

# WB-03S/07S

*Single-phased AC charger*



49 Boulevard Lucien Sampaix, 69190 Saint-Fons  
T 09 73 79 63 33  
[www.wellborne.fr](http://www.wellborne.fr)



## **AVERTISSEMENT**

This user manual is copyrighted by RP Technology (hereinafter referred to as “Wellborne”). No company or person may extract or copy part or all of this user manual without written permission from RP Technology. Content should not be transmitted in any form, including materials and publications.

All rights reserved. RP Technology has the final right to interpret this user manual. The information in this manual is subject to change without notice.

WB Series Smart Single Phase AC Charger is a power device that uses professional and advanced technology to provide power to electric vehicles, it also has an ergonomic interface and versatile control, billing and communication functions. . The charger can be connected to a back office server to perform booking and payment functions via the Mobile phone application. Diverse communication options including wired Ethernet, WIFI, 4G are available for connection to the back office server.

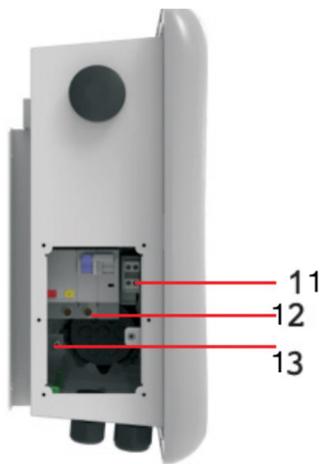
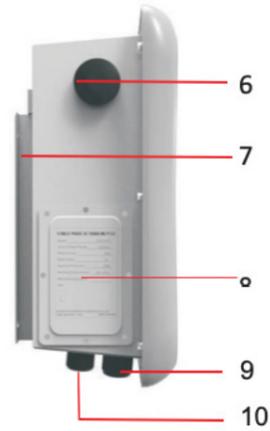
We sincerely hope that this product can meet your needs and continuously improve the quality of our products.

## **MENU**

<b>I.</b>	Product description	— — — — — — — — — —	<b>1</b>
<b>II.</b>	Packaging list	— — — — — — — — — —	<b>2</b>
<b>III.</b>	Installation and wiring	— — — — — — — — — —	<b>3</b>
<b>IV.</b>	Parameter Setting	— — — — — — — — — —	<b>7</b>
<b>V.</b>	Operation instruction and LCD description	— — — — — — — — — —	<b>16</b>
<b>VI.</b>	Firmware update	— — — — — — — — — —	<b>23</b>
<b>VII.</b>	Troobleshooting	— — — — — — — — — —	<b>26</b>
<b>VIII.</b>	Use solar power to charge your car	— — — — — — — — — —	<b>33</b>
<b>IX.</b>	Intelligent power modulation	— — — — — — — — — —	<b>36</b>
<b>X.</b>	Specifications	— — — — — — — — — —	<b>39</b>
<b>XI.</b>	Annex	— — — — — — — — — —	<b>40</b>

## PRODUCT DESCRIPTION

1. LOGO backlight
2. Emergency stop button
3. Forced on / off button
4. Status indicator (The indicator flashes while charging)
5. Power socket (socket holder for the wired version)
6. WIFI / 4G antenna
7. Mounting bracket
8. Side window and plate
9. Waterproof cable for Communication wire
10. Waterproof AC input cables



11. Box for CT / meter wiring.  
The definition of the terminal is FA; 2B; LI; GND. and 2 is the RS485 terminal for the connection of the meter; Ó and @ are for CT connection.
12. AC input terminals. The definition of terminal is (IN; DL).
13. Pe terminal

## PACKAGING LIST

NO.	NOM	QTE	REMARQUES
	Charger		
2	User manual	1	
3	Quality certificate		
4	Mounting bracket		
5	Cable hook For cabled version		For the version « wired »
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		RFID function will be equipped with user card

# INSTALLATION AND WIRING

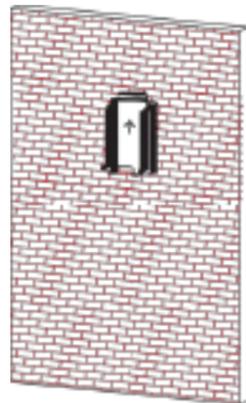
**1.** Mount on a wall

**2.** 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 hooker is also included inside.

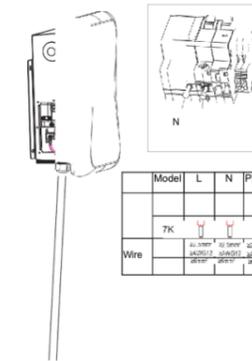


**3.** Remove the mounting bracket from the charge point, use it as a template to mark the position of the drill holes. Drill the holes and hammer the expansion bolts in the accessories bag into the holes. Then fix the mounting bracket onto the wall.

**4.** 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

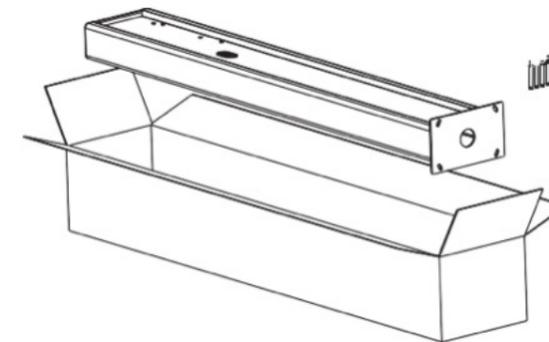


**5.** Crimp the below shown insulated ferrule or ring terminals on the end of the AC input wires. Connect the wires into the terminal block of the charge point as below. Check the wiring and then close the RCBO in the side window. Close the side window with the cover, then the wiring is done.



**1.** Mount on a pole

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

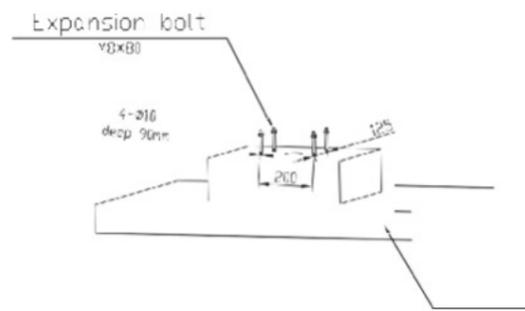


3

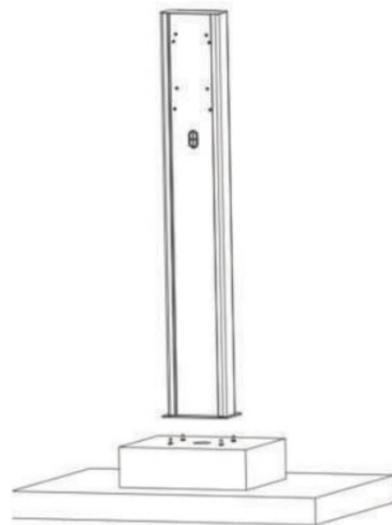
4

# ⚡ INSTALLATION AND WIRING

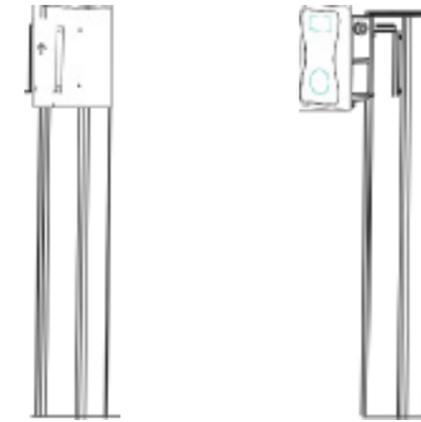
**3.** The pole must be installed on a hard surface, concrete surface is recommended, it can also be mounted on a solid ground. Drill hols according to the requirements marked on the illustration for fixing expansion bolts.



