Usage Manual

ETEK®

ETEK ELECTRIC

EKEPC3 Charging Pile OCCP-1.6J protocol controller

No.288th. Wei 17 Road, Economic Development Zone, Yueqing City Zhejiang China.
Tel: 0086-577-62718777 Fax: 0086-577-62774090

Thank you for choosing EKEPC3 Charging Pile OCCP-1.6J protocol controller. Please read this manual before installation, operation and maintenance.

Overview

This product is a OCCP-1.6J protocol vertified AC Chariging Pile Controller which can connect to your APP or background remote platform by using WIFI, 2G/4G, Ethernet and many other network communications. And also The local setting of this product has a variety of customized intelligent charging solutions such as intelligent charging and appointment charging.

Because of the advantages which include energy saving, environmental protection, easy to use, high degree of intelligence, this product can be applicated widely and reliable in safety.

Power supply: AC 170V-260V 50Hz,

power consumption <=3W.

Operating temperature range: -25~55 degrees;

Relative humidity: < 95%;

Height: 2000 m;

Instruction for using

1.1 About the manual

The Instructions contain all the information needed for debugging and using the controller.

Validity range of this manual

This manual is valid for all parts of the charging pile controller.

This product is based on international standards IEC61851 and SAEJ1772.

Note: SAEJ1772 is a standard for electric vehicle chargers proposed by the Society of Automotive Engineers.

1.2 Recycle and treatment

The material of the controller has environmental compatibility and can be recycled. In order to meet the environmental protection requirements, please contact a certified professional company that specializes in handling such waste to deal with electronic waste.

The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

Safety Instruction

2.1 Precautions and hazards

Note: please follow the safety instructions and legal guidelines.

Due to the different installation requirements in different countries and regions, the installation personnel are responsible for ensuring that the product installation can meet the local legal requirements.

Danger: voltage hazard

Contact with live components will cause serious injury. Please cut off the power supply of all systems and devices before operation.

2.2 Fuse

Warning: improper fusing may cause heat or fire

The internal self-resetting fuse is only used to protect the controller, and the installation personnel are responsible for the safety of the circuit.

2.3 Repair

It is not allowed to repair, and the defective device shall be disposed (abandoned) under the condition of meeting the environmental protection requirements.

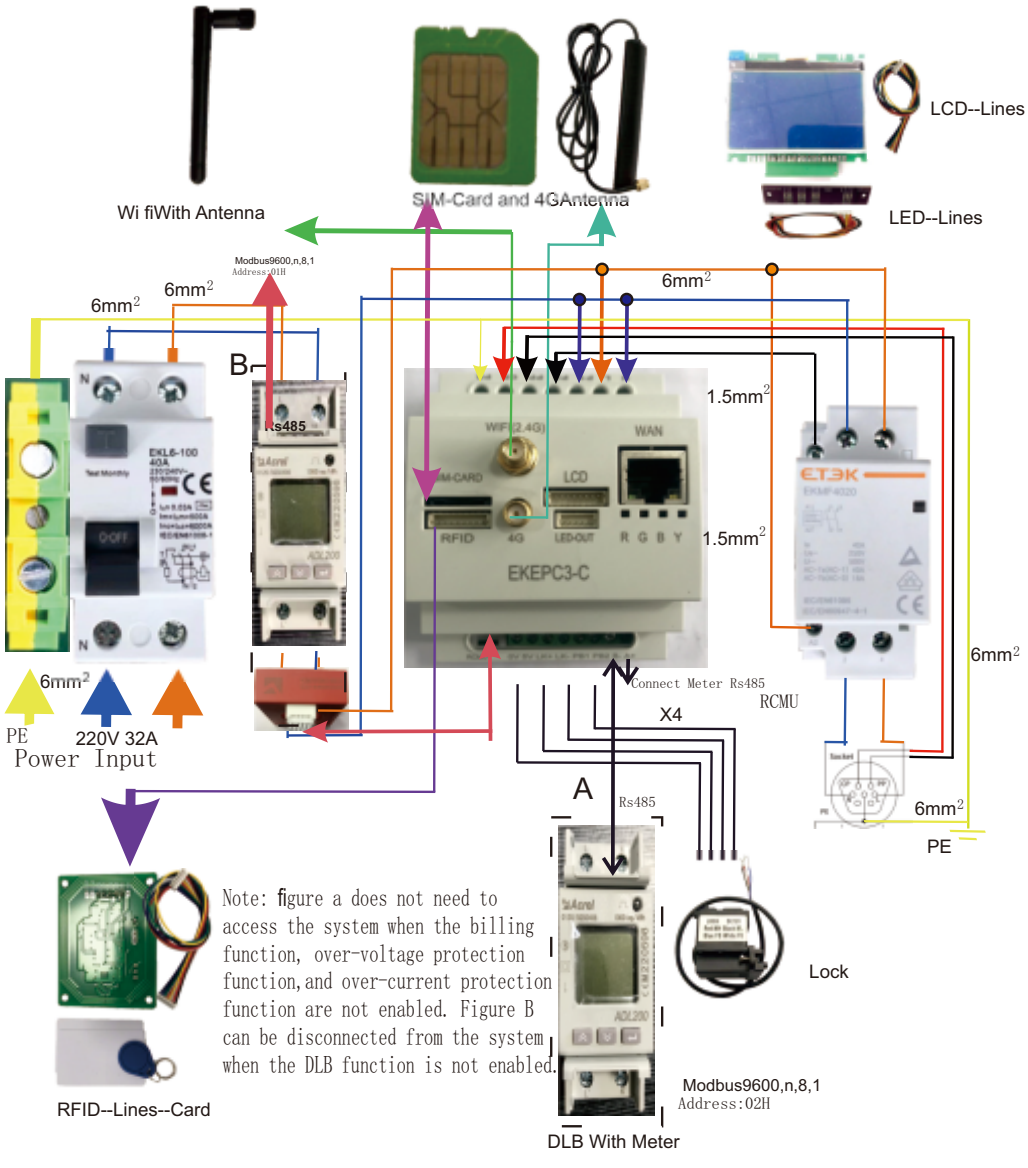
Warning: opening the device without permission can cause danger

Opening the device without permission may cause harm to the user or cause significant damage or property loss.

Note: if the device is changed in violation of regulations, the manufacturer's warranty will be invalid. Any unauthorized changes will void the warranty.

