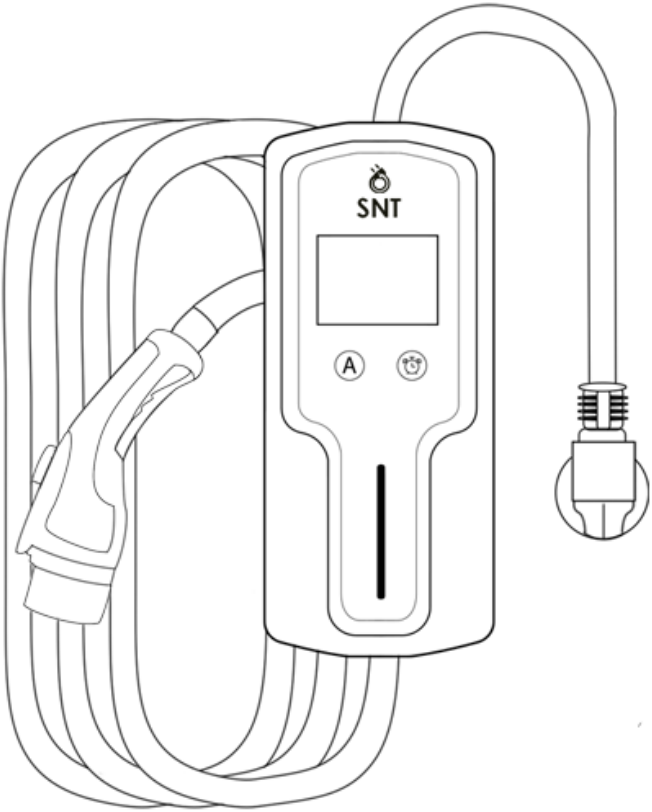
SMART NATURE
Technology Co.,Ltd.



User Manual

version V1.0.3

Legal Information

SmartNature - Clean Energy Systems - Nanjing, China

Introduction

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Thank you very much,

for purchasing our SNT series Mobile Charger.

It is the charging station for charging electric vehicles with an integrated charging control, suitable for all the E-vehicles of type 2 and GBT. The Mobile Charger is equipped with a more than 5-metres charging cable (type 2 plug, GBT plug), which allows you to charge your vehicle comfortably and safely at any time.

Read carefully before use!

Read this manual carefully before usage.

It contains important regulations and instructions for the use of this product and provides technical support for the operator of the unit.

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I ABBREVIATIONS

1.1 Abbreviations

NO.	Abbreviations	Description
1	IEC	International Electrotechnical Commission
2	EV	Electrical Vehicle, this can be BEV (battery EV) or PHEV (plug-in hybrid EV)
3	EVSE	Electric Vehicle Supply Equipment (EC61851-1)
4	kW	Kilo Watt (unit of power)
5	A	Ampere (unit of current)
6	V	Volt (unit of voltage)
7	Hz	Hertz (unit of frequency)
8	LCD	Liquid Crystal Display
9	LED	Light-emitting Diode
10	RFID	Radio Frequency identification
11	CMS	Central Management System Manages EVSE and has the information for authorizing users for using its EVSE.
12	OCPP	Open Charge Point Protocol A standard open protocol for communication between EVSE and a Central System and is designed to accommodate any type of charging technique. (www.openchargealliance.org)
13	IP	Ingress Protection
14	PE	Protective Earthing
15	HMI	Human-Machine Interface
16	RCCB	Residual Current Circuit Breaker
17	MCB	Miniature Circuit Breaker
18	MCCB	Moulded Case Circuit Breaker

1.2 Safety Instructions

- It should be inspected prior to installation to ensure that the power required to charge the vehicle can be continuously supplied to the currently available household power unit. If necessary, an energy management system can be used to protect the domestic power supply unit.
- The charger should work in a properly grounded power supply system and the protective conductor must be installed correctly.
- Persons installing and using chargers must observe the principles and regulations to ensure personal safety, the safety of the operating personnel and the safety of the appliance.
- Before switching on the unit, make sure that the unit is properly earthed to avoid unnecessary accidents.
- A visual inspection for damage should always be carried out before charging.
- In particular, the contact area of the charging plug should be checked for dirt and moisture, the charging cable should be checked for cuts or abrasions to the insulation and the cable outlet of the charger should be checked for tightness.
- Unauthorized modifications or changes to the charger will result in the immediate exclusion of the warranty.
- The charger must not be used in the vicinity of volatile gases or flammable objects.
- Before using the charger, make sure that the cables to be connected comply with the charger's specification.
- Only pull the charger cable out of the socket by the plug and not by the cable.

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II SAFETY INSTRUCTIONS

2.1 Safety Symbols and Notes

The following warning signs, mandatory signs and information signs are used in the charging station operating instructions:

Caution:

Warning of electrical hazards.

This sign is intended to alert the user that severe personal injury or substantial property damage can result if the device is not operated as requested.

Attention:

Warning of a danger spot or dangerous situation. This sign is intended to alert the user that minor personal injury or material damage can result, if the device is not operated as requested.

Caution:

Warning of electromagnetic field.

Caution:

Warning of combustion.

No access for unauthorized persons.

No access for persons wearing pacemakers.

Use protective footwear.

Must wear a safety helmet.

This symbol indicates texts, notes or tips.

Indicates recycling information.

Indicates assemblies or parts that must be disposed of properly.

Do not dispose of them in the household waste.

2.2 Environment

EV Charging station should be installed on the incombustible such as metal.
Otherwise, hazardous fire may result.