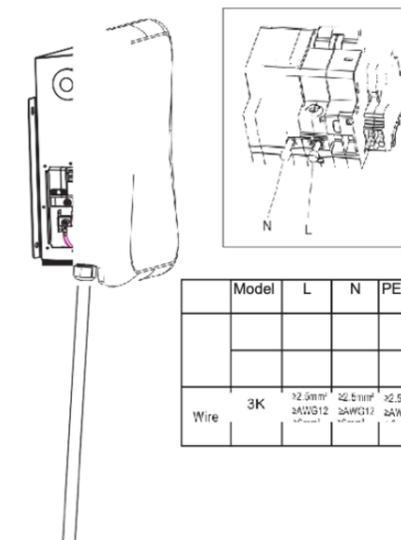
**4,** Fix the pole onto the holes with expansion bolts. The input cables shall go into the pole from the bottom middle area and come out of it from the area below the cable hooker. Position the charge point onto the bracket and secure it on the bracket with the 2 screws.



**5.** Fix the mounting bracket onto the pole. Position the charge point onto the bracket and secure it on the bracket with the 2 screws.



**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 RCBO in the side window. Close the side window with the cover, then the wiring is done,



Model	L	N	PE
Wire	3K	Ø2.5mm² 2AWG12	Ø2.5mm² 2AWG12

# PARAMETER SETTING

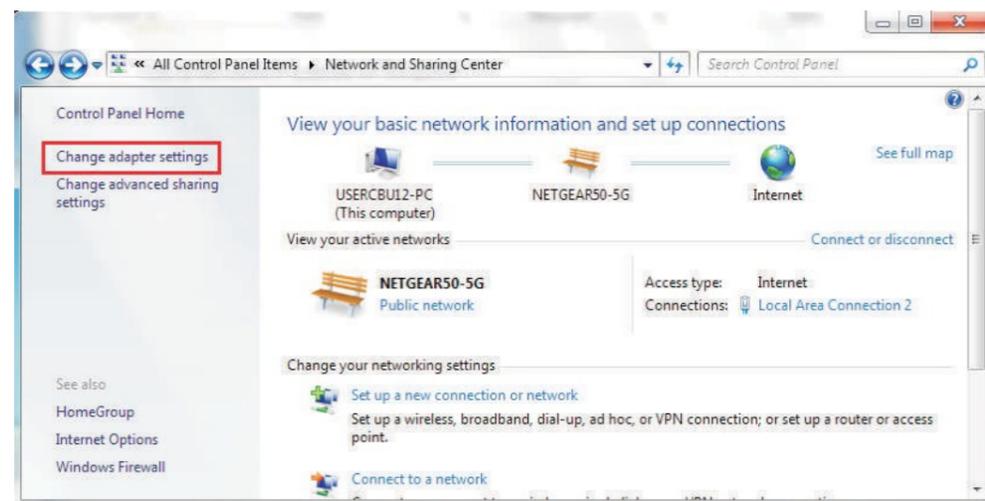
After the installation and wiring is done, connect the Charger to a computer and configure parameters via the web browser of the computer, then the Charger can be ready for use

## Set computer's IP

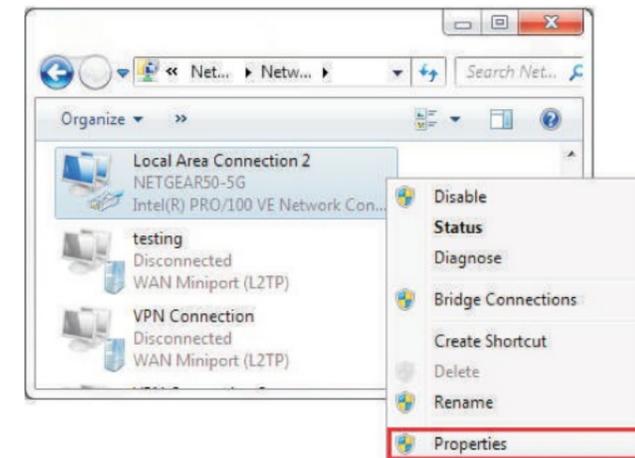
1. The Charger's default IP address is 192.168.1.5. To access the parameter setting interface, you'll need to first set the computer's IP to 192.168. 1.x(x can be any value between 1 and 255 except for 5, e.g. 192.168.1.10). To set a static IP on your Windows computer:

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).

