



X3-AELIO

**50 kW / 60 kW / 39 kW /
49 kW / 49.9 kW / 61 kW**

Installation Manual

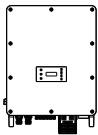
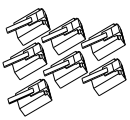
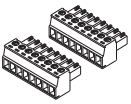
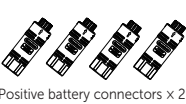
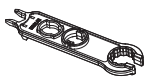
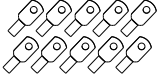
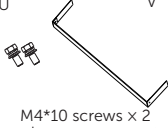
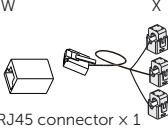
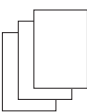
Version 1.0

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

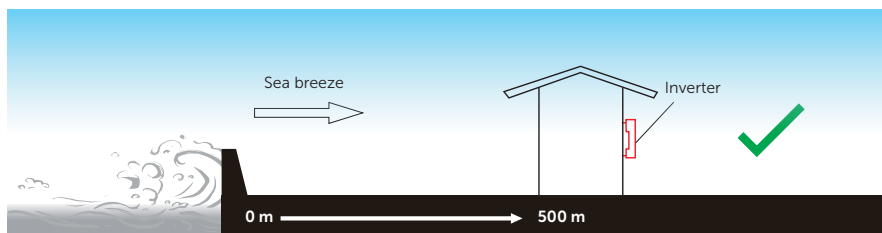
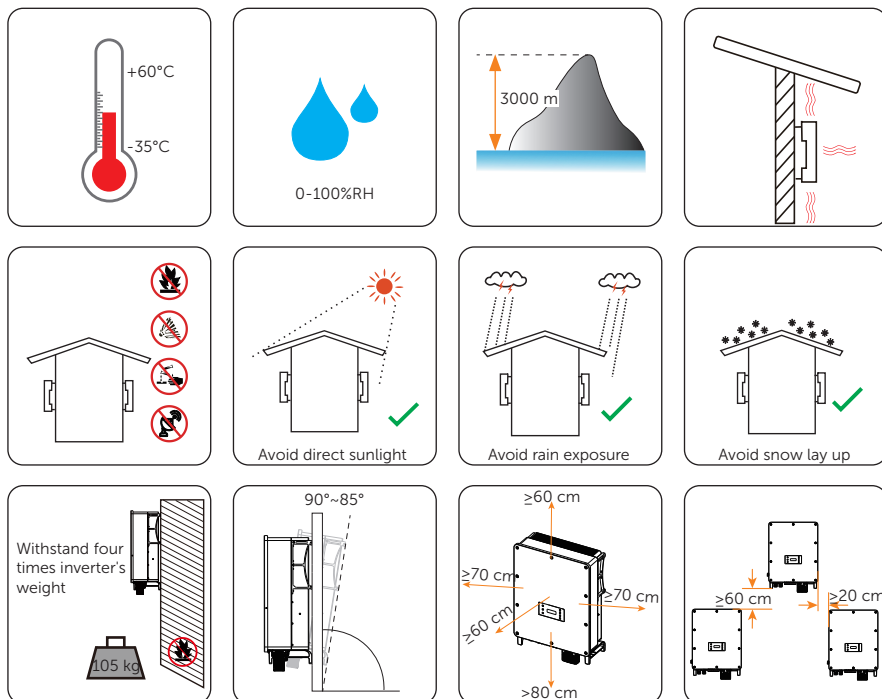
 Inverter x 1	 Mounting bracket x 1	 M5 screws x 4	 Cable clamp x 1
 OT terminal x 1	 RJ45 terminals x 7	 8-pin terminal blocks x 2	 Positive battery connectors x 2 Negative battery connectors x 2
 Positive PV connectors & pin contacts x 8/10/12	 Negative PV connectors & pin contacts x 8/10/12	 M10*100 expansion bolts x 4	 Lifting rings x 2
 Removal tool for PV connectors x 1	 AC terminals x 10	 AC connector x 1 Five-hole sealing plugs x 2	 M6 flange nuts x 10 M4*12 screws x 2
 Negative & positive PV dustproof buckles x 8/10/12	 M4*10 screws x 2 Inverter screen cover x 1	 RJ45 connector x 1 CT x 1	 Documents
 Meter (optional) x 1	 Dongle (optional) x 1		

Note:

- Refer to the actual delivery for the optional accessories.

* The positive and negative PV connector & pin contact & dustproof buckles is 8 pairs for X3-AELIO-39K, 10 pairs for X3-AELIO-49K, X3-AELIO-49.9K and X3-AELIO-50K, 12 pairs for X3-AELIO-49.9K-P, X3-AELIO-60K and X3-AELIO-61K.

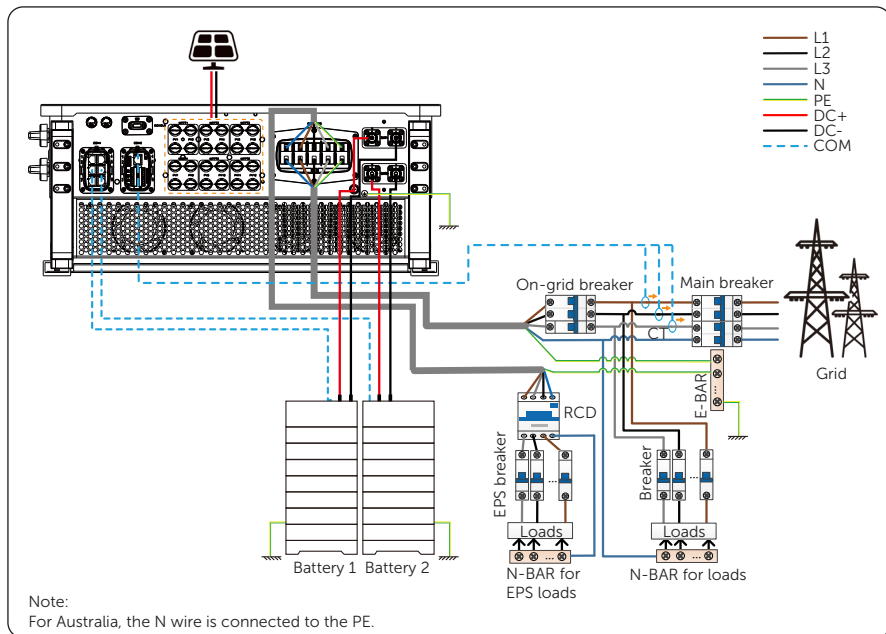
Mounting Location / Montageort / Emplacement de montage / Ubicación de montaje / Localização de montagem / Bevestigingslocatie / Posizione di montaggio / Lokalizacja miejsca montażu / Montážní místo / Monterings plats / Locație de montare / Место за монтаж / Monteringssted / Τοποθεσία στερέωσης / Paigalduskoht / 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 / Схе́ма на свѣрзване / Ledningsdiagram / Διάγραμμα συνδεσμολογίας / Ühendusskeem / KytKentäkaavio / Dijagram ožičenja / Kapcsolási rajz / Elektros laidų montavimo schema / Elektroinstalācijas shēma / Schéma zapojenia / Električna shema / Bağlantı Şeması / Diagrama de fiașo



Note:

- Breaker recommended for grid connection (with EPS)

Model	50 kW	60 kW	39 kW	49 kW	49.9 kW	61 kW
On-grid Breaker	> 100A	> 125A	> 80A	> 100A	> 100A	> 125A

- Breaker recommended for grid connection (without EPS)

