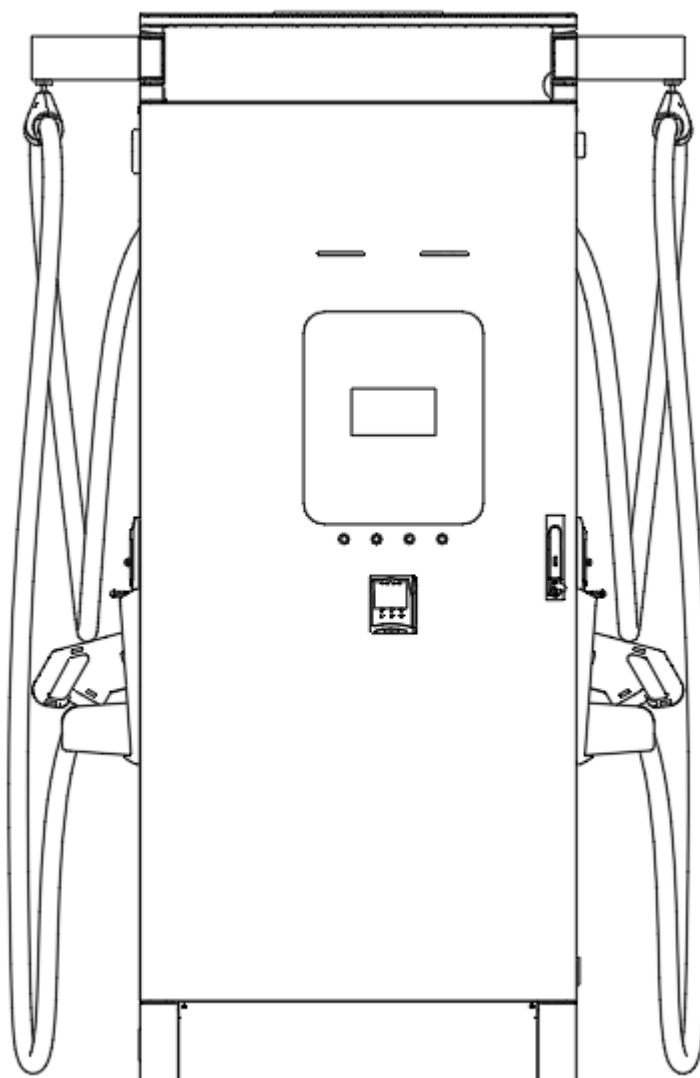




ADC002 US standardall-in-one

DC charging station installation and use manual

ADC002 US standard all-in-one DC charging station installation and use manual



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1. General

1.1 Purpose of the document

The purpose of this document is to guide the construction personnel to complete the on-site installation of the US standard all-in-one DC charging station.

1.2 Scope of application

1.2.1 This manual applies to equipment types:

ADC002 US standard all-in-one DC charging station

1.2.2 This manual is suitable for the following groups of people

ADC002 US standard all-in-one DC charging station installer

1.3 Definition of relevant warning symbols







| No. | Mark | Meaning |
|-----|---|---|
| 1 |  | A "WARNING" sign indicates a hazard. Pay attention to procedures, practices, or incorrect execution that may result in personal injury or death. Actions following the WARNING mark should only be performed if the indicated conditions are fully understood and met. |
| 2 |  | A "CAUTION" sign indicates a hazard. Be aware of product damage or destruction that may result from operating procedures, experiments or incorrect execution, and operations following the "CAUTION" mark should only be performed when the indicated conditions are fully understood and met. |
| 3 |  | Indicates a burn hazard arising from hot areas or areas with high component temperatures |
| 4 |  | protective earth connection |
| 5 |  | AC current |
| 6 |  | Indicates that the described operations must be performed using employer-supplied clothing and/or personal protective equipment |

Table 1 Definitions of related warning symbols

1.4 Safety Precautions

For Both FCC & IC application:

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt

RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est

susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

MPE Requirements

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

Les antennes installées doivent être situées de façon à ce que la population ne puisse y être exposée à une distance de moins de 20 cm. Installer les antennes de façon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l'antenne.

La FCC des états-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son fonctionnement.

Before starting the operation, please read the operation instructions and precautions carefully to reduce accidents. The "Caution, Caution, Warning, Danger" items in the product and product manual do not represent all safety items that should be observed, but are only supplements to various operational safety precautions.

When operating the company's products and equipment, you must abide by the safety regulations of the relevant industry, and strictly abide by the relevant equipment precautions and special safety instructions provided by the company.




Warning

This equipment is not intended for use in a residential environment and may not provide adequate protection for radio reception in such environments.


Safety instructions

The internal working voltage of the charging system is high and the current is large. In order to ensure personal safety, the following regulations should be observed at all times:

TOOL


| | |
|---|---|
|  Warning | This equipment is not intended for use in a residential environment and may not provide adequate protection for radio reception in such environments. |
|---|---|

Thunderstorm


| | |
|--|---|
|  Danger | It is strictly forbidden to use high voltage and alternating current in thunderstorm weather. |
|--|---|


During thunderstorms, strong electromagnetic fields are generated in the atmosphere. Therefore, in order to avoid lightning damage to the equipment, it is necessary to do a good grounding of the equipment in time.


Static electricity

| | |
|---|---|
|  Notice | The static electricity generated by the human body will damage the electrostatic sensitive components on the circuit board, such as large-scale integrated circuits (IC). Before touching the equipment, holding plug-in boards, circuit boards, IC chips, etc., you must wear an anti-static bracelet and ground the other end of the anti-static bracelet to prevent static electricity from damaging sensitive components. |
|---|---|


Short circuit

| | |
|--|--|
|  Danger | It is strictly forbidden to short-circuit the positive and negative poles of the power distribution system or short-circuit the non-grounded poles to the ground during operation. A short circuit will cause equipment burns and personal safety hazards. |
|--|--|

 When performing live work, the polarity of cables and interface terminals must be strictly checked.


 The power distribution operation space is compact, so please pay attention to select the operation space before any operation.

 Operation must use insulated tools.


 When operating with electricity, you must pay attention to keeping your hands, wrists, and arms in a tense state, so as to prevent accidents caused by too much movement of the tool or human body when the tool slips.

Other


Object sharp corner

| | |
|---|---|
|  Warning | When carrying the equipment by hand, wear protective gloves to prevent cuts from sharp objects. |
|---|---|

Power cable

| | |
|--|---|
|  Notice | Before connecting the cables, verify that the cable labels are correct. |
|--|---|

Signal line

| | |
|--|--|
|  Notice | Signal cables should be bundled separately from power cables, with a spacing of at least 15mm. |
|--|--|

2. Preparations before installation







2.1 Environmental conditions

When selecting an installation site for charging equipment, the environmental conditions listed in the table below should be considered.

| Environmental Conditions | Recommended Range |
|----------------------------------|--|
| Ambient temperature | -30°C ~ + 50°C, use with derating above 50°C |
| Altitude | ≤2000m |
| Humidity | 5%~95%RH, no condensation inside the product; |
| Dust | ≤1mg/m ³ |
| Corrosive substances | Free from pollutants such as salt, acid, smoke, etc. |
| Shock | ≤1.5mm/s |
| Insects, pests, vermin, termites | None |
| Mold | None |
| Damp | Rainproof |

Table 2 Installation Environment Confirmation Form

2.2 Conventional construction tools

| No. | Category | Name | Use | Picture |
|-----|------------------------|---------------------------|----------------------------------|---|
| 1 | wire preparation tool | Electrician's knife | Peeling of insulating sheath |  |
| 2 | tools for installation | wire stripper | Peeling of insulating layer |  |
| 3 | tools for installation | Crimping Tool | Terminal crimp |  |
| 4 | tools for installation | impact drill | Component tube clip installation |  |
| 5 | tools for installation | Electric air pick machine | slotted |  |
| 6 | tools for installation | Cutting Machine | Cut the tube |  |











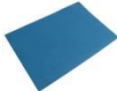

| No. | Category | Name | Use | Picture |
|-----|------------------------|--|--|---|
| 7 | tools for installation | heat gun | Heat shrinking of insulating materials |  |
| 8 | tools for installation | hot melt machine | Welded PE water pipe |  |
| 9 | tools for installation | Allen key (full set) | Install and remove screws |  |
| 10 | tools for installation | Open-end wrench (full set includes No. 13) | Install and remove the nut |  |
| 11 | tools for installation | Angle Grinder | grinding of materials |  |
| 12 | tools for installation | Phillips screwdriver (full set) | Remove and install screws |  |
| 13 | measuring instrument | Laser level | Level measurement |  |
| 14 | measuring instrument | level | Level measurement |  |
| 15 | measuring instrument | multimeter | Measure voltage, current, etc. |  |
| 16 | measuring instrument | Megohmmeter | Measuring insulation resistance |  |
| 17 | assistive device | Insulating floor mat | Placing the disassembled parts |  |
| 18 | Lifting tools | Manual crane | Equipment lifting |  |

Table 3 List of conventional construction tools

Note: The above tools need to be selected according to the actual situation on site.

2.3 Construction materials

2.2.1 Cables

Refer to the table below to select the corresponding terminals according to different wire diameters.

| Wire Diameter | Terminal Model |
|--------------------------------|----------------|
| 6AWG (13.3mm ²) | SC16-6/SC25-8 |
| 4AWG (21.15mm ²) | SC25-6/SC25-8 |
| 3AWG (26.67mm ²) | SC35-8 |
| 2AWG (33.62mm ²) | SC35-6/SC35-8 |
| 1AWG (42.41mm ²) | SC50-8 |
| 1/0AWG (53.49mm ²) | SC70-8 |
| 2/0AWG (67.43mm ²) | SC70-8 |
| 3/0AWG (85.01mm ²) | SC95-8 |
| 4/0AWG (107.22 | SC120-10 |

Table 4 Cable Diameter Comparison Terminal Table

2.2.2 Network cable

If you need to use the Ethernet communication function, it is recommended to use a shielded twisted-pair network cable (cat6a) and RJ45 crystal plug. The length of the network cable shall not exceed 75m. If it exceeds 75m, the customer needs to customize the construction plan according to the site conditions.

2.2.3 Other materials

Heat-shrinkable tubes, insulating tapes and other auxiliary materials required for making cables.

If the fuse is damaged, it is necessary to replace the model with the same specification, the fuse specification is 350A,AC1250V/DC1000V

2.4 Installer Requirements

- (1) Entering the construction site should abide by the construction site safety management regulations.
- (2) When entering the construction site, you must correctly wear a safety helmet (fasten the chin strap, the safety helmet is in good condition), do not wear unsafe clothing such as loose clothing and slippers, and are strictly prohibited from drinking to work and smoking on the construction site.
- (3) High-altitude workers must wear safety helmets, hang seat belts, wear non-slip shoes, and fasten labor tools.
- (4) If the construction site is dusty or there is painting work, protective masks must be worn.
- (5) Do not enter the hoisting area, below the vertical operation and other dangerous areas, and place objects to strike.
- (6) Try to stay away from various mechanical equipment and electrical circuits to prevent mechanical and electrical damage.
- (7) Those who use mobile power tools must master their use skills and precautions, wear insulating shoes and gloves as much as possible, and the metal shell must be grounded or zero-connected.
- (8) For temporary electricity use on site, the electrical box must be kept intact, and damaged electrical components must be replaced in time.
- (9) Rubber cables should be used for temporary on-site wires, plastic flower wires are prohibited, and wires are not allowed to be directly inserted into sockets.
- (10) Try to avoid live work.
- (11) When entering the foundation pit, roof and other marginal places and various openings, you must concentrate your energy to prevent falling from heights.
- (12) Pay attention to the ground environment conditions such as iron nails and steel bars, and prevent other injuries such as sticking, touching, hanging and falling.
- (13) Site construction protection facilities, safety signs, warning signs, etc. shall not be dismantled without authorization.
- (14) Strengthen the on-site maintenance of construction equipment, maintain the intact rate, and prohibit the operation with illness and overload operation.

2.5 Handover of construction drawings

After the installer arrives at the site, first ask the store staff to check the installation location drawings of the equipment, and check to confirm that the cables and cement foundations of each equipment meet the requirements.