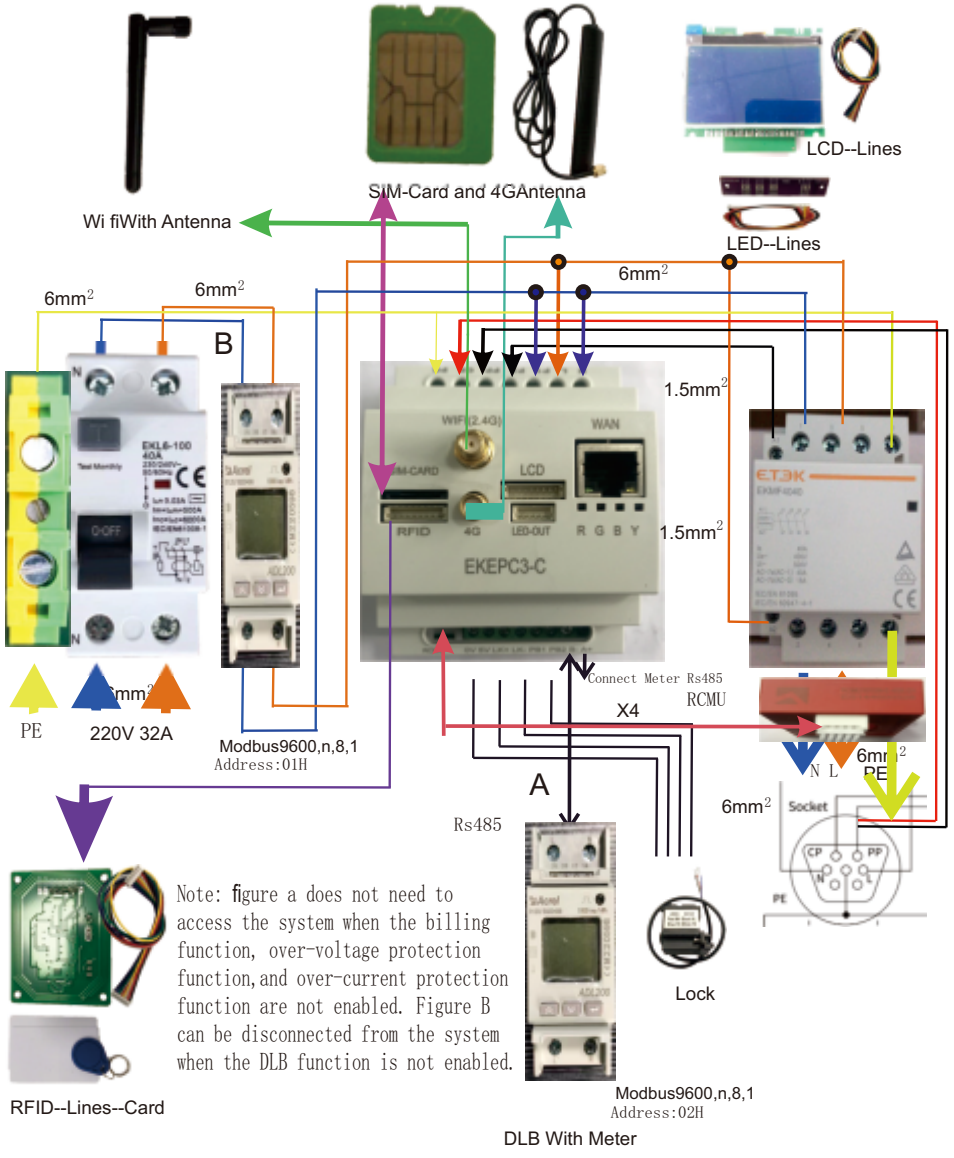
The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

