SUNGROW
Clean power for all

Integrated DC Charger

Quick Installation Guide

IDC480E-C

IDC480E-C-QIEN-Ver11-202507

EN

- This document will be updated from time to time due to updates of the product or other reasons. Under no circumstances should this document be taken as a substitute for the user manual and safety instructions provided on the product.
- Before performing any operation, please read through carefully the user manual and relevant standards and specifications. You can find the related documents by visiting http://support.sungrowpower.com/ or by scanning the QR code provided on the device or the back cover of this Quick Installation Guide.
- Operations on the device must only be performed by qualified technical persons. The qualified technical persons must have received specialized training, read through the user manual to gain a good understanding of the relevant safe operation instructions, and be familiar with the applicable local standards and safety code for electrical systems.
- Before installation, check the delivered items for quantity according to the packing list and see if the delivery matches the order you placed. Meanwhile, inspect the items for any visible damage. Contact the transport service provider or SUNGROW in case of anything abnormal.
- The cables used must all be intact and well-insulated. Be sure to use insulated tools and wear personal protective equipment properly during operation.
- Violation of any of the above requirements may result in personal injury or device damage.

Safety Disclaimer

SUNGROW shall not be held liable for any personal injury or device damage arising from device-related operations that are not carried out in compliance with the requirements specified in this document or the user manual.

DANGER

- Electrical connection must be performed by qualified technical persons who wear personal protective equipment.
- All electrical connections must be done in compliance with the applicable local and national electrical standards.
- Be sure to use specialized insulated tools when performing electrical connection.
- Do not use the power cabinet when its cable is defective, frayed, cracked, or in case of exposed wires. Contact SUNGROW if you have found any of the above issues.
- When the power cabinet is running, do not touch any of its live parts, nor remove any of its part or component; otherwise, it may lead to electrical shocks.

WARNING

- All safety signs and warning labels and the nameplate on the power cabinet must be clearly visible and cannot be removed or covered.

CAUTION

Burn hazard!

- During the charging process, do not touch any hot part of the power cabinet (e.g., air outlet for heat dissipation); otherwise, it may cause burns.

NOTICE

- Non-qualified personnel are forbidden from disassembling the device or moving its components.
- Do no install the device in a place with corrosives such as corrosive gas and organic solvent, etc.
- Do not install the device in dusty and smoky environments.

Signs on the Product

Disconnect the device from all external power sources before maintenance!	Danger to life due to high voltages! Installation and operation must only be performed by qualified technical persons.
Protective grounding (PE) terminal.	CE mark of conformity.
DE-M 24 0122 TXXXX-DE PTB mark of conformity.	TÜV mark of conformity.
Do not dispose of the device together with household waste.	Read the user manual before performing any operation on the device.
10min Do not touch live parts until 10 minutes after disconnecting charger from all external power sources.Test before touch.	Regulatory compliance mark.

EU Declaration of Conformity

within the scope of the EU directives:

- Low Voltage Directive 2014/35/EU (LVD)
- Electromagnetic compatibility Directive 2014/30/EU (EMC)
- Radio Equipment Directive 2014/53/EU (RED)
- The restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment Directive 2011/65/EU and Commission Delegated Directive (EU)2015/863

The manufacturer Sungrow Power Supply Co., Ltd., China hereby confirms that the product IDC480E complies with the essential requirements and other relevant provisions of Directives 2014/35/EU, 2014/30/EU, 2014/53/EU, 2011/65/EU and (EU)2015/863.

Radio data

	WIFI
Model	AW-AM510-I
Power Supply	3.3V
Frequency range	2412-2472MHz
Maximum transmitting power	20dBm
Max. Antenna gain	2.5dBi

		4G	
Model		EC25-EUX	EG25-G MINIPCIE
Power Supply		3.8V	3.8V
Frequency range	LTE band 1	1920~1980 MHz	1920~1980 MHz
	LTE band 3	1710~1785 MHz	1710~1785 MHz
	LTE band 5	-	824~849 MHz
	LTE band 7	2500~2570 MHz	2500~2570 MHz
	LTE band 8	880~915 MHz	880~915 MHz
	LTE band 20	832~862 MHz	832~862 MHz
	LTE band 28	703~736 MHz	703~748 MHz
	LTE band 38	2570~2620 MHz	2570~2620 MHz
	LTE band 40	2300~2400 MHz	2300~2400 MHz
	LTE band 41	-	2496~2690 MHz
Maximum transmitting power	LTE band 1	24.37 dBm	
	LTE band 3	24.04 dBm	
	LTE band 5	-	
	LTE band 7	23.60 dBm	
	LTE band 8	24.17 dBm	
	LTE band 20	22.88 dBm	
	LTE band 28	23.17 dBm	
	LTE band 38	23.78 dBm	
	LTE band 40	23.78 dBm	
	LTE band 41	-	
Max. Antenna gain		3.0dBi	3.0dBi

*Technical parameters listed above apply to EU countries only.

