ATESS

ATESS EVD-20S

DC EV charging station
User Manual

Copyright Notice

Thank you for choosing ATESS!

ATESS EVD series intelligent DC EV Charging station is a device that provides high-efficiency, safe and stable DC power supply for electric vehicles, which has a friendly man-machine interface and integrates corresponding functions of control, billing, communication and security protection. The EV charger uses OCPP 1.6JSON open protocol for communication with back-office server, thus to realize functions such as reservation and network payment via mobile APP. Diversified communication options, including wired Ethernet, WIFI, 4G wireless, are provided for customers to conveniently connect the device to a charging network.

We sincerely hope that this product can meet your needs, and we welcome and value your feedback and suggestions on the performance and function of the product. We will continuously improve the quality of our products and services.

Contents

1 Product Description

Internal view and terminal definition

1. Air intake
2. HMI(opt)
3. RFID ready (opt)
4. Charging connector
5. POS(opt, refer to Chapter 12.1 for installation)
6. LED indicators
7. Mounting bracket
8. WIFl/4G antenna
9. Emergency Stop button
10. Stop button

Explanation of LED indicators behaviors:
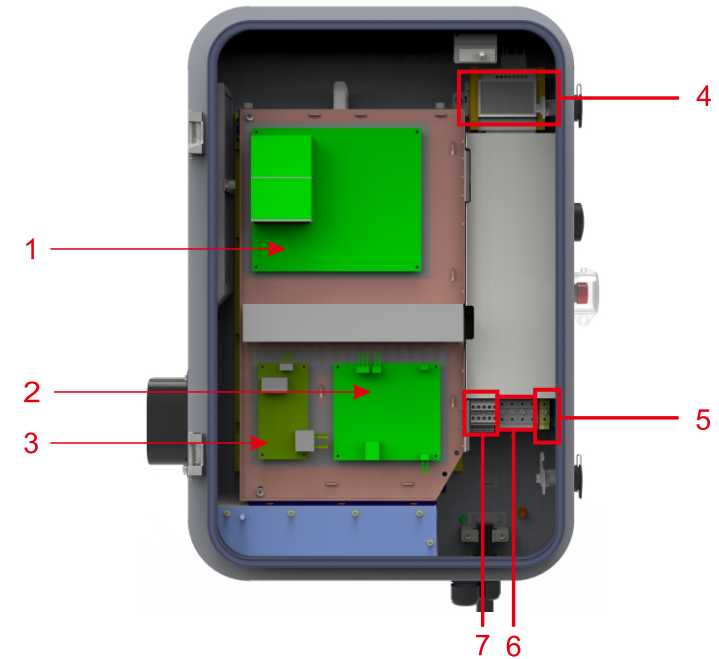Blue Standby(The charging equipment can only be used when the blue light lit);
Red Steady on/Flashing-Fault;
Green Steady on-Charging in process;
Green Flashing-Establishing communication;
Yellow Flashing-System initializing.

1. Main board
2. SECC communication board
3. Insulation detection board
4. Power Meter (opt)
5. PE terminal
6. AC input terminal block. Terminal definition is (L1/L2/L3/N)
7. Sampling CT/Meter

2 Packaging List

| No.	Name	Qty	Remark
1	DC Charger	1	
2	User manual	1	
3	Quality certificate	1	
4	User card	1	Usually provided for RFID configuration
5	Mounting bracket	1	Already installed on the rear side of the charging equipment
6	Cable holder	1	
7	Hex head expansion bolt, M8*80/304 stainless steel	7	
8	L-shaped Anti-theft Wrench for Plum Blossom Stud Screws, Size M6	1	

3 Installation and Wiring

3.1 Wall-mounted

3.1.1 Firstly, according to the specific installation height requirement of the user, determine the installation height of the charging equipment and the installation height of the cable holder. According to the dimensions in the following drawings, drill 4 holes for bracket mounting and 3 holes for cable holder mounting on the wall. Take out the expansion bolts in the packing accessory bag, hammer the expansion bolts into the holes. Remove the nuts and washers for later use.
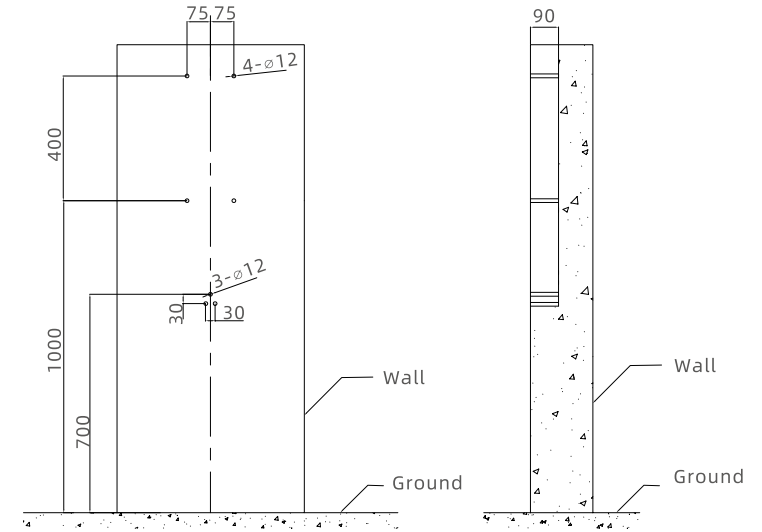

Drill holes on the wall

3.1.2 Loosen the 2 screws at the bottom of the charging equipment that fixes the mounting bracket, keep them properly for later use. Place the mounting bracket onto the bolts just installed and screw the nuts and washers. Take out the cable holder and fix it using the same procedure.
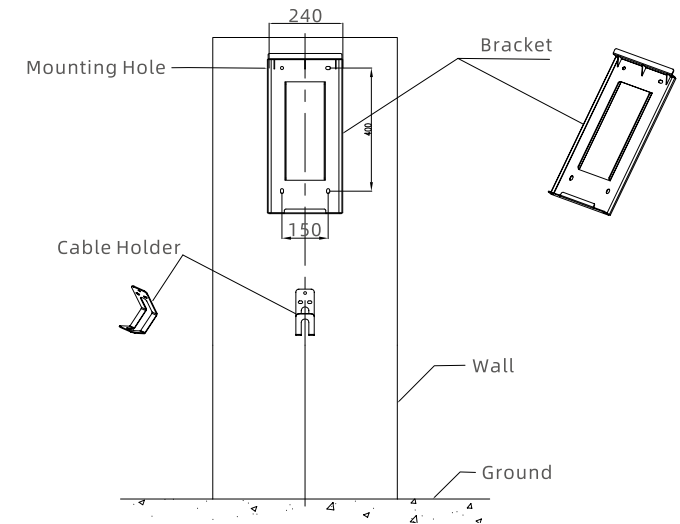

Mount the bracket and cable holder

3.1.3 After the mounting bracket and cable holder is fixed, place the charging equipment onto the mounting bracket, with the outward bent part inserted to the slot on the rear side of the charging equipment. Lock the charging equipment onto the bracket at the bottom using the 2 screws. The installation is done.
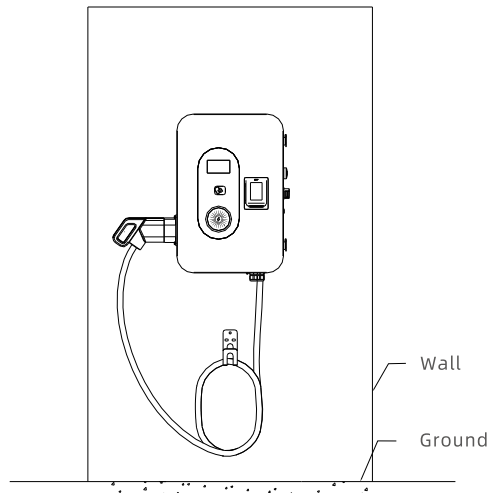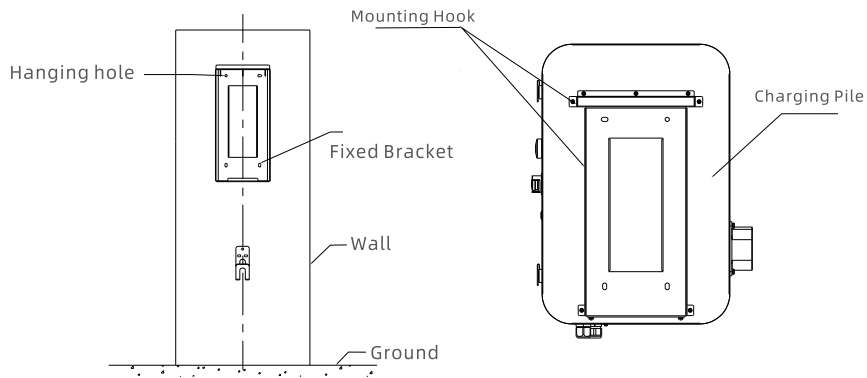

Insert the hanging hooks of the Charging equipment into the hanging holes and Install in place

3.2 Pole-mounted

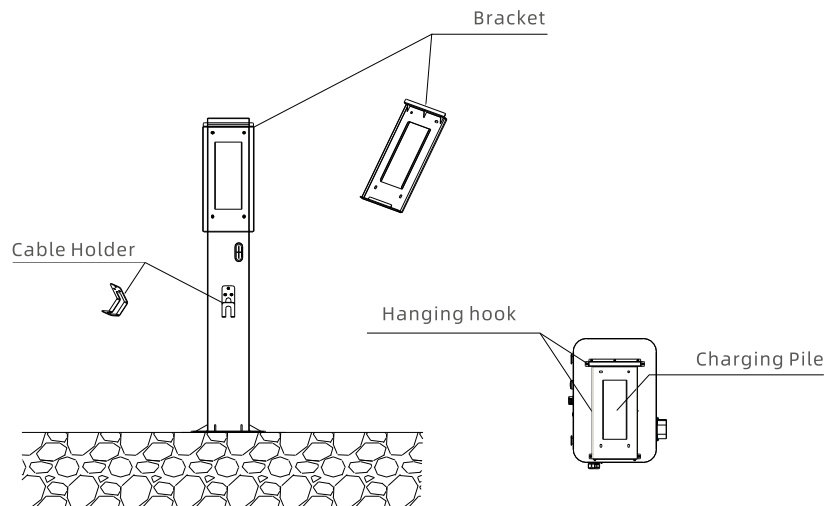3.2.1 Open the packaging of the pole, take out the pole and mounting accessories.
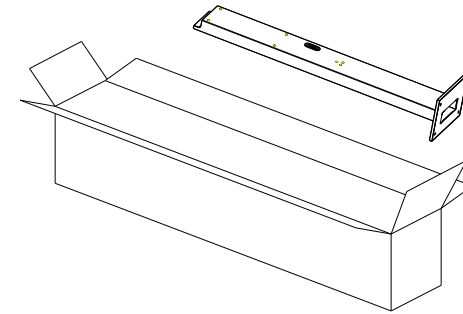
3.2.2 The pole must be installed on a hard surface, concrete surface is on a solid ground. Drill holes according recommended, it can also be mounted the requirements marked on the illustration for fixing expansion bolts.
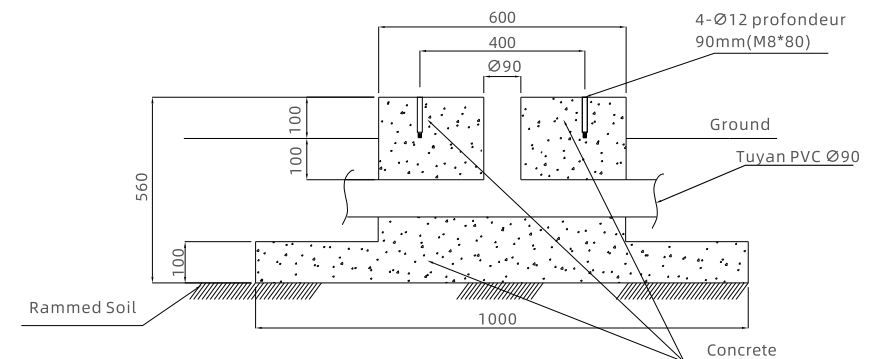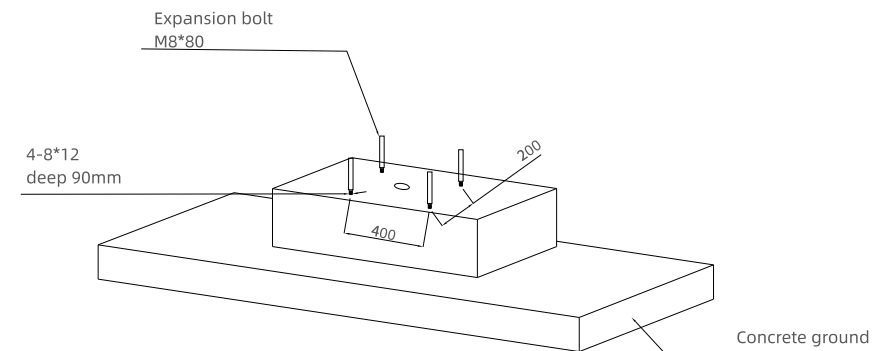
3.2.3 Fix the pole onto the holes with expansion bolts. The input cables shall go into middle area and come out of it from the area below the pole from the bottom cable holder.

