CIRCONTROL
Mobility & eMobility

Raption Series

User Manual

Raption Series
User Manual

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Here's your guide to use and configure a Raption

1

This manual contains all the necessary information for the proper use of the Charge Point and helps the user to perform charging with a high level of efficiency and safety.

The CIRCONTROL Charge Point provides the fastest way to charge electric vehicles nowadays. Its innovative and original design provides a quick and intuitive way for recharging the electric vehicles, according to the current regulations. It can carry out loads into alternating current (AC) and direct current (DC), either individually or simultaneously.

The unit integrates an intuitive user interface and easy to use, it is an 8" touch screen by which all necessary for recharging operations are performed. It has been designed vandal-proof in compliance with all requirements regarding IK indices. In addition, the Charge Point also has a communications system that allows monitoring and control remotely via OCPP and use XML parameters and information while the recharging is being performed. This feature provides an easy way to integrate the Charge Point into superior systems that allow to the owner or system manager monitor it.

Read carefully all the instructions before using the Charge Point.

So, hello!

Important safety instructions

- Do not use the Charge Point for anything other than electric vehicle charging modes which are defined in IEC 61851-1.
- Do not modify the Charge Point. If modified, CIRCONTROL will reject all responsibility and the warranty will be void.
- Comply strictly with electrical safety regulations according to your country.
- Do not make repairs or manipulations with the unit energised.
- Only trained and qualified personnel should have access to the electrical parts inside the Charge Point.
- Check the installation annually by qualified technician.
- Remove from service any item that has a fault that could be dangerous for users (broken connectors, caps that don't close...).
- Use only Circontrol supplied spare parts.
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- Adaptors or conversion adapters and cord extensions set are NOT allowed to be used.
- The device does not emit noise, ultrasounds, electromagnetic fields and does not produce harmful substances, thanks to which it can be operated in the environment.
- Pay attention to traffic in busy streets.
- Waste generated after the disassembly of a waste device or a device taken out of service is handed over to a person conducting activity in the field of recycling or conducting activity in the field of recovery processes.

2

A Main features

• HMI: there is a TFT colour touch screen of 8 inches, is the interface between the Charge Point and the user. Provides detailed information for starting and stopping the charge, including information concerning the recharge that is in progress (charge state of the battery, charging time remaining, etc).

• RFID: there is a radio frequency reader that allows user authentication to proceed with the recharging of the electric vehicle. At the discretion of the facility operator, the user's recharge also can be allowed or denied.

• User Management: provides a database that associates users with one or more identification cards, you can also assign consumption and charging logs.

• Beacons light: by a LED beacons located above connectors, it is indicated the charging status of the socket/connector.

• Ethernet: the unit allows communicate using TCP / IP on an Ethernet network, giving flexibility to the system operator and management of the Charge Point.

• Remote monitoring and control in real-time 3G/4G: it can be done a remote device connection or make OCPP integrations thanks to the integrated modem. In addition, by using a standard Web browser, you can access to the Charge Point to monitor the status of recharge and even run a Start / Stop remote.

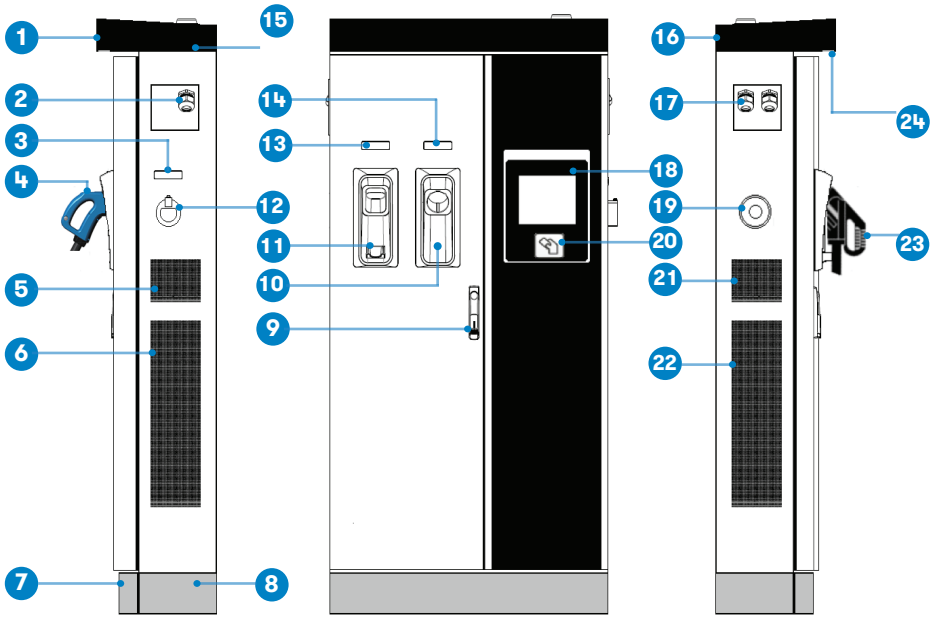
• Historic charge transactions: the system is able to generate charging process reports, according to the historical database of the Charge Point.

• Energy metering: Integrated meter, independent for AC and DC, is measuring power and energy consumed by the EV during a charge session.

• OCPP integration: OCPP is a communication protocol between the Charge Point and management platforms (BackOffice) for comprehensive management of charging. This integration allows, among other things, management and user authentication as well as a variety of parameters to monitor during a recharge.

Features

B Overview

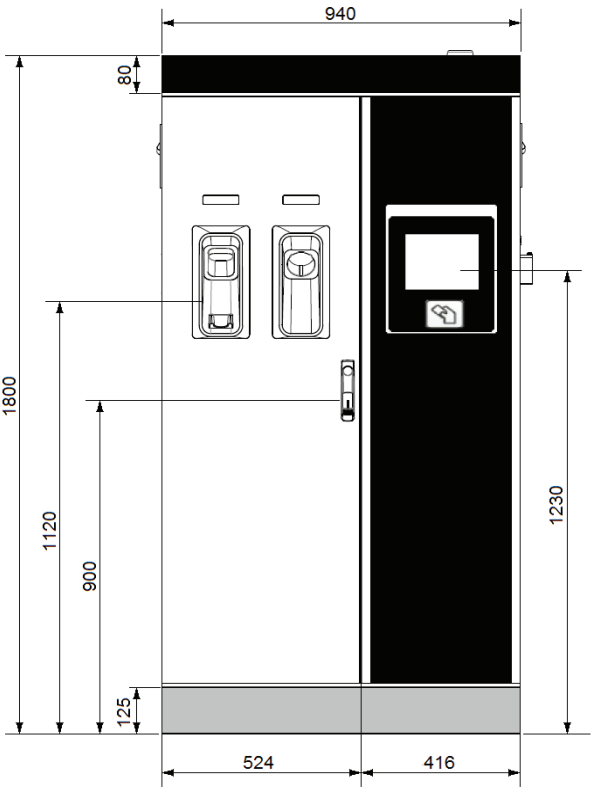


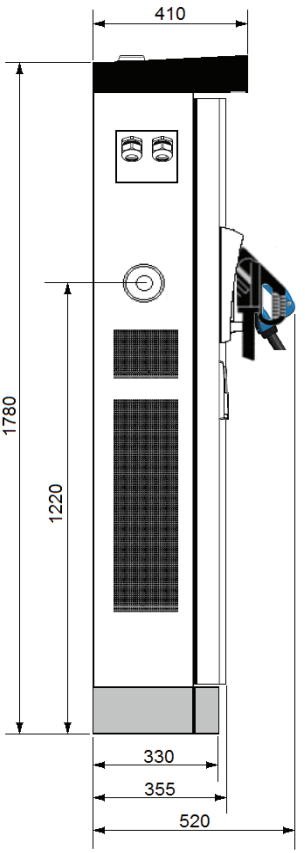
1- Cover	2- Exit AC cable *	3- AC light beacon	4- CHAdeMO connector	5- Unit air inlet
6- Power Modules air outlet	7- Decorative front panel	8- Decorative rear panel	9- Handle	10- CHAdeMO holder
11- CCS holder	12- AC holder or socket 32A *	13- CCS light beacon	14- CHAdeMO light beacon	15- Antenna
16- Unit air outlet	17- Exit DC cable	18- Touch screen	19- Emergency button	20- RFID reader
21- Unit air inlet	22- Power Modules air inlet	23- CCS connector	24- Courtesy light	

(*) Depending on the model, the components can vary.

Dimensions

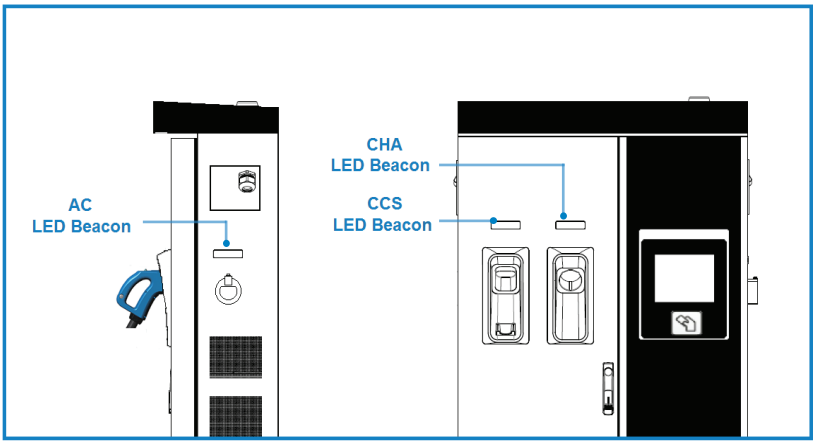
- Units specified in millimeters:





D Status Beacon lights

Over each connector there is a beacon light, it indicates the state of charge in which the socket/connector is located.



Colour	Status	Description
Green	Available	The connector or socket is available to start a charging session
Blue	Charging	The connector or socket is performing a charging session
Cyan	Booked (OCPP 1.5)	The connector or socket has been booked by system operator through OCPP
Red	Error	The Charging Station indicates that the emergency button has been activated or some error has occurred. Check the HMI Screen and follow the instructions

E Connectors

The Charge Point is equipped with three connectors of different load; these can recharge a large range of vehicles:

• AC (Mode 3): Type 2 tethered cable (63A/44kW)* or Type 2 socket (32A/22kW)**

• DC (Mode 4): CHAdeMO, Tethered cable, 3m. Until 125 A / 50 kW

• DC (Mode 4): Combo 2 (CCS), Tethered cable, 3m. Until 125 A / 50 kW

(*) Only available in Raption 50 Standard Model, Raption 51 and Raption 52.
(**) Depending on the model, the components can vary.

The following considerations, before using this Charge Point, must be considered.

Of the three types of charges that the Charge Point can perform, it can carry out:

• Only AC

• Only DC CHAdeMO

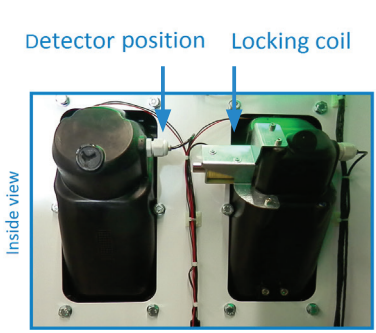
• Only DC CCS 2

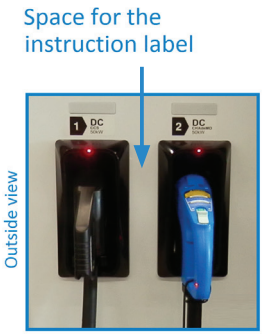
• Simultaneous, AC and one DC connector at the same time

Watch Out!!

If your Charge Point is equipped with the **'Mechanical connector locking'** accesory at DC holders, is not possible to pull back the connectors from holders without first unlocking it.

There are one label placed between the CHAdeMO and the CCS holders explaining about this function. Follow the instructions given in this label and the HMI screen.



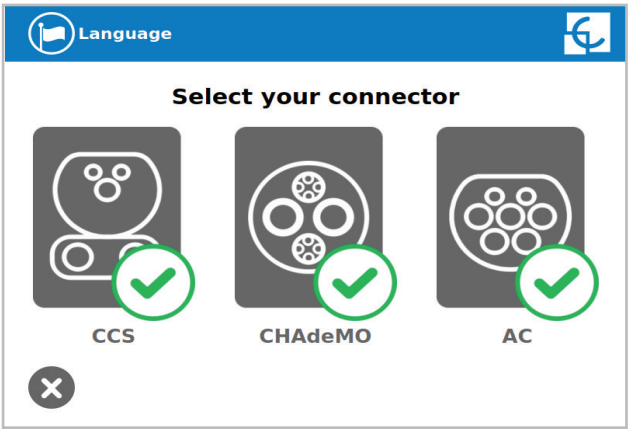


Also, there is one Led over each holder indicating the lock state:

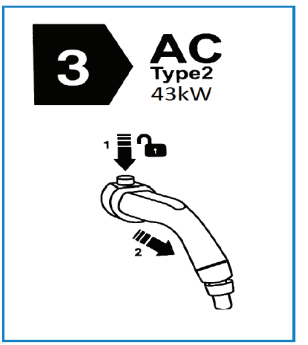
- **Red** → Connector locked

- **Off** → Connector unlocked

The connectors will be delivered right in the moment than the user push over the 'Connector touching button' when choose the option in the HMI screen:



At the AC side for every Charge Point (It is not an optional device) there is a manual lock for keeping the connector, follow the indications shown on the label in order to remove the AC connector.



