



X1-Lite-LV

8 kW / 10 kW / 12 kW

Installation Manual

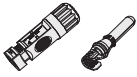
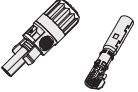
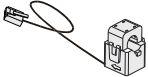
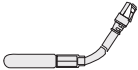
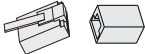
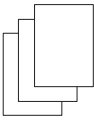
Version 0.0

www.solaxpower.com



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

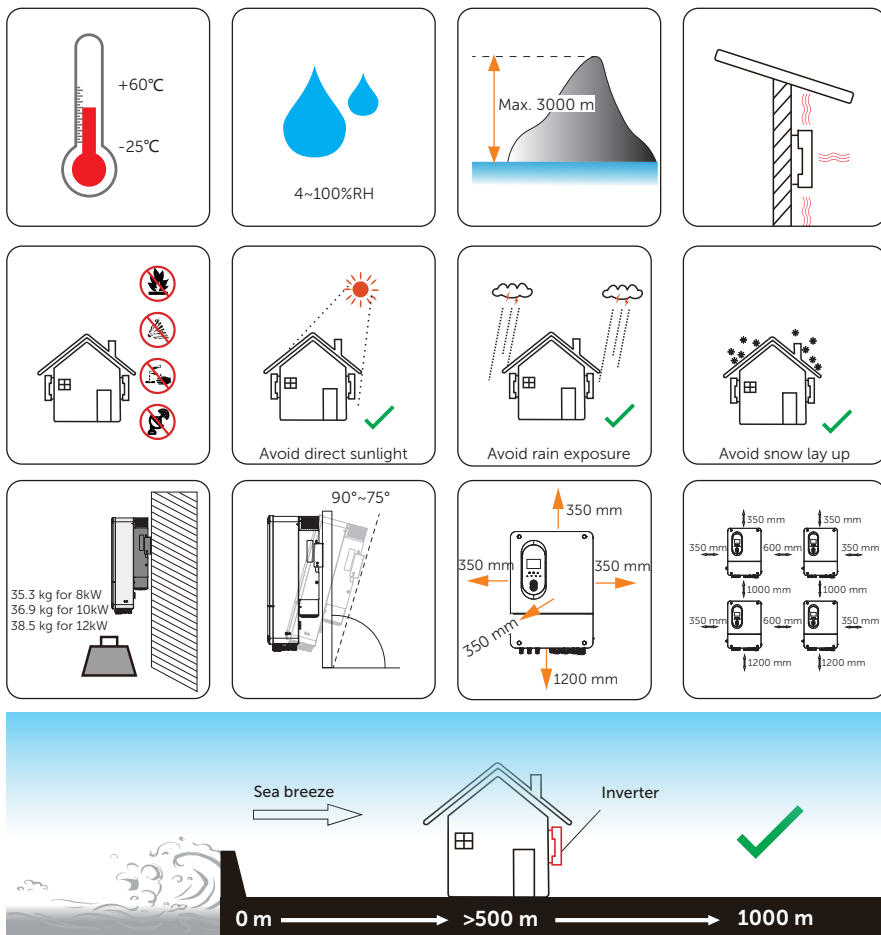
Packing List / Packliste / Liste du matériel livré / Lista de piezas / Lista da embalagem / Paklijst / Contenuto della confezione / Zawartość opakowania / Seznam balení / Packlista / Listă de ambalare / Опаковъчен лист / Pakkeliste / Λίστα συσκευασίας / Pakkeleht / Pakkausluettelo / Popis pakiranja /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

 Inverter x 1	 Bracket x 1	 A B Negative PV connector & PV pin contact¹	 C D Positive PV connector & PV pin contact¹
 E CT x 1	 F Battery temperature sensor x 1	 G Disassembling tool for PV terminal x 1	 H I J Battery connection terminal x 4 Y terminal x 9 OT terminal x 1
 K M4*L12 screw x 2	 L M6*L14 screw x 1	 M N O Washer x 4 Expansion tube x 4 Self-tapping screw x 4	 P Q RJ45 terminal x 4 RJ45 connector x 2
 R Document	 S Decorative buckle x 2	 T Parallel network cable x 1	 Dongle x 1 (optional)

Note:

- Refer to the actual delivery for the optional accessories.
- ¹"4 pairs for 8 or 10 kW inverters and 6 pairs for 12 kW inverter.

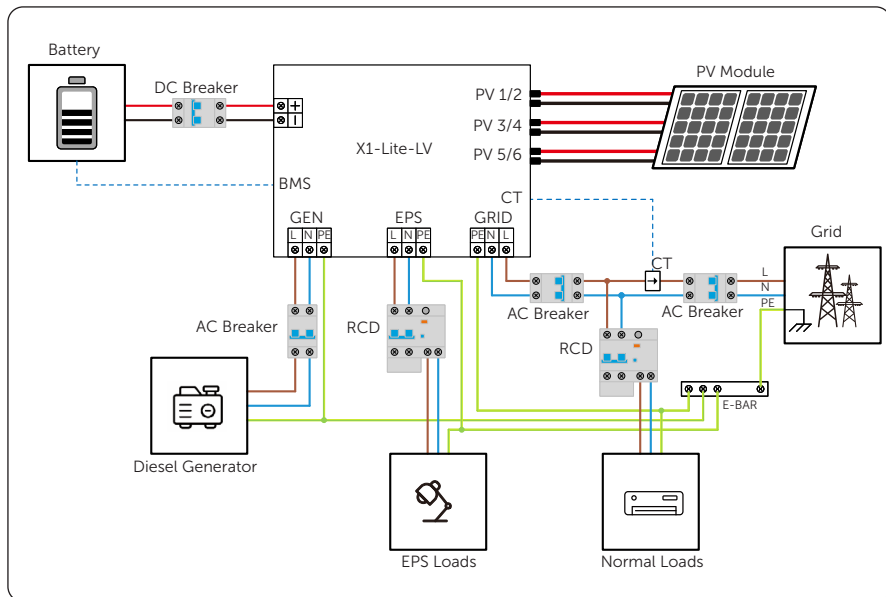
Mounting Location / Montageort / Emplacement de montage / Ubicación de montaje / Localização de montagem / Bevestigingslocatie / Posizione di montaggio / Lokalizacja miejsca montażu / Montážní místo / Monterings plats / Locație de montare / Место за монтаж / Monteringssted / Τοποθεσία στερέωσης / Paigalduskoht / Asennuspaikka / Mjesto postavljanja / Rögzítési hely / Montavimo vieta / Montāžas vieta / Miesto inštalácie / Mesto namestitve / Montaj Konumu / Local de montagem



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.