Concrete ground

Mounting hole

Left view

Top view
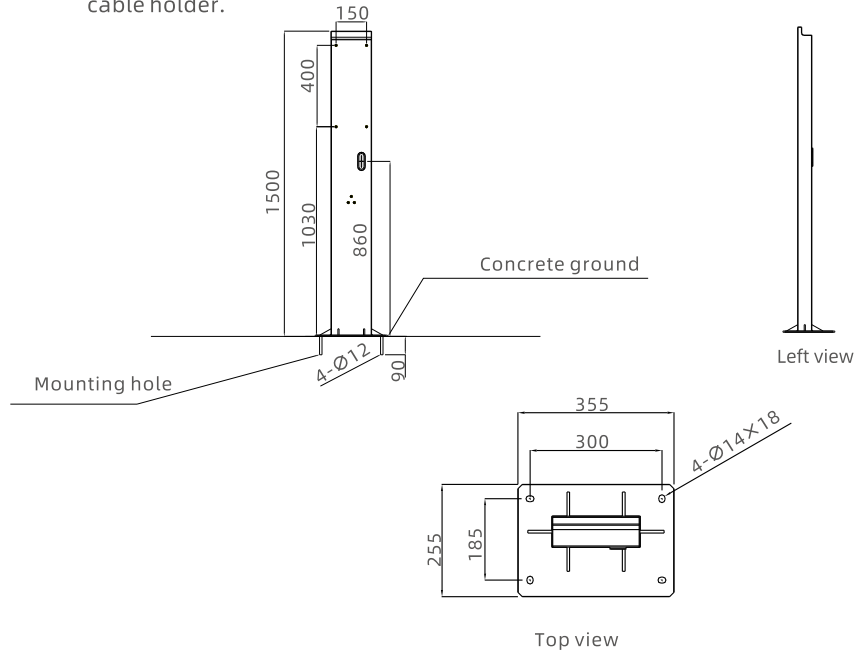
3.2.4 Fix the mounting bracket onto the pole.

Bracket

Cable Holder

Hanging hook

Charging Pile

3.2.5 Position the charger onto the bracket and secure it on the bracket with the 2 screws.
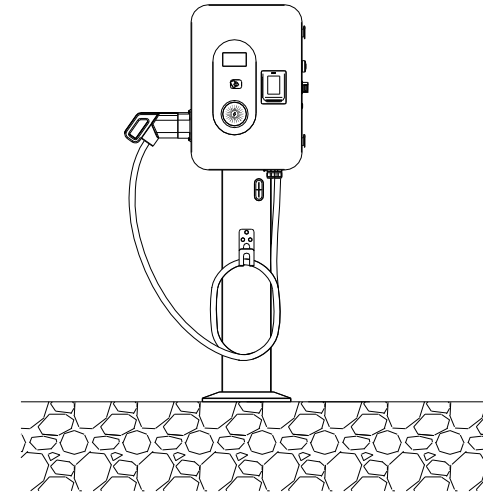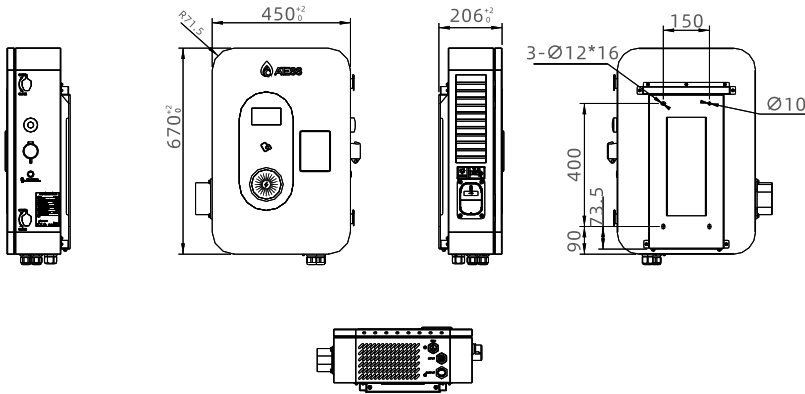

3.3 Wiring

Now prepare for wiring. Use 3 power cables and 1 PE cable, it is suggested to use a 4-core cable(with PE included) for the convenience of using the water-proof cable gland. The live wires shall be at least 6mm², PE shall be greater than 6mm². Open the 2 locks at the right, Connect the AC input cables into the corresponding terminals through the cable gland on the bottom right side and fasten them(Refer to the Internal view and terminal definition part for wire connection), Connect the network cable through the hole in front of the AC input cable gland to the RJ45 socket and fasten the water-proof gland. Close and lock the upper cover after checking internal wiring and breaker position. The wiring is then finished.

	L1	L2	L3	PE
Terminal				
Wire	≥6mm² ≥AWG9	≥6mm² ≥AWG9	≥6mm² ≥AWG9	≥6mm² ≥AWG9

450$^{+2}_{0}$ 206$^{+2}_{0}$ 150

R71.5 3-Ø12*16

670$^{+2}_{0}$ Ø10

400

73.5

90

Notice:

1. Only professional personnel can do the wiring, connect the Ac input wires in correct phase order according to the markings on the terminal block.

2. The PE terminal shall be connected to the Earth firmly and reliably!

3. Turn off the upstream breaker in the distribution panel and the breaker inside the charging equipment before repairing or maintaining.

4. It is recommended to install at least TypeA circuit breaker protection at the front of the charger input.

Distribution end RCBO Selection Recommended:

Rated power P: 20kW

Rated voltage Ue: 400Vac

Working voltage U: 320Vac~457Vac

Efficiency η: 94%

Power factor PF: COSΦ≥0.99

Rated current: Ie=P/1.732ηUeCOSΦ=21A

Recommended RCBO rated current: ≥39A=1.25*Ie

Maximum current: Imax=P/1.732ηUCOSΦ=39A

Recommended RCBO rated current: ≥49A=1.25*Imax

5. Do not replace the adapter.

6. Unauthorized use of extension cords is not allowed.

7. Please do not disassemble the unit unless authorized!

After the charger installation and wiring, connect the charger and PC via network cable for parameter setting. For specific actions, please refer to the following details.

4.1 Set the IP address of the PC

The Charger's default IP address is 192.168.1.5.To access the parameter setting interface, you need to first set the computer's IP to 192.168.1.x(x can be any value between 1and 255 except for5,e.g.192.168.1.10).
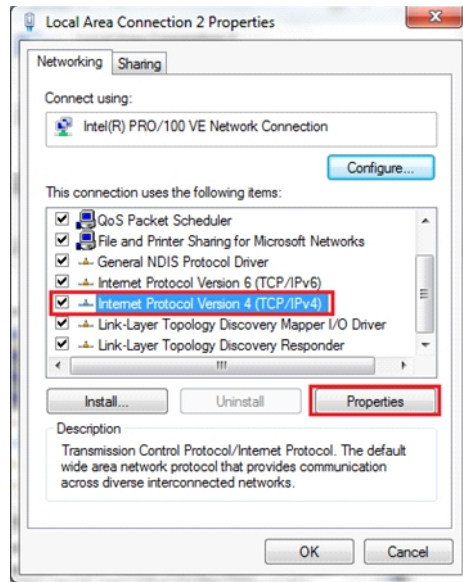
To set a static lP on your computer:

1. Click Start Menu {>} Control Panel {>} Network and Sharing Center. (for Windows 8and higher, search for and open Control Panel and select Network and internet).
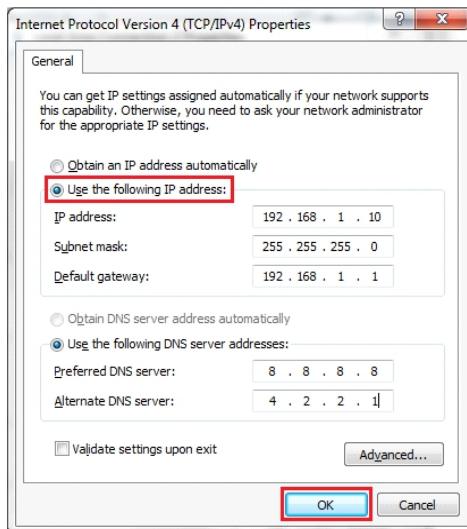
2.Click Change adapter settings.
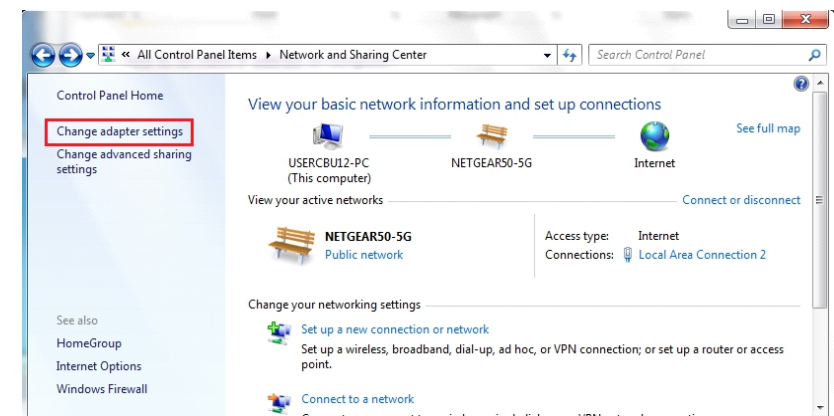
3.Right-click on Local Area Connection and click on Properties.
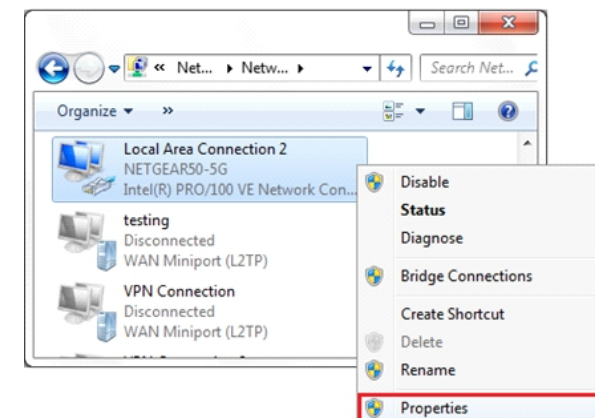
4.Select Internet Protocol Version 4 (Tcp/IPv4) and click on Properties.

5.Select "Use the following IP address" and enter the IP address, Subnet Mask, Default Gateway. Click OK and close the Local Area Connection; properties window.

4.2 Configure parameters

Connect the charger to a computer via a network cable. Open the web browser and type in http://192.168.1.5:8080/ in the address field and click enter, then the parameter setting page of the charger will open up.

Parameter setting can only be done via web browser on a computer. lt is suggested to use IE or Firefox, other browser might have compatibility problem.

Overview of Parameter setting page

Explanation of parameters:

(1) Firmware version of the Charger. This item cannot be modified here on the setting page.

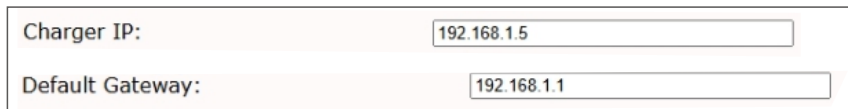Firmware Version Num: EVD-20S-C-V2.2.4-20250214-UU

Fig.1

(2) Charger ID, this is the unique identification of the charger, if the charger is to be connected to ATESS back-office server, this ID must be set as the serial number on the nameplate of the Charger. Otherwise the Charger cannot be registered on the server.
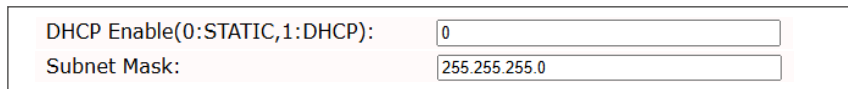
(3) Charger IP. The default IP is 192.168.1.5. It is not suggested to change the default IP. If you have changed the default IP and forgot the new IP, you can reset the charger to factory setting by long press the reset button(the reset button on control board, not the red emergency stop button) until the charger reboot. Then you can use the default 192.168.1.5 for access.

