



# SAFECHARGER

## Wallbox - AC charging station

### INSTALLATION MANUAL

JHE9-40032W



# INSTALLATION MANUAL

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# 1. Important safety instructions

## 1.1. Safety information

Before installing, operating or repairing charging equipment, please read this safety information carefully, and please check and become familiar with the equipment.



- **Electrical Hazard/Fire Hazard**

The charging station must be installed, commissioned and repaired by a properly trained, qualified and authorized electrician. Such electricians have full responsibility for compliance with the current standards and installation regulations.

- Please note that vehicle or national regulations may require additional overvoltage protection. For details, please check your local connection and installation standards for reference.
- Before testing the equipment, please check that all the screws and terminals are firmly connected. The terminal cover shall not be opened without supervision. Before leaving the charging station, fix the terminal cover.
- Do not make any unauthorized modification or adjustment to the charging station.
- Repair or replacement of charging station is only to be completed by the manufacturer or trained person..
- Do not remove any identifiers, such as safety signs, warning instructions, nameplates, labels, or cable marks.
- Charging Station not equipped with power switch. The residual current action circuit breaker and the building insulation circuit breaker should be used as a power isolation device.
- Remove the charging cable from the connector through the plug handle, do not pull the cable.
- Be sure that the charging cable is not mechanically damaged (kinked, stuck, or crushed). Keep away from heat sources, dirt, or water in the contact area.
- Do not use this product if the power cord or EV cable is worn, intermediately insulated or any other signs of damage.
- Do not use this product if the housing or EV connector is broken, cracked, opened or shows any other signs of damage.



- Do not leave when using the device if children are nearby.
- Do not stick objects into the EV connector
- Do not use high pressure water (hose, pressure washer, etc.) to clean the charging station! Be sure that the charging station is not damaged by improper handling (housing cover, internal parts, etc.).
- For charging station installed outdoors, do not open the wiring cover in rain or snow.
- The installation area must be flat and shall not distort the housing (enclosure), and the screw torque shall be used at the required value.

Touching the electronic components may cause damage. Before touching the module, discharge by touching a metal ground object. Failure to operate with safety instructions may cause personal injuries and equipment damage. The equipment manufacturer is not liable for any claims arising therefrom.

## 1.2. Device use

The charging station is used to charge electric vehicles or plug-in hybrids for both indoor and outdoor use. Do not use the charging station to connect to any other equipment, such as power tools. The charging station shall be mounted on the walls or cylinders. Installation of the charging station must comply to relevant local specifications and requirements.

The use of the equipment for set purposes shall meet the environmental conditions set at the time of development.

The development, production, testing and documentation of the charging station shall be based on the relevant safety standards. If being operated in accordance with instruction and specified purpose, this product will not cause any danger to personal health and property under normal circumstances.

The equipment must be grounded. If a problem occurs, grounding helps to reduce the risk of electric shock. The equipment is connected to the grounded metal permanent wire wiring system, or the equipment ground conductor must run with the circuit conductor and be connected to the equipment ground terminal or lead on the product.

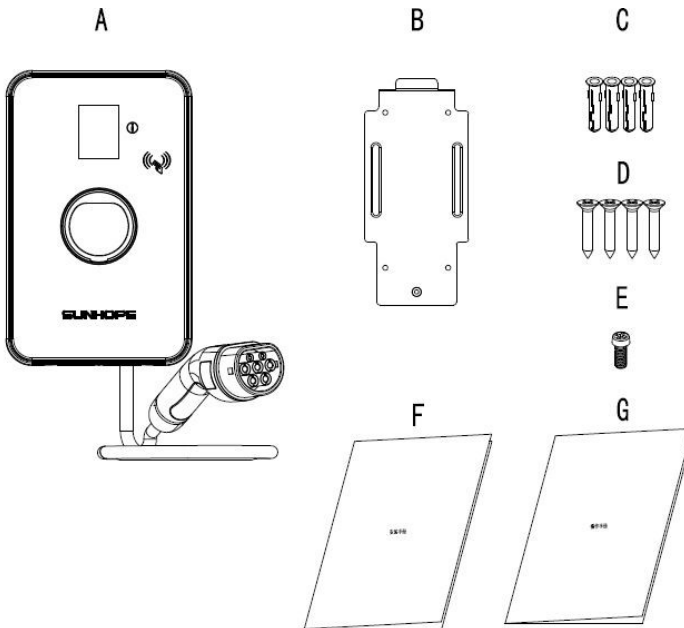
Please carefully follow the instructions outlined in this manual. Otherwise, a potential hazard may occur or the safety equipment may become inoperable. In addition to the safety information described in this manual, please review specific equipment specified in the Safety and Accident Prevention Code.