Wiring Diagram / Schaltplan / Schéma de câblage / Diagrama de cableado / Diagrama de ligação / Bedradingsschema / Schema elettrico / Schemat połączeń / Schéma zapojení / Kopplingsschema / Schemă de conexiuni / Схема на свързване / Ledningsdiagram / Διάγραμμα συνδεσμολογίας / Ühendusskeem / Kytkenäkaavio / Dijagram ožičenja / Kapcsolási rajz / Elektros laidų montavimo schema / Elektroinstalācijas shēma / Schéma zapojenia / Električna shema / Bağlantı Şeması / Diagrama de fiação



Note:

- Breaker recommended for grid connection (with EPS)

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
On-grid breaker	60 A	80 A	100 A

- Breaker recommended for grid connection (without EPS)

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
On-grid breaker	50 A	60 A	80 A

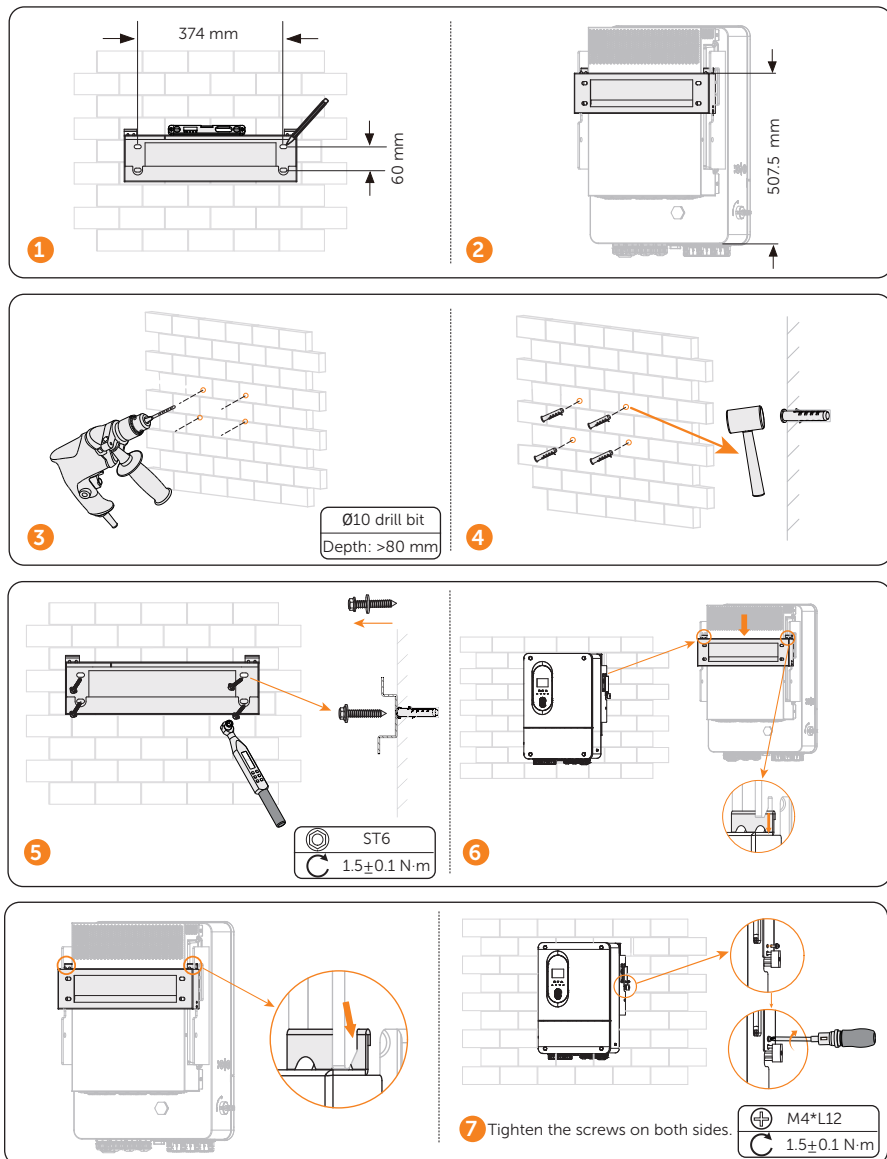
- Breaker recommended for off-grid connection (only EPS)

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Off-grid breaker	50 A	60 A	80 A