Fig.3

(4) Charger Subnet mask. The default value is 255.255.255.0. It is not suggested to change. If the subnet mask has been reset to other value and you have forgotten the new value, you can restore the charger to factory setting by long press the reset button.
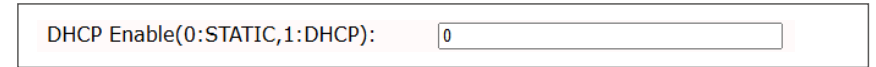

Fig.4

(5) MAC address. This is the MAc address used for LAN cable connection. If the charger is connected to ATESS back-office server via LAN cable and the router has MAC access control, then you can put this MAC in the router to allow the charger to access server.

Fig.5

(6) Enable the DHCP mode to automatically assign IP addresses to routers and Connect to charger via network cable under internet connection.

Fig.6
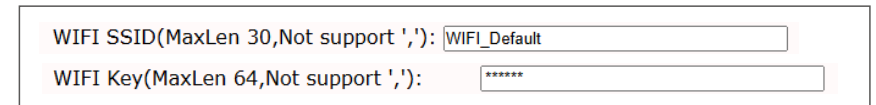
(7) The secret key to connect to the OCPP server for authentication.

Fig.7

(8) WiFi SSID (wireless network name) and WiFi Key (WiFi password) is used for WiFi connection.

Fig.8

(9) Server URL is to set the domain name or IP address of the back office server to be connected.
The domain name of ATESS server is "ws://enerace-ws.atesspower.com/ocpp/ws".

Fig.9

(10) Time of the charger. Set according to the local time. After the charger is connected to back-office server, the time will be synchronized with the server's time. If the charger has no server connection, then you'll have to reset the time every time you turn off and back on the charger.

Fig.10

(11) Login password is used for web page login parameter settings, the default password is 12345678.

Login Password:	••••••••

Fig.11

(12) Over temperature protection value, not suggested to change.

Max Charge Tempr(℃):	90

Fig.12

(13) Interval for uploading metering data during charging, keep the default value.

MeterValue Interval(0~300 Sec):	60

Fig.13

(14) 4G connection, when the 4G network cannot be connected, login SIM card APN and other information.

4G Account(Maxlen 30):	
4G APN:	Default
4G Password(Maxlen 30):	

Fig.14

(15) For the charger with an integrated meter, set the meter model and address and keep the default value.

Measure Meter Type:	Yada
Measure Meter Addr:	1

Fig.15

(16) Set low electricity prices for charging time to reduce costs.

Off Peak Charge(0:Disable,1:Enable):	0
Off Peak Time1(HH:MM-HH:MM):	11:00-16:00
Off Peak Time2:	22:00-08:00
Off Peak Time3:	00:00-00:00
Off Peak Time4:	00:00-00:00
Off Peak Time5:	00:00-00:00
Off Peak Curr1(A):	50
Off Peak Curr2(A):	50
Off Peak Curr3(A):	0
Off Peak Curr4(A):	0
Off Peak Curr5(A):	0

Fig.16

(17) Relieve the power grid pressure, authorized charging, after the set time to start.

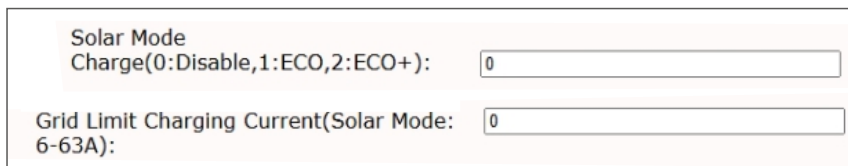| Rand Delay Charge Time(Sec):	0

Fig.17

(18) Loadbalancing, sets the total power input of the home grid to avoid tripping.

Extern power limit type(0:Dis,1:Samp,2:Lms,3:3th_Pt):	0
External Power Limit(KW):	20

Fig.18

(19) To set the working mode of solar, the ECO mode requires setting the KWH of electricity obtained from the grid.
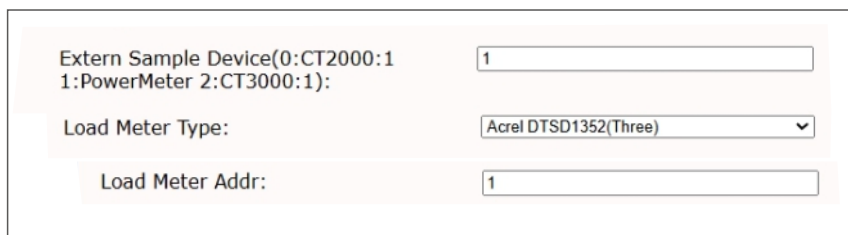
Solar Mode
Charge(0:Disable,1:ECO,2:ECO+):   `0`

Grid Limit Charging Current(Solar Mode: 6-63A):   `0`

Fig.19

(20) Set the load balancing or Solar function, sampling instrument type and address.

Extern Sample Device(0:CT2000:1 1:PowerMeter 2:CT3000:1):   `1`

Load Meter Type: `Acrel DTSD1352(Three)` ▼

Load Meter Addr: `1`

Fig.20

(21) Set the display language of the charger LCD.

Language Set: `English` ▼

Fig.21

(22) The charger model, can not be modified, factory default.

Module Type: `EVD_20K_C_UU_TYPE` ▼

Fig.22

(23) Set the output power of the charger to limit the output power of the charger.

Max Output Power(KW):   `20.0`

Fig.23

(24) Charging mode setting. 1:APP/RFlD mode; 2:RFlD mode; 3: Plug & charge mode.

Charge Mode(Default 1:APP,2:RFID,3:Plug&Charge):   `3`

Fig.24

(25) PIN of the charger, used to verify the PIN of user card. To use a RFID card with the charger, their PIN must be consistent. If the user card has a different PIN, then it can not be used on this charger, The default PIN setting of the charger is 242007.

Card Pin(6 digits, E.g:123456):   `242007`

Fig.25

(26) Set the tariff for charging energy.

Charging Rate(1/kWh) :   `2.0000`

Fig.26

(27) Set daylight saving time for the charger to switch automatically.

Daylight Saving Time(MM-DD):   `00-00&00-00`

Fig.27

(28) The communication interval between the charger and server, keep the default value.

Hearbeat Interval(0~3600 Sec):   `60`

Fig.28

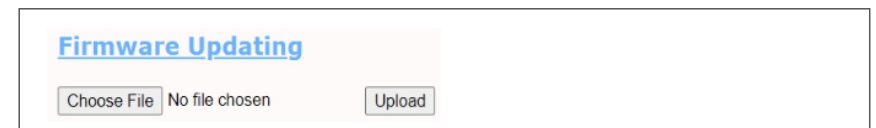(29) After modifying any parameters, click "Set and Reboot" to take effect. Some parameters may cause the charger to automatically restart.

`Set and Reboot`

Fig.29

(30) Upgrade the firmware of the charger, After clicking upload, the charger will restart.

Firmware Updating

`Choose File` No file chosen   `Upload`

Fig.30

(31) Restore the charge to factory settings.

Restore factory settings

`Reset`

Fig.31

5 Operation instruction and LCD introduction

5.1 Charging mode and operation

Initiate or cease charging by scanning QR code using APP or by swiping RFID card.

APP mode:
You can also use APP for reservation and payment provided that the back-office server supports such function.

APP mode operation process flow

If you are using the ATESS APP, Charging can be started/stopped by pressing the " ⏻ / ⏸ " button on the APP.
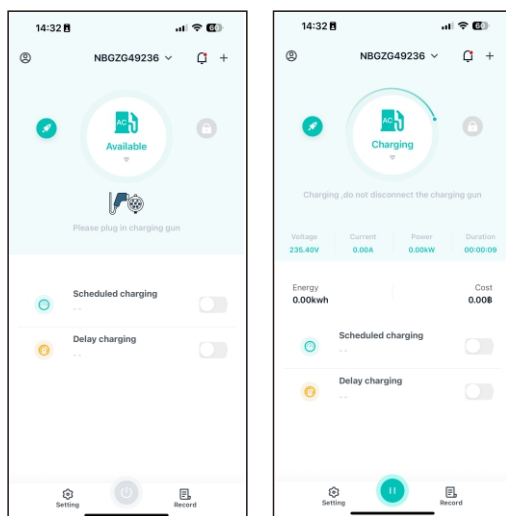
RFID mode:
Initiate or cease charging by swiping RFID card.

RFID mode operation process flow

Plug&Charge:
If you want to stop the charging, after EV plugged in press the Stop button on the right side of the charger.

Plug&Charge mode operation process flow

5.2 LCD interface introduction(For LCD version)

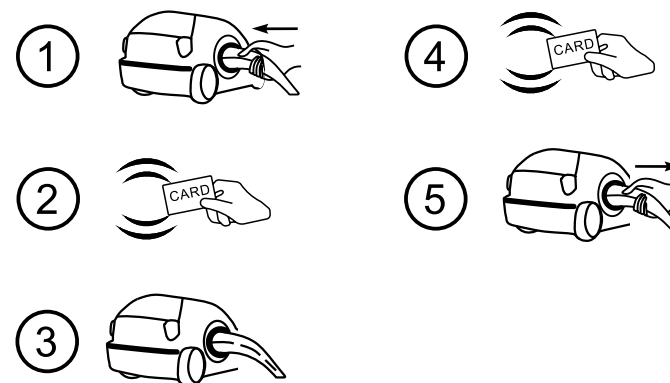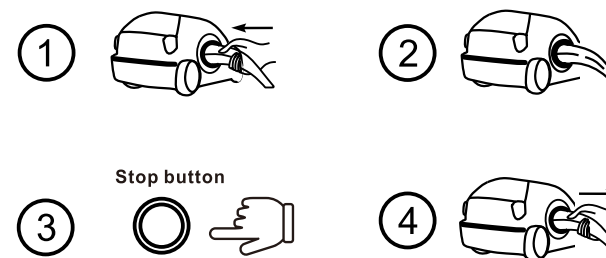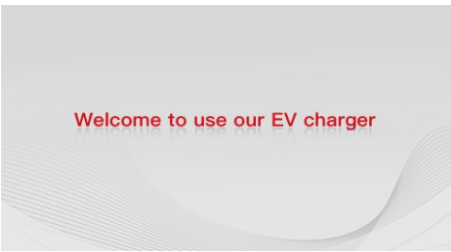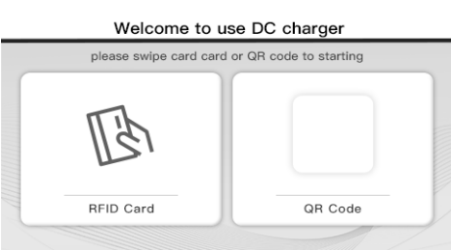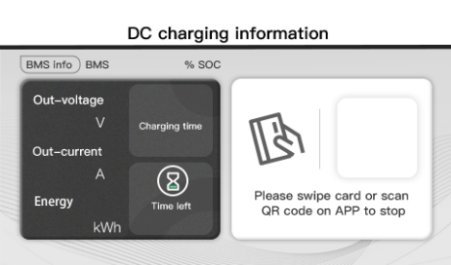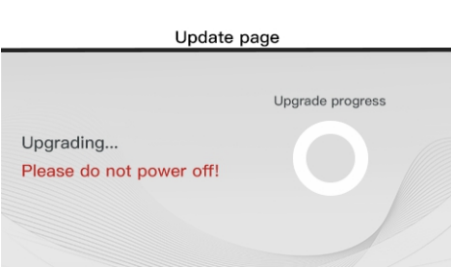The charging equipment is equipped with a 4.3 inch industrial-grade resistor type panel. The display content is as below.

Welcome to use our EV charger	When powered on for the first time, the Charging equipment will display this page.
Welcome to use DC charger please swipe card card or QR code to starting RFID Card QR Code	When powered on, the Charging equipment will display this page.
DC charging information BMS Info BMS % SOC Out-voltage V Charging time Out-current A Energy Time left kWh Please swipe card or scan QR code on APP to stop	Charging information, which will show the status of the charging equipment,such as standby, charging, fault,etc.
Update page Upgrade progress Upgrading... Please do not power off!	Charging equipment is being upgraded.