Model	50 kW	60 kW	39 kW	49 kW	49.9 kW	61 kW
On-grid Breaker	> 100A	> 125A	> 80A	> 100A	> 100A	> 125A

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

Model	50 kW	60 kW	39 kW	49 kW	49.9 kW	61 kW
EPS breaker	> 100A	> 125A	> 80A	> 100A	> 100A	> 125A

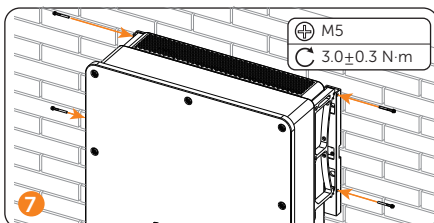
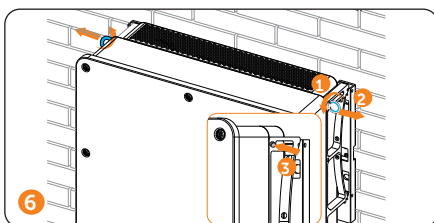
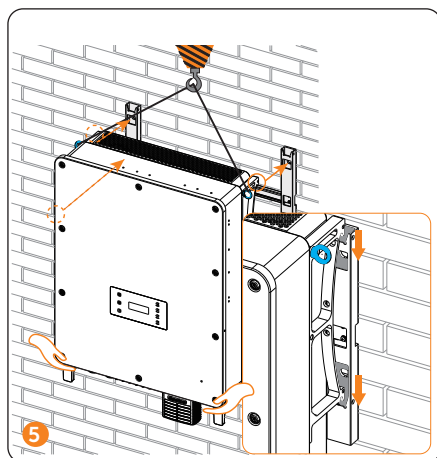
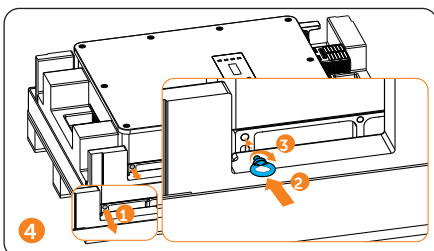
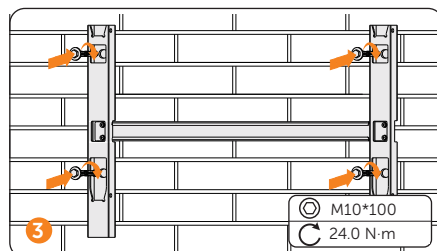
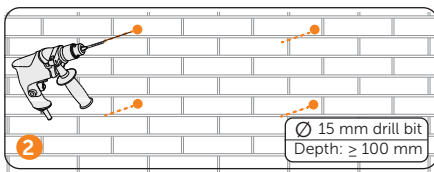
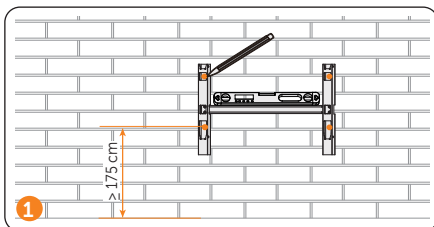
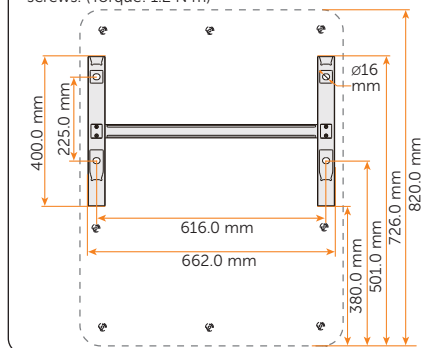
- RCD recommended

Model	50 kW	60 kW	39 kW	49 kW	49.9 kW	61 kW
RCD	< 500 mA	< 600 mA	< 390 mA	< 500 mA	< 500 mA	< 600 mA

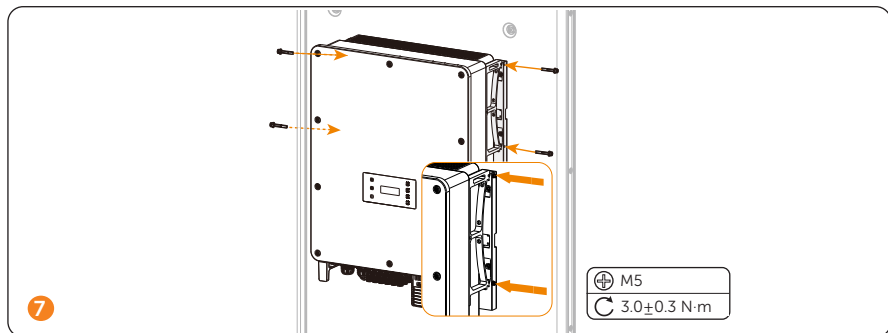
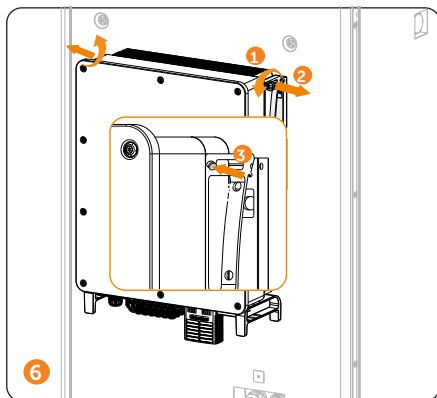
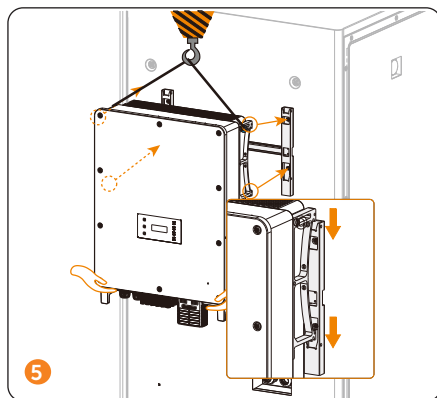
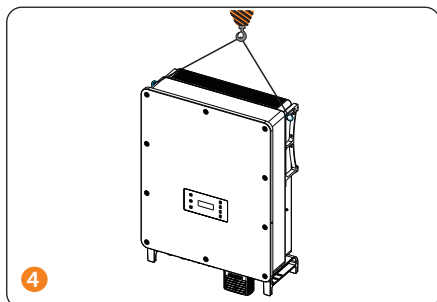
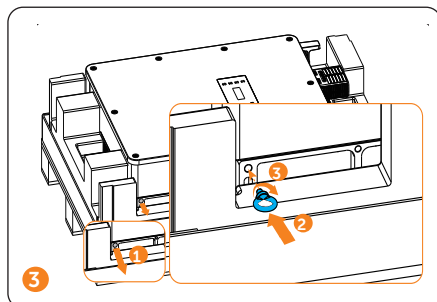
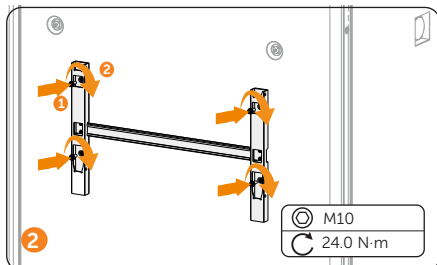
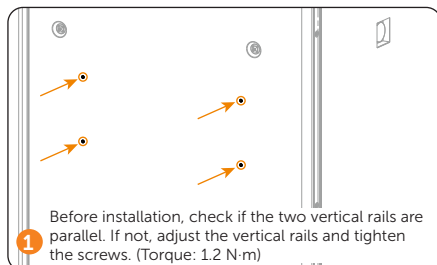
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• Plan a: wall mounting