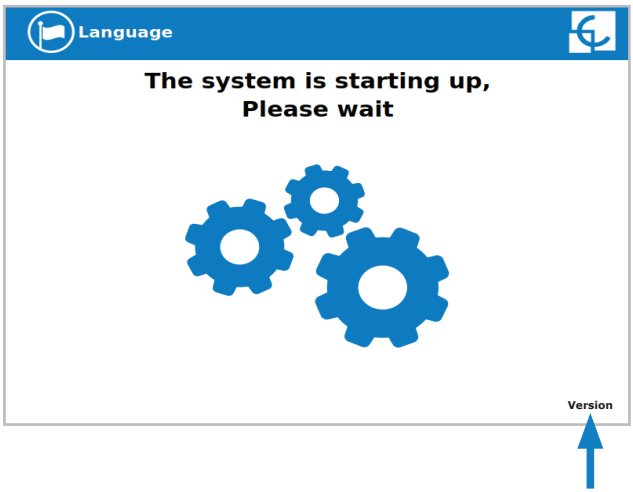
1- Push over the upper plastic button in order to release the connector.

2- Pull back the connector.

3

A General

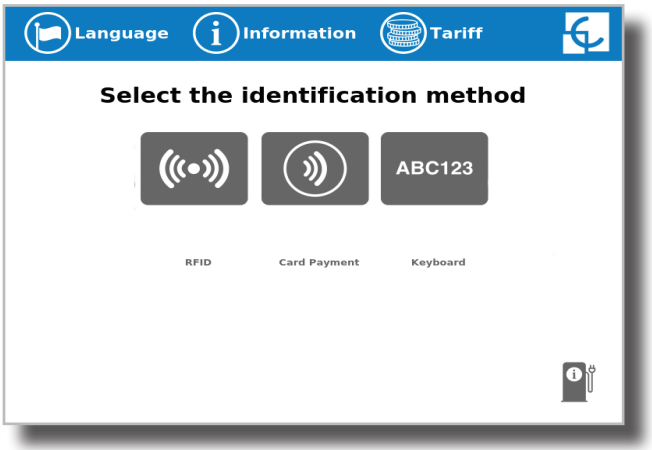
The first time the Charge Point is powered on, the system will take around 10 seconds for starting up, the screen will show next image:



In the lower right corner, it shows the firmware version. After that 10 seconds have passed, the first screen that appears is the screensaver,

How to use it ?

Tap over the screensaver, and the HMI will skip to the next screen:



Depending on the optionals chosen, the identification methods shown in this picture can vary.

At this new screen, the Charge Point is asking for showing the identification method the user is going to use in order to start a charge transaction, as you can see there are three possible options.

- RFID or keyboard options will let to initiate a 'Charging session' to the user that has the identification card, has been registered in advance or a code has been given to type it manually in the screen.

- Paying by a debit or credit card option will let to initiate a 'Charging session' to the user without been registered in advance.

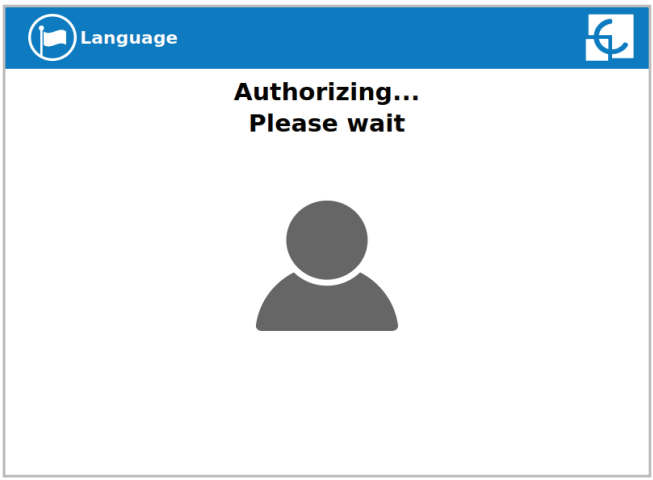
In the lower right corner, it shows the connectors status and the charging process so as to know the Charge Point availability.

Also, at this screen and during all the process is possible to change language, pressing on the top of the screen over the **'Flag'** touch symbol:

Next screen will appear, press over your language's flag:

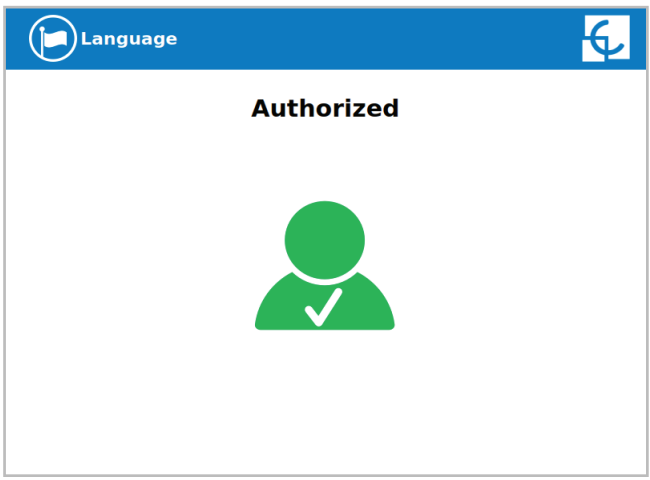
B Starting a charging session

- Once you have shown your identification card, the HMI will show next screen:

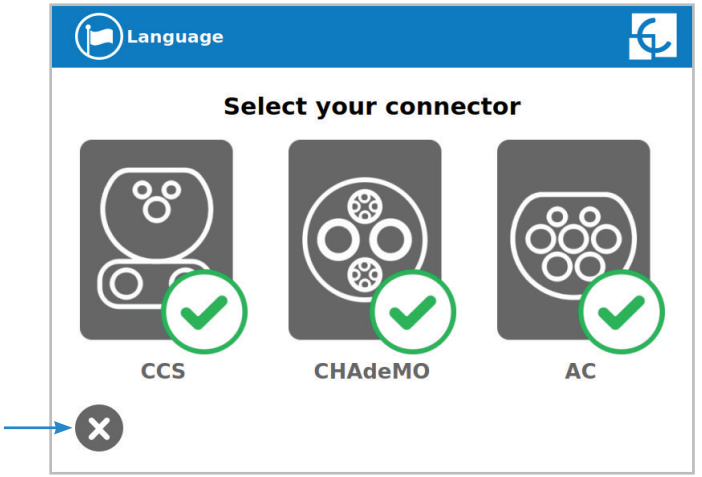


Wait while Charge Point performs identification.

- If everything is correct and the user is authorized, the HMI will show next screen:



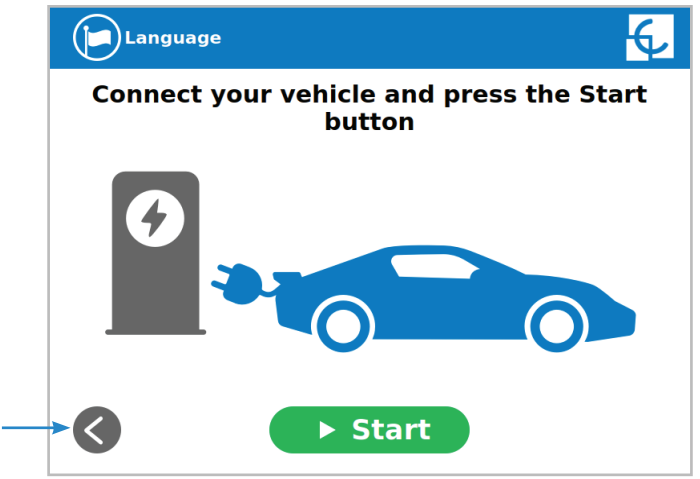
- Now, the user can choose the connector, always depending of the sort of vehicle that you have and if the connector status is available:



At any time is possible to press over this button in order to go back to the "identification screen".

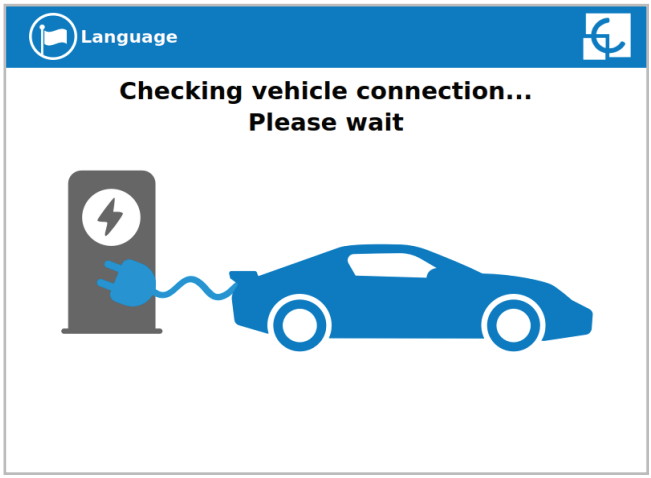
- Once you have chosen your connector, instruction screens will appear successively, follow the instructions:

1- Connect your vehicle and press the 'Start' button

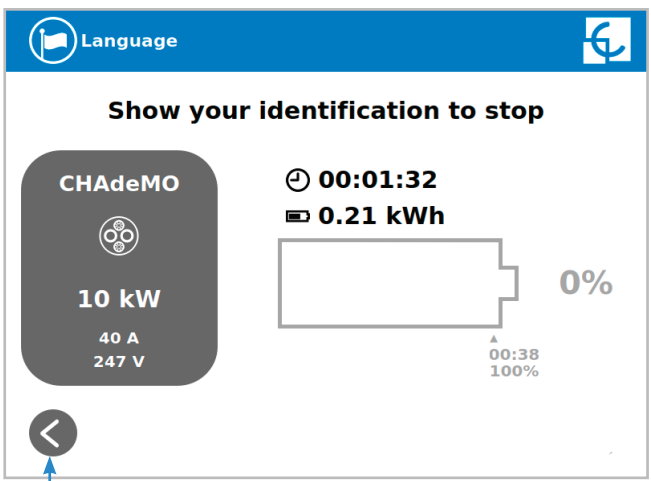


At any time is possible to press over this button in order to go back to the previous screen.

2- Checking vehicle connection... Please wait



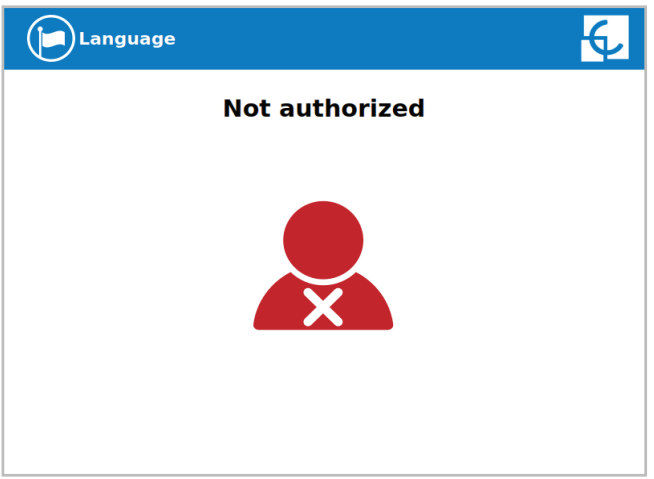
- In a few seconds, the charging session will start and the HMI will show the charging process.



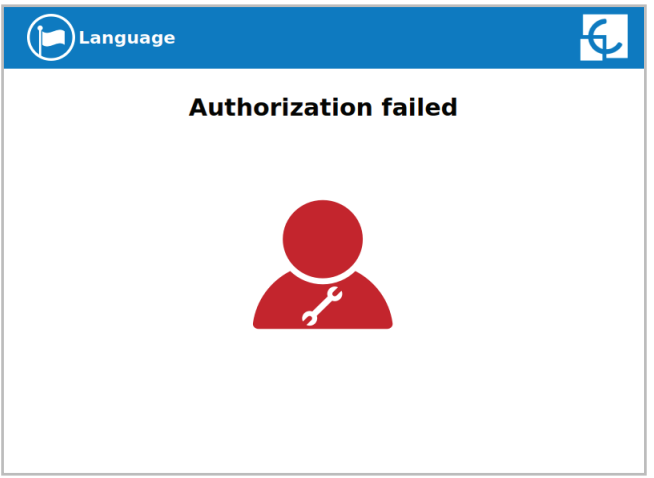
Pressing over this button, the screen will go back to the "identification screen".