### 1.3. About this manual

This manual is designed for trained personnel. Such personnel specifically refer to those who have been trained by relevant standards, acquired relevant skills, experience and knowledge, also can conduct assigned operations and identify potential dangers.

Please read the operation manual for operation information and instructions for the device.

### 1.4. Packaging and accessories



**A. Charging station**

**B. Back plate**

**C. Wall anchor (4)**

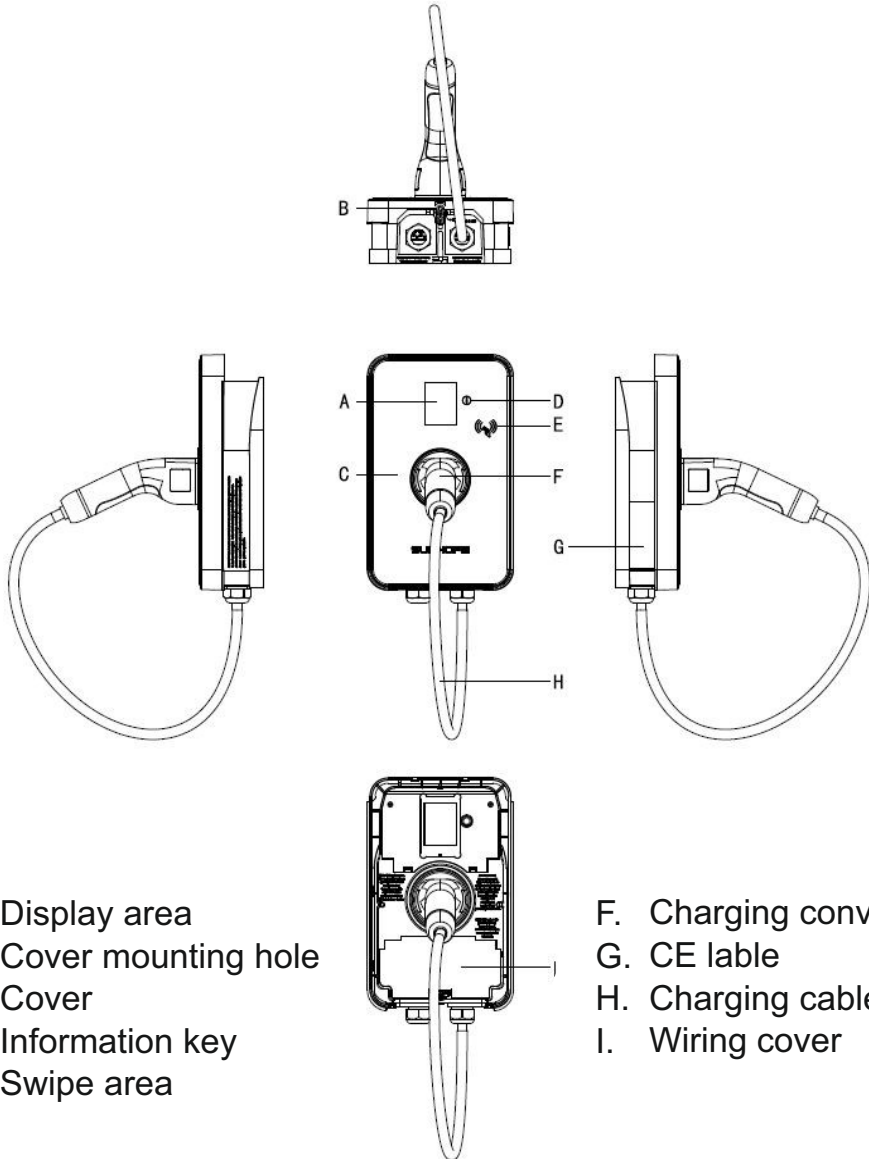
**D. Self tapping screw (4)**

**E. Screw (1)**

**F. Installation manual**

**G. Operation manual**

## 2. Contents overview



- A. Display area
- B. Cover mounting hole
- C. Cover
- D. Information key
- E. Swipe area

- F. Charging convertor
- G. CE lable
- H. Charging cable
- I. Wiring cover

## 3. Installation specifications

### 3.1. General criteria for installation

The charging station can be used either indoors or outdoors. Therefore, it is necessary to ensure that the installation site meets the required conditions and certain protective measures are taken.

