

Split-Type DC Power Cabinet

Quick Installation Guide

CDC1000E



- This document may be updated from time to time due to product version upgrades 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, read the user manual and applicable standards and specifications carefully. You can access it by logging in to the SUNGROW Technical Support Platform at <http://support.sungrowpower.com/> or by scanning the QR code on the back cover of this Quick Installation Guide.
- Operations on the device must only be performed by qualified technical personnel. Qualified technical personnel must have received specialized training, read through the manual to gain a good understanding of the relevant safe precautions, and be familiar with applicable local standards and electrical safety codes.
- Before installation, check the delivered items against the packing list to confirm completeness to verify that they match the order, and inspect for visible damage. If any anomaly is found, contact the carrier or SUNGROW.
- The cables used must all be intact and well-insulated. Use insulated tools and wear personal protective equipment properly during operation.
- The items labeled "DANGER", "WARNING", "CAUTION", "NOTICE", "NOTE" in this manual do not represent all safety precautions that must be observed. Users are also required to comply with applicable international standards, national or regional regulations, and industry codes and requirements.
- 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 connections must be performed by qualified technical personnel 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 connections.
- Do not commission or operate the equipment if the cable is defective, cracked, worn, or damaged, or if the cable core is exposed.
- When the charger is running, do not touch any of its live parts, nor remove any of its part or components; otherwise, it may lead to electrical shock.

WARNING

- All safety signs, warning labels, and nameplates on the power cabinet must be clearly visible and must not 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

- Unqualified personnel are forbidden from disassembling the device or moving its components.
- Do not install the device in environments containing corrosives such as corrosive gases and organic solvents, etc.
- Do not install the device in dusty and smoky environments.

Symbols in the Manual

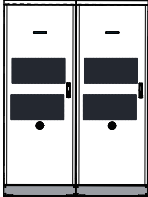
	Disconnect the device from all external power sources before maintenance!		Danger to life due to high voltages! Only qualified personnel can open and maintain the device.
	External protective grounding terminal.		CE mark of conformity.
	TÜV mark of conformity.		Do not dispose of the device together with household waste.
	Read the user manual before performing any operation on the device.		Regulatory compliance mark.
	Burn hazard due to the hot surface that may exceed 60 ° C!		24 0122 PTB mark of conformity. TXXX-DE

Scope of Supply

 CDC1000E Power Cabinet (x1)	 M12X100 expansion bolt (x6)	 Door key (x4)	 Eject tool (x2)
 M8x20 bolt assembly (x12)	 M2M_2FF 4G IoT SIM card (x1) (optional)	 M10x35 bolt assembly (x36)	 M10 hex flange nut (x36)
 Fireproof mud (x4)	 Documents		

*The figures are for reference only. The actual product and quantities received shall prevail.

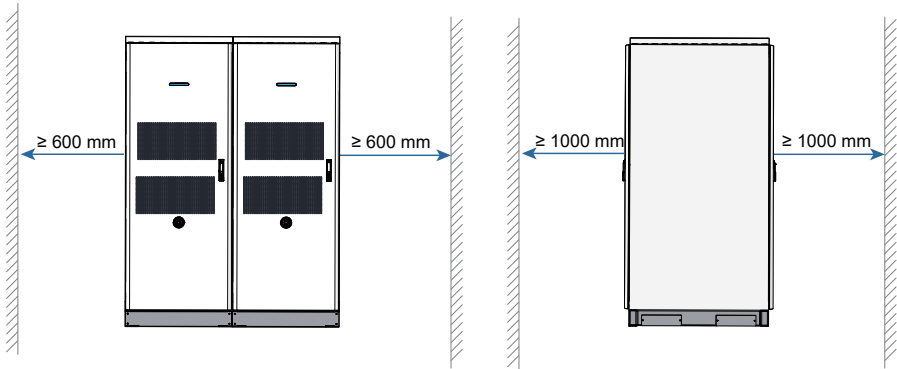
1. Installation Environment Requirements



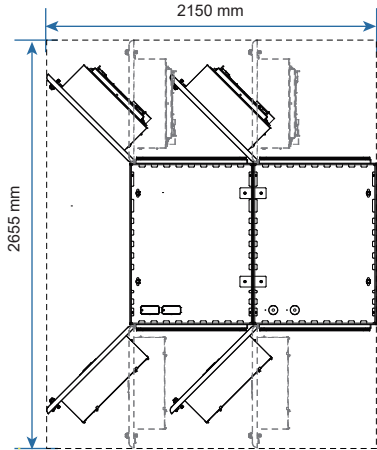
 $\leq 55\text{ }^{\circ}\text{C}$
 $\geq -35\text{ }^{\circ}\text{C}$
 $5\%\sim 95\%$