EV Charging station should not be installed in the area that contains explosive gas.
Otherwise, hazardous blast may result.

Leave no inflammable or explosive substances near the EV Charging station.
Otherwise, hazardous blast may result.

EV Charging station should be installed in a place with no conductive dust and insulation destructive gas or vapor.

EV Charging station should be installed in a place with no violent vibration and impact.
For good ventilation, mount the charging station vertically.

The installation foundation shall be higher than the ground level, and drainage ditch shall be set around the EV Charging station, otherwise the equipment may be damaged.

2.3 Installation

Safety protection must be done when installing the EV Charging station.

Installation and wiring have to be done by personnel with professional qualification.
Otherwise, hazardous electric shock may result.

Make sure input power supply is entirely disconnected before wiring.
Otherwise, hazardous electric shock may result.

Earth terminal of the EV Charging station must be grounded securely.
Otherwise, hazardous electric shock may result.

The lead nose of the charging station must be securely attached or there is a risk of damaging the equipment.

Leave no metals such as bolts, gaskets into the inside of the EV Charging station.
Otherwise, hazardous blast and fire may result.

Main loop terminal of the EV Charging station should be firmly connected with wiring ends.
Otherwise, damage to property may result.

Bare parts of wiring ends of electrical cables must be wrapped with insulating tape.
Otherwise, hazardous fire and property loss may result.

2.4 Operating

Strictly forbidden for minors or persons of restricted capacity to approach the charging station to avoid injury.

Forced charging is strictly forbidden when the electric vehicle or charging station fails.

EV can only be charged with the engine off and stationary.

At any time, in case of any emergency (such as fire, smoke, abnormal noise, water inflow, etc.), on the premise of ensuring personal safety, please cut off the input power, and immediately stay away from the charging station. And then contact with the supplier.

It is strictly prohibited to use the charging station when the charging adapter or charging cables are defective, cracked, worn, broken or the charging cables is exposed.

Do not charge in rainy and thunderous weather.

2.5 Maintenance

Accessory replacement must be done by qualified personnel, thrums or metals are prohibit to be left in the controller.
Otherwise, hazardous blast and fire may result.

It is recommended that routine safety inspection visits to charging station be conducted at least once a week.

Keep the charging connector clean and dry and wipe with a clean, dry cloth if soiled.

2.6 Safety Information

Read the safety information carefully and follow the instructions. Familiarize yourself with the device before the installation, operation or service.

- Electrical danger: the Mobile Charger must be installed, commissioned and serviced by a trained, qualified and authorized electrician, who have full responsibility for being familiar with current standards of installation regulations.
- Electrical danger / fire hazard!

- Never use defective, worn or dirty charging plugs.
- Do not attempt to disassemble, repair or modify the SNT Mobile Charger. If you need to repair or modify the charging station, please contact the supplier. Improper operation may cause equipment damage, water leakage, electricity leakage and other situations.
- It is strictly forbidden to remove any safety symbols or warning instructions from the SNT Mobile Charger.
- Before charging always ensure that there is no damage on the SNT Mobile Charger, the charging plug or socket. Check that there is no dirt or moisture in the charging plug or socket, or damage on the charging cable.
- Check that the SNT Mobile Charger has not been damaged due to incorrect handling.
- Protect the charging plug and socket carefully from dirt and water by using the dust cap when it is not used, and ensure that the contact area cannot come in contact with heat sources, dirt or water.
- Check regularly that the Mobile Charger is not damaged due to incorrect usage.
- Keep charging connector clean and dry. If there is dirt, please use a clean dry cloth to wipe, do not touch the charging connector core when the power is on.
- Do not flush the Mobile Charger with high pressure water.
- To reduce the risk of breakage of the plastic housing, do not countersunk screws or use powerful force to tighten screws.
- Children are not allowed to get close to or use the charging station during charging to avoid injury.
- Do not step on, pull, fold or knot the cable.
- Only for using in the situation that the power-supply side contains RCD breaker protector.
- Only for EV charging.
- Do not put fingers into the charge connector.

ESD

Instructions for trained, qualified and authorized personnel installing the device:

Be careful when operating at the device. Electrical components of the Mobile Charger can be damaged if touched.

Before operating at modules, conduct a discharging process by touching a metallic earthed object.

If safety instructions were not followed appropriately, serious physical injuries, death or damage of the device could be a result. The device manufacturer will not accept the liability for claims resulting from this.

Intended Use

This Mobile Charger is a charging station for electric and plug-in hybrid vehicles, and can be installed indoor or outdoor. Do not connect any other electronic devises or tools with the charging plug. The Mobile Charger is designed to be installed on the wall or pillar, ensure to follow all the relevant national regulations for the installation and connection of the Mobile Charger.

The Mobile Charger was developed, tested and manufactured according to the national safety standards. Ensure to follow the safety information and instructions in this manual and demonstrated on the device for the intended use. If followed, the device will not cause any danger to the health of people, as well as no property damage.

The device must be earthed, as in case of an error, it will reduce the danger of an electric shock.

The instructions in this manual must be followed when installing or operating on this device, otherwise sources of danger could be created. In addition to the safety information, it is also important to follow the regulations for each specific device as well as the local regulations for installation.