Manufacturer :
Sungrow Power Supply Co., Ltd.
No 1699. Xiyou Road,Hefei 230088.P.R.China
For EU only
EU/EEA Importer: Sungrow Deutschland GmbH
Balanstraße 59, 81541 München, Germany

note

The image shown here is for reference only. The actual product received may differ. Changes may be made without prior notice.

Scope of Delivery

IDC480E-C Power Cabinet (x1)

M12X100 expansion bolt (x4)

Door key (×2)

SIM card ejector pin and holder(×2)

M2M_2FF 4G IoT SIM card (×1*) (optional)

M10×30 bolt assembly (×10)

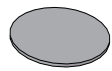
M10 hex flange nut (×10)

M8×20 bolt assembly (×8)

M8 hex flange nut (×2)

M5×12 (×8)

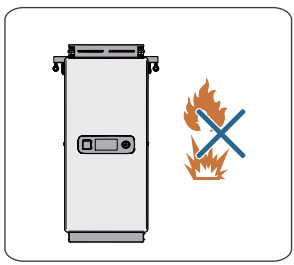
Fireproof mud (×1)

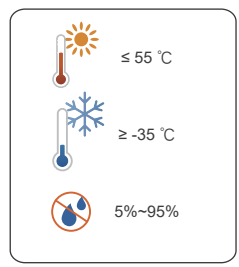


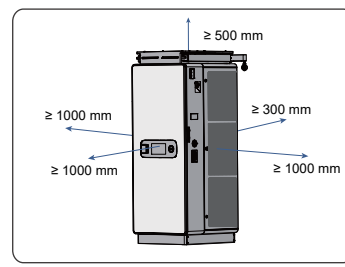
Emergency stop protective cover (×1)

Documents

Requirements for Place of Installation



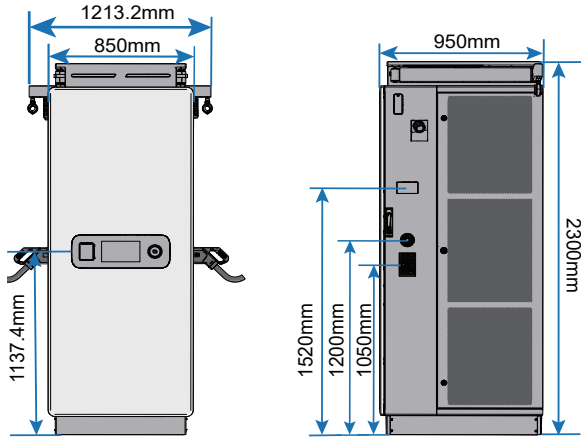




note

When the ambient temperature is above 45°C, it's recommended to add shading for extra protection.

Overall Dimensions

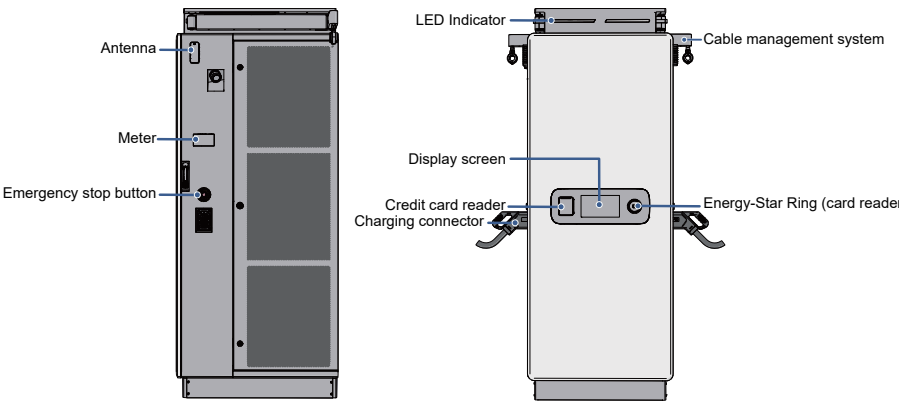


note

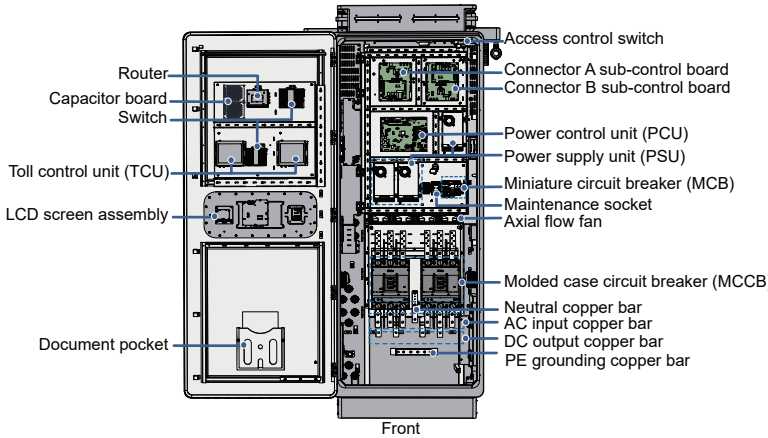
The dimensions of the real product may differ.

