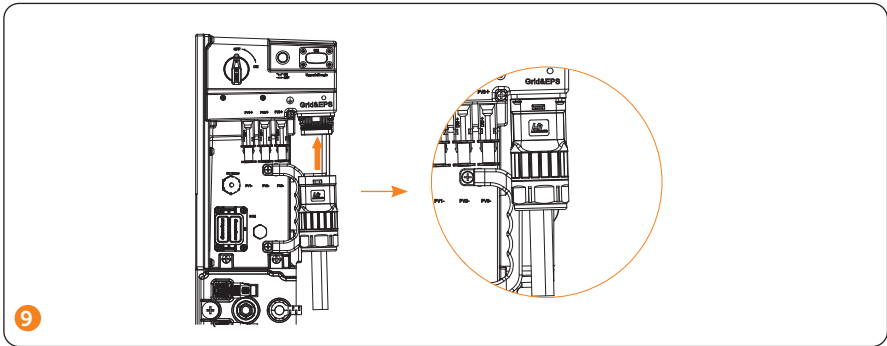
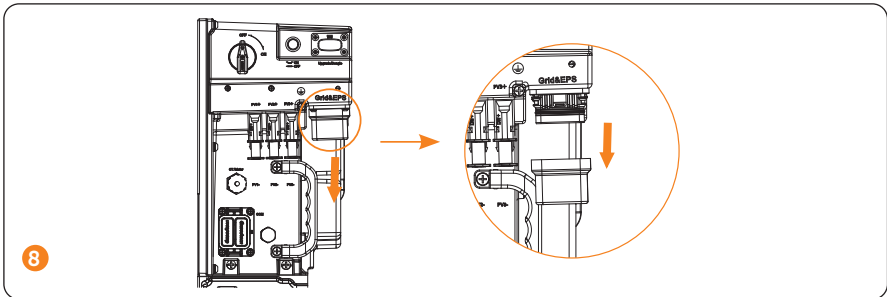
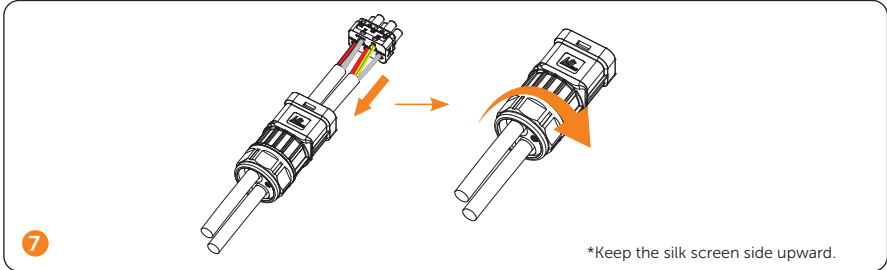
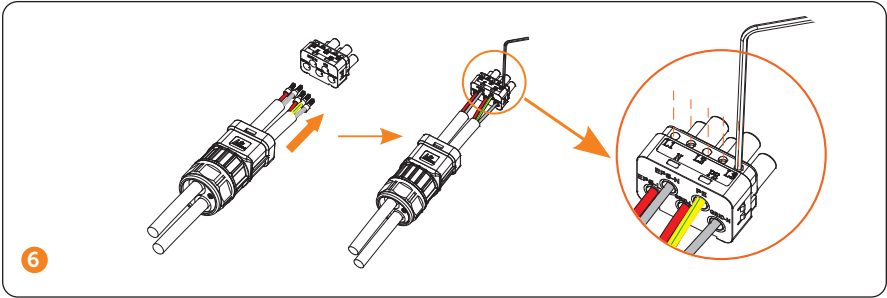
3



4



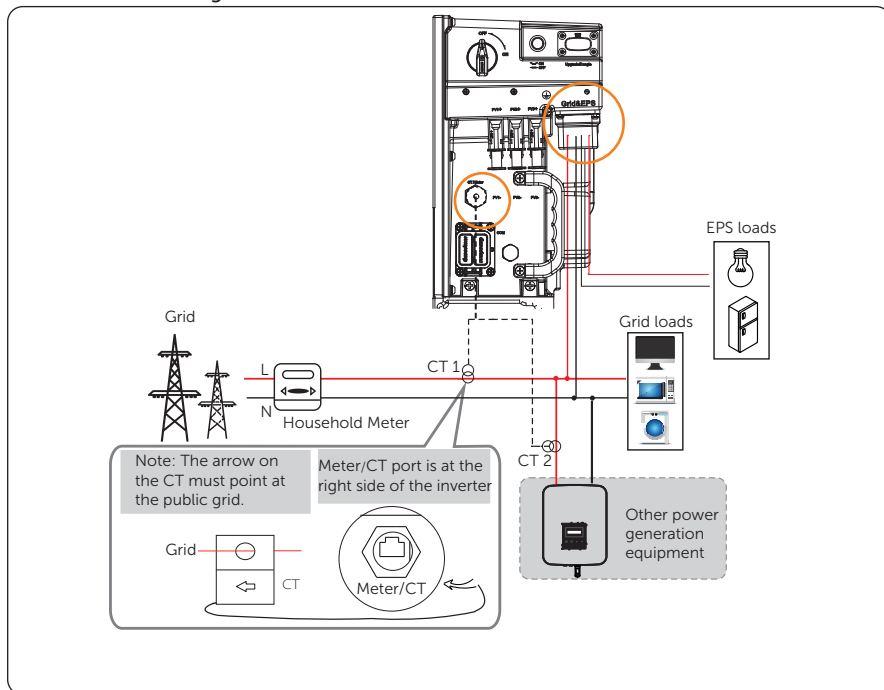
5



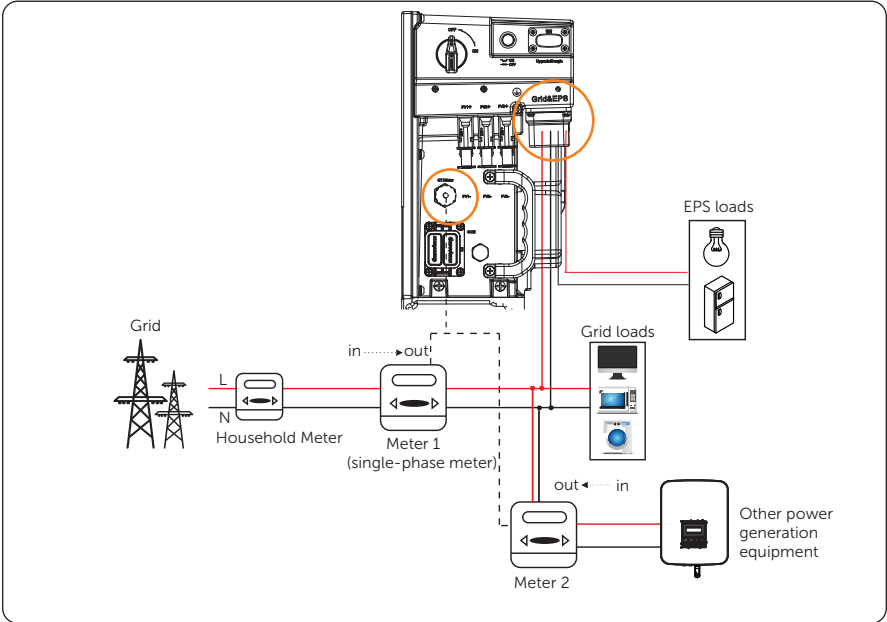
- Communication Connection / Kommunikations-Anschluss / Branchement de communication / Conexión de comunicación / Ligaçao à Comunicação / Communicatie-aansluiting / Collegamento comunicazione / Potaczenie komunikacyjne / Komunikační připojení / Kommunikationsanslutning / Conexiune de comunicare / Коммуникационная връзка / Kommunikationsforbindelse / Σύνδεση επικοινωνίας / Sideühendus / Tiedonsiirtoliitäntä / Priklučak za komunikaciju / Kommunikációs bekötés / Duomenų ryšys / Sakaru savienojums / Pripojenie komunikácie / Komunikacijska povezava / Iletişim Bağlantısı / Conexão do Cabo de Comunicação / توصيل الاتصال

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.