III PRODUCT RANGE OVERVIEW

3.1 MOBILE CHARGER CN (AC GBT)

Model	SNTG2ACM3CN	SNTG2ACM7CN	SNTG2ACM11CN
General Parameter			
Maximum Charging Power (kW)	3.5kW	7kW	11kW
Cable Variant	1Phase		3Phase
Output Current	8A/10A/13A/16A	8A/10A/13A/16A/22A/32A	8A/10A/13A/16A
Rated Supply Voltage	220VAC		380VAC
Standby Power	＜1.5W		
Cable Length	5.8m	5.6m	6.2m
Dimension (LxBxH)	244*108*63mm (without cable)		
Weight	2.15 kg	3.15 kg	2.90 kg
System Standards	GB/T 18487.1-2015		
Charging Interface	GB/T 27930-2015		
Language Supported	Deutsch / English / 简体中文/Français / Русский язык / ภาษาไทย / other		

3.2 MOBILE CHARGER EU (AC TYPE-2)

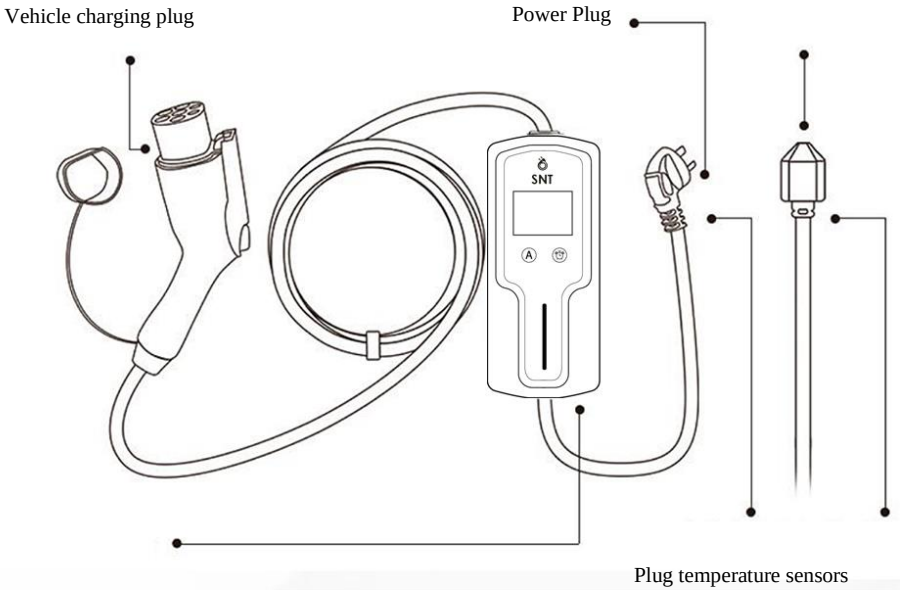
Model	SNTG2ACM3EU	SNTG2ACM11EU
General Parameter		
Maximum Charging Power (kW)	3.5kW	11kW
Cable Variant	1Phase	3Phase
Output Current	8A/10A/13A/16A	8A/10A/13A/16A
Rated Supply Voltage	100-240VAC	400VAC
Standby Power	＜1.5W	
Cable Length	5.8m	6.2m
Dimension (LxBxH)	244*108*63mm (without cable)	
Weight	2.20 kg	2.94 kg
System Standards	IEC 61851-1	
Charging Interface	IEC 62196 Type 2	
Language Supported	Deutsch / English / 简体中文/Français / Русский язык / ภาษาไทย / other	

Plug Versions Infrastructure side					
Rated Power 6A - 16A					
	UK	NZ/AU	EU	BRA	ZAF
Rated Power 16 A - 32A					
	3 Pins CEE	5 Pins CEE			
Rated Power 6A - 16A					
	5-15P	5-20P	6-20P	10-30P	14-50P

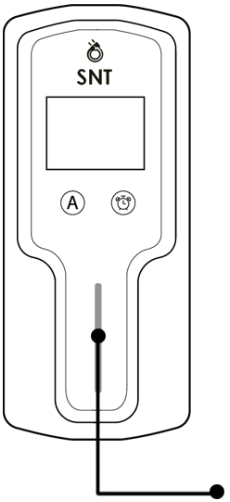
IV MOBILE CHARGER

4.1 Introduction

The product is a single-phase/three-phase AC mobile charger, mainly used for AC charge. The equipment adopts the principle of industrial design, to ensure the safety of equipment operation. The protection grade of the whole machine reaches IP55, with good dust-proof and water-proof functions, and can be operated and maintained safely outdoors.



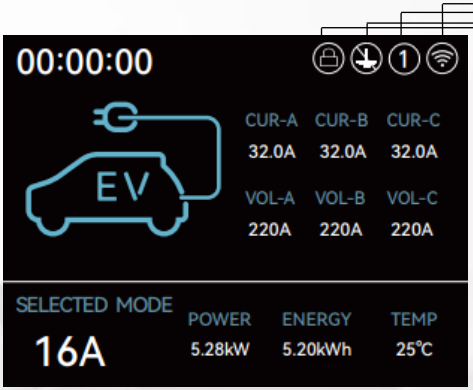
SNT mobile charger (Indicator) & Charger Status



Blue (on)	Plug not connected
Green(on)	Ready to charge
Green(pulsing)	Charging ongoing
Red (on)	Fault

Indicator light (strip)

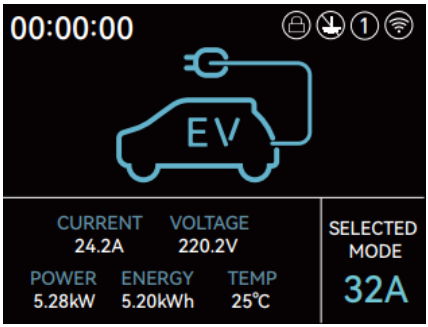
SNT mobile charger Controller (electronic display)