Special events starting a charge

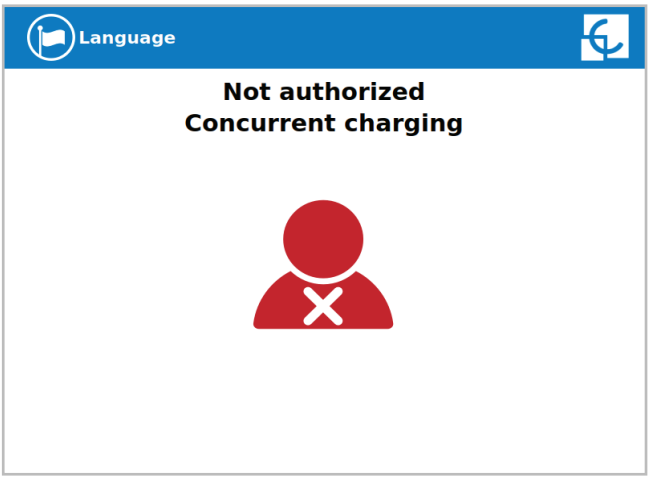
A - "Not authorized": some Charge Points could be working under the supervision of the main management system, called Back Office. It can generate a whitelist in order to register new users, manage charging sessions, etc. If the user is not authorized, the HMI will show the following message:



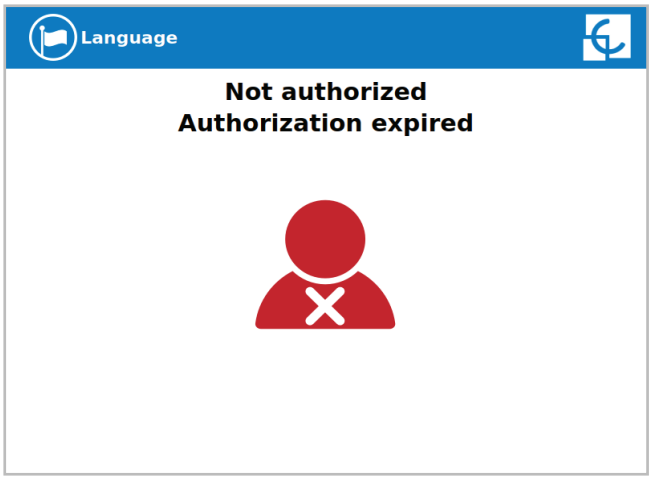
B - "Authorization failed": if there is some communication problem with the Back Office right at the connecting time:



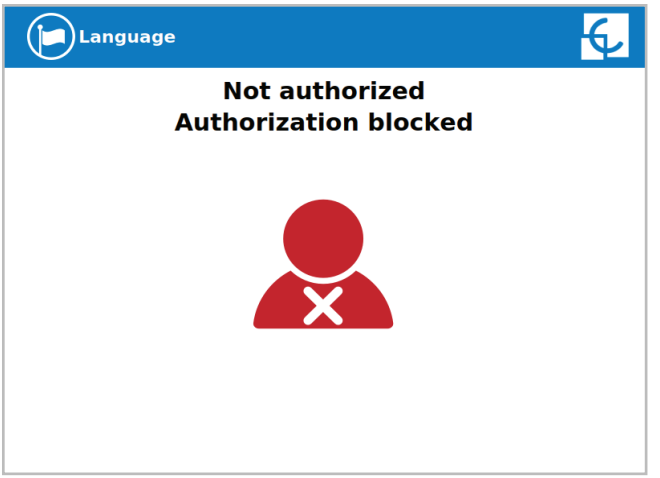
C - "Not authorized, Concurrent charge": in this case, the identifier is already involved in another charge transaction:



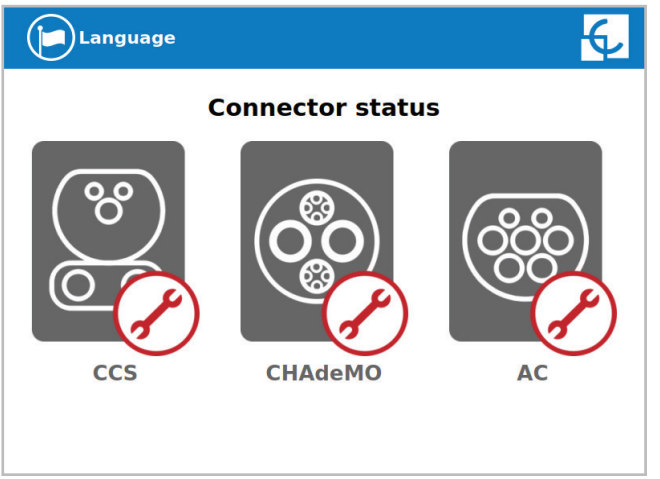
D - "Not authorized, Authorization expired": is possible that the back office has put deadline to your identification card and this date is already expired:



E - "Not authorized, Authorization blocked": is possible that the back office has blocked temporarily your identification card.

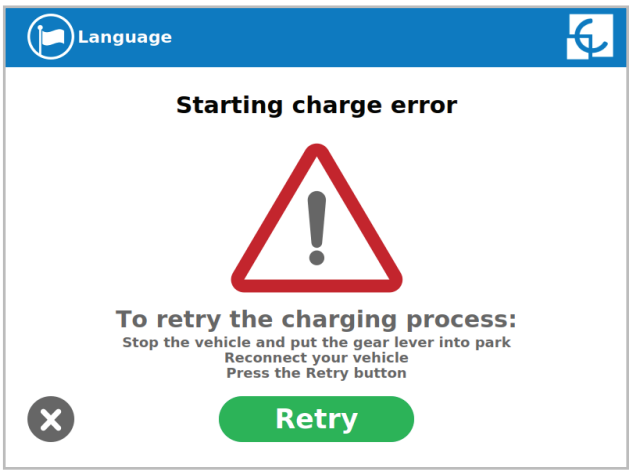


F – After the user has been properly authorized, just at the moment that has to choose the connector, the screen will show the connectors status. It could appear some problem. It will be not possible to use any connector with tool symbol, like in the next picture:



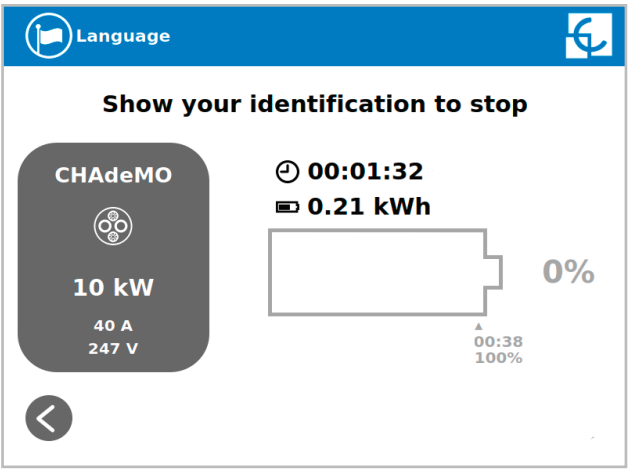
G– Almost all vehicles cannot charge if the shift lever is not in parking mode position. This situation can be detected by the Charge Point and it will be displayed by HMI as **“Please, check vehicle gear shift position, put it in parking mode”**. After check it, press over **‘Retry’** button.

H– Is possible that the problem that appears is not a concrete one. The HMI will show next screen, press over **‘Retry’** button.

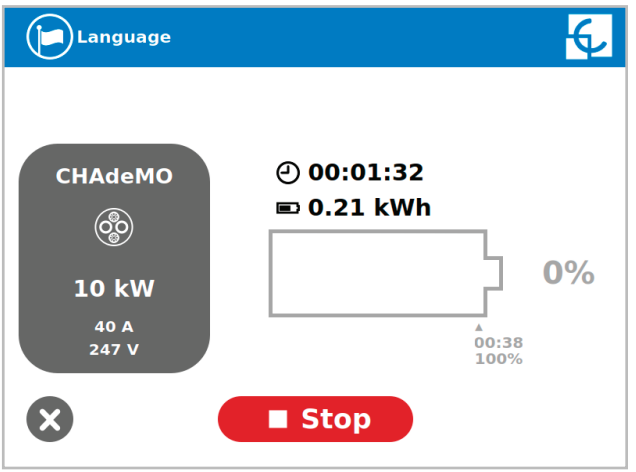


D Stopping a charging session

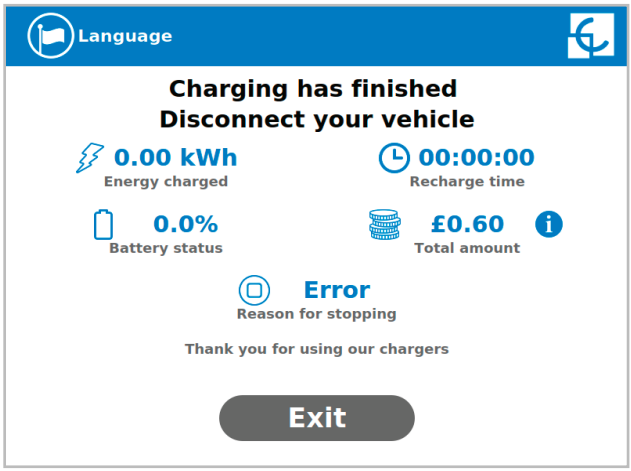
The HMI is showing the charging process and next message **"Show your identification to stop",** the session can be stopped by the same user that has started it.



After showing the identification card, the Charge Point will allow you to stop the charging session by pressing over the **'Stop'** touch button:



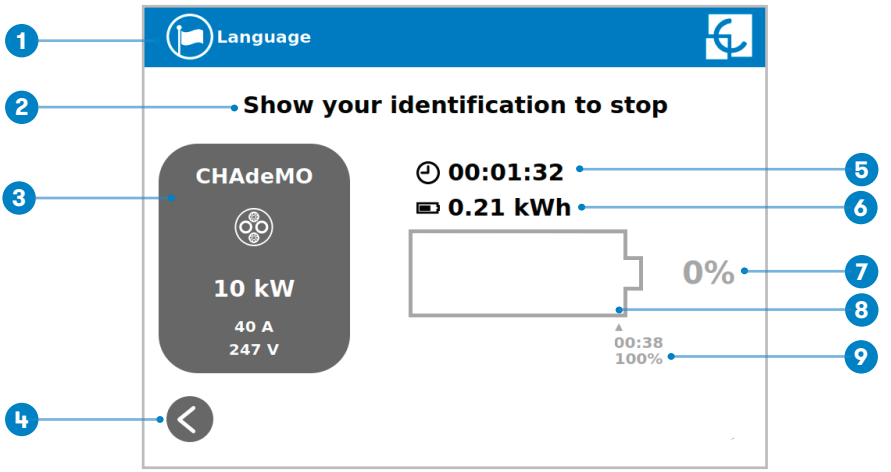
Once you have stopped the charging session the HMI will show the summary screen,. Press over the **'Exit'** touch button and disconnect your vehicle:



E Charging information

Depending of the the connector used, the HMI screen can show different process information. The information is almost the same except for few details.

The following images show the basic charging process information.



1- *Language button:* pressing over this button it is possible to change the HMI language.

2- *Additional information:* current status, errors, battery status, etc.

3- *Connector information:* type and identificator of connector, power of charge, etc.

4- *House touch button:* it goes back to the "identification screen".

5- *Charge time with status bar:* charging time elapsed so far.

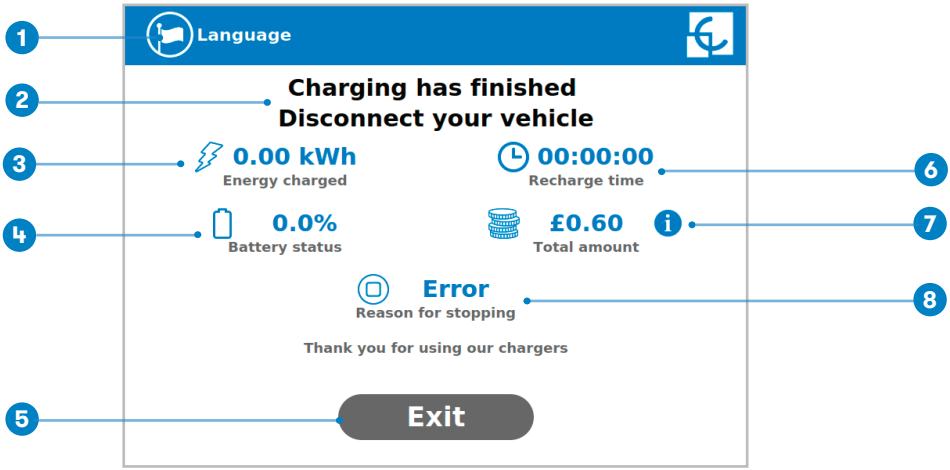
6- *Energy charged:* energy supplied to the vehicle so far.

7- *Battery SOC*: It indicates the current battery state of charge.

8- *Process indicator:* at first moment it is red, as the vehicle is charging it will change to orange, changing after 75% of battery charged to green.

9- *Remaining time until 100 %:* remaining time until 100 % of the SOC.

F Charging summary



1- *Language button:* pressing over this button it is possible to change the HMI language.

