



Project EV EVA-03/07S-SE
Single phase AC charging equipment
Quick user manual

Project EV

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Thank you for using ATESS EV charging equipment!

EVA series intelligent single-phase AC charger is a power supply device that uses professional and advanced technology to provide energy supply to electric vehicles, it also has friendly man-machine interface and versatile functions of control, billing, and communication. The charger can be connected to a back-office server to realize the functions of reservation and payment via Mobile phone APP. Diversified communication options, including wired Ethernet, WIFI, 4G is available for back-office server connection.

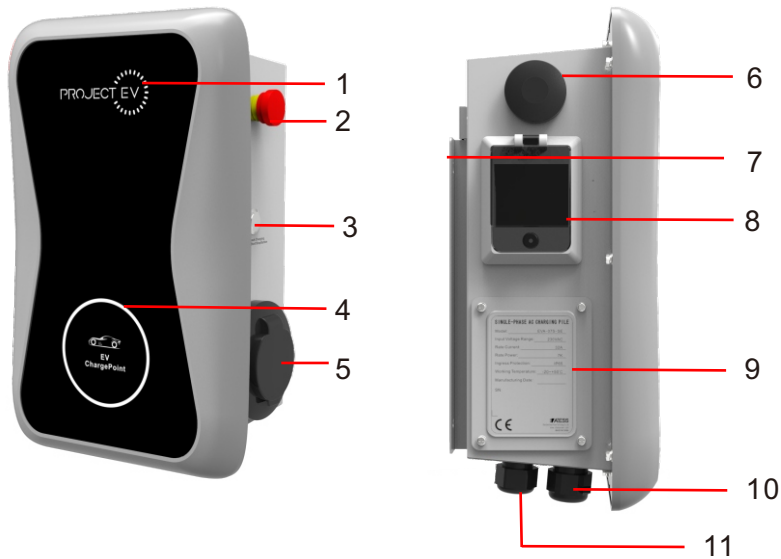
EVA-03/07S-SE has the function of not driving grounding pile, which conforms to EN 61558-2-4 standard. Protection against electric shock is provided by a device which disconnects the charging point from the live conductors of the supply and from protective earth in accordance within the 5S in the event of the voltage between the circuit protective conductor and Earth exceeding 70 V rms . The device will not operate if the voltage exceeds 70 V rms for less than 4S.

We sincerely hope that this product can meet your needs and will continuously improve the quality of our products.

Menu

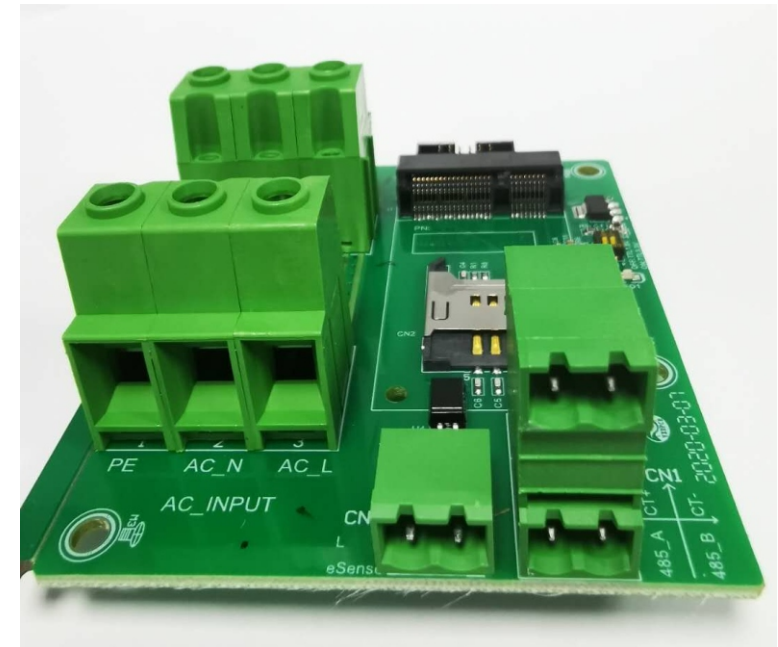
I. Product description	1
II. Packaging list	3
III. Installation and wiring	4
IV. Parameter setting	8
V. Operation instruction	18
VI. Firmware update	20
VII. Troubleshooting	24
VIII. Use excess solar power to charge your car	32
IX. Intelligent power modulation	35
X. Specification	38
XI. Annex 1	39
XII. Annex 2	51
XIII. Annex 3	52

I. Product description



- | | |
|---|--|
| 1. LOGO and LOGO backlight; | 6. WIFI/4G antenna; |
| 2. Emergency stop button; | 7. Mounting bracket; |
| 3. Forced on/off button; | 8. Side window/RCD |
| 4. Status indicator
(Indicator flashes when charging); | 9. Side window nameplat; |
| 5. Socket outlet(plug holder for
cabled version); | 10. Waterproof cable gland for
communication wires; |
| | 11. Waterproof cable gland for
AC input cables |

Wiring definition in the side window



1. Terminal block for CT/meter wiring. The terminal definition is:
485-A/485-B is RS485 terminal for meter connection;
CT+ /CT- is for CT connection
2. AC input terminals. Terminal definition is:
AC-L/AC-N/PE
3. Peak&Off Peak Charging Enable signal is:
eSense L/N

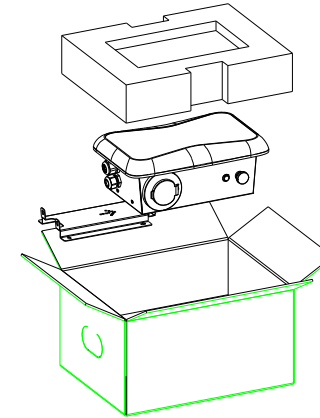
II. Packaging list

No.	Name	Qty	Remark
1	Charger	1	
2	User manual	1	
3	Quality certificate	1	
4	Mounting bracket	1	
5	Cable hook	1	For cabled version
6	ST6.3X40 Stainless steel hex-head self-drilling screws	4-7	4 for socket version, 7 for cabled version(3 of the 7 screws is for cable hook fixing)
7	12X46 Plastic expansion plugs	4-7	4 for socket version, 7 for cabled version(3 of the 7 plugs is for cable hook fixing)
8	User card	1	RFID function will be equipped with user card

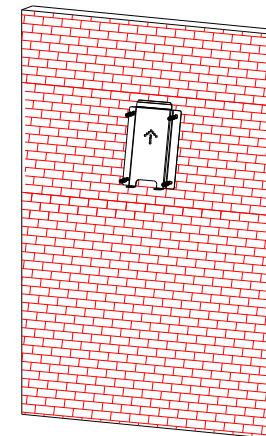
III. Installation and wiring

3.1 Mount on a wall

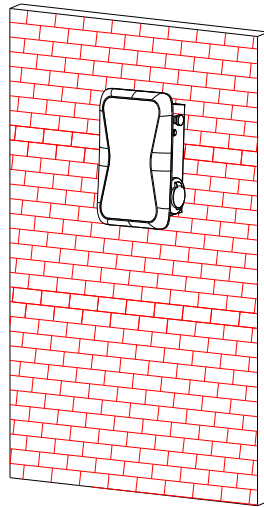
3.1.1 Open the packaging, you'll see a charge point, a mounting bracket, a user manual and a bag of mounting accessories. There is also an RFID card if the charge point is RFID version. For cabled version, a cable hook is also included inside.



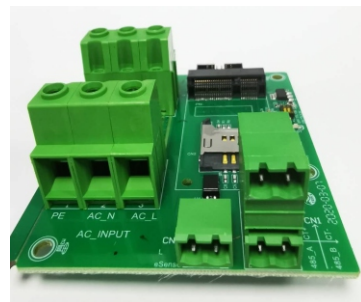
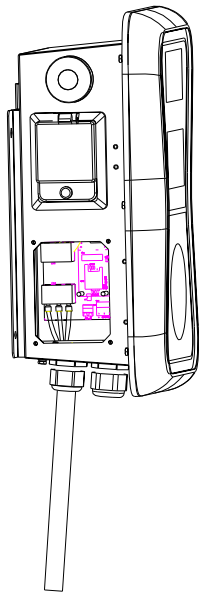
3.1.2 Remove the mounting bracket from the charge point, use it as a template to mark the position of the drill holes. Drill the holes and hammer the expansion bolts in the accessories bag into the holes. Then fix the mounting bracket onto the wall.



3.1.3 Put the charge point onto the bracket, and fix it with the 2 screws at the bottom of the charge point. The installation is done.



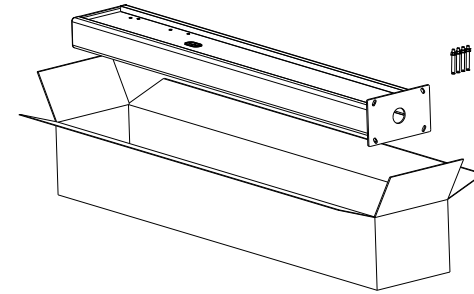
3.1.4 Crimp the below shown insulated ferrule or ring terminals on the end of the AC input wires. Connect the wires into the terminal block of the charge point as below. Check the wiring and then close the RCD in the side window. Close the side window with the cover, then the wiring is done.



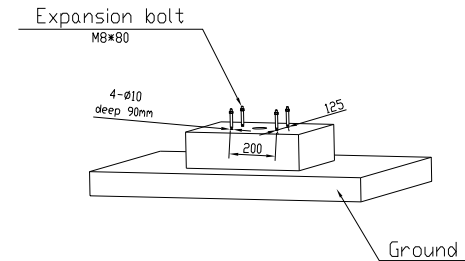
	Model	L	N	PE
Terminal	3K			
	7K			
Wire	3K	≥2.5mm ² ≥AWG12	≥2.5mm ² ≥AWG12	≥2.5mm ² ≥AWG12
	7K	≥6mm ² ≥AWG9	≥6mm ² ≥AWG9	≥6mm ² ≥AWG9

3.2 Mount on a pole

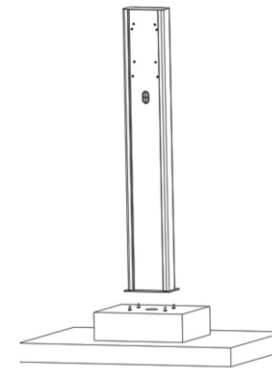
3.2.1 Open the packaging of the pole, take out the pole and mounting accessories.



3.2.2 The pole must be installed on a hard surface, concrete surface is recommended, it can also be mounted on a solid ground. Drill holes according to the requirements marked on the illustration for fixing expansion bolts.



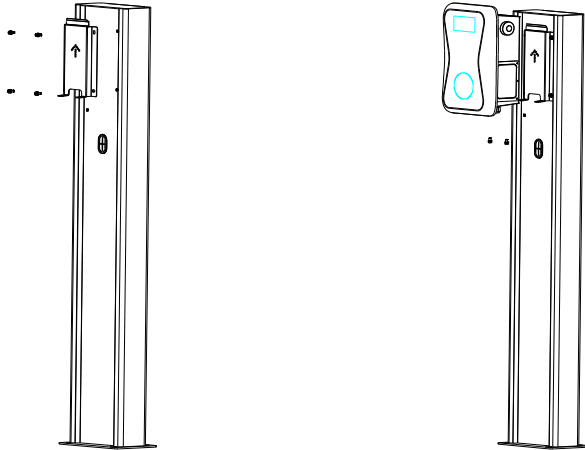
3.2.3 Fix the pole onto the holes with expansion bolts. The input cables shall go into the pole from the bottom middle area and come out of it from the area below the cable hooker.