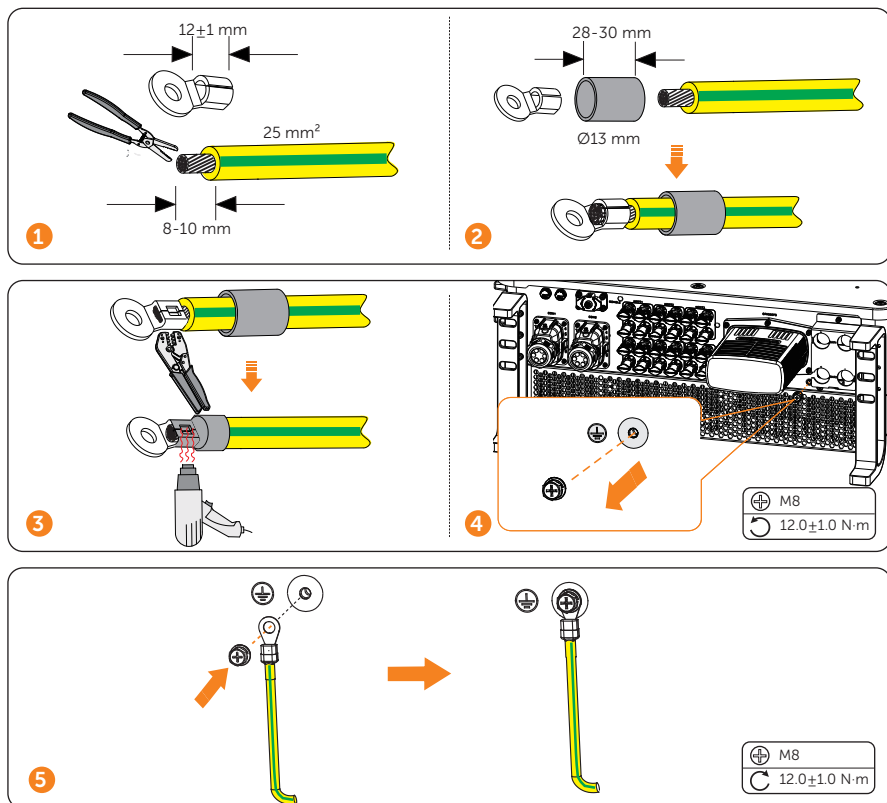
Before installation, check if the two vertical rails are parallel. If not, adjust the vertical rails and tighten the screws. (Torque: 1.2 N·m)



- Plan b: battery cabinet mounting



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



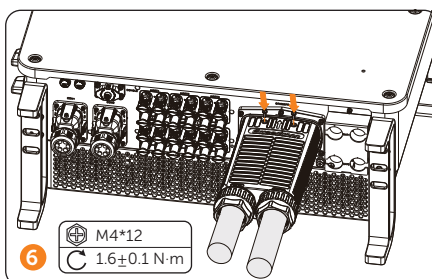
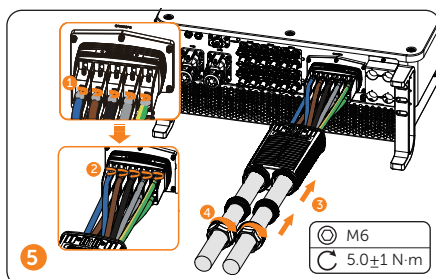
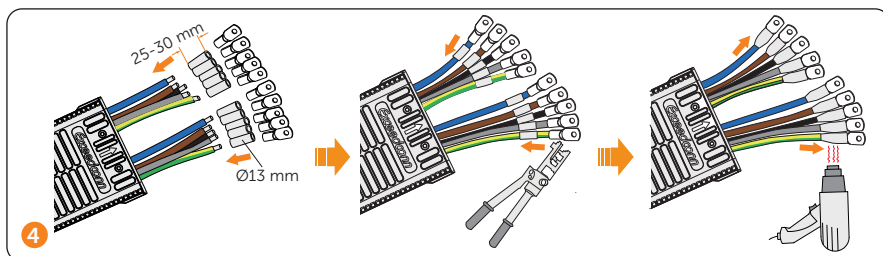
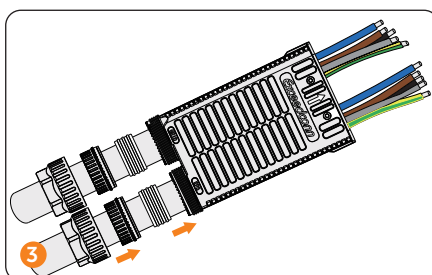
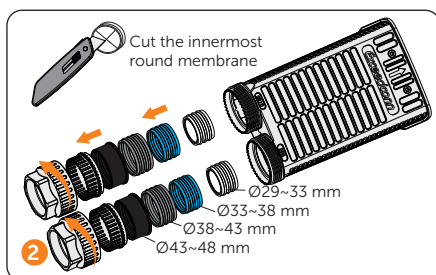
Grid and EPS Connection / Netz- und EPS-Verbindung / Branchement Réseau et EPS / Conexión de red y EPS / Ligação à Rede e Off-grid / Aansluiting op het net en EPS / Collegamento GRID e EPS / Połączenie z siecią i EPS / Pripojení k síti a EPS / Elnäts- och EPS-anslutning / Conectare la rețea și EPS / 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

Grid: 155 mm
EPS: 180 mm

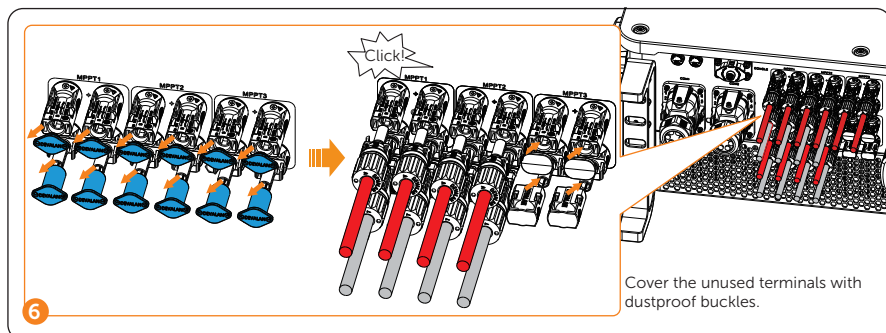
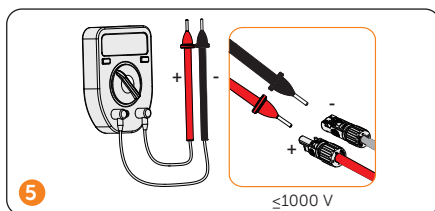
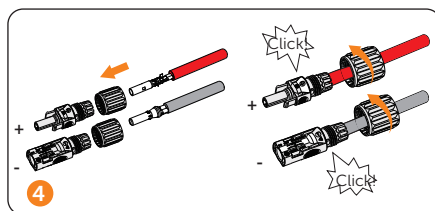
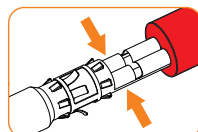
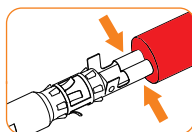
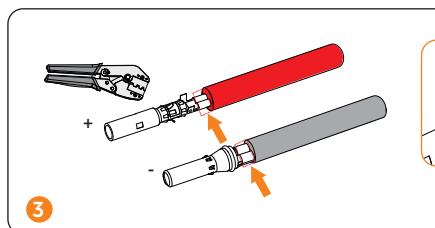
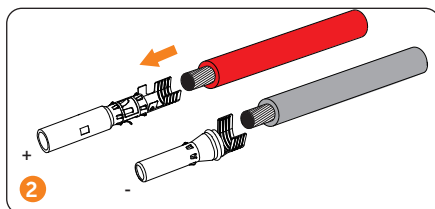
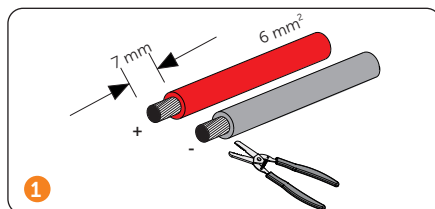
Grid cable	
No. cable	Cable length (mm)
A L1	135
B L2	145
C L3	145
D N	135
E PE	155