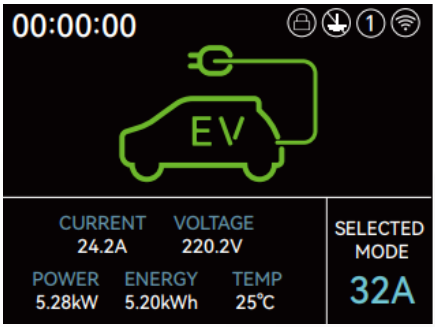
Locked	: Lock Function Display
Earth Wire	: Connected
Timed Charging	: Timing time (H)
WIFI	: On

4.2 Screen display

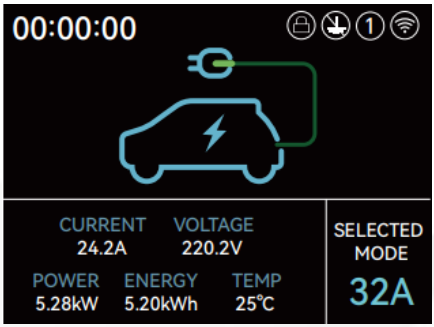
Loading



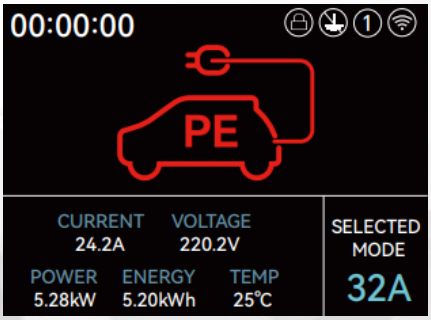
Plug not connected



Ready to charge



Charging ongoing



Fault

V MOBILE CHARGER OPERATION

5.1 Quality Assurance

SNT EV Charging is warranted to be free of defects in material and workmanship for a period of one year from the date of shipment.

This warranty does not cover any damage due to the following cases:

1. Improper handling, installation, usage or maintenance by users

2. The breakdown and the failure caused by the force majeure, such as direct damage and inability to function properly caused by natural disasters

3. Products are filled with water or soaked in water

This warranty does not cover the cost of freight to return the device to factory for repairs.

This warranty is only valid to the original purchaser of the device and is not transferable.

5.2 Accessory Kit

Accessory list

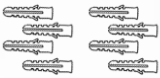
NO.	Tool Name	Effect
1	Device bag	SNT mobile charger storage
2	Mounting bracket	Installation base of SNT mobile charger
3	Plug holder	Hold the charging connector when not in use
4	Longer screw	Fix the mounting bracket on the wall base
5	Sleeve anchor	Fix the longer screws into the wall base
6	32A3PIN PEE socket	standard configuration for 7kW
7	16A5PIN PEE socket	standard configuration for 11kW

Device bag*1

Mounting bracket*1

Plug holder*1

Longer screw*8



Sleeve anchor*8

32A3PIN PEE socket

16A5PIN PEE socket

5.3 Installation

1. Fix and punch holes according to the vacancy diagram

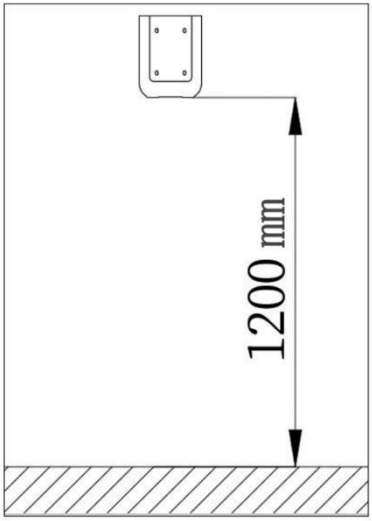


Fig.1

2. Install the mounting bracket

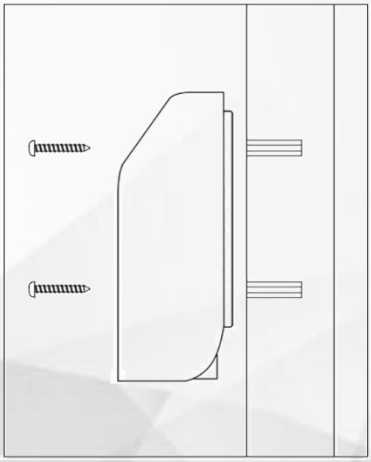


Fig.2

3. Install the plug holder

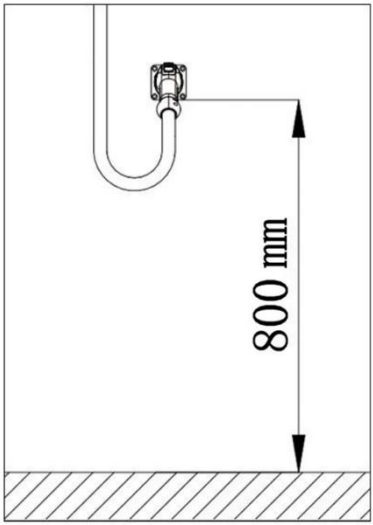


Fig.3

4. Installation effect

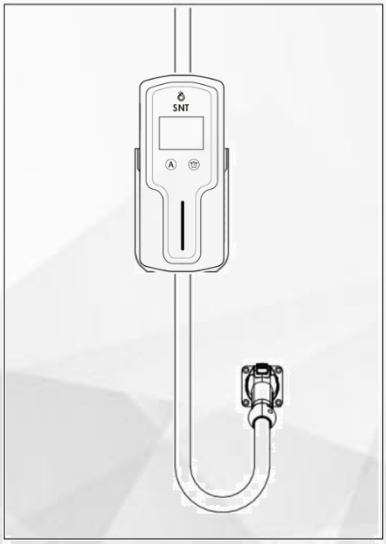


Fig.4

5.4 APP Operation

1. Download the SNT energy APP:

Scan the QR code below, as shown in Fig.5, select the appropriate software version according to the type of mobile phone system, download and install the SNT energy APP. For IOS system, please search for "SNT Energy" in the Apple Store to download and install;