2. Installation Clearance Requirements

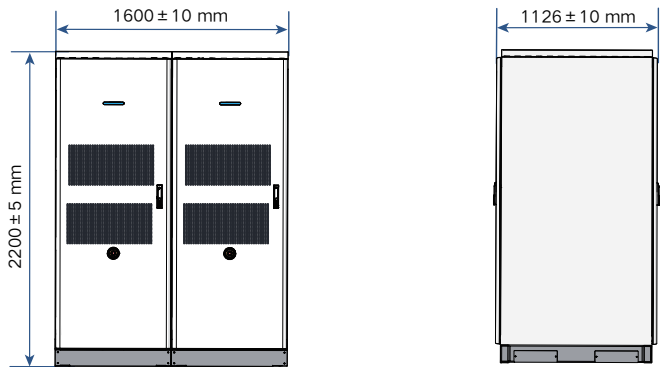
- Recommended Clearance Requirements



- Mandatory Clearance Requirements

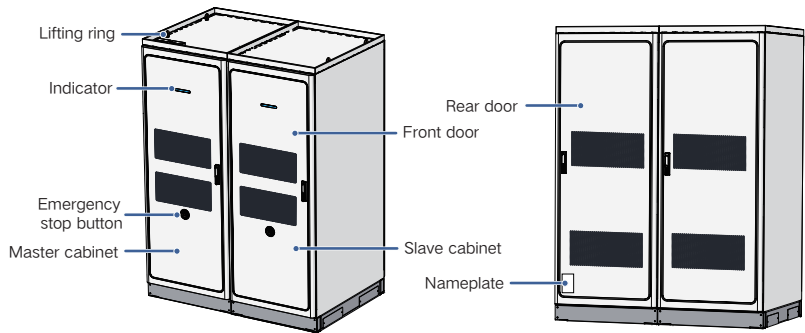


1. Dimensions

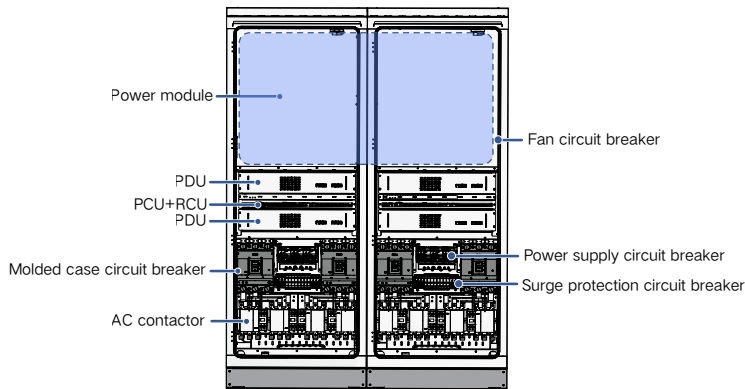


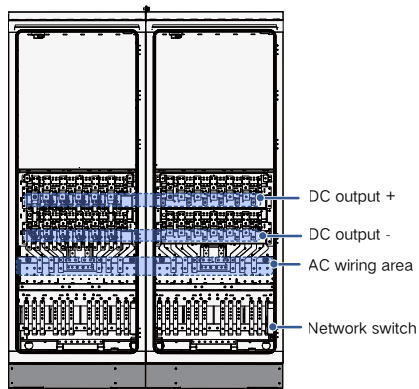
*The product dimensions are subject to the actual product received.

2. External Design



3. Internal Structure



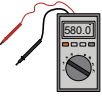


Preparation Before Installation

1. Required Tools

The tools listed in this manual are for reference only. Prepare a complete set of compliant tools based on site conditions prior to installation, including but not limited to the items listed below:

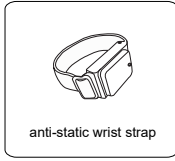
• Installation Tools

 Phillips Screwdriver (M4)	 Marker	 Socket wrench set (M8,M10,M12)	 Vacuum cleaner	 Multimeter: ≥600 Vdc
 wire stripper	 Wire cutter	 RJ45 crimping tool	 Hammer drill (Φ15)	 Pan head tamper proof wrench set
 Hydraulic pliers	 Heat gun	 Rubber mallet	 Socket wrench	 Adjustable wrench

• Protective Tools

 Safety shoes	 Goggles	 Safety helmet	 Dust mask	 Earplugs
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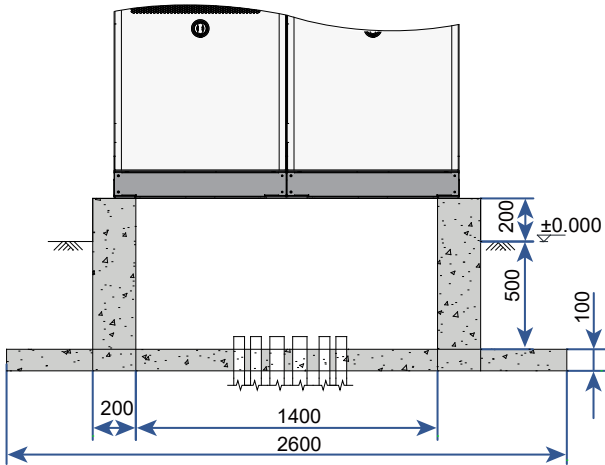
- Electrical Safety Tools



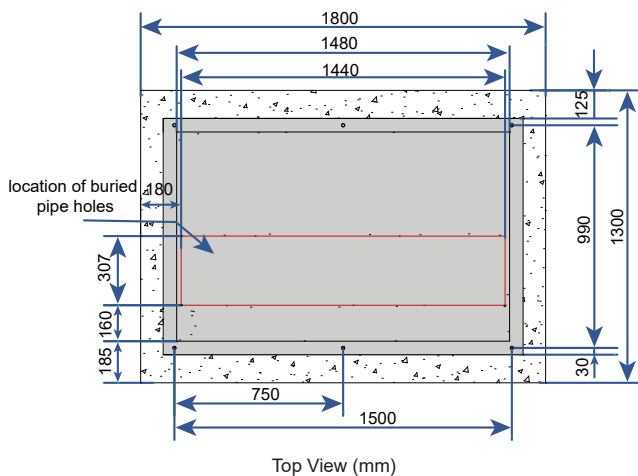
2. Build Foundation

NOTICE

- Plan the foundation in accordance with the installation clearance requirements and base dimensions to ensure adequate clearance for installation and O&M activities.
- Within the installation area, the height of any obstacles shall not exceed the foundation level, as this may affect subsequent maintenance.
- Please install the device on a solid brick or concrete foundation.