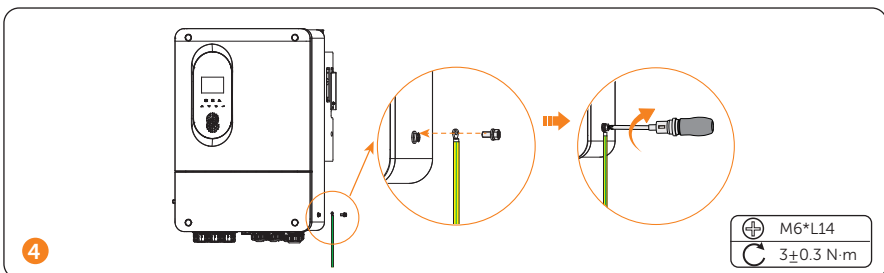
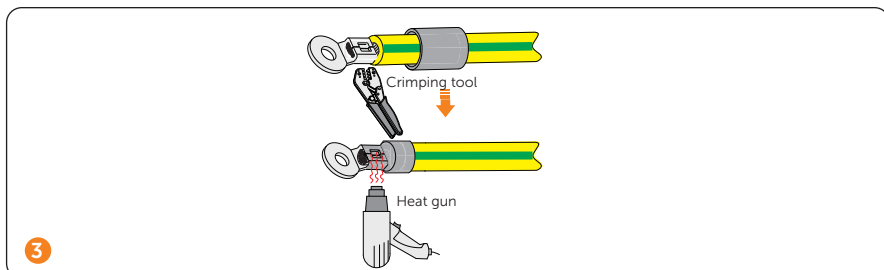
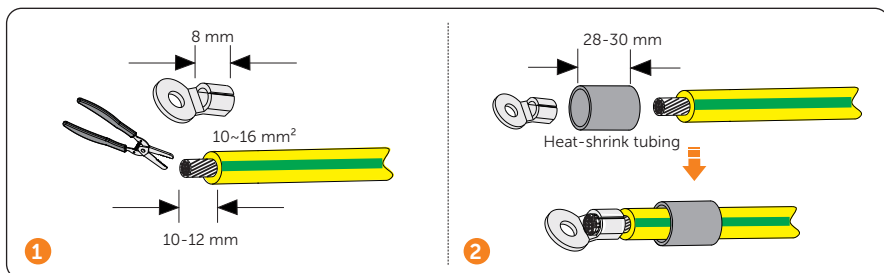
- Breaker recommended for GEN connection

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Breaker	60 A	80 A	100 A

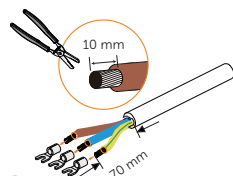
Mechanical Installation / Mechanische Installatie / Installation mécanique / Instalación mecánica / Instalação mecânica / Mechanische installatie / Installazione meccanica / Instalacja mechaniczna / Mechanická instalace / Mekanisk installation / Instalare mecanică / Механичен монтаж / Mekanisk installation / Μηχανική εγκατάσταση / Mehaaniline paigaldus / Mekaaninen asennus / Mehanička ugradnja / Mechanikai telepítés / Mechaninis montavimas / Mehāniskā uzstādīšana / Mechanická inštalácia / Mehanska namestitvev / mekanik kurulum / instalação mecânica



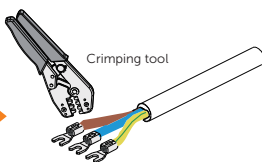
PE Connection / Schutzerdungs-Anschluss / Connexion PE / Conexión PE / Ligação à Terra / PE-aansluiting / Collegamento PE / Połączenie PE / PE připojení / PE-anslutning / Conexiune PE / PE връзка (земя) / Jordforbindelse / Σύνδεση PE / PE ühendus / PE-yhteys / PE priključak / PE bekötés / PE (apsauginio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



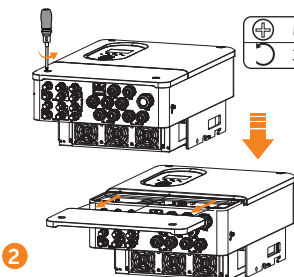
Grid and EPS Connection / Netz- und EPS-Verbindung / Branchement Réseau et EPS / Conexión de red y EPS / Ligação à Rede e Off-grid / Aansluiting op het net en EPS / Collegamento GRID e EPS / Połączenie z siecią i EPS / Pripojení k síti a EPS / Elnäts- och EPS-anslutning / Conectare la rețea și EPS / Връзка с мрежата и аварийното захранване / Elnet- og EPS-tilslutning / Σύνδεση στο δίκτυο και σε Σύστημα ηλεκτρικής ενέργειας (EPS) / Võrgu- ja EPS-ühendus / Verkon ja EPS:n liitäntä / Priključak mreže i EPS priključak / Rácsos és EPS bekötés / Tinklo ir EPS jungtis / Tikla un EPS savienojums / Pripojenie do siete a k núdzovému napájaniu EPS / Povezava z omrežjem in EPS zasilno napajanje / Şebeke ve EPS Bağlantı / Conexão de Rede e EPS



1 For specifications of cable and Y terminal, refer to the right tables.

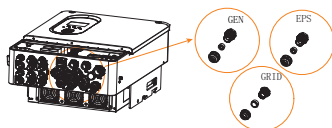


Situations	8 kW	10 kW	12 kW
On-grid (with EPS)	10 mm ²	16 mm ²	16 mm ²
On-grid (without EPS)	8 mm ²	10 mm ²	16 mm ²
Off-grid (Only EPS)	8 mm ²	10 mm ²	16 mm ²
Item	8 kW	10/12 kW	
Y terminal	10 mm ²	16 mm ²	
Cable for Gen	10 mm ²	16 mm ²	



2

M6*L14
3±0.3N·m

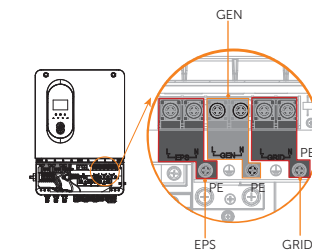


For Grid, remove the sealing cover of the plug

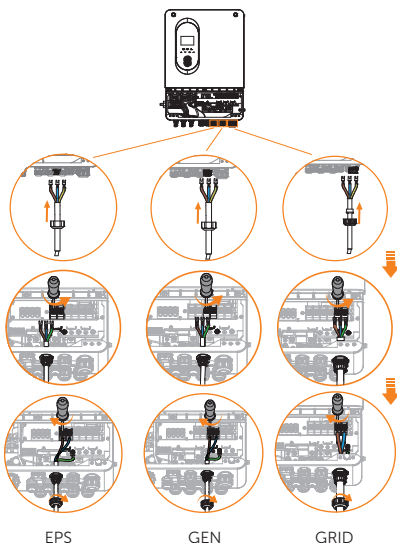
For EPS and GEN, remove the plug



*It is recommended to seal unused plugs with fireproof putty.