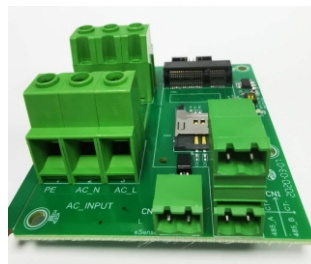
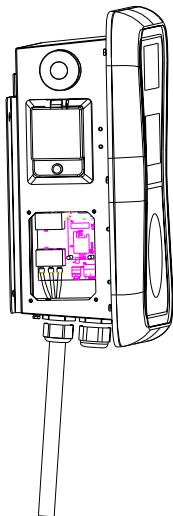
IV. Parameter setting

3.2.4 Fix the mounting bracket onto the pole.

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



3.2.6 Crimp the below shown insulated ferrule or ring terminals on the end of the AC input wires. Connect the wires into the terminal block of the charge point as below. Check the wiring and then close the RCD in the side window. Close the side window with the cover, then the wiring is done.



	Model	L	N	PE
Terminal	3K			
	7K			
Wire	3K	≥2.5mm ² ≥AWG12	≥2.5mm ² ≥AWG12	≥2.5mm ² ≥AWG12
	7K	≥6mm ² ≥AWG9	≥6mm ² ≥AWG9	≥6mm ² ≥AWG9

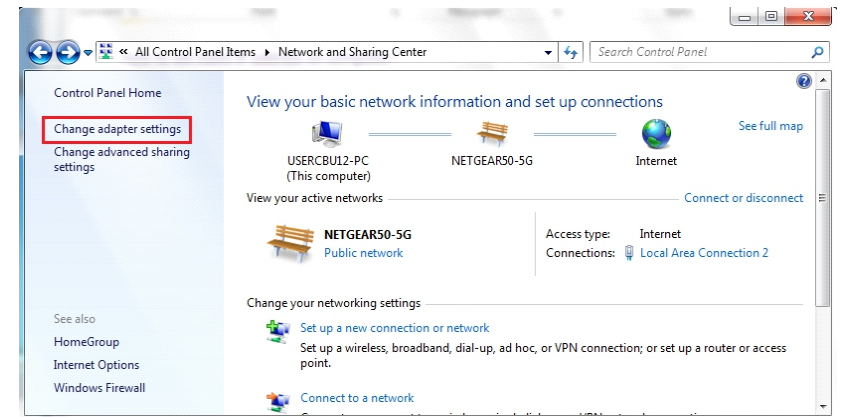
After the installation and wiring is done, connect the Charger to a computer and configure parameters via the web browser of the computer, then the Charger can be ready for use.

4.1 Set computer's IP

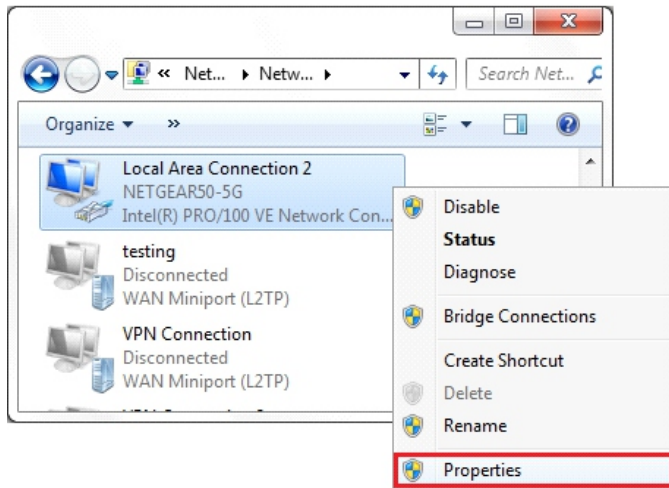
The Charger's default IP address is 192.168.1.5. To access the parameter setting interface, you'll need to first set the computer's IP to 192.168.1.x(x can be any value between 1 and 255 except for 5, e.g. 192.168.1.10).

To set a static IP on your Windows computer:

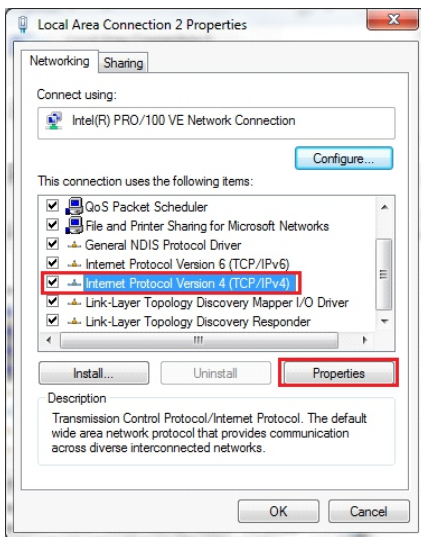
1. Click Start Menu > Control Panel > Network and Sharing Center. (For Windows 8 and higher, search for and open Control Panel and select Network and Internet).
2. Click Change adapter settings.



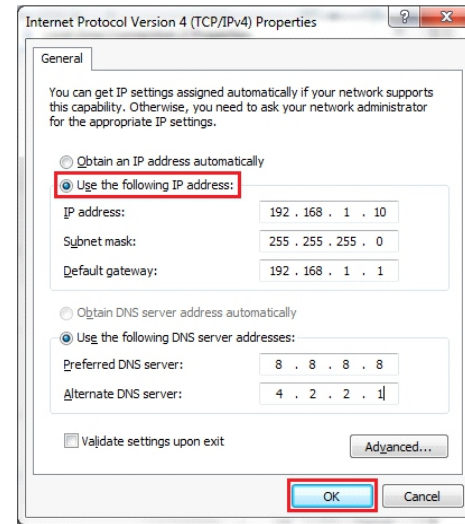
3.Right-click on Local Area Connection and click on Properties.



4.Select Internet Protocol Version 4 (TCP/IPv4) and click on Properties.



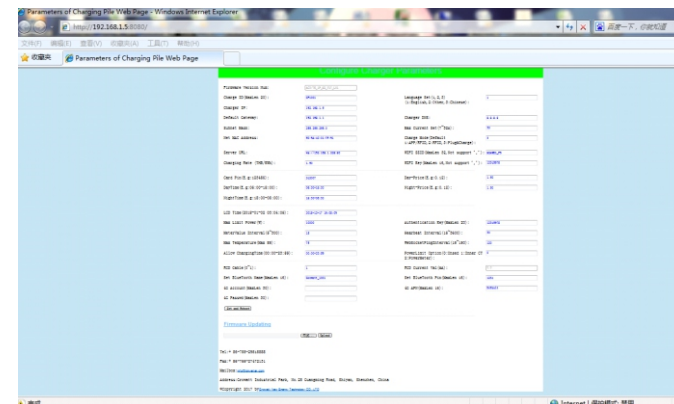
5.Select "Use the following IP address" and enter the IP address, Subnet Mask, Default Gateway. Click OK and close the Local Area Connection properties window.



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. It is suggested to use IE or Firefox, other browser might have compatibility problem.



Overview of Parameter setting page

Configure Charger Parameters

Firmware Version Num: (1)	AC3/TK_IP_H2_V17_L01	Language Set(1,2,3) (13)	1
Charge ID(MaxLen 20): (2)	CP1001	(1:English, 2:Other, 3:Chinese):	
Charger IP: (3)	192.168.1.5	Charger DNS: (14)	8.8.8.8
Default Gateway: (4)	192.168.1.1	Max Current Set(7~32A): (15)	32
Subnet Mask: (5)	255.255.255.0	Charge Mode(Default) (16)	3
Net MAC Address: (6)	60:9A:4C:01:7F:91	1:APP/RFID, 2:RFID, 3:Plug&Charge):	
Server URL: (7)	ws://192.168.1.228:80	WiFi SSID(MaxLen 32,Not support (17):	SHAWEI_PP
Charging Rate (THB/kWh): (8)	1.50	WiFi Key(MaxLen 16,Not support (19):	12345678
Card Pin(E.g.:123456): (9)	242007	Day-Price(E.g.:0.12): (19)	1.50
DayTime(E.g.:05:00-18:00): (10)	06:30-18:30	Night-Price(E.g.:0.12): (20)	1.50
NightTime(E.g.:18:00-05:00): (11)	18:30-06:30		
LCD Time(2018-01-02 03:04:05): (12)	2018-12-17 16:08:09		

Enlarged view of parameter setting page_1

Max Limit Power(W): (21)	10000	Authentication Key(MaxLen 20): (29)	12345678
MeterValue Interval(5~300): (22)	15	Hearbeat Interval(15~3600): (30)	30
Max Temperature(Max 85): (23)	75	WebSocketPingInterval(15~150): (31)	120
Allow ChargingTime(00:00-23:59): (24)	00:00-23:59	PowerLimit Option(0:Unsed 1:Inner CT 2:PowerMeter): (32)	0
RCD Cable(0~1): (25)	1	RCD Current Val(mA): (33)	0.0
Set Bluetooth Name(MaxLen 16): (26)	Growatt_1001	Set Bluetooth Pin(MaxLen 16): (34)	1234
4G Account(MaxLen 30): (27)		4G APN(MaxLen 16): (35)	Default
4G Passwd(MaxLen 30): (28)			
<input type="button" value="Set and Reboot"/> (36)			
Firmware Updating			
<input type="button" value="浏览..."/> <input type="button" value="Upload"/> (37)			

Enlarged view of parameter setting page_2

Explanation of parameters:

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

Firmware Version Num: (1)

Fig.1

(2) Charger ID, this is the unique identification of the Charger. If the charger is to be connected to Growatt 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.

Charge ID(MaxLen 20): (2)

Fig.2

(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.

Please note: After restoring the charger to factory setting, you'll need to reset the charger ID(same as serial number, can be found on the nameplate sticker) and server url, otherwise the charger won't be connected to the back-office server.

Charger IP: (3)

Fig.3

(4) Charger gateway. The default value is 192.168.1.1. It is not suggested to change. If the gateway 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.

Default Gateway: (4)

Fig.4

(5) 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.

Subnet Mask: (5)	<input type="text" value="255.255.255.0"/>
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Fig.5

(6) MAC address. This is the MAC address used for LAN cable connection. If the charger is connected to Growatt 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

Net MAC Address: (6)	<input type="text" value="50:9A:4C:01:7F:91"/>
----------------------	--

Fig.6

(7) Server URL is to set the domain name or IP address of the back office server to be connected.

The domain name of Growatt server is "ws://charge.growatt.com:80/ocpp/ws";

IP address is "ws://47.254.157.66:80/ocpp/ws".

Authentication Key and Heartbeat Interval is used for testing and no need to reset.

Server URL: (7)	<input type="text" value="ws://192.168.1.228:80"/>
Authentication Key(MaxLen 20): (29)	<input type="text" value="12345678"/>
Hearbeat Interval(15~3600): (30)	<input type="text" value="30"/>

Fig.7

(8) Charging fee per unit of electricity.

Charging Rate (THEB/KWh): (8)	<input type="text" value="1.50"/>
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Fig.8

(9) 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 cannot be used on this charger. The default PIN setting of the charger is 242007.

Card Pin(E.g:123456): (9)	<input type="text" value="242007"/>
---------------------------	-------------------------------------

Fig.9

(10) Peak time period. Set the time period of peak tariff.