EPS cable	
No. cable	Cable length (mm)
A L1	170
B L2	170
C L3	160
D N	180
E PE	160

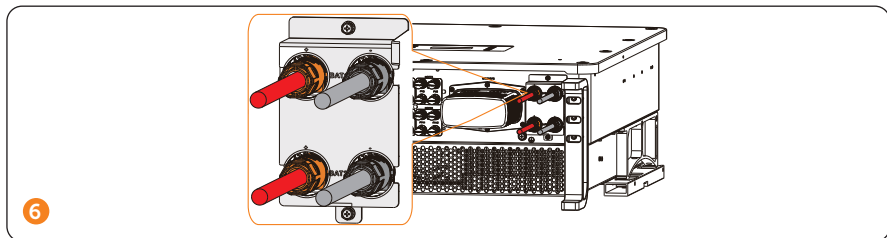
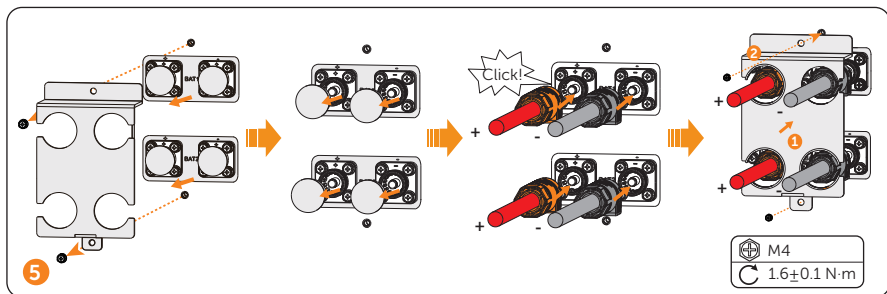
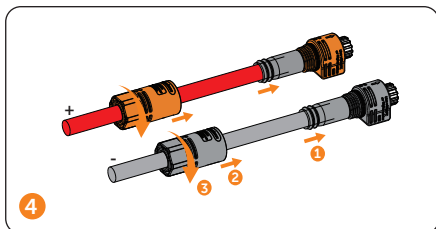
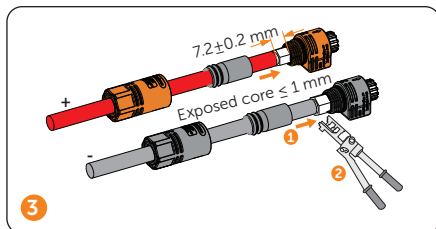
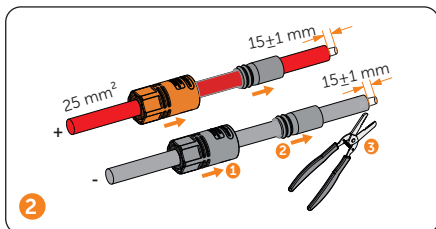
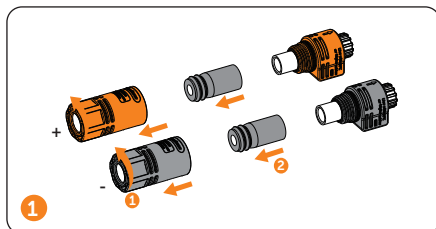
35 mm²
16 mm



PV Connection / PV-Anschluss / Connexion PV / Conexión FV / Ligação PV
 (Fotovoltaica) / 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
 bekôtës / Fotovoltinë jungtis / PV savienojums / Pripojenie fotovoltaiķy (FV) / Povezava
 fotonapetostnega kabla (PV) / PV Bağlantısı / Conexão PV



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

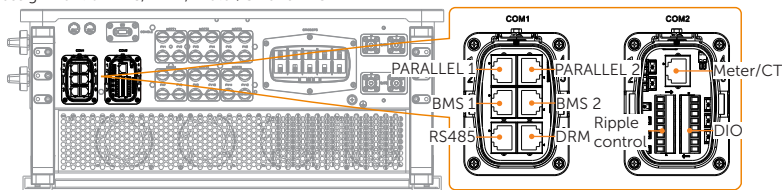


NOTICE!

- The protective cover does not need to be removed and installed when you ordered the Australian version.

Communication Connection / Kommunikations-Anschluss / Branchement de communication / Conexión de comunicación / Ligaçao à Comunicação / Communicatie-aansluiting / Collegamento comunicazione / Połączenie komunikacyjne / Komunikaciñní pñipojení / Kommunikationsanslutning / Conexiune de comunicare / Коммуникационная вñязка / Kommunikationsforbindelse / Σύνδεση επικοινωνίας / Sideühendus / Tiedonsiirtoliitántä / Priklučak za komunikaciju / Komunikaciós bekötés / Duomenų ryšys / Sakaru savienojums / Pripojenie komunikácie / Komunikacijska povezava / İletişim Bağlantısı / Conexão de Comunicação

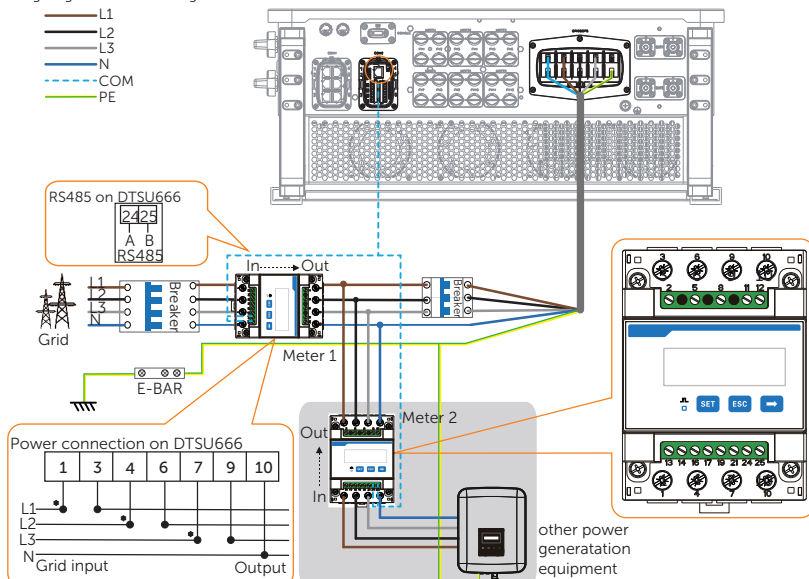
Pin assignment of BMS, DRM, meter/CT and DIO