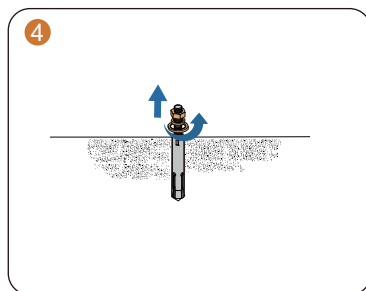
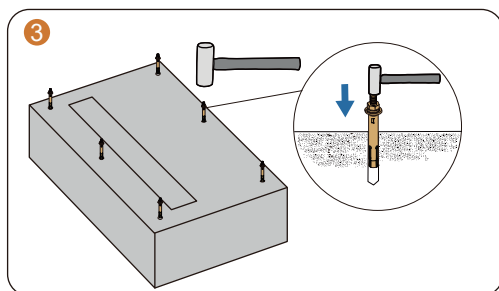
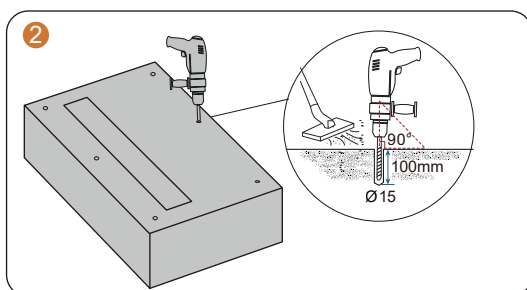
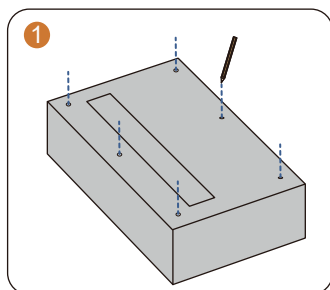


Side View (mm)



Install Cabinet

1. Drill Foundation Holes

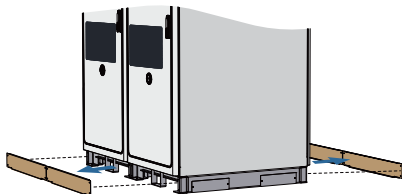


2. Transport Cabinet

iNOTE Pay attention to the device's center of gravity at all times.

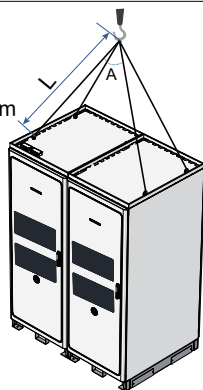
- Transport with Crane

1



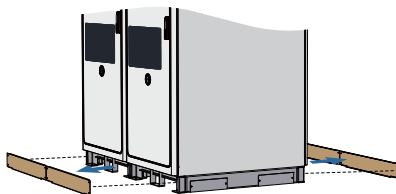
2

$A \leq 60^\circ$
 $L \geq 1200 \text{ mm}$



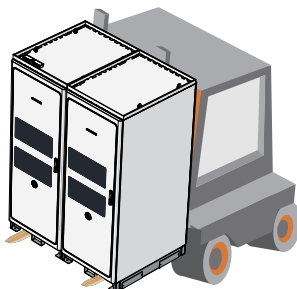
- Transport with Forklift

1



2

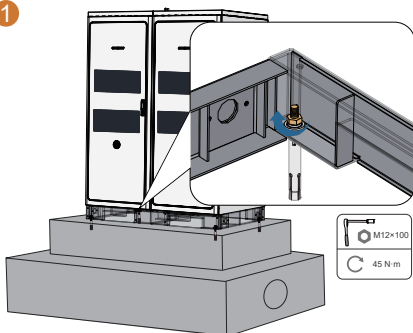
Forklift load capacity $\geq 1.5 \text{ t}$



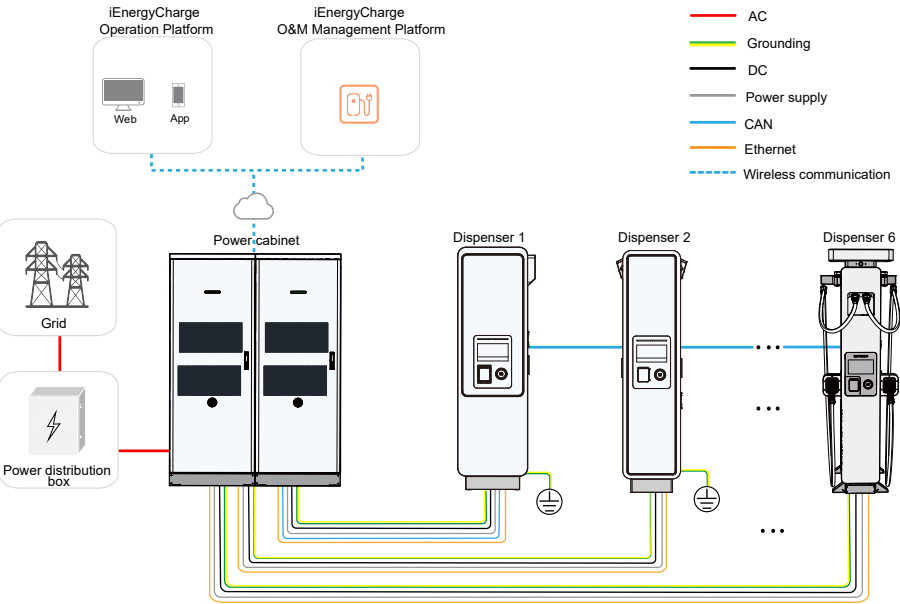
3. Secure Cabinet

Attach the flat washer, spring washer, and nut to the expansion screw in the correct order. Then, tighten the screw using a socket wrench. An S10 (M12) socket wrench is recommended.