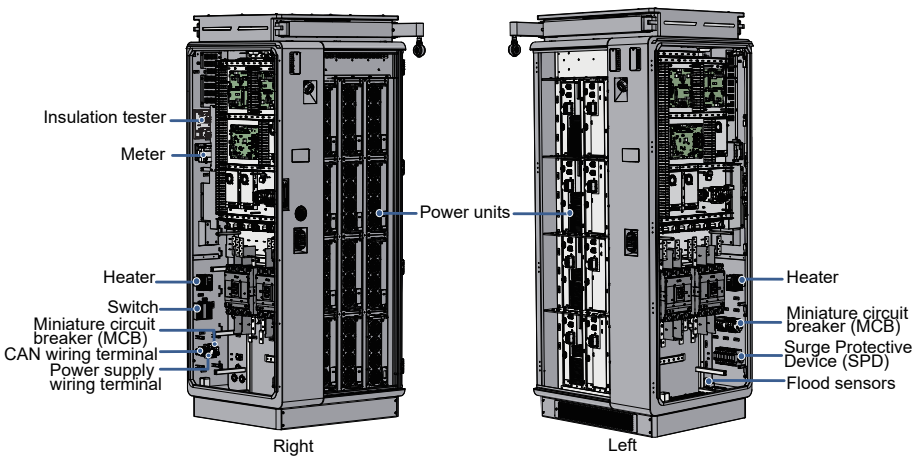
Production Overview

- External design



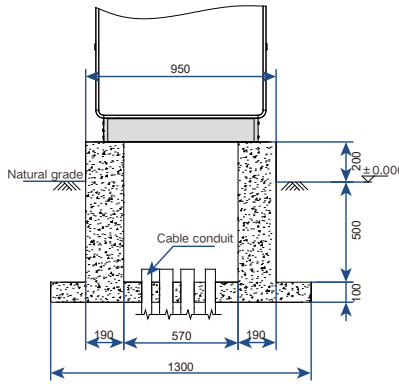
- Internal Structure

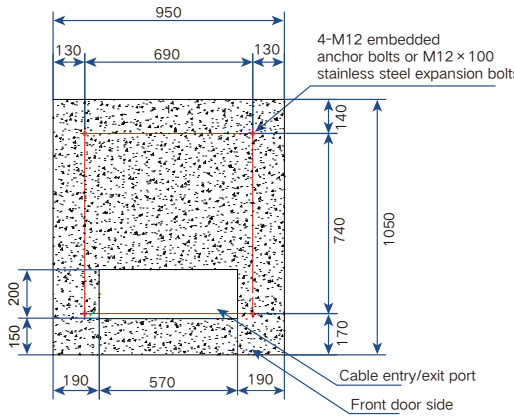




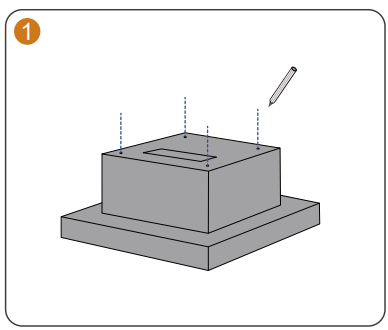
Foundation Building

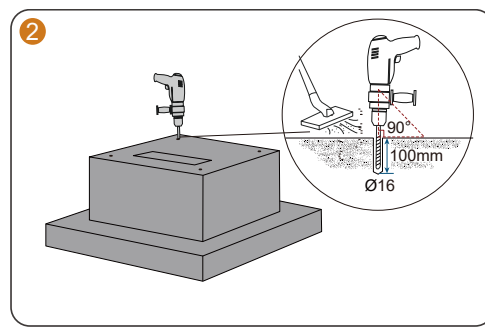
- Foundation Dimensions (mm)





Foundation Building





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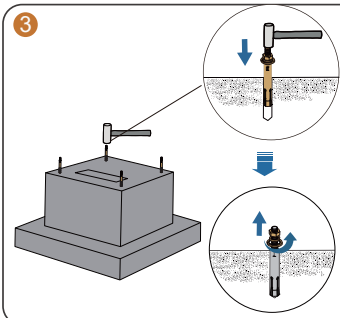