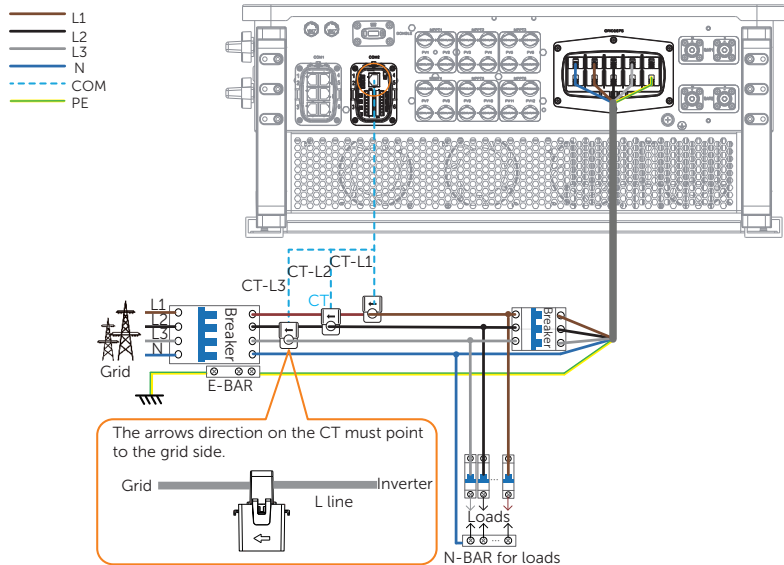
Assignment	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
BMS1	BAT_TEMP	GND_COM	GND_COM	BMS1_CANH	BMS1_CANL	BAT_WAKEUP_POWER	BMS1_485A	BMS1_485B
BMS2	BAT_TEMP	GND_COM	GND_COM	BMS2_CANH	BMS2_CANL	BAT_WAKEUP_POWER	BMS2_485A	BMS2_485B
DRM	DRM1/5	DRM2/6	DRM3/7	DRM4/8	+3.3V_COM	COM/DRM0	GND_COM	GND_COM
Meter/CT	CT_R1_CON	CT_S1_CON	CT_T1_CON	METER_485A	METER_485B	CT_T2_CON	CT_S2_CON	CT_R2_CON
DIO	DO_1	DO_2	DI_1+	DI_1-	DI_2+	DI_2-	GND_COM	EPSBOX_RELAY_VCC

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

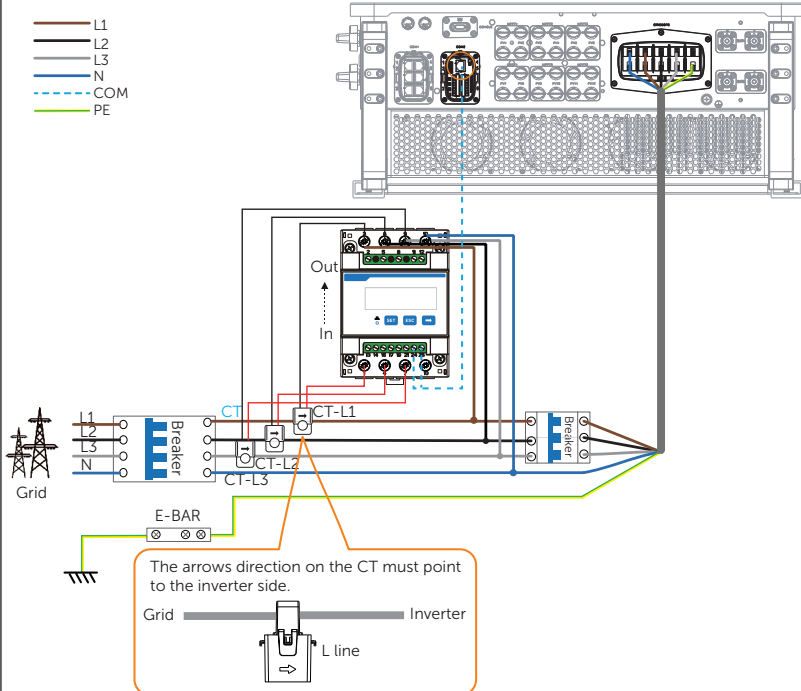
Wiring diagram of connecting a direct-connected meter



Wiring diagram of connecting a batch of CTs

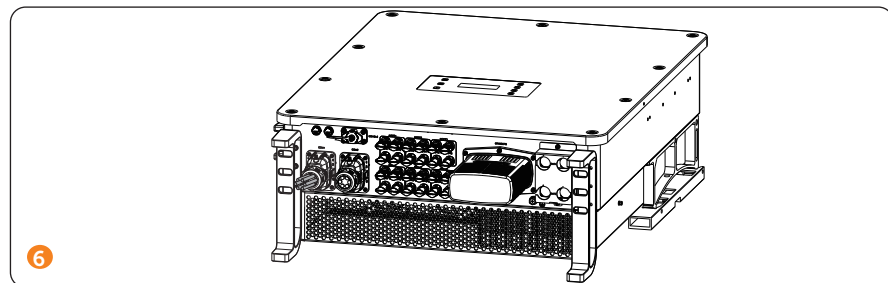
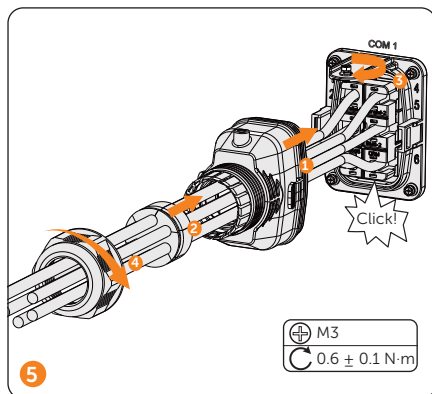
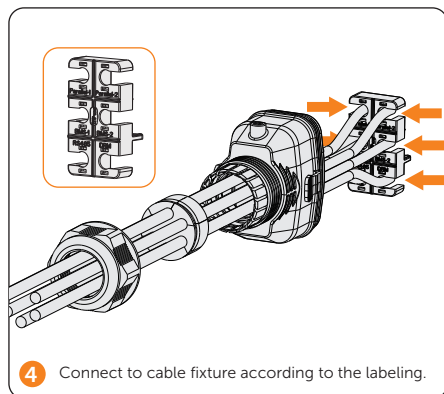
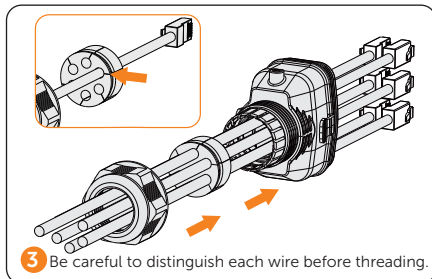
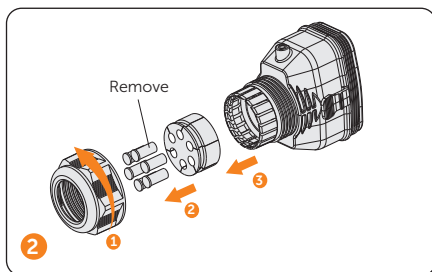
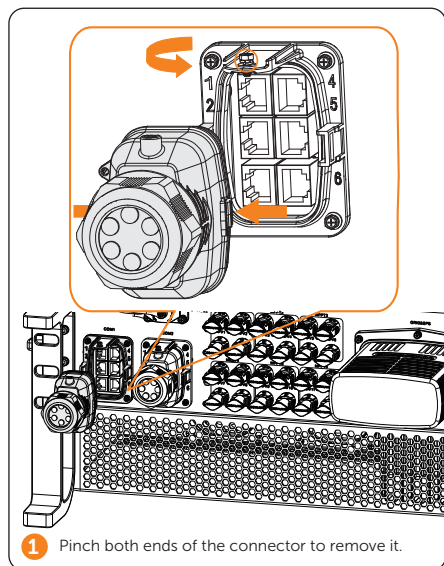