DayTime(E.g:05:00-18:00): (10)	<input type="text" value="06:30-18:30"/>
--------------------------------	--

Fig.10

(11) Off-peak time period. Set the time period of off-peak tariff.

NightTime(E.g:18:00-05:00): (11)	<input type="text" value="18:30-06:30"/>
----------------------------------	--

Fig.11

(12) 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.

LCD Time(2018-01-02 03:04:05): (12)	<input type="text" value="2018-12-17 16:08:09"/>
-------------------------------------	--

Fig.12

(13) Language of LCD screen.

Language Set(1, 2, 3) (13) (1:English, 2:Other, 3:Chinese):	<input type="text" value="1"/>
--	--------------------------------

Fig.13

(14) Charger DNS setting, this only needs setting when the charger is to connect to server via LAN cable.

Charger DNS: (14)	<input type="text" value="8.8.8.8"/>
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Fig.14

(15) Set the max output of the charger.

Max Current Set(7~32A): (15)	<input type="text" value="32"/>
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Fig.15

(16) Charging mode setting. 1: APP/RFID mode; 2: RFID mode; 3: Plug&Charge mode.

Charge Mode(Default (16) 1:APP/RFID, 2:RFID, 3:Plug&Charge):	<input type="text" value="3"/>
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Fig.16

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

WiFi SSID(MaxLen 32, Not support (17):	<input type="text" value="HUAWEI_P9"/>
WiFi Key(MaxLen 16, Not support (18):	<input type="text" value="12345678"/>

Fig.17

(19) (20) Set peak tariff and off-peak tariff.

Day-Price(E. g:0.12): (19)	<input type="text" value="1.50"/>
Night-Price(E. g:0.12): (20)	<input type="text" value="1.50"/>

Fig.18

(21) (32) (22) Max power import to the property, Power sampling device selection, meter value collection interval. These 3 parameters are used for power management setting.

Max Limit Power(W): (21)	<input type="text" value="10000"/>
PowerLimit Option(0:Unused 1:Inner CT 2:PowerMeter): (32)	<input type="text" value="0"/>
MeterValue Interval(5~300): (22)	<input type="text" value="15"/>

Fig.19

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

Max Temperature(Max 85): (23)	<input type="text" value="75"/>
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Fig.20

(24) Charging-allowed time. Charging can only start within this time period. This is used for off-peak charging setting.

If you want to charge out of this period, just press the forced on/off button at the side of the charger.

Allow ChargingTime(00:00-23:59): (24)	<input type="text" value="00:00-23:59"/>
---------------------------------------	--

Fig.21

(25) DC residual current sampling value calibration. Enter 0 and press "Set and Reboot" to calibrate the DC RCD ring.

RCD Cable(0~1): (25)	<input type="text" value="1"/>
----------------------	--------------------------------

Fig.22

(26) (34) Bluetooth setting. Only needs setting when the charger is equipped with Bluetooth.

Set BlueTooth Name(MaxLen 16): (26)	<input type="text" value="Growatt_1001"/>
Set BlueTooth Pin(MaxLen 16): (34)	<input type="text" value="1234"/>

Fig.23

(27) (28) (35) 4G connection setting.

4G Account(MaxLen 30): (27)	<input type="text"/>
4G Passwd(MaxLen 30): (28)	<input type="text"/>
4G APN(MaxLen 16): (35)	<input type="text" value="Default"/>

Fig.24

(31) This is for communication testing, no need to reset.

WebSocketPingInterval (15~150): (31)

Fig.25

(33) DC residual current real-time detection value.

RCD Current Val (mA): (33)

Fig.26

(36) Press this button for the parameter change to take effect.

(36)

Fig.27

(37) This is used to upgrade firmware.

[Firmware Updating](#)
 (37)

Fig.28

V. Operation instruction

5.1 Charging mode and Operation

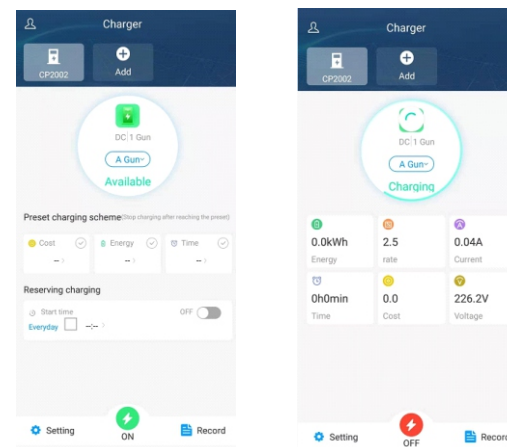
APP/RFID mode:

Initiate or cease charging by scanning QR code using APP or by swiping RFID card. You can also use APP for reservation and payment provided that the back-office server supports such functions.



APP/RFID mode operation process flow

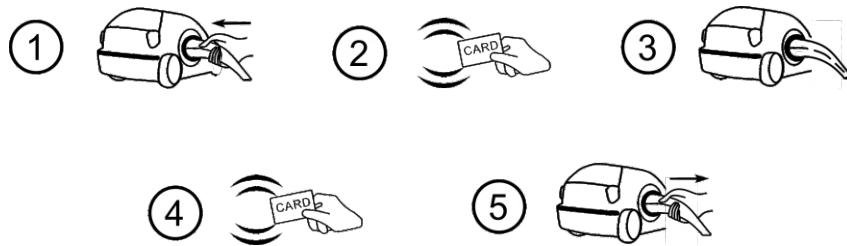
If you are using the ProjectEV APP, Charging can be started/stopped by pressing the ON/OFF button on the APP.



VI. Firmware update

RFID mode:

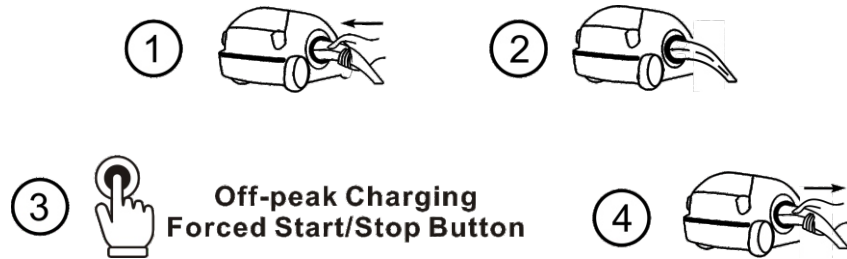
Charging can only be initiated or ceased by swiping RFID card.



RFID mode operation process flow

Plug&Charge:

Charging will start automatically after EV plugged in. If you want to stop the charging, just press the forced on/off button on the side of the charger.



Plug&Charge mode operation process flow

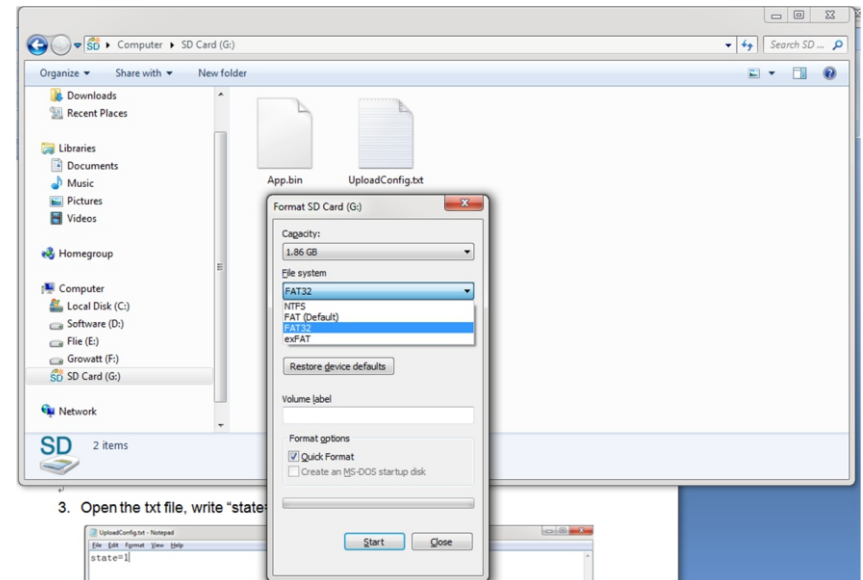
There are 2 ways to update firmware for EV charger,

1. Update by SD card
2. Update on parameter setting page

6.1 Update by SD card

The firmware file must be named as "App.bin".

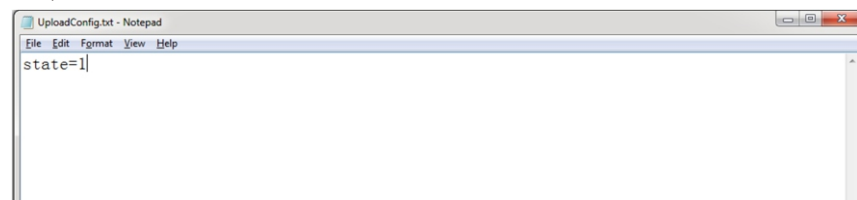
1. Prepare a microSD card with capacity not greater than 4G. Format the SD card using FAT32.



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. Insert the SD card into the charger, turn off and back on the charger, the update will start automatically. The indicator will first flash red and then flash green with a long beep as the end of the update(sometimes the beep sound may not be clearly heard). After the update is done, turn off the charger and remove the SD card.

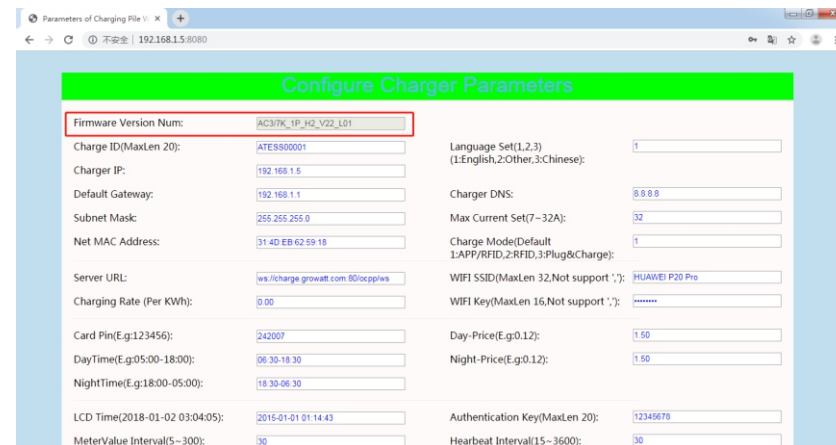


MicroSD slot of 7kW charger

5. Check the current FW version on LCD or the parameter setting page.

To check FW version on the parameter setting page,

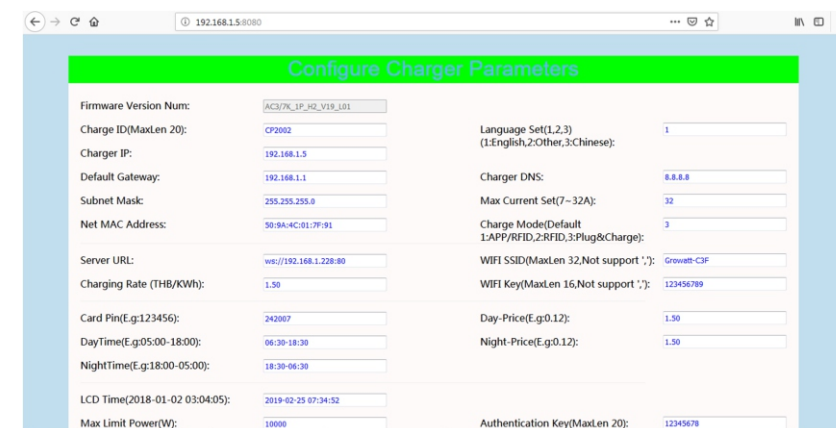
Connect the charger to computer via a network cable, the computer's IP must be within the 192.168.1.x segment(x is any value between 1 and 255 except 5). Open the web browser, type in the charger's default IP of "http://192.168.1.5:8080" and click enter, then you can check the firmware version on the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