6.1 Update by SD card

There are 2 ways to update firmware for EV charger
1. Update by SD card
2.Update on parameter setting page

The firmware file must be named as "App.bin".
1. Prepare a microSD card with capacity not greater than 4G. Format the SD card using FAT32.
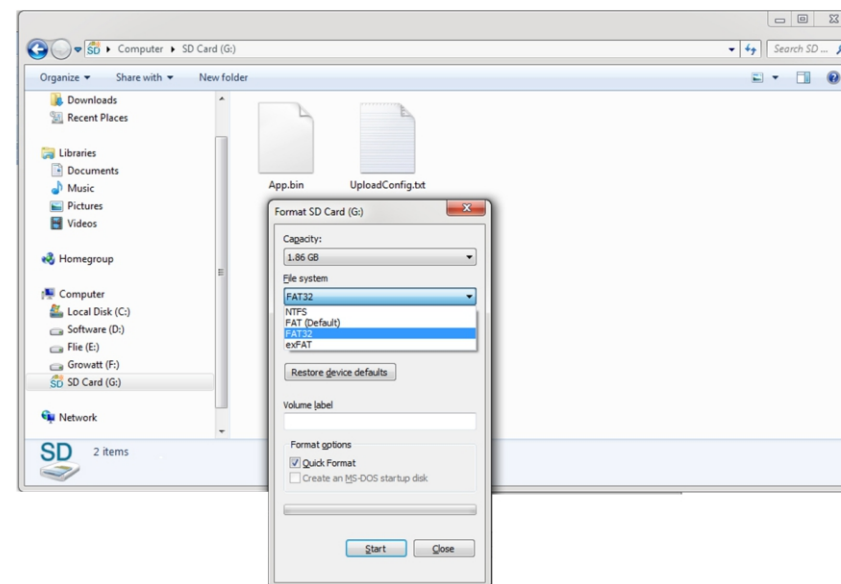
2. In the root directory of the SD card, rename the firmware file as "App.bin". And create a txt file with name of "UploadConfig.txt".

App.bin	2018/12/5 15:58	BIN 文件	168 KB
UploadConfig.txt	2018/12/6 15:04	文本文档	0 KB

3. Open the txt file, write "state=1" in it and save the file.

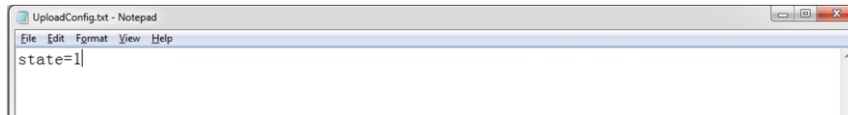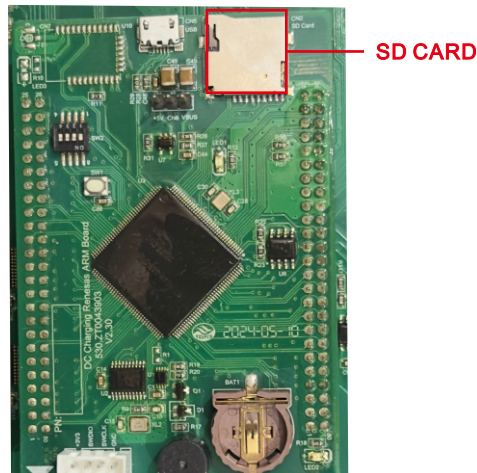4. First, power off the charging station. Insert the SD card, then restore power to the charging station. The update will begin automatically, accompanied by a beeping sound. When a long beep is heard, the charging station will reboot. After confirming the reboot is complete, power off the charging station again and remove the SD card. The update is now finished.

Micro SD slot of 20kW charger

5. Check the current firmware version on LCD or the parameter setting page. To check firmware version on the parameter setting page.
Connect the charger to computer via a network cable, the computer's IP must be within the 192.168.1.x segment(x is any value between 1 and 255 except 5). Open the web browser, type in the charger's default IP of "http://192.168.1.5:8080" and click enter, then you can check the firmware version on the appeared parameter setting page.

6.2 Update on parameter setting page

Using this method for update doesn't require any specific name for the firmware file.
1. Connect the charger to a computer with IP address set as 192.168.1.x(x can beany value between 1 and 255 except 5) via a network cable. Open web browser and type in the charger's default IP address-http://192.168.1.5:8080, click enter then you'll get into the parameter setting page.

2. Scroll down to the below field.

3. Click the "Browse" button and select the firmware file. Click "Upload", then update will start automatically.

Firmware Updating

Choose File | No file chosen | Upload

After the upgrade command is issued, the charging station's LED indicator will flash yellow. When the yellow light stops flashing, it indicates the download is complete. Subsequently, a beeping sound will be emitted, and the charging station will automatically reboot—this signifies successful firmware update.

4. You might see below content, lf the charger is already successfully reboot after the firmware update, close the browser and open it again to check the current firmware version.

① 192.168.1.5:8080/firmware.cgi

please wait for a while, the module will boot in 2 seconds.

① 192.168.1.5:8080/firmware.cgi

please wait for a while, the module will boot in -13 seconds.

7.1 Troubleshooting: Fault code

| No.	Fault description
1	Meter commun fault!
2	Load Balanc Meter Fault!
3	Power module commun fault!
4	Emergency stop is pressed!
5	Door is open!
6	Pulg head connect over temp!
7	DC output overvolt fault!
8	DC output overvurrent fault!
9	Wait for BMS commun timeout!
10	DC+ Contactor sticking fault!
11	CP short!
12	PE cut!
13	Insulation detect fault!
14	PLC fault!
15	EV emcy fault!

7.2 Firmware update fails

7.2.1 Firmware update failure with SD card

a. Check if the capacity is over 4G bytes, please use a SD card of less than 4GB to retry.
b. Check if the SD card is formatted with FAT32.
c. Check if the firmware file is renamed as App.bin.
d. Check if you have filled in "state=1" in the UploadConfig.txt file.

7.2.2 Firmware update failure with laptop

Please try with IE browser. Or reboot the laptop to retry.

7.3 WiFi connection&APP issue
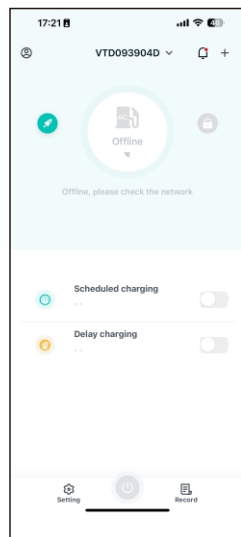
a. Check WiFi signal strength

Signal strength on PC:

Signal strength on mobile:

b. Please check and input the correct WiFi SSID and password to retry;

If you check the WiFi setting on the App, please turn off and back on the charger and connect your mobile to the WiFi emitted by the charger for checking and setting.
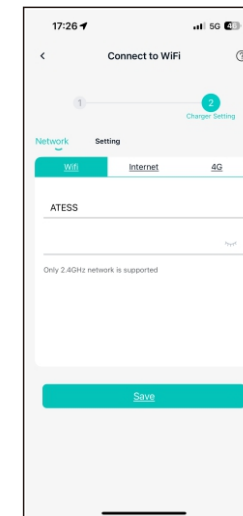
c. Check if there is access control in the router, e.g. MAC filtering, port blocking, etc.

To verify this, you can use your mobile phone to create a hotspot and try to connect the charger to this mobile hotspot. If charger can connect to the hotspot, but cannot connect to the router, there must be access control in the router, please check with the site owner for this.

Check if charger is connected on Device list of the hotspot setting page
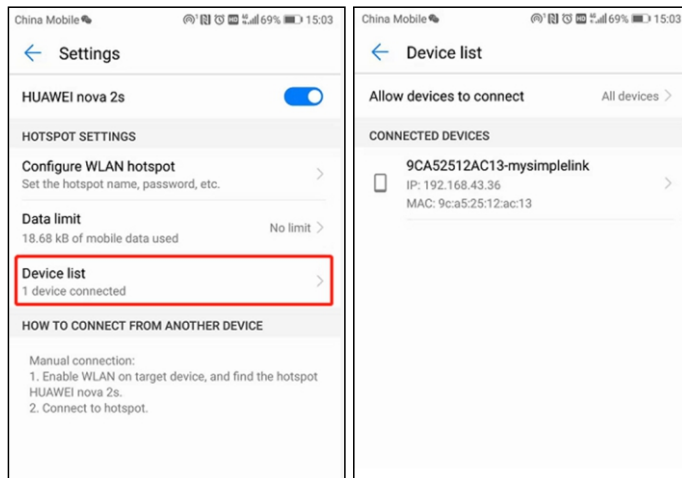
1. Some routers have 2 WiFi, one is 2.4GHz, the other is 5GHz. Most homes just use the 5GHz WiFi as their default WiFi. But the charger can only connect to the 2.4GHz WiFi. So if the charger can connect to your mobile phone hotspot, but cannot connect to the home WiFi. Please check with the home owner or check on their router to see if you are using the 5GHz WiFi. Please do use the 2.4GHz WiFi for charger connection.

2. When the WiFi signal strength is lower than - 75dbm, the charging point will not be able to connect with WiFi.

(1) Download the WiFi signal strength test tool from the app store to check whether the WiFi signal strength connected to the charging point is greater than-75dbm.

(2) If the WiFi signal strength is weak, it is recommended to use AP repeater to increase the signal strength, which can enlarge the WiFi signal range.

d. Check if the charger is still connected to the computer. Please unplug it from computer otherwise the charger won't connect to the back-office server.

e. Check if server address is correct in the "Server URL" field. The correct setting is : ws://enerace-ws.atesspower.com/ocpp/ws

7.4 Cannot access parameter setting page

a. Check if you have connected the charger to your computer,

b. Check if you have change the computer's IP to 192.168.1.x(x can be any value between 1 and 255 except 5).

To set a static IP on your Windows computer:

(1). Click Start Menu>Control Panel>Network and Sharing Center. (For Windows 8 and higher, search for and open Control Panel and select Network and Internet).

(2). Click Change adapter settings.
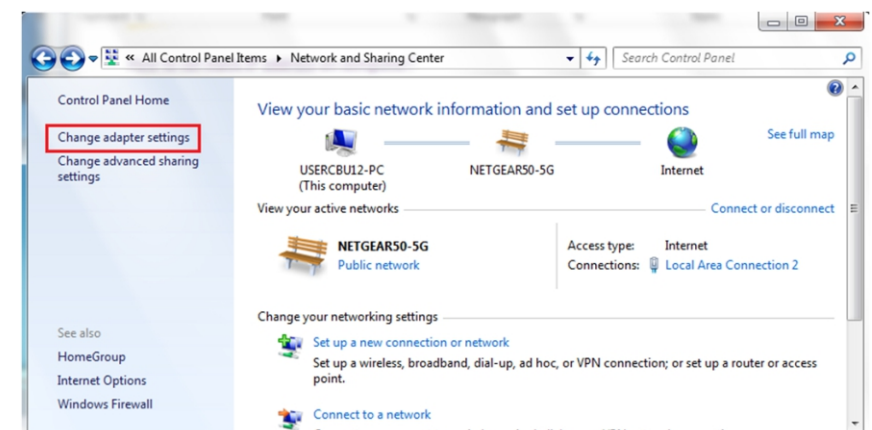
(3). Right-click on Local Area Connection and click on Properties.
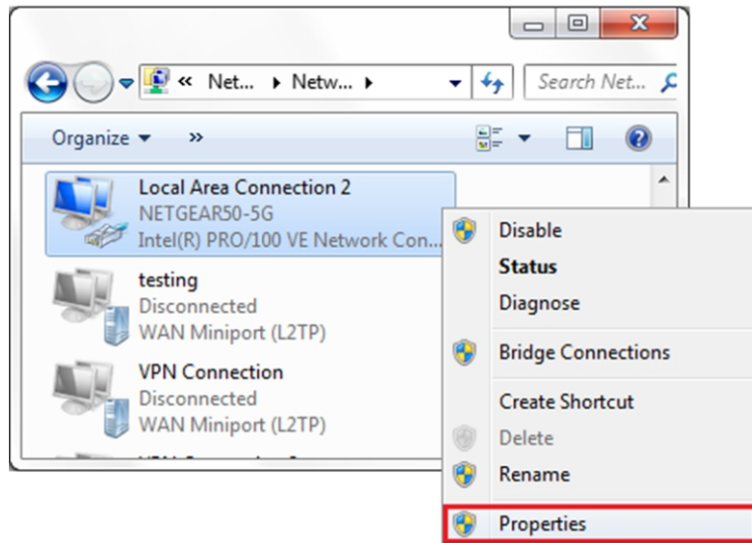
(4). Select Internet Protocol Version 4 (TCP/IPv4) and click on Properties.
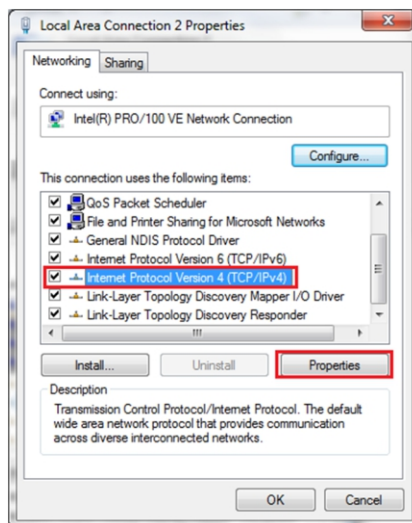
(5). Select "Use the following IP address" and enter the IP address, Subnet Mask, Default Gateway. Click OK and close the Local Area Connection properties window.
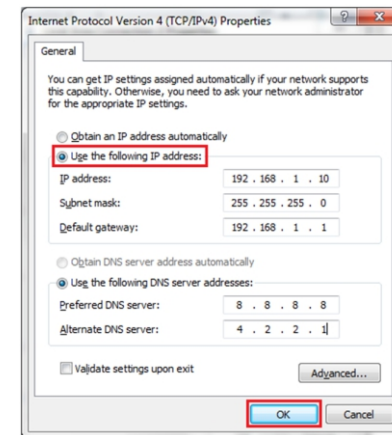
a. Check what web browser is being used, it's suggested to use Firefox or IE, Chrome cannot be used to update firmware.