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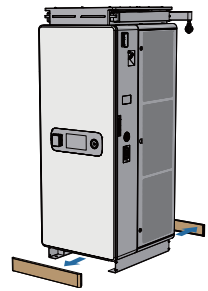
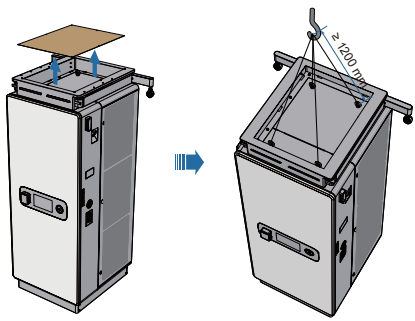
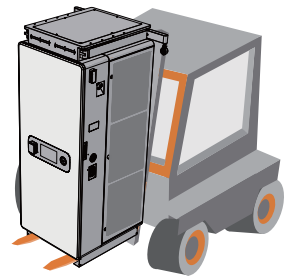


5 Pay attention to the device's center of gravity.

Method 1: Handle with a crane



Method 2: Handle with a forklift



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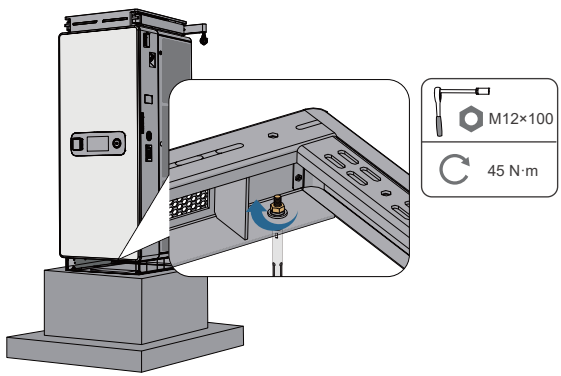
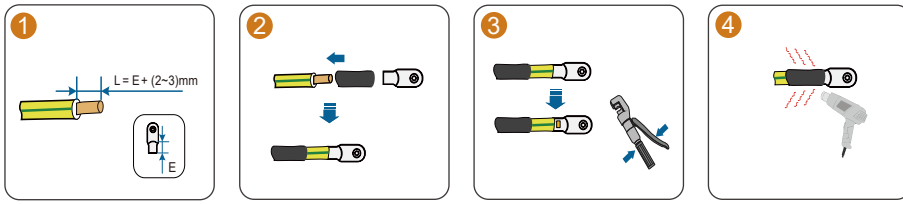
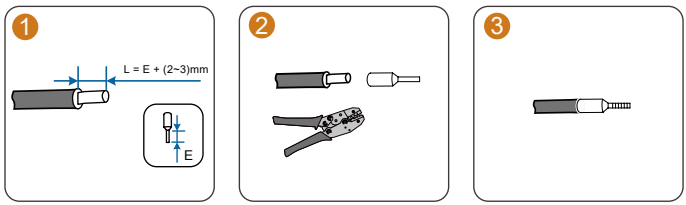


OT/DT/SC Terminal Crimping



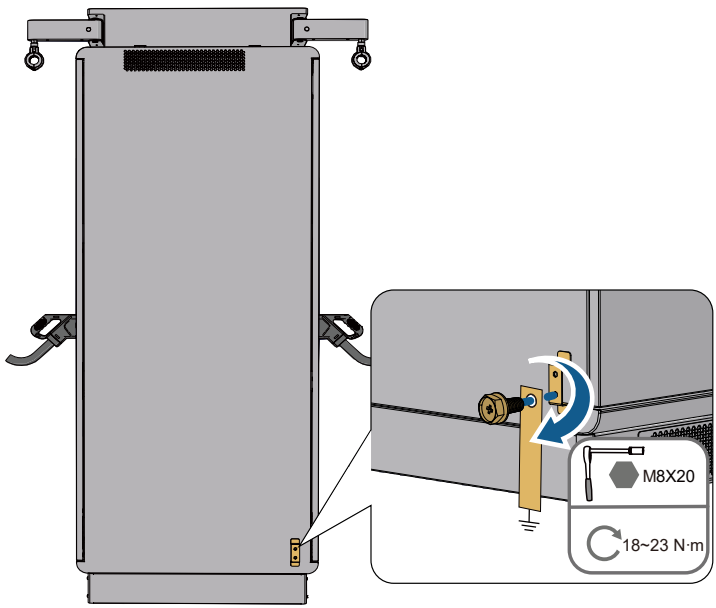
Tubular Terminal Crimping



External Ground Connection

- Specification of grounding flat steel

Hot-dip galvanized flat steel: 40 mm × 4 mm. The flat steel needs to be prepared by the user.



note

1.All cable specifications listed in this manual are recommended values. Users must select appropriate cables based on actual conditions and ensure compliance with local regulations and safety standards.
2 The cable specifications recommended in this document are only applicable to cable duct installation. For other installation methods, please select the appropriate cable specifications based on local conditions.
3.To avoid wiring errors that may cause device malfunction, it is recommended to clearly label both ends of each cable (e.g., using adhesive labels) before cable routing, and to double-check all connections before and after wiring.
4.After confirming that wiring is completed correctly, promptly seal the cable inlets using the fireproof mud included in the shipment or locally compliant foam.