- Refer to local electrical installation regulations, fire prevention regulations, accident prevention regulations, and on-site rescue routes.
- Do not install charging station at:
  - Escape or rescue route.
  - Areas with potential explosion hazards (EX environment).
  - Environment that causes charging station to contact ammonia. (e.g.restrooms)
  - Environment where the charging station may be damaged by falling objects (such as hanging ladders or tools).
  - Location in which the charging cable may be a trip hazard for pedestrians.
  - Location that may cause the charging station to be subject to high pressure water (e. g., manual car wash system, high pressure washer, or garden hose nearby).
  - Installation surface cannot withstand mechanical stress.
- Wherever possible, Install charging station in areas protected from direct rainfall to avoid damage from weather, ice and hail.
- Wherever possible, Install in areas protected from direct sunlight to avoid reduced charging current or interruption of charging process due to high temperature.
- Follow the approved environmental conditions, as described in the "Technical parameter" section.
- Ensure compliance with national and international installation standards and specifications.

### 3.2. Electrical connection instruction

**The default current for the charging station is 32A.**

Ensure that the maximum current is set using the APP to accommodate the installed circuit breaker. Please see details in the Current Setting Up section.

#### **Select the power supply cable**

Only use 90°C CopperCoreCable8AWG/32A, 11AWG/ 16A. It must be permanently connected to the existing building facilities. Wiring terminal is rated to 105°C and accepts a maximum of 16 mm<sup>2</sup> (6 AWG) wire.

#### **Power isolation device**

The charging station does not have a power switch. The current action circuit breakers and/or power supply cable circuit breakers can be used as power isolation devices (not recommend using a GFCI breaker, CCID protection is included in the device). When selecting the circuit breaker, the temperature climb of the control room should also be considered, combined with the required charging rating and the capacity of the power supply cable.

## 4. Installation

### 4.1. Installation requirements

- Comply with the local installation specifications.
- Product must be connected to a grounded fixed metal wire wiring system; or the equipment ground conductor must operate with the circuit conductor and connect to the equipment ground terminal or product conductor.
- Environmental adaptation: If the temperature difference between transportation and installation site exceeds 15°C, the charging station must keep unopened for at least two hours.

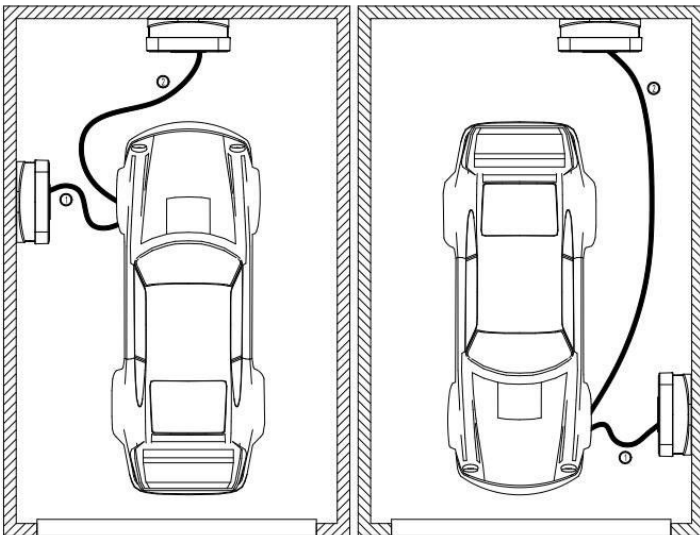
Immediate opening may cause condensation within the charging station and may cause damage when opening the device. In some cases, damage caused by condensation may not appear immediately after installation but will be exposed after some time.

- Ideally, the charging station should be stored on the installation site for several hours before starting the installation. Even if this condition cannot be met, the charging station should not be placed outside or inside the car at low temperature (<5°C).
- Ensure there is WIFI available. The APP requires a wireless connection to use.

#### List of tools

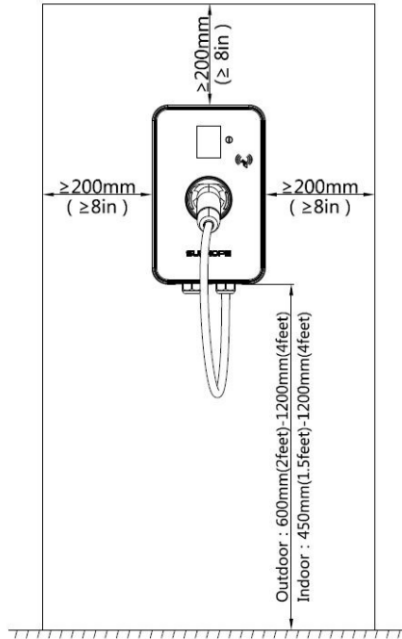
- Electric Drill (Brick wall only)
- Phillips / Cross #2 screwdriver
- Flat Tip #0 screwdriver
- Marking pen or pencil