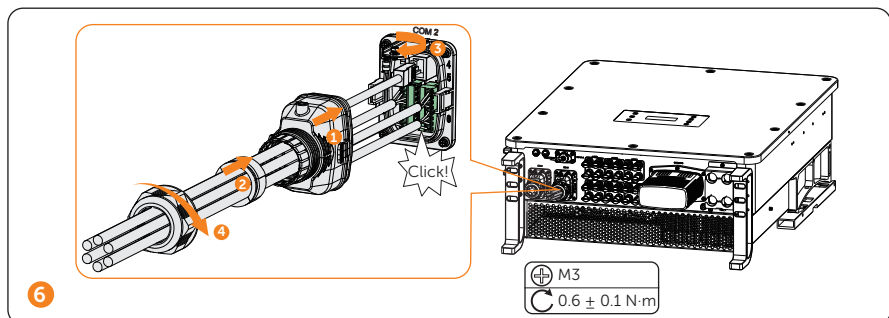
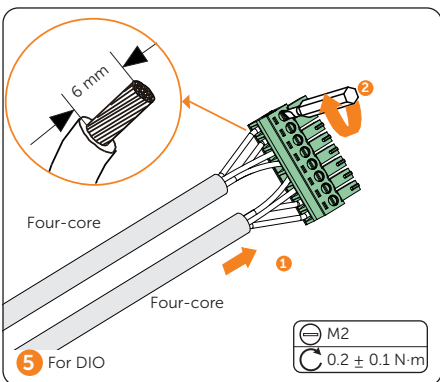
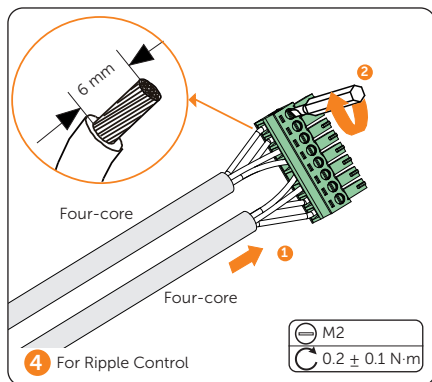
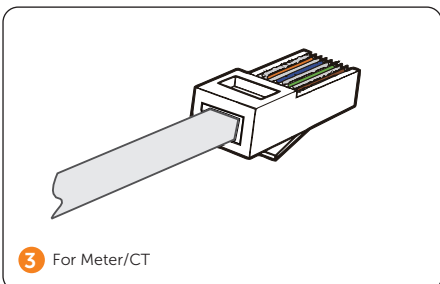
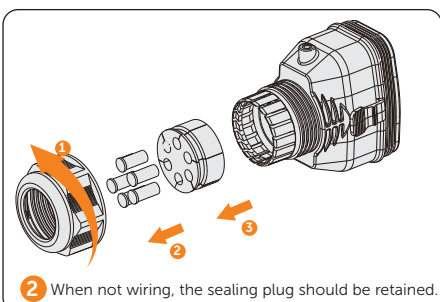
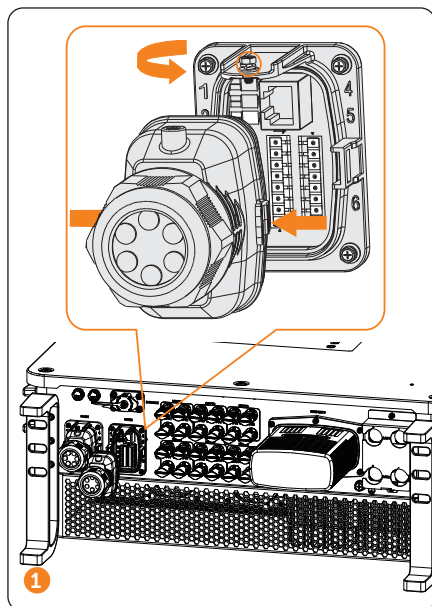
Wiring diagram of connecting a CT-connected meter



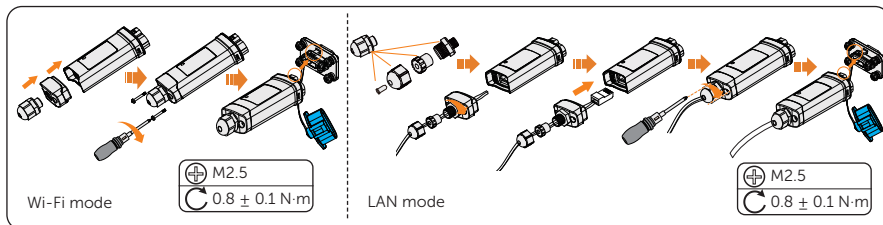
* Refer to user manual for other communication connections.

* Connect the cables according to the actual function requirements.

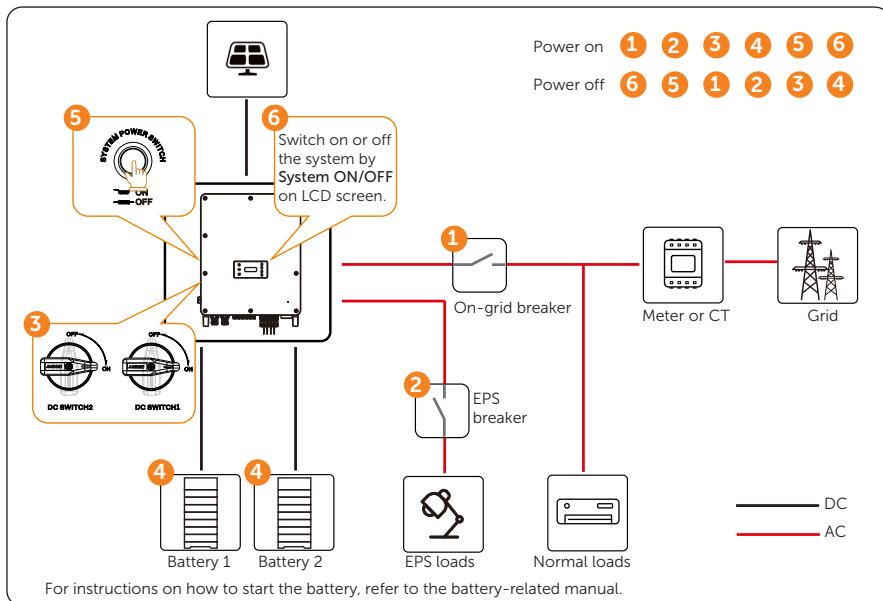




Monitoring Connection / Überwachungs-Anschluss / Branchement de surveillance / Conexión de monitorización / Ligação à Monitorização / Monitoring-aansluiting / Collegamento monitoraggio / Potężenie na potrzeby monitorowania / Pripojení ke sledování / Övervakningsanslutning / Conexiune de monitorizare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

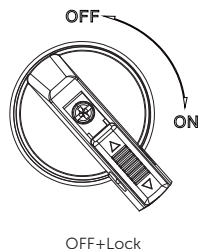
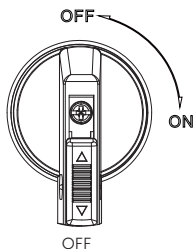
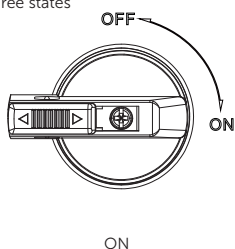