b. Check if you have input the complete content, which is http://192.168.1.5:8080, in the address field, do not leave out the http:// or the ":8080" .

c. Sometimes you may need to restart the charger to access its parameter setting page.

d. If you have changed the charger's IP to other value and cannot remember, you can restore the charger to factory setting by long press the reset button. Then you can access it using http://192.168.1.5:8080

Reset button
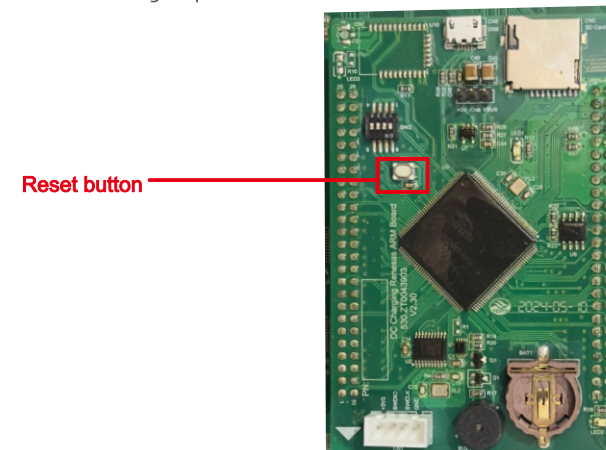
Please note:After restoring the charger to factory setting, you'll need to reset the charger ID and server url, otherwise the charger won't be connected to the back-office server.

7.5 Charging issue

If charging cannot start after the car is plugged in,
a. Check if the red emergency stop button is pressed.
b. Check what charge mode is being used

APP: Charge can only be started/stopped by APP or RFID card, and the charger must be connected to the back office server already;

RFID: Charge can only be started/stopped by RFID card;

Plug and charge: Charge will start automatically when car is plugged in.

Use Excess Solar Power to Charge Your Car 8

The charge point can work with grid-tied solar system, to detect and use the residual solar power to charge your car that otherwise would be fed back to grid. This can help increase the self-usage rate of the solar system and reduce electricity bill for the household.

The charge point supports 3 charge modes with grid-tied PV system: FAST, ECO and ECO+.

8.1 Introduction to the 3 modes for solar charge

ECO+ Mode:

In this mode, the charging point only uses the electricity sent by the photovoltaic inverter to charge the electric vehicle. The charging station consumes exactly the amount of electricity generated by the photovoltaic system. Please choose this mode carefully.

FAST mode: Charge at the rated power, the car can be fully charged in the shortest time at this mode.

ECO mode:

（1）Solar function set the power p range: Pe stands for rated power, P1 stands for Power Transferred to Power Grid by Photovoltaic.

　　1. The power of three-phase charger belongs to（2.4kW-Pe）

（2）Operation mode：

　　1. Set the Grid current limit on the parameter configuration interface (e.g., set the current to 15A).

　　2. If the photovoltaic system generates 10kW, the charging station will rely solely on the PV output.

　　3. If the photovoltaic system generates 5kW, the charging station will draw approximately 5kW from the grid.

8.2 Wiring

To monitor the real-time power import and export, the CT or meter is needed for this function to work properly.

If CT is used, the wiring will be as below.
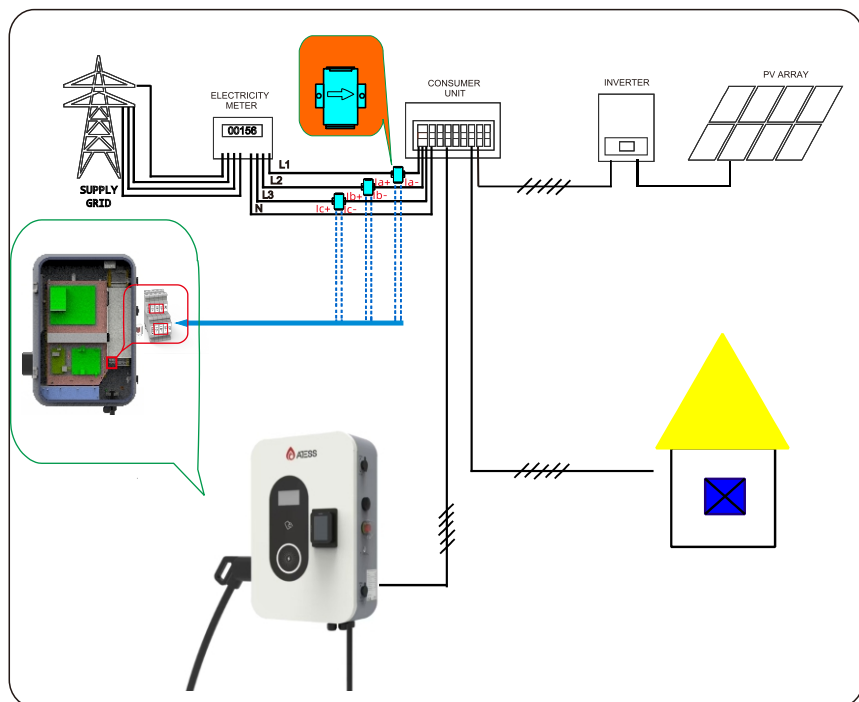
If meter is used, please wire it as below
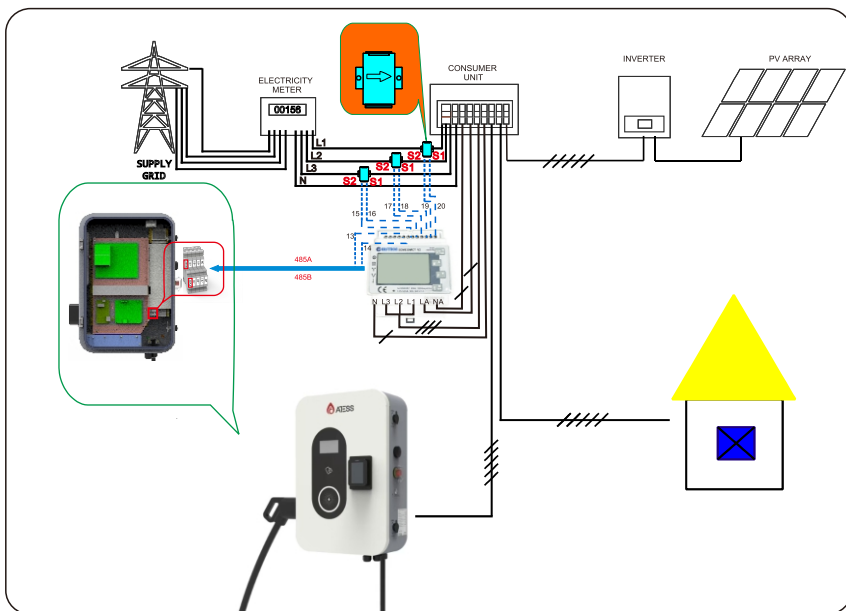
8.3 Parameter configuration for this function

(1) Connect the charge point to a laptop with a network cable, access the parameter setting page on the web browser of the laptop.

(2) Scroll down to find the following parameters: Solar Mode, FAST, ECO or ECO+.

(3) Select CT or meter as sampling device of this solar charge function. Scroll down to find the option: External Power Sampling Wiring(0:CT2000:1 1:PowerMeter2: CT3000:1). If CT is used, please set it to 0; if meter will be used, please set it to 1.

(4) If you choose the PowerMeter.Plesae choose PowerMeter Type, change PowerMeter Addr to the address shown on the meter.

9 Load Balancing

Introduction

The charge point can monitor the total power consumption of the household during charging. If the power consumption approaches the preset max value, the charge point will reduce charge power to avoid the situation of main breaker trip due to overload. It will adjust the charging power dynamically and in real-time thus the car can always be charged with the maximum allowable power.

9.1 Wiring

Similar with the solar charge function, the CT or meter is needed to detect the power import. If the CT is used, please wire it as below,
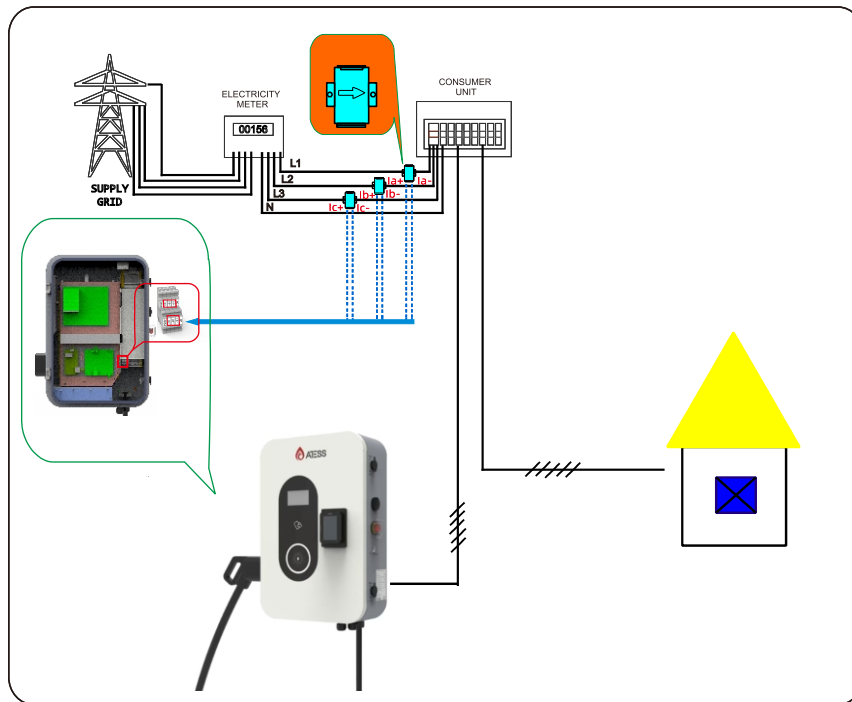
9.2 If SDM630MCT meter is used, the wiring will be as the following
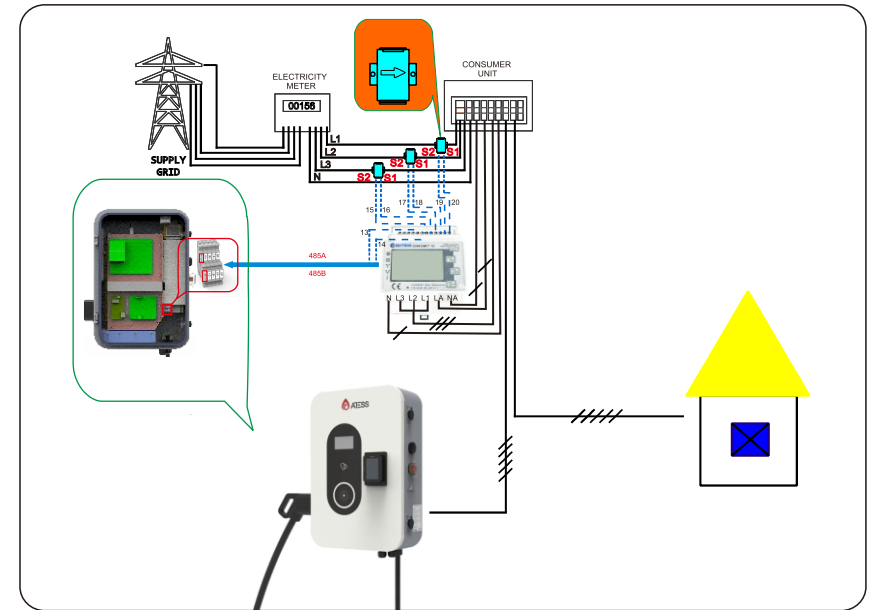
9.3 Parameter configuration for this function

(1) Connect the charge point to a laptop with a network cable, access the parameter setting page on the web browser of the laptop.