2.6 Spacing requirements for equipment

(1) Maintenance distance requirements

When the back or side of the charging pile to be installed is close to the wall or other obstacles, a certain maintenance distance needs to be reserved. Please refer to Figure 1 below for the installation distance of the base, and please refer to Figure 2 for the maintenance distance with the door open. The charging pile adopts left and right ventilation and heat dissipation, the air enters from the right and the air exits from the left, refer to Figure 3.

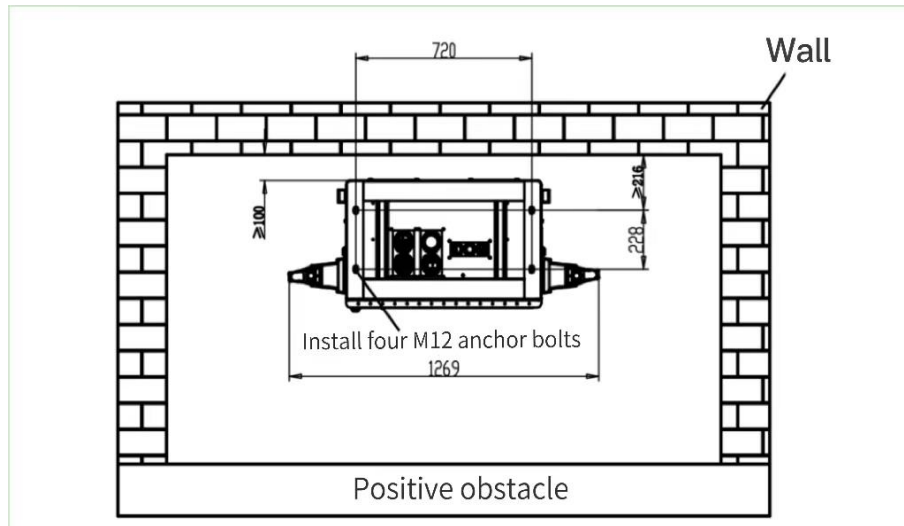


Figure 1 Base Installation Distance Diagram

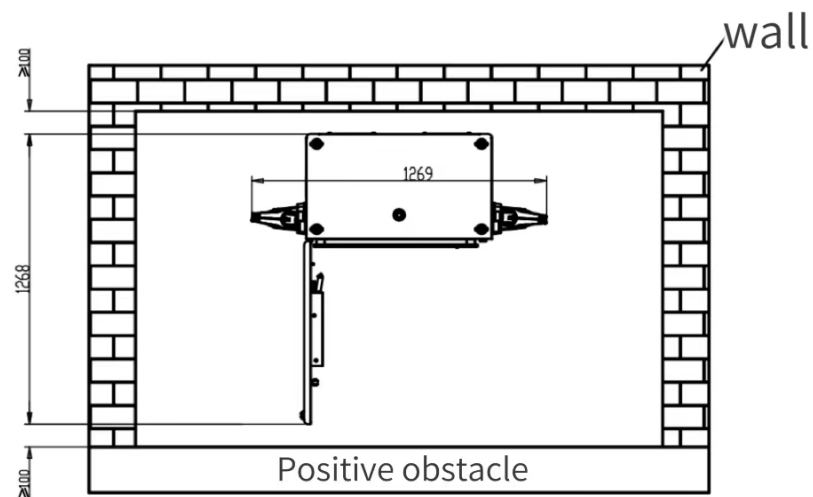


Figure 2 Maintenance distance map

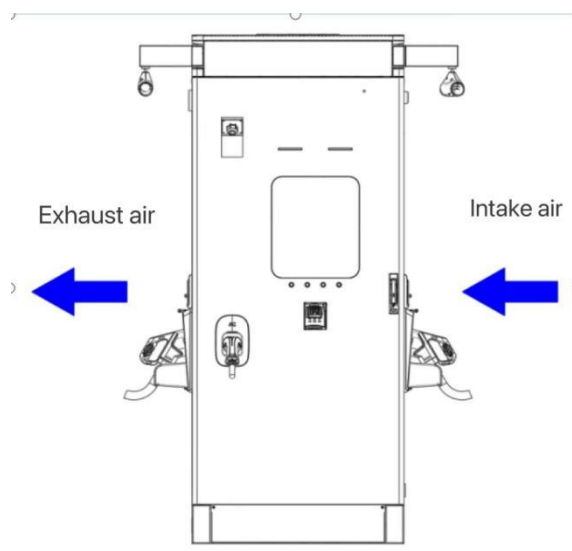


Figure 3 Schematic diagram of wind direction

(2) Parking space requirements

When the charging station is installed in the middle of a parking space or back-to-back parking spaces, it is recommended to leave a space of 1200mm between the car wheel block and the charging station to facilitate the use of the charging pile, as shown in Figure 4:

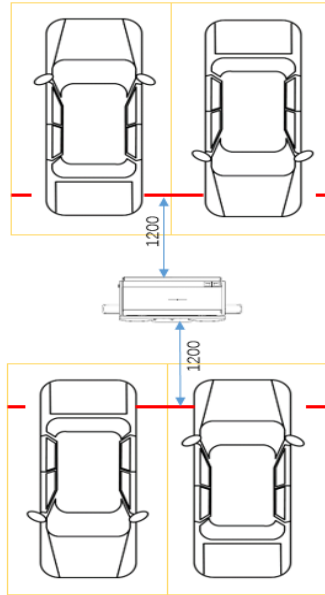


Figure 4 Parking distance requirements

2.7 Power cable recommendation

ADC002 US standard DC charging pile recommends using cables with a voltage level of 480V or higher, **Use Copper Conductors Only**, and the cables should reach a temperature resistance level of at least 90°C. The installer confirms whether shielding is required according to local laws or regulations. If there is a shielding layer, both ends of the shielding network must be connected to the PE wire.

The power distribution input wire diameter of the charging pile is recommended not to be lower than the following recommended values. If the wire diameter does not comply with laws and regulations, please refer to the requirements of local laws and regulations.

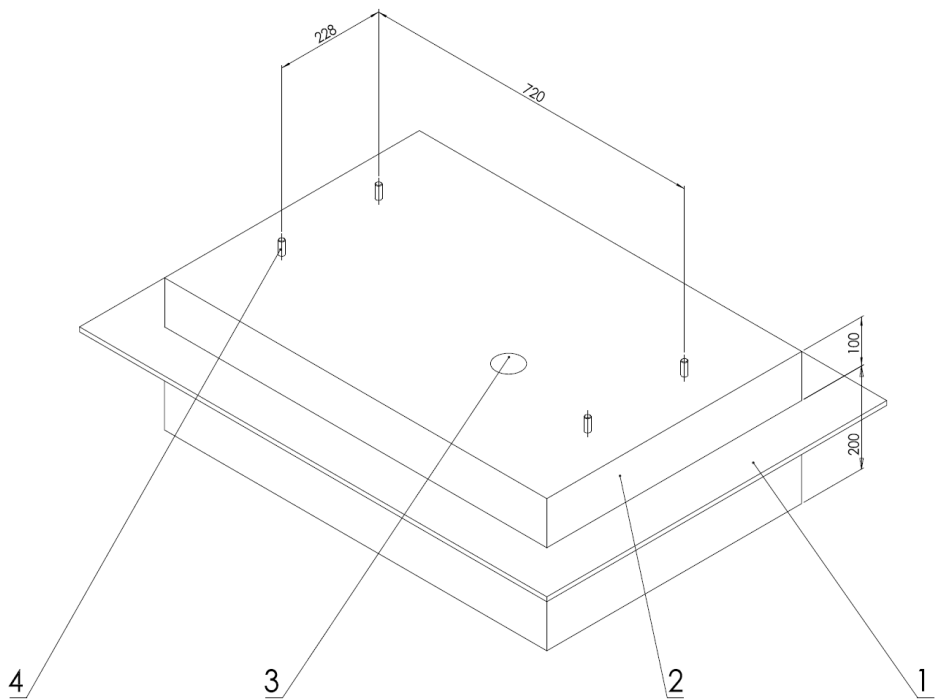
| Phase sequence | L1 | L2 | L3 |
|---------------------------|--------------------------------|--------------------------------|--------------------------------|
| 60kW | 3AWG (26.67mm ²) | 3AWG (26.67mm ²) | 3AWG (26.67mm ²) |
| 90kW | 2AWG (33.62mm ²) | 2AWG (33.62mm ²) | 2AWG (33.62mm ²) |
| 120kW | 1/0AWG (53.49mm ²) | 1/0AWG (53.49mm ²) | 1/0AWG (53.49mm ²) |
| 150kW | 1/0AWG (53.49mm ²) | 1/0AWG (53.49mm ²) | 1/0AWG (53.49mm ²) |
| 180kW | 2/0AWG (67.43mm ²) | 2/0AWG (67.43mm ²) | 2/0AWG (67.43mm ²) |

| PE | Torque (N/m) |
|-------------------------------|--------------|
| 5AWG (16.77mm ²) | 4.8~6 |
| 3AWG (26.67mm ²) | 4.8~6 |
| 2 AWG (33.62mm ²) | 4.8~6 |
| 2 AWG (33.62mm ²) | 4.8~6 |
| 1 AWG (42.41mm ²) | 4.8~6 |

2.8 Requirements for cement foundation

The cement foundation needs to be poured before the installation of the charging pile. The size of the cement foundation must be greater than 650mm*900mm*600mm, and the depth of the foundation is 600mm. The design of the cement foundation can be adjusted according to the user's requirements and the actual situation on site. The schematic diagram of the cement foundation is shown in Figure 5, and the basic inspection requirements are as follows:

- (1) Pay attention to the correction level when pouring the foundation.
- (2) The foundation installation is higher than the ground level, and necessary maintenance passages are reserved on site depending on the specific space.
- (3) The drainage outlet on the foundation surface is slightly inclined to avoid water accumulation.
- (4) The foundation is filled with C25 concrete.
- (5) On the basis, reserve a wire outlet hole with a diameter of not less than 60mm, and adjust it according to the actual wire diameter. As shown in Figure 4.
- (6) After the foundation is completed, use a level to test the flatness.
- (7) Four M12 screw rods are used for fixed pre-embedding, which are pre-embedded into the interior of the concrete foundation according to the positioning of the drawing, and 30-40mm threads on the upper surface of the concrete foundation are exposed.



| | | | |
|---|-------------|---|------------------|
| 1 | ground | 3 | cable outlet |
| 2 | cement base | 4 | M12 threaded rod |

Figure: Schematic diagram of the cement base of the charging station

2.9 Current and distribution capacity requirements

Please confirm the relevant information requirements of the distribution network according to the table below, and proceed according to the recommended circuit breaker selection requirements

| Charging station specification | Distribution grid voltage | Wiring form | Grid capacity | Rated current |
|---------------------------------------|----------------------------------|--------------------|----------------------|----------------------|
| 60kW | 480Vac, 60Hz | L1+L2+L3+PE | $\geq 75\text{kVA}$ | 76A |
| 120kW | 480Vac, 60Hz | L1+L2+L3+PE | $\geq 150\text{kVA}$ | 152A |
| 180kW | 480Vac, 60Hz | L1+L2+L3+PE | $\geq 200\text{kVA}$ | 228A |

| Circuit breaker selection | Remark |
|--|---------------|
| Ue=480V, $\geq 100\text{A}$, $I_{cu} \geq I_{cs} \geq 40\text{kA}$, 3P | |
| Ue=480V, $\geq 200\text{A}$, $I_{cu} \geq I_{cs} \geq 40\text{kA}$, 3P | |
| Ue=480V, $\geq 250\text{A}$, $I_{cu} \geq I_{cs} \geq 40\text{kA}$, 3P | |

2. 10 Grounding/Insulation Resistance Requirements

(1) Check the civil engineering grounding resistance test report to ensure that the resistance value of the grounding grid produced on site must be $\leq 4\Omega$.

(2) Check the civil engineering insulation resistance test report to ensure that the insulation resistance of the cable is $\geq 10M\Omega$.



Important: The above requirements are the minimum requirements for this equipment, and the specific standards are subject to local laws and regulations.