Wiring diagram of single phase 32A



The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

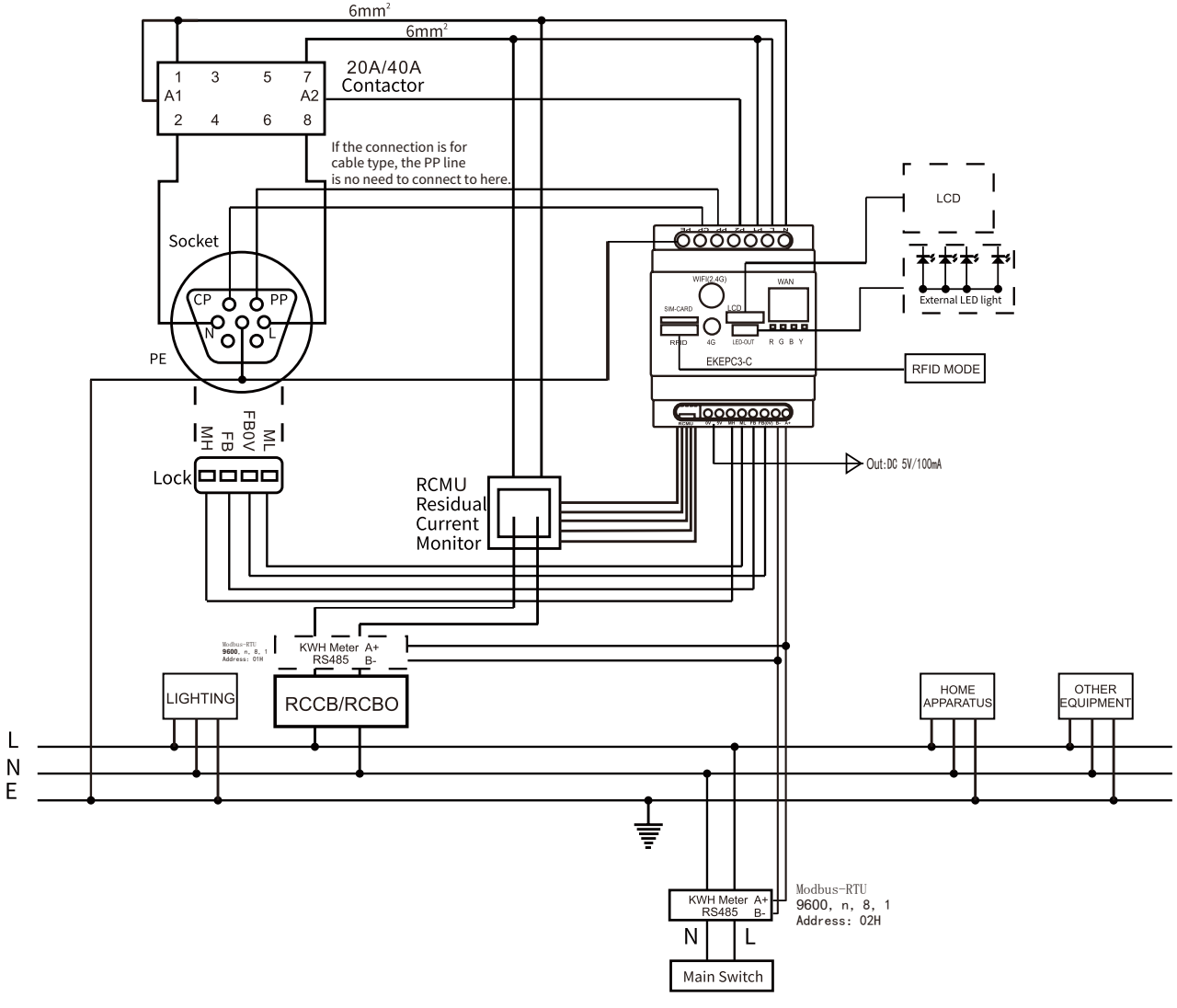
PEN Disconnection Protection System



The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

Single Phase

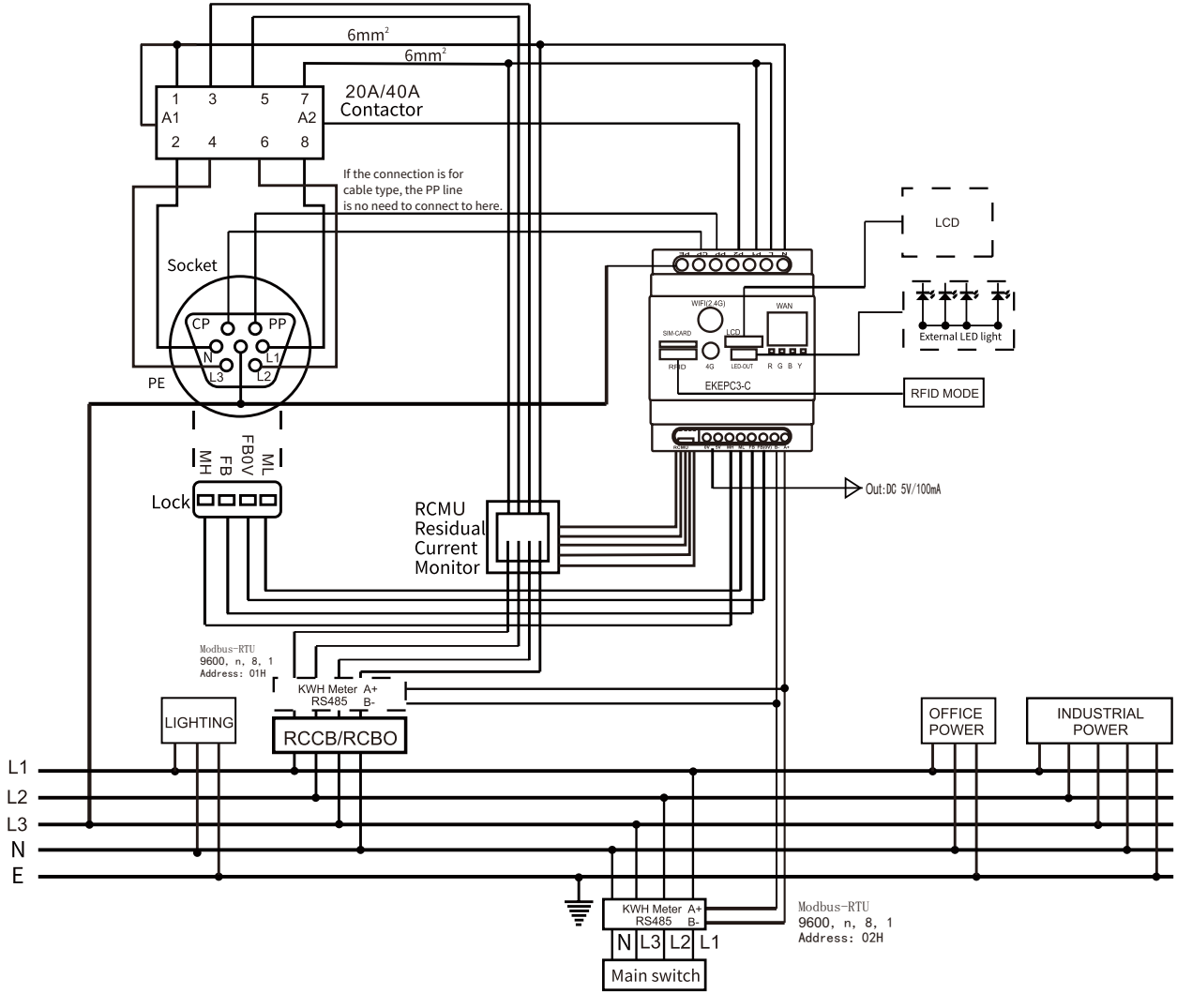
Wiring example 230V AC



The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

Three Phase

Wiring example 400V AC



The instruction manual for OCPP-1.6J protocol controller of electric vehicle charging pile

Guidence of EKEPC3(OCCP1.6J)controller

1.Boot distribution network

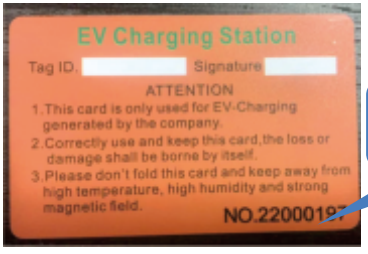
1.1.1 Connect to the power supply and start up, then swipe the dediciated card for network configuration to help the WIFI signal to be avaliable to link by device. If the card is lost, please contact to the manufacture to replace the card.

1.1.2 IC card supported by this controller: contactless IC card, 13.56MHz, M1 with protocol ISO14443A
standard, IC-UID、IC-CUID、IC-FUID、IC-UFUID, etc.

1.1.3 For card which is released by our company, The TagID is already written when it was produced. The number of TagID will be marked on the card (with 9-digit decimal).

1.1.4 For card which is set by yourself, the RFID module will read the serial number which is solidified in card as the TagID number (with 8-digit hexadecimal).

1.1.5 If you used the RFID function on your controller, then you need to add the TagID at local device or the background platform of OCCP operation according to the require, to help you add TagID into your list.

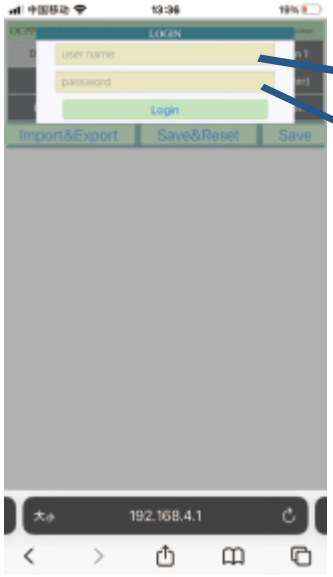


TagID

Swipe the card ⟸

1.2 Use a device that can receive wireless network signals (such as a mobile phone or laptop) to search for wireless LAN (name: OCPP_XXXX password: 88888888) and connect to it.

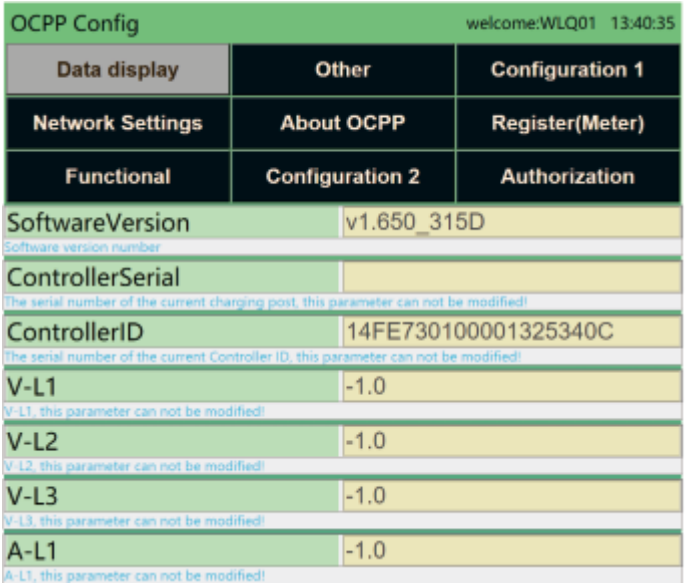
1.3 Open the browser, type the IP address 192.168.4.1 to enter the login page.



User1：ETEC-001
User2：OCPP-00001

PAS1：88888888
PAS2：88888888

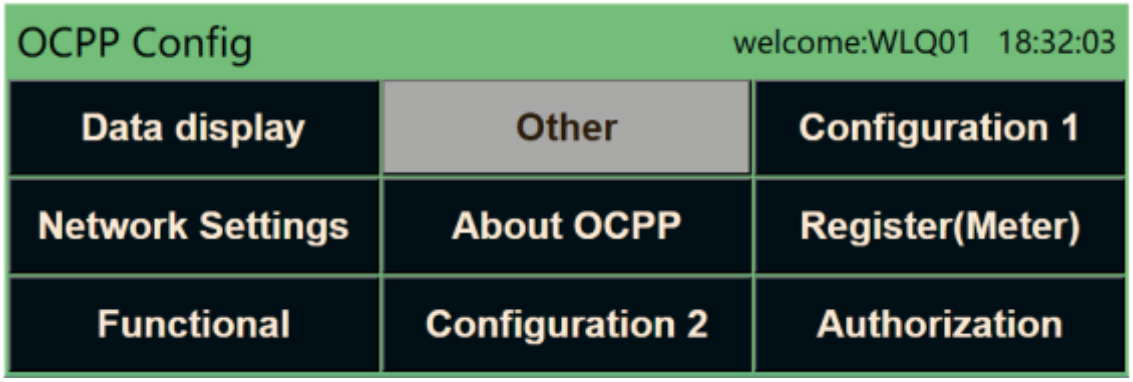
1. 4 Enter the parameter setting interface of thelocal web page.