### 4.2. Recommended installation location



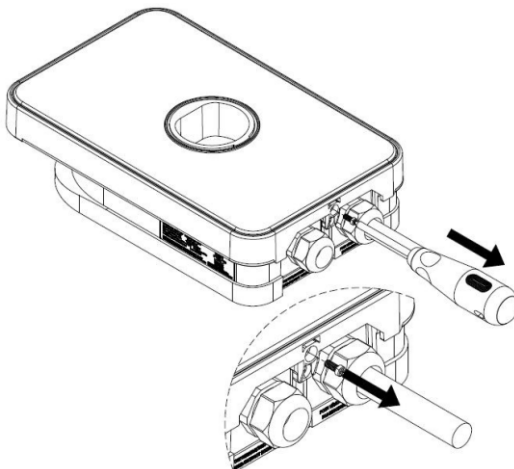


### 4.3. Distance requirements

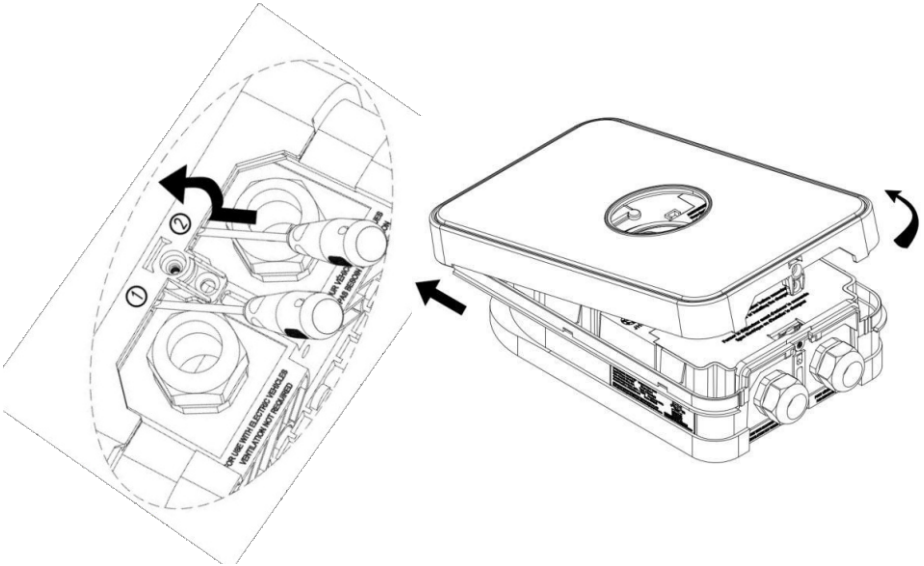


### 4.4. Install charging station

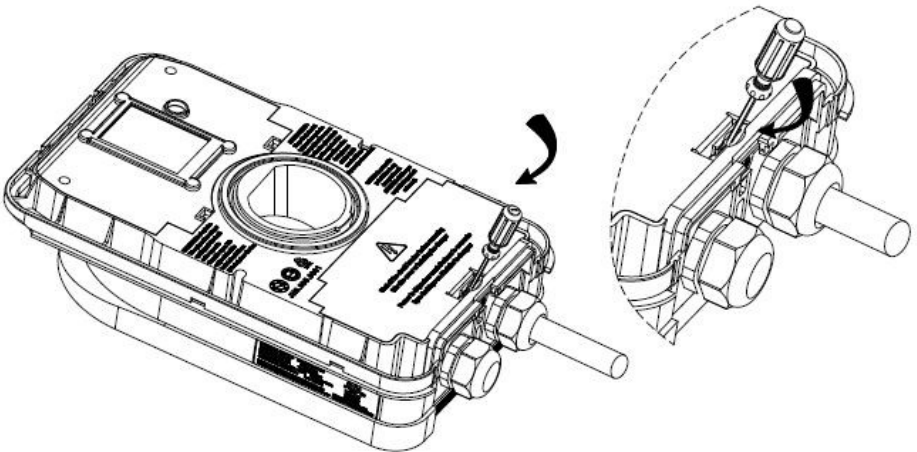
#### 4.4.1. Remove cover screw.



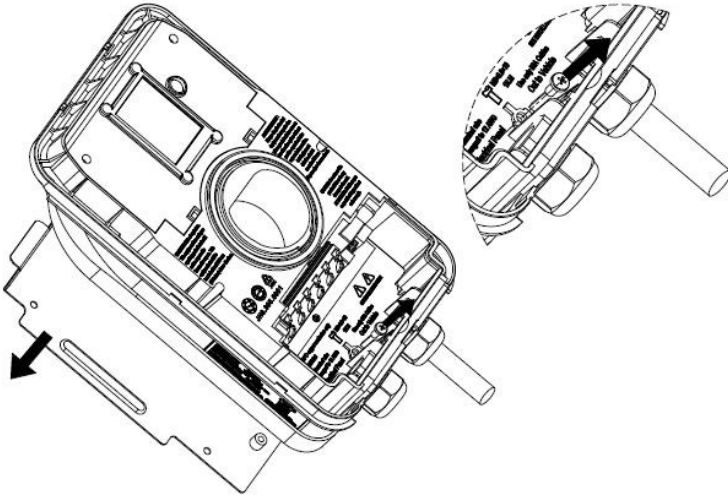
#### 4.4.2. Remove cover.