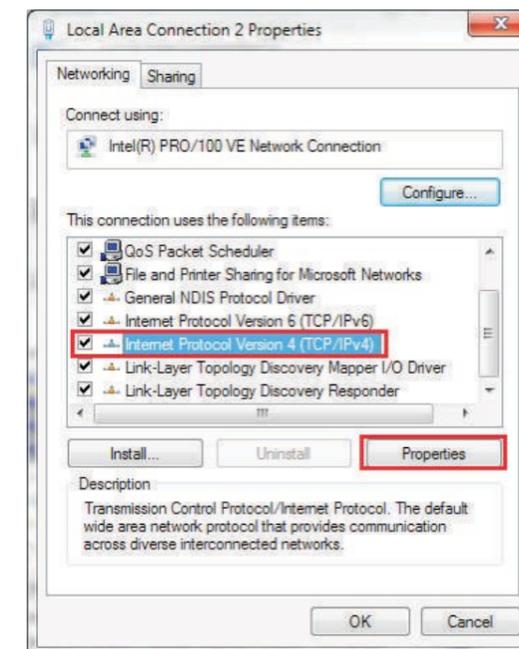
Click Change adapter settings



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

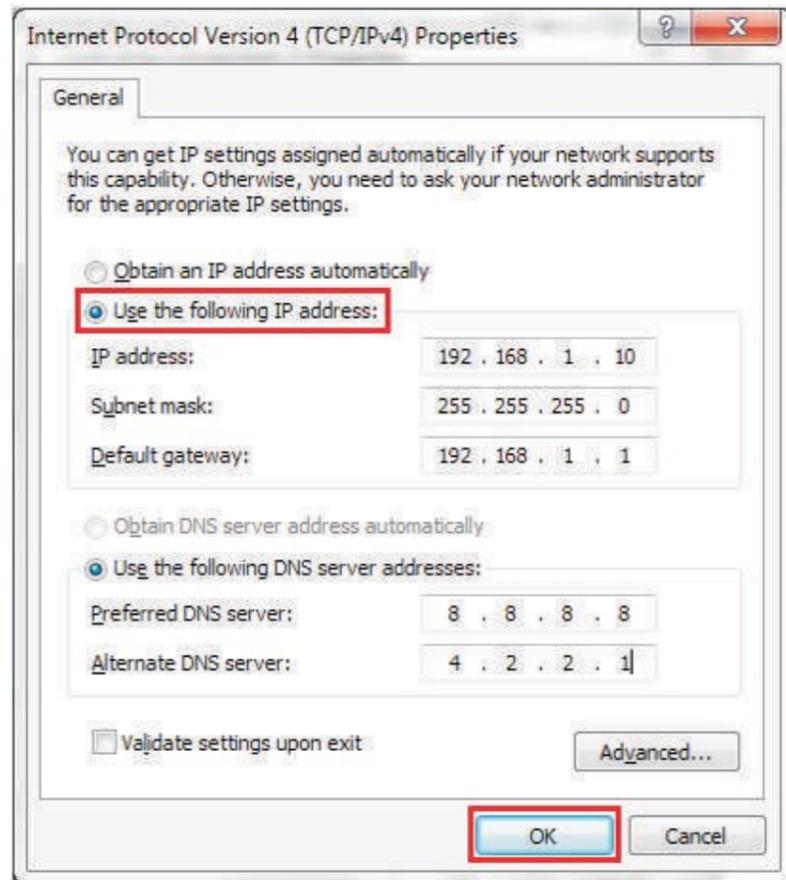


3. Select Internet Protocol Version 4 (TCP/IPv4) and click on Properties.



# PARAMETER SETTING

3. 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.



## 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.

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

Firmware Version Num: (1) ACS/TK IP H2 V17 L01

FIG 1

(2) Charger ID, this is the unique identification of the Charger. If the charger is to be connected to 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) CP1001

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) 192.168.1.5

FIG3

(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) 192.168.1.1

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) 255.255.255.0

FIG 5

(6) MAC address. This is the MAC address used for LAN cable connection. If the charger is connected to 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) 80:9A:9C:01:7F:81

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 server 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) ws://192.168.1.228:80  
Authentication Key(MaxLen 20): (29) 12345678  
Heartbeat Interval(15~3600): (30) 30

FIG 7

(8) Charging fee per unit of electricity.

Charging Rate (TBE/KWh): (8) 1.50

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) 242007

FIG 9

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

DayTime(E.g:05:00-18:00): (10) 06:30-18:30

FIG 10

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

NightTime(E.g:18:00-05:00): (11) 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.

(13) Language of LCD screen.

Language Set(1, 2, 3) (13)  
(1:English, 2:Other, 3:Chinese): 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)

**FIG 14**

(15) Set the max output of the charger.

Max Current Set(7~32A): (15)

**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):

**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):   
WiFi Key(MaxLen 16, Not support (18):

**FIG 17 et 18**

(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 19 et 20**

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)   
PowerLimit Option(0:Unused 1:Inner CT 2:PowerMeter): (32)   
MeterValue Interval(5~300): (22)

**FIG 21 - 32 - 22**

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

Max Temperature(Max 85): (23)

**FIG 23**

(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)

**FIG 24**

(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)

**FIG 25**

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

Set BlueTooth Name(MaxLen 16): (26)   
Set BlueTooth Pin(MaxLen 16): (34)

**FIG 24 et 34**

(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)	Default

**FIG 27 - 28 - 35**

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

WebSocketPingInterval(15~150): (31)	<input type="text" value="120"/>
-------------------------------------	----------------------------------

**FIG 31**

(33) DC residual current real-time detection value

RCD Current Val(mA): (33)	<input type="text" value="0.0"/>
---------------------------	----------------------------------

**FIG 33**

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

**FIG 36**

(37) This is used to upgrade firmware.

[Firmware Updating](#)

**FIG 37**

## Operation instruction and LCD description

### Charging mode and Operation

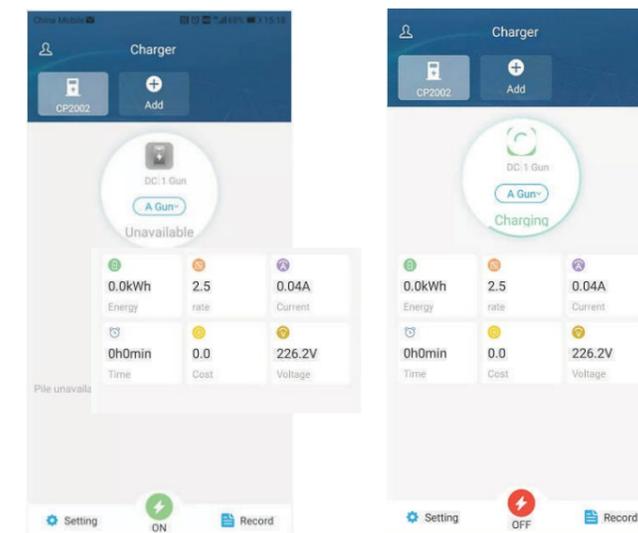
APP/RFID mode:

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 ProjectEVA APP, Charging can be started/stopped by pressing the ON/OFF button on the APP.