3

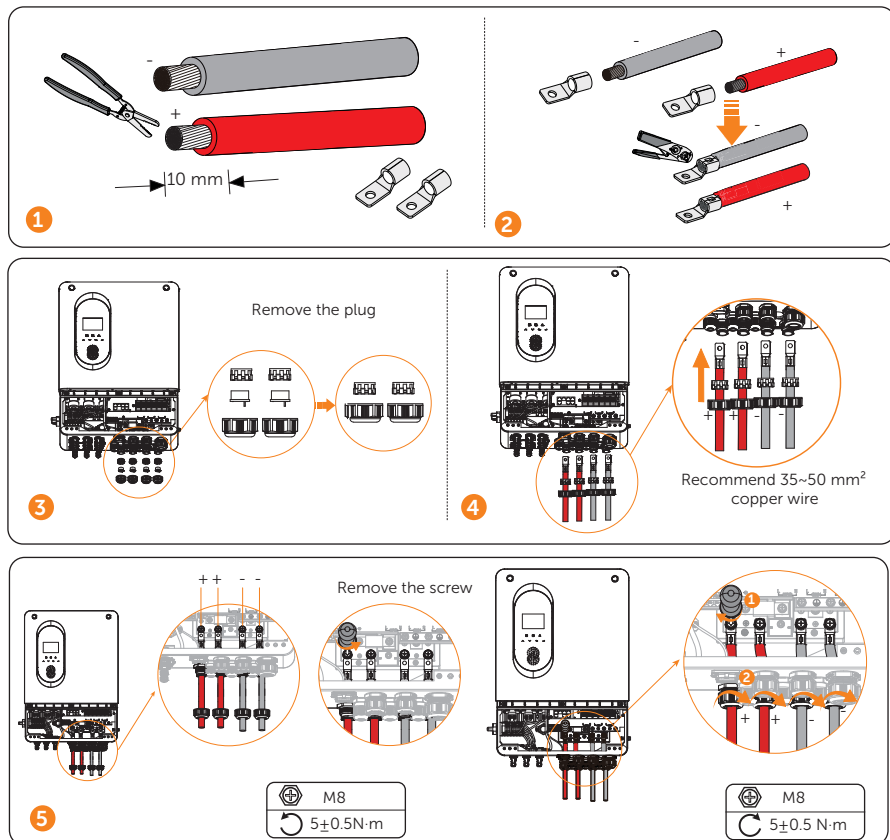


PV Connection / PV-Anschluss / Connexion PV / Conexión FV / Ligação PV
(Fotovoltaiica) / PV-aansluiting / Collegamento PV / Połączenie PV / Pripojení FV /
Anslutning av solcellsanläggning / Conexiune PV / Връзка с PV / PV-tilslutning /
Σύνδεση φωτοβολταϊκού / PV-ühendus / PV-liitântä / Fotonaponski priključak / PV
bekötés / Fotovoltliné jungtis / PV savienojums / Pripojenie fotovoltaiiky (FV) / Povezava
fotopanelstnega kabla (PV) / PV Bağlantısı / Conexão PV

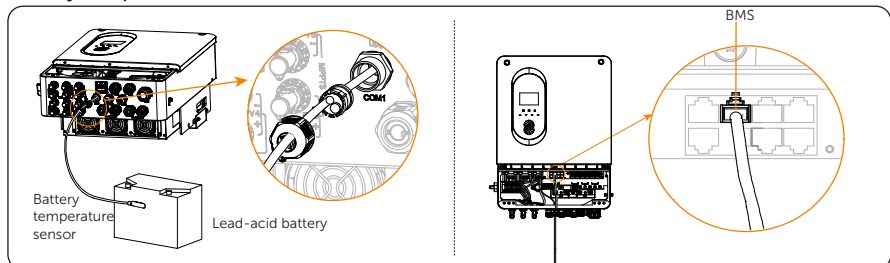


7 Seal the unused PV terminals with caps.

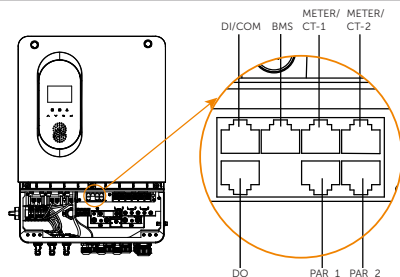
Battery Connection / Batterieanschluss / Branchement de la batterie / Conexión de la batería / Ligação da bateria / Batterij-aansluiting / Collegamento della batteria / Połączenie akumulatora / Pripojení baterie / Batterianslutning / Conectare baterie / Връзка с батерията / Batteritilslutning / Σύνδεση μπαταρίας / Akuühendus / Akuiitõtä / Priklučak za bateriju / Akumulátor bekötés / Akumulatoriaus jungtis / Akumulatora savienojums / Pripojenie batérie / Povezava baterije / Akü Bağlantısı / Conexão da Bateria