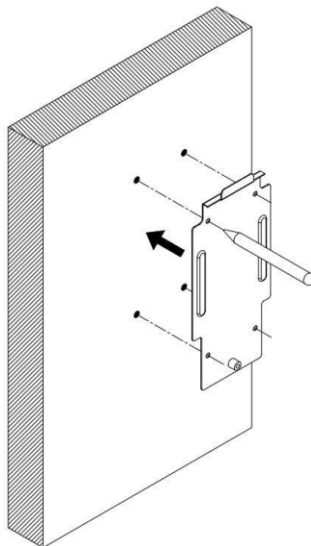
#### 4.4.3. Remove wiring cover.



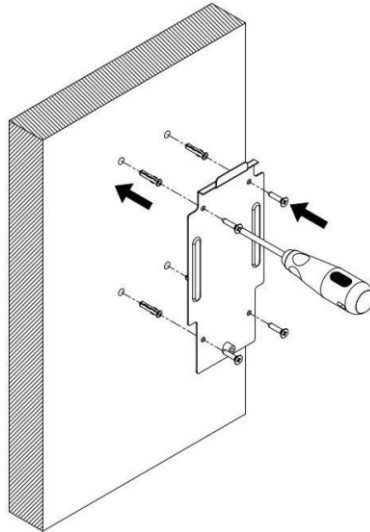
**4.4.4. Unscrew wall back plate screw and remove plate.**



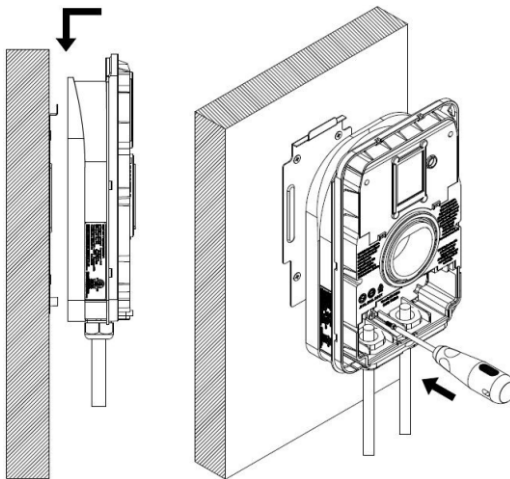
**4.4.5. Mark installation location using wall back plate.**



**4.4.6. Install 4 wall anchors in marked locations, and secure the wall backplane to the wall.**

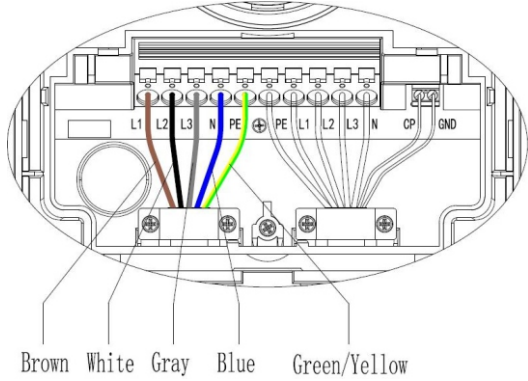
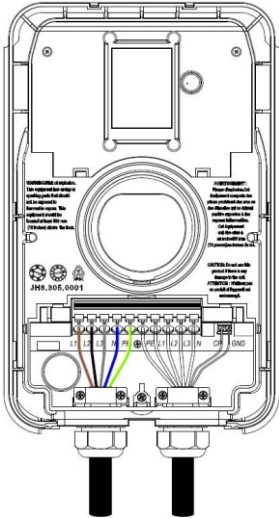