Electrical Connection with Dispenser (Optional)

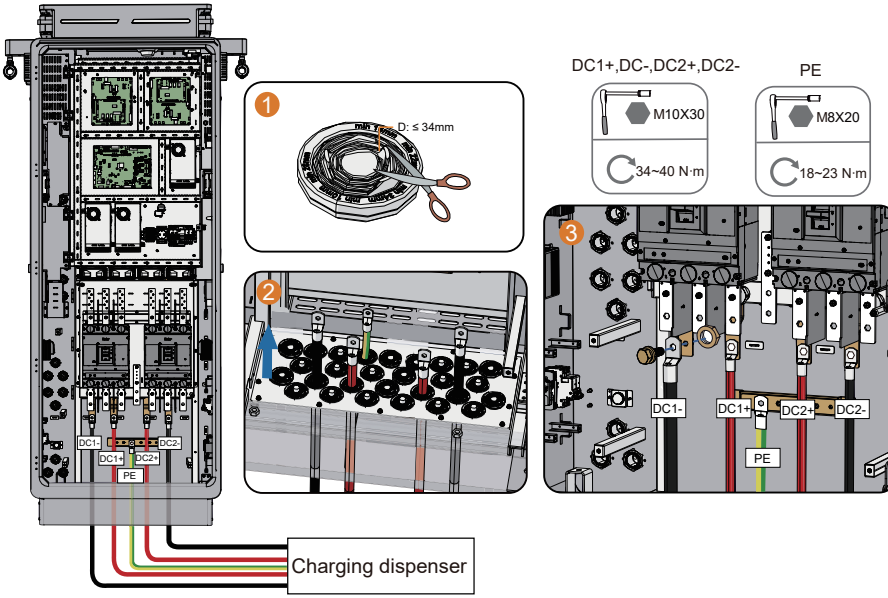
note

When connecting the product to the dispenser, refer to this section to complete the cable connections on the product side. For detailed operations on the dispenser side, see the corresponding dispenser manual.

1 DC Cable Connection

- Specification of DC cables and grounding cable

Dispenser Type	Cable Type	Wire cross-sectional area	Crimp Terminal
Air-cooled dispenser	Outdoor single-core copper cable Withstand voltage:1 kV	DC1+,DC2+,DC1-,DC2-: 150 mm²	SC150-10
		PE: 95 mm²	SC95-8
	Outdoor five-core copper cable Withstand voltage:1 kV	DC1+,DC2+,DC1-,DC2-: 185 mm²	SC185-10
		PE: 95 mm²	SC95-8
	Outdoor single-core aluminum cable Withstand voltage:1kV	DC1+,DC2+,DC1-,DC2-: 240 mm²	SC240-10
		PE: 120 mm²	SC120-8
	Outdoor five-core aluminum cable Withstand voltage:1kV	DC1+,DC2+,DC1-,DC2-: 300 mm²	SC300-10
		PE: 150 mm²	SC150-8
liquid-cooled dispenser	Outdoor single-core copper cable Withstand voltage:1 kV	DC1+,DC2+,DC1-,DC2-: 120 mm²	SC120-10
		PE: 70 mm²	SC70-8
	Outdoor five-core copper cable Withstand voltage:1 kV	DC1+,DC2+,DC1-,DC2-: 150 mm²	SC150-10
		PE: 95 mm²	SC95-8
	Outdoor single-core aluminum cable Withstand voltage:1kV	DC1+,DC2+,DC1-,DC2-: 185 mm²	SC185-10
		PE: 95 mm²	SC95-8
	Outdoor five-core aluminum cable Withstand voltage:1kV	DC1+,DC2+,DC1-,DC2-: 240 mm²	SC240-10
		PE: 120 mm²	SC120-8