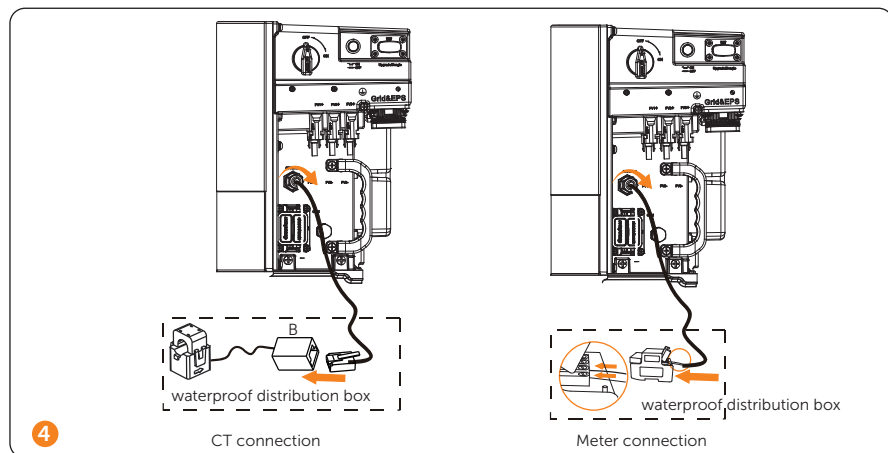
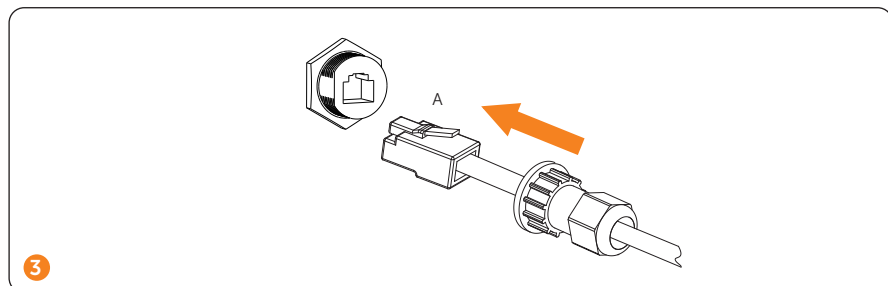
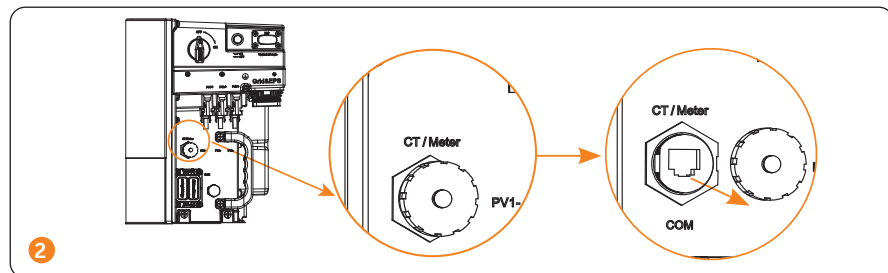
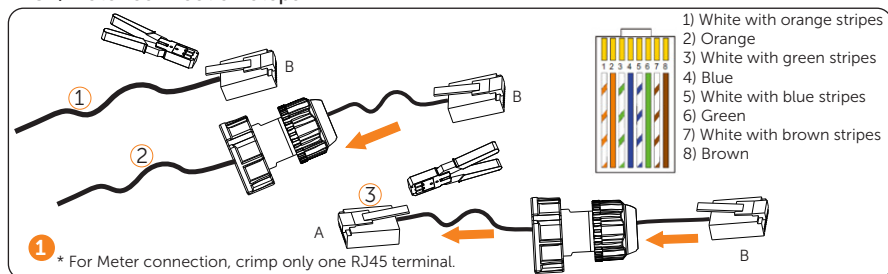
3. Pin definition for CT/Meter

Pin	1	2	3	4	5	6	7	8
Function	CT		Meter				CT	
Pin Definition	CT_11_ CON	GND_ COM1	CT_21_ CON	METER_ 485A	METER_ 485B	CT_22_ CON	GND_ COM1	CT_12_ CON

* 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.

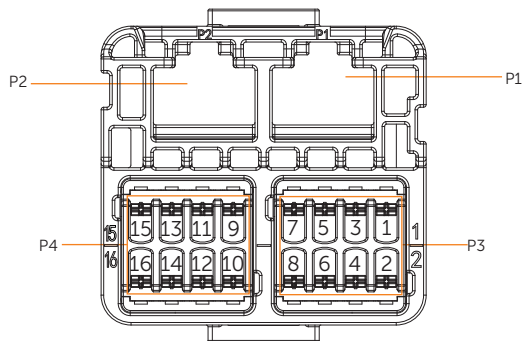
* Refer to user manual for other communication connections.

4. CT/Meter connection steps



COM port connection

1. COM port introduction

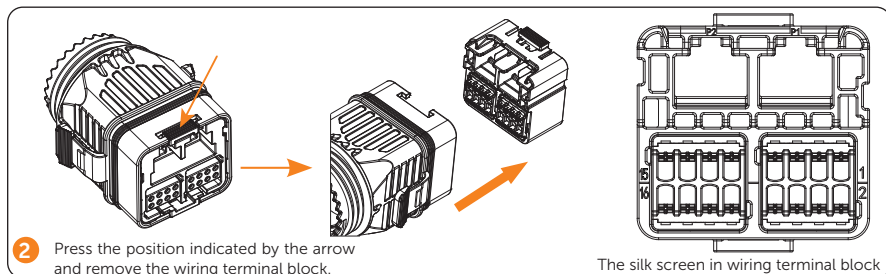
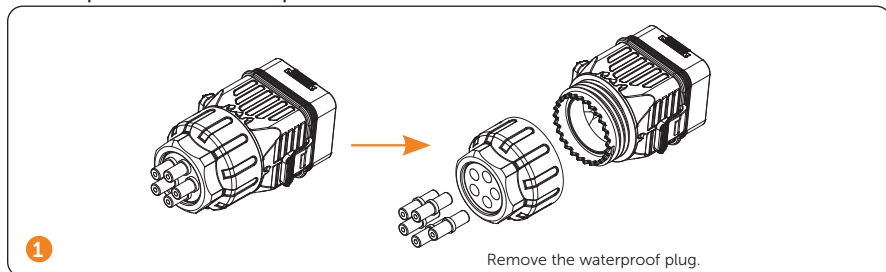


Icon	PIN	PIN Definition	Function
P1 (DRM Port)	1	DRM1/5	DRM
	2	DRM2/6	
	3	DRM3/7	
	4	DRM4/8	
	5	+3.3V_COM	
	6	COM/DRM0	
	7	GND_COM	
	8	GND_COM	
P2 (Parallel Port)	1	REMOTE_485A	RS485
	2	REMOTE_485B	
	3	GND_COM	/
	4	PARALLEL_SYN2	Parallel synchronization signal
	5	PARALLEL_SYN1	
	6	EPSBOX_RELAY_VCC	/
	7	PARALLEL_CANL	Parallel CAN
	8	PARALLEL_CANH	
P3	1	/	/
	2	/	
	3	/	
	4	/	
	5	GND_COM	/
	6	GND_COM	Communication with SolaX's Datahub, EV Charger, Adapter Box and other internal devices
	7	REMOTE_485A	
	8	REMOTE_485B	

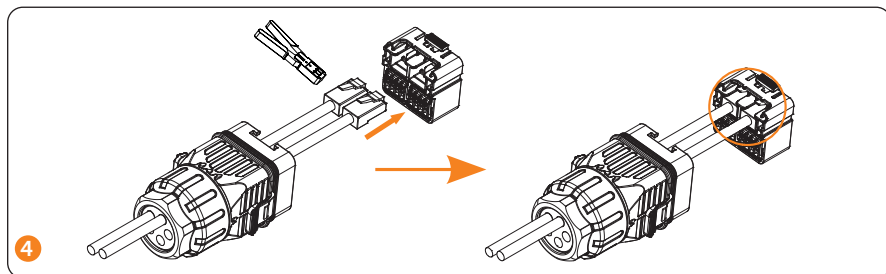
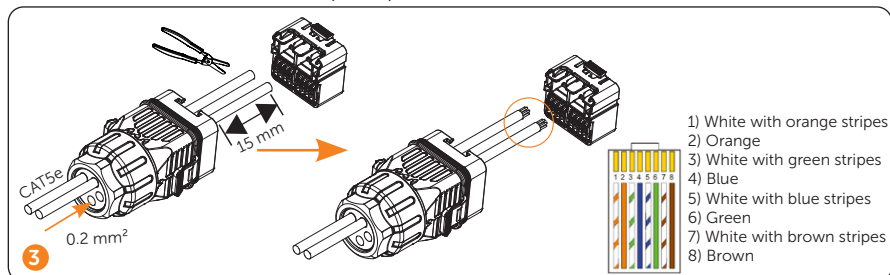
Icon	PIN	PIN Definition	Function
P4	9	ARM_POWER	/
	10	GND_COM	/
	11	MODBUS_485A	Communication with other external devices
	12	MODBUS_485B	
	13	DO_1	Output drycontact
	14	DO_2	
	15	DI_1	Input drycontact
	16	DI_2	