**4.4.7. Place and secure the charging pile body to the wall back plate. (screw torque 1Nm)**

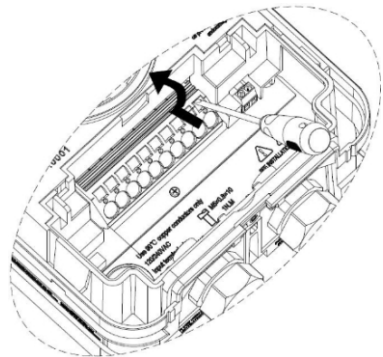
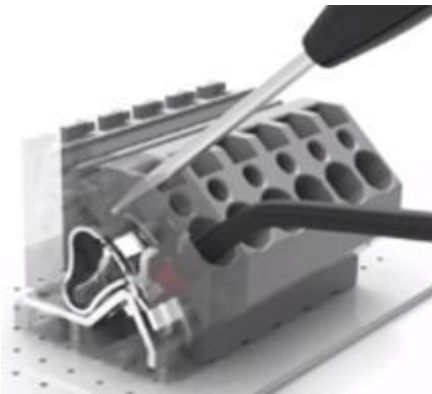


#### 4.4.8. This step is not required without replacing the cable.

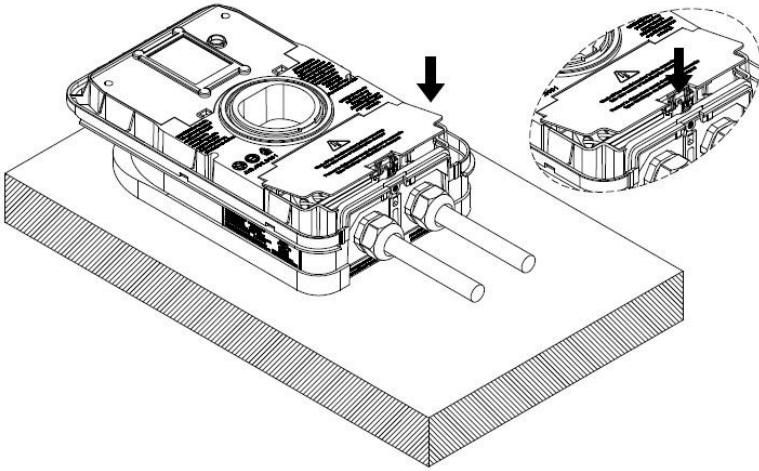
Connect the charging cable, connect to the main power cable (pay attention to the wiring sequence and its corresponding position), and then tighten the sealing joint.



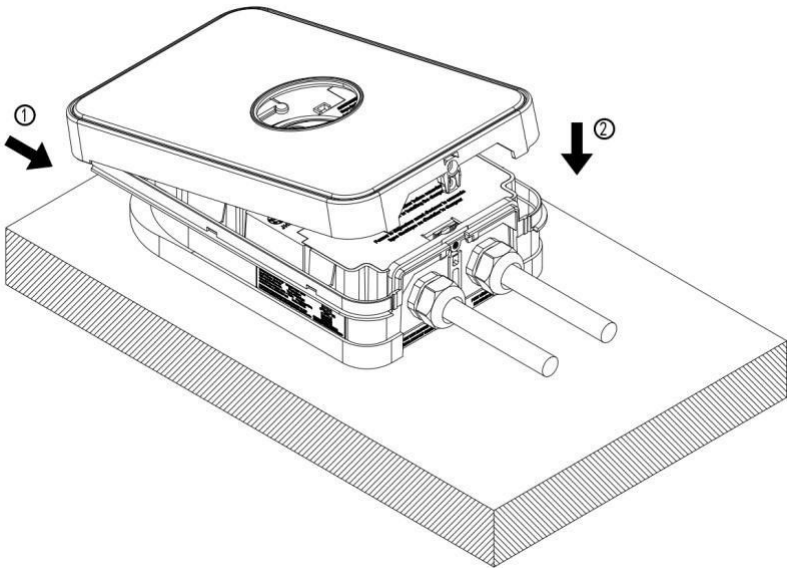
#### 4.4.9. Operation diagram



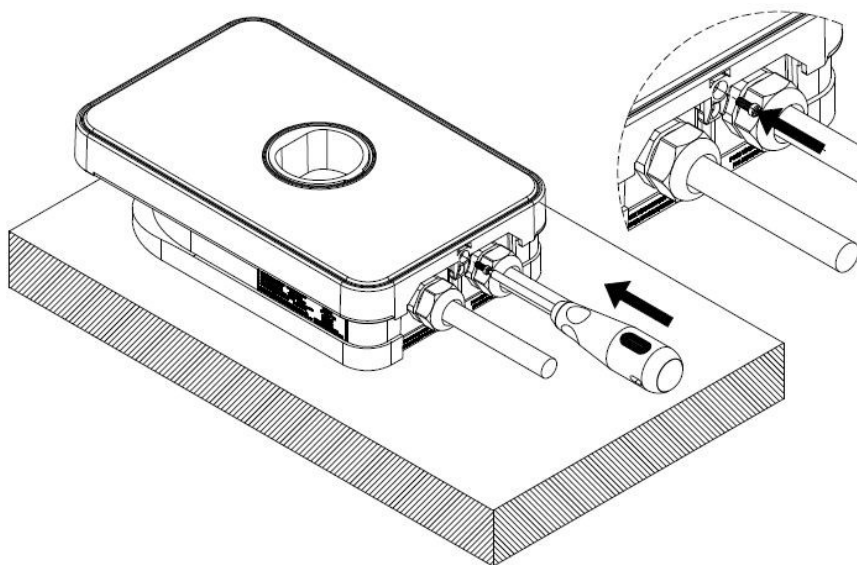
## 4.5. Install wiring cover.