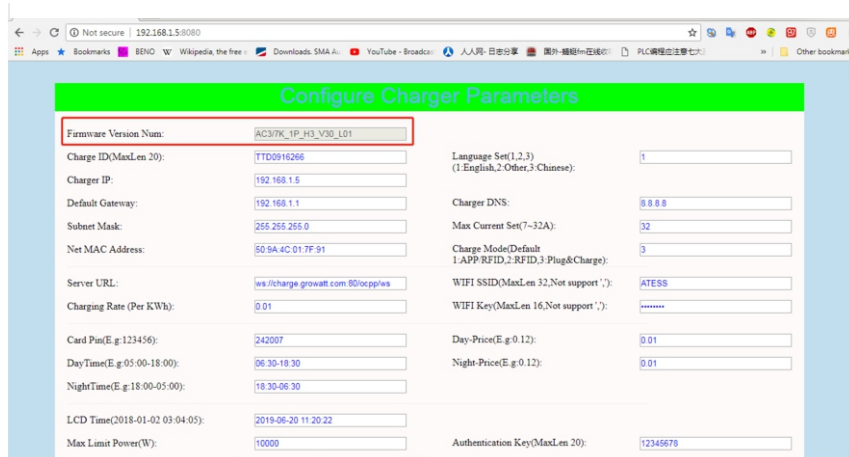
VII. Troubleshooting

3. Click the “浏览...” button and select the firmware file. Click “Upload”, then update will start automatically.



During the update, the LED indicator will behave as below,
 First flash red and goes out with a short beep sound, during this period the firmware file is transmitted to the charger’s flash memory from the computer;
 Then flash red again for some seconds and quickly change to green light flashing. During this period, the charger is updating the firmware to its micro controller.
 When the greenlight goes out, there will be a long beep sound. That means the firmware is successfully updated.
 The beep sound may not be audible with the front cover fixed on the charger.
 If the update doesn’t start after click “Upload”, Turn off and back on the charge to try again.

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



7.1 Troubleshoot by LED behavior or LCD display

If fault occurs, users can check the fault information on the LCD or by the number of blinks of the LED indicator light. Each fault is indicated with a sequence of different numbers of LCD blinking. A pause of 3 seconds between each sequence indicates the beginning or end of a sequence. If multiple faults happen at the same time, each sequence of blinking shows in chronological order at an interval of 3 seconds.

Please see the table below for detail information

No.	Fault code on LCD (if available)	Number of blinks of the LED	Fault description
1	100	3	The red emergency stop button is pressed or broken
2	105	1	Over voltage on phase L1
3	106	2	Under voltage on phase L1
4	108	4	Over current
5	109	5	Over temperature
6	110	6	DC leakage current detected
7	111	7	RS485 communication fault
8	112		Reserved
9	113	9	Type A switch fault
10	114		Reserved
11	115	11	PE fault
12	116	12	PEN fault
13	117		Reserved
14	1000		Other fault

7.2 Firmware update fails

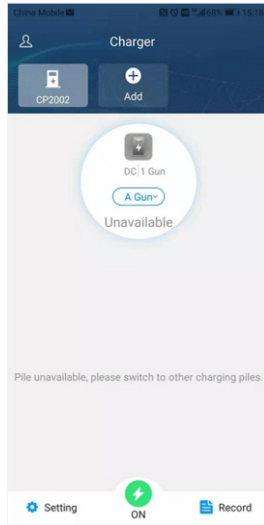
7.2.1 Firmware update failure with SD card:

- Check if the capacity is over 4G bytes, please use a SD card of less than 4G to retry;
- Check if the SD card is formatted with FAT32;
- Check if the firmware file is renamed as App.bin;
- 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



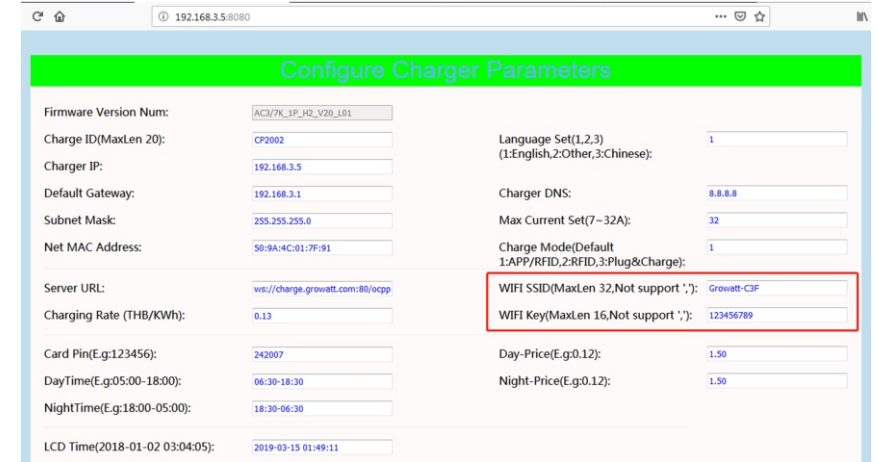
- Check WiFi signal strength;
Signal strength on PC:



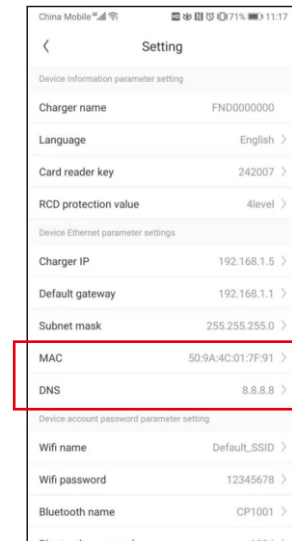
- Signal strength on mobile:



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

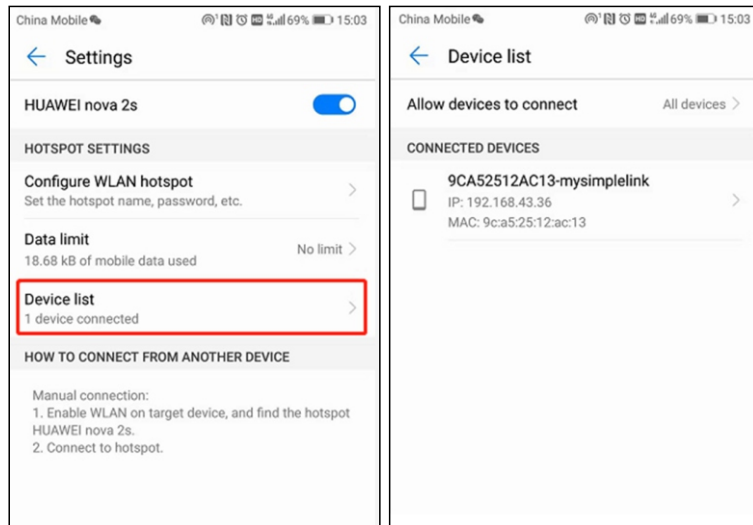


If you check the WiFi setting on the APP, please turn off and back on the charger and connect your mobile to the WiFi emitted by the charger for checking and setting.

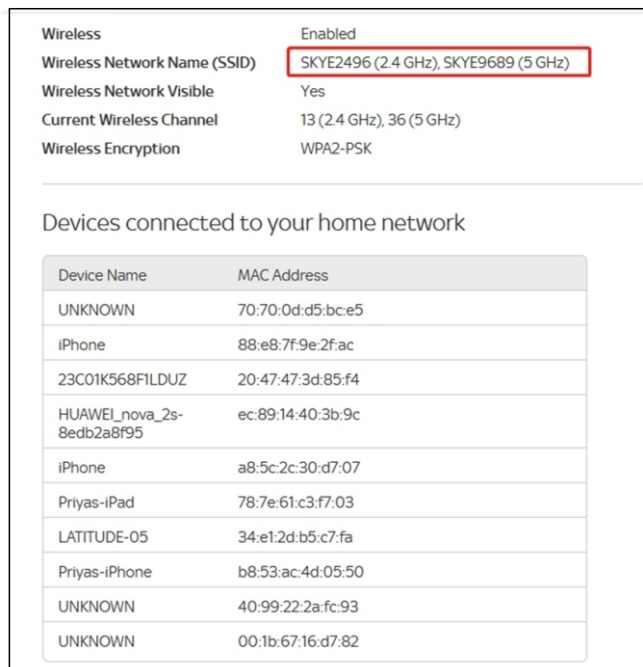


- Check if there is access control in the router, e.g. MAC filtering, port blocking, etc.
To verify this, you can use your mobile phone to create a hotspot and try to connect the charger to this mobile hotspot. If charger can connect to the hotspot, but cannot connect to the router, there must be access control in the router, please check with the site owner for this.

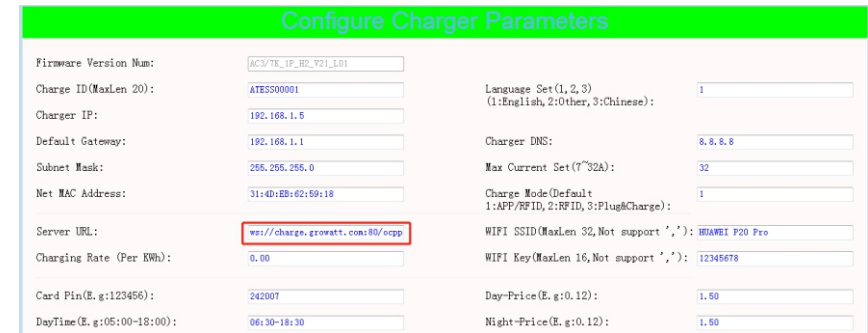
Check if charger is connected on Device list of the hotspot setting page



d. 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.