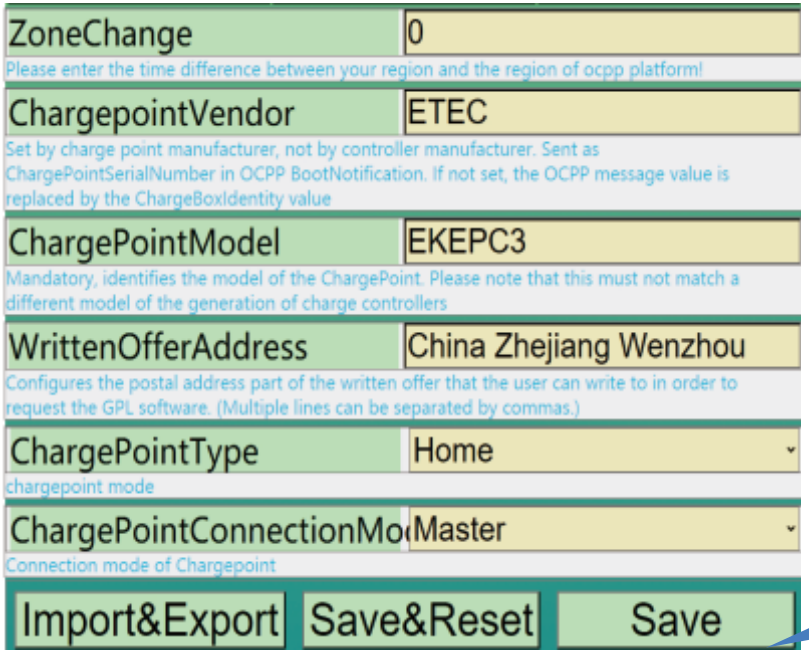
Groups of 9 related parameters

2. The setup instruction of local web page

The Main menu group options of local web page



Step 1: Set the information about the Controller **Configutation 1**



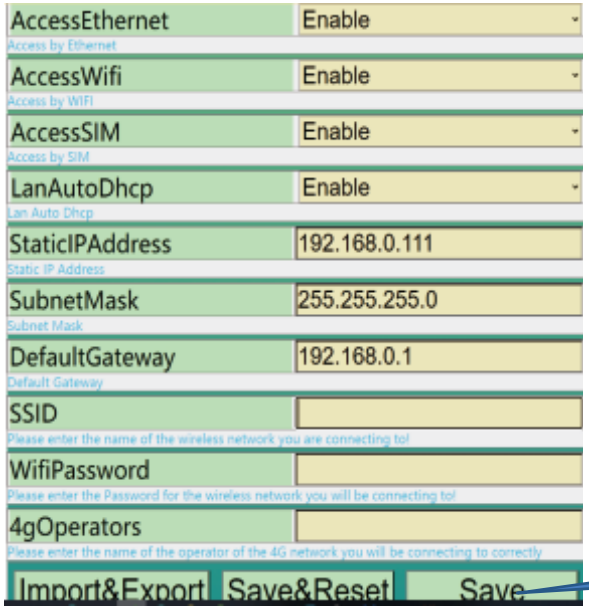
If the time is different between the final platform you connected and your local place, please enter the time difference here.
This text is allowed to change.

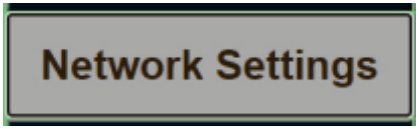
This text is allowed to change.

This text is allowed to change.
If your charging pile is not connected to a network or back-end APP. Please select this option as: Home, otherwise it will be pulic.
Select the controller's work mode: Master ot Slave

If the parameters are completed, please click this button.

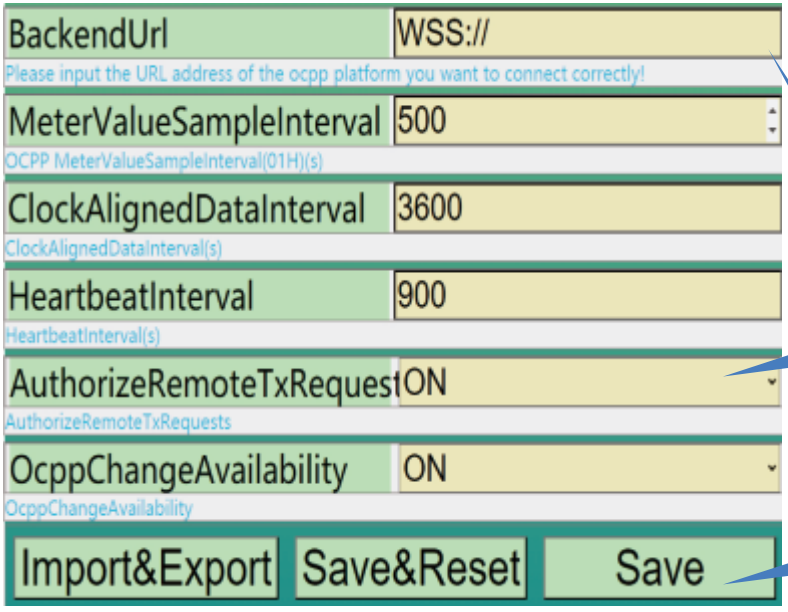
Step2: set up the network system you are going to access





If the parameters are completed, please click this button.

Step 3: Set up the parameters about OCCP background's connection.



Enter the Url of OCCP background which you want to access at here. Both WS link or WSS link are avaliable to use.

When you choose ON: Only at the situation when the charging pile without network and OCCP background is not avaliable to authorize.If the TagID you used can not be found on the local list, but the device has your using record, it will find the TagID in the cache. When both two match then the charging will be avaliable to start.

If the parameters are completed, please click this button.

Step 4: Set the register address for accessing to the meter.

Register(Meter)

Illustrate: All ammeters with the following functions are supported: 1) RS485 communication interface, communication protocol: Modbus-RTU.9600,n, 8, 1.

2) The address of the electricity meter is set as 01H(electricity meter for metering) and 02H (total circuit meter for current collection for DLB function).

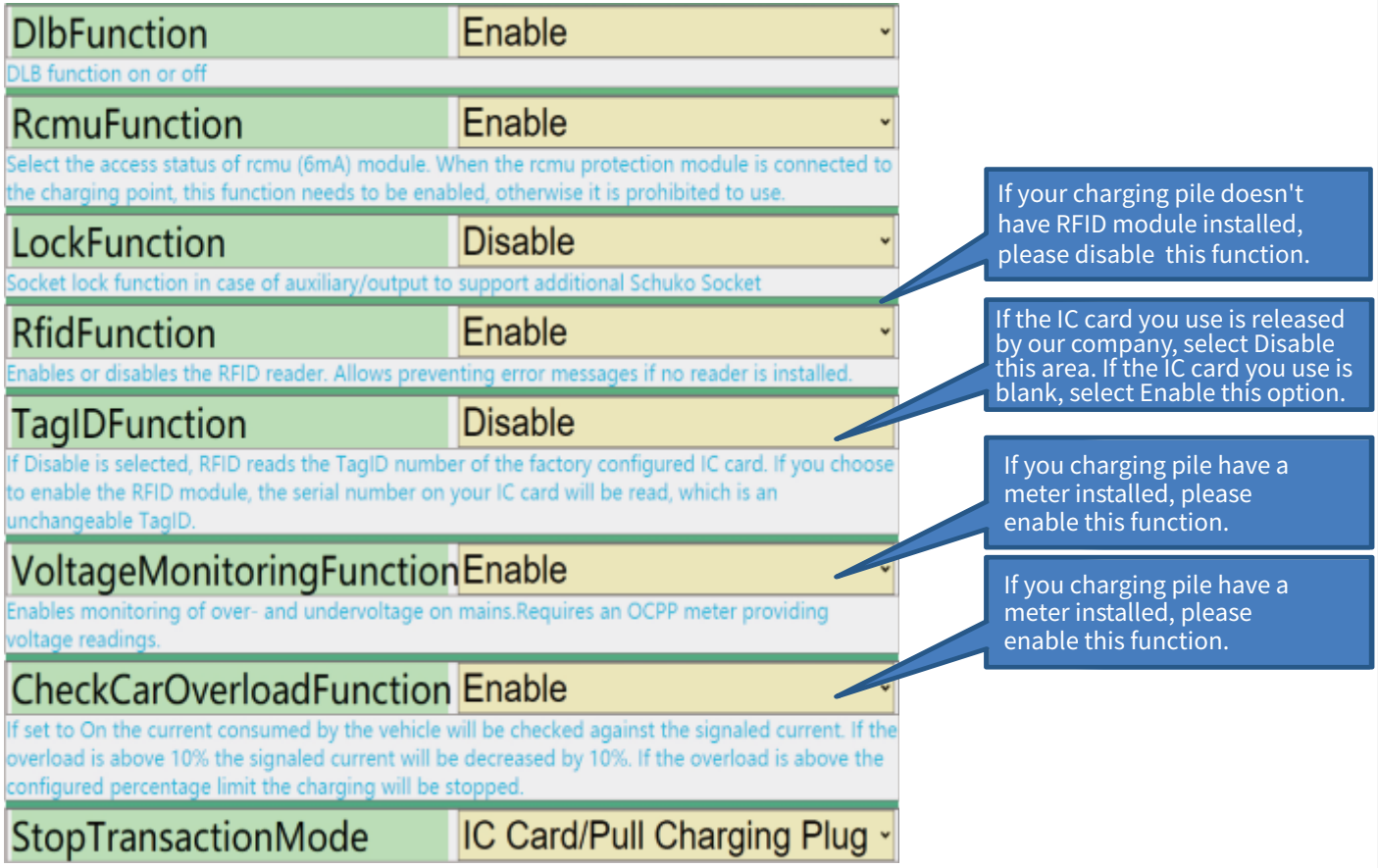
3) The data type of the required register is: 4-bit floating point.