(2) Scroll down to find the following parameter: Power Distribution Enable(0:Disable, 1:Enable) and set it to 1 to activate the power modulation function.

(3) Select power sampling device in the field of the parameter: External Power Sampling Wiring(0: Inner CT 1: PowerMeter). 0 means CT while 1 stands for meter.

Extern Sample Device(0:CT2000:1
1:PowerMeter 2:CT3000:1):   1

(4) Set the maximum power import value in the field of External Maxlimit Power(kW). To avoid nuisance tripping of the main breaker, it is suggested to set this parameter slightly lower than the max supply power of the property. e.g. the max supply power is 15kW, you can set the max power import to 13kW or 14kW.

Extern power limit   0
type(0:Dis,1:Samp,2:Lms,3:3th_Pt):
    External Power Limit(KW):   20
Load Meter Type: Acrel DTSD1352(Three)

(5) If you choose the PowerMeter. Plesae choise PowerMeter Type, change PowerMeter Addr to the address shown on the meter.

Extern Sample Device(0:CT2000:1   1
1:PowerMeter 2:CT3000:1):

Load Meter Type: Acrel DTSD1352(Three)

Measure Meter Type: Yada

Charge Mode(1:APP, 2:RFID,
3:Plug&Charge):
Default Gateway:

Net MAC Address:

WIFI Key(MaxLen 16,Not support ','):

Charging Rate(1/kWh) :

4G User Password:

Login Password:

Hearbeat Interval(0~3600 Sec):

Daylight Saving Time(MM-DD):

安科瑞
东宏
Acrel DDS1352
Acrel DTSD1352(Three)
Eastron SDM230
Eastron SDM630(Three)
Eastron SDM120 MID
EastronSDM72D MID(Three)
Din-Rail DTSU666 MID(Three)
ACREL_AGF_AE
SM_US_200
CHNT_DTSU666_MID(Three)
CHNT_DDSU666

Model	EVD-20S
Dimension(mm)	450*206*670(W*D*H)
Weight(kg)	38kg
Display	LCD(opt)
Casing material	Stainless steel&acrylic sheet
AC input	
Grid connection	400V, 3 phase 4 wires
Voltage	AC 320~457V
Current	32A
Frequency	50/60Hz
DC output	
Plug type	CCS 2
Voltage	DC150~1000V
Current	0-50A
Voltage-stabilizing accuracy	±0.5%
Current-stabilizing accuracy	≤±1%
Power factor	≥0.98
Efficiency	≥94%

Ingress protection	IP 54
Working environment	-25℃~+50℃, derate since 50℃
Relative humidity	5%-95%
Altitude	2000m, derate for higher than 2000m
Cooling method	Forced air cooling
Remote monitoring	Ethernet/WIFI/4G/485
Payment	APP/RFID(opt)/Credit Card(opt)
Standby power	25W
Standards	IEC-62196-1;IEC-62196-3;
Mounting	Wall or Pole
Certificate	CE, UKCA, RCM
Metering accuracy	0.5%
Protection features	
Over /Under voltage t of AC output	YES
Over voltage of DC output	YES
Over temperature protection	Derate since 55℃; Stop at 75℃
Emergency stop protection	Yes
Lightning protection	Type II

11.1. APP Introduction

11.1.1 Description

EneRace is an app for controlling charger. It can help you quickly and easily charge your vehicle with a EV charger.

11.1.2 Main Function Of **EneRace**

(1) The APP can push the transfer information of the charger.
(2) The user can control the start and stop of the charger through the APP.
(3) The user can preset the charging scheme and scheduled charging.
(4) The user can modify the parameter settings of the charger.
(5) Users can authorize other users to use their own charger.
(6) The user can view the charging record and report to email.
(7) Users can manage and set up their own accounts.

11.1.3 Performance

APP has good ease of use and reliability, and guarantees the security and confidentiality of information.

11.2. Instructions

11.2.1 APP download and install

Users can install EneRace by scanning the below QR code or download it from the APP store(IOS) or GooglePlay(Andriod).


<IOS>   <Andriod>

11.2.2 Registration and login

When the user first visits, the user registration is performed by the following steps: Click the desktop icon Login page Register. When the user has an account, you can directly enter the user name and password to log in. If you forget the password, you can click the login page, forget the password button, and follow the prompts to retrieve the password through the mailbox.
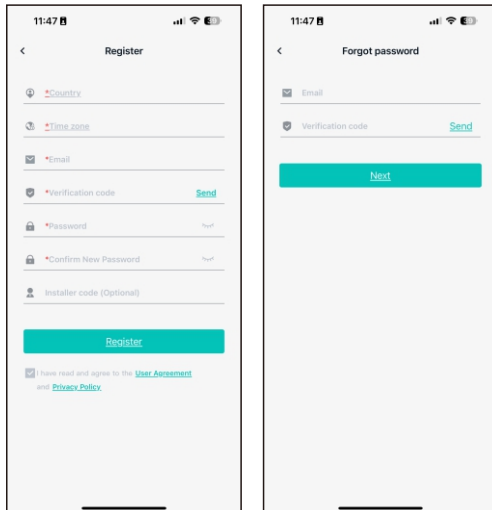
11.2.3 Add Charger

IF you use ATS Charge for the first time, you need to add charger in the APP to facilitate setting and controlling the charger. The process of adding a charger is as follows: Click "Add" to add a charger by scanning the QR code (LCD/nameplate)or entering the charger ID. you can check the OR code/Bar code on the side window nameplate.
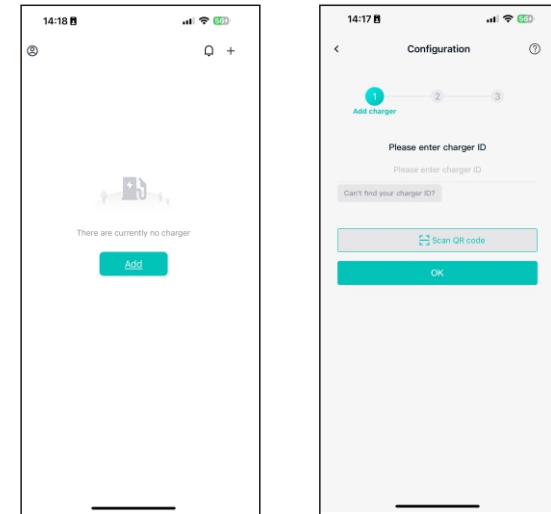
11.2.4 Charger switch and delete

When you have multiple chargers, you can switch chargers by clicking the arrow. A list of chargers can be found in the account information, swipe left to delete.
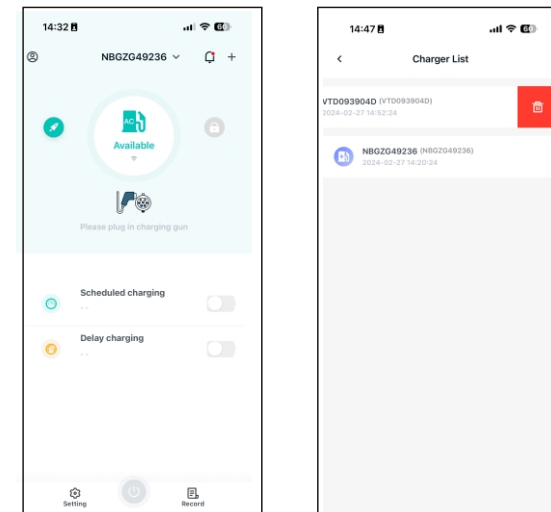
11.2.5 Start and stop control of charger

Press " ⏻ / ⏻ " to turn on / off.

Note: when charger status is Preparing , you can press ⏻ to start charging.

11.2.6 Charging record

Press "Record" to view past charge records, including changer ID, gun number, time, energy, cost and so on.You can also view the energy consumption curve over time, and download the charging report to your email or local reference.
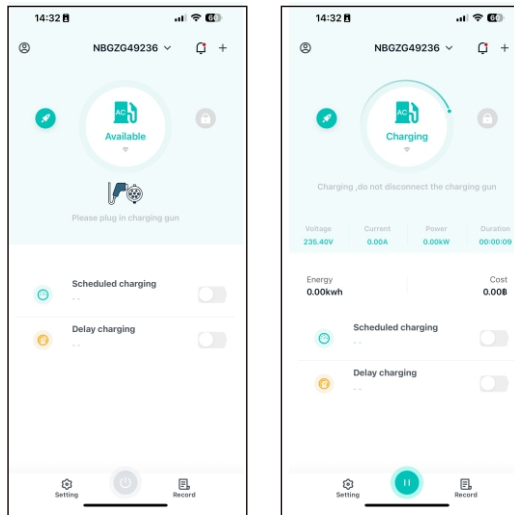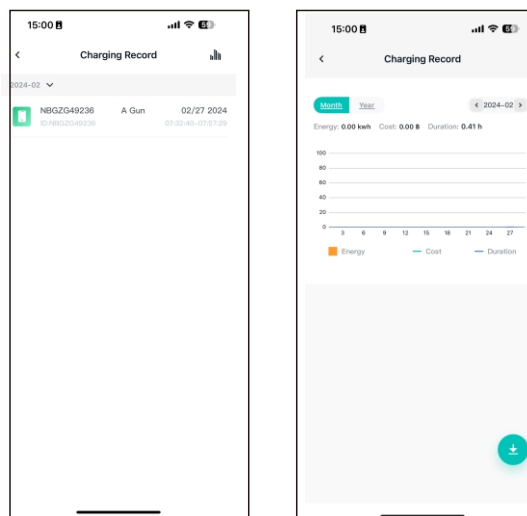

11.2.7 Preset charging scheme
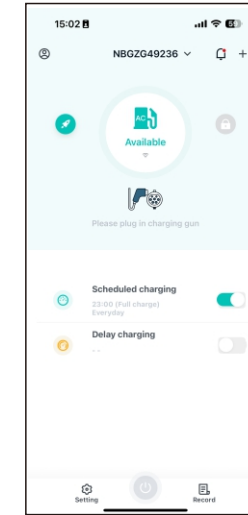
Multiple reservation plans can be preset. Once activated, the charging station will execute charging according to the selected plan.

Start Time: Set the charging start time.

End Time: Set the charging end time.

Repeat: Configure the recurrence frequency of the reservation plan (options: single use or Monday–Sunday)

Note: Scheduled charging must be used in App mode.

11.2.8 Charger parameter settings Basic parameter Settings and function Settings of the charger, including Basic info, Charger settings, load balancing, authorization, off-peak Regulations, charging tariffs, connect to WIFI and Firmware upgrade.

Basic info

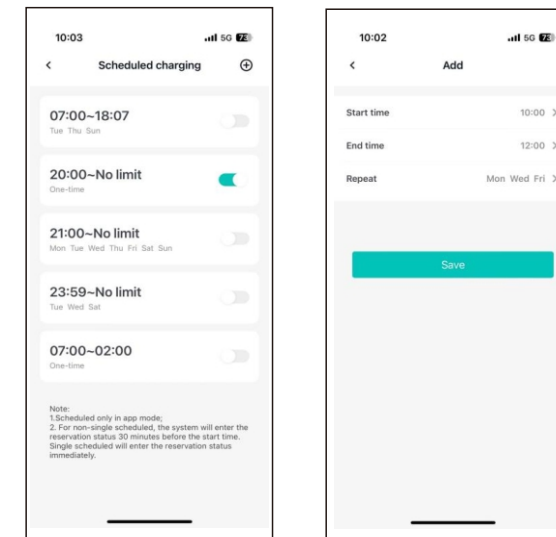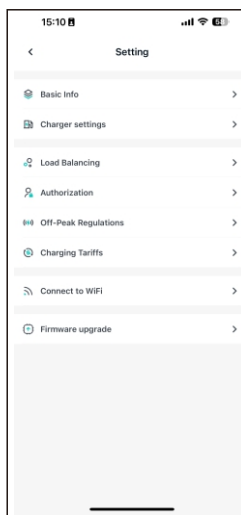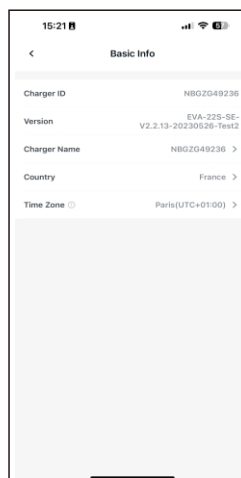Charger ID: The authentication code of the charger cannot be modified.

Version : Firmware version of the charger.

Charger Name: A custom name for the charger.

Country: Set the current country so that the charger displays the correct time.