Fig.5

2. APP usage tutorial

Open the APP and follow the steps below:

WIFI connection as shown in Fig.6 and Fig.7 → select the hotspot name beginning with SNT and connect, the initial password is: 12345678

Fig.6

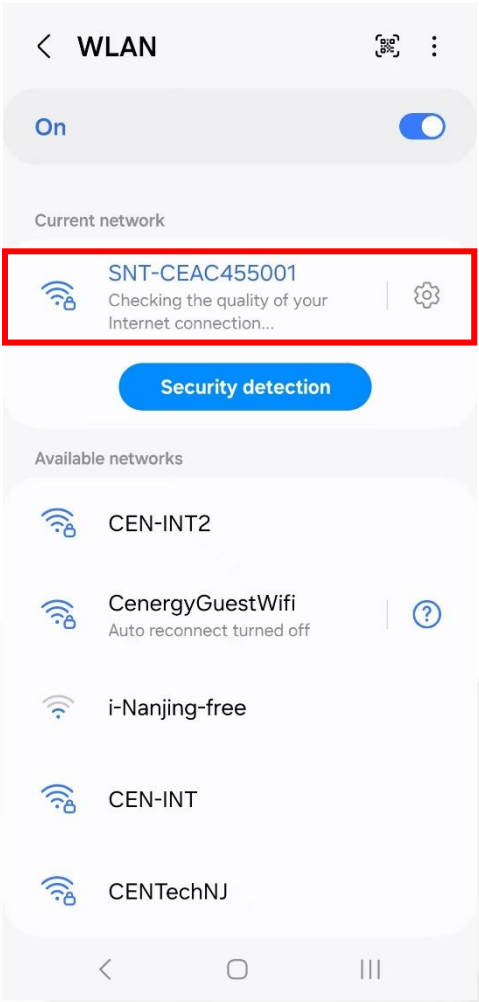


Fig.7

If there are multiple similar hotspot names, please choose the hotspot name that is consistent with the serial number of the nameplate on the side.

After connecting, return to the APP, the device has been automatically added to the "Home" page, as shown in Fig.8 and Fig.9.

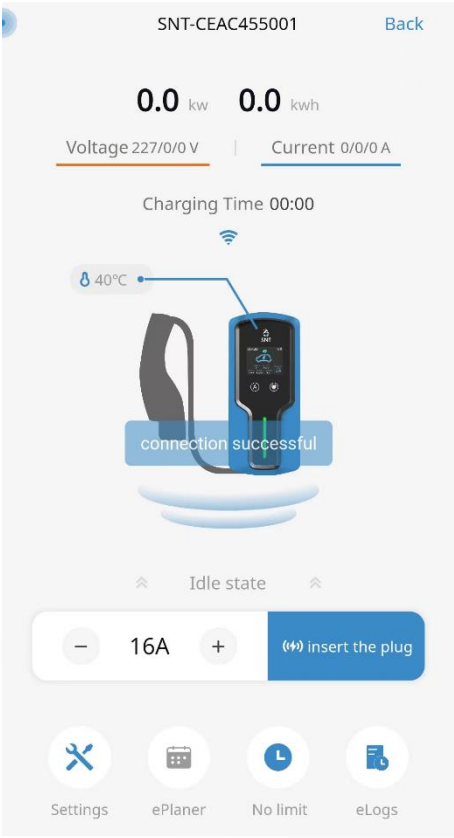


Fig.8

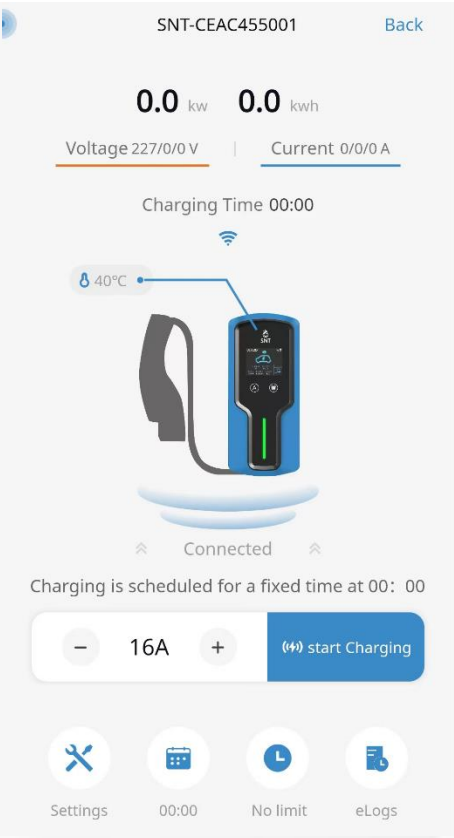


Fig.9

- Start charging: After inserting the plug, you can click the "start charging" button to initiate the charging process, as shown in Fig.8.
- Stop charging: you can click the "stop charging" button to interrupt the charging process, as shown in Fig.9.
- eTimer: Set the duration of charging.
- ePlanner: Start charging from a specified time.