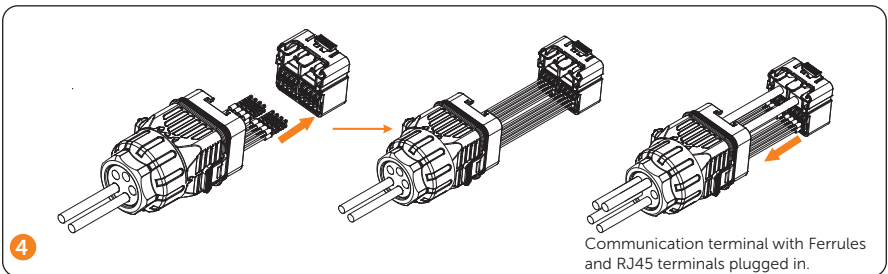
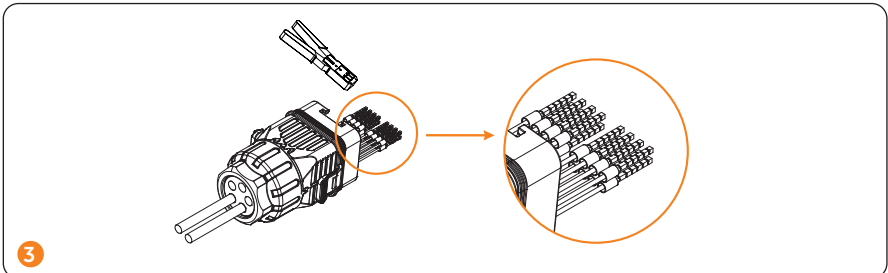
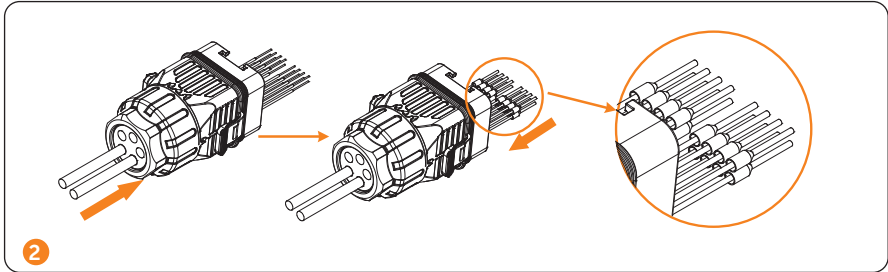
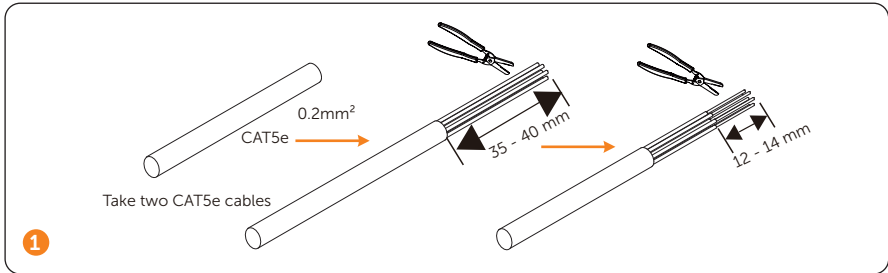
2. COM port connection steps

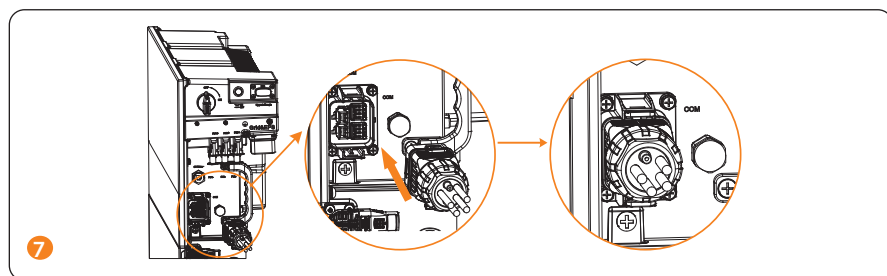
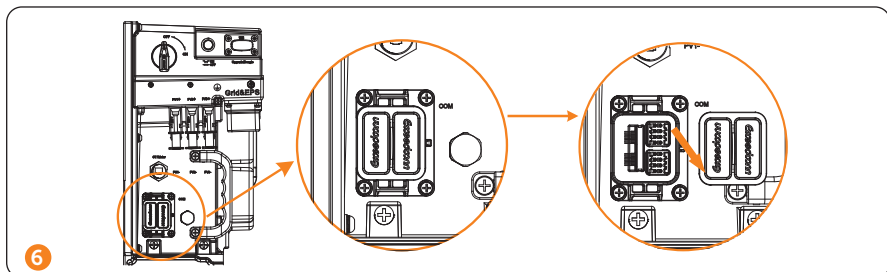
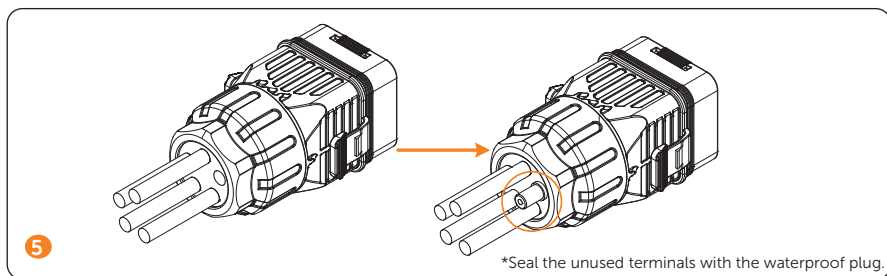


2.1 DRM and Parallel connection (P1 P2)

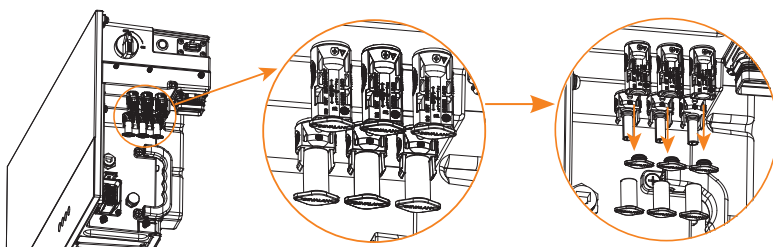


2.2 PIN 1-16 connection (P3 P4)





- PV Connection / PV-Anschluss / Connexion PV / Conexión FV / Ligação PV (Fotovoltaica) / PV-aansluiting / Collegamento PV / Potężenie PV / Pripojení FV / Anslutning av solcellsanläggning / Conexiune PV / Връзка с PV / PV-tilslutning / Σύνδεση φωτοβολταϊκού / PV-ühendus / PV-liitântä / Fotonaponski priključak / PV bekôtës / Fotovoltinë jungtis / PV savienojums / Pripojenie fotovoltaiķy (FV) / Povezava fotonapetostnega kabla (PV) / PV bağlantısı / Conexão fotovoltaica / اتصال الكهروضوئية



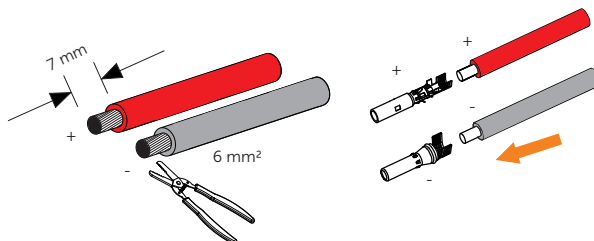
1

Remove the terminal caps of PV terminals.