Battery temperature sensor connection



Communication Connection / Kommunikations-Anschluss / Branchement de communication / Conexión de comunicación / Ligação à Comunicação / Communicatie-aansluiting / Collegamento comunicazione / Połączenie komunikacyjne / Komunikaciňní pŕipojení / Kommunikationsanslutning / Conexiune de comunicare / Коммуникационная връзка / Kommunikationsforbindelse / Σύνδεση επικοινωνίας / Sideühendus / Tiedonsiirtoliitäntä / Priklučak za komunikaciju / Komunikációs bekötés / Duomenų ryšys / Sakaru savienojums / Pripojenie komunikácie / Komunikacijska povezava / İletişim Bağlantısı / Conexão de Comunicação

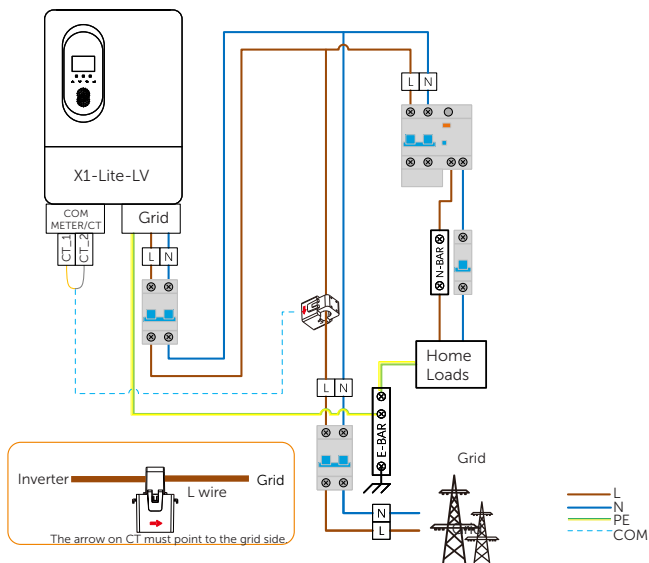


Pin assignment of Meter/CT-1, Meter/CT-2 and BMS

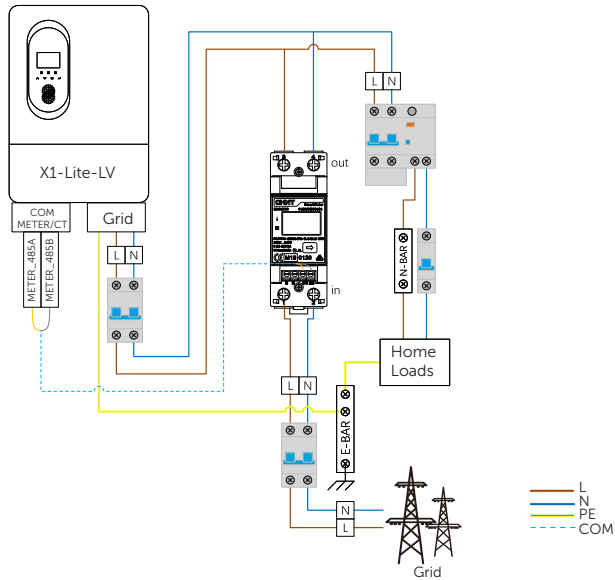
Assignment	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
Meter/CT-1	/	/	CT1_1	METER_485A	METER_485B	CT1_2	/	/
Meter/CT-2	/	/	CT2_1	METER_485A	METER_485B	CT2_2	/	/
BMS	BMS_485B	BMS_485A	GND	BMS_CANH	BMS_CANL	/	BMS_WAKEUP	BAT_TEMP

*For pin assignment of other communication ports, refer to the user manual.

Wiring diagram of CT

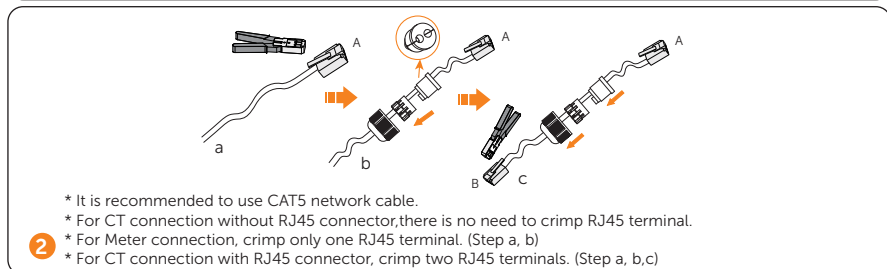
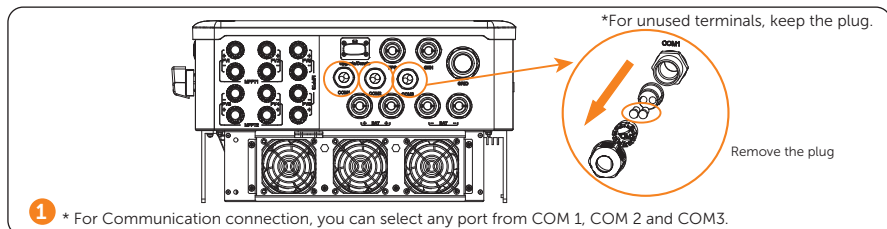


Wiring diagram of meter

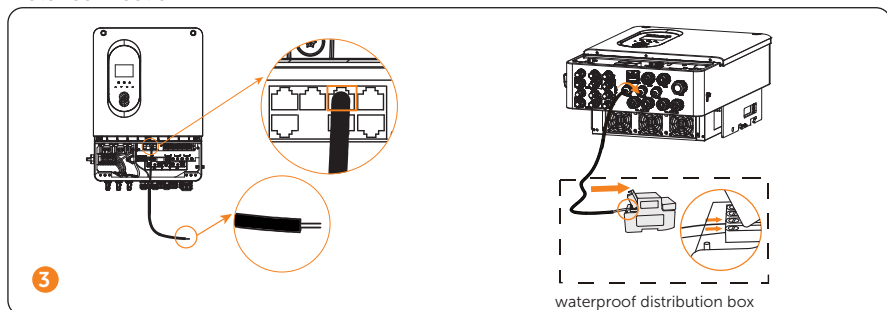


- * Only one of the Meter and CT connections can be selected in the same METER/CT port. Meter cable goes to pin terminal 4 and 5; CT cable goes to pin terminal 3 and 6.
- * Refer to user manual for other communication connections.