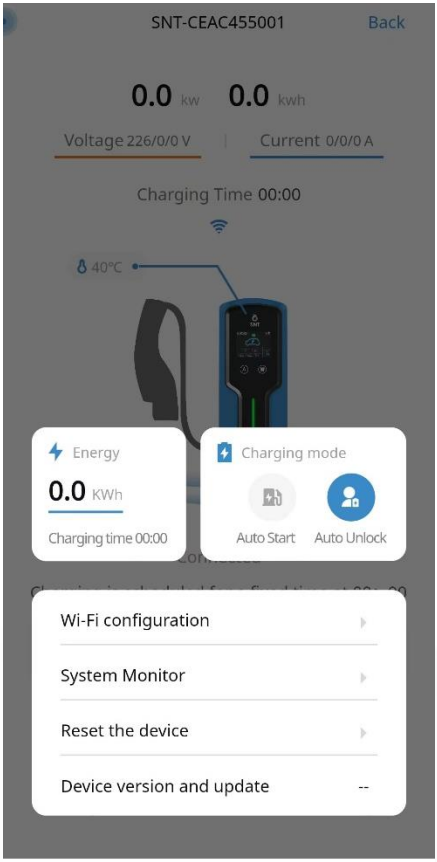


Fig.10

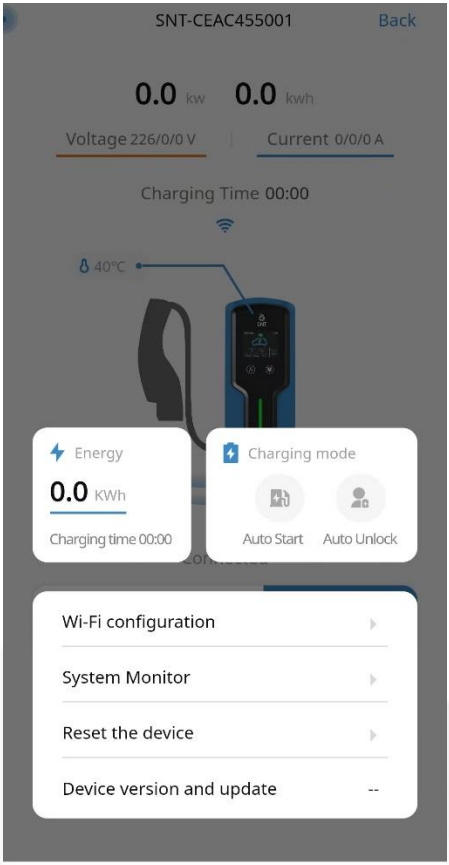


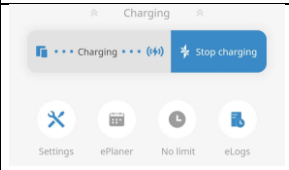
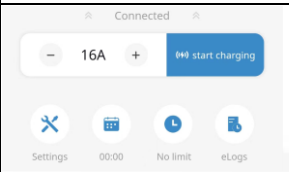
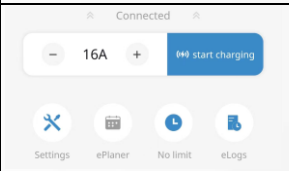
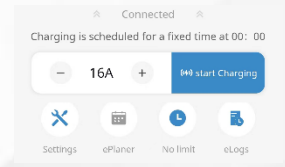
Fig.11

SNT Energy APP menu introduction (click “Settings” in Fig.10 to enter)：

- Energy: Summarized statistics for total charging data.
- Wi-Fi configuration: Change the device password and Connect to the local Wi-Fi.
- System monitor: Users can check the safety performance of the device at any time.
- Reset the device: Restart the device.
- Device version and update: Recorded the device software information and available update.
- Charging Mode: “Auto Start” or “Auto Unlock”.

Auto Start: after the mobile charger be turned on, once the mobile phone is close to and connected to the hotspot of the charging station, the device will automatically start charging, eliminating the need to swipe the RFID card or operate in the mobile phone. This feature prevents the device from being embezzled;

Auto Unlock: After turning it on, charging starts automatically. (Note: Anyone can use the device without authorization after it is turned on; Auto Start automatically expires after "Auto Unlock" is turned on);

#	Charging Mode	Diagram	Detailed Introduction of Corresponding Functions
1	Auto Start Auto Unlock		Charging starts automatically.
2	Auto Start Auto Unlock		Please click "start charging" button to start charging. "00:00" button can start charging from a specified time. "No limit" button can set the duration of charging.
3	Auto Start Auto Unlock		Please click "start charging" button to start charging. "No limit" button can set the duration of charging.
4	Auto Start Auto Unlock		The scheduled charging is default to be started at 00:00. "00:00" button can start charging from a specified time. "No limit" button can set the duration of charging.

The prerequisite is that the user has completed inserting the plug.

Add Device to Local Wi-Fi

Once the user successfully connects the charger to the local Wi-Fi via the SNT Energy APP, the APP does not have to be connected to the device's hotspot during use and the user's mobile phone can always access it via the Internet.

Operating steps:

After the APP is successfully connected to the device's Wi-Fi, enter the device management page.