3. Installation steps

3. 1 Unpacking and unpacking inspection

3. 1. 1 Equipment packing list

| Name | Package | Configure | random document | Parts List |
|------------------|------------|-----------|--|---|
| Device body | wooden box | Standard | <ul style="list-style-type: none"> - certificate - Certificate of Qualification-Factory inspection report -Installation manual (electronic version) | <ul style="list-style-type: none"> - key - RFID card - Module solid - screw - U disk - print line |
| Rectifier module | Carton | Standard | | The quantity will be configured according to the actual power |

Table 7 Equipment packing list

3.1.2 Unpacking inspection

(1) Check the packing list number and equipment quantity.

(2) Check the equipment nameplate information.

(3) Check whether the random files are complete.

(4) Check whether the spare parts and accessories are complete.

(5) Check the factory inspection report and certificate of conformity.

(6) Check whether the appearance of the equipment is good, and whether there is deformation, bumps, stains, etc.

3.1.3 Unpacking precautions

- (1) The installer shall unpack in the presence of the owner, and fill in the unpacking record in detail. See Appendix 1 for the unpacking record sheet.
- (2) After unpacking and checking, please ask the owner's representative to confirm and sign on the equipment unpacking record sheet.
- (3) If problems are found during the unpacking and acceptance of the equipment, in addition to making records, wait for the negotiation between the owner and the supplier.

3.1.4 Product parts introduction

- (1) The components of the product facade are shown in Figure 6 and Figure 7
- (2) The internal structure diagram of the product is shown in Figure 8

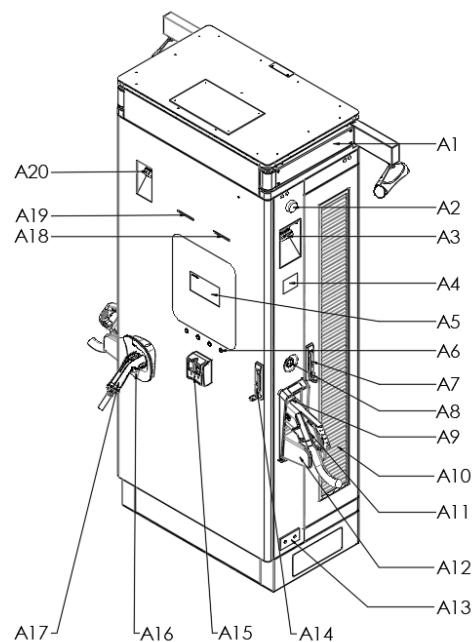


Figure 6 Front view of components

| | | | | | | | |
|-----|------------------------------|-----|--------------------------------|-----|--------------------------------|-----|---------------------|
| A1 | Swing arm assembly* | A2 | POS machine antenna | A3 | Waterproof gland A | A4 | DC meter window |
| A5 | touch screen | A6 | mechanical button | A7 | right door lock | A8 | emergency button |
| A9 | gun mount | A10 | blinds | A11 | Charger | A12 | gun stock |
| A13 | External Ground Bronze Medal | A14 | front door lock | A15 | POS machine* | A16 | AC mount* |
| A17 | AC Gun* | A18 | B Charging gun indicator light | A19 | A Charging gun indicator light | A20 | Waterproof gland B* |

Note: A1, A15, A16, A17, A20 are optional.

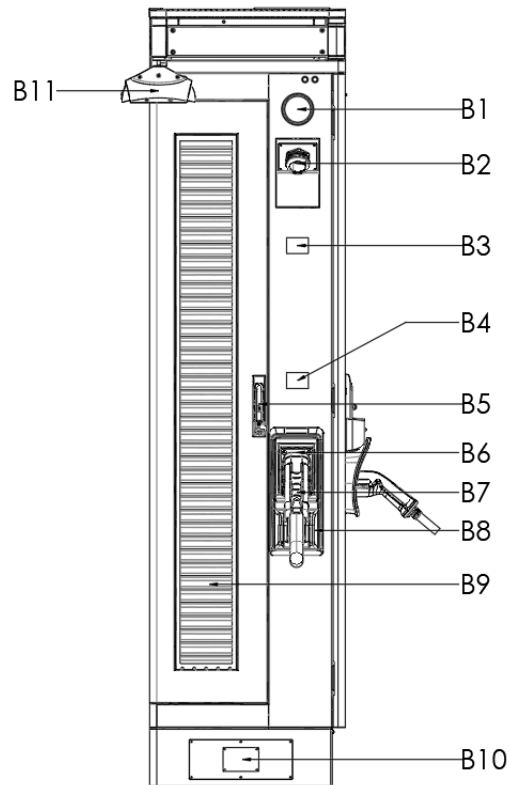


Figure 7 Side member view

| | | | | | | | |
|----|-------------------|-----|--------------------|-----|-----------------|----|-------------------|
| B1 | 4G antenna module | B2 | Waterproof gland C | B3 | DC meter window | B4 | * AC meter window |
| B5 | right door lock | B6 | gun mount | B7 | Charger | B8 | gun stock |
| B9 | louver grid | B10 | Nameplate | B11 | Wire support | | |

Remarks: B4 in the above table is optional

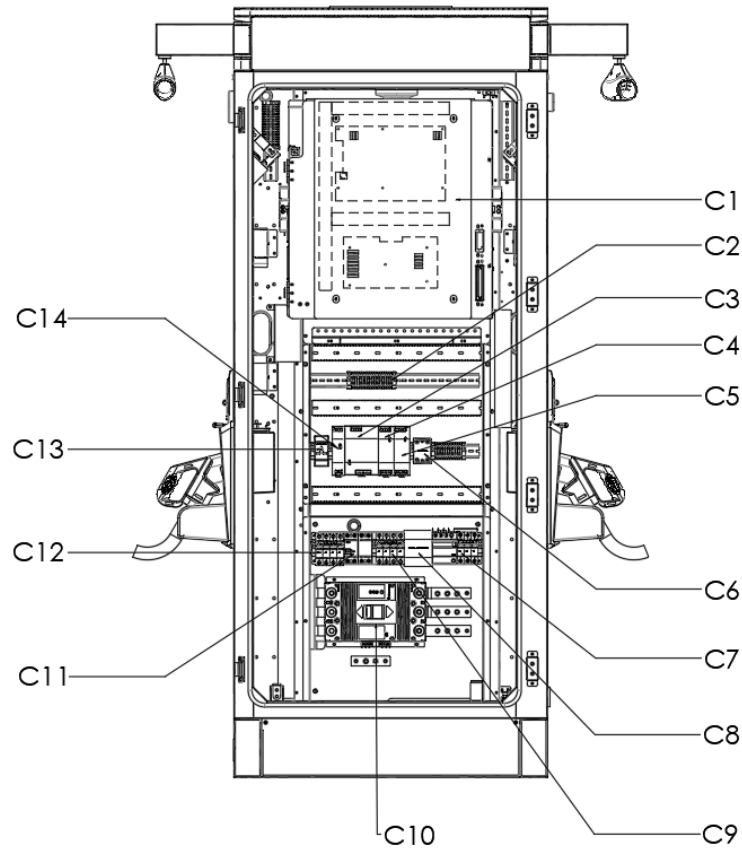


Figure 8 Internal component diagram

| | | | | | | | |
|-----|-------------------|-----|-----------------------------|-----|-----------------------------|-----|-----------------------------|
| C1 | PDU module | C2 | Terminals | C3 | Auxiliary power A | C4 | Auxiliary power supply B |
| C5 | Auxiliary power C | C6 | Intermediate relay | C7 | miniature circuit breaker A | C8 | Surge Protector A |
| C9 | surge protector B | C10 | Molded case circuit breaker | C11 | Leakage protection switch | C12 | miniature circuit breaker B |
| C13 | NC | C14 | NC | | | | |

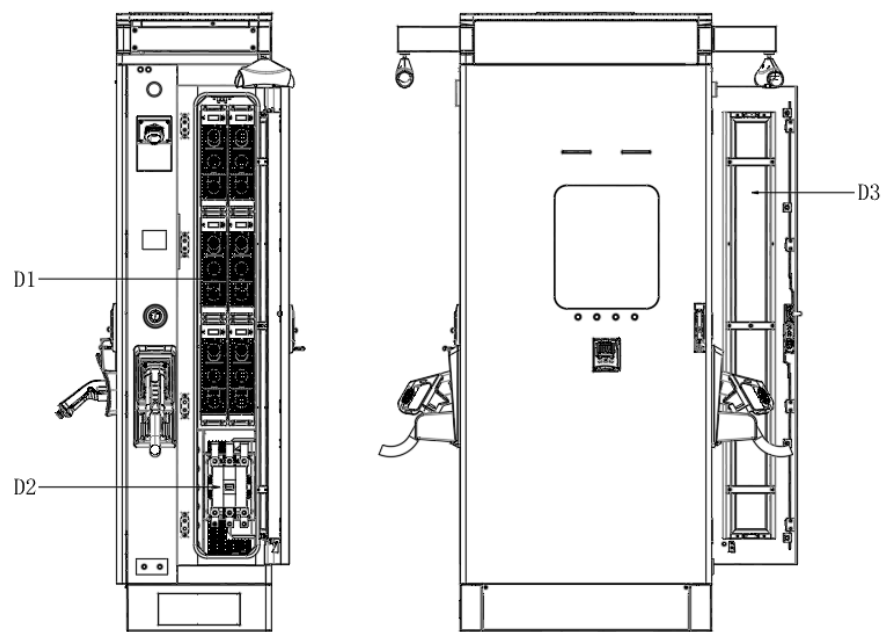


Figure 9 Right component diagram

| | | | | | | | |
|----|-----------------|----|--------------|----|----------------------|--|--|
| D1 | charging module | D2 | AC contactor | D3 | Quick release buckle | | |
|----|-----------------|----|--------------|----|----------------------|--|--|

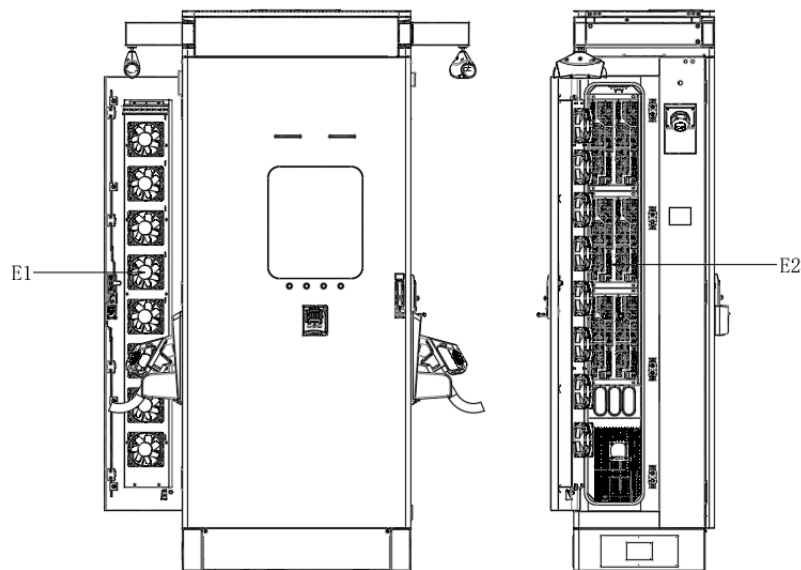


Figure 10 left component diagram

| | | | |
|----|-------------|----|-----------|
| E1 | cooling fan | E2 | Terminals |
|----|-------------|----|-----------|

3.2 Equipment installation and fixing and wiring

3.2.1 Installation dimensions

The installation size of the equipment is: 1964mm × 800 mm × 493 mm, and the external dimensions are shown in below Figure.