### 4.5.1. Install cover



#### 4.5.2. Tighten the cover screws (torque 0.8Nm)



## 5. Use

### 5.1. Use

When the device is powered on, the system enters self-test, and the status indicator will display yellow. The status indicator then turns blue, indicating that the device is ready to charge.

### 5.2. Begin Charging

There are two charging modes: plug and play charge and APP launched mode. In the plug and play charge mode (default setting), connect the vehicle and the charging connector to begin the charging process. The screen displays "charging", and the LED status indicator is blue.

### 5.3. End Charging

The vehicle completes charging, and the LED status indicator remains green. When the connection is unplugged, LED status indicator will remain blue.

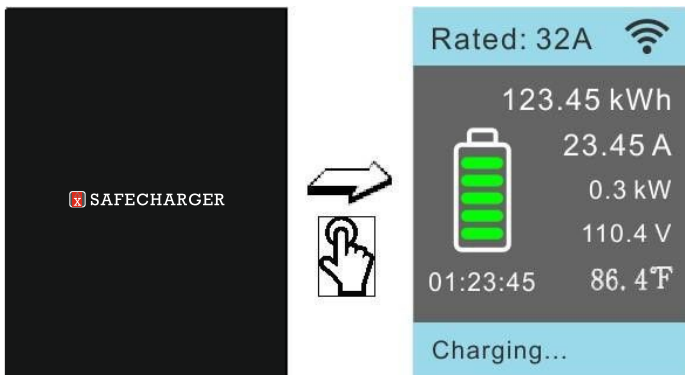
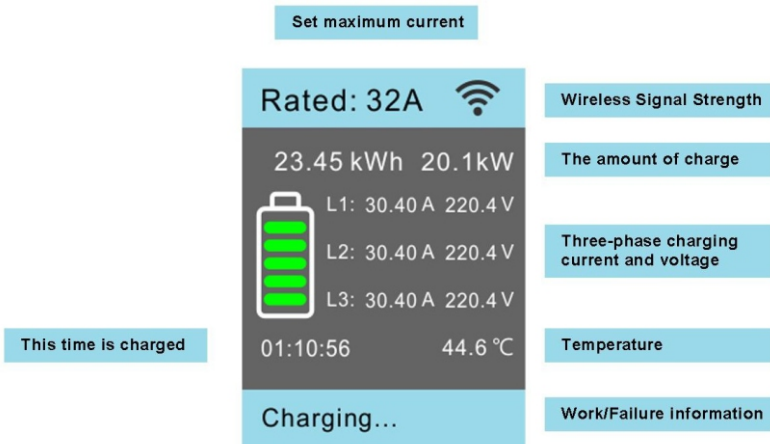
## 6. LED status indicator

LED lamp	Status
Black	Station not connected to power supply
Yellow 1-sec pulse	System initialization
Blue Steady on	No vehicle connected
Yellow steady on	Vehicle connected, waiting to charge
Blues flashing	Vehicle charging
Green steady on	Charging complete
Yellow quick flashing	Automatic capacity reduction
Red	Fault



## 7. Display screen information

- The LCD screen shows the relevant electrical parameters and charging time.
- The status/fault bar indicates the working process and fault type (if present).
- The LCD screen will enter Screensaver mode automatically.
- Wake the Status Screen by tapping the information button.



# 8. Fault

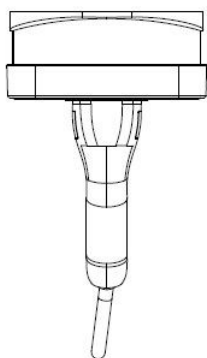
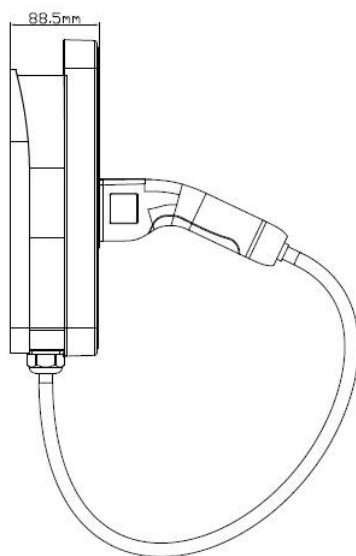
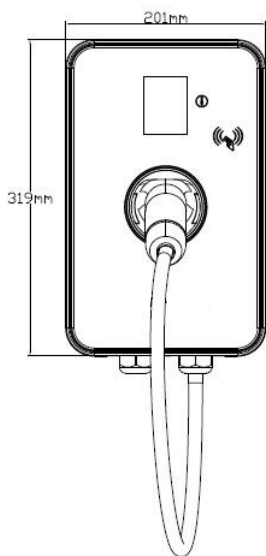
## 8.1. Problem solving