2- *Process instructions:* different instructions can be displayed.

3- *Energy charged:* total energy charged at the end of the charging session.

4- *Battery SOC*: It indicates the final battery state of charge at the end of the charging session.

5- *Exit button:* It has to be pressed in order to finish the charging session. After pressing, the HMI screen will go back to the "identification screen".

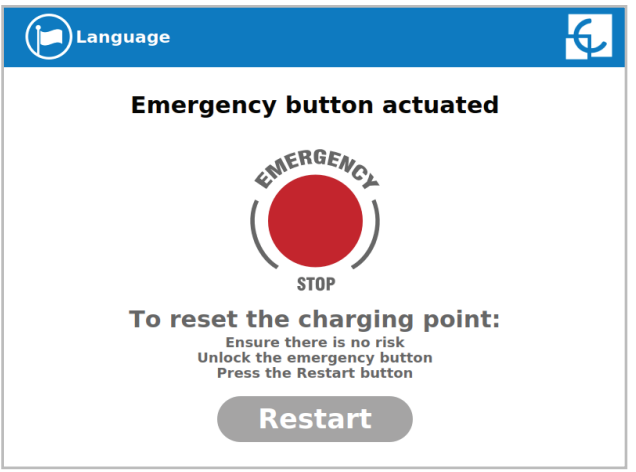
6- *Recharge time:* total recharging time at the end of the charging session.

7- *Information button:* pressing over this button you can get information about the charging session tariff applied.

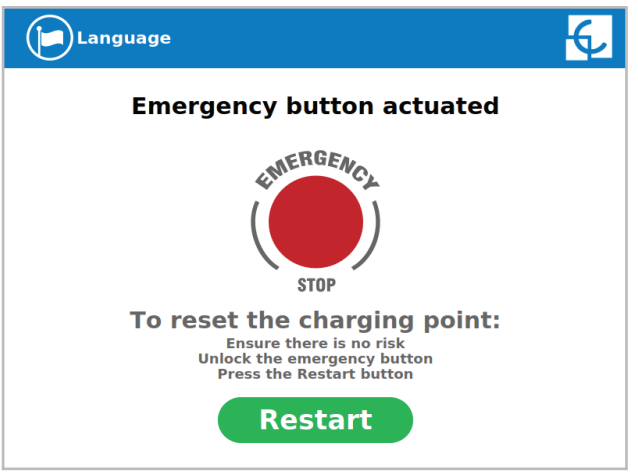
8- *Stop reason:* It shows why the charging session has been stopped.

Emergency button

If for any reason the Emergency button is pressed, all in progress charge transactions will be stopped, the beacon lights will turn red and it will not be possible to start new charge transaction until the recovery process is completed successfully. All the power modules will shut down in order to protect the user and the own Charge Point. The HMI screen will remain powered up in order to show the instructions.



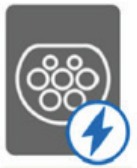
At first moment, the **'Restart'** touch button will be in light grey and it will not be able for pressing. Once emergency button has been unlocked, the **'Restart'** touch button will be in green and able to use.



H Connectors status

The HMI screen shows a different symbols over the connector pictures, as you can see below:

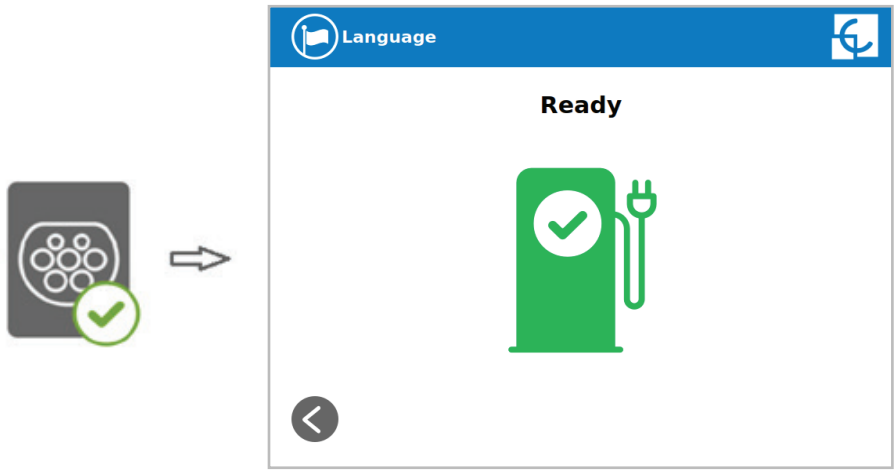
	- It means that the connector is ready to be used.
	- This connector is out of service for any technical reason. Press over **'Information'** touch button in order to get more information about it.
	- The Charge Point is out of service because the emergency button has been pressed. This fact affects all the connectors at the same time.
	- The connector is disabled. The Charge Point is out of order due to some maintenance job or because the Back office has decided to stop it.

	- The user cannot use this connector because another user is already using it.
	- This connector has been reserved and only will be able to use per the user that has made the reserve. **NOTE:** if the user that has reserved the Charge Point is yourself the charging session will start normally, if not, the Charge Point will not be able to charge until the date and time displayed have expired.
	- Only for DC connectors. As the Charge Point only can performance one DC charging session at the same time, CCS or CHAdeMO, it could be possible to find one of these connectors with this symbol because the other is charging or has been reserved.

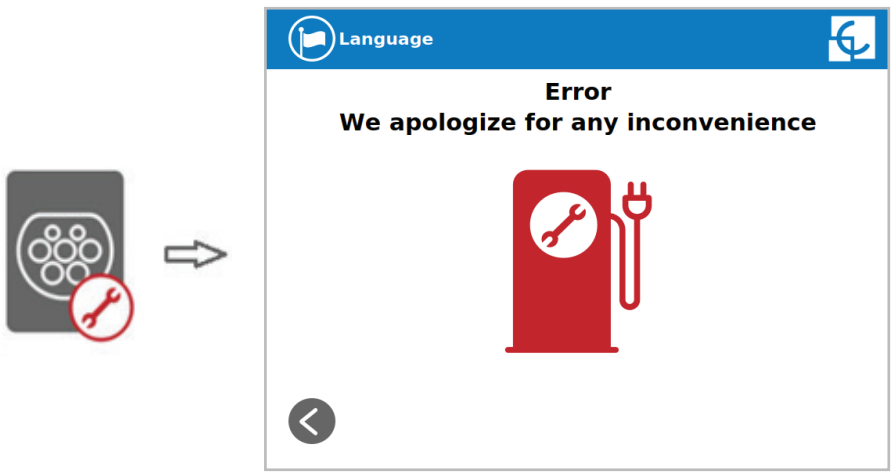
Consulting the connectors status

It is possible to press over each connector picture to get more information about the status:

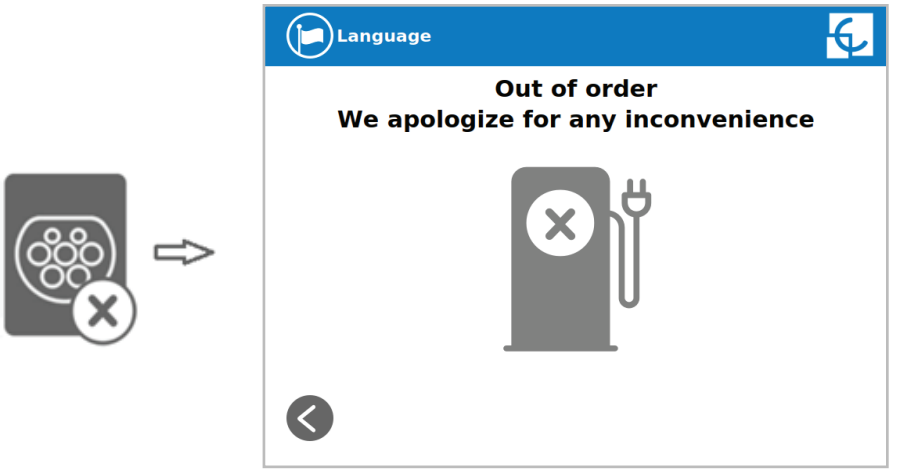
1 — CONNECTOR AVAILABLE



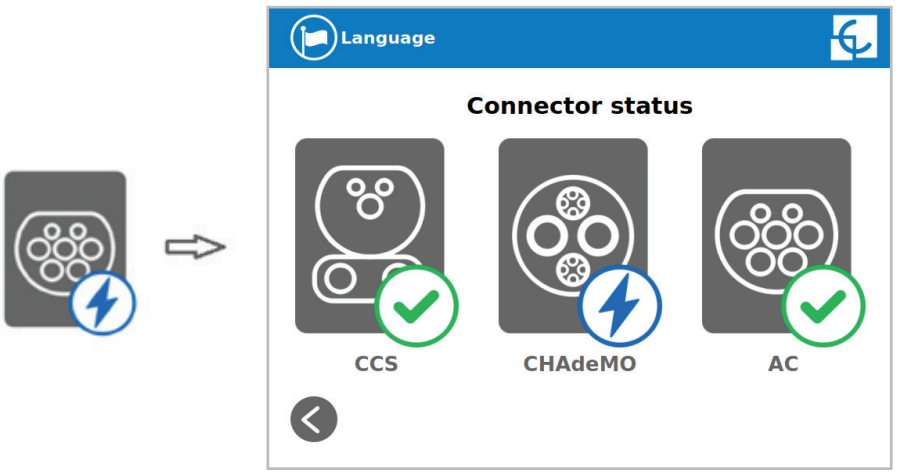
2 — CONNECTOR IN ERROR



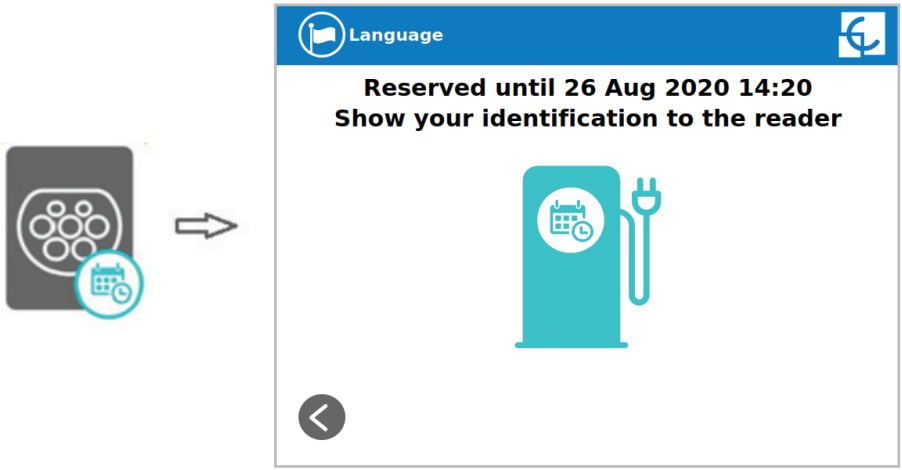
3 — CONNECTOR DISABLED



4 — CONNECTOR IN USE

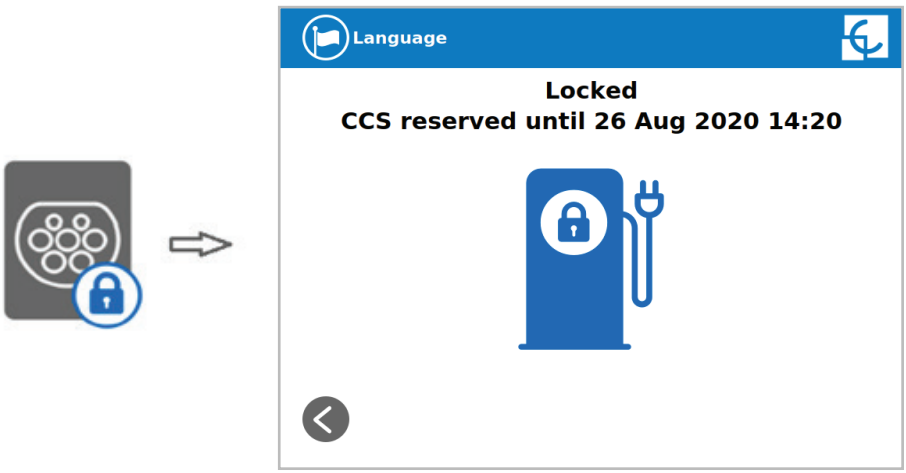


5 — CONNECTOR RESERVED



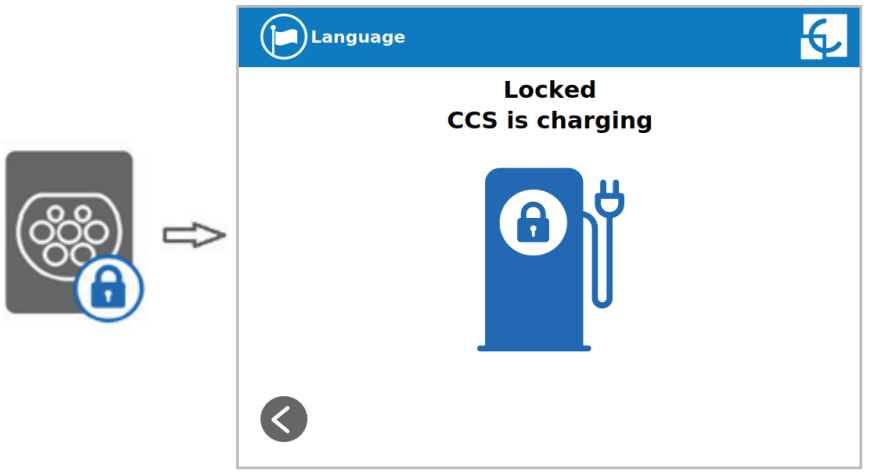
6 — CONNECTOR BLOCKED PER RESERVED

*Applies only when simultaneously charge is not available.