Power On/Off / Einschalten/Ausschalten / Marche/Arrêt / Encendido/apagado / Ligar/Desligar / In-/uitschakelen / Accensione/Spengimento / Włączanie/wyłączanie zasilania / ZAP/VYP / Ström på/av / Pornire/Oprire / Включване/изключване / Strøm til/fra / Ενεργοποίηση/Απενεργοποίηση / Toide sisse/välja / Virta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

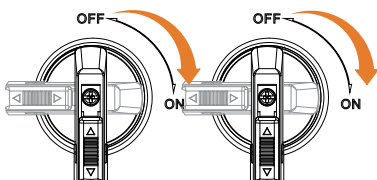


Lockable DC Switch / Abschließbarer DC-Schalter / Interrupteur CC verrouillable / Interruptor de CC con bloqueo / Interruptor CC Bloqueável / Vergrendelbare DC-schakelaar / Interruttore CC bloccabile / Blokowany przełącznik prądu stałego / Uzamykatelny DC vypínač / Låsbar DC-brytare / Comutator DC blocabil / Закljučващ 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 / Uzamykateľný spínač jednosmerného prúdu / DC stikalo z možnostjo zaklepanja / Kilitlenebilir DC Anahtarı / Interruptor CC bloqueável

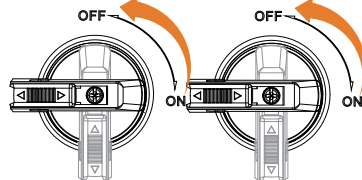
Three states



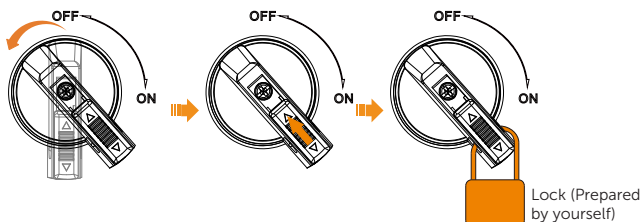
Turn on



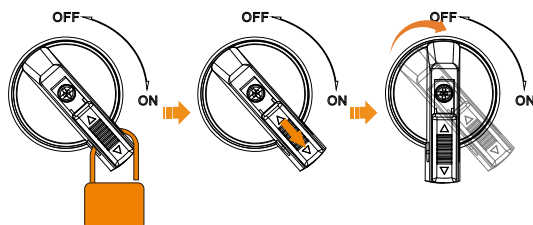
Turn off



Lock



Unlock

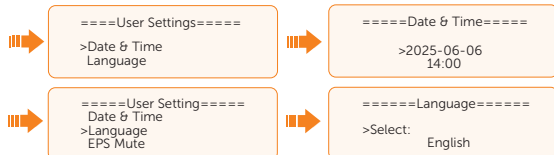


1 User Settings

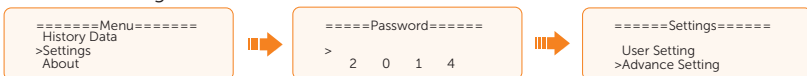


* The initial password is 0 0 0 0 which should be changed for the consideration of account security.

- Data & Time, Language



2 Advance Settings



The initial password of advanced settings is 1014. For your account security, change it after the first setting.

- Safety Code



Set the safety code for a country or region. For more details about safety code, please refer to *X3-AELIO User Manual*.

- Export Control

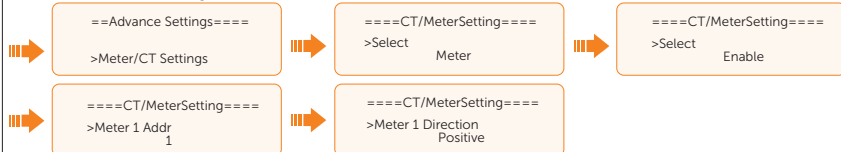


Set the control power to 0 for the countries with zero export control limit

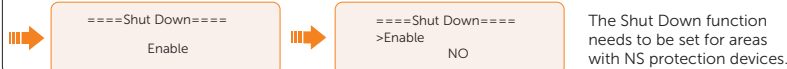
- Meter / CT Setting-if CT is connected



- Meter / CT Setting-if Meter is connected

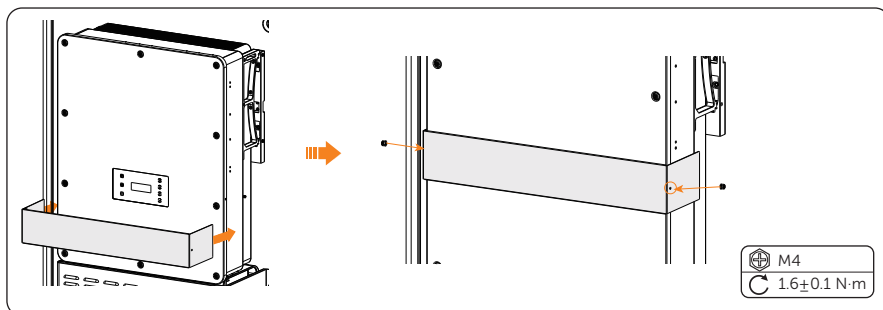


- Shut Down



The Shut Down function needs to be set for areas with NS protection devices.

Inverter Screen Cover Installation / Inverter-Abdeckungsmontage / Installation du couvercle de l'écran de l'onduleur / Instalación de la cubierta de la pantalla del inversor / Instalação da tampa do ecrã do inversor / Inverter-schermapak installatie / Installazione del coperchio dello schermo dell'inverter / Instalacja osłony ekranu inwertera / Instalace krytu obrazovky měniče / Inverter skärmlock installation / Instalarea capacului ecranului inverterului / Инсталация на капака на екрана на инвертора / Inverter-Bildschirmabdeckung Installation / Installation du couvercle de l'écran d'onduleur / Instalación de la cubierta de la pantalla del inversor / Instalação da tampa do ecrã do inversor / Inverter-schermapak installatie / Installazione del coperchio dello schermo dell'inverter / Instalacja osłony ekranu inwertera / Instalace krytu obrazovky měniče / Inverter skärmlock installation / Instalarea capacului ecranului inverterului / Установка крышки экрана инвертора / Inverterképernyő fedél telepítése / Εγκατάσταση κάλυψης οθόνης αντιστροφέα / Inverteri ekraani kaane paigaldamine / Inverterinäytön kotelon asennus / Instalacija poklopca invertorskog ekrana / Installazione del coperchio dello schermo dell'inverter / Установка крышки экрана инвертора / Inverter ekran kapağı kurulumu / Instalação da tampa do ecrã do inversor



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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

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Max. PV input voltage [V] ^①				1000			
Max. input current per MPPT [A]				40			
Max. input short circuit current per MPPT [A] ^②				50			
Max. inverter backfeed current to the array [A]				0			
MPPT voltage range [V]				160-950			

Note:

① The maximum input voltage represents the highest DC voltage threshold for the inverter, approaching which power derating occurs and any further increase might lead to potential damage to the inverter.

② Max. current for each PV input string is 50A.

NOTICE!

- The technical data on the AC and EPS sides are different for the General and Australian versions. Please confirm the specifications based on the version you ordered.