- e. 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.
- f. Check if server address is correct in the "Server URL" field. The correct setting is : ws://charge.growatt.com:80/ocpp/ws

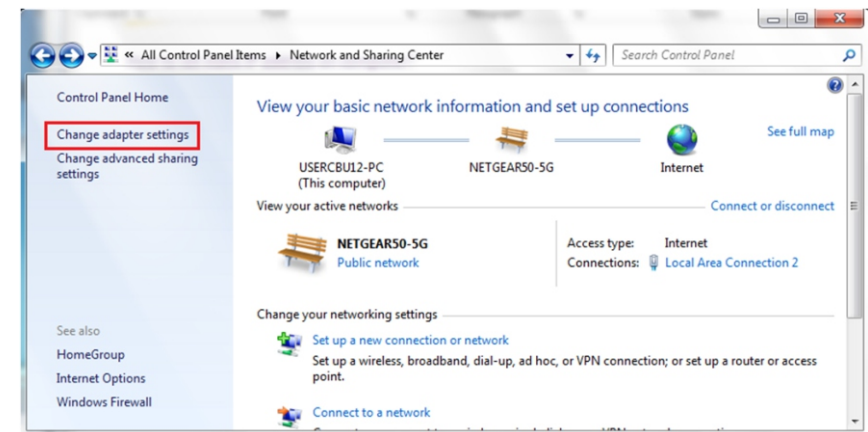


7.4 Cannot access parameter setting page

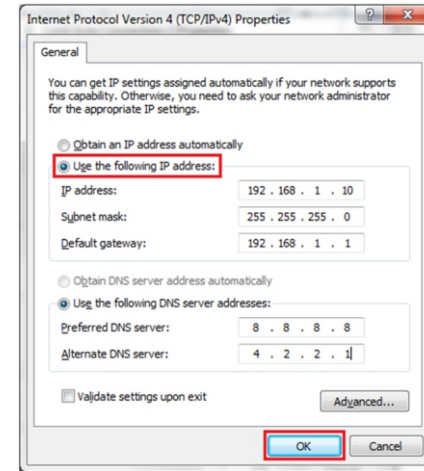
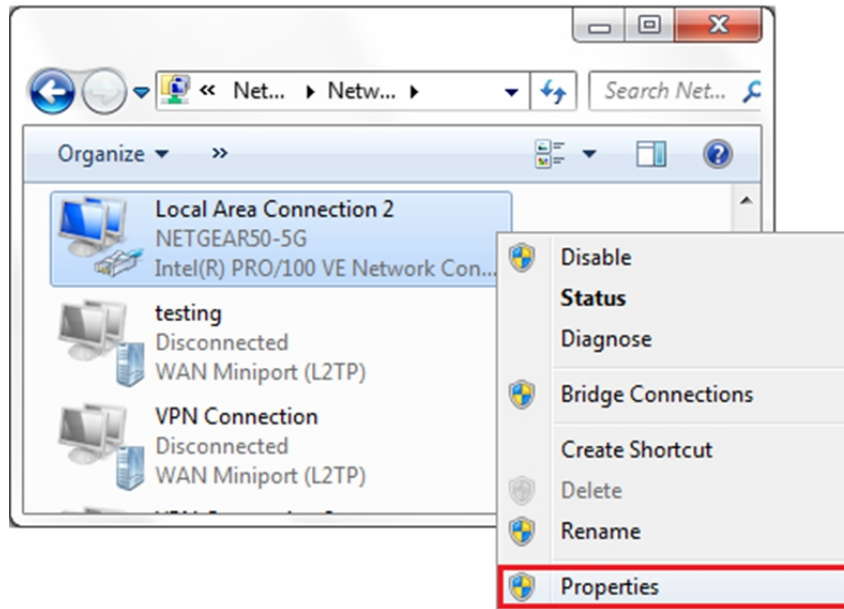
- a. Check if you have connected the charger to your computer,
- b. Check if you have change the computer's IP to 192.168.1.x(x can be any value between 1 and 255 except 5).

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.



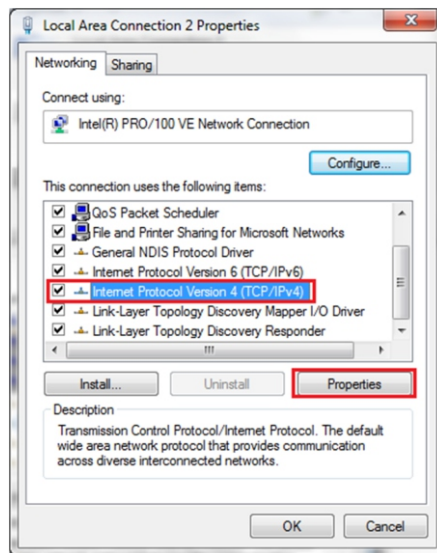
c. Check what web browser is being used, it's suggested to use Firefox or IE, Chrome cannot be used to update firmware.

d. 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`.

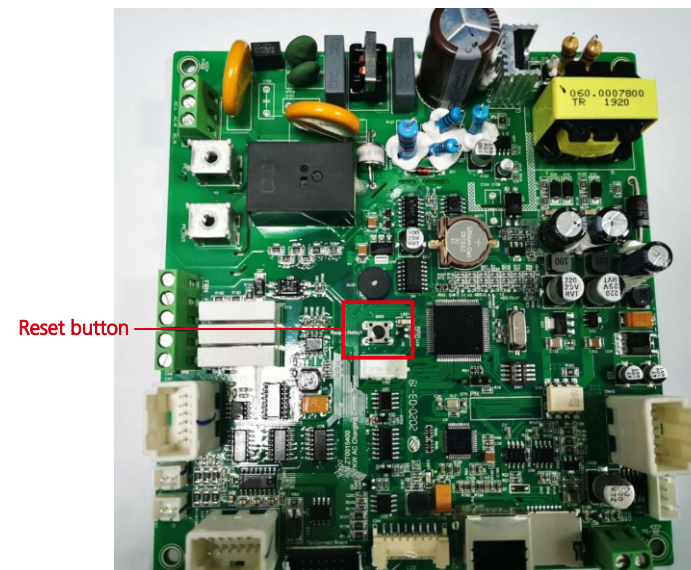
e. Sometimes you may need to restart the charger to access its parameter setting page.

f. 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`.

(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.



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,

- Check if the red emergency stop button is pressed.
- Check what charge mode is being used

APP/RFID: 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&Charge: Charge will start automatically when car is plugged in.

Configure Charger Parameters	
Firmware Version Num:	AC3/TK_IP_H2_V21_L01
Charge ID(MaxLen 20):	ATESS00001
Charger IP:	192.168.1.5
Default Gateway:	192.168.1.1
Subnet Mask:	255.255.255.0
Net MAC Address:	31:4D:EB:02:59:18
Server URL:	ws://charge.growatt.com:80/ecpp
Charging Rate (Per kWh):	0.00
Card Pin(E.g:123456):	242007
DayTime(E.g:05:00-18:00):	06:30-18:30
Language Set(1, 2, 3) (1:English, 2:Other, 3:Chinese):	1
Charger DNS:	8.8.8.8
Max Current Set(7~32A):	32
Charge Mode(Default 1:APP/RFID, 2:RFID, 3:Plug&Charge):	1
WiFi SSID(MaxLen 32, Not support ','): HUAWEI P20 Pro	
WiFi Key(MaxLen 16, Not support ','): 12345678	
Day-Price(E.g:0.12):	1.50
Night-Price(E.g:0.12):	1.50

- Check if off-peak charging is set and if charger's time is correct.

If off-peak charging is set, charge can only start within the charging allowed time period.

Card Pin(E.g:123456):	242007	Day-Price(E.g:0.12):	1.50
DayTime(E.g:05:00-18:00):	06:30-18:30	Night-Price(E.g:0.12):	1.50
NightTime(E.g:18:00-05:00):	18:30-06:30		
LCD Time(2018-01-02 03:04:05):	2019-03-15 07:50:59	Authentication Key(MaxLen 20):	12345678
Max Limit Power(W):	10000	Hearbeat Interval(15~3600):	30
MeterValue Interval(5~300):	15	WebSocketPingInterval(15~150):	120
Max Temperature(Max 85):	75	PowerLimit Option(0:Unused 1:Inner CT 2:PowerMeter):	0
Allow ChargingTime(00:00-23:59):	00:00-23:59	RCD Current(Enter 0 calibration)mA:	0.0
RCD Protection(mA):	20	Bluetooth Pin(MaxLen 16):	1234
Bluetooth Name(MaxLen 16):	Growatt_1001	4G APN(MaxLen 16):	Default
4G Account(MaxLen 30):		NetWorking Status:	disconnect
4G Passwd(MaxLen 30):			

VIII. Use excess solar power to charge your car

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

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

ECO Mode:

- solar function set the power p range : P_e stands for rated power, P_1 stands for Power

Transferred to Power Grid by Photovoltaic.

- The power of three-phase charger belongs to $(5.3kW-P_e)$ 。
- The power of single-phase charger belongs to $(1.8kW-P_e)$ 。

- The condition of changing duty cycle of charger : P2

- The power of three-phase charger $P_2=1000W$
- The power of single-phase charger $P_2=500W$

- Operation mode :

- when Initial charging, Permissible output power of charger $P_3(P_3=P)$
- If $P_1 < P_2$, Permissible output power of charger $P_3(P_e \geq P_3 \geq P)$
- If $P_1 \geq P_2$, Charger will Increase Permissible Output Power, When detected during this process $P_1 < P_2$ or $P_3 = P_e$. Charger will stop increasing allowable output power, now the allowable output power of charger $P_3(P_e \geq P_3 \geq P)$

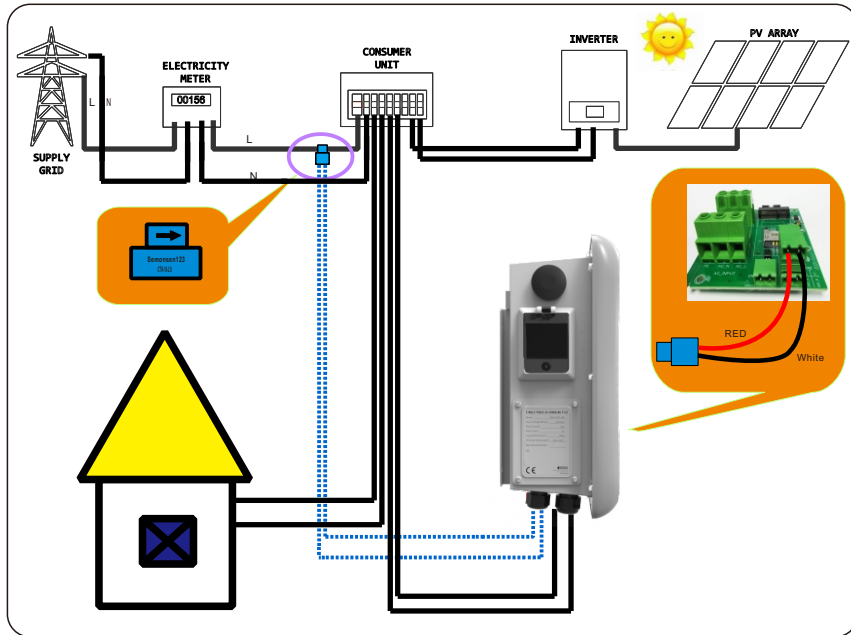
ECO+ mode:

In this mode, the charging point only uses the electricity sent by the photovoltaic inverter to charge the electric vehicle. When the current sent by the inverter is less than 6A, the charging point will stop charging. Please choose this mode carefully

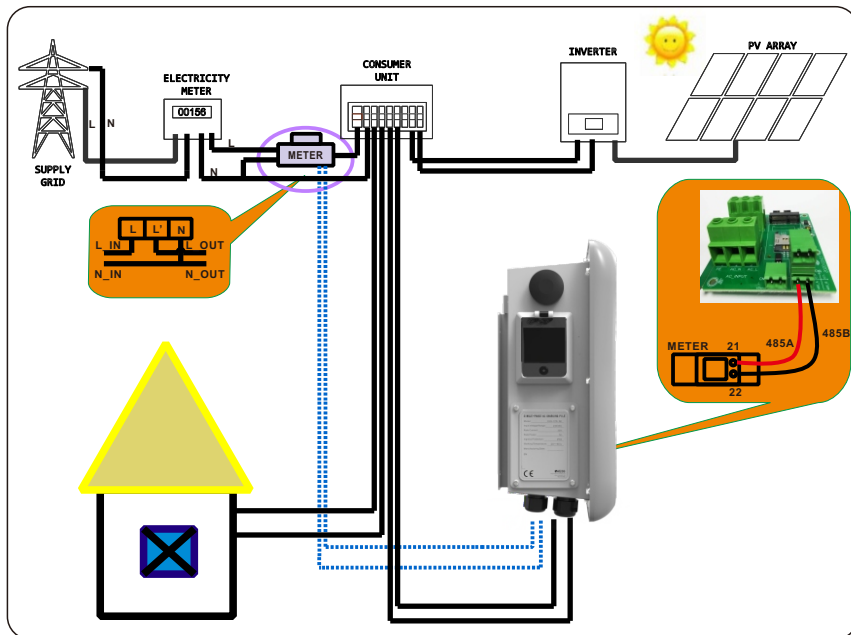
8.2 Wiring

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

If CT is used, the wiring will be as below,



8.3 If meter is used, please wire it as below



8.4 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 of solar mode charge: FAST, ECO and ECO+.