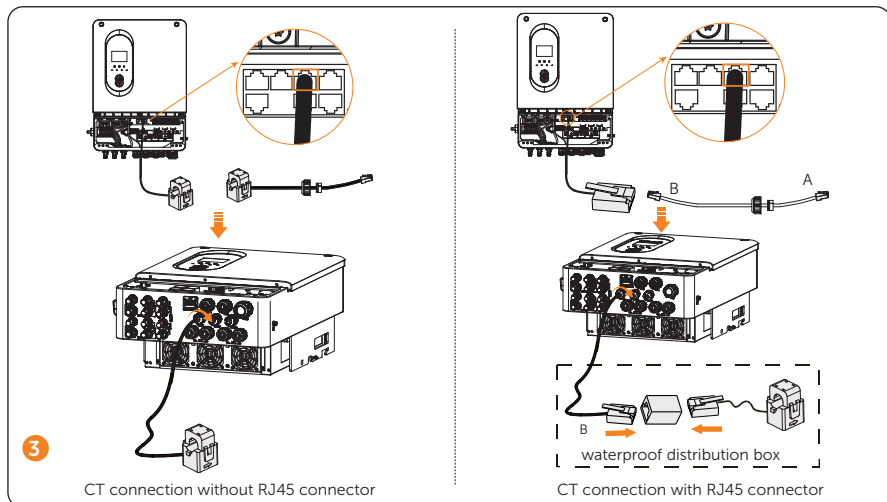
CT/Meter connection steps



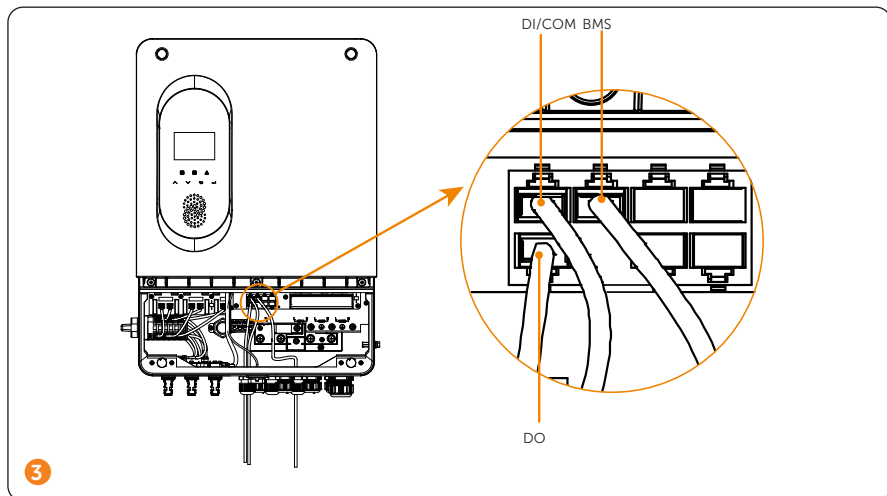
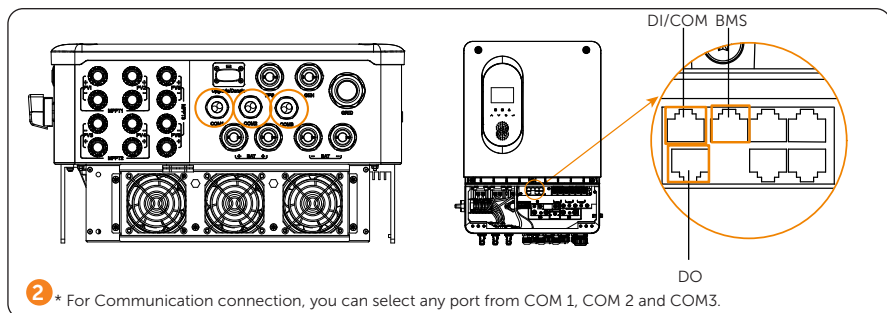
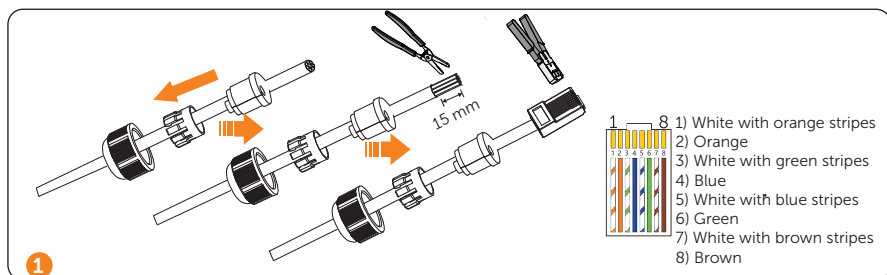
Meter connection