1

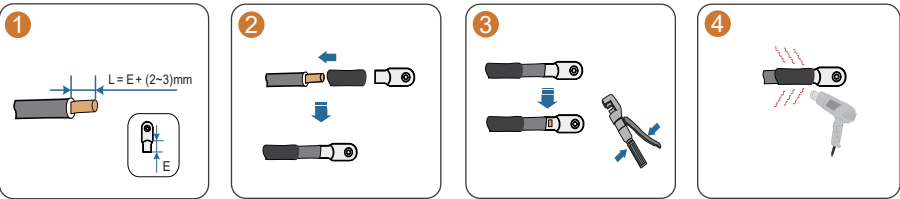


System Wiring Diagram

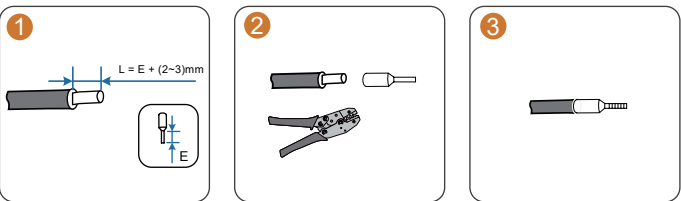


Prepare Terminals

1. Prepare SC Terminals



2. Prepare Ferrule Terminals

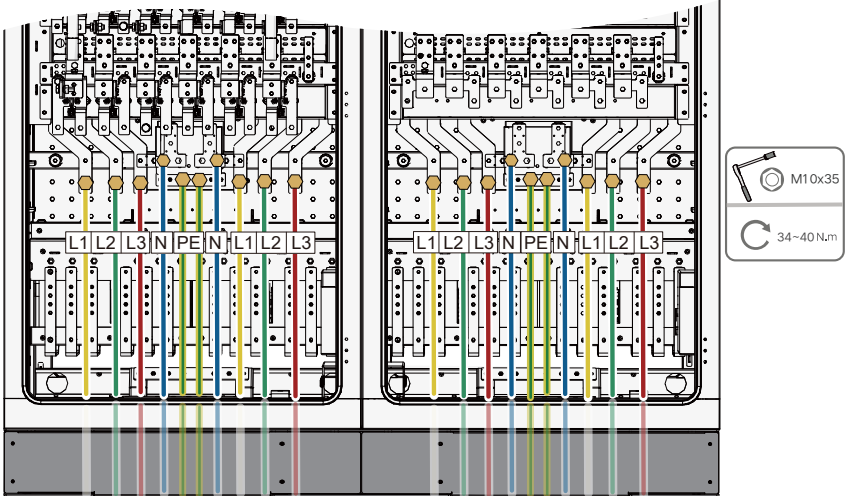


1. Connect AC Cables

Before connecting the AC cables, ensure that the upstream circuit breakers and the molded case circuit breakers in the AC wiring compartment are open.

AC Cable Specifications (Two Circuits per Cabinet)

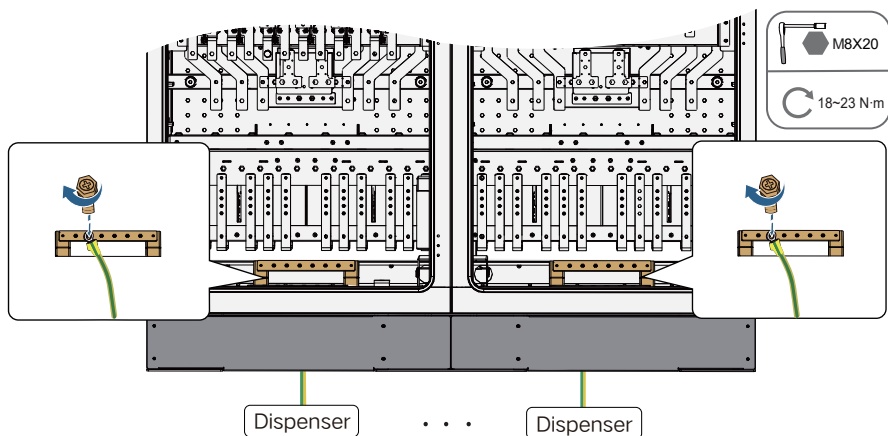
Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Outdoor single-core / multi-core copper cables	L1/L2/L3/N cable: 4 × 185 mm ²	SC185-10
	PE cable: 95 mm ²	SC95-10
Outdoor single-core / multi-core aluminum cables	L1/L2/L3/N cable: 4 × 300 mm ²	SC300-10
	PE cable: 150 mm ²	SC150-10
Withstand voltage: 1 kV		



2. Connect Power Cabinet to Dispenser Grounding Cables

Grounding Cable Specifications

Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Outdoor single-core copper cables	Fast dispenser: 95 mm ²	SC95-8
	Ultra-fast dispenser: 180 mm ²	SC180-8
Outdoor single-core aluminum cables	Fast dispenser: 150 mm ²	SC150-8
	Ultra-fast dispenser: 240 mm ²	SC240-8