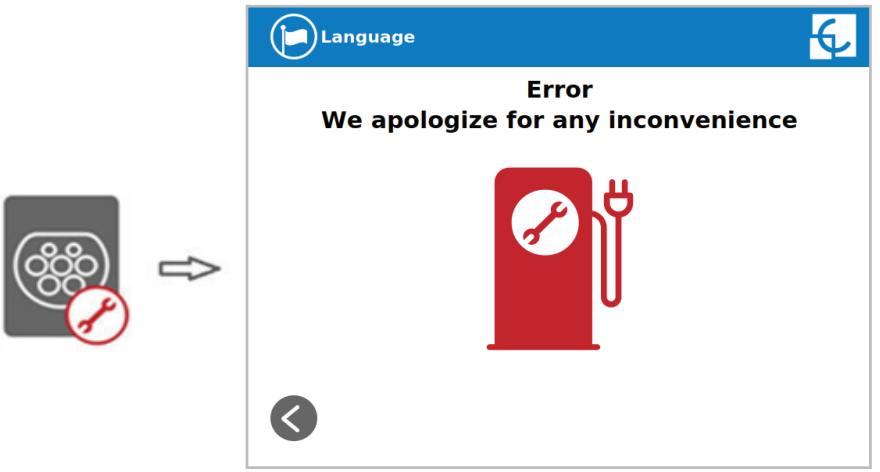


7 — CONNECTOR BLOCKED PER CHARGING

*Applies only when simultaneously charge is not available.



8 — CONNECTOR BLOCKED PER ERROR



4

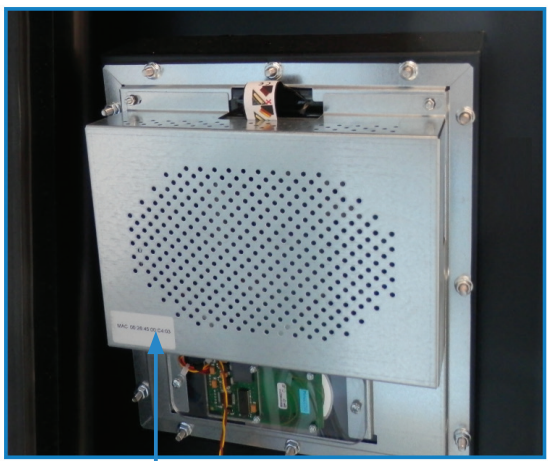
A Introduction

The Charge Point can be configured and monitored to establish owner preferences or specific setup using integrated Ethernet communication port allocated in HMI screen device (see below).

Once Service PC is configured as bellow procedure and connection established with the Charge Point, direct access to the main setup page will be showed.

The Charge Point is shipped from the factory with default network setting of "DHCP enabled". It means that the Charge Point will try to obtain an IP address from a DHCP server available on the network.

Step by step below guide detailed setup an IP address to the Charge Point in case there is no DHCP server available on the network.



The Ethernet port is located at the bottom left side of the rear part of the HMI screen.

How to configure it ?

B What is needed?

Below table shows, hardware and software needed to setup and IP address to the Charge Point.

	- Service PC running Microsoft Windows, at least Windows XP .
	- UTP Cable (Crossover recommended)
	- IPSetup.exe (*)
	- CirCarLife Scada Client (*)

(*) In order to get the software needed, you can download it from http://circontrol.com/downloads/ or contact with support@circontrol.com

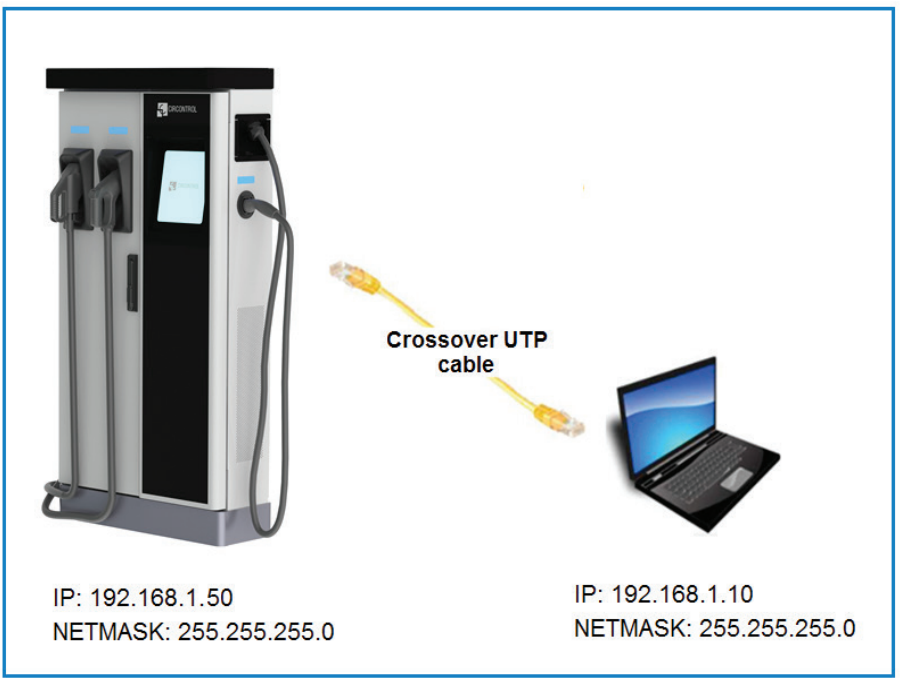
Network topology

Connecting the Service PC with Charge Point needs to be done with static IP address and TCP/IP v4 protocol.

Next section shows how to do this configuration. Below image shows Ethernet connection topology and the IP addresses used in this guide as example.

For Service PC → IP: 192.168.1.10 NETMASK: 255.255.255.0

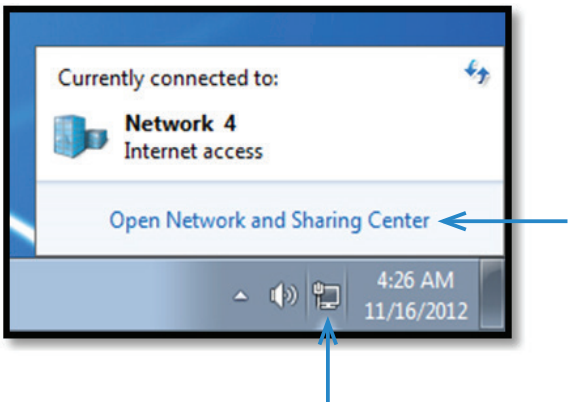
For Charge Point → IP: 192.168.1.50 NETMASK: 255.255.255.0



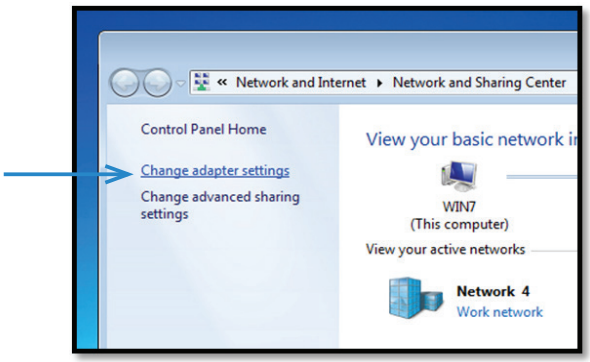
D LAN connection procedure

This section provides a step-by-step guide to connect the Service PC to the Charge Point in order to see real-time status.

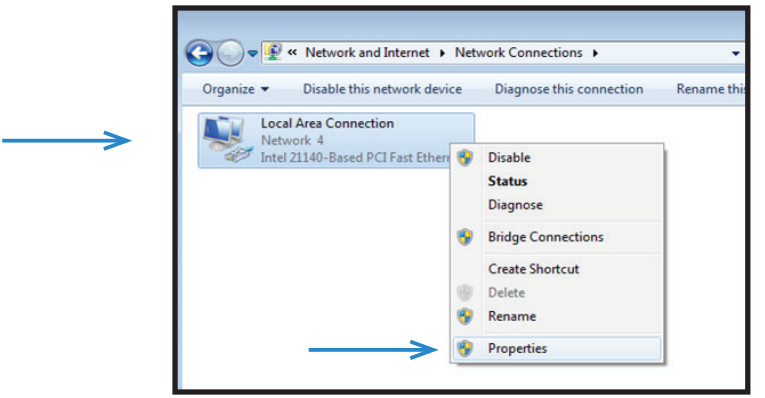
1- On the Service PC click over the **'Network icon'** next to the clock of the taskbar, and click on **'Open Network and Sharing Center'**



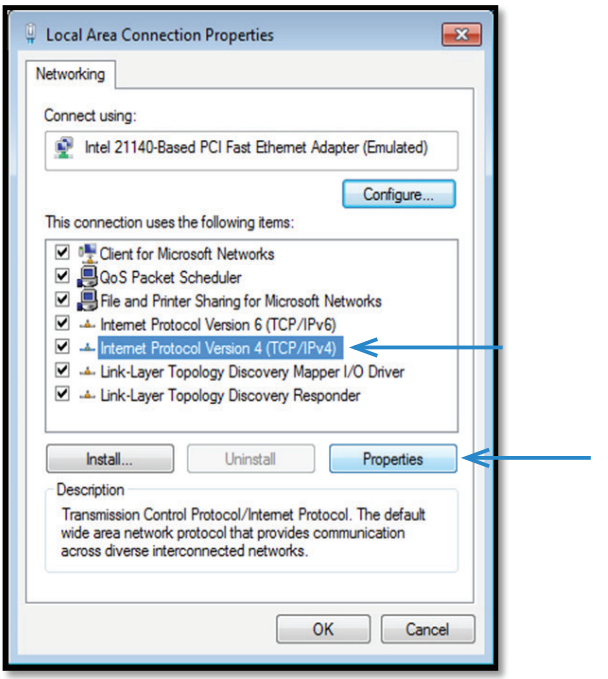
2- On the left pane, click on **'Change adapter settings'**



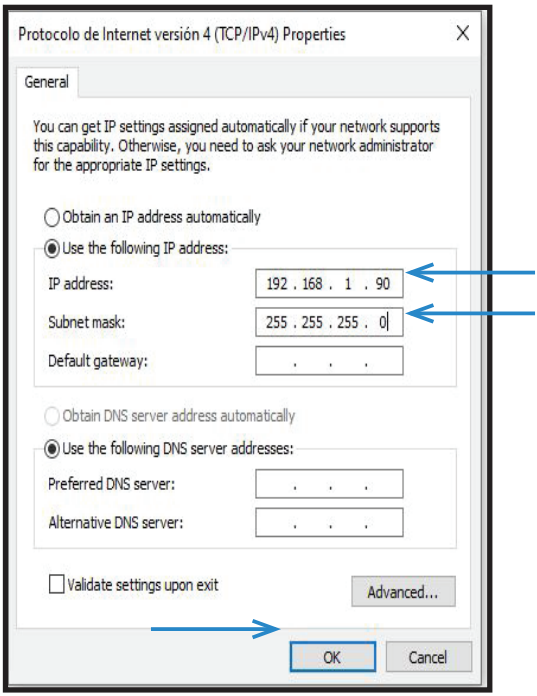
3- Make right click on **‘Local Area Connection’** and then click on **‘Properties’**



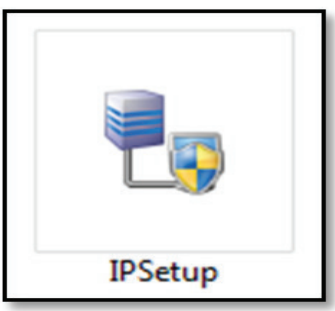
4- Select **‘Internet Protocol Version 4 (TCP/IP)’** option and click on **’Properties’**



5- Setup IP address and subnet mask like as shown here below and click **'OK'** twice to complete the assigning IP address process to the computer.