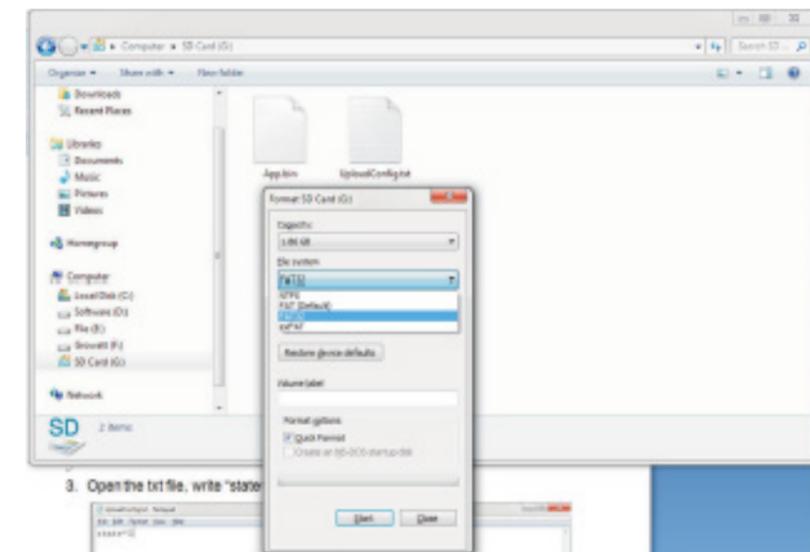
## Firmware update

There are 2 ways to update firmware for EV charger

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

### Update by SD card

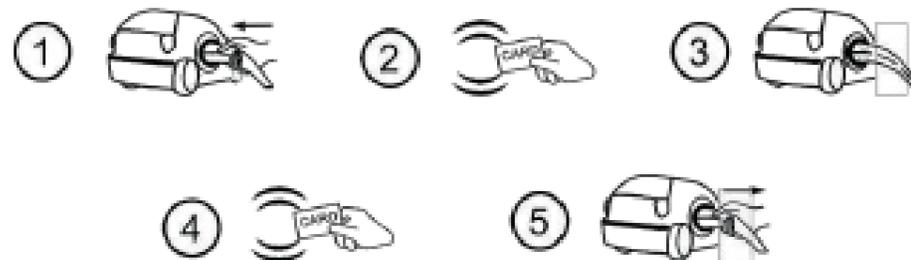
1. The firmware file must be named as «App.bin». Prepare a microSD card with capacity not greater than 4G. Format the SD card using FAT32.



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».

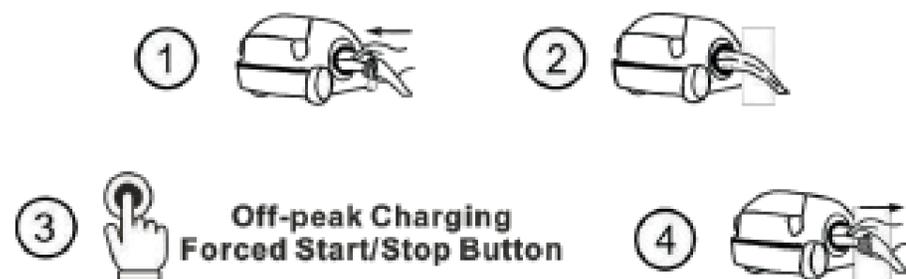
RFIDmode:

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



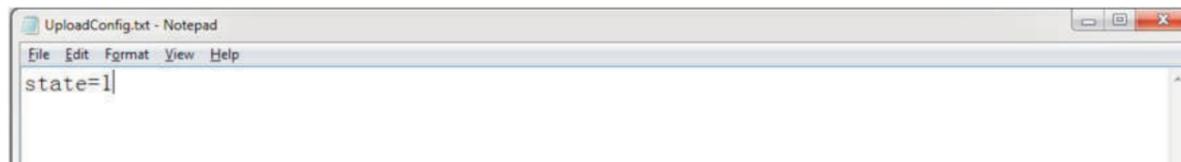
Plug&Charge:

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,



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

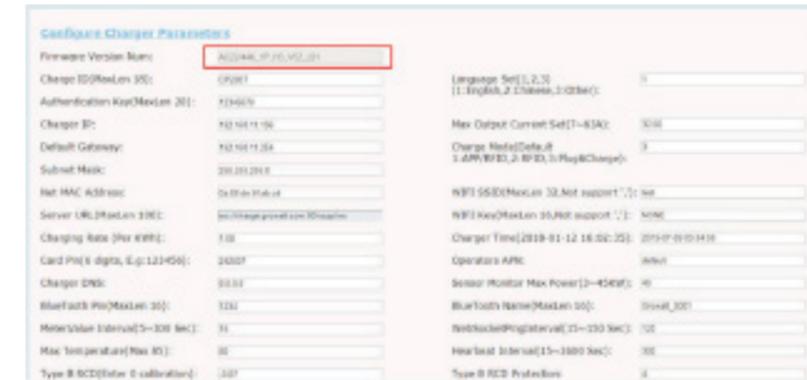
3. Open the txt file, write “state=1 ” in it and save the file.



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.



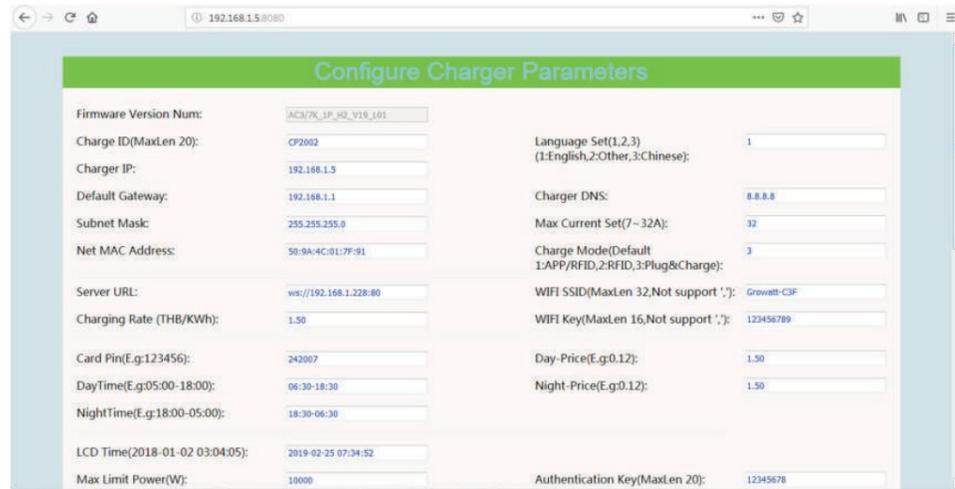
5. Check the current FW version on LCD or the parameter setting page. To check FW version on the paramete setting page Connect the charger to computer via a network cable, the computer's IP must be within the 192.168. 1.x segment(x is any value between 1 and 255 except 5).Open the web browser type in 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.



### 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.



Scroll down to the below field.