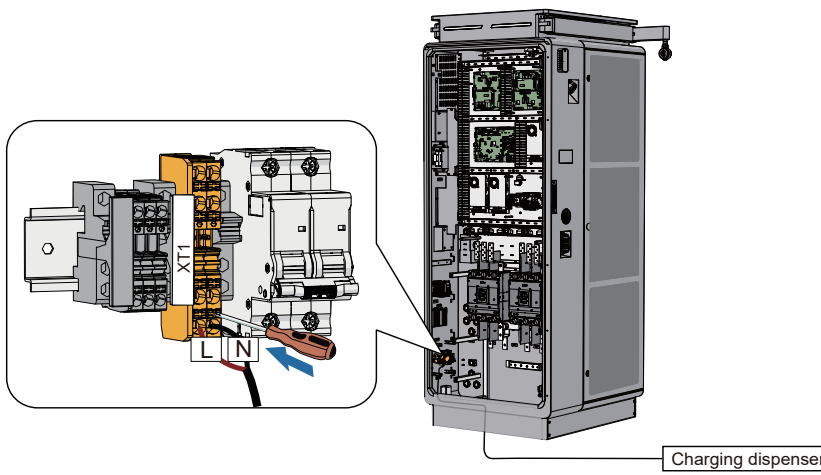
Ensure the DC+ and DC- cables of the dispenser are all connected in the correct positions;otherwise, the device cannot operate properly.
Connect the DC cables between the dispensers and the IDC480E-C charger following the rules below:

Dispenser Type	Charging Connector ID	Connection Points
Air-cooled dispenser	GUN3	DC1+/DC1-: DC1+, DC1-
	GUN4	DC2+/DC2-: DC2+, DC2-
Liquid-cooled dispenser	GUN3	DC1+/DC1-: DC1+, DC1- DC2+/DC2-: DC2+, DC2-

2 Power Cable Connection

- Specification of power cable

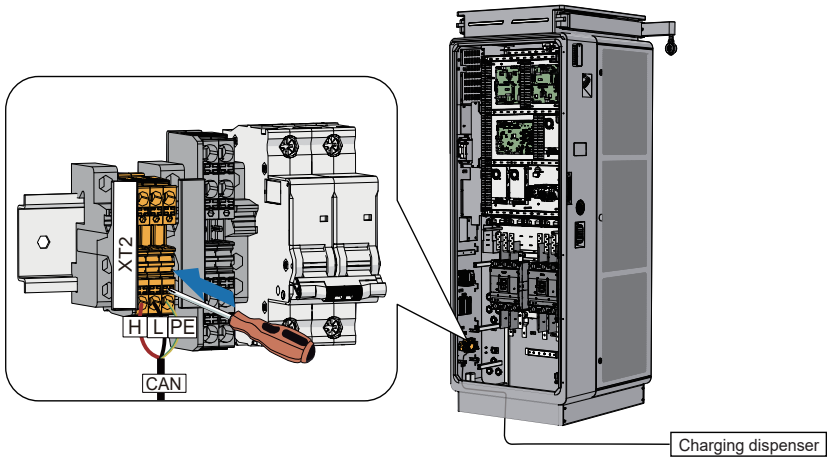
Dispenser Type	Cable Type	Wire cross-sectional area	Crimp Terminal
Air-cooled/liquid-cooled dispenser	Two-core power cable	L,N: 2.5 mm²	E1510



3 CAN Cable Connection

- Specification of power cable

Dispenser Type	Type	Wire cross-sectional area	Crimp Terminal
Air-cooled/liquid-cooled dispenser	Shielded twisted-pair cable	0.75 mm²	E1510

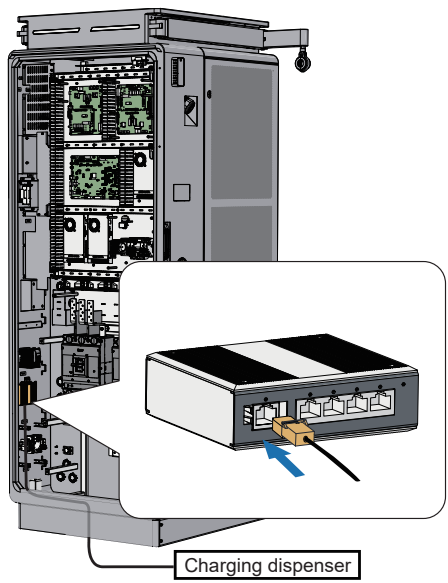


note

The CAN cable must be a twisted shielded pair, and the shielding layer must be properly grounded.

4 Network Connection

8-core Cat5e or Cat6 Ethernet cable is recommended. Ethernet Cables are purchased by user.