Click 'Settings' → 'Wi-Fi configuration' → 'Add the device to a local Wi-Fi' → enter relevant information, as shown in Fig.12 and Fig.13

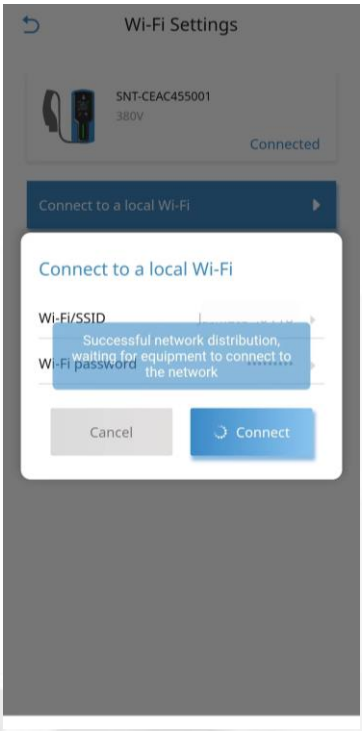


Fig.12

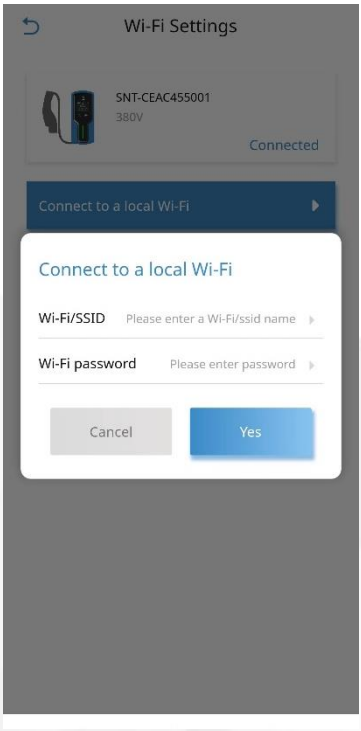


Fig.13

Please note that the precondition as follows:

- Frequency Band: 2.4G
- Encryption Standard: WPA/WPA2
- Protocol: IEEE802.11 b/g/n

5.5 Web Interface Operation

1. Connect the hotspot of device

WIFI connection → select the hotspot name beginning with SNT and connect, the initial password is: 12345678

2. Enter the URL **192.168.4.1** in your mobile browser

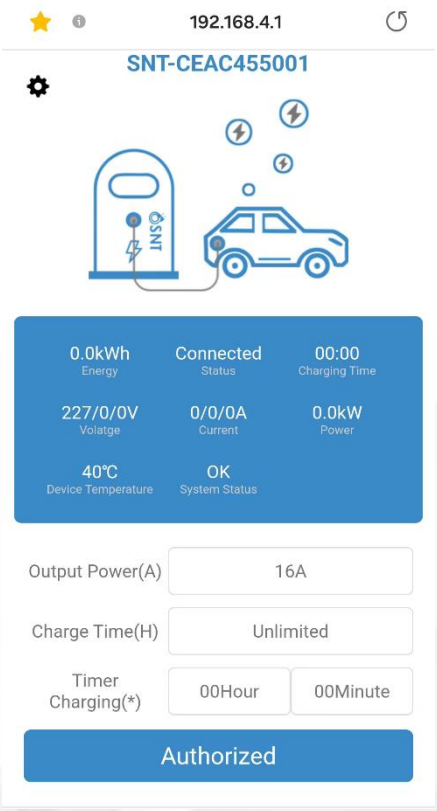


Fig.14

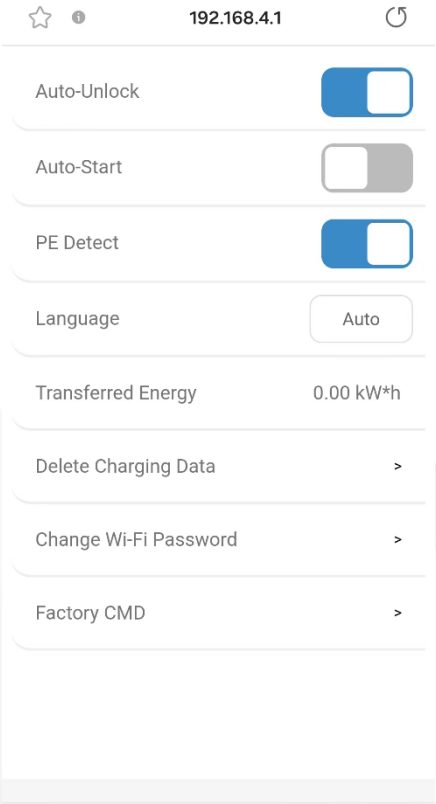
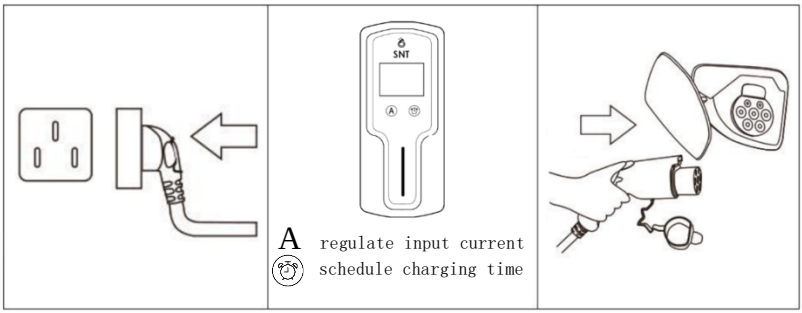