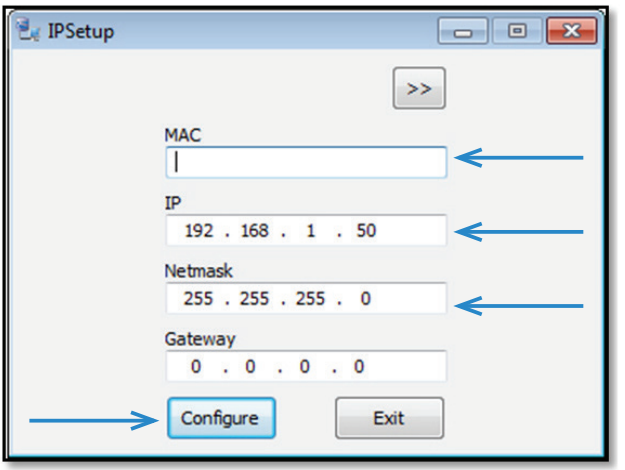


6- Now execute **IPSetup.exe** software provided on the Service PC



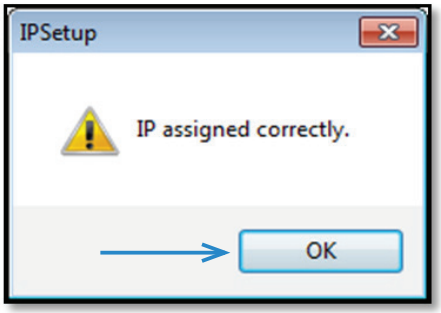
7- Enter the following parameters and click on **'Configure'**

- MAC of the Charge Point (see label on the cover's screen)
- IP address: i.e.(192.168.1.50)
- Netmask: i.e. (255.255.255.0)
- Gateway: leave default settings.

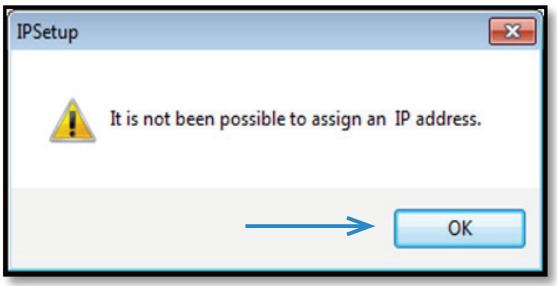


8- Wait 30 seconds approximately until the process is complete.

9- The process will complete when the following message appears, click on **'OK'**



10- If the message shown is the next one, check the following parameters and click on **'OK'**



- Check IP address entered.
- Check the MAC of the device entered.
- Try with another UTP CAT5e cable.

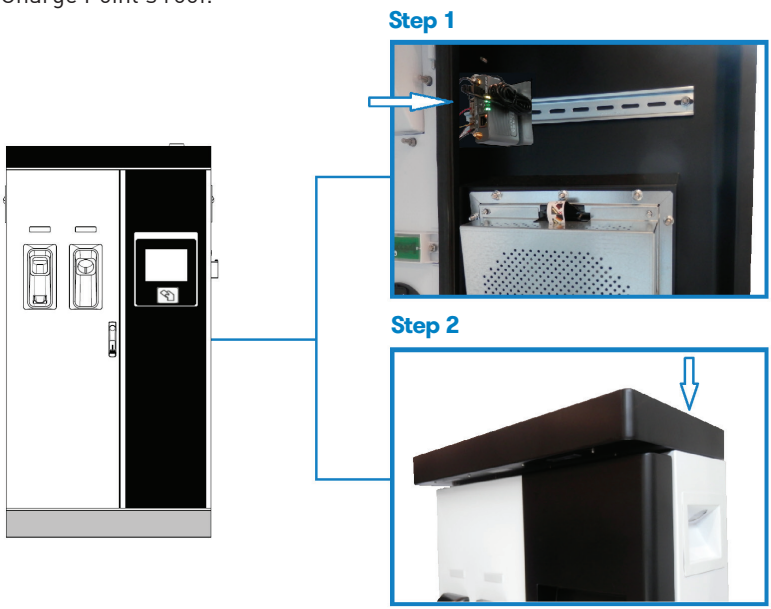
5

A Introduction

This section describes how to install the SIM card and setting up the modem. The modem that has been installed in Raption Series is Teltonika RUT 240.

Modem location

The modem is installed inside the unit and the antenna is fixed outside, right on the Charge Point's roof.



Step 1- Open Charge Point's right door and locate the modem, on the rear side.

Step 2- Check that the Charge Point is provided with the antenna on the cover top.

Modem is fully configurated by default in Circontrol.

Only in case it is needed to configure it, remain in this section.

Communications

B Modem configuration

1 — MODEM OVERVIEW

The 4G modem installed from factory in the Charge Point is: **Teltonika RUT240**

This device allows to the Charge Point connects over 4G networks to remotely view or manage the Charge Point status. RUT240 is part of the RUT2xx series of compact mobile routers with high speed wireless and Ethernet connections.

1	LAN Ethernet port
2	WAN Ethernet port*
3	LAN Led indicator
4	WAN Led indicator
5	Power connector
6	Power LED
7	Signal strength indication LEDs
8	SIM card holder
9	WiFi antenna connector
10	Reset button
11	LTE antenna connectors

(*) WAN Ethernet port is set up as a LAN Ethernet port in order not to disconnect modem from Charge Point during service issues.

2 — CONNECTION STATUS LED

Explanation of connection status LED indication:

- Signal strength status LED's turned on: router is turning on
- 2G, 3G and 4G LED's blinking every 1 sec: no SIM or bad PIN
- 2G/3G/4G LED's blinking every 1 sec: connected 2G/3G/4G, but no data session established
- Blinking from 2G LED to 4G LED repeatedly: SIM holder not inserted or access to network denied
- 2G/3G/4G LED turned on: connected 2G/3G/4G with data session
- 2G/3G/4G LED blinking rapidly: connected 2G/3G/4G with data session and data is being transferred.

3 — SIM CARD INSTALLATION

Explanation of SIM card installation:

Insert SIM card which was given by your ISP (Internet Service Provider). Correct SIM card orientation is shown in the picture.

1. Push the SIM holder extract button

2. Pull out the SIM holder

3. Insert the SIM card

4. Push in the SIM holder

After installing the SIM card, check out that the 4G antenna (mobile), WiFi antenna and the power connector are properly attached.

NOTE: SIM card is not provided with equipment.

4 — LOGGING IN

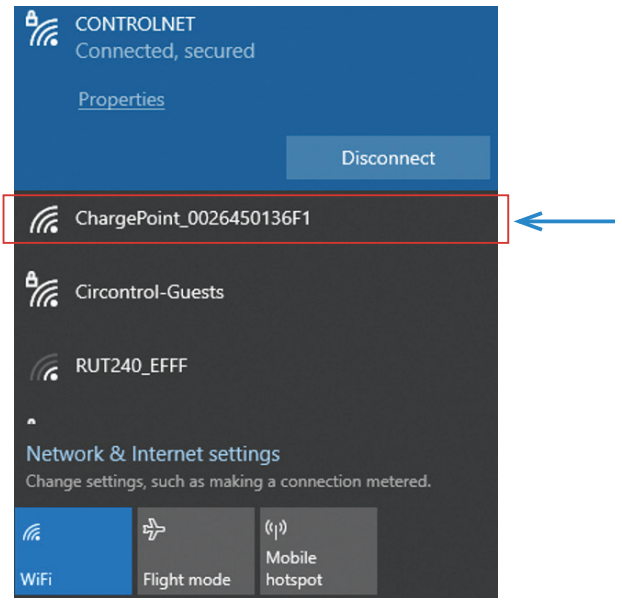
After you're complete with the setting up as described in the section above, you are ready to start logging into your router and start configuring it. This example shows how to connect through WiFi:

For cibersecurity reasons, modem's WiFi connection is disabled by default.

In order to enable it, remember to adjust it in charger side, as explained in section 6.

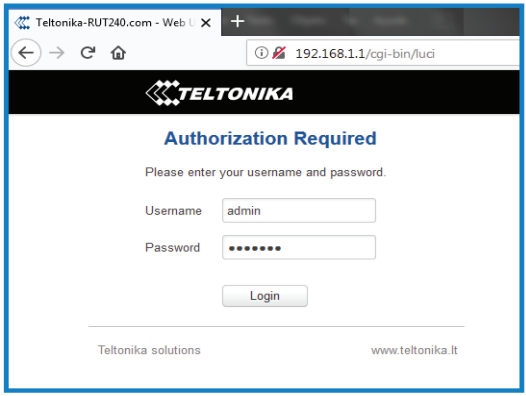
4.1 Connect your ethernet cable in the LAN port and do all the settings being locally connected (it can also be done from the WAN port when WAN port is configured as a LAN).

4.2 At your service computer, look for access point named ChargePoint_xxxxxxxxxxxx (where "x" means the MAC Address), and connect on it.



4.3 Open a web browser and type ***http://192.168.1.1*** . Use the following parameters when prompted for authentication, and then either click Login with your mouse or press the Enter key.

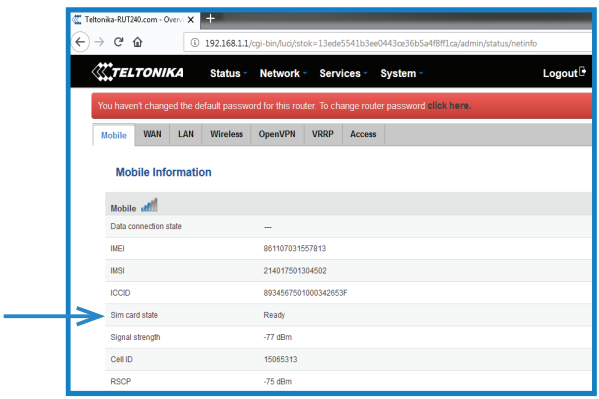
User name: **admin**
Password: **Admin001**



You have now successfully logged into the RUT240!, from here on out you can configure almost any aspect of your router.

4.4 **Configuration Wizard** will start after logging in. It is necessary to complete Configuration Wizard to setup modem to the correct mode.

Go to **Status** → **Network** → **Mobile** and pay attention to 'Sim card state' field, it has to be *Ready*.

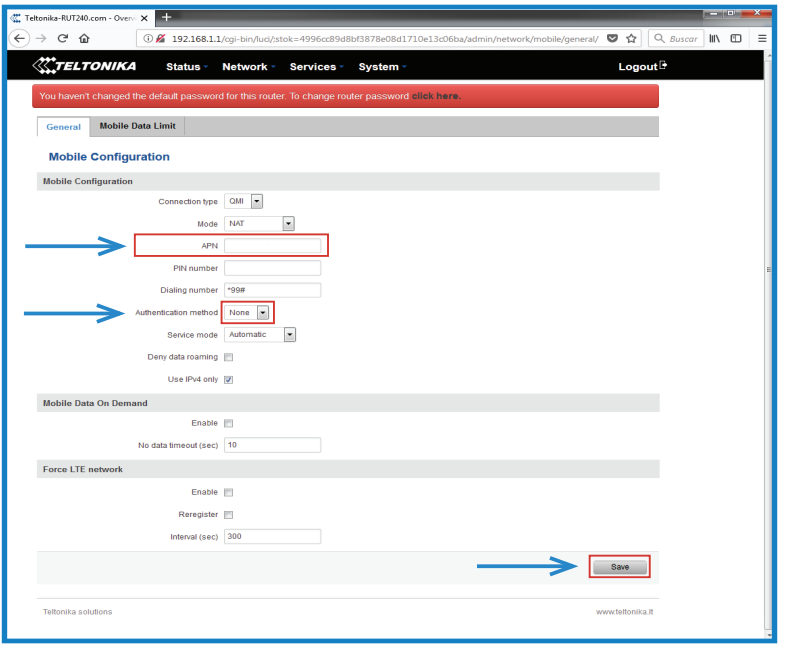


See note in next page

In order to change the password, remember to adjust it in charger side, as explained in section 6.

4.5 **Network Mobile configuration.** Here you can configure mobile settings which are used when connecting to your local network.

Go to **Network** → **Mobile** → **General >** *Mobile Configuration*



Type the APN from your SIM provider and push over **'Save'** tab.

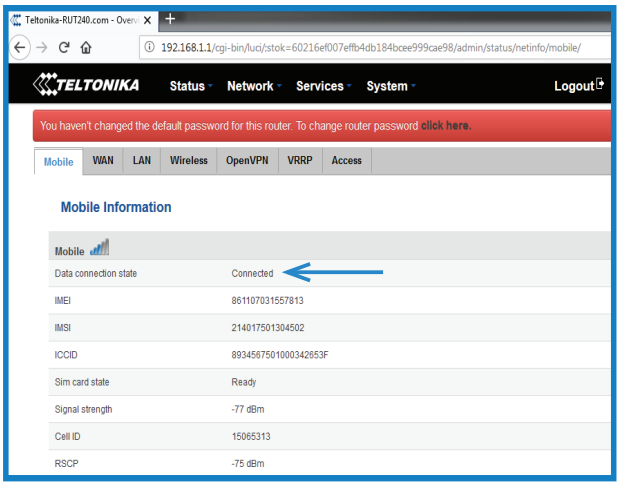
NOTES:

1. If your SIM provider require any authentication ask them about what type, PAP or CHAP, select it on 'Authentication method' field and introduce a password and username.