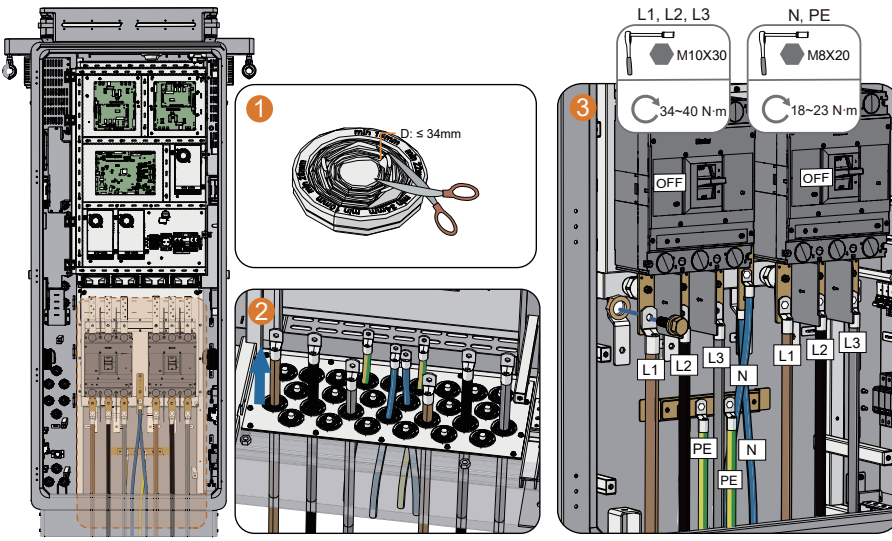
AC Cable Connection

- Specification of AC cables

Cable type	Wire cross-sectional area	Crimp Terminal
Outdoor single-core copper cable Withstand voltage:1 kV	L1,L2,L3: 150 mm²	SC150-10
	N: 150 mm²	SC150-8
	PE: 95 mm²	SC95-8
Outdoor five-core copper cable Withstand voltage:1 kV	L1,L2,L3: 185 mm²	SC185-10
	N: 185 mm²	SC185-8
	PE: 95 mm²	SC95-8
Outdoor single-core aluminum cable Withstand voltage:1kV	L1,L2,L3: 240 mm²	SC240-10
	N: 240 mm²	SC240-8
	PE: 120 mm²	SC120-8
Outdoor five-core aluminum cable Withstand voltage:1kV	L1,L2,L3: 300 mm²	SC300-10
	N: 300 mm²	SC300-8
	PE: 150 mm²	SC150-8

note

Before connecting the AC cables, make sure that the upstream circuit breaker and the MCCB in the AC wiring area are in the open state.

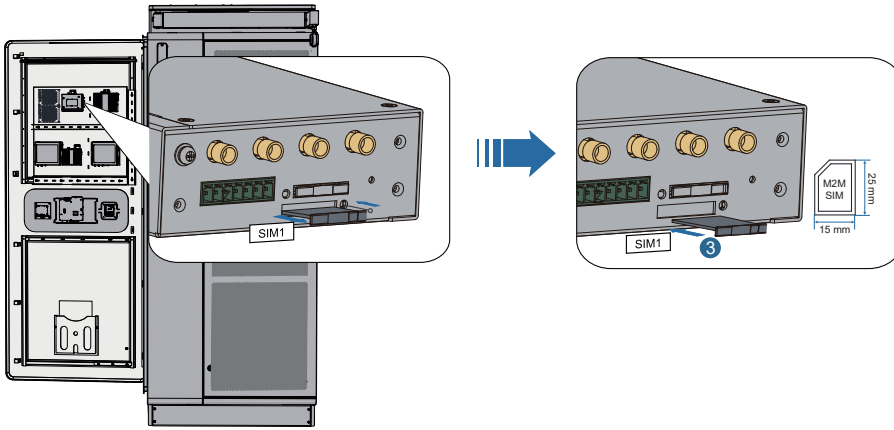


Network Connection

The charger supports Ethernet, 4G and Wi-Fi network . SIM cards and Ethernet Cables are purchased by user.

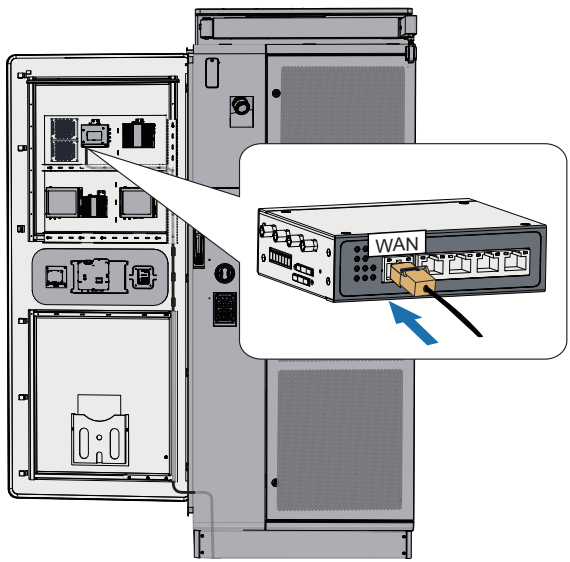
- SIM Card Installation (4G network Connection)

  Industrial-grade IoT SIM cards with a size of 2FF 25mm*15mm are recommended for users.It is recommended to allocate 500MB/month per device (e.g., for a system with 1 IDC480E-C Charger and 1 dispenser, a 1GB/month data plan is suggested).