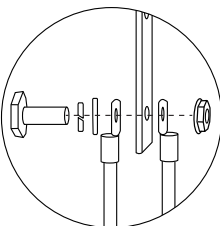


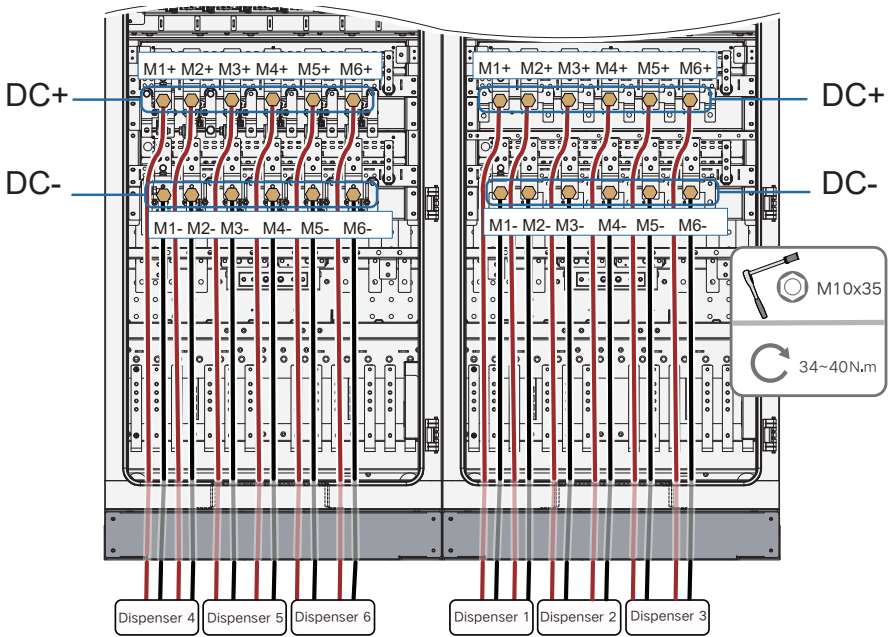
3. Connect DC Cables

DC Cable Specifications

Cable Type	Wire Cross-Sectional Area (per Charging Connector)	Crimp Terminal
Outdoor single-core copper cables Withstand voltage: ≥ 1 kV	Fast dispenser:	
	DC+: $1 \times 120 \text{ mm}^2$	SC120-10
	DC-: $1 \times 120 \text{ mm}^2$	
	Ultra-fast dispenser:	
	DC+: $2 \times 120 \text{ mm}^2$	SC120-10
	DC-: $2 \times 120 \text{ mm}^2$	
Outdoor single-core aluminum cables Withstand voltage: ≥ 1 kV	Fast dispenser	
	DC+: $1 \times 240 \text{ mm}^2$	SC240-10
	DC-: $1 \times 240 \text{ mm}^2$	
	Ultra-fast dispenser	
	DC+: $2 \times 240 \text{ mm}^2$	SC240-10
	DC-: $2 \times 240 \text{ mm}^2$	

If the dual-parallel wiring is used, refer to the dual-parallel wiring diagram below.





*The above figure is for reference only. During actual operation, perform wiring according to the on-site configuration.

- Typical system configuration 1: CDC1000E power cabinet + 1 MCS dispenser + 2 ultra-fast dual-connector dispensers

Dispenser Type	DC Terminal Connection Position
MCS dispenser	DC1+ / DC1- (CCS2): M5+, M5- (slave-cabinet)
	DC2+ / DC2- (MCS): M2+, M2- (master-cabinet)
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M5+, M5- (master-cabinet)
	DC2+ / DC2-: M6+, M6- (master-cabinet)
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M3+, M3- (slave-cabinet)
	DC2+ / DC2-: M4+, M4- (slave-cabinet)

- Typical system configuration 2: CDC1000E power cabinet + 3 ultra-fast dual-connector dispensers

Dispenser Type	DC Terminal Connection Position
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M1+, M1- (master-cabinet)
	DC2+ / DC2-: M2+, M2- (master-cabinet)
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M3+, M3- (master-cabinet)
	DC2+ / DC2-: M4+, M4- (master-cabinet)
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M1+, M1- (slave-cabinet)
	DC2+ / DC2-: M2+, M2- (slave-cabinet)

- Typical system configuration 3: CDC1000E power cabinet + 2 ultra-fast dual-connector dispensers + 2 fast dual-connector dispensers

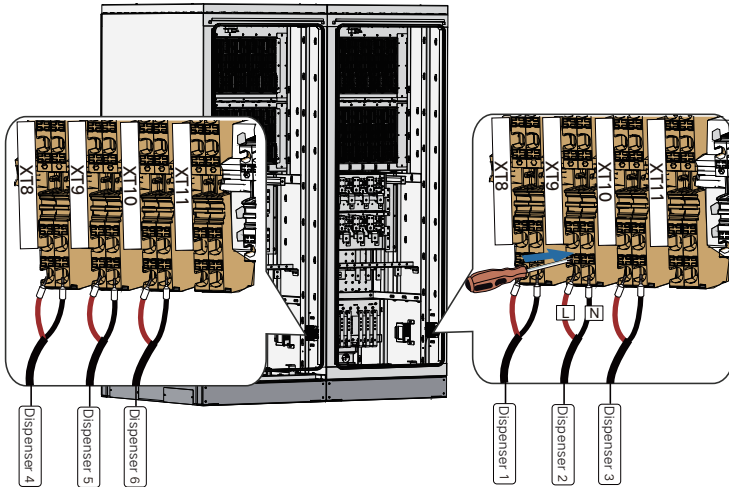
Dispenser Type	DC Terminal Connection Position
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M3+, M3- (master-cabinet)
	DC2+ / DC2-: M4+, M4- (master-cabinet)

Dispenser Type	DC Terminal Connection Position
Fast dual-connector dispenser	DC1+ / DC1-: M5+, M5- (master-cabinet)
	DC2+ / DC2-: M6+, M6- (master-cabinet)
Fast dual-connector dispenser	DC1+ / DC1-: M1+, M1- (slave-cabinet)
	DC2+ / DC2-: M2+, M2- (slave-cabinet)
Ultra-fast dual-connector dispenser	DC1+ / DC1-: M3+, M3- (slave-cabinet)
	DC2+ / DC2-: M4+, M4- (slave-cabinet)

4. Connect Power Cables

Power Cable Specifications

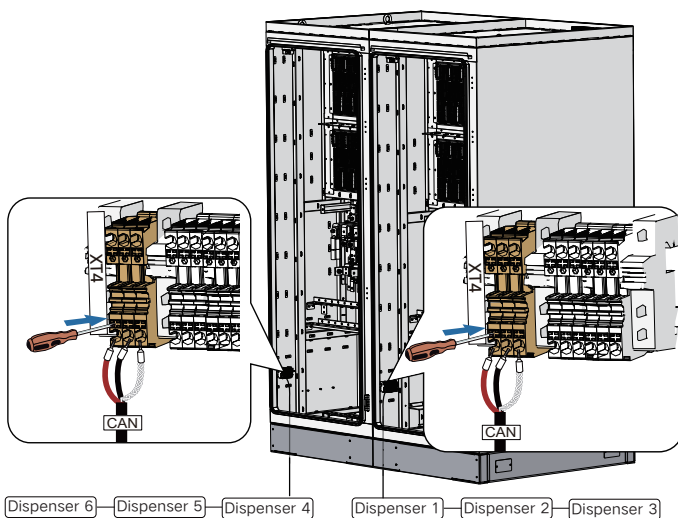
Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Two-core power cable	$2 \times 1.5 \text{ mm}^2$	Ferrule terminal E1510



5. Connect CAN communication cables

CAN Cable Specifications

Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Shielded twisted-pair cable	$2 \times 0.75 \text{ mm}^2$	Ferrule terminal E1510



⚠ NOTICE

- The CAN shielding cable must be connected; otherwise, communication anomalies may occur.
- Connect the CAN cables in a "hand-in-hand" configuration. Refer to the terminal manual for CAN wiring on the dispenser side.