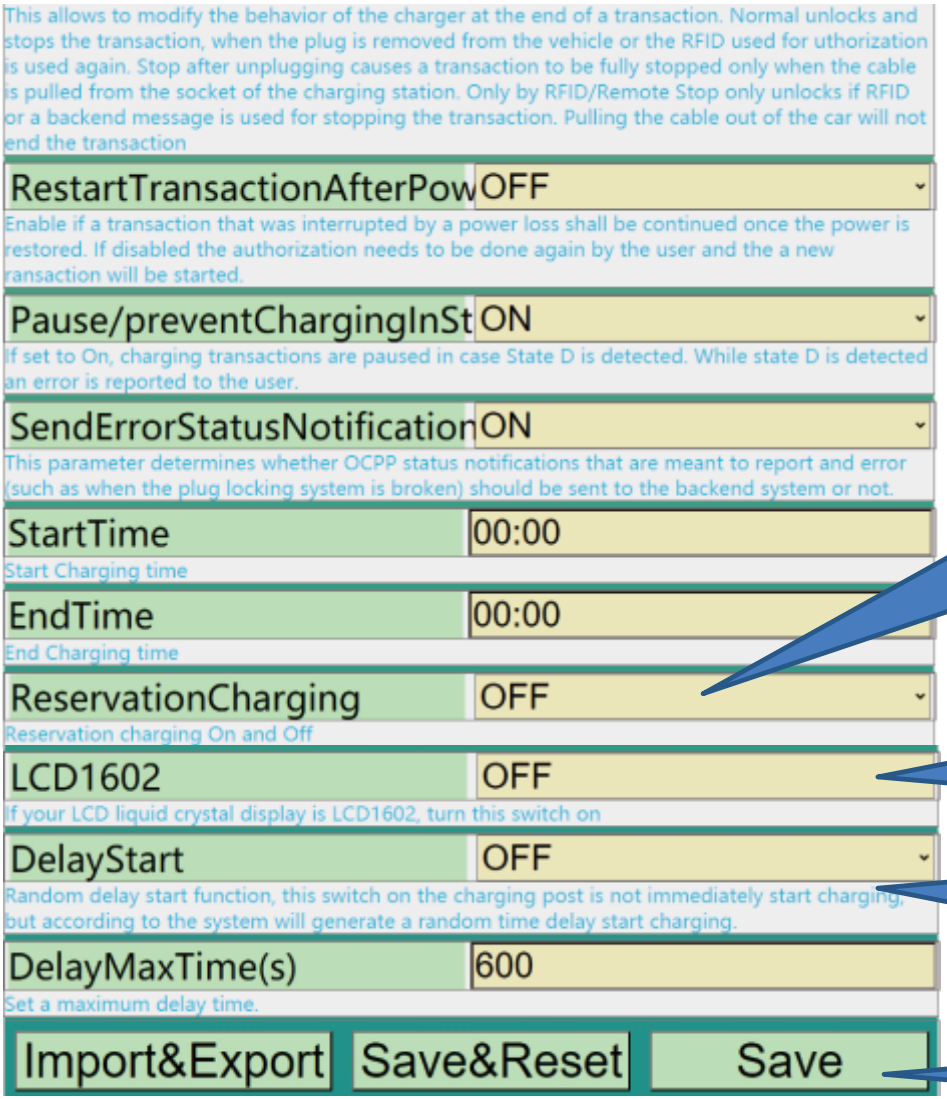
If this is an ADL400 meter, enter 2304, 2306, 2308, 2310, 2312, 2314, 2322, 2332, 2310.If the SDM63 type 0 meter is entered: 0, 2, 4, 6, 8, 10, 52, 342, 10. For other types of meters, please refer to the instruction manual of the meter you selected.

If the parameters are completed, please click this button.

Step 5: Set the button for functions related to the charging pile.

Functional


DlbFunction
Enable
DLB function on or off
RcmuFunction
Enable
Select the access status of rcmu (6mA) module. When the rcmu protection module is connected to the charging point, this function needs to be enabled, otherwise it is prohibited to use.
LockFunction
Disable
Socket lock function in case of auxiliary/output to support additional Schuko Socket
RfidFunction
Enable
Enables or disables the RFID reader. Allows preventing error messages if no reader is installed.
TagIDFunction
Disable
If Disable is selected, RFID reads the TagID number of the factory configured IC card. If you choose to enable the RFID module, the serial number on your IC card will be read, which is an unchangeable TagID.
VoltageMonitoringFunction
Enable
Enables monitoring of over- and undervoltage on mains.Requires an OCPP meter providing voltage readings.
CheckCarOverloadFunction
Enable
If set to On the current consumed by the vehicle will be checked against the signaled current. If the overload is above 10% the signaled current will be decreased by 10%. If the overload is above the configured percentage limit the charging will be stopped.
StopTransactionMode
IC Card/Pull Charging Plug
If your charging pile doesn't have RFID module installed, please disable this function.
If the IC card you use is released by our company, select Disable this area. If the IC card you use is blank, select Enable this option.
If you charging pile have a meter installed, please enable this function.
If you charging pile have a meter installed, please enable this function.