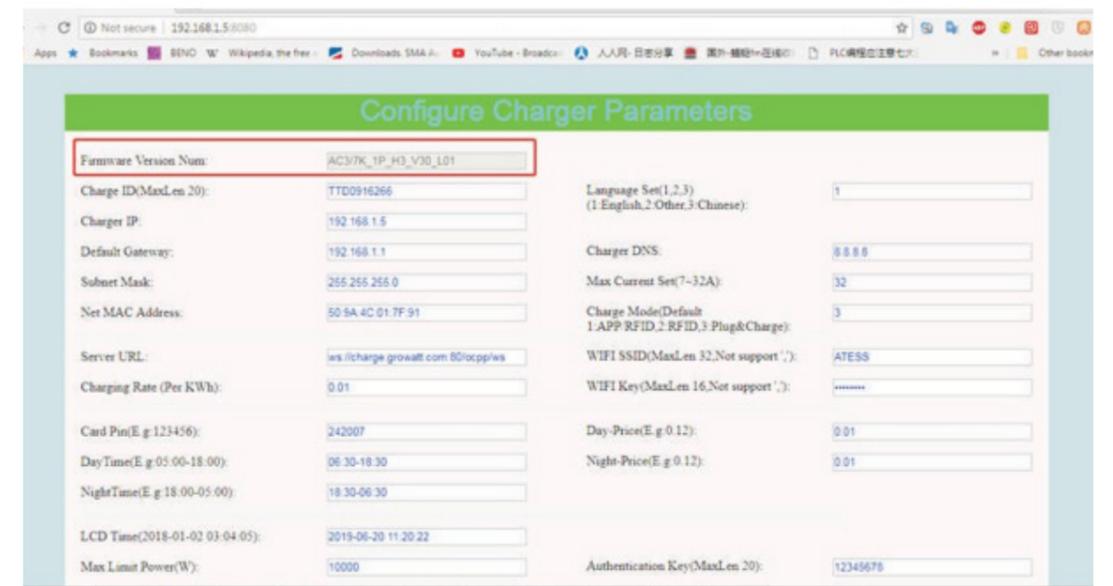
2. Click the 浏览 button and select the firmware file. Click "Upload", then update will start automatically.



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 green light 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.

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.

3. You can see the content below. If the charger already reboots successfully after the firmware update, close the FIRMWARE UPDATE browser and start it again to check the current firmware version.



# TROUBLESHOOTING

## Troubleshoot by LED behavior or LCD display

If a 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

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		Réserved
9	113		Réserved
10	114		Réserved
11	115		Réserved
12	116		Réserved
13	117		Réserved
14	1000		Réserved

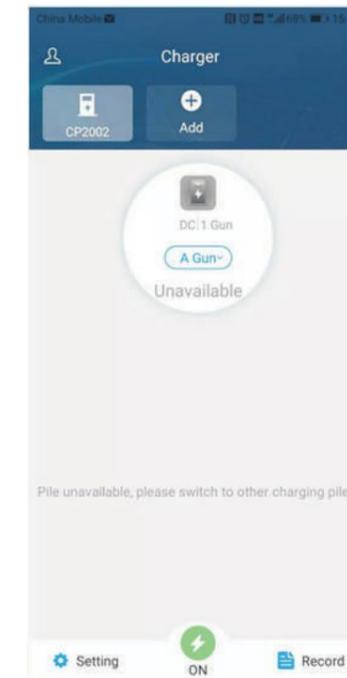
Please see the table below for detail information

## Firmware update fails

1. Firmware update failure with SD card :
  2. Check if the capacity is over 4G bytes, please use a SD card of less than 4G to retry;
  3. Check if the SD card is formatted with FAT32;
  4. Check if the firmware file is renamed as App.bin;
  5. Check if you have filled in "state=1" in the UploadConfig.txt file.
6. Firmware update failure with laptop:
 

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

## WiFi connection and application issue



# ⚡ TROUBLESHOOTING

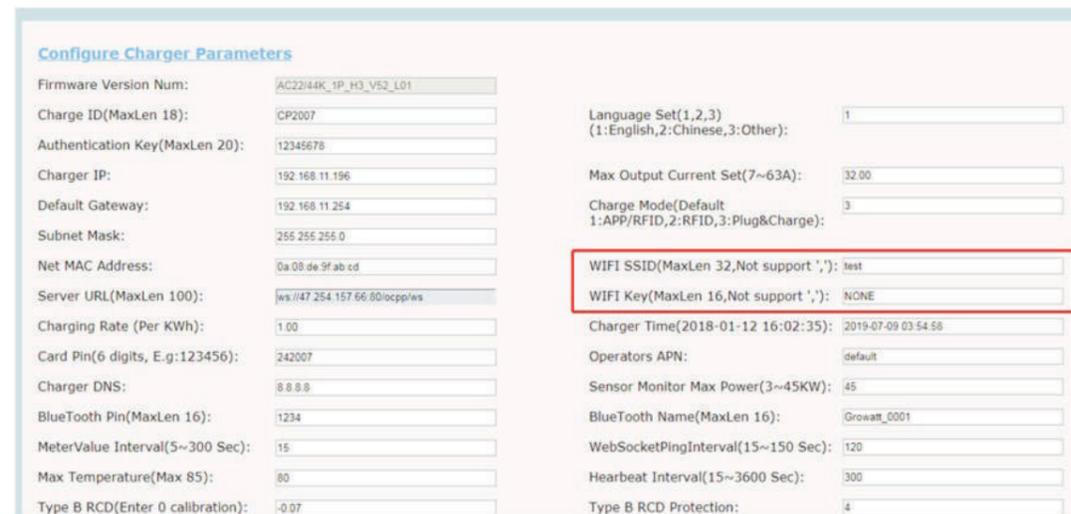
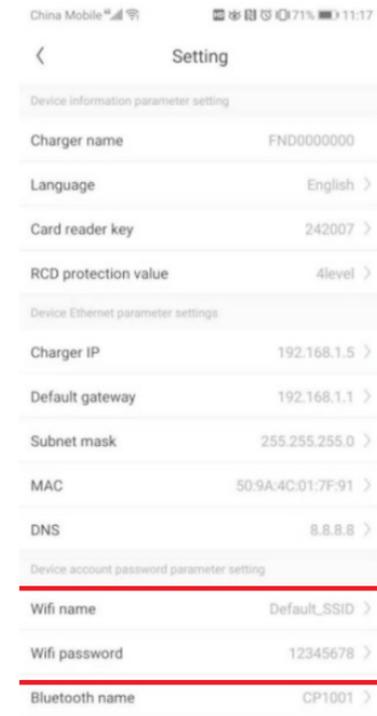
Check WiFi signal strength;  
Signal strength on PC:



Signal strength on mobile:

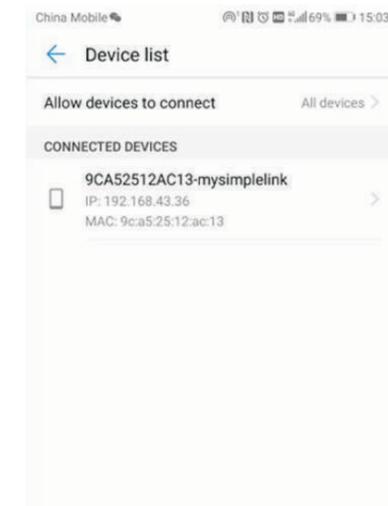


Please check and input the correct WiFi SSID and password to retry;



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.

2. 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



# ⚡ TROUBLESHOOTING

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.