Solar Mode Charge(0:Disable,1:ECO,2:ECO+):	<input type="text" value="0"/>
Power Distribution Charge(0:Disable,1:Enable)	<input type="text" value="0"/>
Grid Off Peak Charge(0:Disable	

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

Power Distribution Enable(0:Disable,1:Enable)	<input type="text" value="0"/>	External Power Sampling Wiring(0:Inner CT 1:PowerMeter):	<input type="text" value="0"/>
External Maxlimit Power(kW):	<input type="text" value="10"/>	Peak Valley Charge(0:Disable 1:Enable):	<input type="text" value="0"/>
PowerMeter Addr:	<input type="text" value="032"/>		
<input type="button" value="Set and Reboot"/>			

- (4) If you choose the PowerMeter. Please change PowerMeter Addr to the address shown on the meter.

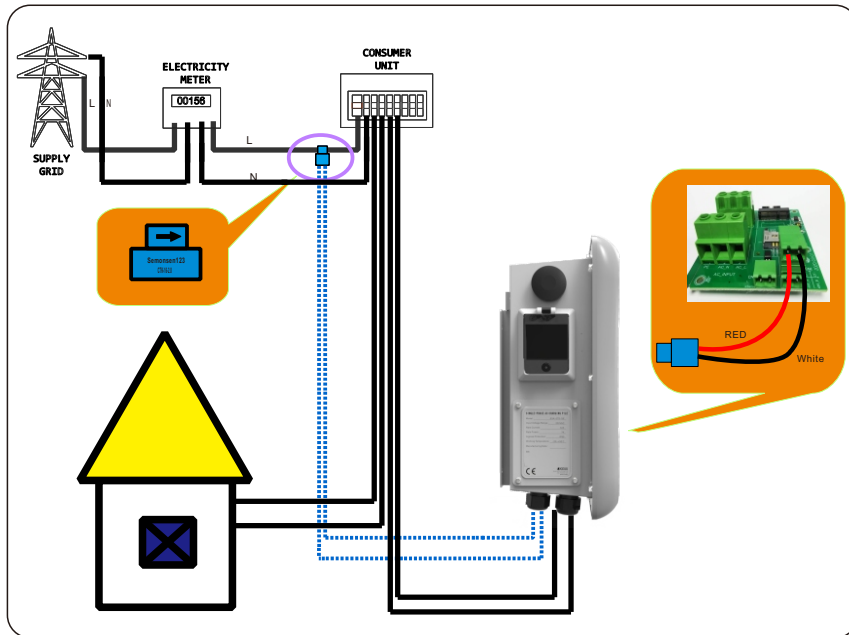
Power Distribution Enable(0:Disable,1:Enable)	<input type="text" value="0"/>
External Maxlimit Power(kW):	<input type="text" value="10"/>
PowerMeter Addr:	<input type="text" value="032"/>
<input type="button" value="Set and Reboot"/>	

IX. Intelligent power modulation

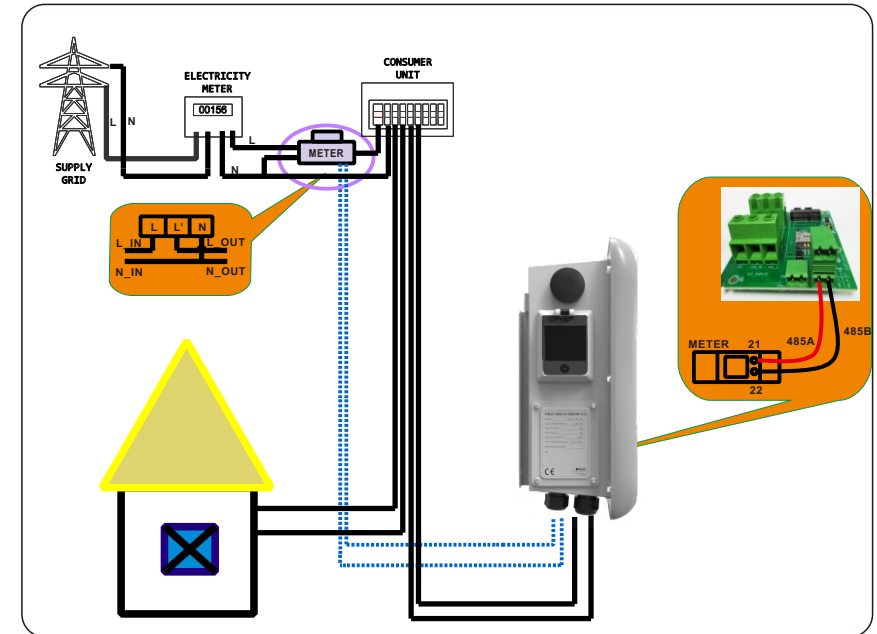
Introduction

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 so that the car can always be charged with the maximum allowable power.

9.1 Similar with the solar charge function, a CT or meter is needed to detect the power import. If a CT is used, please wire it as below,



9.2 If a 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 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.

Power Distribution Enable(0:Disable,1:Enable)	<input type="text" value="0"/>
External Maxlimit Power(kW):	<input type="text" value="10"/>
PowerMeter Addr:	<input type="text" value="032"/>
<input type="button" value="Set and Reboot"/>	

X. Specification

(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.

External Power Smplng Wiring(0:Inner
CT 1:PowerMeter):

Peak Valley Charge(0:Disable 1:Enable):

(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.

Power Distribution
Enable(0:Disable,1:Enable)

External Maxlimit Power(kW):

PowerMeter Addr:

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

Power Distribution
Enable(0:Disable,1:Enable)

External Maxlimit Power(kW):

PowerMeter Addr:

Model	EVA-03/07S
Dimension (mm)	380*240*145(L*W*H)
Weight (kg)	7
Display	LCD
Casing Material	Stainless steel& Engineering plastics& Tempered glass
Input	
Voltage	AC 230V
Max current	16A/32A
Output	
Voltage	AC 230V
Max current	16A/32A
IP Protection degree	IP65
Working environment temperature	-25°C ~ +50°C
Relative humidity	5% ~95%
Altitude	≤2000m
Frequency	50 Hz ±1Hz
Communication	Ethernet/WIFI/4G/485
Payment	RFID/APP
Standby power	<8W
Standard	IEC-62196-2;EN61851
Mounting	Wall/Pole
Certificate	CE
Protection features	
Over voltage	275V
Under voltage	190V
Over current	20A/40A
Short circuit	Yes
Leakage protection	No/Type A/Type A+6mA DC RCD
Over temperature	Yes
Lightning protection	Type II

XI. Annex 1

11.1. APP Introduction

11.1.1 Description

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

11.1.2 Main Function Of Project EV

- (1) The user can add a charger by entering the chargepoint serial number and scanning the QR code.
- (2) The user can control the start and stop of the charger through the APP.
- (3) The user can preset the charging scheme and reserve 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.
- (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

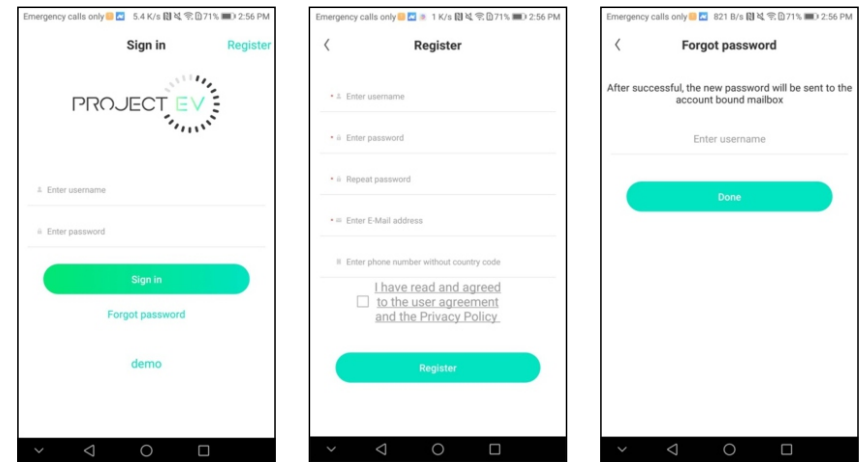
11.2.1 APP download and install

Android phone users can search and install "Project EV" through Google play.
iPhone users can search and install "Project EV" through the App Store.

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.

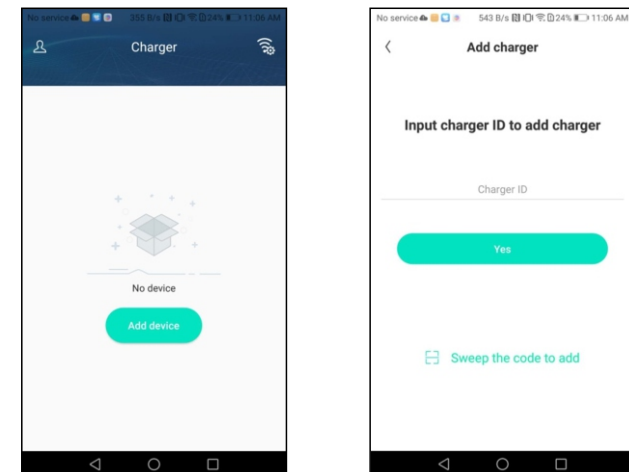
When the user has an account, you can directly enter the user name and password to log in. If you forget the password, you can click the login page, forget the password button, and follow the prompts to retrieve the password through the mailbox.



11.2.3 Add

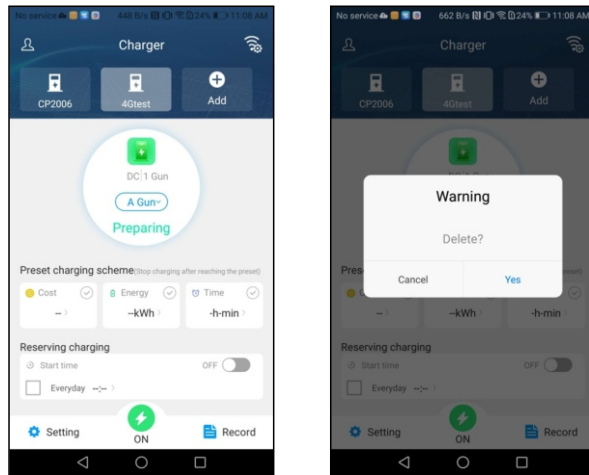
If you use Project EV for the first time, you need to add charger in the APP to facilitate setting and controlling the charger.

The process of adding a charger is as follows:
Click "Add" to add a charger by scanning the code or entering the charger ID.