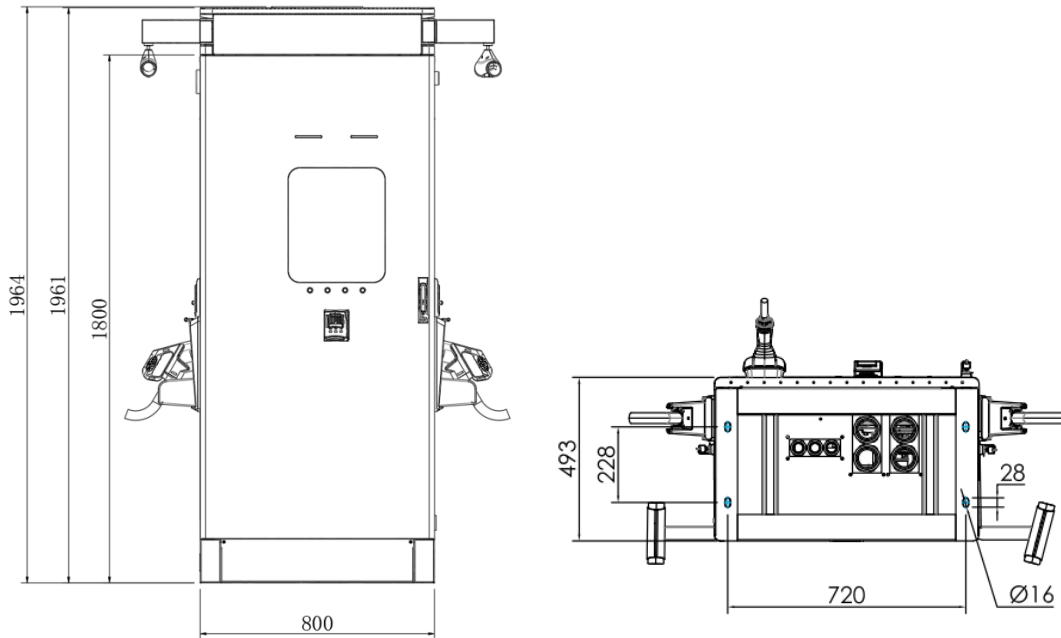


Figure11. Schematic diagram of installation dimensions

3.2.2 Unboxing

(1) Open the top cover

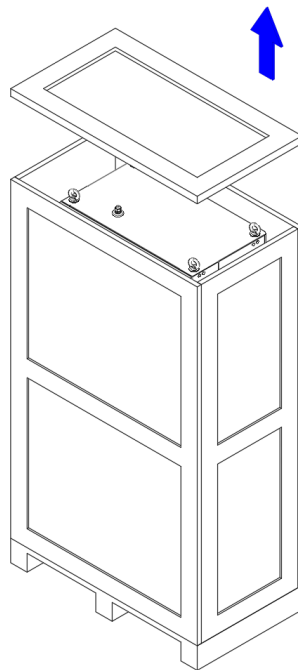


Figure 12: Open the top cover

(2) Remove the left and right side boards

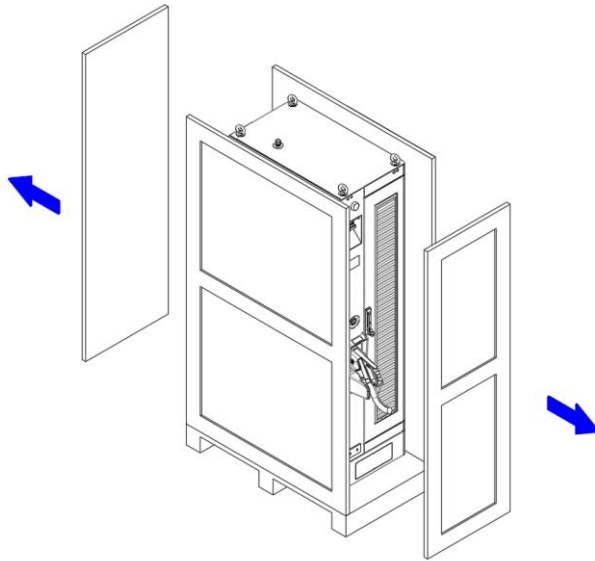


Figure 13: Dismantling the left and right side boards

(3) Remove the front and rear planks

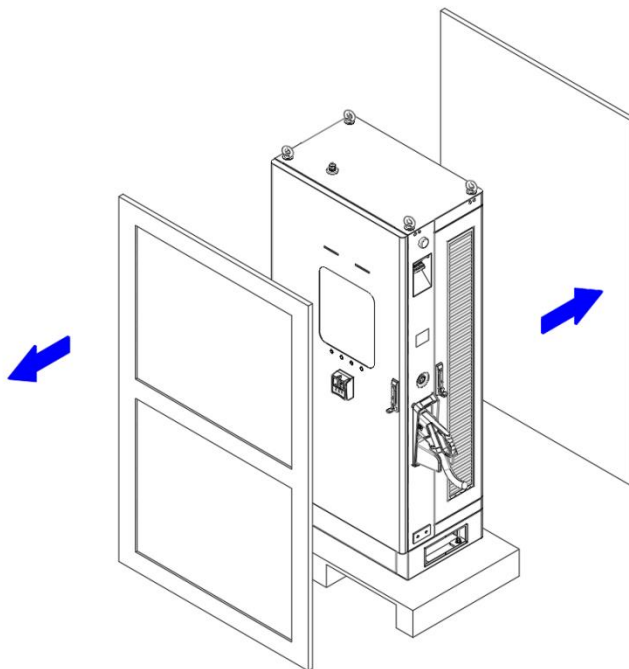


Figure 14: Before and after removal of wooden planks

3.2.3 Unloading

There are two ways of unloading, you can choose to use the hoisting method or the liftable forklift method to transport the charging station

- (1) Lift the charging station with a crane and confirm that the four lifting rings are in a tightened state

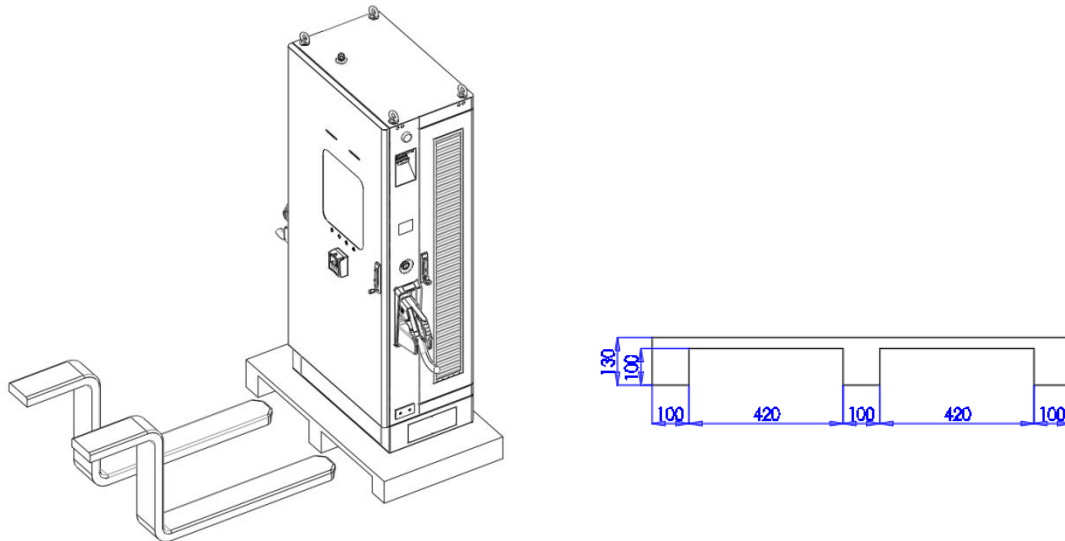


Figure 15: Lifting the charging pile

- (2) Remove the tray, and use a No. 19 socket wrench to loosen the M12 screws on the cabinet and tray

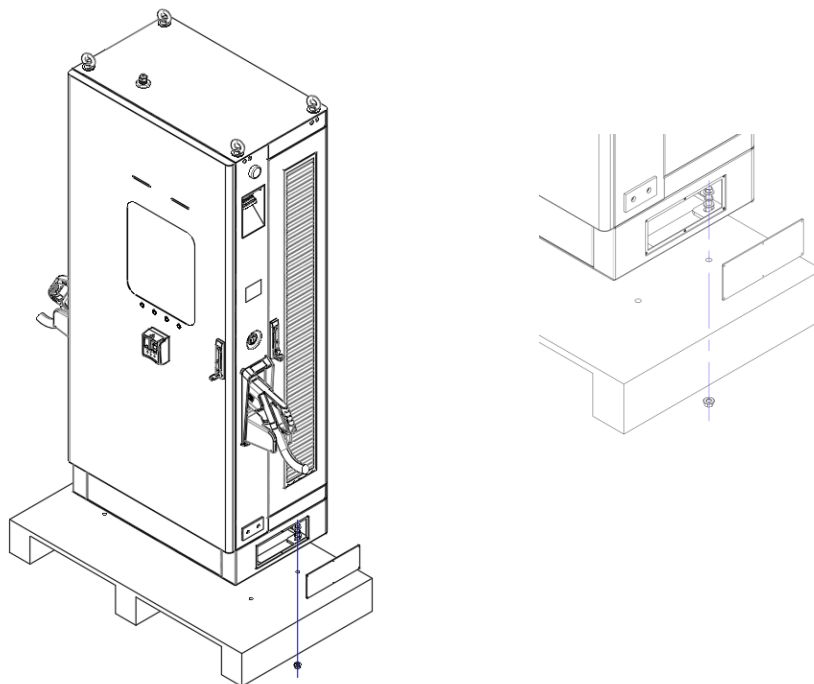


Figure 16: Diagram of removing the tray

(3) Confirm that the four lifting rings are tightened, pass the rope through the rings, and lift the charging pile with a crane.

Note: If you need to install the swing arm, please remove the lifting ring after lifting.

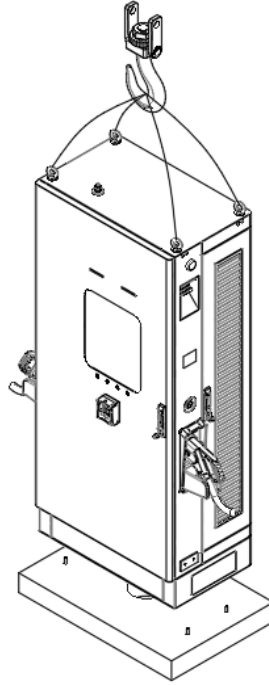


Figure 17 Lifting the charging station

(4) Lift the charging pile, make it fall steadily and slowly, align with the pre-embedded threaded rod, until it falls to the installation base. Make sure that the cables have entered the cabinet along the cable protection cover.

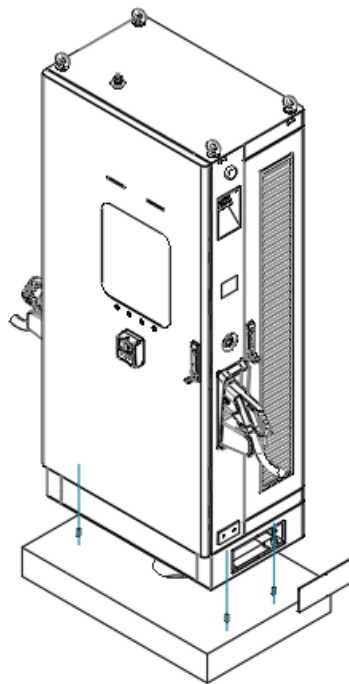


Figure 18 Schematic diagram of cabinet placement

(5) Use M12 nuts and flat and spring washers to fix the charging pile, lock these nuts, and the recommended torque is $95.5\text{N}\cdot\text{m}$.

(6) Lead the cables into the cabinet through the cable glands.

3.2.4 Wiring

(1) Open the cabinet doors on both sides, insert the module into the module compartment, make sure that the module identification corresponds to the label attached to the module compartment, and lock the power module with 4 M4×12 combination screws, the recommended torque is 5N·m.

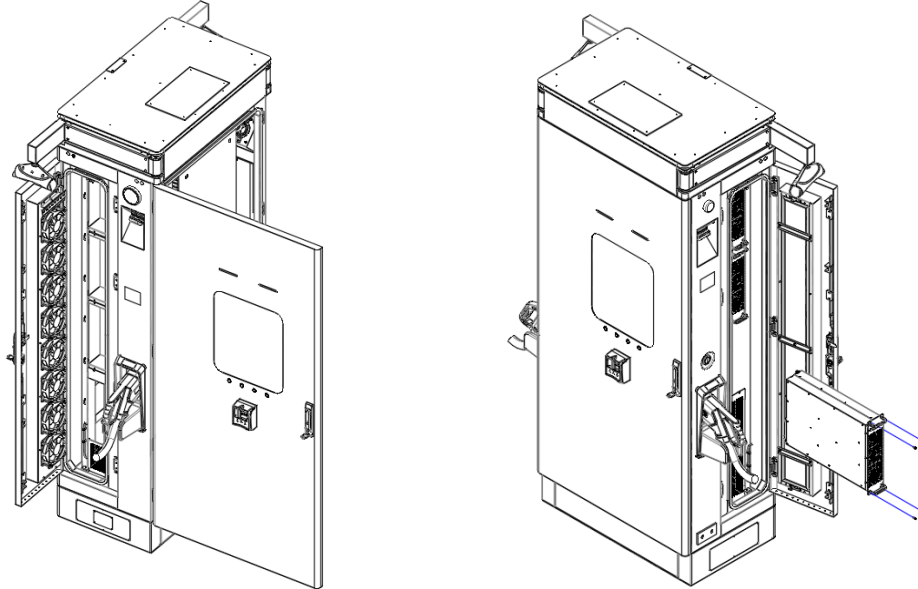


Figure 19 Power module installation diagram

(2) Before wiring, confirm that the leakage protection of the circuit breaker and the air switch should be in the OFF position.