Wireless	Enabled
Wireless Network Name (SSID)	SKYE2496 (2.4 GHz), SKYE9689 (5 GHz)
Wireless Network Visible	Yes
Current Wireless Channel	13 (2.4 GHz), 36 (5 GHz)
Wireless Encryption	WPA2-PSK

Device Name	MAC Address
UNKNOWN	70:70:0d:d5:bc:e5
iPhone	88:e8:7f:9e:2f:ac
23C01K568FILDUIZ	20:47:47:3d:85:f4
HUAWEI_nova_2s-Bedc2a8f95	ec:89:14:40:3b:9c
iPhone	a8:5c:2c:30:d7:07
Priyas-iPad	78:7e:61:c3:f7:03
LATITUDE-05	34:e1:2d:b5:c7:fa
Priyas-iPhone	b8:53:ac:4d:05:50
UNKNOWN	40:99:22:2a:fc:93
UNKNOWN	00:1b:67:16:d7:82

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.

Check if server address is correct in the "Server URL" field. The correct setting is: ws://47.254.157.66: 80 / ocpp / ws

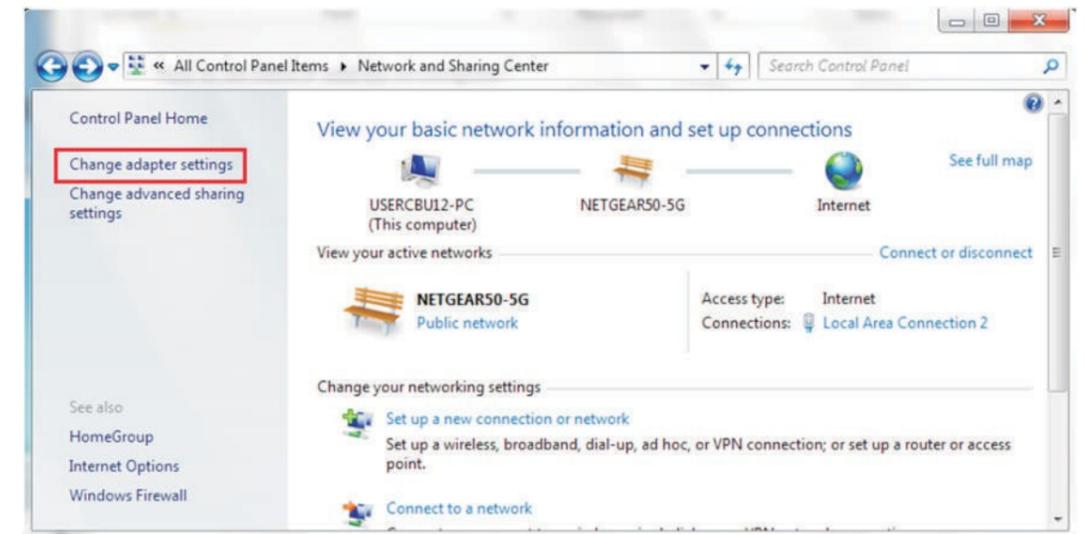
Configure Charger Parameters	
Firmware Version Num:	ACC244K_IP_H1_V52_181
Charge ID(MaxLen 18):	CP0007
Authentication Key(MaxLen 20):	12345678
Charger IP:	192.168.11.196
Default Gateway:	192.168.11.254
Subnet Mask:	255.255.255.0
Net MAC Address:	54:00:aa:9f:ab:ca
Server URL(MaxLen 100):	ws://47.254.157.66:80/ocpp/ws
Charging Rate (Per kWh):	1.00
Card Pin(6 digits, E.g:123456):	242007
Charger DNS:	8.8.8.8
Bluetooth Pin(MaxLen 16):	1234
MeterValue Interval(5~300 Sec):	15
Max Temperature(Max 85):	80
Type B RCD(Enter 0 calibration):	0.07
Language Set(1,2,3) (1:English,2:Chinese,3:Other):	1
Max Output Current Set(7~63A):	32.00
Charge Mode(Default 1:APP;RFID;2:RFID;3:Plug&Charge):	3
WiFi SSID(MaxLen 32,Not support ',')::	test
WiFi Key(MaxLen 16,Not support ',')::	NONE
Charger Time(2018-01-12 16:02:35):	2019-07-09 03:54:58
Operators APN:	default
Sensor Monitor Max Power(3~45KW):	45
Bluetooth Name(MaxLen 16):	Growatt_0001
WebSocketPingInterval(15~150 Sec):	120
Hearbeat Interval(15~3600 Sec):	300
Type B RCD Protection:	4

## Cannot access parameter setting page

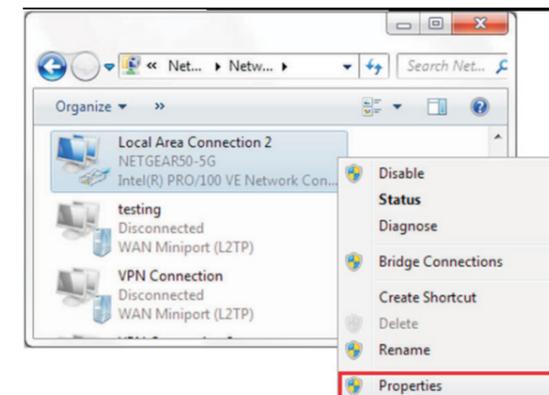
- Check if you have connected the charger to your computer,
- Check if you have change the computer's IP to 192.168.1.x(x can be any value between 1 and 255 except 5).  
To set a static IP on your Windows computer:

(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.

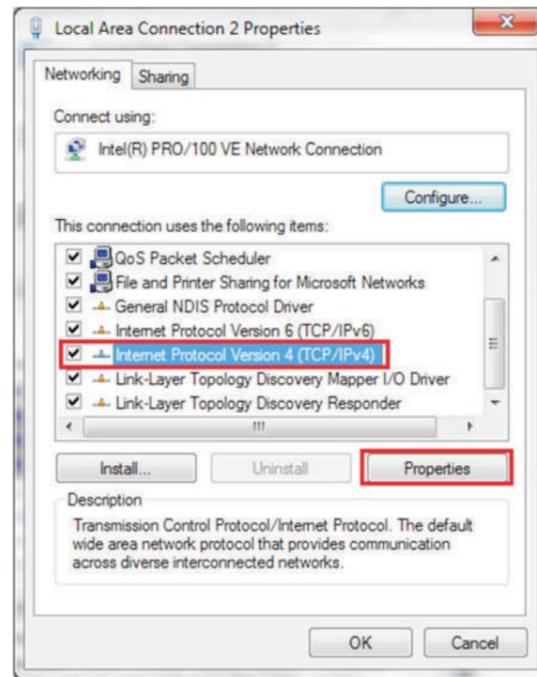


(3). Right-click on Local Area Connection and click on Properties.