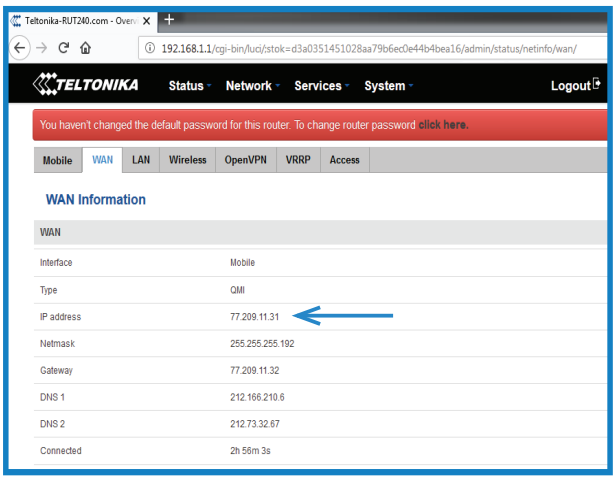
2. If you need to do some custom over the modem configuration, ask the Circontrol Support staff in order to get the Teltonika modem manual.

4.6 In order to know if the connection has been done properly, check next steps:

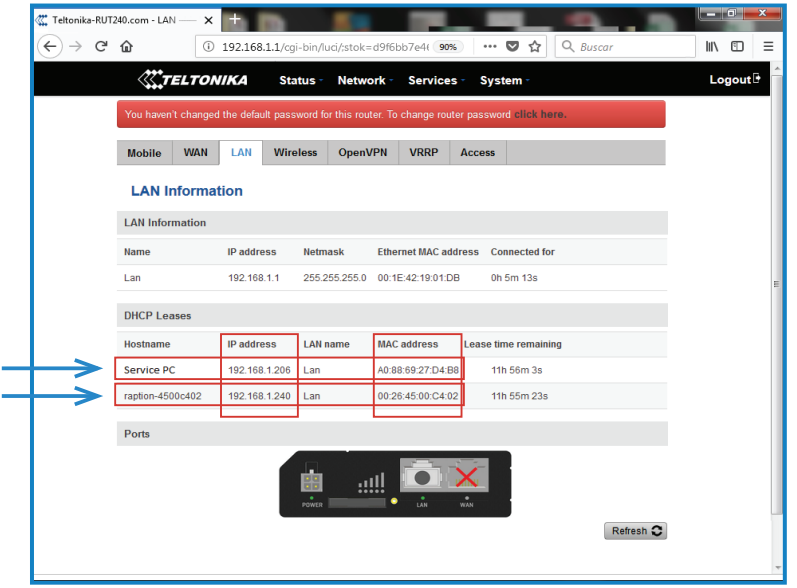
Go to **Status** → **Network** → **Mobile** and pay attention to *Data connection state*, it has to be *Connected*



Go to **Status** → **Network** → **WAN** and pay attention to *IP address, the modem* must has found a public IP address



Go to **Status** → **Network** → **LAN** → *DHCP Leases* and pay attention to *IP addresses*

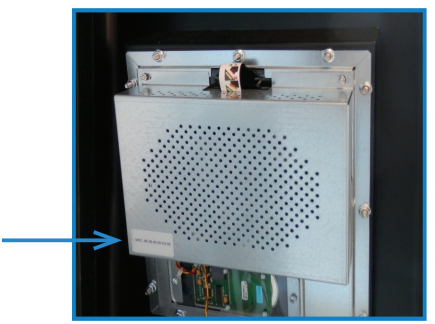


At **'DHCP Leases'** check that the modem has detected the automatic IP address and MAC number for both, your Service PC and the Charge Point.

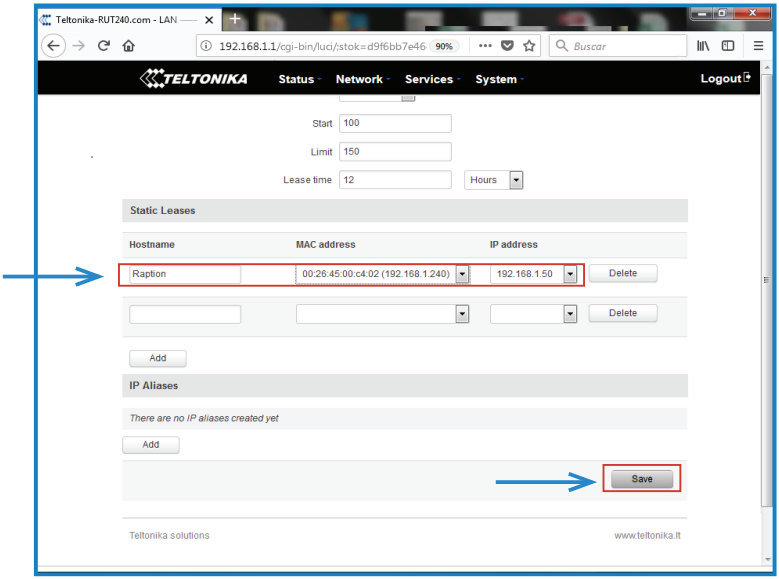
NOTES:

1. If the modem has not detected the automatic IP address, switch off the Q10.1 circuit breaker for Raption 50 (Q14.3 in case of Raption 51, Raption 52 and Raption 100) , wait for 10 seconds and switch on again. Connect again your Service PC to the access point named ChargePoint_xxxxxxxxxxx, and repeat the steps 4.3 y 4.6.

2. To make sure that the Charge Point' s MAC number is correct, it can be seen in one label behind the HMI screen.



4.7 Go to **Network → LAN >** *Static Leases*



Complete the fields with next information:

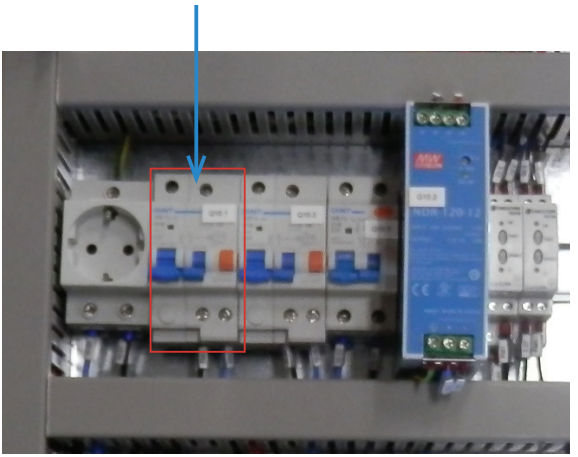
Hostname - It can be written the name that you want for your Charge Point. It is highly recommended to name it keeping this structure: ChargePoint_xxxxxxxxxxx, to identify it easier.

MAC address - It will be the MAC number found behind the HMI screen, on the label

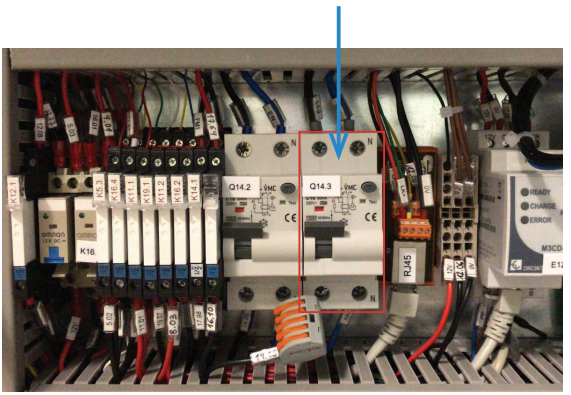
IP address - **192.168.1.50**

After filling the fields, push over **'Save'** button.

4.8 Disconnect the MCB Q10.1 (Q14.3 in case of Raption 51, Raption 52 and Raption 100) inside the Charge Point in order to do a hard reset over the modem and the HMI screen, after 10 seconds switch ON again the MCB.



Model for Raption 50



Model for Raption 51, Raption 52 and Raption 100

4.9 Repeat again the points 4.2 and 4.3 explained above:

4.2 - look for modem access point and connect on it.

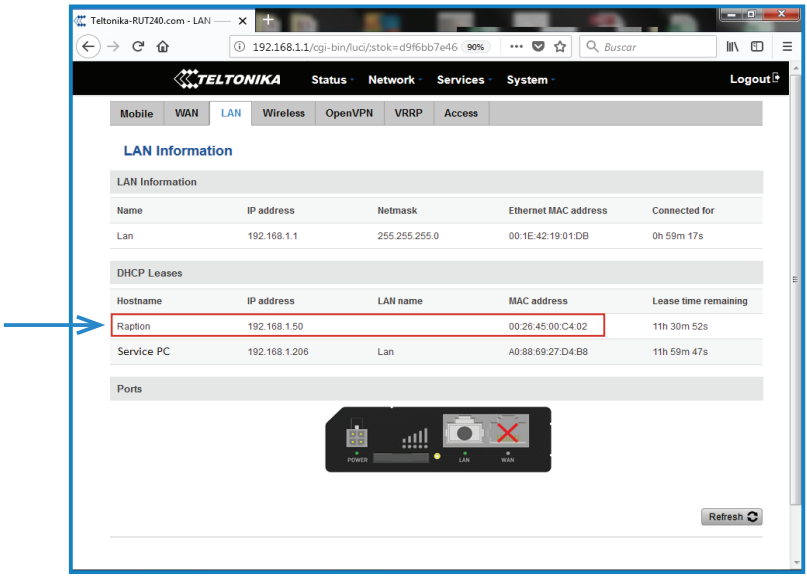
4.3 - log on modem webpage with authentication.

4.10 Now, go again to **Status** → **Network** → **LAN** → *DHCP Leases* and confirm that the information written at the point 4.7 has been successfully recorded:

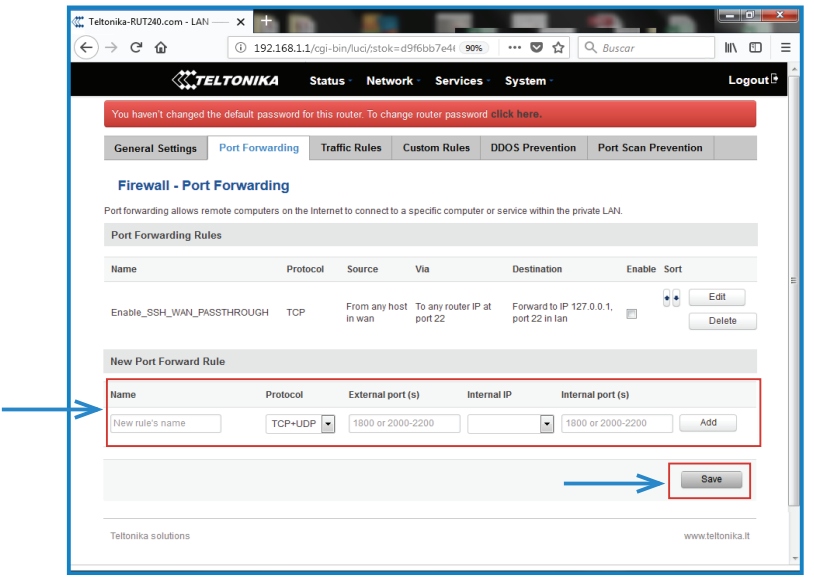
Hostname - the name given for Charge Point

MAC address - the MAC of the Charge Point

IP address - **192.168.1.50**



4.11 Go to **Network > Firewall > Port Forwarding >** *New Port Forward Rule*



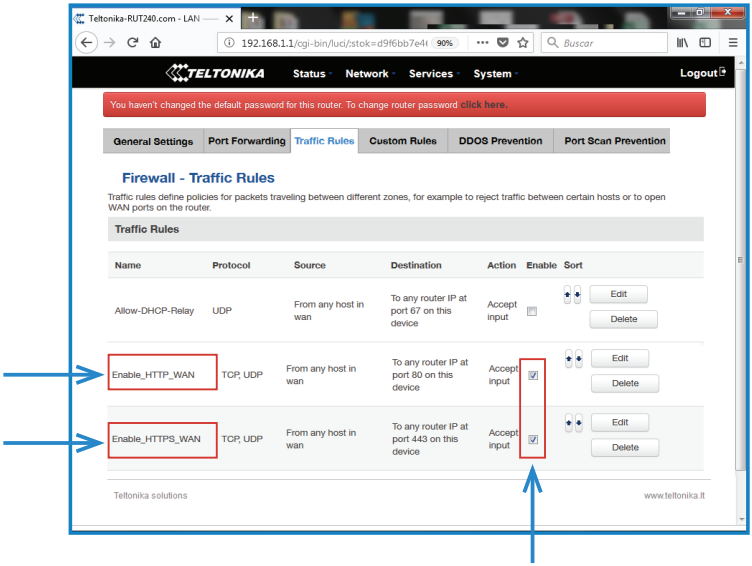
The ports that you can see in the table below are introduced in the modem by default, although only the named 50000 and 9191 are enabled:

Name	Protocol	External port (S)	Internal IP	Internal port (S)
80	TCP	80	192.168.1.50	80
8080	TCP	8080	192.168.1.50	8080
50000	TCP	50000	192.168.1.50	50000
9191	TCP	9191	192.168.1.1	80

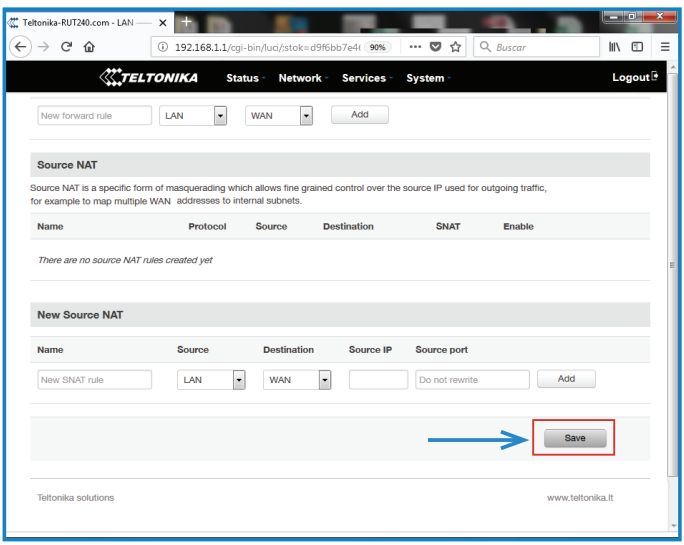
If necessary, it is possible to enable the other ports or introduce them following the table listed above.