Fig.15

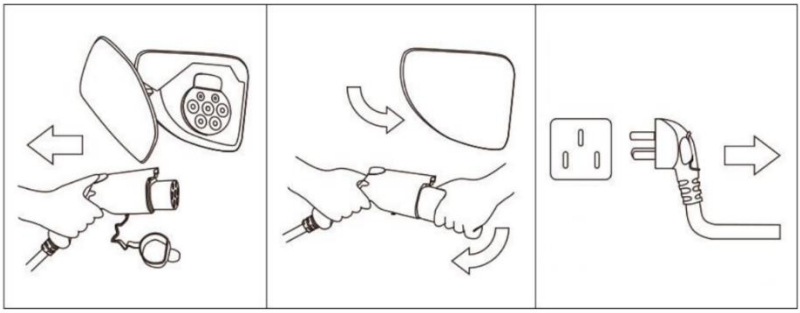
5.6 Start Charging



(Fig.16) (Fig.17) (Fig.18)

1. Insert the plug into power-supply socket firmly (Fig.16). Ensure power-supply socket is compliance with national standards, and the rated current is matching.
2. Press the button [A] to switch charging current. Press the button [⏰] to timer charging (Fig.17).
3. Pull off cap, insert the charging plug into your vehicle' s socket (Fig.18). Ensure the charging plug are fully inserted till a sound of click.

5.7 Stop Charging



(Fig.19) (Fig.20) (Fig.21)

1. Charging finished or stop charging from SNT Energy APP or web interface.
2. Unlock the vehicle and then press the button and disconnect the charging plug from the vehicle socket (Fig.19)
3. Close protective cap of EV and put on the protective cap of charging plug (Fig.20).
4. Disconnect the plug from the power-supply socket (Fig.21)
5. Refer to the Fig.4 to return the objects to their original positions or storing the mobile charger into the device bag.

VI TROUBLESHOOT COMMON FAULTS

6.1 Common Faults

Faults Codes	Reasons	Recommendation
CP	CP connection of charging connector is abnormal	1. Check whether the charging gun is connected correctly and reliably. 2. If the fault persists, please contact with us.
PE	The input/output is improperly grounded	1. Immediately turn off the leakage/overcurrent protection switch of the distribution box. 2. Check whether the input/output lines of AC stations are grounded properly and whether the input L/N is connected in normal sequence. 3. After the fault is rectified, power on the device again. If the fault persists, please contact with us.
OV	The AC input voltage is too high.	1. Please ask the electrician to test the input voltage of the air switch 2. If the actual voltage exceeds 275Vac for a short time, wait for the network to restore itself to the normal voltage range, power off and restart 3. If the actual voltage exceeds 275Vac for a long time, contact the power supply department 4.If the actual voltage is less than 265Vac and the power failure is not recovered, please contact with us.
UV	The AC input voltage is too low.	1. Please ask the electrician to test the input voltage of the air switch. 2. If the voltage is temporarily below 85Vac, wait for the voltage to return to normal range. 3. If the actual voltage is lower than 85Vac for a long time, contact the power supply department. 4. If the actual voltage is greater than 85Vac, please contact with us.
OC	The AC input current is too large	1. Immediately turn off the leakage/overcurrent protection switch of the distribution box. 2. Check whether there is low impedance connection between two output lines of AC station. 3. After troubleshooting the above problems, the power on fails to recover, please contact with us.
OT	The internal temperature is greater than 85 degrees	1. Check the installation environment of AC stations. Check whether there are heating devices or devices nearby. Ensure that the ambient temperature is below 55°. 2. If the fault cannot be rectified, please contact with us.
LEAK	Leakage current is greater than 30mA	1. Immediately turn off the leakage/overcurrent protection switch of the distribution box. 2. Check AC station output line for damage or low impedance connection to the ground. 3. After troubleshooting the above problems, reset the switch of leakage current protector and power on again. If the fault still exists, please contact us.

6.2 Troubleshoot

PROBLEM	POSSIBLE CAUSE
Status LED not lit	No voltage supply connected Fault on the Mobile Charger, please contact SNT customer service.
Charging cycle has not started	The charging plug has not been connected correctly, please remove the charging cable plug and try connecting again. The vehicle is already fully charged or has a fault – check the vehicle.
Charging cable plug cannot be disconnected	Charging cycle has not been ended by the vehicle, ensure to end the charging cycle first as described in the manual provided by the vehicle manufacturer.
Vehicle did not fully charge/ in time	Vehicles charging setting has been incorrect, either the charging mode or planned departure time. Power has been reduced due to high temperature in the car or the Mobile Charger.
Status LED permanently lights in RED	The Mobile Charger was unable to shut down the voltage on the charging cable, please reset the Mobile Charger. If the problem persists, please disconnect the Mobile Charger from the main power supply and contact SNT Customer Service.

6.3 Reset an Error

In case of any interruptions during the connection process or charging cycle, please reset the Mobile Charger. If the charging cycle cannot be restarted, the charging cycle must be ended, and the Mobile Charger should be reset. If the error occurs again, for no obvious reason, please contact with us.

For more or update information, please visit the SNT page: www.smartnature.group

If the error/error code is not listed, please contact the SNT after -sales service department.

6.4 Warranty

SNT Service can provide more details about the warranty of this device.

However, the warranty will not cover any damaged cause by the following cases.

- Damage at the Mobile Charger caused by inappropriate installation, when it was carried out by a not authorized electrician or the following Installation Instructions were not followed.
- Damage or Defects of the device if the instructions were not followed according to SNT installation and operating instructions.
- Costs or damage caused by someone installing or operating at the device, who is not a trained, qualified and authorized electrician.

6.5 Waste Disposal

Ensure to properly decommissioning the device, then have the device by a service and follow all the valid national disposal regulations.

The devise must be disposed separately from general house waste.

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