Time zone: Set the current time zone so that the charger displays the correct time.

Charger Settings

Charging mode: Three modes control the charging of the charger, APP, RFID and plug and charge.

Solar Mode: The Solar feature works in three ways, Fast, ECO and ECO+. In ECO mode, you need to set the power that can be allowed obtain from the grid.

ECO current limit: In solar mode, part of the charging energy comes from the photovoltaic and part from the grid. Here, set the power that is allowed to be obtained from the grid.
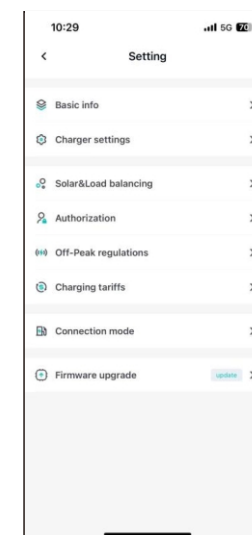
Load balancing

Wiring sampling: The load balancing function and the solar function detect the type of tool for fuse or gird power. CT2000,CT3000 and meter.

Total domestic power(kw): Set the total capacity of the home grid to maintain a balance between load and charger to avoid overload trips. If your detection tool is a meter, you need to select the corresponding model and set the meter address(check on the meter screen).
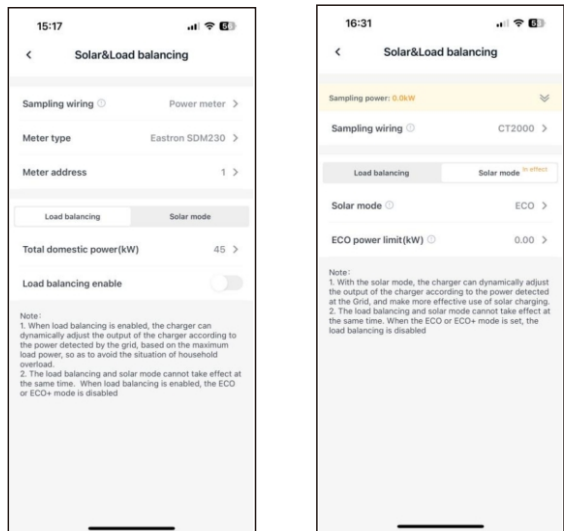
Authrization

To manage authorized users, you can view the authorization time, account name, and delete user in the authorization management interface.

Users can authorize other users to use charging stubs through authorization management. Enter the user name to authorize other users to use the chargepoint.

If the person you want to authorize does not have an account, you can register for the new user by registering the new user in the upper right corner.

Off-peak Regulations

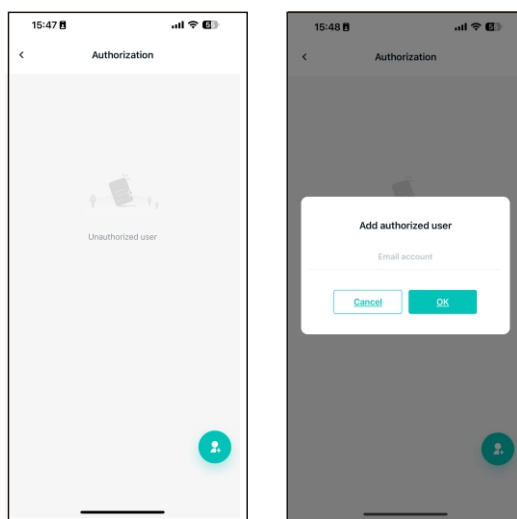According to the power price, set the output capacity of the charger in various time periods to save electricity costs. You can set a maximum of five time periods. Supports setting schedules for weekends only, weekdays only, or all-day operation.
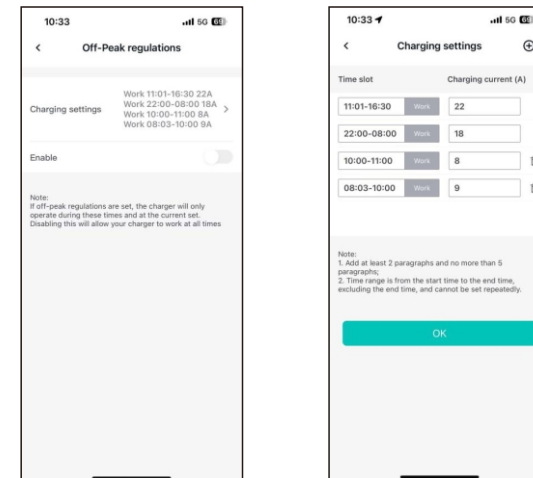
Charging tariffs

Currency: Select the currency in which the charge is settled and the charge report displays the bill with currency.

Tariffs setting: The charge tariff is used to calculate the cost of electricity consumed. The charge report shows the total cost. You can set up tariffs for up to 5 different time periods.
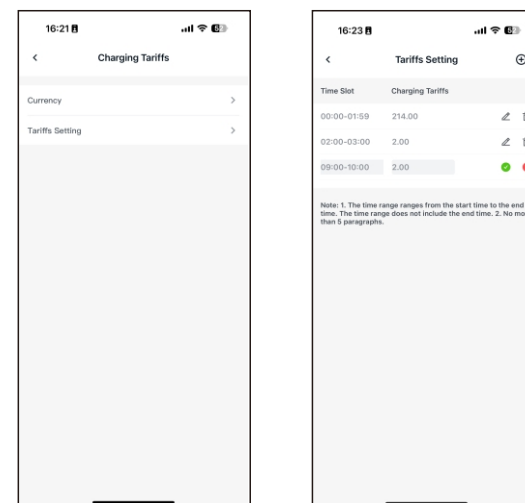
Connect to WIFI

When the charger is not connected to the server, every 60 seconds will switch to AP mode. search for the charger WIFI, and the WIFI name is the charger ID. After connecting the charger WIFI, you can enter the setting page to set the parameters of the charger. When the charger is connected to the network, you can switch to AP mode in the parameter setting, set the charger to AP mode, and then connect. Switching to AP mode can switch the STA mode to AP mode. If it is not operated for 60s, it will switch back to STA mode and conn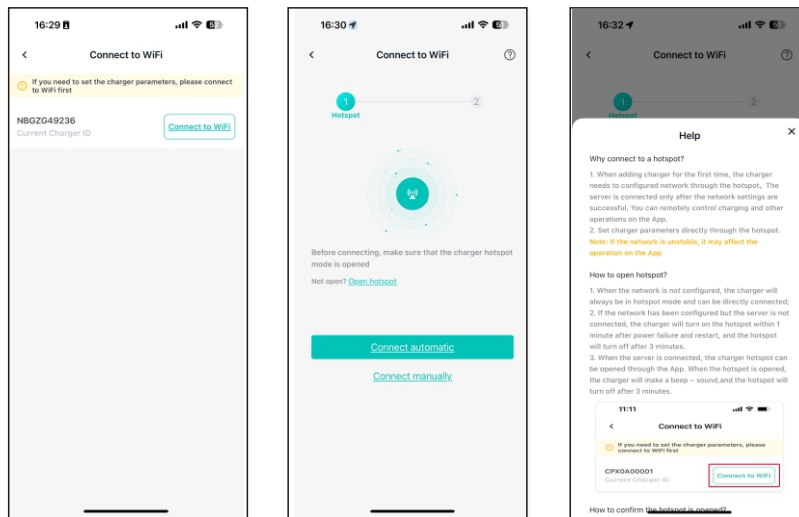ect to the server. Click the "connect to WIFI" button to enter the hot spot connection page. When connecting WIFI at the charging point, please note the charger ID of the current stub. The connected hotspot must be the charger ID. Click the upper right corner of the hotspot connection page to view the operation instructions of the WIFI Direct connection function.

Only when the charger is in AP mode can you use the phone to connect to the charger. The charger ID is displayed in AP mode and the charger parameters can be set.Pay attention to the format restrictions of the parameters when setting the pole parameters.

(1) IP address, gateway, mask, and DNS should be filled in according to the four-segment number format, for example: 192.168.1.1

(2) The following parameters must be integers: heartbeat interval (0-3600), PING interval (5-300), meter upload interval (0-3600), protection temperature (65 -85).

(3) rate range is (0-5000), you can set the decimal.

(4) The following parameters can only be numbers or letters: card reader key, WiFi password, Bluetooth password, 4G password, 4G APN, handshake login authorization key.

(5) The following parameters can only enter numbers, uppercase and lowercase letters, icon page to view the operation instructions of the WiFi Direct connection function. underscores (_), spaces, bars (-): WiFi name, Bluetooth name, 4G username.
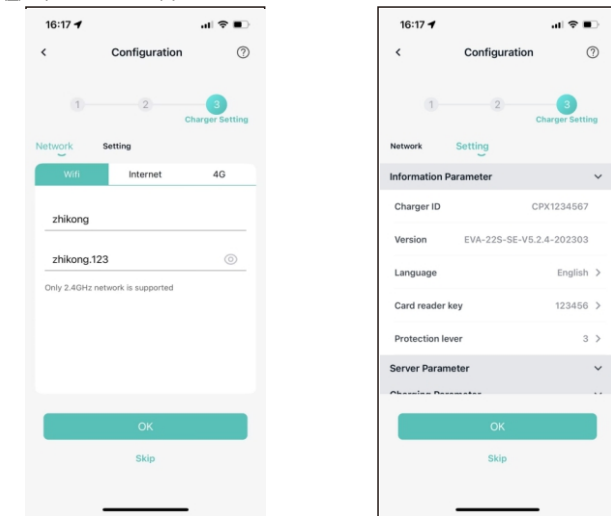
Firmware upgrade

EV charger firmware upgrade, when there are new functions and other upgrades, users can achieve one-click upgrade through the interface.
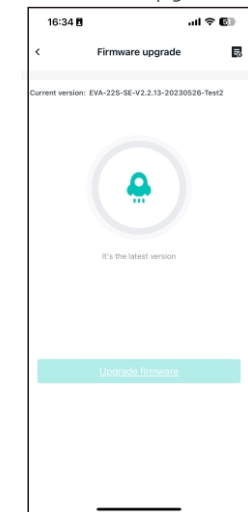
11.3 Account Management

Users can manage their accounts, set their avatars, change their passwords, and bind
their mobile phone numbers and mailboxes.
Change password: You need to verify the original password, then enter and confirm the new password.
Modify the mailbox: Follow the steps to verify the new mailbox by verification code.
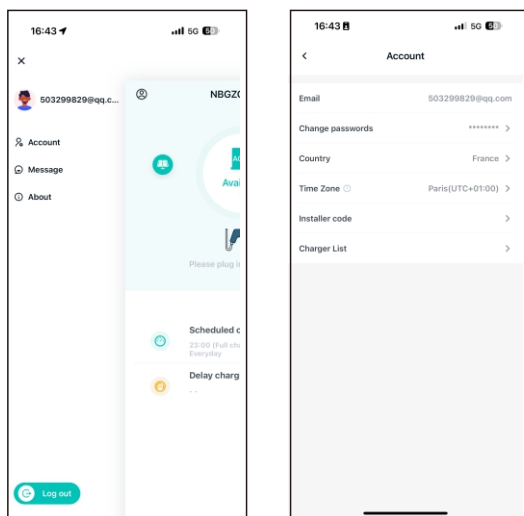
12.1 POS installation