• AC output (for general version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Rated AC power [W]	50000	60000	39000	49000	49900	49900	61000
Max. apparent AC power [VA] (below +45°C)	55000	66000	39000	49000	49999	49999	66000
Rated grid voltage (AC voltage range) [V]	3 / N / PE, 220 / 380V 3 / N / PE, 230 / 400V						
Rated grid frequency [Hz]	50 / 60						
Nominal AC current [A]	75.8 @ 220V 72.5 @ 230V	91.0 @ 220V 87.0 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	92.5 @ 220V 88.5 @ 230V
Max. AC current [A] (above rated current, derating is acceptable)	83.4 @ 220V 79.8 @ 230V	100.0 @ 220V 95.7 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	100.0 @ 220V 95.7 @ 230V
Current (inrush) (at 50μs) [A] (AC 280V, 90°)	104.0						
Displacement power factor	~1 (0.8 leading ~ 0.8 lagging)						
Total harmonic distortion (THDi, rated power)	<3%						

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
parallel operation				Yes			
Unbalance output				Yes			

- AC output (for Australian version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Rated AC power [W]	50000	60000	49900	49900	61000
Max. apparent AC power [VA] (below +45°C)	55000	66000	49999	49999	66000
Rated grid voltage (AC voltage range) [V]	3 / N / PE, 220 / 380V 3 / N / PE, 230 / 400V				
Rated grid frequency [Hz]	50 / 60				
Nominal AC current [A]	72.2	86.6	72.0	72.0	88.0
Max. AC current [A](above rated current, de-rating is acceptable)	83.6	100.3	76.0	76.0	100.3
Current (inrush) (at 50μs) [A] (AC 280V, 90°)	104.0				
Displacement power factor	~1 (0.8 leading ~ 0.8 lagging)				
Total harmonic distortion (THDi, rated power)	<3%				
parallel operation	Yes				
Unbalance output	Yes				

- AC input (for general version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Nominal AC power [W]	50000	60000	39000	49000	49900	49900	61000
Nominal AC current [A]	75.8 @ 220V 72.5 @ 230V	91.0 @ 220V 87.0 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	92.5 @ 220V 88.5 @ 230V
Max. AC current [A] (above rated current, de-rating is acceptable)	83.4 @ 220V 79.8 @ 230V	100.0 @ 220V 95.7 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	100.0 @ 220V 95.7 @ 230V
Rated grid voltage (AC voltage range) [V]	3 / N / PE, 220 / 380V 3 / N / PE, 230 / 400V						
Rated grid frequency [Hz]	50 / 60						

- AC input (for Australian version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Nominal AC power [W]	50000	60000	49900	49900	61000
Nominal AC current [A]	72.2	86.6	72.0	72.0	88.0
Max. AC current [A] (above rated current, de-rating is acceptable)	83.6	100.3	76.0	76.0	100.3

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Rated grid voltage (AC voltage range) [V]			3 / N / PE, 220 / 380V 3 / N / PE, 230 / 400V		
Rated grid frequency [Hz]			50 / 60		

- EPS output (for general version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
EPS peak power [VA]				1.5*Prated, 10s 1.2*Prated, 1min 1.1*Prated, long term			
EPS rated power [kVA]	50.0	60.0	39.0	49.0	49.9	49.9	61.0
EPS rated voltage [V], frequency [Hz]			3 / N / PE, 220 / 380V, 50/60Hz 3 / N / PE, 230 / 400V, 50/60Hz				
EPS rated current [A]	75.8 @ 220V 72.5 @ 230V	91.0 @ 220V 87.0 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	92.5 @ 220V 88.5 @ 230V
Max. AC current [A]	83.4 @ 220V 79.8 @ 230V	100.0 @ 220V 95.7 @ 230V	59.1 @ 220V 56.6 @ 230V	74.3 @ 220V 71.1 @ 230V	75.7 @ 220V 72.4 @ 230V	75.7 @ 220V 72.4 @ 230V	100.0 @ 220V 95.7 @ 230V
Switch time[s]				<10ms			
Total harmonic distortion (THDv, linear load)				<3%			
Parallel operation				Yes			

- EPS output (for Australian version)

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
EPS peak power [VA]				1.5*Prated, 10s 1.2*Prated, 1min 1.1*Prated, long term	
EPS rated power [kVA]	50.0	60.0	49.9	49.9	61.0
EPS rated voltage [V], frequency [Hz]			3 / N / PE, 220 / 380V, 50/60Hz 3 / N / PE, 230 / 400V, 50/60Hz		
EPS rated current [A]	72.2	86.6	72.0	72.0	88.0
Max. AC current [A]	83.6	100.3	76.0	76.0	100.3
Switch time[s]				<10ms	
Total harmonic distortion (THDv, linear load)				<3%	
Parallel operation				Yes	

• Battery

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Battery type	Lithium batteries						
Battery voltage range [V]	180-820						
Recommended battery voltage [V]	650Vdc						
Max.charge / discharge power [kW]	50 / 50	60 / 60	39 / 39	49 / 49	49.9 / 49.9	49.9 / 49.9	61 / 61
Max.charge / discharge current [A]	160 (80*2) (280Ah / 320Ah @ 0.5C)						
Peak charge / discharge current [A]	160 (80*2) (280Ah / 320Ah @ 0.5C)						
Battery connection	2						
Reverse connect protection	YES						

• Efficiency

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
MPPT efficiency	99.90%						
Euro-efficiency	97.20%						
Max. efficiency	98.00%						
Rated battery charge / discharge efficiency	98.5% / 97.00%						

• Protection

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
SPD	PV Type II+AC Type II						
AFCI*	Optional (AFCI type: F-I-AFPE-1-4-2, F-I-AFPE-1-4/4/2-3, F-I-AFPE-1-4-3)						

Note:

For X3-AELIO-39K:

AFCI Type: F-I-AFPE-1-4-2

- Full coverage
- Integrated
- AFPE
- 1 monitored string per input port,
- 4 input ports per channel,
- 2 monitored channels.

For X3-AELIO-50K, X3-AELIO-49K and X3-AELIO-49.9K:

AFCI Type: F-I-AFPE-1-4/4/2-3

- Full coverage
- Integrated
- AFPE
- 1 monitored string per input port,
- 4/4/2 input ports per channel,
- 3 monitored channels.

For X3-AELIO-60K, X3-AELIO-61K and X3-AELIO-49.9K-P:

AFCI Type: F-I-AFPE-1-4-3

- Full coverage
- Integrated
- AFPE
- 1 monitored string per input port,
- 4 input ports per channel,
- 3 monitored channels.

- Standard

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Safety	EN/IEC 62109-1/-2						
EMC	EN/IEC 61000-6-1/-2/-3/-4; EN/IEC 61000-3-2/-3/-11/-12; EN 55011; IEC 62920;						
Certification	VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC 61727, PEA/MEA, NRS-097-2-1, RD1699, TOR		NC RfG		VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC 61727, PEA/MEA, NRS-097-2-1, RD1699, TOR		

- Environment limit

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Protection class	IP66						
Operating temperature range [°C]	-35~60 (Derating above +45°C)						
Relative humidity (condensing) [%]	0~100 (Relative humidity)						
Altitude [m]	<3000						
Storage temperature [°C]	-40~+70						
Noise emission (typical) [dB]	<65						
Over voltage category	PV:II+Main: III						

- General

Model	X3-AELIO-50K	X3-AELIO-60K	X3-AELIO-39K	X3-AELIO-49K	X3-AELIO-49.9K	X3-AELIO-49.9K-P	X3-AELIO-61K
Dimensions (WxHxD) [mm]	820×670×257						
Weight [kg]	<100	<105	<100	<100	<100	<105	<105
Cooling concept	Smart air cooling						
Topology	Non-isolated						
Communication	RS485-Meter, RS485-Monitor, RS485-Parallel (daisy-chain), CAN-BMS, CAN-Parallel (daisy-chain), USB, DI*2, DO*1, RCR (DI*4), DRM						
LCD display	Optional						

Note:

The specific gross weight is subject to the actual situation of the whole machine.

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.



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

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