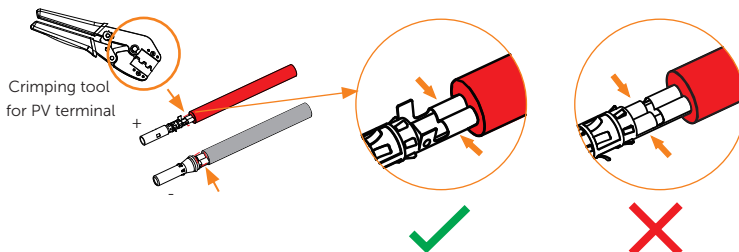
* For 3kW~3.7kW inverters, remove two pairs of the PV terminal caps, the third PV terminal is unavailable.



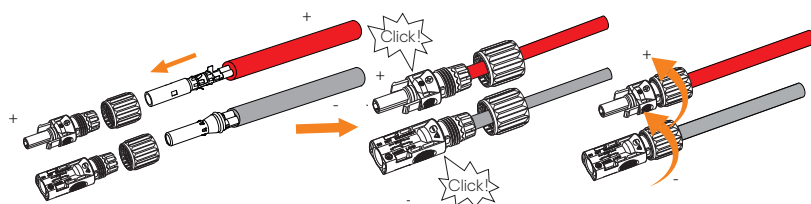
INSTALLATION



1

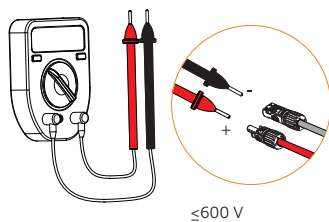


2

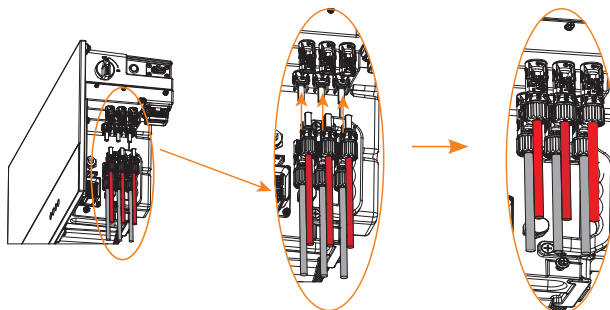


3

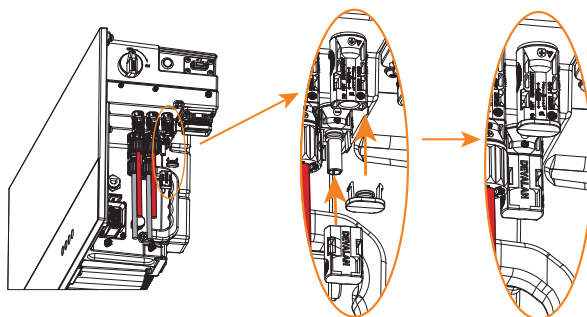
5



6



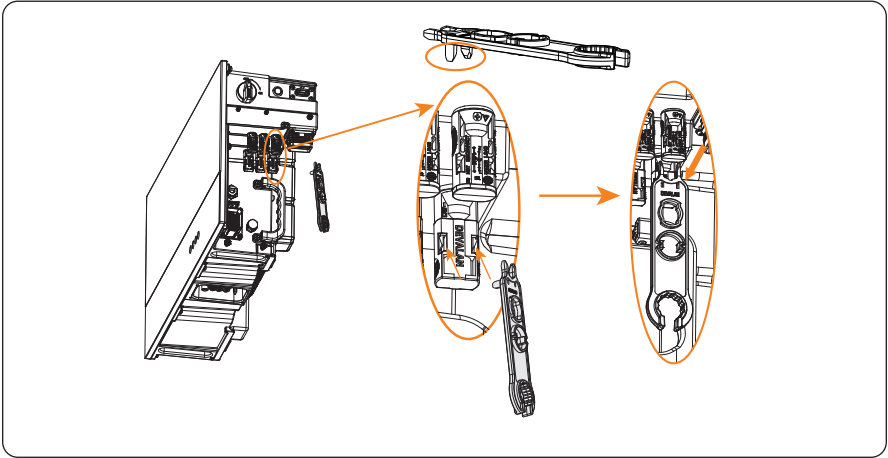
7



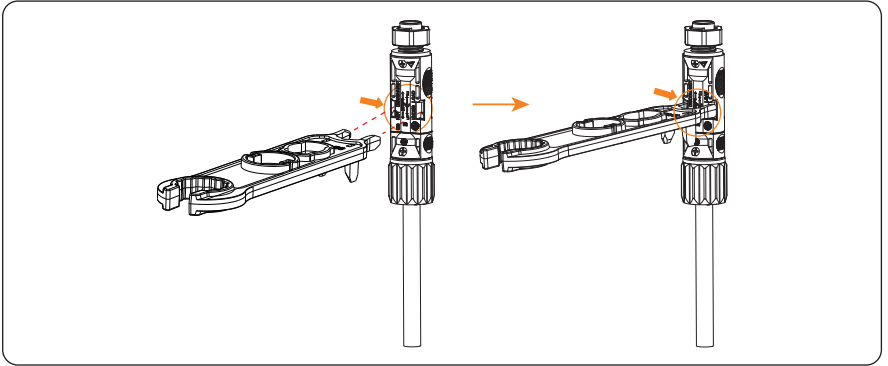
* Seal the unused PV terminals with the dustproof buckles.



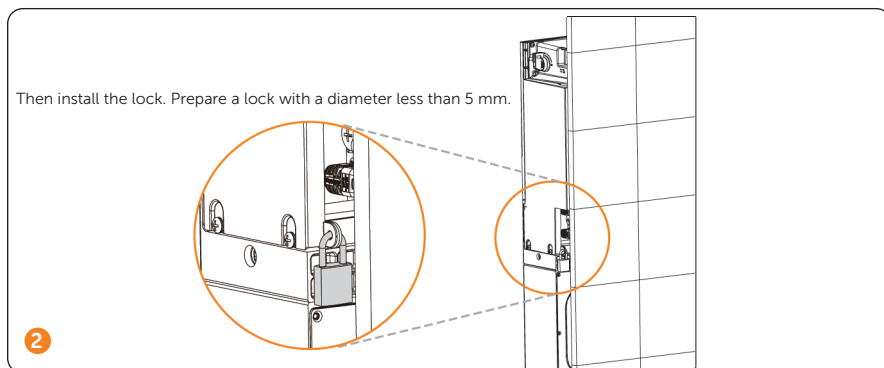
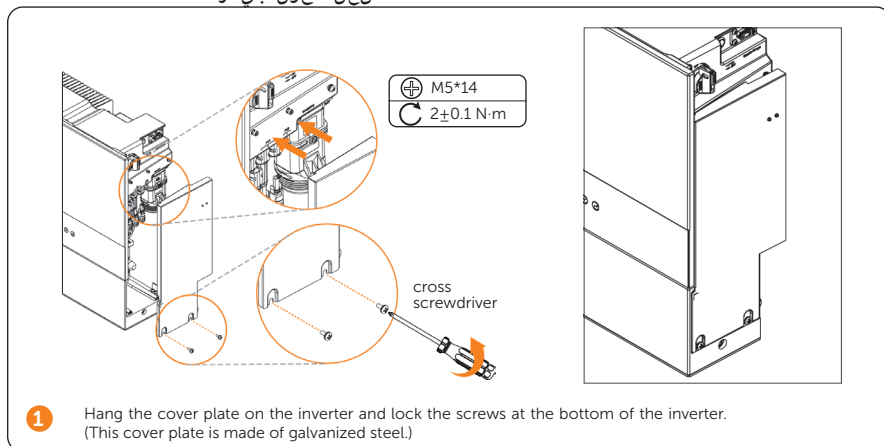
Disassembling the dustproof buckles