12.1.1 Insert Card POS Terminal installation

Step 1:
Open the cabinet door
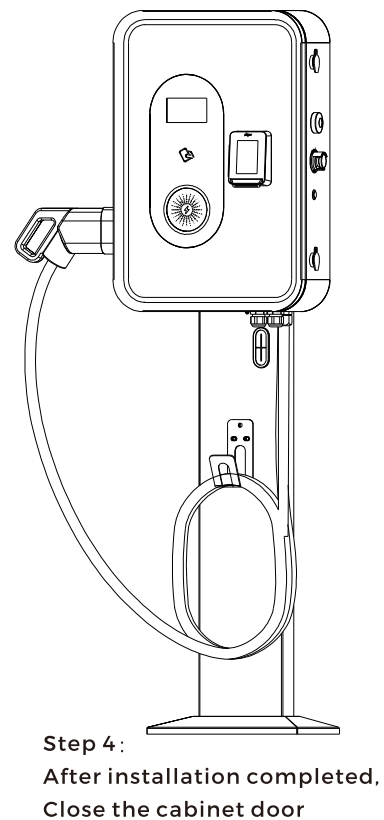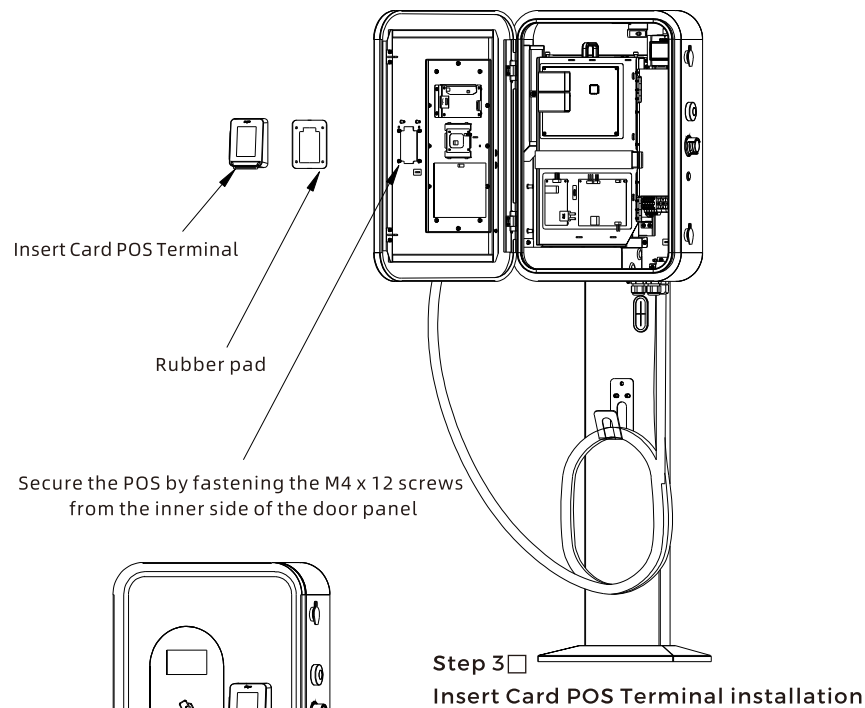
Outer sealing plate

Step 2:
Remove the outer sealing plate

Insert Card POS Terminal

Rubber pad

Secure the POS by fastening the M4 x 12 screws
from the inner side of the door panel

Step 3□
Insert Card POS Terminal installation

Operation steps:

1.Open the cabinet door with the key.

2.Remove the outer sealing plate from the inside of the cabinet with a cross screwdriver.
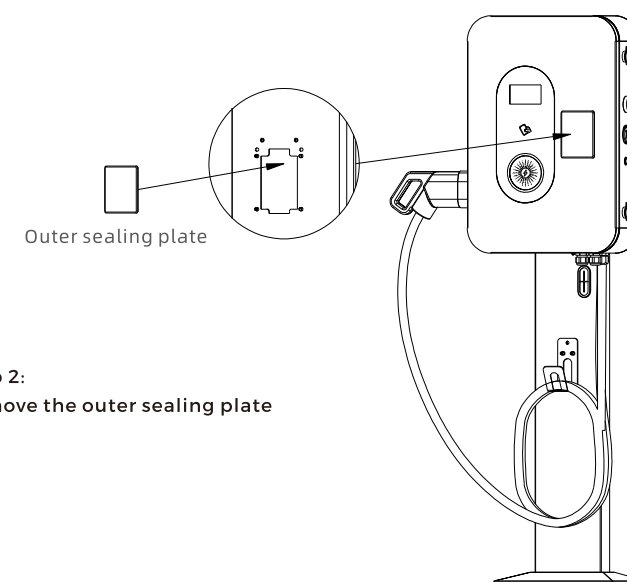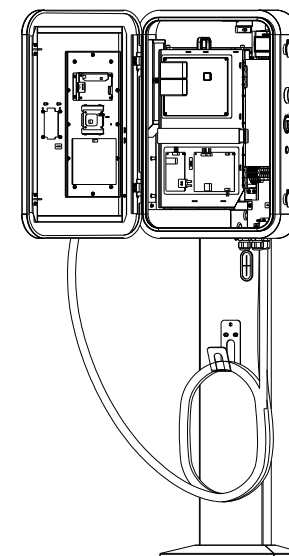
3. Install the POS machine base on the outer side, place the POS machine, and secure it from the inner side using M4x12 tri-grip screws; Make sure the POS screws are in place to make the rubber pad waterproof, otherwise there is a risk of water leakage.

4.Close and lock the cabinet door after checking.

Step 4：
**After installation completed,
Close the cabinet door**

12.1.2 Contactless POS machine installation

Step 1：
Open the cabinet door

Outer sealing plate

Step 2：
Remove the outer sealing plate
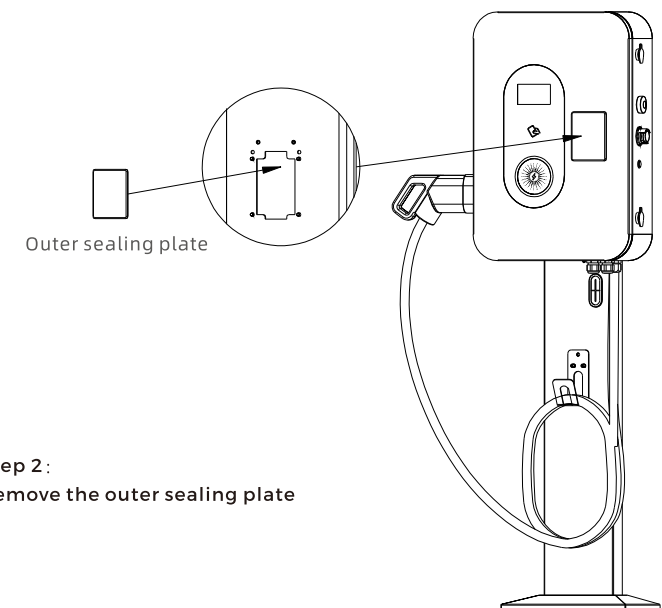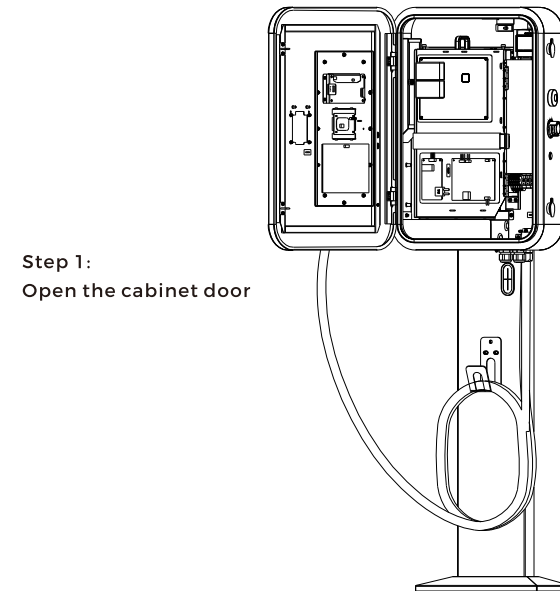
Secure the POS base here with two M4x12 screws

Rubber pad

POS base

Decorative adhesive paper

Contactless POS machine

Secure the POS by fastening the
M4 x 12 screws from the inner side of the door panel

Step 3:
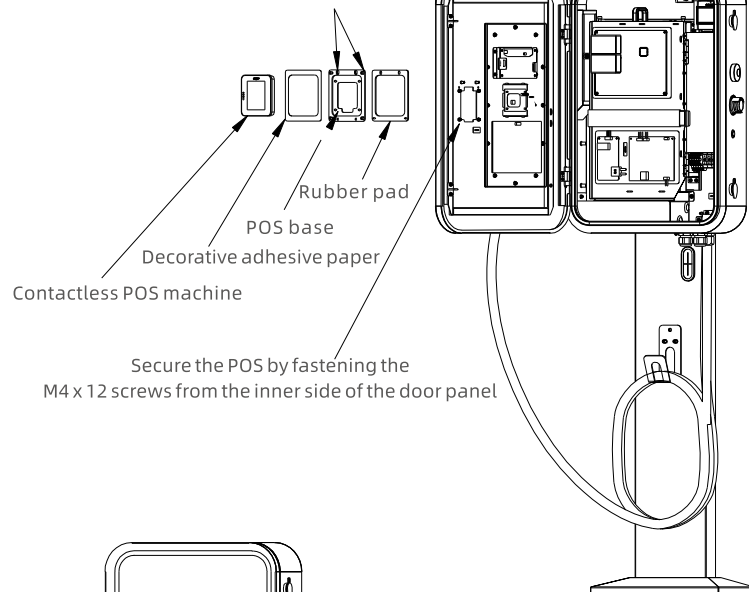**Contactless POS machine installation**

Operation steps:

1.Open the cabinet door with the key.

2.Remove the outer sealing plate from the inside of the cabinet with a cross screwdriver.

3. Install the POS machine base on the outer side, place the POS machine, and secure it from the inner side using M4x12 tri-grip screws; Make sure the POS screws are in place to make the rubber pad waterproof, otherwise there is a risk of water leakage.

4.Close and lock the cabinet door after checking.

Step 4：
After installation completed,
Close the cabinet door

12.2 Electric diagram

DC_out+

DC_out-

CCS 2

DC_KM1

DC_KM2

DC+

AC

SPD

PE

PE

input U
V
W
PE
400V/AC
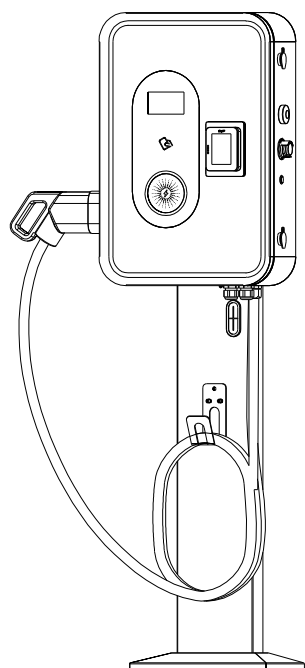
Fig12.2-1. Main circuit diagram

13 **Warranty**

13.1 Warranty period

The warranty period of this product is 3 years. If the contract stipulates otherwise, the contract shall prevail.

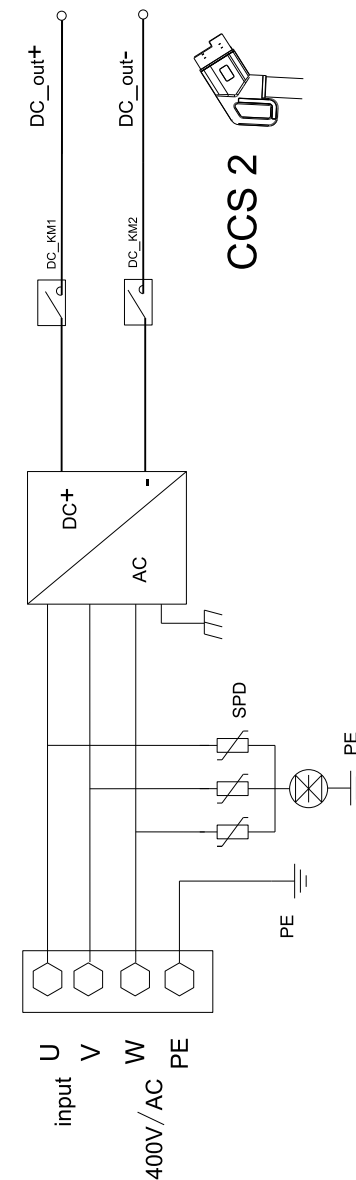For warranty cases during the warranty period, the customer should present the invoice of the purchase of the product to the service personnel of ATESS Power Technology. At the same time, the nameplate on the product should be clearly visible, otherwise the warranty claim might not be accepted.

13.2 Warranty condition

ATESS Power Technology Co., Ltd. will repair or replace the product free of charge during the warranty period. The defective machine after replacement shall be owned by ATESS Power Technology, and the customer shall reserve a certain amount of time for ATESS Power Technology to repair the faulty machine.

13.3 Liability exemption

ATESS Power Technology reserves the right not to accept the warranty claim if the conditions below happen,

1. No ATESS logo on the product;

2. Warranty period has expired;

3. Failure or damage caused by incorrect installation, by installing the device in a not allowed environment, by improper storage or usage, etc.(e.g. too high or too low temperature, moisture or too try environment, high altitude or unstable voltage/current, etc.)

4. Failure or damage caused by the installation, repair, modification or disassembly by unauthorized service personnel;

5. Failure or damage caused by using ATESS Power Technology's genuine spare parts;

6. Failure or damage caused by accident or human cause (operational error, scratching, handling, bumping, access to inappropriate voltage, etc.), or transport damage;

7. Failure or damage caused by force majeure such as natural disasters (such as earthquakes, lightning strikes, fires, etc.);

8. Other failures or damages that are not caused by quality problem of the product or its components.

13.3 Statement of liability

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For more information, please access www.atesspower.com.

Annex 14

Contact

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