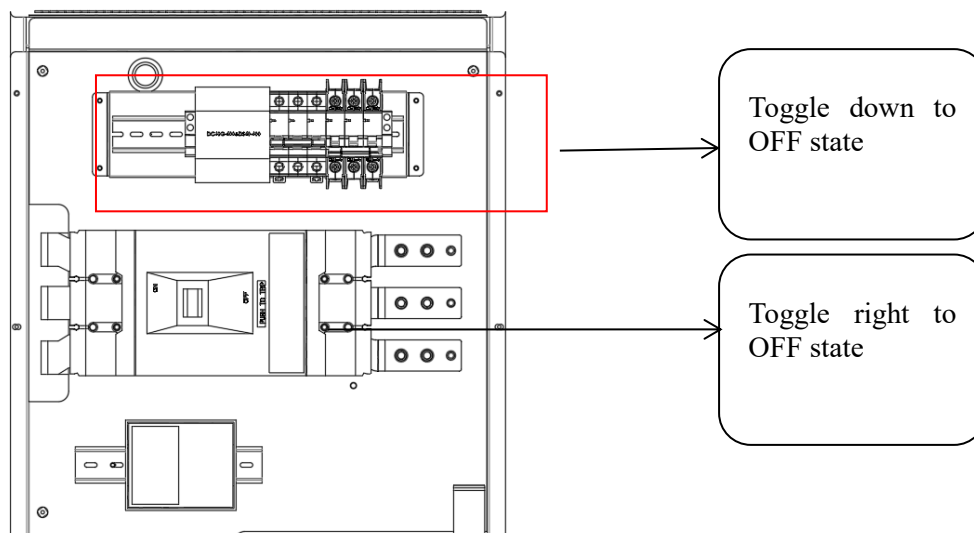


Figure 20 Leakage protection and air switch

(3) Access the power cord

Please select the power cable according to the requirements in Chapter 2.6, and connect it with reference to Figure 21. At the same time, make sure that the cable is not broken, damaged or scratched.

Note: PE needs to be connected to the grounding copper bar

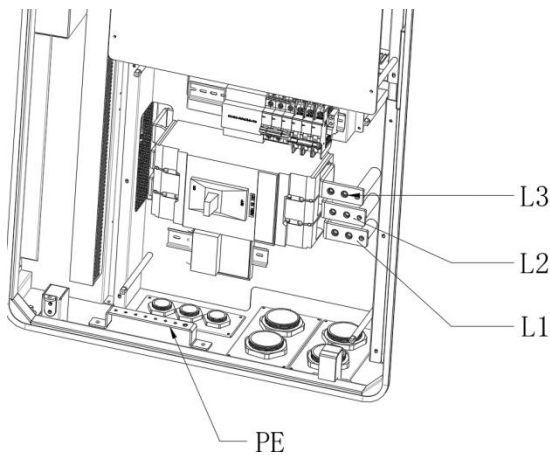



Figure 21 Wiring diagram

The multimeter selects the resistance on-off position (),
Check whether there is a short circuit between +12V and -12V, between L1, L2, L3, and N.

| DC terminal | Function | +24V | -24V | +12V | -12V |
|-------------|-----------------|------|------|------|-------|
| | Terminal number | 1-4 | 5-8 | 9-12 | 13-16 |

| AC terminal | Function | L | N | PE |
|-------------|-----------------|-----|------|-------|
| | Terminal number | 1-5 | 6-10 | 11-13 |

Please check as follows:

A. In the 12V terminal block, take any one of terminals 9-12 and any one of 13-16 to measure, the multimeter should show an open circuit, and the buzzer should not beep.

B. Take any terminal in 1-5 of the AC terminal block and measure it with any terminal in 6-10, 11-13 respectively. The multimeter should show an open circuit and the buzzer will not beep.

C. Take any terminal in 6-10 and any terminal in 11-13 in the AC terminal block to measure, the multimeter shows that it should be open circuit, and the buzzer does not buzz.

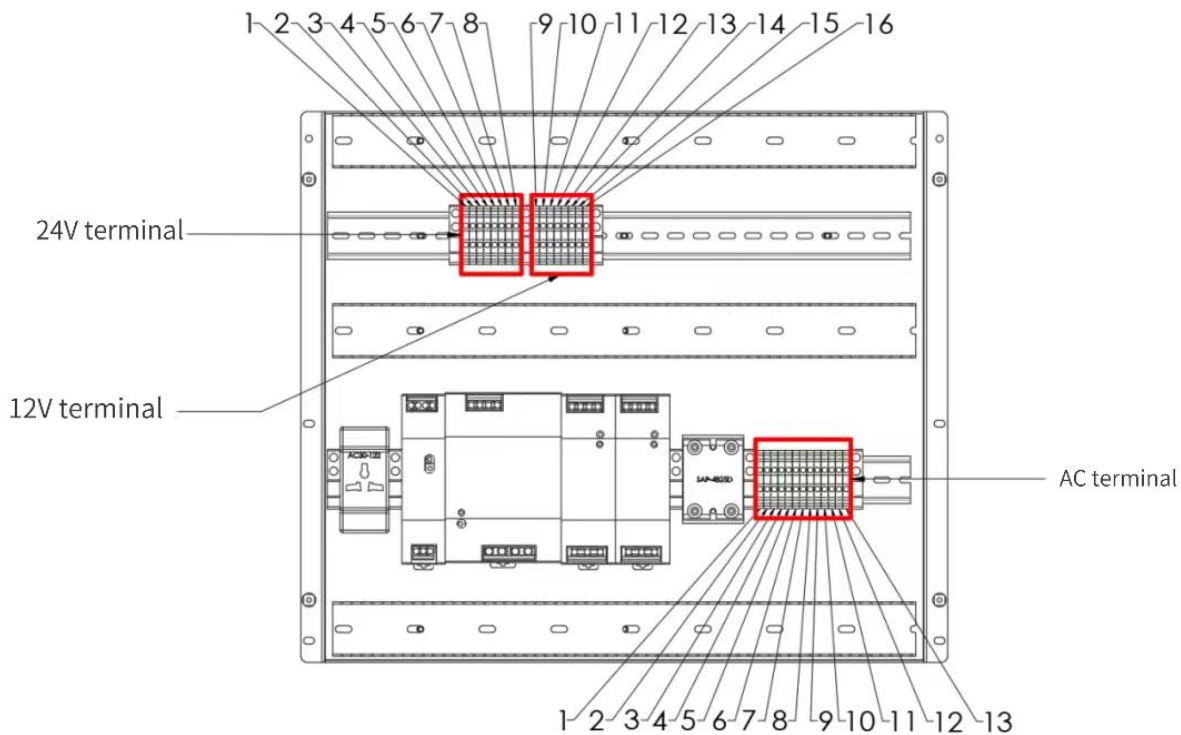


Figure 21 The multimeter detects whether there is a short circuit



Warning: Must be carried out in accordance with the specifications and correct operation steps. Improper execution may result in personal injury or death.

4. Inspection after installation

4.1 Installation wiring check

4.1.1 Equipment and equipment fixing inspection

- (1) The appearance of the charging pile is clean and tidy, there is no bump damage, the position is consistent with the base, and it is firmly fixed without loosening.
- (2) The orientation of the equipment meets the installation standards.
- (3) There is no leakage of equipment installation accessories.
- (4) The book review of the level measuring equipment meets the specified requirements.

4.1.2 Cable laying and connection inspection

- (1) Check whether the cable insulation is scratched or damaged.
- (2) Check whether the power cable terminals are compliant and the wiring is firm.
- (3) Check that the communication cable terminals are correct and not loose.
- (4) Check for hanging cable labels.
- (5) Check whether the cable bending radius meets the requirements.
- (6) Check whether the electrical grounding is reliable.

4.2 Check before power-on

Before powering on the equipment, check whether the power supply voltage at the upper end of the plastic-cased air circuit breaker at the low-voltage power distribution cabinet is normal, and there are no abnormalities such as phase loss, overvoltage, undervoltage, and phase sequence. The circuit breaker, leakage protection and air switch should be in the OFF position, as shown in the figure below.

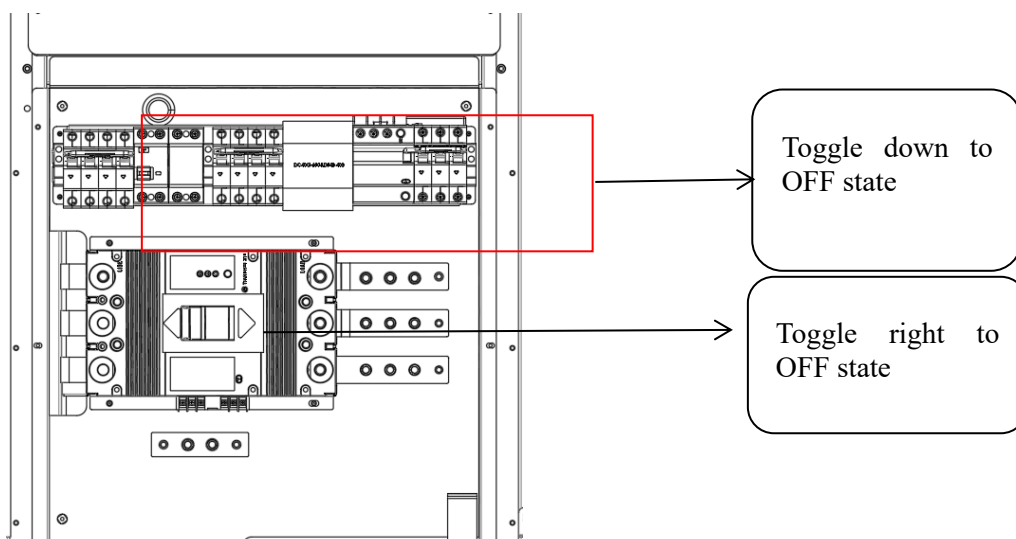


Figure 22 Turn off the circuit breaker, leakage protection, air switch

After ensuring that the charging pile is installed stably and the wire connection is reliable, etc., the charging station can be powered on.

4.3 Power-on check

Connect the main switch of the external AC power supply of the charging pile.

Turn on the circuit breaker, leakage protection and air switch.

(The door is open, the fault light is on, and the buzzer sounds.)

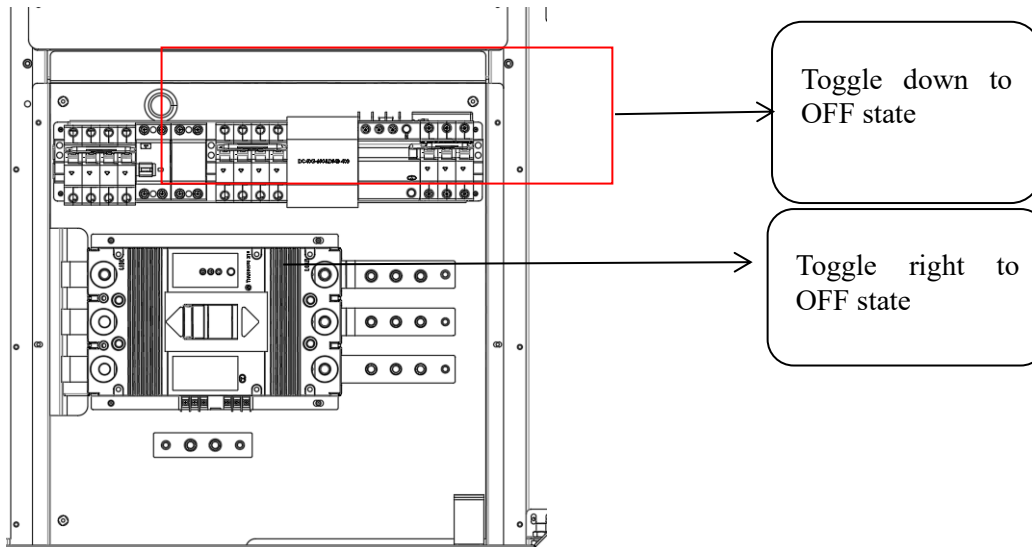


Figure 23 Open circuit breaker, leakage protection, air switch

- Close the cabinet door (the fault indicator light is off at this time, and the buzzer stops beeping.)