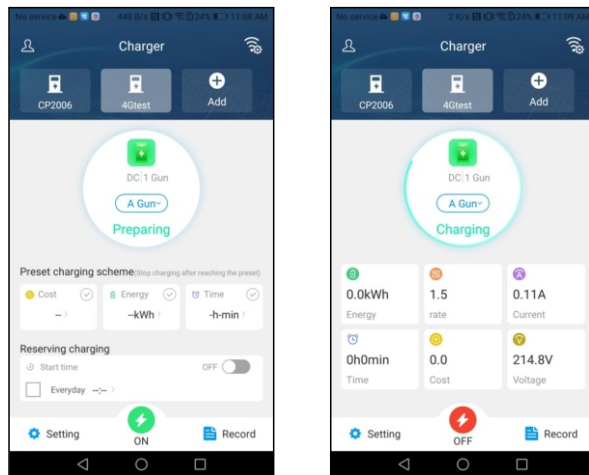



11.2.4 Charger switching and removal


When there are multiple chargepoint, you can switch the chargepoint by clicking on the name of the chargepoint above. Press and hold the chargepoint name to remove the chargepoint. You can add a new chargepoint by adding a button.



11.2.5 Start and stop control of charger



Press  to turn on/off.

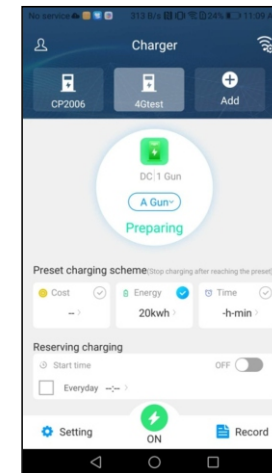
Note: when charger status is Preparing , you can press  to start charging.

When the chargepoint status is preparing, the user can use the preset charging scheme and the reserved charging function.

When charging, the preset charging scheme, the amount of charge, the amount of consumption, the duration of charging, the charging rate, the current current, and the current voltage are displayed.

11.2.6 Preset charging scheme and reservation function

Preset charging scheme:



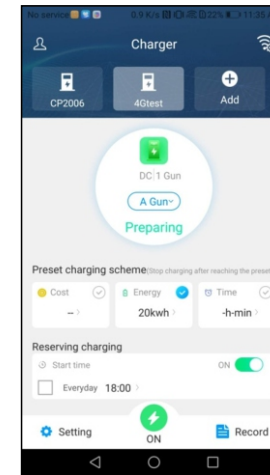
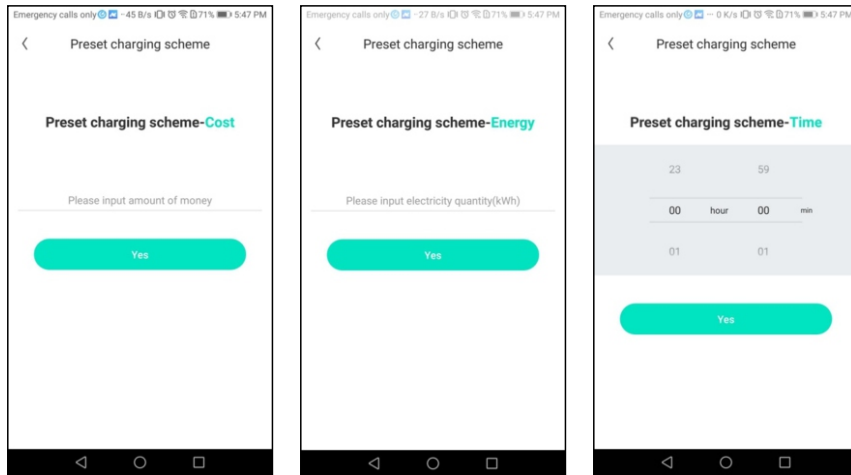
You can make an appointment to charge according to the amount, amount of electricity, and duration. For example, if the preset power is 20kwh, the chargepoint will automatically stop charging when the charging power reaches 20kwh.

Only one of the three charging schemes can be selected to take effect.

Click the cost to set the preset amount. When the preset amount is reached, the charger stops charging.

Click the energy to set the preset power. When the preset power is reached, the charger stops charging.

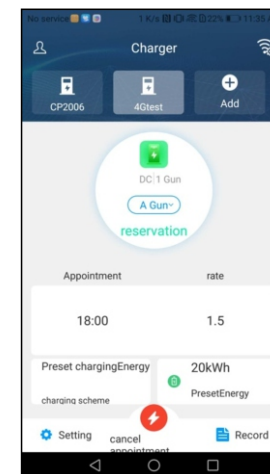
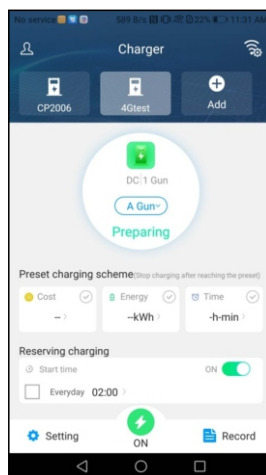
Click the time to set the preset time. When the preset duration is reached, the charger stops charging.



reservation:

You can also schedule a charge start time and set whether it will take effect every day. For example, if you want to start charging at 02:00 every day, every day at 02:00, if the vehicle is connected to the chargepoint, charging will start automatically.

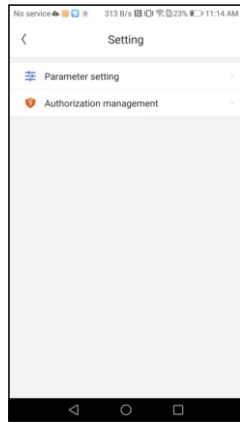
When using the reservation function, set the appointment time and plan, click the charge button to enter the reservation display interface. This interface displays the time of the scheduled charging, the charging rate and the preset charging schedule. The user can click to cancel the appointment and cancel the current appointment charge.



The preset charging scheme and the reservation function can be used simultaneously. However, when using at the same time, the lower reservation charging is only used as the start time, and the reservation time period cannot be set.

11.2.7 Setting

Click on setting to parameterize and authorize the charger.



Parameter settings

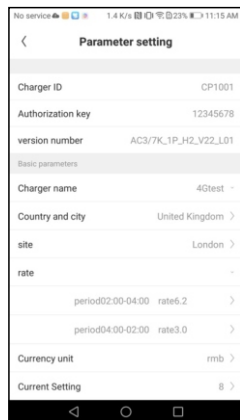
You can set the charger parameters by parameter setting.

On the parameter setting page, the user can view the charging station ID, the authorized authentication key, and the version number (not modifiable);

The basic parameters can be modified - the name of the electric pile, the national city, the station, the charging rate, the currency unit, the maximum output current of the electric pile, the intelligent power distribution, the charging mode (scan code/swipe, only card charging, gun charging);

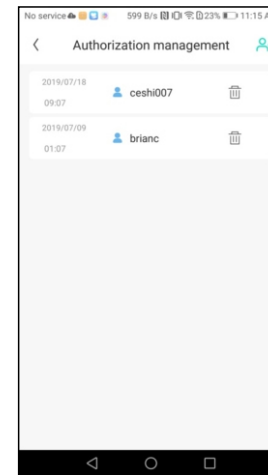
You can modify the advanced settings - charging stub IP, gateway, subnet mask, network MAC address, server URL, DNS address. Please make careful changes to the advanced settings. If the settings are incorrect after modification, the chargepoint may not be available.

Enter AP mode and switch the electric pile to AP mode.

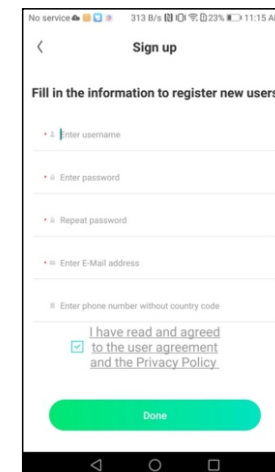
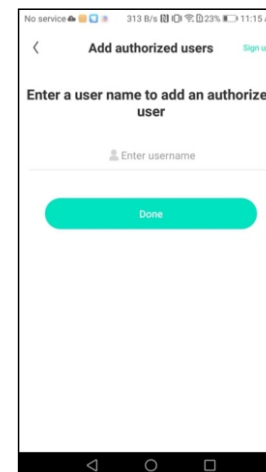


Authorization management

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

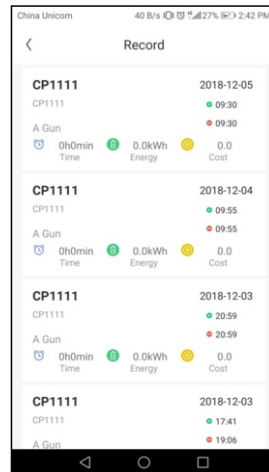


Users can authorize other users to use charging stubs through authorization management. Enter the user name to authorize other users to use the chargepoint. If the person you want to authorize does not have an account, you can register for the new user by registering the new user in the upper right corner.



11.2.8 Charging record

Press "Record" to view past charge records, including charger ID, gun number, time, energy, cost and so on.



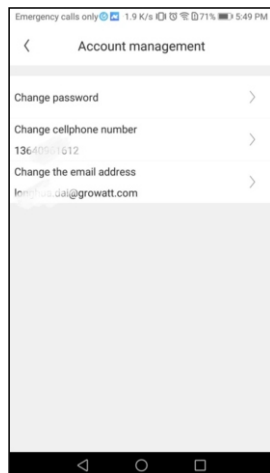
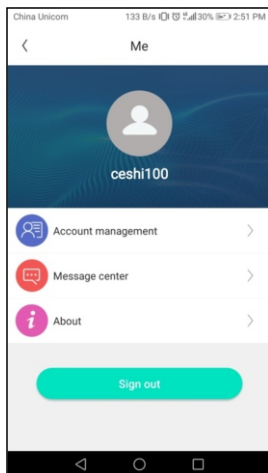
11.2.9 Account Management

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 phone number: Follow the steps to verify the new phone number with a verification code.

Modify the mailbox: Follow the steps to verify the new mailbox by verification code.



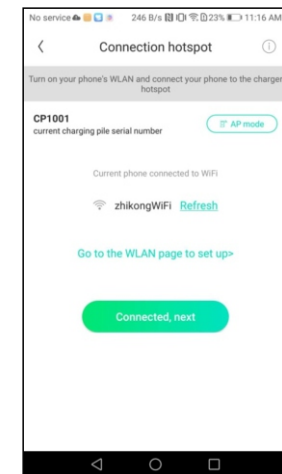
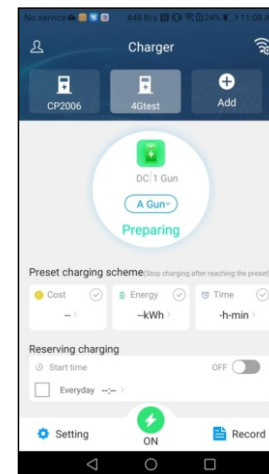
11.2.10 WiFi connection configuration charger

In the main interface, click the WiFi connection symbol in the upper right corner to enter the WiFi connection page.

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.

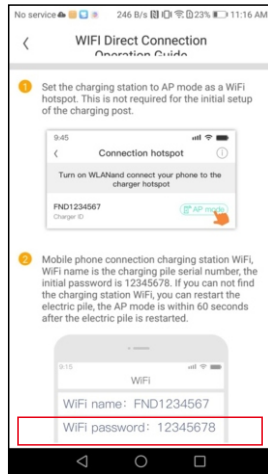
When the charger is connected to the network, you can switch to AP mode in the parameter setting, set the charger to AP mode, and then connect.