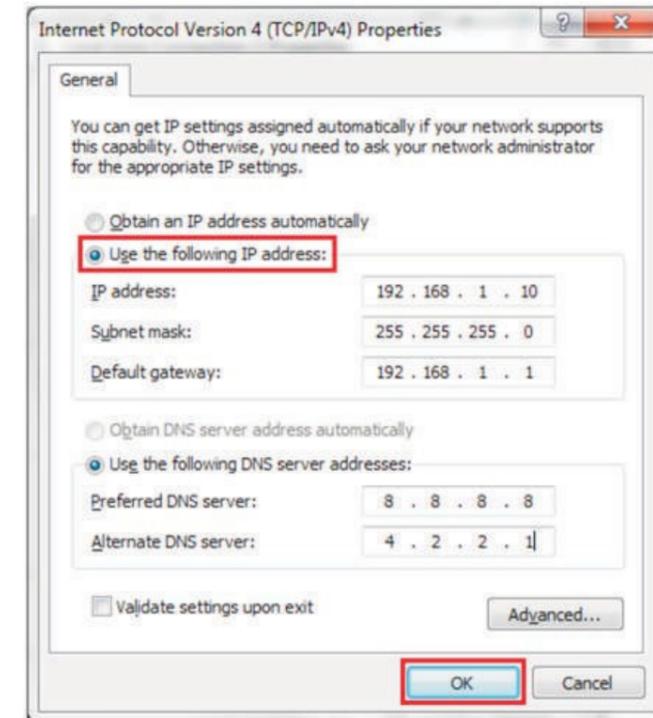
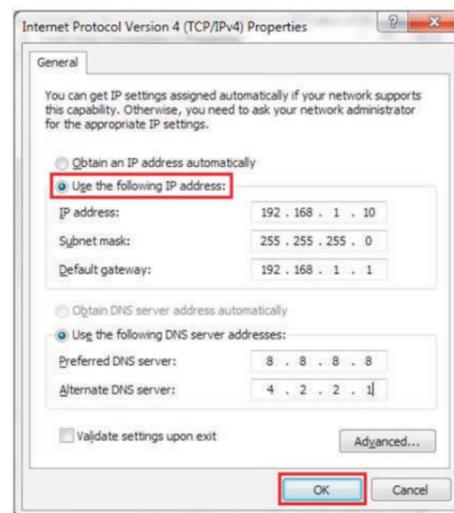


# ⚡ TROUBLESHOOTING

(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.



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`

# ⚡ TROUBLESHOOTING



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.

## 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/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	
FW Version Num:	AC/DC_IP_30_V01_L01
Charge ID(MaxLen 20):	ATESS00001
Charger IP:	192.168.1.9
Default Gateway:	192.168.1.1
Subnet Mask:	255.255.255.0
Net MAC Address:	31:40:EB:62:59:18
Server URL:	ws://charge.growatt.com/80/ocpp
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:PlugCharge):	1
WiFi SSID(MaxLen 32, Not support ','): HAWEI 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

c. 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
DayTime(E.g:05:00-18:00):	06:30-18:30
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
Max Limit Power(W):	10000
MeterValue Interval(5-300):	15
Max Temperature(Max 85):	75
Allow ChargingTime(00:00-23:59):	00:00-23:59
RCD Protection(mA):	20
BlueTooth Name(MaxLen 16):	Growatt_1001
4G Account(MaxLen 30):	
4G Passwd(MaxLen 30):	
Set and Reboot	

## ⚡ Use 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 2 charge modes with grid-tied PV system: FAST and ECO.

Introduction to the 2 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.

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

The condition of changing duty cycle of charger .  $P_2$

3. The power of three-phase charger  $P_2 = 1000W$
4. 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  $P_3 (P_e - P_3 > P)$

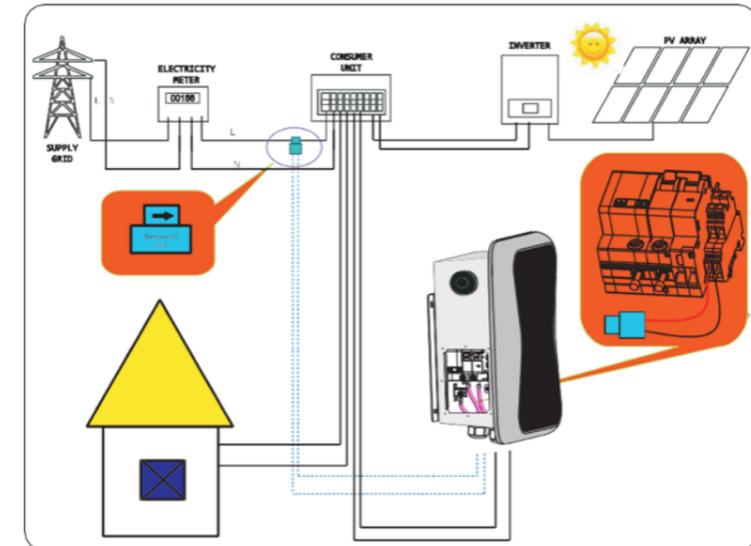
If  $P_1 > P_2$ , Charger will increase Permissible Output Power, When detected during this process  $P_1 - P_2$  or  $P_3 = P_e$ . Charger will stop increasing allowable output power, now the allowable output power of charger  $P_3 (P_e - P_3 = P)$

### Wiring

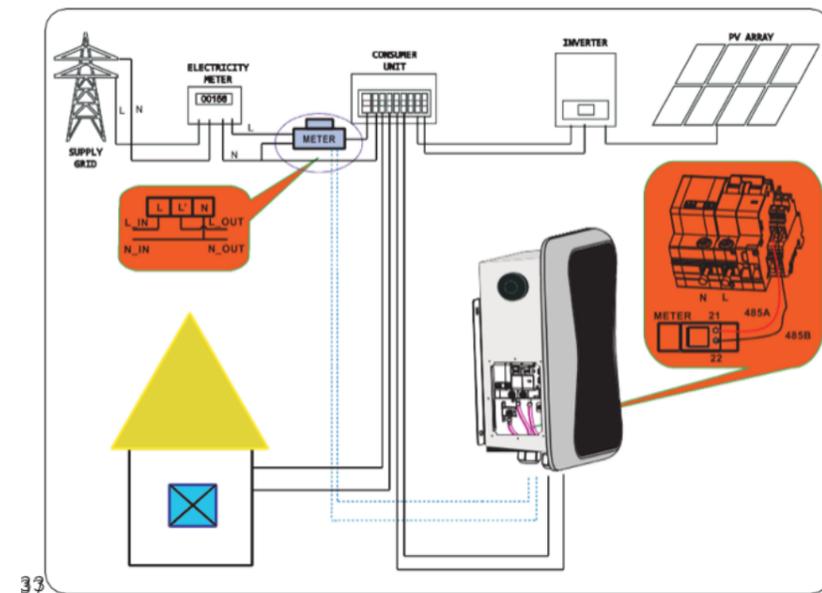
To monitor the real-time power import and export, a CT or meter is needed for this function to work properly.