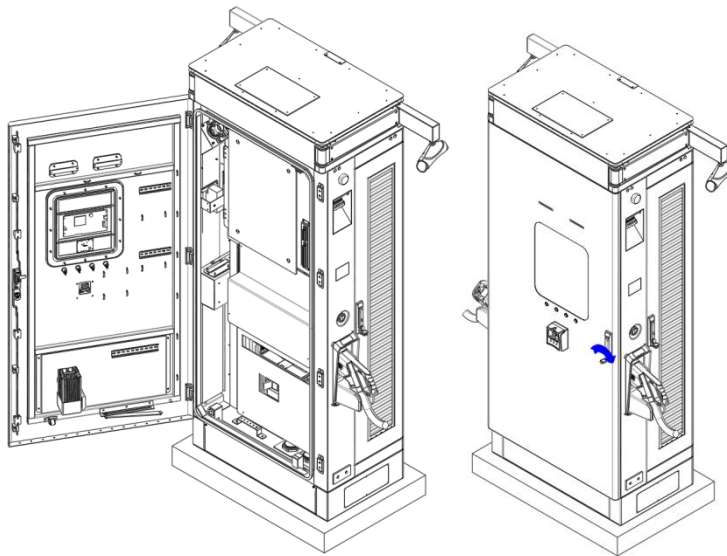


Figure 24 Close the cabinet door

- The screen enters the startup interface, and the green light is on. (Note: Please refer to the table below for the detailed description of the indicator lights on the light board)

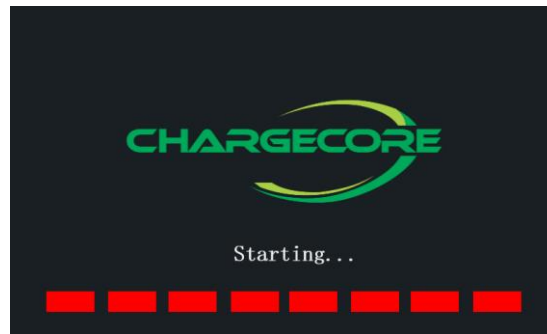


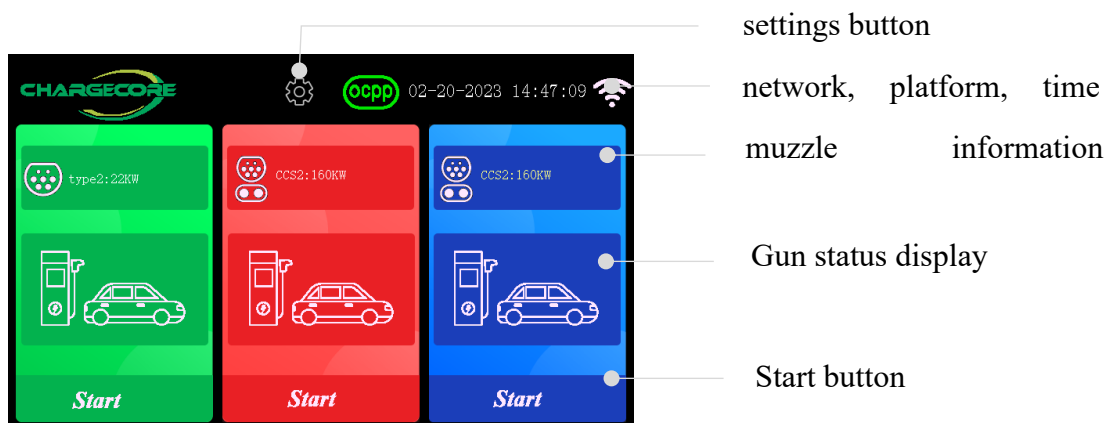
Figure 25 The screen display after power on

| indicator light | standby | charge | Error |
|--|--------------|-------------|------------|
| DC1 | green steady | blue steady | red steady |
| DC2 | green steady | blue steady | red steady |
| other: | | | |
| DC connector plug-in light: white constant light | | | |
| Atmospheric light at the top: green always on | | | |

Table 8: Comparison table of charging pile status indicators

5. Charging

5.0 Display introduction



5.1 Initial Setup

(1) The administrator interface configures the network

Step1:Click the "Settings" button on the homepage

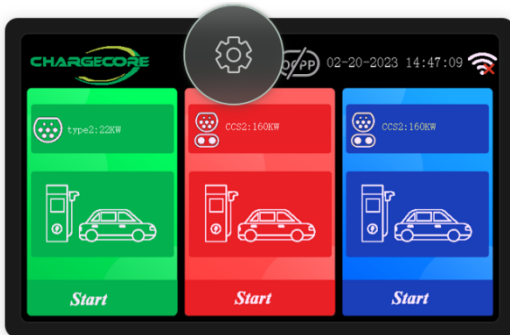
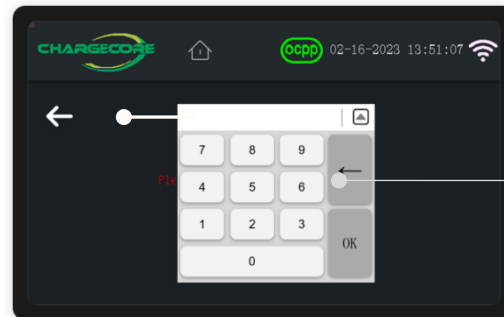


Figure 27. Home page "Settings"

Step2:Enter password to enter



initial
password:
123456

Figure 28. Password input

Description: How to change the password?

Log in to the administrator interface, select "Basic Settings" and click the "Password" button

·Enter the six-digit old password, new password, and confirm the new password (Figure 30), click "Confirm" and the modification is successful

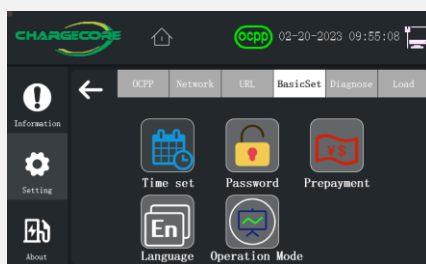


Figure 29. Basic settings

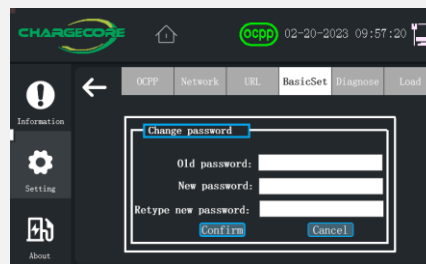


Figure 30. Change password

2 .network configuration

After entering the management interface, select "Network"

·Support WIFI, 4G, Ethernet

The signal icon in the upper right corner of the screen is displayed as the corresponding networking mode (as shown in Figure 31), that is, the network connection is successful



Figure 31. Network configuration success signal icon

➤ WIFI Set

Step1: Select WIFI > Click Refresh

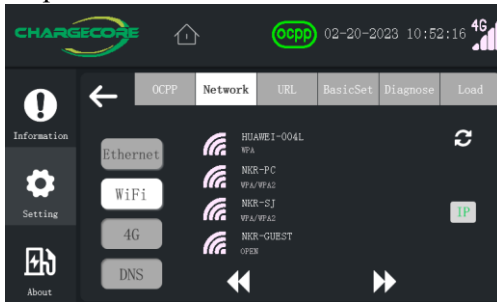


Figure 32. Select WIFI

Step2: Enter WIFI password > Next to confirm



Figure 33. Enter WIFI password

➤ 4G Set

Step1: Select 4G > Set the corresponding parameters Step2: Confirm to switch to 4G network

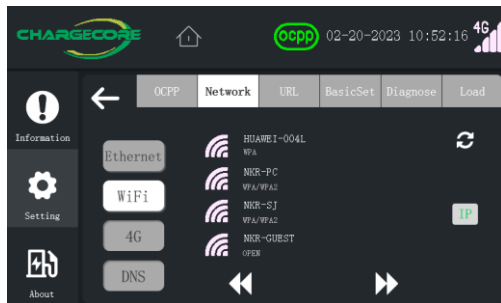


Figure 34. Select 4G network

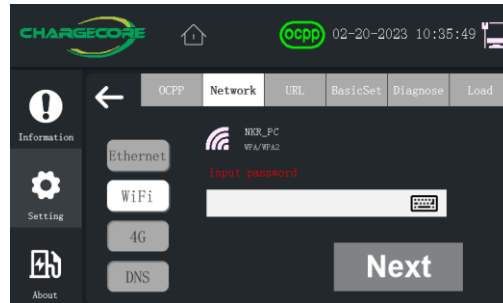


Figure 35. Confirm switch network

➤ Ethernet set

Select Ethernet > Tick Obtain Automatically/Set IP Address Manually > Confirm Connection

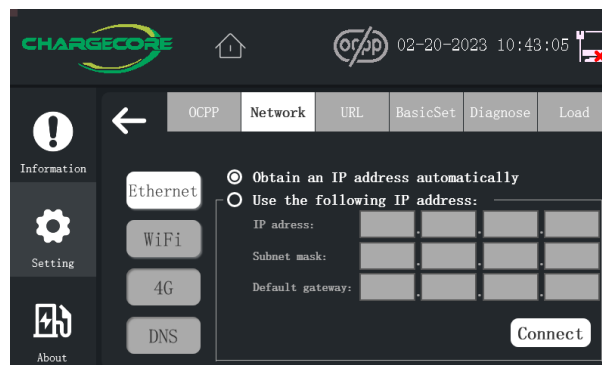


Figure 36 Select Ethernet

3. OCPP platform connection

After the configuration of the charging pile network is completed, it will automatically connect to the OCPP platform within 60s. After the connection is successful, the OCPP icon on the screen will light up (as shown in Figure 37)



Figure 37. OCPP connection successful

5.2 Charging process

1 Take out the plug gun, insert the charging gun into the charging port of the vehicle, and the screen icon changes at this time (as shown in Figure 38 and Figure 39)

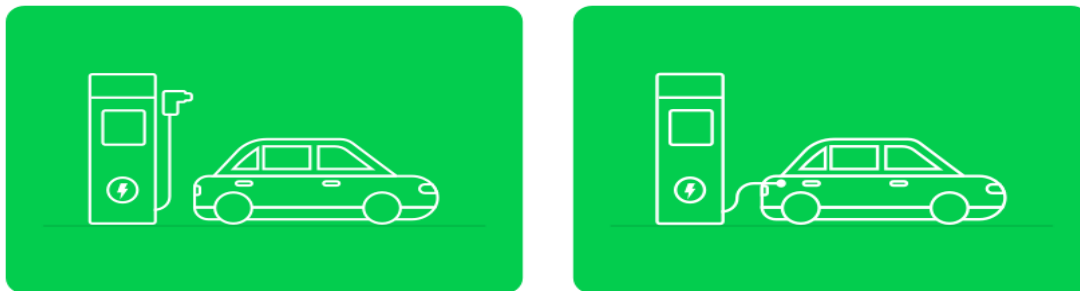


Figure 38. The state of not inserting the gun Figure 39. The state of not inserting the gun

2 After inserting the gun, click the "start" button and select the payment method

·Support RFID activation, APP scanning code activation, POS credit card activation (optional)



Figure 40 payment method selection interface

* Click the "[]" button on the home page of the App to scan the QR code (Note: For details on how to use other functions of the APP, please refer to the APP instruction manual)