<b>Fault situation</b>	<b>Method of operation</b>
<b>Status indicator light is off (white)</b>	1. Power supply is disconnected - Check circuit breaker and ensure breaker is set to ON.
	2. Equipment failure - Contact support.
<b>Charging cannot start (yellow or green light)</b>	1. Charging plug is not correctly inserted into vehicle - Unplug and reconnect securely
	2. The vehicle has been set to reserve charging - Check the vehicle.
	3. The vehicle does not need to charge or fault - Check the vehicle.
<b>Charging time extended</b>	1. Vehicle is reserve charging.
	2. Reduced charging due to high temperature - Check current values on LCD display.
	3. Charging current at max - Check current values on LCD display.
<b>Steady red light</b>	If charging station faults, refer to the fault information displayed on the LCD screen
	Disconnect charging plug, shut off the power supply ( disconnect the circuit breaker). Wait 30 seconds and turn on power supply to restart system. If the issue persists, contact customer support.

## 8.2. Possible causes of fault

<b>LCD display fault shown</b>	<b>Status</b>
<b>Overcurrent</b>	Overcurrent protection. Charge again after 10min interval. If overcurrent fault occurs three times, end charging and then contact customer support.
<b>Overvoltage</b>	Overvoltage protection. Resume charging after the voltage is normalized.
<b>Undervoltage</b>	Undervoltage protection. Resume charging after the voltage is normalized.
<b>Contractor error</b>	Contactor status failure. Contact customer support.
<b>Overtemperature</b>	Over-temperature protection. Resume charging after temperature has cooled.
<b>CCID leakage</b>	CCID leakage protection. Remove vehicle plug and reconnect after 30 seconds..
<b>Groundfault</b>	Ground-fault protection. Check for proper grounding.
<b>Short circuit Err</b>	Short circuit protection. Contact customer support.
<b>Control pilot Err</b>	Control pilot failure. Abnormal draw during charging.

## 9. Dimensions



# 10. Technical parameter

Description	Project	Parameter
<b>Electric parameter</b>	Working voltage	AC400V±10%
	Working frequency	50/60±1 HZ
	Output power	22kW
	Stand-by power consum.	5W
	Rated output current	AC 32A (can be set 6/10/16/32A)
	Working temperature	-40 °C ~ +50 °C, over 60 °C derating
	Storage temperature	-40°C ~ +80°C
	Humidity	≤95 % (without condensation)
	Altitude	2km
	Isulation resistance	>10MΩ
	Dielectric strenght	Leaking current≤10mA
	External breaker	Need install breaker
	Grounding system	TN-S
<b>Safety protection</b>	Ground fall detection	Ground fall detevtion, automatic recovery
	Residual current detection	A+6mA DC
	Protection function	Overvoltage, undervoltage and overcurrent protection, output short circuit
	Protection class	IP55 (instal. according to instructions), IK08
<b>Metering</b>	Without MID independent meter	On-board measurement
<b>Interface</b>	Display mode	2,8 inch color backlit LCD
	Starting mode	Self-starting, application, RFID, RS485
	Charging mode	Automatic, manual
	Charging port	IEC62196-2
	Charging cable	5 m
<b>Com.</b>	Communication	WIFI
	Control	RS485 with ModBus protocol, can be connected to homemanagement/other system
	RFID	ISO/IEC 15693/ISO14443-A
	Com. protocol	OCPP1.6/2.0
	Software upgrade	OTA
<b>Structure parameter</b>	Boundary dimension	201*319*88,5 mm
	Installation	Wall
	Weight kg	2,4 kg (with charging cable)
<b>Certification</b>	Certification	CE

RFID	RFID	13,56 MHz	-53,16 dBm
WLAN	WLAN 2,4GHz	2412~2472MHz	9,47 dBm (EIRP)
RLAN	5 GHz RLAN	5150~5350MHz, 5470-5725MHz	12,56 dBm (EIRP)

## 11. Disposal

After the equipment is reasonably suspended please submit it to the service department in accordance with the current waste disposal regulations.

## 12. Product certification