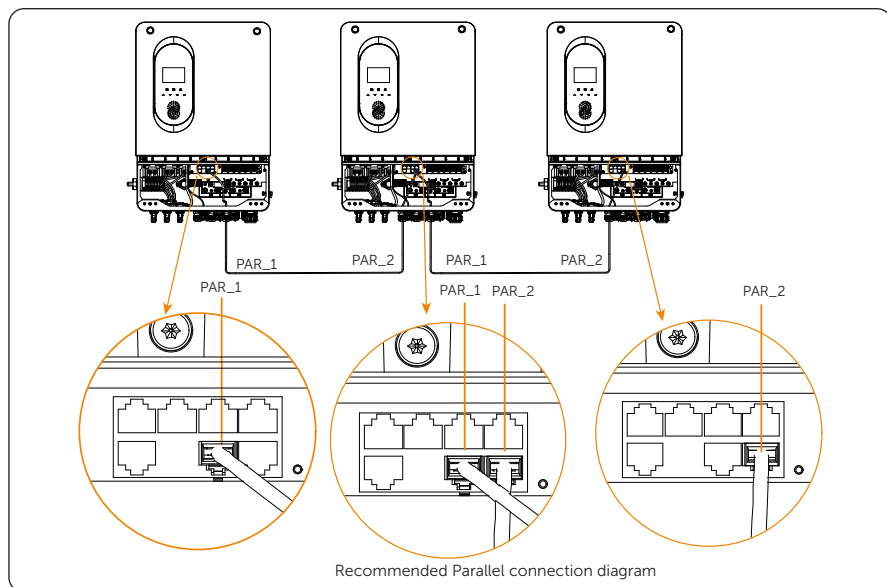
CT connection



DI/COM, BMS, DO port connection

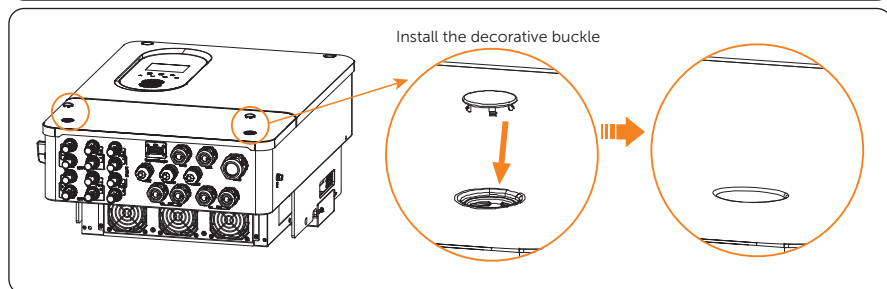
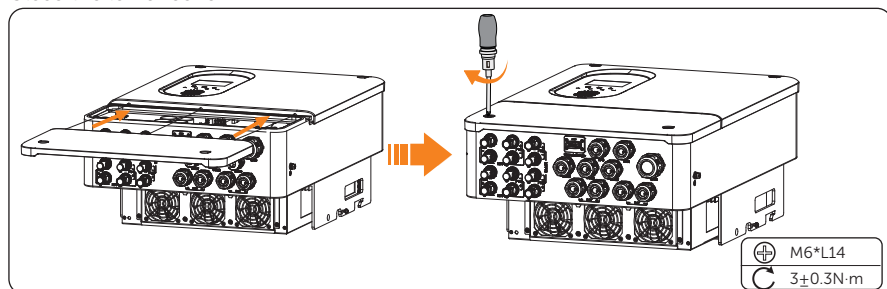


Parallel port connection

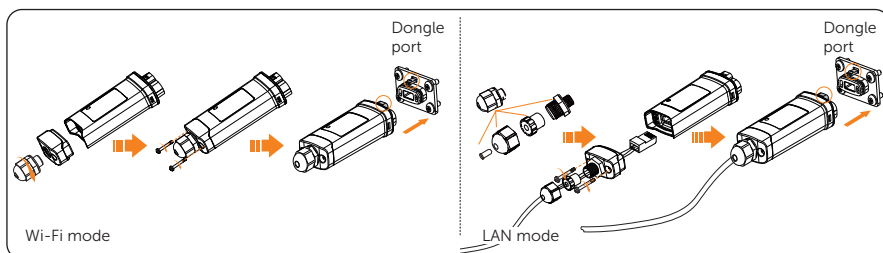


* Parallel network cable is in the accessory bag.

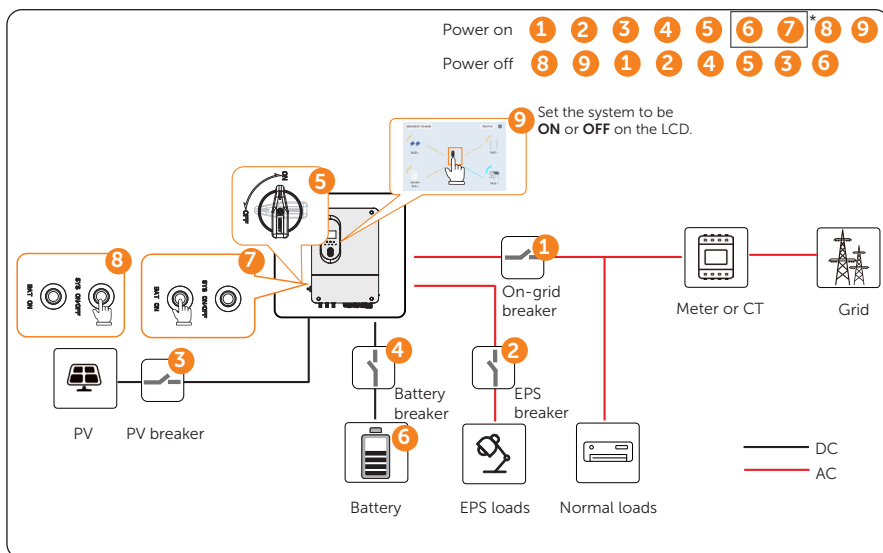
Close the lower cover



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



Power On/Off / Einschalten/Ausschalten / Marche/Arrêt / Encendido/apagado / Ligar/Desligar / In-/uitschakelen / Accensione/Spegnimento / Włączanie/wyłączanie zasilania / ZAP/VYP / Ström på/av / Pornire/Oprire / Включване/изключване / Strøm til/fra / Ενεργοποίηση/Απενεργοποίηση / Toide sisse/välja / Virta päälle/pois / Uključivanje/isključivanje napajanja / Be-/kikapcsolás / Maitinimo įjungimas / išjungimas / Barošanas ielslēgšana/izslēgšana / Napájanie zapnuté/vypnuté / Vkllop / izklop / Güç Açık/Kapalı / Ligar/Desligar