Figure 41. Chargecore interface

3. Select the charging mode

· Support SOC mode, time mode, power mode, fast charging mode

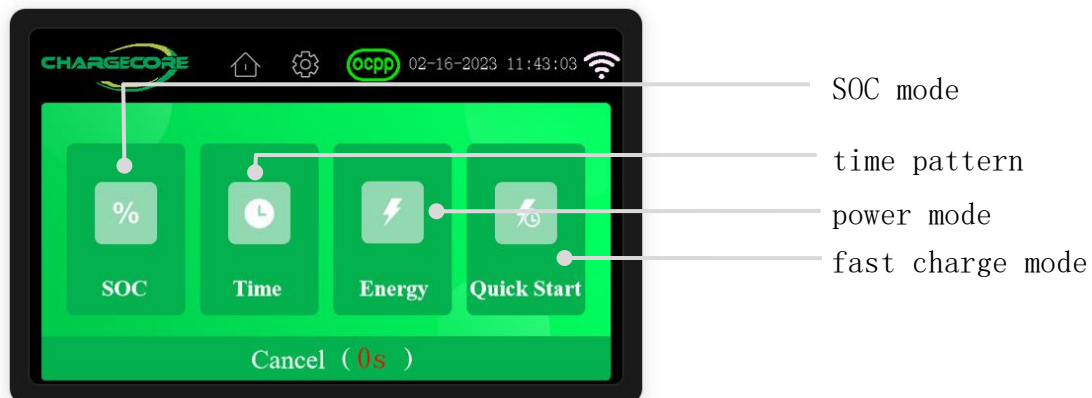


Figure 42. Charging mode selection - screen operation interface

* After the App scans the QR code, it enters the charging mode and payment method selection (Note: Please refer to the App instruction for detailed App usage)

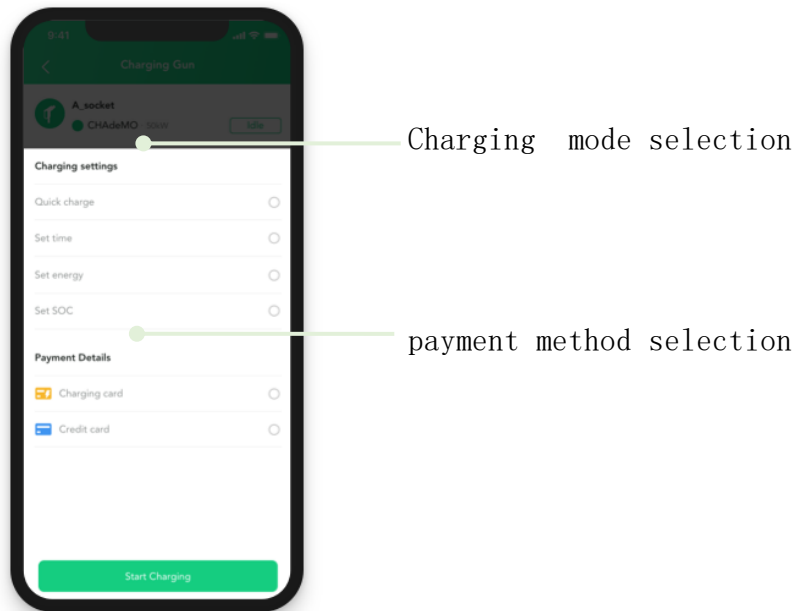


Figure 43 Charging mode selection - App operation interface

➤ Click to select SOC mode/time mode/power mode

a. Enter the percentage of electricity required for this vehicle (%) / the required charging time for this time (min) / the required electricity for this charging (kwh) (as shown in Figure 44)

b. Click to start charging

SOC mode: Enter the percentage of electricity that the vehicle needs to reach this time (%)

Power mode: the power required for this charging (kwh)

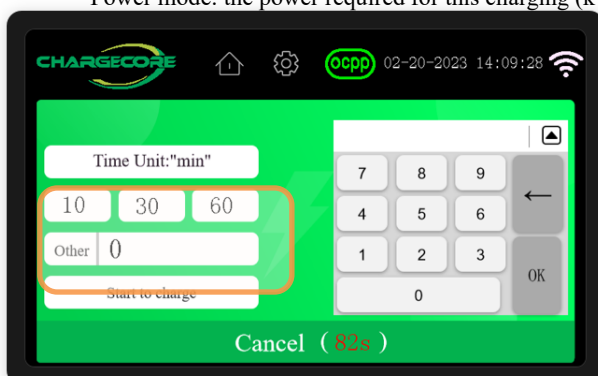


Figure 44. Time mode: the required charging time for this time

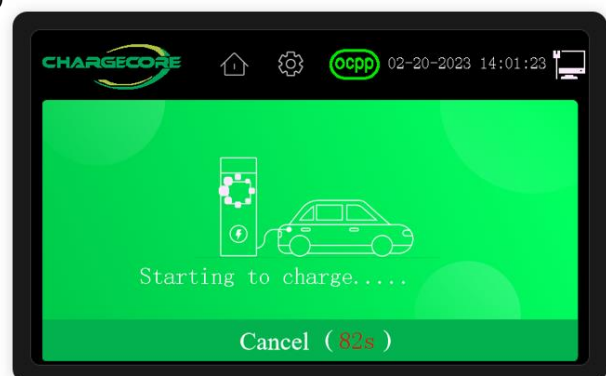


Figure 45. Initiating charging

➤ Click to select the fast charging mode to start charging immediately

4 charging

- Check vehicle charging details in real time (as shown in Figure 46)

Charging will end automatically after it is fully charged / click the "STOP" button to end charging in advance

(Note: When using the App to charge, you need to operate the "STOP" button on the App)

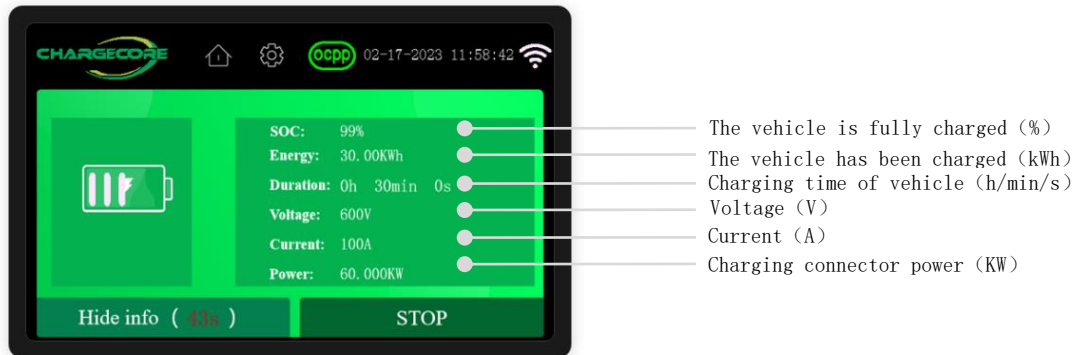


Figure 46. Charging interface

5 Pay the order and view the order details (as shown in Figure 48)

- When choosing an RFID card, you need to swipe the card again to pay (as shown in Figure 47)
- When choosing an app, the payment will be automatically completed in the credit card/debit card bound to the app in the app
- No need to operate when selecting the pos machine, the payment will be completed automatically after the charging stops

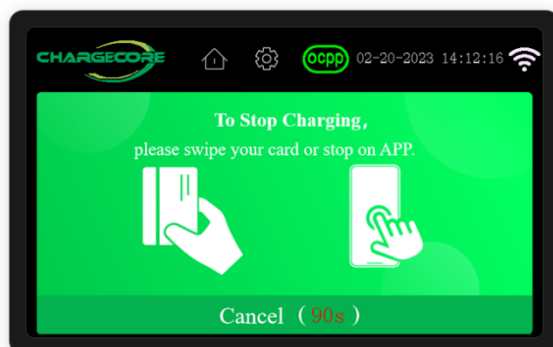


Figure 47. RFID card settlement interface

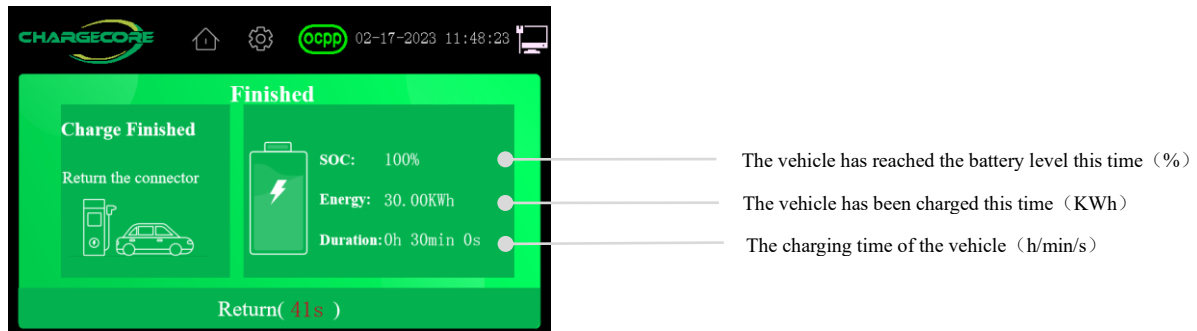


Figure 48. Order details interface

6 After charging is complete, pull out the charging plug and put it back in place

5.3 Power Off & Shutdown

After charging, disconnect the leakage protection and the air switch, and then power off the main brake.

6.3.1 Turn the door lock handle to the left to open the cabinet door.

Illustrate:

1. If you need to charge again, you need to reinsert the gun
2. When one gun of the charging pile is charging and the other guns are not connected