Disassembling the PV cables

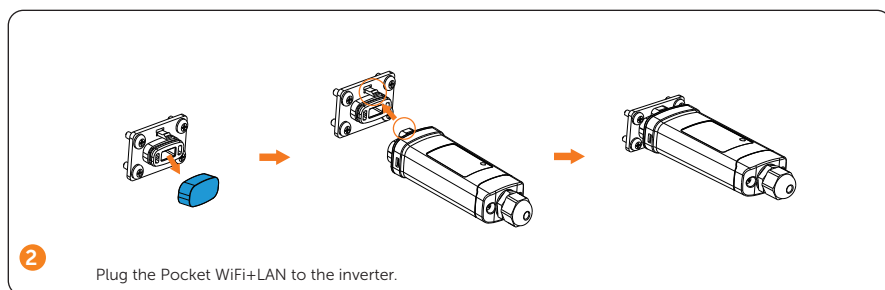
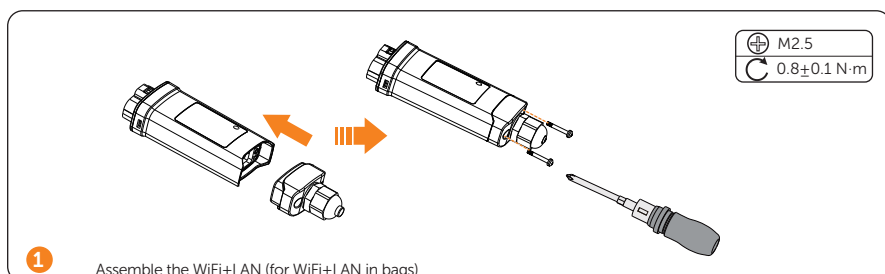
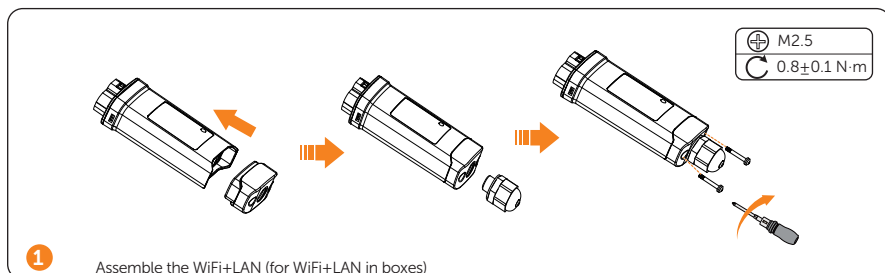


- Cover Plate Installation / Montage der Abdeckplatte / Installation de la plaque de couverture / Instalación de la placa de cubierta / Instalação da placa de cobertura / Installatie van de afdekplaat / Installazione della piastra di copertura / Instalacja pokryw / Montáž krytu / Installation av täckplatta / Instalare placa de acoperire / Инсталация на покривна плоча / Installation af dækselplade / Εγκατάσταση πλάκας κάλυψης / Katteplaadi paigaldamine / Peitelevyn asennus / Instalacija pokrova / Fedéllemez telepítés / Dangos plokštės montavimas / Vāka plāksnes uzstādīšana / Inštalácia krytu / Namestitev pokrova / Kapak Plakası Kurulumu / Instalação da placa de cobertura / فالغلالة حول بي كرت

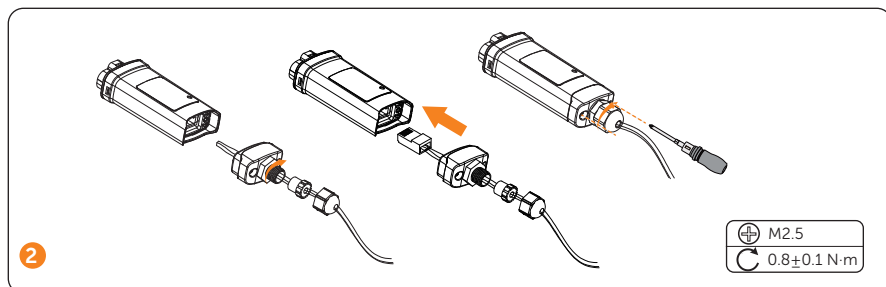
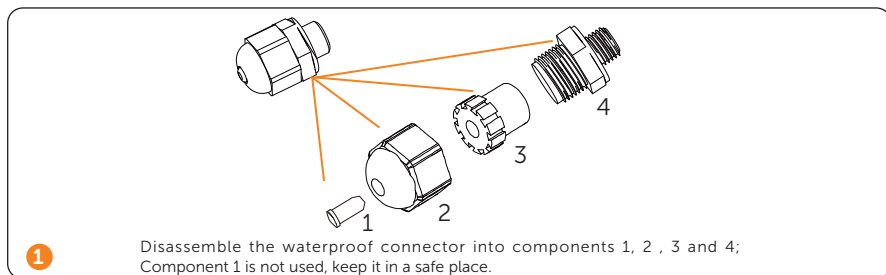


- Monitoring Connection / Überwachungs-Anschluss / Branchement de surveillance / Conexión de monitorización / Ligação à Monitorização / Monitoring-aansluiting / Collegamento monitoraggio / Połączenie na potrzeby monitorowania / Připojení ke sledování / Övervakningsanslutning / Conexiune de monitorizare / Мониторинговая 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 / مراقبة الاتصال

WiFi Mode:



LAN Mode:



Step3: Remove the waterproof cover (refer to WiFi mode step 2), then plug the dongle to the inverter.

* Note: Ensure the dongle port is sealed with the dustproof cover when no device is plugged in. Otherwise, it may cause inverter damage.

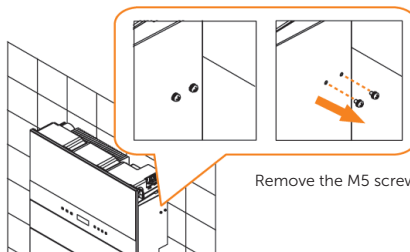


NOTICE!

- Install dongle with WiFi connecting cable (with WiFi stand) according to the actual needs.

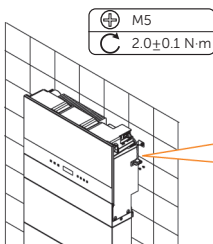
Install the dongle on the right cover plate of the inverter.

1

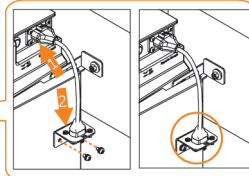


Remove the M5 screws on the right cover plate.

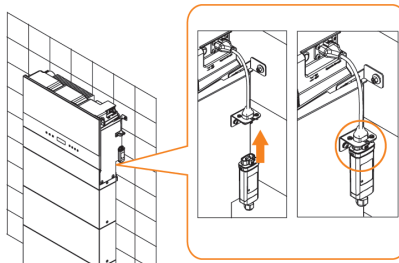
2



Plug one end of the WiFi connecting cable into the Dangle port of the inverter, and install the other end with WiFi stand to the cover plate by M5 screws.



3

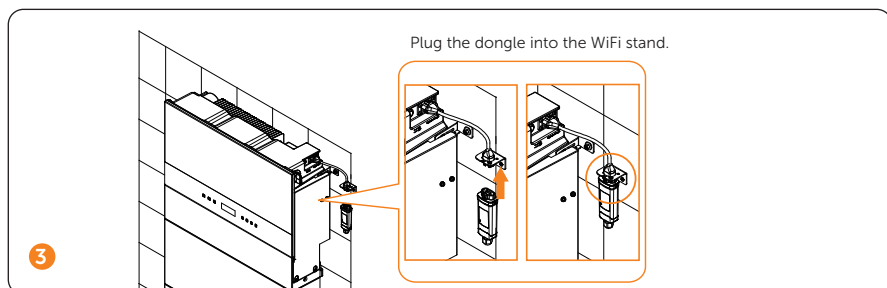
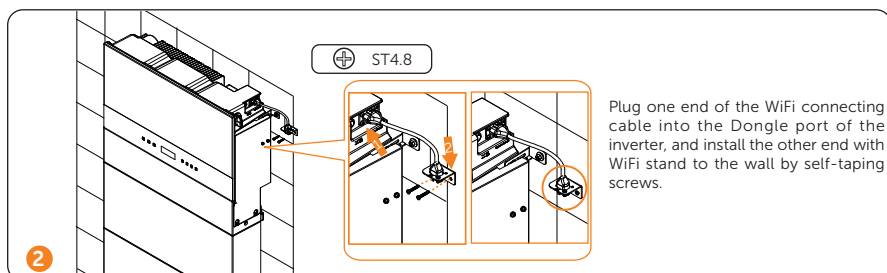
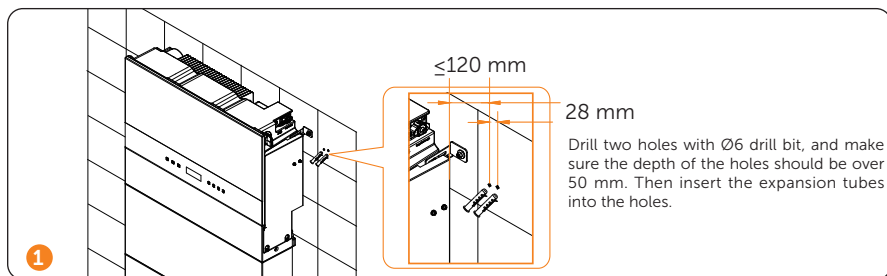


Plug the dongle into the WiFi stand.