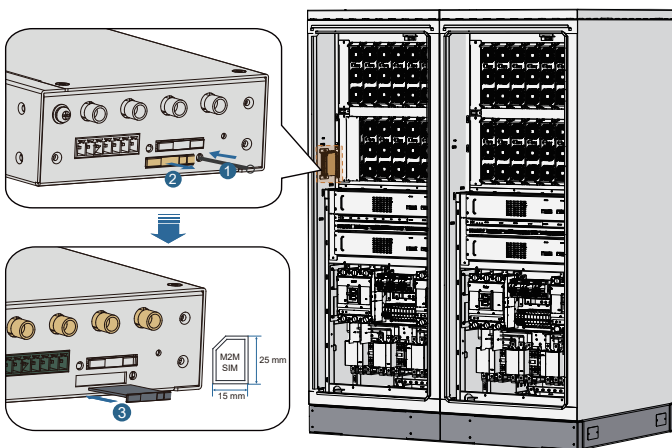
6. Connect Power Cabinet Network

The equipment can connect to the network via 4G or Ethernet to transmit communication data to the cloud platform, enabling operation and maintenance through the cloud. Select one connection method based on the site conditions. Prepare the SIM card or the Ethernet cable as required.

• 4G Network Connection

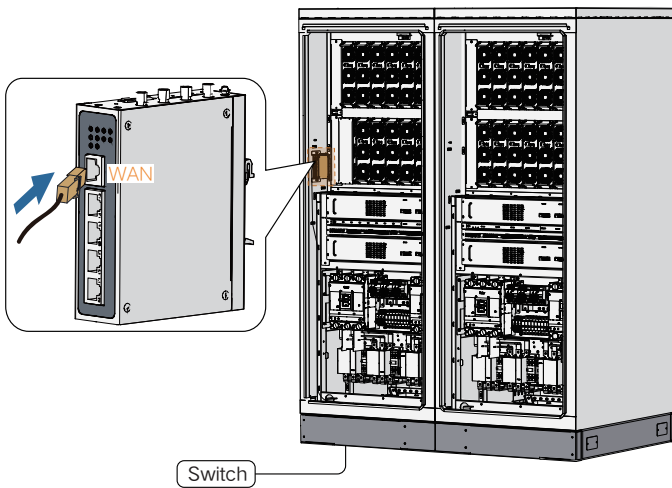
Use an industrial-grade SIM card (2FF, 25 mm × 15 mm).

Select an appropriate data plan based on the number of devices in the charging system. It is recommended to allocate 500MB/month per device (e.g., for a system with 1 power cabinet and 3 dispensers, a 2GB/month data plan is suggested).



• Ethernet Connection

F/UTP Cat5e Ethernet cables are recommended.



7. Connect Dispenser Network

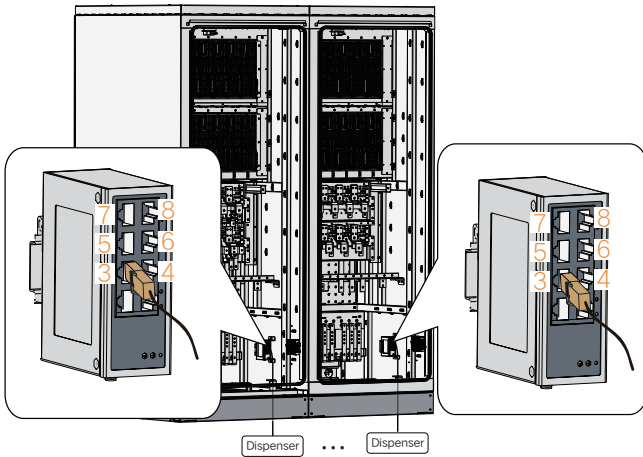
Each charging dispenser must be connected to the power cabinet via an Ethernet cable to reliably transmit communication data to the cloud platform.

F/UTP Cat5e Ethernet cables are recommended.

Connections Between Switch Network Port and Dispenser

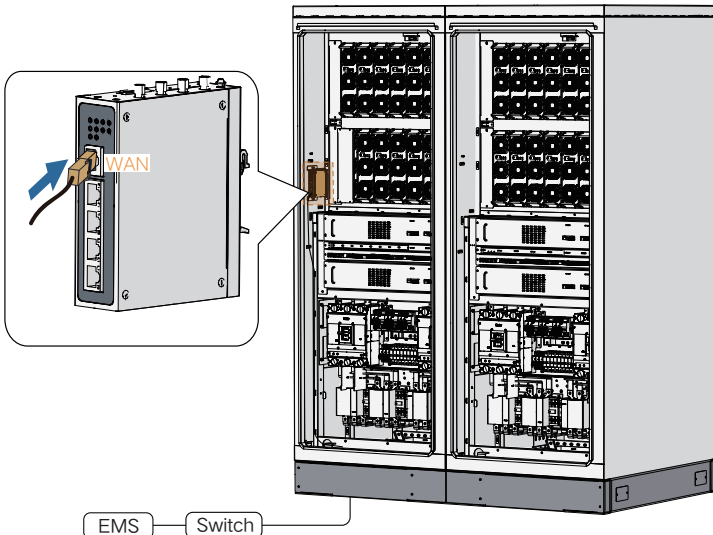
Power Cabinet	Switch Network Port	Dispenser
Master cabinet	Network port 3	Dispenser 1
	Network port 4	Dispenser 2
	Network port 5	Dispenser 3

Power Cabinet	Switch Network Port	Dispenser
	Network port 3	Dispenser 4
Slave cabinet	Network port 4	Dispenser 5
	Network port 5	Dispenser 6



8. Connect EMS Controller

If the charger is connected via Ethernet and the EMS and the charger are on the same network, the EMS can be directly connected to the switch of the charger network. If the charger uses 4G connectivity, connect the network where the EMS is located to the WAN port. It is recommended to use a shielded Cat 5e Ethernet cable.