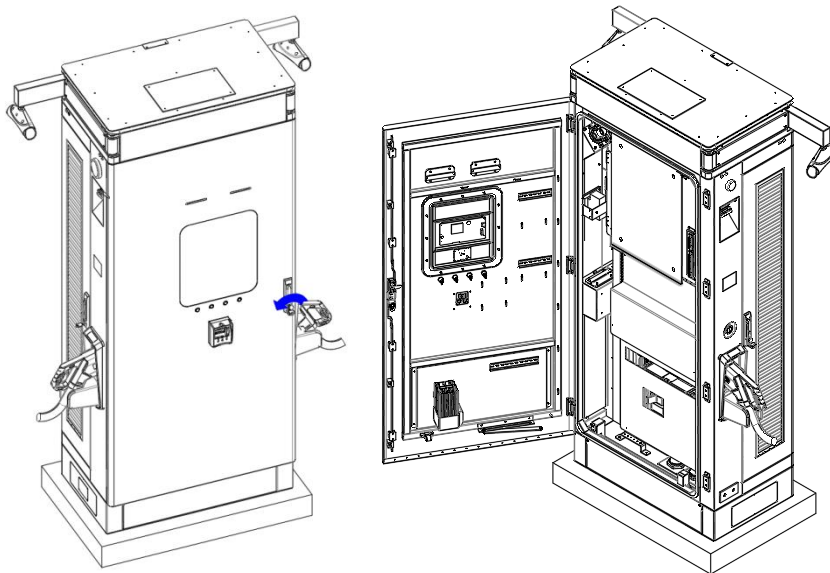


Figure 49 Open the cabinet door

6.3.2 Turn off the circuit breaker and air switch.

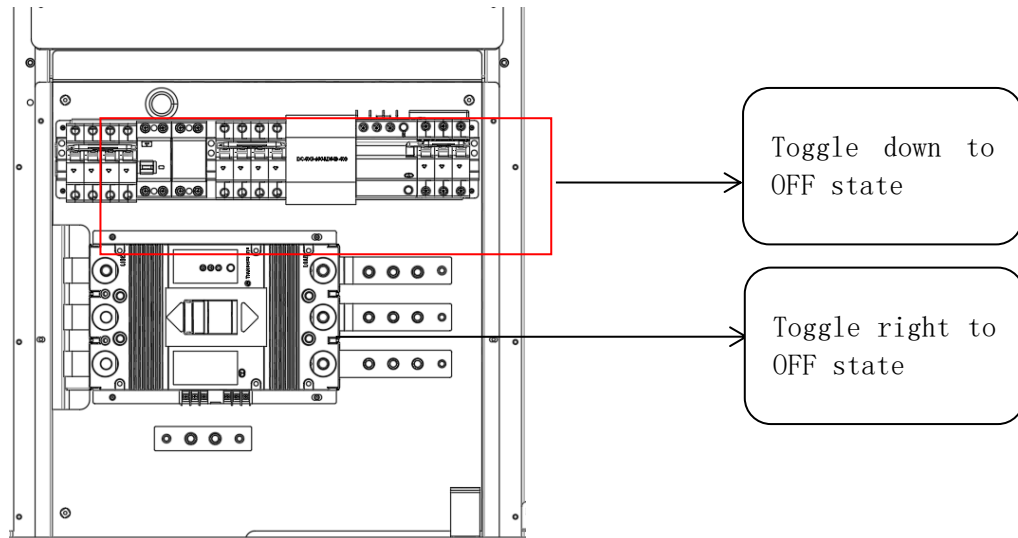


Figure 50 Off switch

6.3.3 Close the cabinet door, turn the door lock handle to the right, and lock the cabinet door.

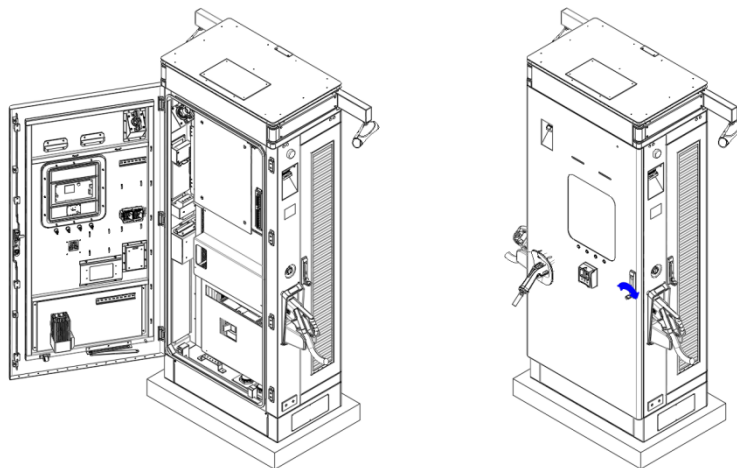


Figure 51 Close the cabinet door

5.4 Emergency operation

5.4.1 Emergency stop function

Refer to this section only when there is an abnormality or misoperation

In case of emergency, quickly remove the transparent protective cover, press the red "emergency stop button", and the system will cut off the output power. Do not use the "emergency stop button" during normal shutdown

5.4.2 Position of emergency stop button

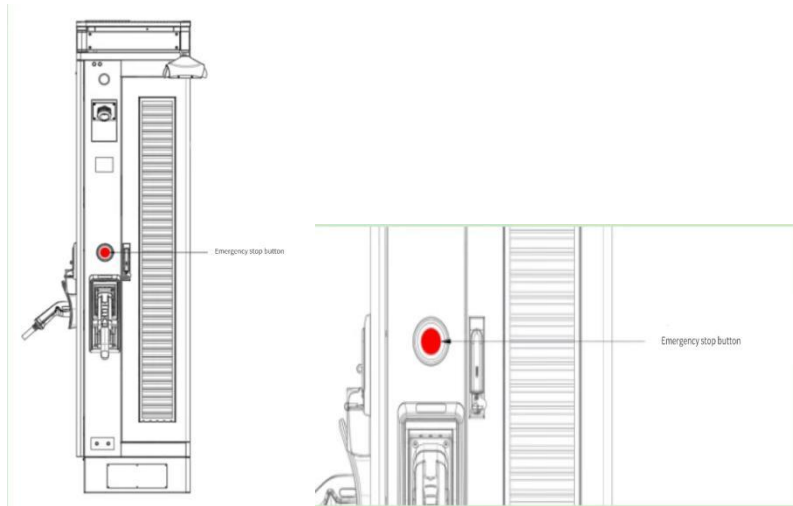


Figure 52 Emergency stop button

5.4.3 Emergency stop reset

Turn the emergency stop button clockwise to reset

6. Product transportation and storage

Our products will be shipped with the charging post fixed on a pallet, using pearl cotton and wrapped tightly around any parts that may come into contact with it. During the transportation process, please take it lightly, do not drop it, do not make violent impact on it.

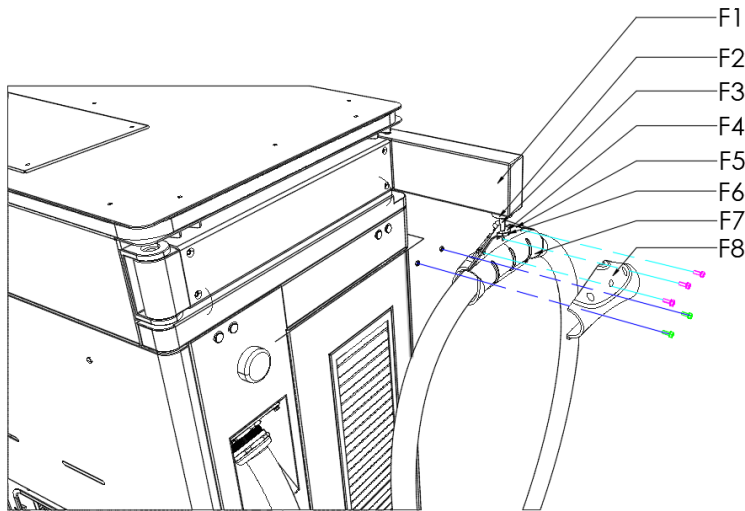
When storing the product, please put it in a dry environment and store it in an ambient temperature between -40°C ~ 85°C . The storage place should be kept clean and ventilated.

7. Completion data

| No. | file name | Page | Document necessity |
|-----|----------------------------|------|--------------------|
| 1 | unpacking record sheet | 1 | √ |
| 2 | Pre-Installation Checklist | 1 | √ |

Appendix 1 Installation of swing arm assembly (optional swing arm is required)

1. Parts introduction

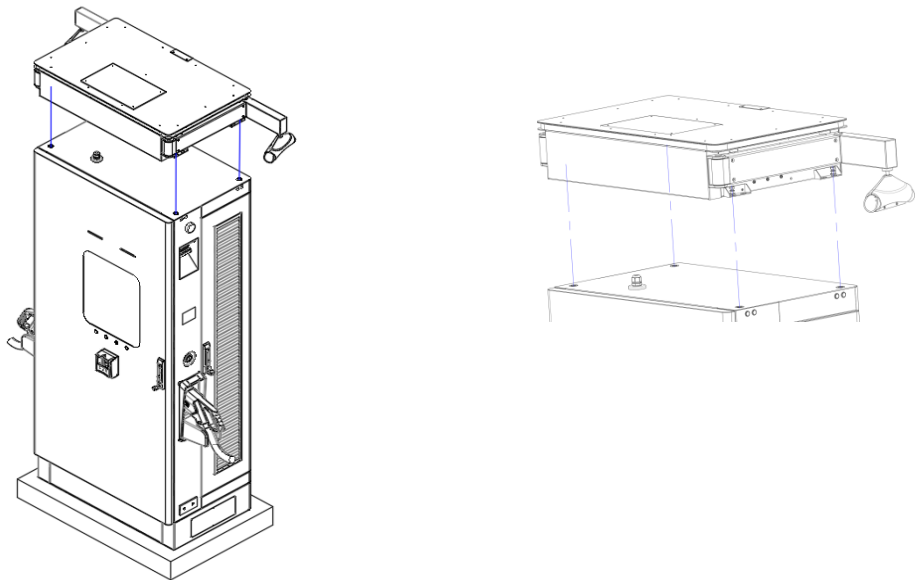


Attached Figure 1 Introduction to swing arm assembly components

| | | | | | | | |
|----|----------------------------------|----|--------------------------------|----|-------------------|----|--------------------------------|
| F1 | Swing arm minor axis | F2 | Cardan shaft fixing bracket | F3 | cardan shaft | F4 | Chuck |
| F5 | Cable support left bracket | F6 | pin | F7 | Gun line apron | F8 | Cable support right bracket |

2.Connect the components with the body according to the figure below, and fasten 4 screws (M12*60). Use 95.5N·M torque.

Attachment 2 Installation drawing of swing arm assembly and cabinet



1. Fix the gun line to the swing arm line card.

2.1 Use the cardan shaft fixing bracket to fix the cardan shaft to the short shaft of the swing arm.

2.2 Fix the 2 chucks to the cardan shaft with pins.

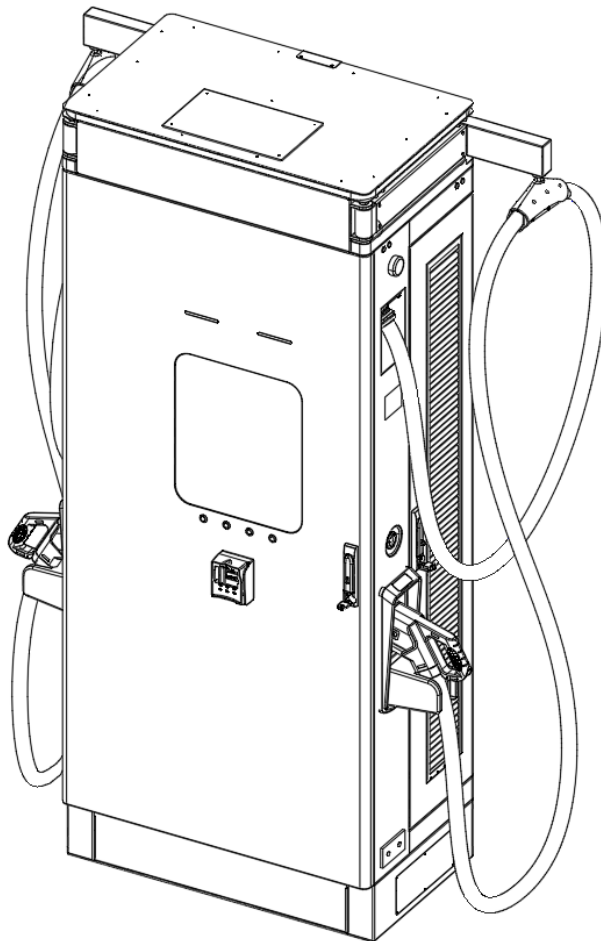
2.3 Put the gun line rubber ring on the gun line about 2m away from the gun line outlet, and snap the gun line rubber ring to the left bracket of the line holder.

2.4 Hang the left bracket of the wire support on the chuck.

2.5 Close the right bracket and the left bracket of the wire support, and lock them with M4 screws and M4 nuts.

2.6 The gun line is fixed.

Recommended distance: the distance from the cable outlet at the cabinet end to the line card of the swing arm is 2 meters, and the distance from the gun head to the line card of the swing arm is 3 meters.



Attached Figure 3 is a diagram of the cable position and distance of the line card

Appendix 2 Unpacking record sheet

| Unpacking record sheet | | | | | | |
|------------------------|-------------------|--------------|-----|-----------------|-----------|---------|
| Dealer store name | | | | Unpacking date | | |
| Serial No. | Name of Goods | Actual goods | Qty | Certificate No. | Equipment | Remarks |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| Unpacking conclusion | | | | | | |
| signature field | Installation Unit | | | Owner unit | | |

Appendix 3 Pre-installation checklist

| Pre-installation checklist | | | | |
|--|-----|--|-------------------|--------------------|
| Project name: | | | | |
| Civil construction: | | Equipment installation unit: | | |
| Sub-project | No. | Main acceptance items | Acceptance record | Treatment measures |
| Installation plan | 1 | Whether the installation of on-site equipment conforms to the design drawings of the construction plan | | |
| Distribution box circuit breaker | 1 | Meet the equipment installation requirements (the minimum input current of the equipment is 92A) | | |
| Cable type Cement foundation | 1 | YJV-0.6/1kV-3*70 mm ² +2*70mm ² | | |
| | 2 | Network cable cat6a (if Ethernet communication is required) | | |
| maintenance channel Sub-project | 1 | Dimensions meet the requirements | | |
| | 2 | The foundation bolts meet the requirements of chapter 2.6 in the installation manual | | |
| Installation plan | 1 | Maintenance access meets the equipment spacing requirements in Section 2.7 | | |
| Conclusion: | | | | |
| Note: (1) The acceptance record is filled with "√" or "×" according to the on-site situation; (2) The conclusion is filled with "qualified" or "required rectification" according to the on-site situation | | | | |
| Signature of the person in charge of inspection: _____ | | | | |
| Date: _____ | | | | |