INSTALLATION

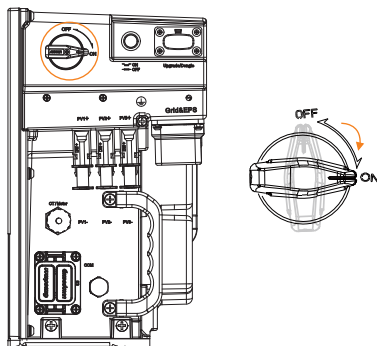
Install the dongle on the wall.



Power on the System

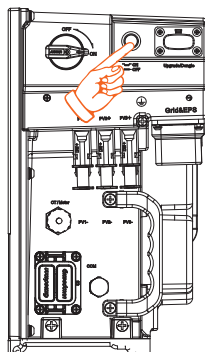
- Power on the System / Schalten Sie das System ein / Mise sous tension du système / Encienda el sistema / Ligue o sistema / Het systeem inschakelen / Accensione del sistema / Włączanie systemu / Zapnutí systému / Slå på systemet / Pornire sistem / Включване на системата / Tænd for systemet / Ρεύμα στο σύστημα / Süsteemi sisselülitamine / Kytke järjestelmän virta päälle / Napajanje sustava / Rendszer áram alá helyezés / Ijungti sistēmā / Ieslēdziet sistēmu / Zapnite system / Vklõpõte sistem / Vklõpõte sistem / Güç açma / Ligar o Sistema / قم بتشغيل النظام

Turn on DC switch



1

Press the button



2

==Advance Settings==

>Safety Code
>Grid Parameters



===Safety Code===

>Country

XXX

3

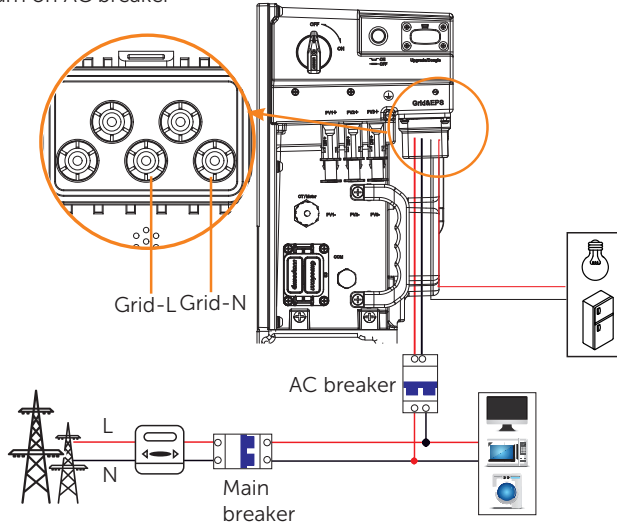
Set the corresponding safety standards according to different countries

==System ON/OFF==

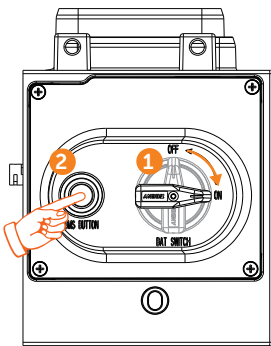
>Switch:
> ON <

- 4 Set the System ON/OFF to ON state on the LCD screen.

Turn on AC breaker



5



6

Press and hold the BAT BUTTON for at least 2 seconds.

NOTICE!

- After the installation is complete, cut off the AC breaker between Grid terminal and the grid, and then switch on all the EPS loads to ensure that the system work properly. Repeat the above operations each time the load on the EPS terminal increases.

* Refer to user manual for more information about powering on the system.

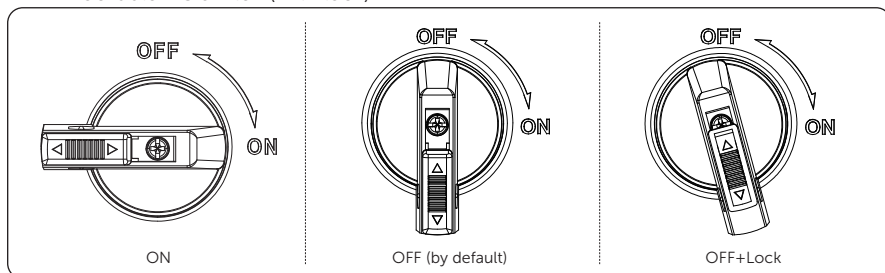


Lockable DC Switch

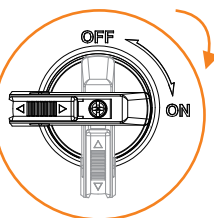
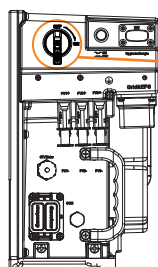
Lockable DC Switch / Abschließbarer DC-Schalter / Interrupteur CC verrouillable / Interruptor de CC con bloqueo / Interruptor CC Bloqueável / Vergrendelbare DC-schakelaar / Interruttore CC bloccabile / Blokowany przelazcznik pradu statego / Uzamykatelny DC vypinač / Låsbar DC-brytare / Comutator DC blocabil / Заключаващ се превключвател за постоянен ток / Låsbar DC-afbryder / Διακόπτης DC με δυνατότητα κλειδώματος / Lukustatav alalisvoolu-lüliti / Lukittava DC-kytkin / Prekidač istosmjernje struje (DC) koji se može blokirati / Zárható DC kapcsoló / Užrakinamas nuolatinės srovės jungiklis / Bloķējams līdzstrāvas slēdzis / Uzamykatelny spinač jednosmerného prúdu / DC stikalo z možnostjo zaklepanja / Kilitlenebilir DC Anahtarı / Interruptor CC bloqueável

There are two kinds of DC switch for the series inverters.

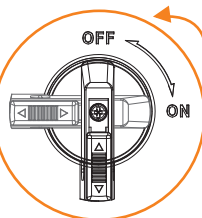
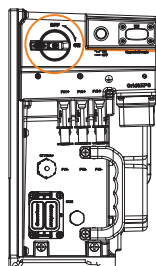
- Unlockable DC switch (without lock);
- Lockable DC switch (with lock).