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

## ⚡ Use solar power to charge your car



If meter is used, please wire it as below



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 or ECO.

Solar Mode(0:FAST,1:ECO):	<input type="text" value="0"/>	Solar Limit Current(8-32A):	<input type="text" value="8"/>
Power Distribution Enable(0:Disable,1:Enable)	<input type="text" value="0"/>	External Power Smpling 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"/>			

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 Smpling 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"/>			

If you choose the PowerMeter.Plesae change PowerMeter Addr to the address shown

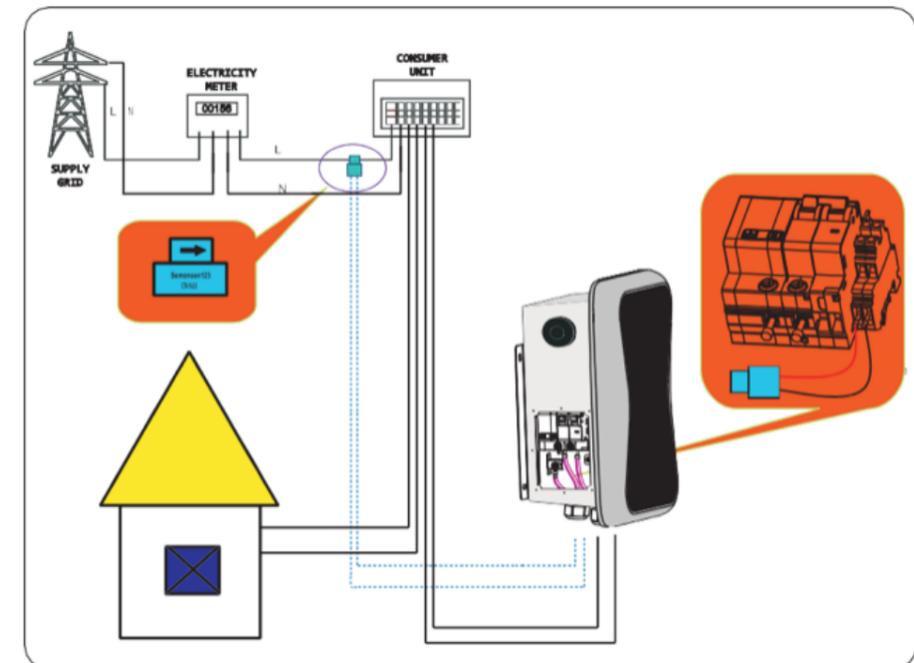
Power Distribution Enable(0:Disable,1:Enable)	<input type="text" value="0"/>
External Maxlimit Power(kW):	<input type="text" value="10"/>
PowerMeter Addr:	<input type="text" value="032"/>
<input type="button" value="Set and Reboot"/>	

## Intelligent power modulation

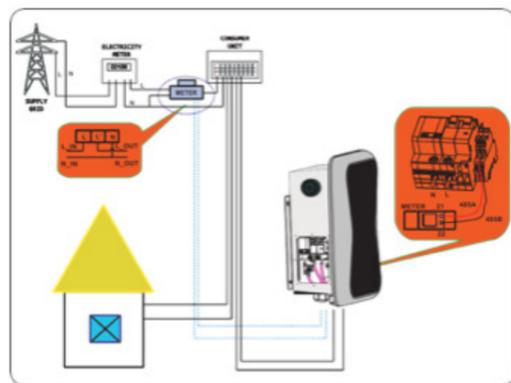
### introduction

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 thus the car can always be charged with the maximum allowable power.

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,



If a meter is used, the wiring will be as the following



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.

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"/>	

(3) Select the power sampling device in the parameter field: External power sampling wiring (0: Internal CT 1: PowerMeter). 0 means CT while 1 means meter.

External Power Smpling Wiring(0:Inner CT 1:PowerMeter):	<input type="text" value="0"/>
---	--------------------------------

Peak Valley Charge(0:Disable 1:Enable):	<input type="text" value="0"/>
---	--------------------------------

(4) Set the maximum power import value in the External maximum power (kW) field. To avoid unwanted tripping of the main circuit breaker, it is suggested to set this parameter slightly lower than the maximum power supply of the property, eg. the maximum input power is 15 kW, you can set the maximum power import to 13 kW or 14 kW.

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"/>	

If you choose the PowerMeter, please change the address of the PowerMeter 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"/>	

## SPECIFICATIONS

Model	WB-03/07S
Dimension (mm)	240*380*164(W*H*D)
Weight (kg)	<7
Casing Material	Stainless steel and engineering plastics and tempered glass
INPUT	
Voltage	AC 230V
Frequency	50 Hz
OUTPUT	
Voltage	AC 230V
Max current	16A/32A
IP Protection degree	IP65
Working environment temperature	-20°C+50°C
Relative humidity	5% ~ 95%
Altitude	<2000m
Communication	Ethernet/WIFI/4G
Payment	RFID/APP
Standby power	<8W
Standard	IEC-62196-2;EN61851
Mounting	Mural / Poteau
Certificate	CE
PROTECTION FEATURES	
Overvoltage	275V
Under voltage	176V
Over current	20A/40A
Short circuit	Oui
Leakage protection	Oui
Over temperature	Oui
lightning protection	Type II

## ANNEX

### Electrical diagram

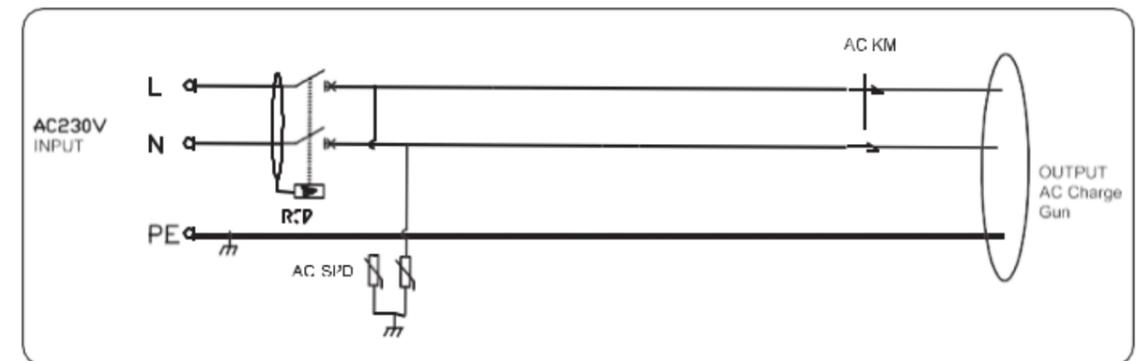


Fig J 1 - J . Main circuit diagram



**49 Boulevard Lucien Sampaix, 69190 Saint-Fons**

**T** 09 73 79 63 33

**W** [www.wellborne.fr](http://www.wellborne.fr)