* For steps 6 and 7, you should note:

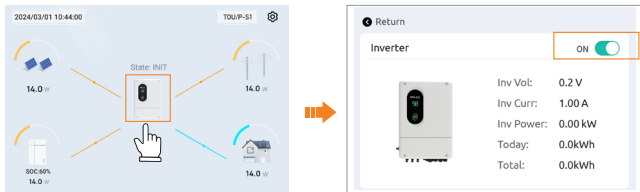
- if PV and Grid are not connected but the battery is connected, execute steps 6 and 7 for Solax lithium battery, but only step 7 for lead acid battery. For instructions on how to start the battery, refer to the corresponding manual.
- if PV or Grid is connected, skip over steps 6 and 7.

* For instructions on how to start the PV, refer to the corresponding manual.

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

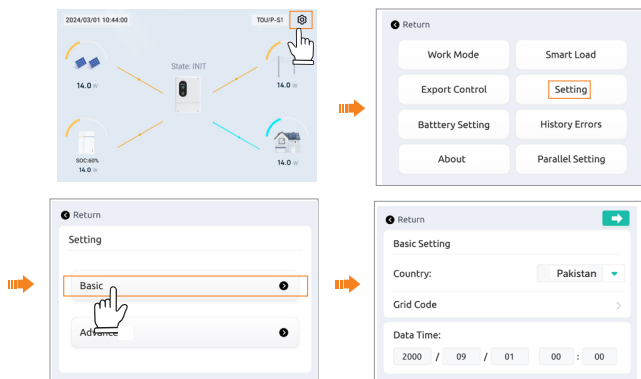
1 System ON/OFF

Set the Power ON/OFF. Tap the icon of inverter, then enable or disable the button to power on/off the inverter.



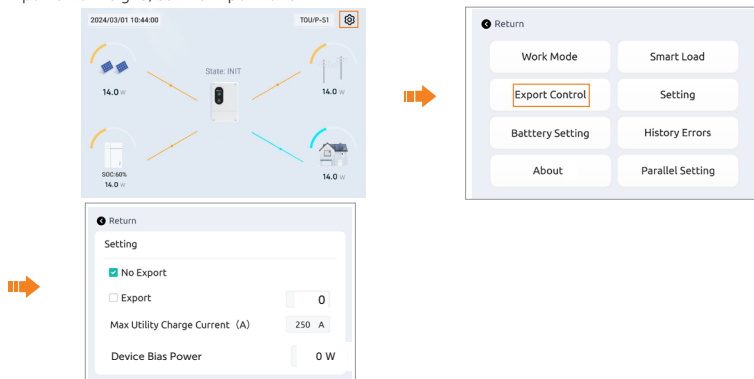
2 Set the basic settings including country, grid code, language and system date&time.

When Country is set to Pakistan, Workmode is different from other countries.



7 Export Control

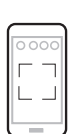
This function allows the inverter to control the output power to the grid. If the user does not want to feed power to the grid, set the Export to "0".



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

* Refer to user manual for more settings.

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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 / Output

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Max PV voltage [d.c. V]		600	
MPPT voltage range [d.c. V]		50-550	
Max. PV current [d.c. A] ¹	32/32	32/32	32/32/32
Isc PV array short circuit [d.c. A]	40/40	40/40	40/40/40
Max. inverter backfeed current to the array [d.c. V]		0	

* "1" When 1 MPPT has 2 string input, if both strings are connected to PV, the maximum string current of a single string does not exceed 16A. If only one string of PV is connected, the maximum single string current does not exceed 32A.

- Battery

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Battery type		Lithium / Lead-Acid	
Battery voltage range [d.c. V]		40-60	
Max. continuous charge/discharge current [d.c. A]	190/190	220/220	250/250

- AC Input / Output

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Rated output apparent power [VA]	8000	10000	12000
Max. output apparent power [VA]	8800	11000	13200
Nominal AC voltage [a.c. V]	220/230/240		
Frequency [Hz]	50/60		
Rated output current [a.c. A]	34.8	43.5	52.2
Max. output continuous current [a.c. A]	40	50	60
Max. output fault current (at 1ms) [a.c. A]	95	135	135
Current (inrush) [a.c. A]	65		
Maximum output overcurrent protection [a.c. A]	110	165	
Max. AC input current [a.c. A]	55	65	80
Power factor range	0.8 leading - 0.8 lagging		
Rated AC Input Apparent Power [VA]	8000	10000	12000

- EPS

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Nominal EPS voltage, Frequency [a.c. V] [Hz]	230, 50/60		
Rated EPS current [a.c. A]	34.8	43.5	52.2
Rated EPS apparent power [VA]	8000	10000	12000

- Others

Model	X1-Lite-8K-LV	X1-Lite-10K-LV	X1-Lite-12K-LV
Operating ambient temperature range [°C]	-25 to +60 (derating above +45)		
Ingress protection	IP65		
Active anti-islanding protection	Frequency Shift		
Humidity [%]	4 to 100 (condensing)		
Storage temperature [°C]	-25 to +60		
Altitude [m]	< 3000		
Pollution degree	II (Inside), III (Outside)		
Protective Class	I		
Overvoltage Category	III (MAINS), II (DC)		
Inverter Topology	Non-isolated for PV side, HF for battery side		
Safety	IEC/EN 62109-1/-2		
Grid Monitoring	NRS 097-2-1, IEC61727, IEC62116, PEA, MEA, BIS		

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Warranty Registration

Please visit the website: <https://www.solaxcloud.com/user-center/> to complete the warranty registration. For more detailed warranty terms, please visit SolaX official website: www.solaxpower.com.



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