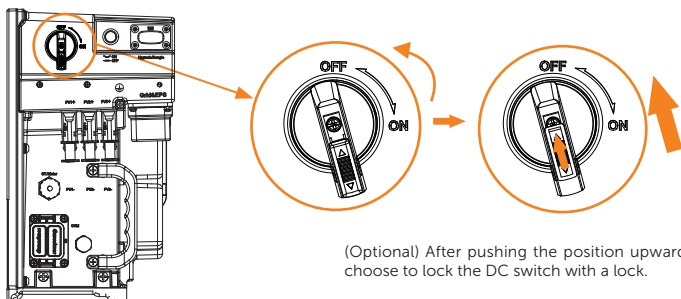
Turn on DC switch



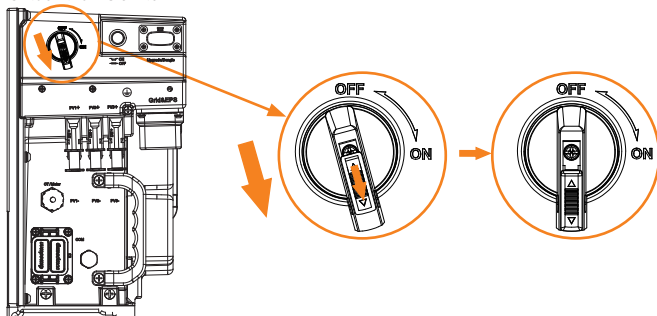
Turn off DC switch



Lock the DC switch



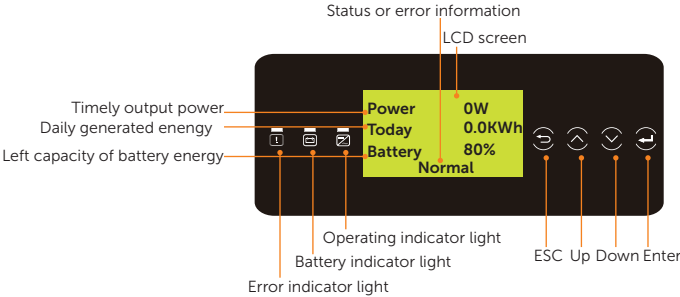
Unlock the DC switch



LCD Panel

LCD Panel / LCD-Bildschirm / Panneau LCD / Panel LCD / Paineel de LCD / LCD-paneel / Pannello LCD / Panel LCD / LCD panel / LCD-panel / Panou cu LCD / LCD панель / LCD-panel / Πάνελ LCD / LCD-paneel / LCD-paneeli / LCD ploča / LCD panel / LCD skydas /LCD panelis / LCD Panel / LCD plošča / LCD Panel / Paineel LCD / **OLED** لوحة

- Inverter



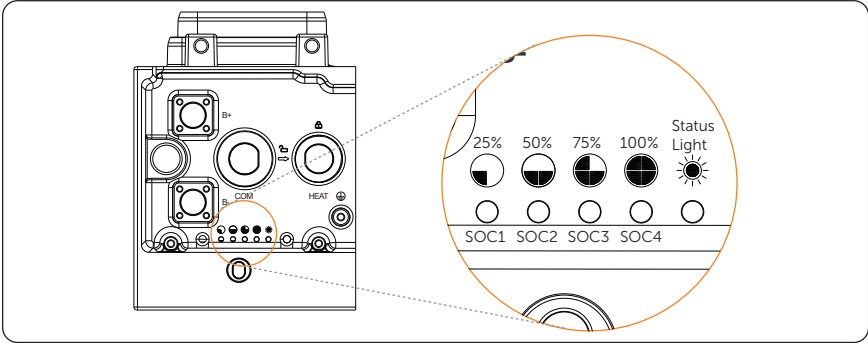
* Please refer to the actual product for the color of the LCD screen. The screen displayed in the manual is for aesthetic purpose.

In normal state, the "Power", "Today" and "Battery" information will be displayed. You can press the keys to switch information. In error state, the fault message and error code will be displayed, please refer to corresponding solutions in the user manual.

LED indicator	Status	Definition
 Operating	Solid blue	The inverter is in normal status or EPS (Off-grid) mode.
	Blue blinking	The inverter is in waiting,checking status or the system switch is off.
	Light off	The inverter is in fault status.
 Error	Solid red	The inverter is in a fault state.
	Light off	The inverter is in norml status.
 Battery	Solid green	The battery communication is in normal status and working normally.
	Green blinking	The battery communication is in normal status and in an idle status.
	Light off	The inverter is in fault status.

Key	Definition
ESC key	Exit from the current interface or function
Up key	Move the cursor to the upper part or increase the value
Down key	Move the cursor to the lower part or decrease the value
Enter key	Confirm the selection

- **Battery (T-BAT-SYS)**



No.	Mode	Description
1	Startup	After pressing the BMS BUTTON to start the system, the status light flashes yellow for 0.1 second and turns off for 0.1 second, and all the SOC power indicators are off.
2	Shutdown	After pressing and holding the BMS BUTTON for more than 1 second, the status light comes on solid green light, and the SOC power indicators flash blue in turn. Then all lights are off within 2.4 seconds after releasing the button.
3	Standby	The status light flashes green for 1 second and turns off for 4 seconds. The SOC power indicators are off.
4	Charging	The status light comes on solid green light, and the state of SOC power indicators depends on the actual situation. For details, please refer to the User Manual.
5	Discharging	The status light comes on solid green light, and the state of SOC power indicators depends on the actual situation. For details, please refer to the User Manual.
6	Fault	In case of failure, the status light will remain on solid red light for 10 minutes, and then such red light will flash for 1 second and then turn off for 4 seconds.
7	Working	In case of warning, the status light will flash yellow light for 1 second, and then turn off for 4 seconds.

General Setting

General Setting / Allgemeine Einstellungen / Paramètres généraux / Configuración general / Definição Geral / Algemene instelling / Impostazione generale / Ustawienia ogólne / Obecné nastavení / Generell inställning / Setare general / Общая настройка / Genel indstalling / Γενική τοποθέτηση / Üldine seadistus / Yleisasetus / Orçe postavke / Általános beállítás / Bendrasis nustatymas / Vispārīgs iestatījums / Všeobecné nastavenie / Splošna nastavitve / Genel Ayar / Configuração Geral / الإعداد العام

1 Set the System ON/OFF to ON state

==System ON/OFF==
>Switch:
> ON <

2 User settings

====Menu====
History Data
>Settings

====Password====
>
0 0 0 0

The initial password of user setting is 0 0 0 0 which should be changed for the consideration of account security.

• Data & Time and Language

====User Settings====
>Date & Time
Language

====Date & Time====
>2024-06-16
14:00

====User Setting====
Date & Time
>Language
EPS Mute

====Language====
>Select:
English

3 Advanced settings

====Menu====
History Data
>Settings
About

====Password====
>
2 0 1 4

====Settings====
User Setting
>Advance Setting

The initial password of advanced setting is 2 0 1 4 which should be changed for the consideration of account security.

• Safety Code

====Advance Settings====
>Safety Code
Grid Parameters

====Safety Code====
>Country
VDE 4105

Set the corresponding safety standards according to different countries

- Export Control

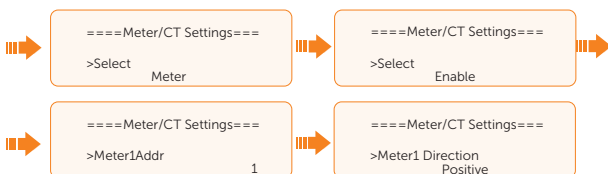


Set the **Export Control** to 0 for the countries with zero export control limit

- Meter / CT Setting-if CT is connected



- Meter / CT Setting-if Meter is connected



* Refer to user manual for more settings.

SolaXCloud Download

SolaXCloud Download / SolaXCloud Download / Téléchargement SolaXCloud / Descarga de SolaXCloud / Descarga do SolaXCloud / SolaXCloud Downloaden / SolaXCloud Download / Pobieranie SolaXCloud / Stáhnout SolaXCloud / SolaXCloud-nedladdning / Descărcare SolaXCloud / Изтегляне на SolaXCloud / Hent SolaXCloud / Λήψη SolaXCloud / SolaXCloud'i allalaadimine / SolaXCloudin lataus / Preuzimanje SolaXCloud / SolaXCloud Letöltés / „SolaXCloud” atsisiuntimas / SolaXCloud lejupielāde / Stiahnuť SolaXCloud / Prenesi SolaXCloud / SolaXCloud indirmesi / Download do SolaXCloud / لي زنت SolaXCloud



SolaXCloud

Scan the QR code to download SolaXCloud App. Follow the tutorial or online documents on the SolaXCloud App to complete the configuration.