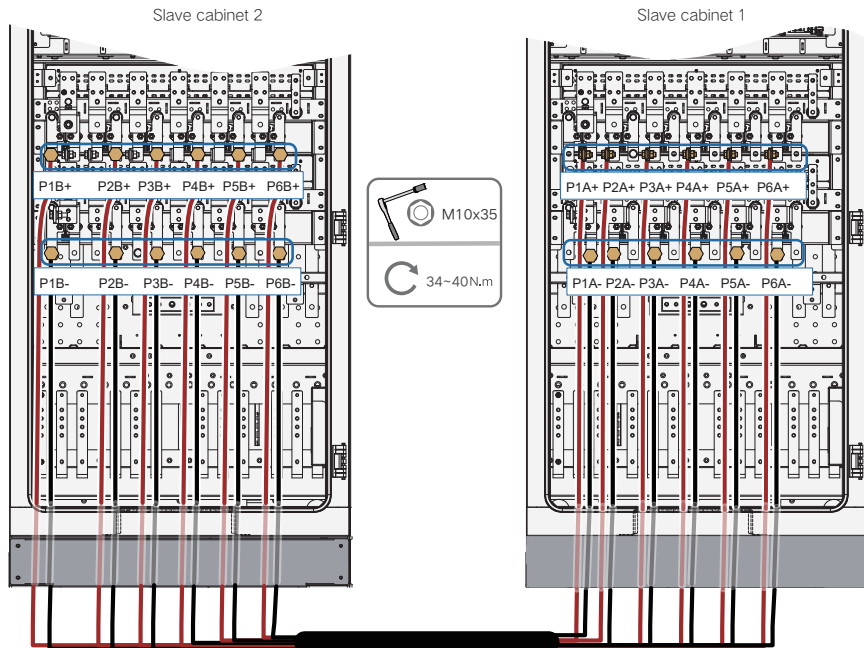


Parallel Cabinet Connection

1. Cabinet DC parallel connection

DC Cable Specifications

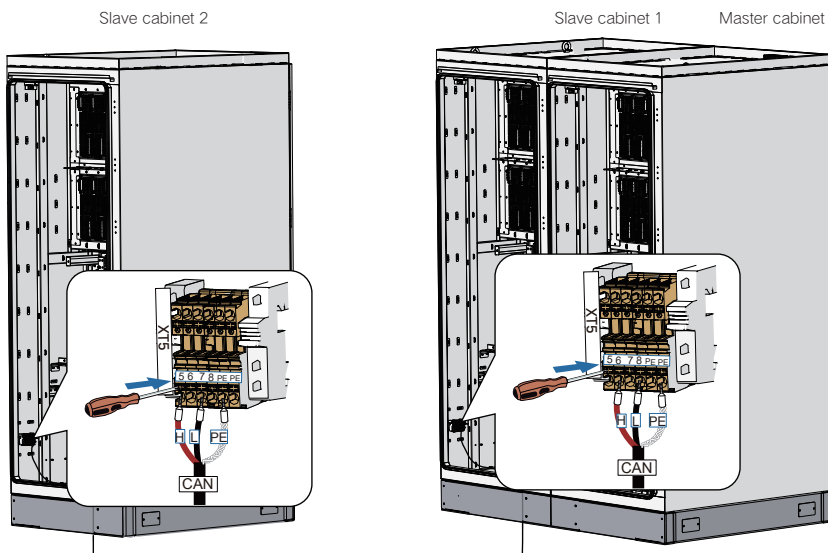
Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Outdoor single-core copper cables	95 mm ²	SC95-10
Withstand voltage: ≥ 1 kV		



2. Connect CAN Communication Cables

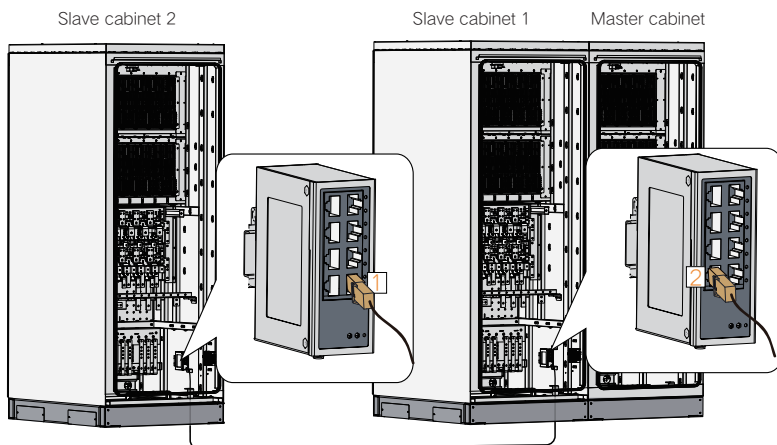
CAN Cable Specifications

Cable Type	Wire Cross-Sectional Area	Crimp Terminal
Shielded twisted-pair cable	2 × 0.75 mm ²	Ferrule terminal E1510