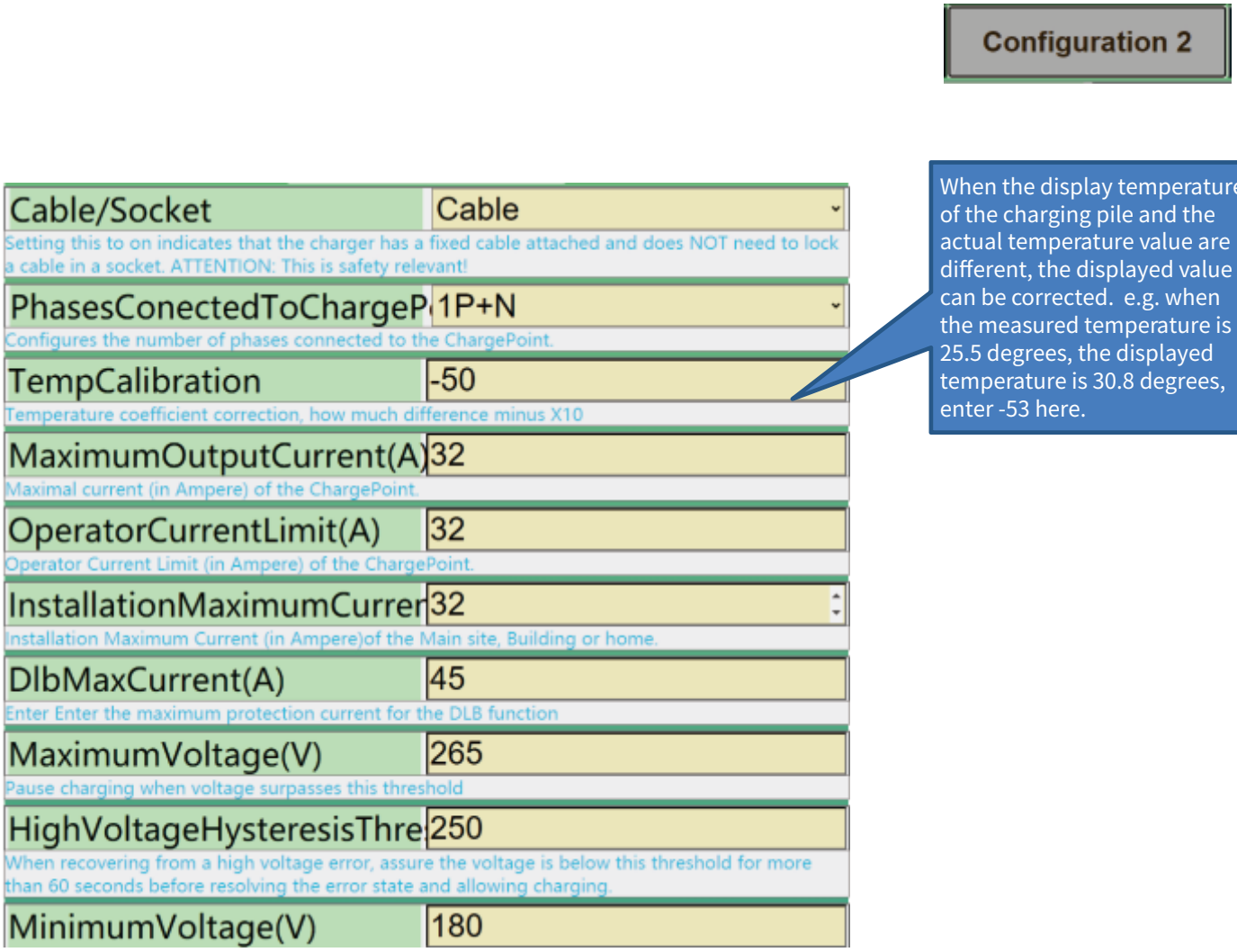
If you turn on the reservation function: the charging pile is correctly connected to the car swipe card to start the charging can not start charging immediately, but start charging in the time area you set, and the charging pile will automatically stop charging after reaching the end time you set.

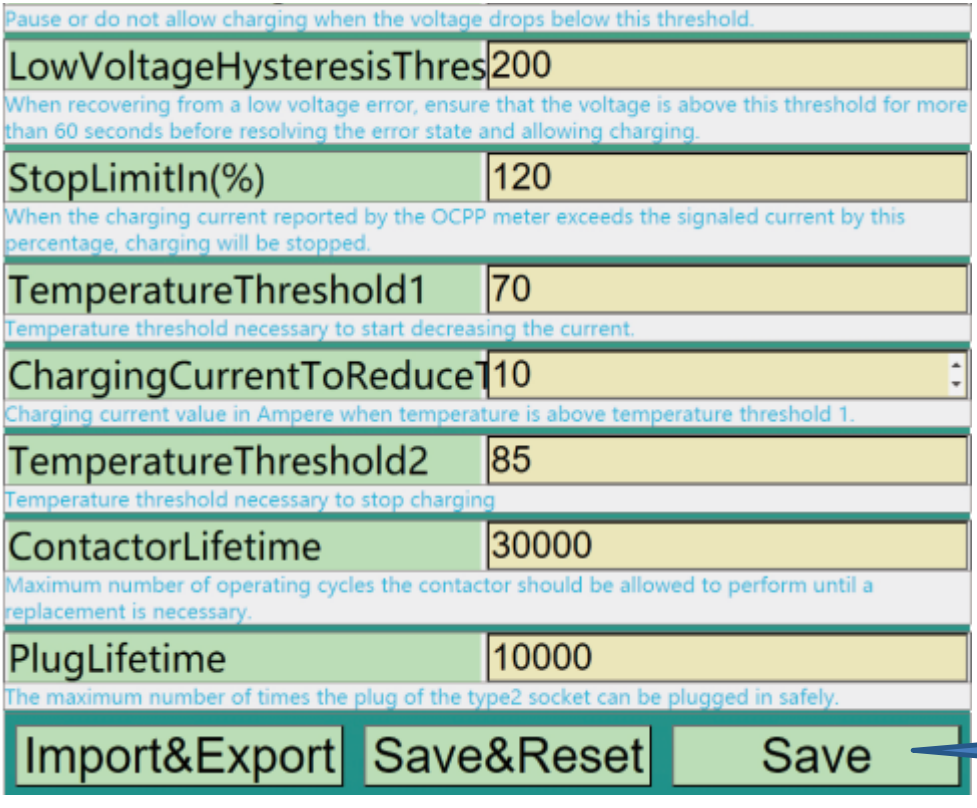
If you are connecting an LCD monitor that is 1602J (0.9 inches), select this option to ON status, otherwise select OFF status.

If the delaystart function is on, it will not start to charge at soon when the charging pile authorized. But start to charge after random delay (in 600s).

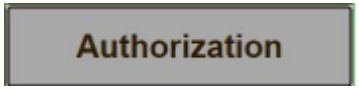
If the parameters are completed, please click this button.