Technical Data

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 / Tehniskis andmed / Tekniset tiedot / Tehnički podaci / Műszaki adatok / Techniniai duomenys / Tehniskie dati / Technické údaje / Tehnični podatki / Teknik Bilgiler / Dados Técnicos / البيانات الفنية

• Inverter

DC input

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Max. recommended PV power ¹ [W]	5000	6000	7400	9200	10000	12000	16000
Max PV voltage [d.c. V]	600						
Nominal DC operating voltage [d.c. V]	360						
MPPT voltage range [d.c. V]	40-560						
MPPT full power voltage range [d.c. V]	115-460	115-460	115-460	115-460	125-460	150-460	200-460
Max. PV current [d.c. A]	20/20	20/20	20/20	20/20/20	20/20/20	20/20/20	20/20/20
Isc PV array short circuit [d.c. A]	30/30	30/30	30/30	30/30/30	30/30/30	30/30/30	30/30/30
Start output voltage [d.c. V]	50	50	50	50	50	50	50
Max. inverter backfeed current to the array [d.c. V]	0	0	0	0	0	0	0
No. of MPP trackers	2	2	2	3	3	3	3
Strings per MPP trackers	A:1/B:1	A:1/B:1	A:1/B:1	A:1/B:1/C:1	A:1/B:1/C:1	A:1/B:1/C:1	A:1/B:1/C:1

* Marked with "1" indicates that a single channel MPPT can only input a maximum of 8000W.

AC output/ input

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
AC output							
Rated output apparent power [VA]	2500	3000	3680	4600	5000 (4600 for VDE4105, 4999 for AS4777)	6000	8000
Max. output apparent power [VA]	2500	3300	3680	4600	5000 (4600 for VDE4105, 4999 for AS4777, 5000 for C10/11)	6600	8000
Nominal AC voltage [a.c. V]	220/230/240						
Frequency [Hz]	50/60						
Rated output current [a.c. A]	10.9	13.1	16	20	21.8	26.1	34.8
Max. output continuous current [a.c. A]	10.9	14.4	16	20	21.8	28.7	34.8
Current (inrush) (at 50µs) [a.c. A]	53A						

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Maximum output fault current (at 1ms) [a.c. A]	55	55	55	75	75	100	100
Maximum output overcurrent protection [a.c. A]	65	65	65	100	100	125	125
Power factor range	0.8 leading - 0.8 lagging						
Total harmonic distortion (THDi)	< 3 %						
AC input							
Max. apparent power [VA]	6576	6576	7680	9600	9600	9600	9600
Rated AC power [W]	6300	6300	7360	9200	9200	9200	9200
Nominal AC voltage [a.c. V]	220/230/240						
Frequency [Hz]	50/60						
Max. AC input current [a.c. A]	27.4	27.4	32	40	40	40	40
Power factor range	0.8 leading - 0.8 lagging						

Battery

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Battery type	Lithium batteries						
Battery voltage range [d.c. V]	80-480						
Max. continuous charge/ discharge current [d.c. A]	50						
Communication interface	CAN/RS485						
Reverse connection protection	Yes						

Efficiency, Safety and Protection

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Efficiency							
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
European efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Maximum efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
Rated battery charge efficiency	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%	98.5%
Rated battery discharge efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Safety and Protection							
Safety	IEC62109-1/IEC62109-2						
Grid monitoring	VDE0126-1-1 A1:2012/VDE-AR-N 4105/G98/G99/AS4777/EN50549/CEI 0-21						
DC SPD protection	Integrated						
AC SPD protection	Integrated						
Over/ under voltage protection	Yes						
Grid protection	Yes						
DC injection monitoring	Yes						
Back feed current monitoring	Yes						
Residual current detection	Yes						



Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Active anti-islanding method	Frequency Shift						
Over load protection	Yes						
Over heat protection	Yes						
Array insulation resistance detection	Yes						

EPS (Off-grid) output

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Rated EPS apparent power [VA]	2500	3000	3680	4600	5000	6000	8000
Nominal EPS voltage [a.c. V]	220/230/240						
Frequency	50/60						
Rated EPS current [a.c. A]	10.9	13.1	16	20	21.8	26.1	34.8
EPS (Off-grid) peak power [VA]	$\leq 1.1P_n$ continuous operation; $1.1P_n - 2P_n$ 10s; $> 2P_n$ report error immediately						
Switching time (typical value) [ms]	< 10						
Total harmonic distortion (THDv)	< 3 %						



Generic data

Model	X1-IES-2.5K	X1-IES-3K	X1-IES-3.7K	X1-IES-4.6K	X1-IES-5K	X1-IES-6K	X1-IES-8K
Dimensions (W/H/D) [mm]	717*350*210						
Dimensions of packing (W/H/D) [mm]	790*590*350						
Net weight [kg]	26.2		26.4			27	
Gross weight * [kg]	30.9		31.1			31.7	
Heat dissipation treatment	Natural cooling						
Noise emission (typical) [dB(A)]	< 35						
Storage temperature range [°C]	-40 to +65						
Operating ambient temperature range [°C.]	-35 to +60 (derating at 45)						
Humidity [%]	0% to 100% (condensing)						
Altitude [m]	≤ 3000						
Ingress protection	IP66						
Protective class	I						
Cold standby consumption	< 5W						
Overvoltage category	III(electric supply side), II(PV side)						
Pollution degree	III						
Installation mode	Wall mounted						
Inverter topology	Non-isolated						
Communication interface	RS485 (Meter), Pocket-X, USB, RS485 (Modbus, EV Charger, Datahub), Parallel (CAN+RS485), DO (SG ready), DI						

* The specific gross weight is subject to the actual situation of the whole machine, which may be a little different due to the influence of the external environment.



• Battery (T-BAT-SYS)

Configuration List

No.	Model	BMS	Battery Module	Nominal Energy (kWh)	Operating Voltage (Vdc)
1	T-BAT HS 5	TBMS-MCS0800E x 1	TP-HS50E x 1	5.1	90-116
2	T-BAT HS 10	TBMS-MCS0800E x 1	TP-HS50E x 2	10.2	180-232
3	T-BAT HS 15	TBMS-MCS0800E x 1	TP-HS50E x 3	15.3	270-348
4	T-BAT HS 20	TBMS-MCS0800E x 1	TP-HS50E x 4	20.4	360-464
5	T-BAT HS 25	TBMS-MCS0800E x 1	TP-HS50E x 5	25.6	450-580
6	T-BAT HS 30	TBMS-MCS0800E x 1	TP-HS50E x 6	30.7	540-696

Performance Parameter

Module	T-BAT HS 5	T-BAT HS 10	T-BAT HS 15	T-BAT HS 20	T-BAT HS 25	T-BAT HS 30
Nominal Voltage (Vdc)	102.4	204.8	307.2	409.6	512	614.4
Operating Voltage (Vdc)	90-116	180-232	270-348	360-464	450-580	540-696
Nominal Capacity (Ah) ¹	50	50	50	50	50	50
Nominal Energy (kWh) ¹	5.1	10.2	15.3	20.4	25.6	30.7
Usable Energy 90% DOD (kWh) ²	4.6	9.2	13.8	18.4	23	27.6
Max. Charge/Discharge Current (A) ³	50	50	50	50	50	50
Recommend Charge/Discharge Current (A) ⁴	30	30	30	30	30	30
Standard Power (kW)	3	6.1	9.2	12.2	15.3	18.4
Max. Power (kW)	5.1	10.2	15.3	20.4	25.6	30.7
Short-circuit current	3.57 kA (0.333 ms)					
Battery Round-trip Efficiency (0.2 C, 25°C) ⁵	95%					
Expected Lifetime (25°C)	10 years					
Cycle Life 90% DOD (25°C)	6000 cycles					
Charge Temperature	0°C ~ 53°C (Off heating function) ³ -30°C ~ 53°C (In heating function) ³					
Discharge Temperature	-20°C ~ 53°C (In heating function) ³ -30°C ~ 53°C (Off heating function) ³					
Storage Temperature	30°C ~ 50°C (6 months), -20°C ~ 30°C (12 months)					
Ingress Protection	IP66					
Protection Class	I					

*Note:

1. Test conditions: 25°C .100 % , depth of discharge (DoD), 02.C charge & discharge.
2. System usable energy may vary with inverter different setting.
3. Discharge: In case of battery cell's temperature range of -20°C~10°C and 45°C~53°C, the discharge current will be reduced; Charge: In case of battery cell's temperature range of 0°C~25°C and 45°C~53°C, the charge current will be reduced. Product charge or discharge power depends on the actual temperature of battery pack.
4. The battery can only be discharged and cannot be charged when the battery cell's temperature range is between -20°C and 0°C.
5. Test conditions: 25°C .100 % , depth of discharge (DoD), 02.C charge & discharge.

Fuse Parameter

Component Type	Assembled fuse
Fuse Type	EV / HEV
Rated Voltage (Vdc & Vac)	750
Rated Current (A)	80



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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.





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