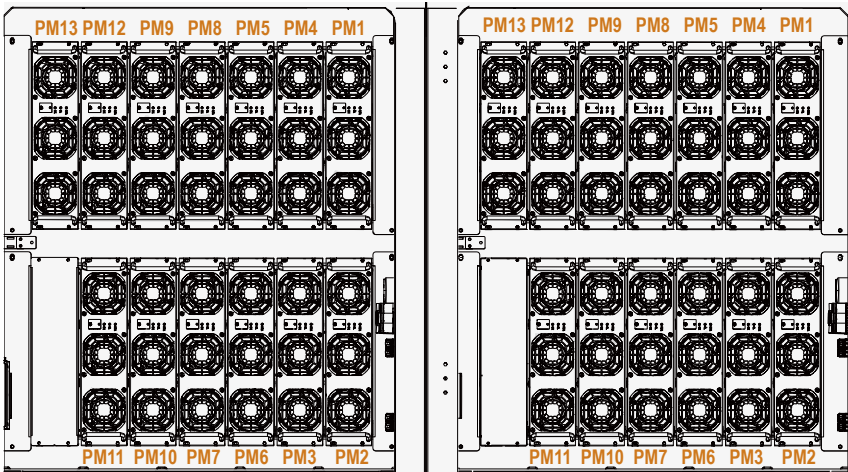


3. Cabinet network cable connection

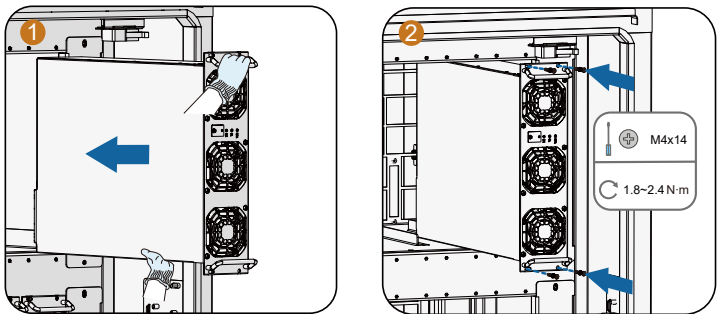
F/UTP Cat5e Ethernet cables are recommended.



1. Layout



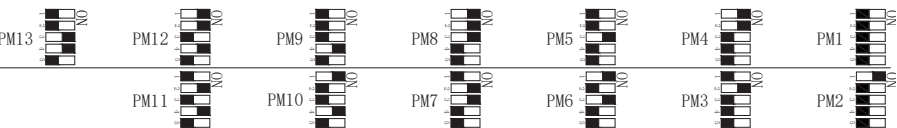
2. Installation



3. DIP switch

i NOTE

Follow the printed markings on the cabinet strictly when setting the DIP switches. Otherwise, the power distribution function may malfunction.



Indicators

Indicator Status	Device Setup
Steady green	Standby
Steady blue	Running
Steady red	Fault
Blinking red	Power on self-test

Inspection Before Power-On

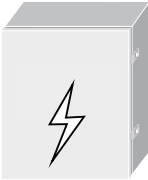
No.	Inspection Item	Acceptance Criteria
1	Appearance	☐ No visible scratches and deformation on the equipment enclosure. ☐ No paint peeling on the exterior of the equipment. ☐ The parts and components of the cabinet are secure and reliable, and the nameplate and marks are all legible.
2	Environment	☐ Verify that the equipment placement and surrounding space comply with the design drawings. ☐ Verify that the equipment is installed in a proper heat dissipation environment, with no obstructions above or around the cabinet.
3	Charging connector	☐ No water stains or foreign objects on the charging connector. ☐ The charging cable is intact.
4	Electrical connection	☐ Verify that all cable connections are securely fastened. ☐ Inspect the DC cables to confirm that the connections match the wiring diagram and that no reverse connection or short circuit is present. ☐ Inspect the AC cables to confirm that the connections match the wiring diagram, the phase sequence is correct, and no reverse connection or short circuit is present. ☐ Inspect the grounding cables to confirm that all connections are secure and free of short circuits. ☐ Apply heat shrink tubing at all terminal-to-cable connections. Ensure that no cable cores are exposed. ☐ When aluminum cables are used, confirm that copper-to-aluminum terminals are applied. ☐ Verify the power unit DIP switches to ensure they comply with the DIP switch settings rules.
5	Maintainability	☐ Secure the cables at the nearest tie points using cable ties. Ensure proper tension and consistent routing direction. ☐ Bind cables of different categories separately and identify them with labels. ☐ Route the cables to allow convenient access for future maintenance.

1. Preparation Before Power-On

NOTICE

Use upstream circuit breakers that are either 3P molded case breakers without residual current protection or 3P+N molded case breakers with residual current protection.

1 Close upstream circuit breaker

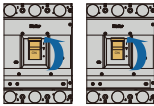


2 Measure voltage

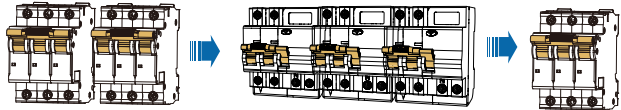
Measuring point 1	Measuring point 2	Normal voltage
L1	L2	323 V–440 V
L1	L3	323 V–440 V
L2	L3	323 V–440 V
L1	N	187 V–254 V
L2	N	187 V–254 V
L3	N	187 V–254 V

2. Power-On

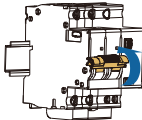
1 Close the charger molded case circuit breaker



2 Close the charger surge protection, power supply, and fan circuit breakers

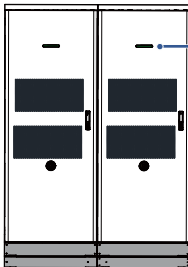


3 Close the terminal miniature circuit breaker



3. Observe Indicators

1



Flashing red



Steady green



For more information, scan the QR code or visit:
<http://support.sungrowpower.com>

SUNGROW

Sungrow Power Supply Co., Ltd.

www.sungrowpower.com



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QICN M0H01426