- Ethernet Cable Connection

  8-core Cat5e or Cat6 Ethernet cable is recommended.



Indicators

Indicator	Indicator Status	Charger Status	Remark
LED indicators	Steady green	Charging connector in standby state	Normal. Indicators for the left and right connector are independent of each other.
	Breathing blue	Charging connector in use for charging.	Normal. Indicators for the left and right connector are independent of each other.
	Steady blue	Fully charged.	Normal. Indicators for the left and right connector are independent of each other.
	Steady red	Fault with the charger.	Abnormal. Indicators for the left and right connector are independent of each other.
Energy Star-Ring	Steady blue	Charger works normally.	Normal.
	Blink blue	Authentication successful, charging initiated.	Normal.
	Steady red	Fault with the charger.	Abnormal. In case of a fault with only one of the charging connectors, the indicator is still steady blue.

Power on

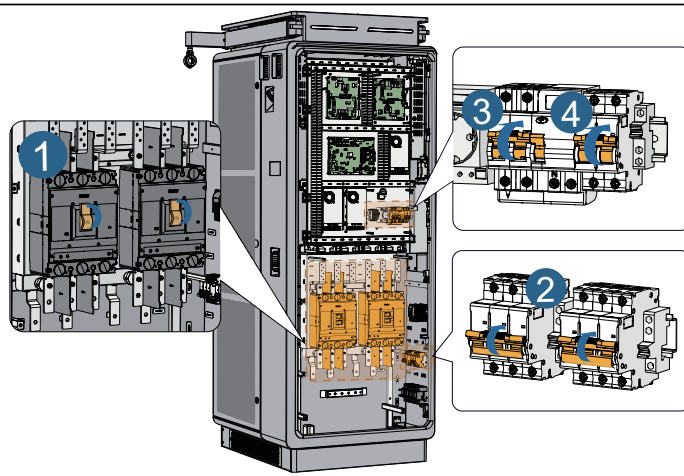
For the upstream circuit breaker, use a 3P molded case circuit breaker without residual current protection, or a 3P+N molded case circuit breaker with residual current protection.

1 Switch on the upstream circuit breaker.

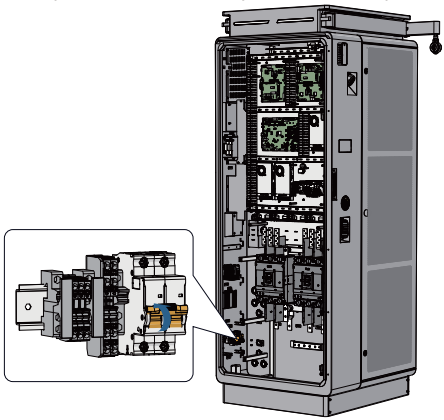
2 Test the voltage.

Test Point 1	Test Point 2	Normal Range
L1	L2	360 V ~ 440 V
L1	L3	360 V ~ 440 V
L2	L3	360 V ~ 440 V
L1	N	208 V ~ 254 V
L1	N	208 V ~ 254 V
L1	N	208 V ~ 254 V

3



4 Optional step: perform when connecting to the dispenser, otherwise skip to the next step.



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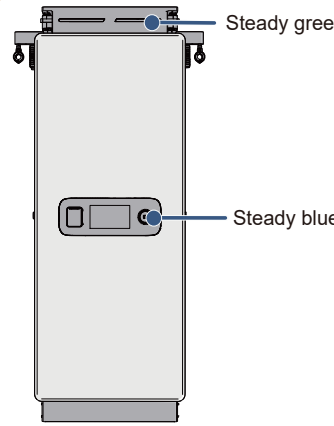
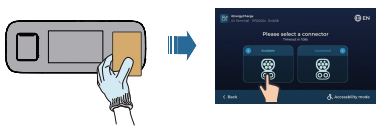
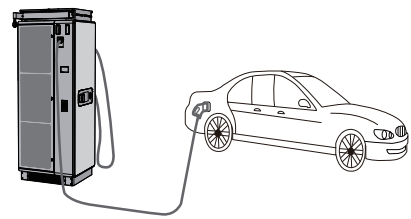


Start charging

1 Tap the RFID card and select a connector



2 Plug the connector to your vehicle



iEnergyCharge App (for O&M Management)

1 Download and install the App

iEnergyCharge App

2 For more detailed information regarding the use of iEnergyCharge App, please scan the QR code below to view the manual.

More information in the QR code or
at http://support.sungrowpower.com/

SUNGROW

Sungrow Power Supply Co., Ltd.

www.sungrowpower.com

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