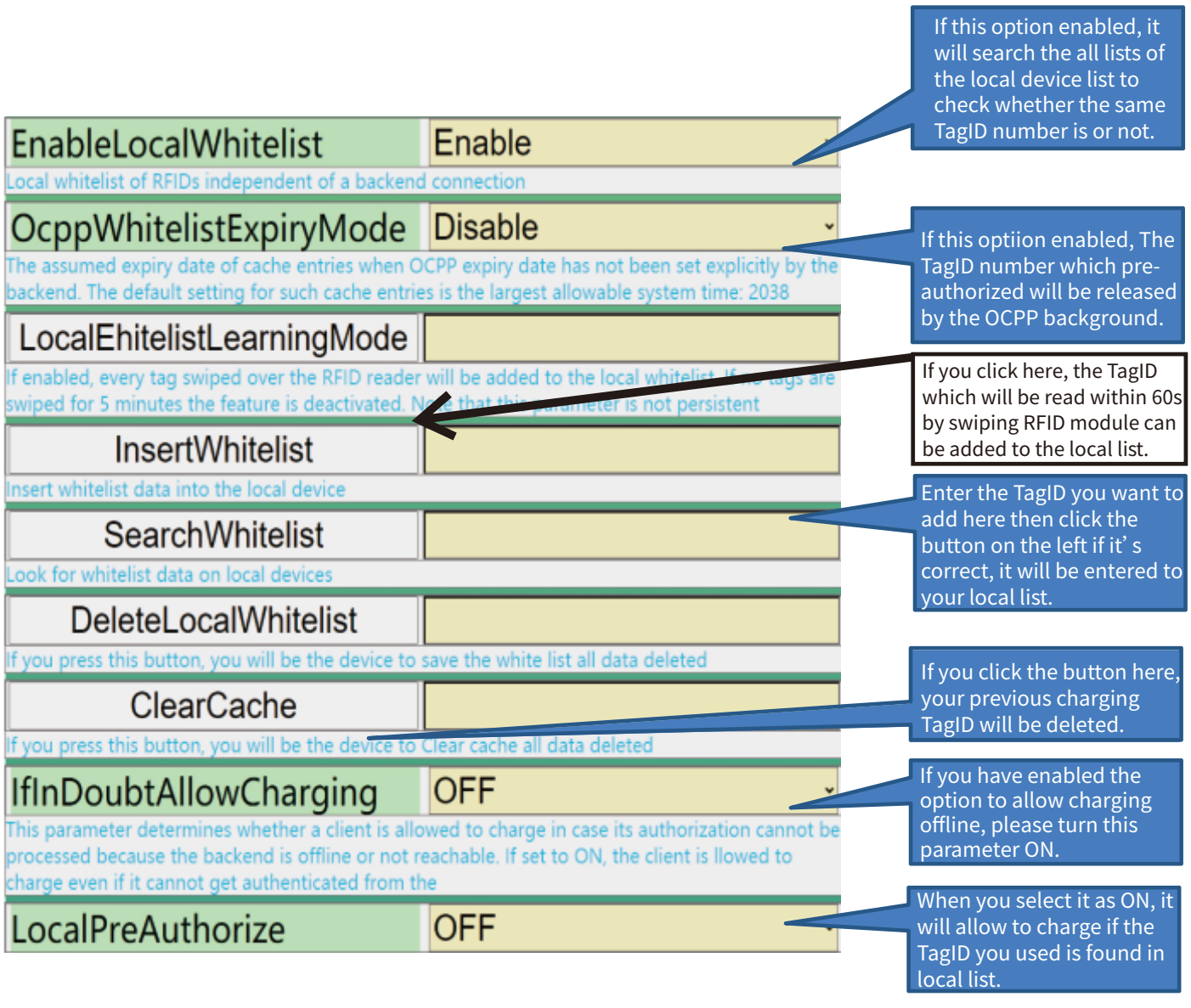
Step 6: Set the relevant configuration parameters of the charging pile

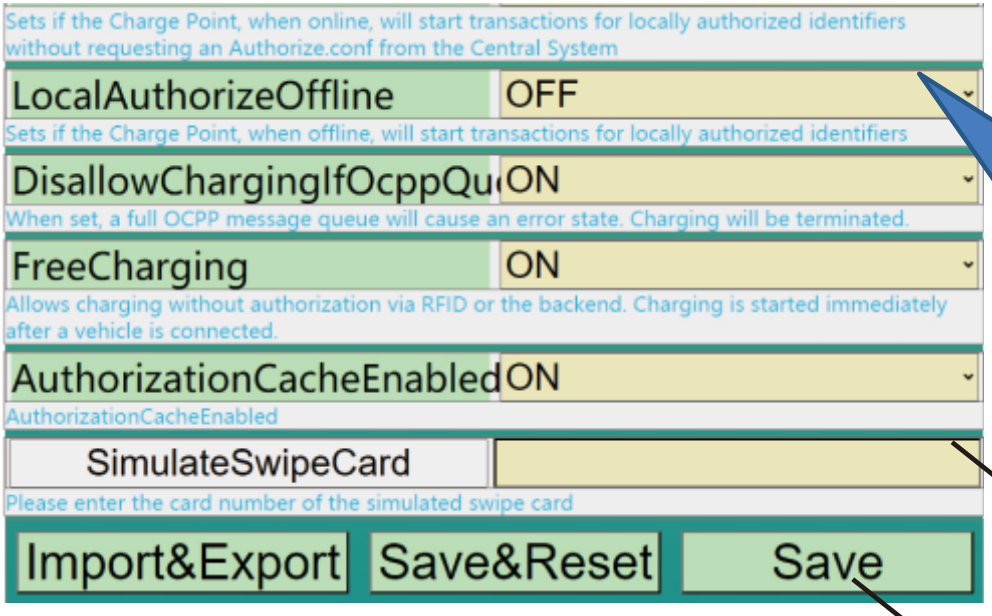




Step 7: Set up the pre-authorization aspect




EnableLocalWhitelist
Enable
Local whitelist of RFIDs independent of a backend connection
OcppWhitelistExpiryMode
Disable
The assumed expiry date of cache entries when OCPP expiry date has not been set explicitly by the backend. The default setting for such cache entries is the largest allowable system time: 2038
LocalEhitelistLearningMode
If enabled, every tag swiped over the RFID reader will be added to the local whitelist
swiped for 5 minutes the feature is deactivated.
is not persistent
InsertWhitelist
Insert whitelist data into the local device
SearchWhitelist
Look for whitelist data on local devices
DeleteLocalWhitelist
If you press this button, you will be the device to save the white list all data deleted
ClearCache
If you press this button, you will be the device to Clear cache all data deleted
IfInDoubtAllowCharging
OFF
This parameter determines whether a client is allowed to charge in case its authorization cannot be processed because the backend is offline or not reachable. If set to ON, the client is llowed to charge even if it cannot get authenticated from the
LocalPreAuthorize
OFF
If this option enabled, it will search the all lists of the local device list to check whether the same TagID number is or not.
If this optiion enabled, The TagID number which pre-authorized will be released by the OCPP background.
If you click here, the TagID which will be read within 60s by swiping RFID module can be added to the local list.
Enter the TagID you want to add here then click the button on the left if it' s correct, it will be entered to your local list.
If you click the button here, your previous charging TagID will be deleted.
If you have enabled the option to allow charging offline, please turn this parameter ON.
When you select it as ON, it will allow to charge if the TagID you used is found in local list.