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 connect to the server.



Click the WiFi Direct button in the upper right corner of the main interface of the Peg to enter the hotspot connection page. Please pay attention to the serial number of the current electric pile when connecting the chargepoint WiFi. The connected hot spot must be the selected electric pile.

Click the upper right corner of the hotspot connection page to view the operation instructions of the WiFi Direct connection function.



Click AP mode to say that the current charging stub is set to AP mode. Only when the chargepoint is in AP mode can the mobile phone be used to connect the chargepoint.

The chargepoint ID is displayed in the AP mode, and the electric pile parameters can be set.

Pay attention to the format restrictions of the parameters when setting the pole parameters.

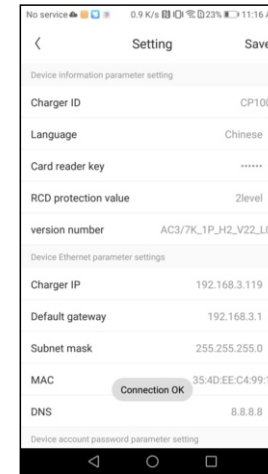
IP address, gateway, mask, and DNS should be filled in according to the four-segment number format, for example: 192.168.1.1

The following parameters must be integers: heartbeat interval (5-300), PING interval (5-300), meter upload interval (5-300), maximum output current of the pole (greater than 3), protection temperature (65 -85), externally monitors the maximum input power (greater than 3).

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

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

The following parameters can only enter numbers, uppercase and lowercase letters, underscores (_), spaces (-): wifi name, Bluetooth name, 4G username.

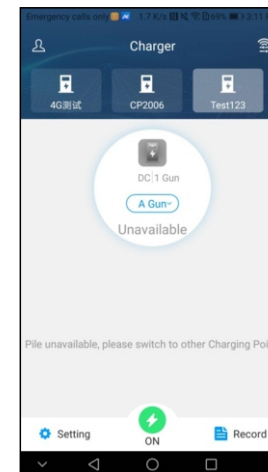


11.3. Notes

Please do not download the Project EV APP from other sources other than Play Store and APP Store.

Please use the parameter setting function with caution. Incorrect settings may cause the chargepoint to be unavailable.

When the chargepoint fails, check the chargepoint according to the fault information display.



XII. Annex 2

12.1 Electrical diagram

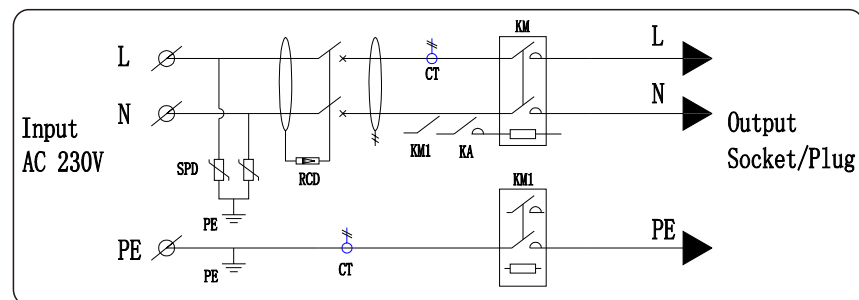


Fig11-1. Main circuit diagram

12.2 Contact

Company Name: Project EV

Address: Project EV (sales and support)
 Houldsworth Business and Arts Centre
 Houldsworth Mill
 Houldsworth St
 Stockport SK5 6DA

Project Better Energy Limited (Headquarters)
 Unit 1 Lakes Court
 Lancaster Business Park
 Burton Upon Trent
 DE13 9PD

Website: www.projectev.co.uk

Service line: 0800 112 3110 – 01283 249 609

E-mail: info@projectev.co.uk

XIII. Annex 3

5 Years Warranty Statement for ATESS EV AC Chargers 3 Years Warranty Statement for DC Authorized Warranty Installer

(Valid from 01.July.2020)

(These warranty terms are only applicable to UK consumers only for the ATESS EV chargers, bought through the authorized repair and installation partner)

1. Warranted Products

This 5 Years limited warranty shall only apply to EV AC Chargers only installation provided by an Authorized 5 Years Warranty Installer.

This 3 Years limited warranty shall only apply to EV DC Chargers only installation provided by an Authorized 3 Years Warranty Installer.

2. 5 Years Limited Warranty

A.5 years Limited Product Warranty (up to 3 Years) 3 Years DC product range.

ATESS warrants its EV chargers, known as 'ATESS Products' here after including factory-assembled charger sockets, charger plug and cables, if any, to be free from defect in materials and workmanship which would impact the functionality of the product under normal application, installation, use and service conditions.

The duration of this limited warranty is for life from the date of delivery in the original packing to the first customer (CUSTOMER) of the ATESS products, or latest 6 months after manufacturing date, the earlier time between the two.

Claims under the warranty can only be accepted if the buyer can provide the proof that the malfunctioning or non-conformity of ATESS Products results exclusively from defects in materials and/or workmanship under normal application, installation, and use and service conditions. If an ATESS Product fails to conform to this warranty, ATESS will, at its option, either repair or replace the product. In the event that a like for like replacement is not available and upgrade may be offered at an additional customer cost.

A.1 Product warranty **within/ up to 3 years**

If, within a period of three(3) years, the costs belonging as below:

Items	Spare parts	International Transportation	On-site service (if needed)	Other cost
Cost belonging	ATESS	ATESS	ATESS	Installer/User

A.2 Product warranty **from year 3 to 5**

If, after a period of three(3) years, the costs belonging as below:

Items	Spare parts	International Transportation	On-site service (if needed)	Other cost
Cost belonging	ATESS	Installer/User	Installer/User	Installer/User

3.Exclusions and Limitations

The above mentioned "Limited Warranty" does not apply to any ATESS Products which have been subjected to:

- A.If the direct customers who has obtained the ATESS Products from ATESS or its distributor failed to pay the ATESS Products according to the purchase price, ATESS is entitled to reject the claim under this warranty based on this provision;
- B.Cosmetic change in appearance stemming from the normal wear and tear over time of product materials, for example the out casing, charger sockets, charger plug, cables and so on.
- C.Installation on mobile or in a marine environment, or extreme thermal environment, damage caused by ammonia, high air pollution, acid rain or any other abnormal environment that beyond ATESS's control;
- D.Misuse, abuse, neglect or accident, alteration, improper installation or application, Improper or unauthorized repair or modifications, power failure surges, lightning, flood, fire, accidental breakage or other events outside ATESS's control.
- E.Service or installation by unapproved technicians who are not qualified under the relevant law or made illegible regulations at the place of installation.
- F.Installation by none approved company or person
- G.ATESS Products for which the nameplates or serial number have been altered, removed or made illegible.
- H.ATESS Products which have been moved from their original installation location without the express written approval of ATESS.
- I.Defective components in the construction on which the ATESS Products are mounted.
- J.Wi-Fi connectivity, internet connectivity or APP connectivity is not covered or any associated connectivity issues
- K.The Warranty is nontransferable.
- L.Any subsequent costs or losses associated with the ATESS EV charge point.
- M.Future proofing new Electric Vehicle software compatibility.

4.General Conditions for Warranty Claims

- A. The direct customers who have obtained the ATESS Products shall register the ATESS Products and upload the information within 30 days from the date of receiving the ATESS Products. If the customers fail to register the product before the deadline, the Limited Product Warranty will remain at 3 years. The warranty registration can be done either through the APP or via the website.
- B. The direct customer shall notify the warranty claims to Authorized 5 Year Warranty Installer or its Distributor within 1 week via email only after becoming aware of the circumstances which constitute a warranty case. The report shall include the following information:
 - 1.Name and address of the END CUSTOMER
 - 2.Name and address of the INSTALLER or SELLER

- 3.A copy of the purchase agreement or installation agreement
- 4.Module type and serial number of the respective ATESS Products
- 5.Address of the place of installation of the respective ATESS Products
- 6.A short description of the problem at hand as well as a short description of the tests which may have already been performed as well as their results.
- 7.Regarding any defect or fault, where possible, pictures and videos of the effected ATESS products clearly showing the problem or fault.
- C. Any repaired or replaced ATESS Products provided by ATESS under a warranty claim, shall be covered by the same Limited Warranty and terms as the first ATESS Products purchased.
- D. No warranty periods or terms shall be extended because of a warranty claim or remedy.
- E. The Limited Warranty does not cover any transportation costs for return of the defective ATESS Products or for reshipment of any repaired or replaced ATESS Products or costs associated with installation, removal or re-installation of repaired, replacement or additional ATESS Products.
- F. The Limited Warranty does not cover any other costs, loss of use, loss of profits, and loss of production, loss of revenues associated with performance or non-performance of defective ATESS Products.
- G. If the authorized partner should cease to trade the warranty reverts to ATESS standard UK warranty which can be viewed online at www.atesspower.com.The warranty is only valid through a valid Authorized 5 Year Warranty Installer directly. ATESS will not cover any product unless it goes through an Authorized 5 Year Warranty Installer. ATESS Warranty is with and for the Authorized 5 Year warranty installer. This product is covered by authorized partner.
- H. 5 Year Warranty only applies to products installed by an Authorized 5 Year Warranty Installer.
- I. An upgrade may be offered at an additional cost should the product or the components be unavailable at an additional cost.
- J. Refurbished or factory reconditioned products may be used in part exchange.
- K. No responsibility will be taken by ATESS for fluctuations in voltage supplied from the National Grid that may affect performance and may cause the EV charger to fail or fault.
- L. An approved installation or technical partner must be used, none approved third party invalidate this warranty in full.
- M. A call out costs and labor charges will be applicable in all cases.
- N. The EV charger must be accessible by ATESS and the consumer to read any faults.
- O. The EV charger must be online and have latest firmware, and make sure the authorized installer can diagnosis potential faults and settings remotely or further labor costs will be required.
- P. Replacement product for warranty claims can only be honored through an Authorized 5 Year Warranty Installer; in this case ATESS has the right to terminate claims over and above its standard terms and conditions if claims do not come through Authorized 5 Year Warranty Installer Ltd.

5. Dispute regarding a material defect or a reduced power

In case of a dispute regarding the existence of a material defect or reduced power in a warranty claim, ATESS will accept the judgment of an accredited testing institute (which is to be selected by ATESS in advance.) The cost and expenses for the testing shall remain with the Buyer if it is found to be good performance.

6. Force Majeure

ATESS shall not be responsible or liable in any way to the Buyer for any non-performance or delay in performance under this Limited Warranty due to occurrences of force majeure such as, war, riots, strikes, epidemic, unavailability of suitable and sufficient labor, material, or capacity or technical or yield failures and any unforeseen event beyond its control, including, without limitation, any technological or physical event or condition which is not reasonably known or understood at the time of the sale of the defective Product(s) or the notification of the relevant warranty claim under this Limited Warranty.

7. Validity

This Limited Warranty shall apply to ATESS Products (s) manufactured after 1st of Jan 2020. This Limited Warranty shall be valid until a new revision is issued by ATESS and is subject to change without prior notice.

8. Others

EV charger spare parts and service costs are assessed each year, subject to the latest prices.
ATESS reserves the right to interpret other unmentioned matters.

9. Contacts

Freephone: 0800 599 9582
Email: Enquiries@projectev.co.uk
Address: Unit 1 Lakes Court, Lancaster Park Newborough Road, Needwood, Burton on Trent, Staffordshire
Zip code: DE14 1PD