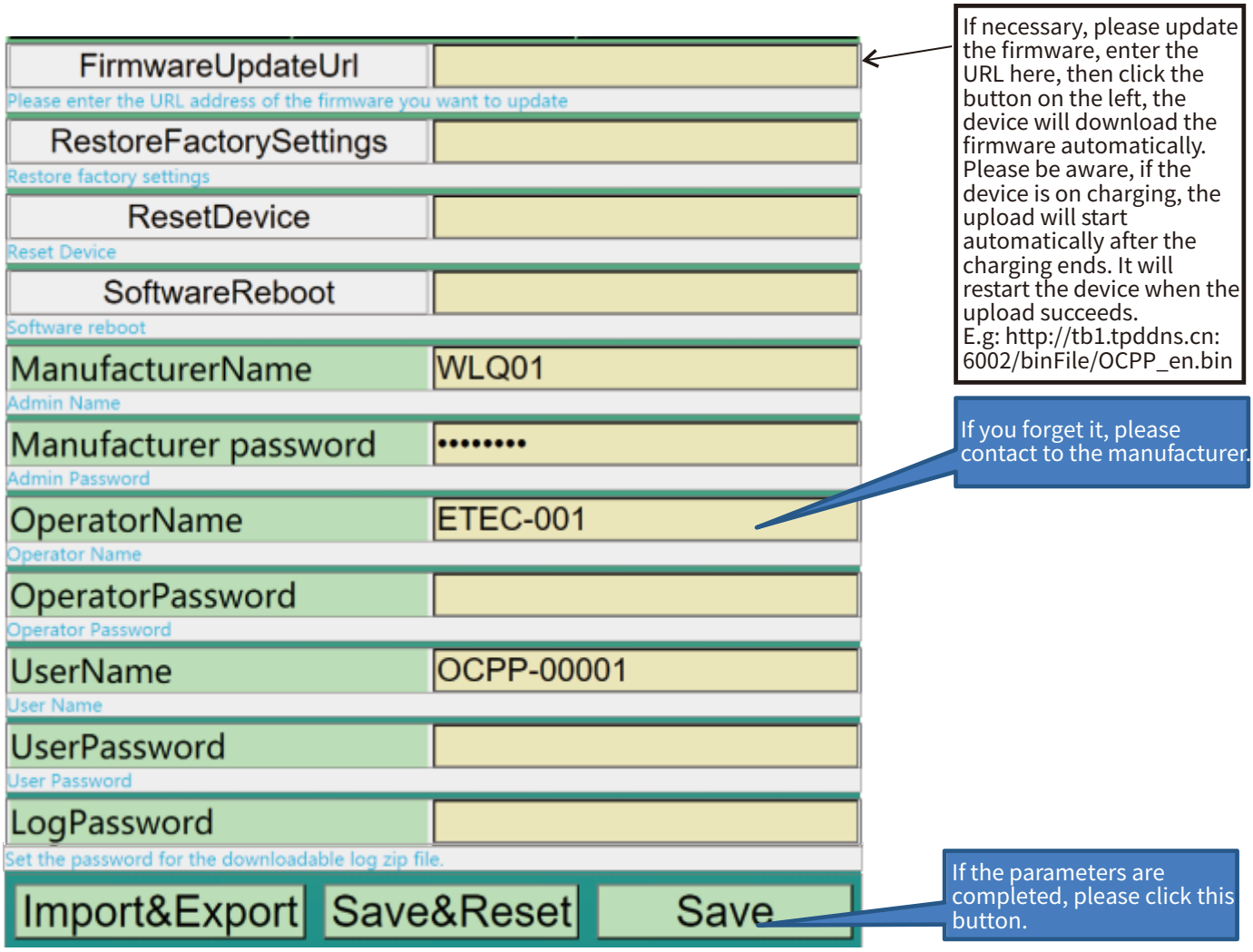


When the ON is selected, it still allow to start to charge if the network disconnect. The all charging records will be saved in local device (maximum to 10,000 records) until reconnect to the network and background. The local device will upload the all charging records which upload offline then clear them up.

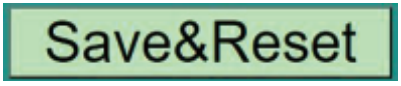
If you forget to take a IC card but you remmenber your IC card number, just enter the TagID number here and click the button on the left. The device will consider that you have swiped the card, and access to pre-authorization process.

If the parameters are completed, please click this button.

Step 8: Other



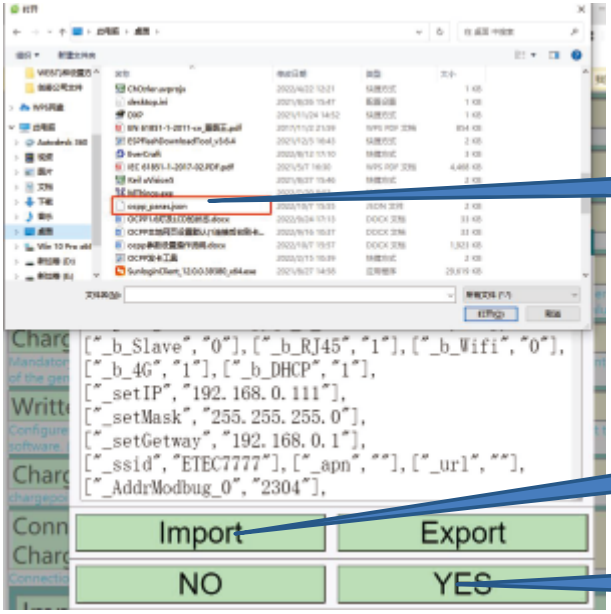
Step 9: Complete the configuration then click this button, the device will save the all datas and restart itself.



Step 10: Complete the configuration, save your recipe file for the next to use.

Export the file on your PC's desktop

3、Import your recipe file and have a quick configuration of the parameters.



Select the configuration file you saved (ocpp_paras.json) and open it.

Import the configuration file on your desktop.

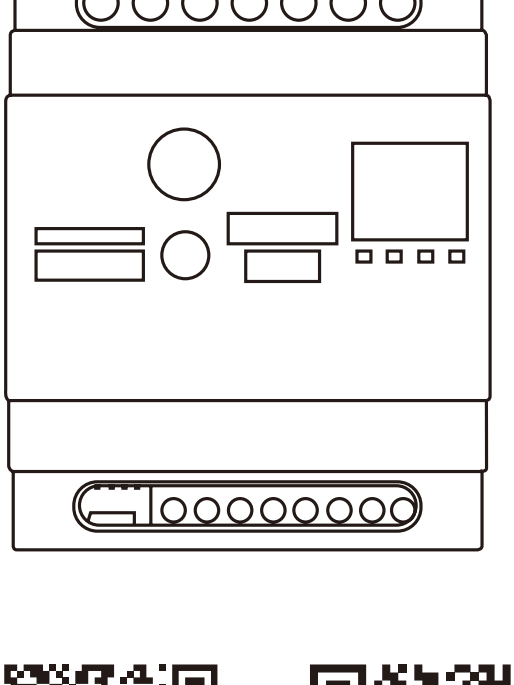
Click this button to confirm your action.

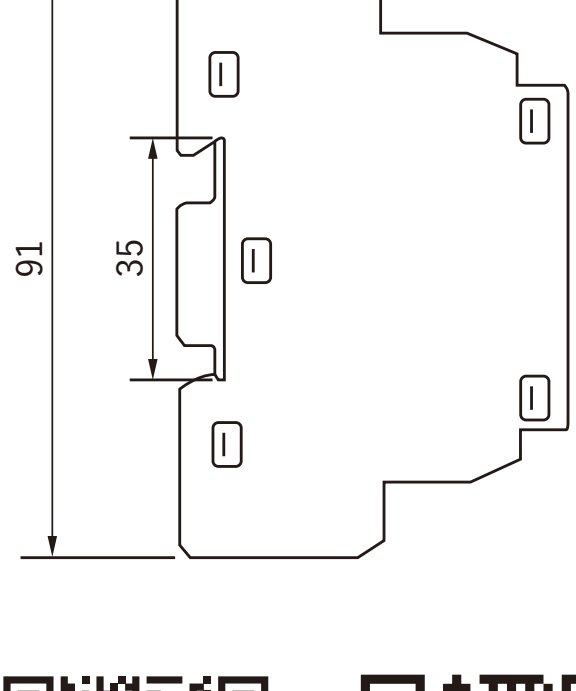
3. The EKEPC3 controller indicator and LCD display guide

State	Blue	Green	Red	Yellow	LCD
Starting	Slow flash				Strating up...
Local Web page settings	Fast flash				
Firmware upgrade	Draw Marquee				Firmware update...XXX%
No vehicle connected				Bright	Available XX kW
Vehicleconnected				Breathe fast	Vehiclenot Connected
OCPP background communication is not smooth				Fast flash	Please Authorize...
The permission has been denied by the backend				Slow flash	Charging for: hh:mm “xxx kWh”
No orders, stand by OCPP state A		Bright			Available XX kW
Swipe or start remotely The authorization is normal but the vehicle is not connected		Breathe fast			Vehicle not connected
Wait for authorization Connected vehicle OCPP state B		Slow flash			Please Authorize...
The order was successfully launched	Breathe fast				Charging for: hh:mm “xxx kWh”
Ventilation is required			Slow flash		Required Ventilation

CP short-circuit abnormality			Bright		Check CP line
The diode is short-circuited					Check Socket
The PP cable is not connected					Check PP line
Lock fails to turn on or off					Lock error/Unlockerror
DLB protection					Check DLB
RCMU protection					Check RCMU
Over-under voltage protection					Check voltage
Overcurrent protection					Check current
The charging pile temperature is too high abnormal			Bright fast		Temperature too high
Without network communication					Icon or E/W/G
Without OCPP background					Icon or 0

4、Dimensional drawings(mm)





Firmware download link 1

APP link 1

Firmware download link 2

APP link 2