Push over **'Save'** button after any modification.

4.12 Go to **Network > Firewall > Traffic Rules**



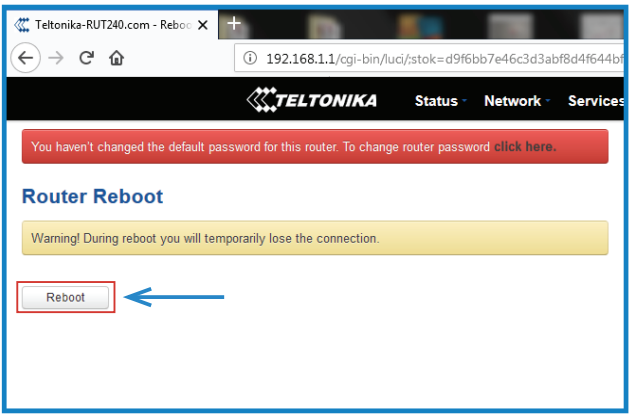
Roll down and look for *'Enable_HTTP_WAN'* and *'Enable_HTTPS_WAN'* fields and enable these.



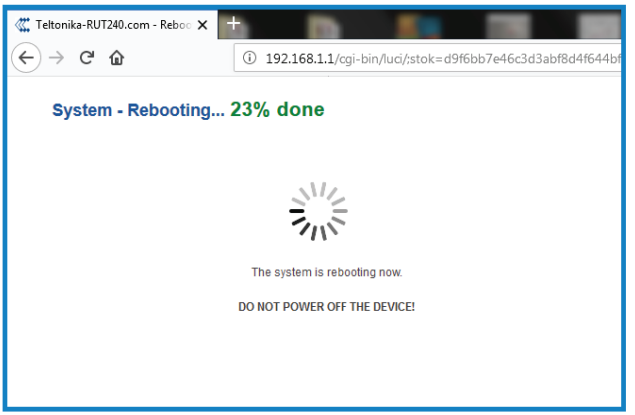
Roll down again and push over **'Save'** button.

4.13 For ending with the modem logging is necessary to do a reboot:

Go to **System** → **Reboot** and push over the **'Reboot'** tab



During the process, the system will show the progress, do not switch off the modem.



4.14 Repeat again the points 4.2 and 4.3 explained above:

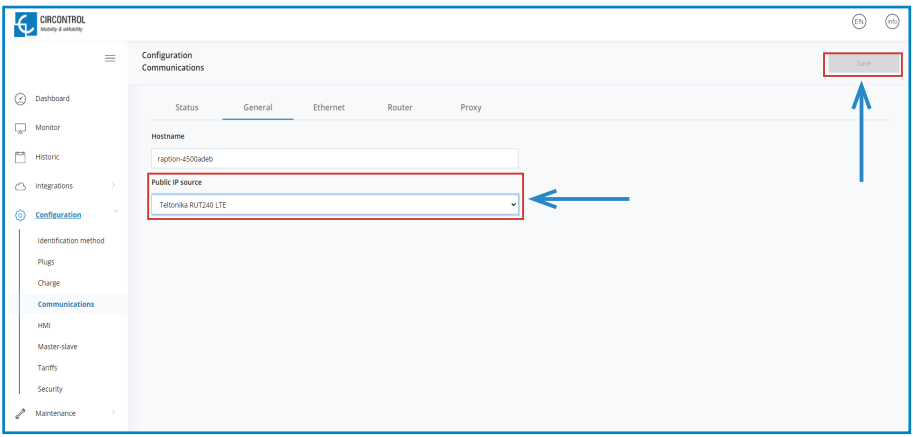
4.2 - look for modem access point and connect on it.

4.3 - log on modem webpage with authentication.

4.15 It is necessary to check that the Teltonika RUT240 LTE modem option is chosen at Charge Point's setup webpage:

Make sure that your Service PC is still connected with the Charge point through wifi, open a web browser and type 192.168.1.50.

Go to **Configuration > Communications > General**



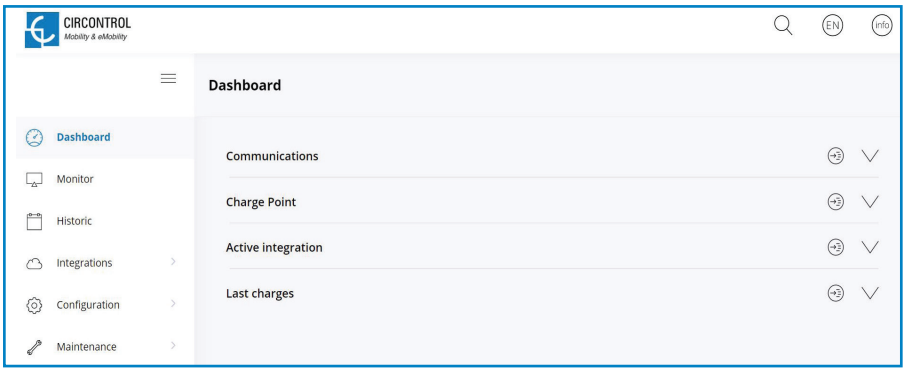
Click over the **'Save' button** located at the top right corner.

6

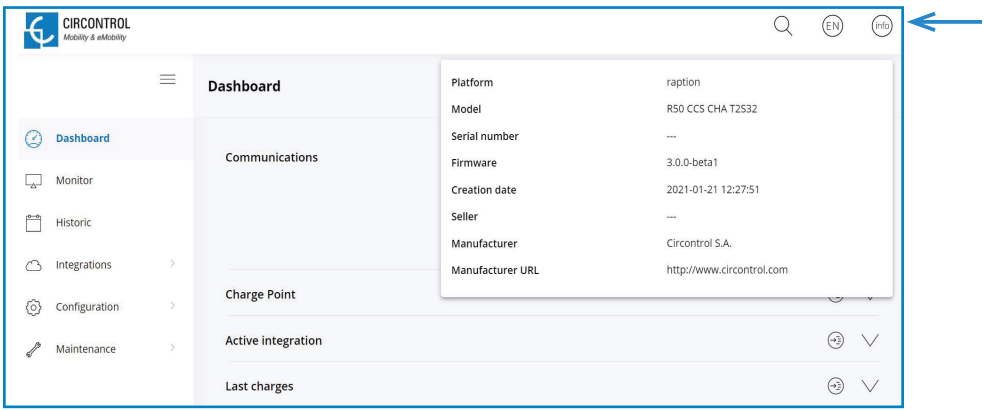
Setup webpage allows managing network setup, upgrading devices and other options.

Once the Service PC is already connected to Charge Point, it is possible to open Setup Webpage through the IP entered. In the example shown in the previous section, it has been set 192.168.1.50

Open a web browser on the service PC and enter this IP, next image will appear.



The webpage opened shows the **'Dashboard' Overview'** as a main screen, but there are many more options. In the next points, they will be explained.

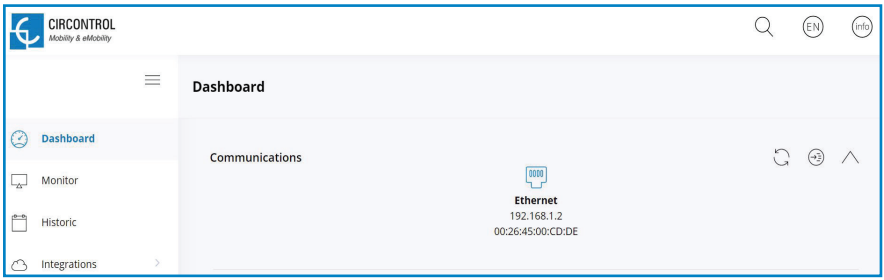


In the right top corner it is shown the search engine icon, the language list and information about the Charge Point. Once the info button is pressed, it appears the screen displayed above, with model and firmware version information, among others.

Setup Webpage

A Dashboard

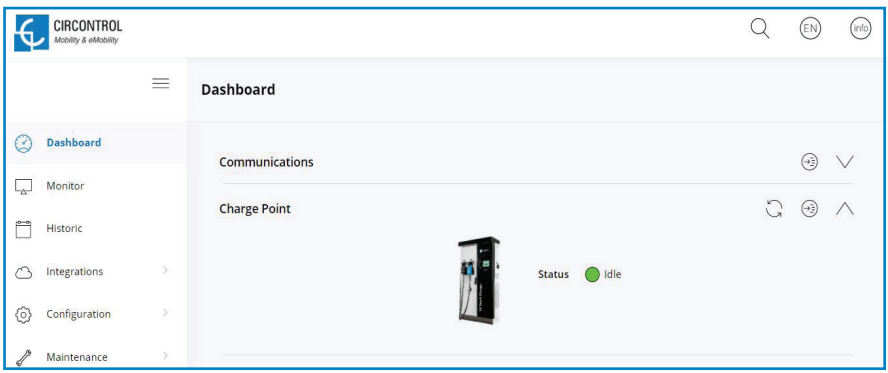
COMMUNICATIONS



As a relevant information, it shows:

Value	Description
IP	Short for Internet Protocol. Identifier that allows information to be sent between devices on a network.
MAC Address	Identifier of the network card of the Charge Point

CHARGE POINT

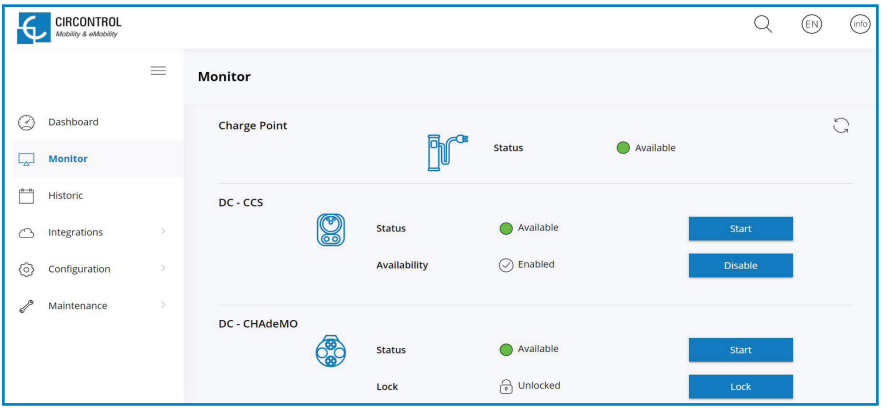


It is displayed if the Charge Point is available to be used or not.

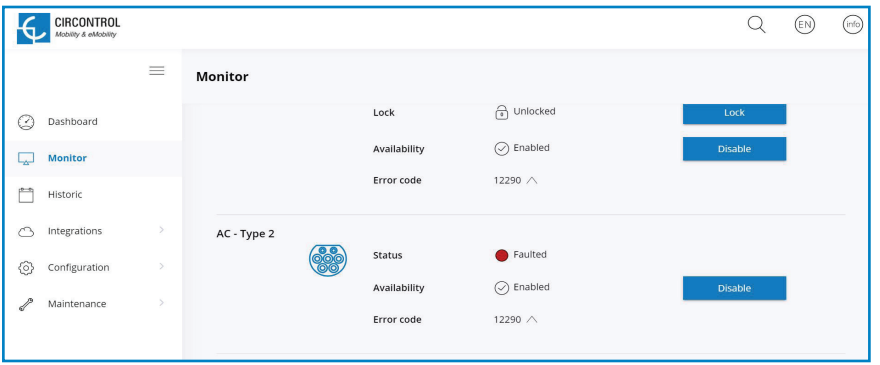
B Monitor

In this section, it can be consulted the status of the Charge Point, the type of connectors it has and the availabilty of them.

It is possible to start or stop a charging session, able or disable a connector or lock or unlock it remotely.



It is also shown when connector individually has an internal error, and an error code, in order to look for the type of fault.

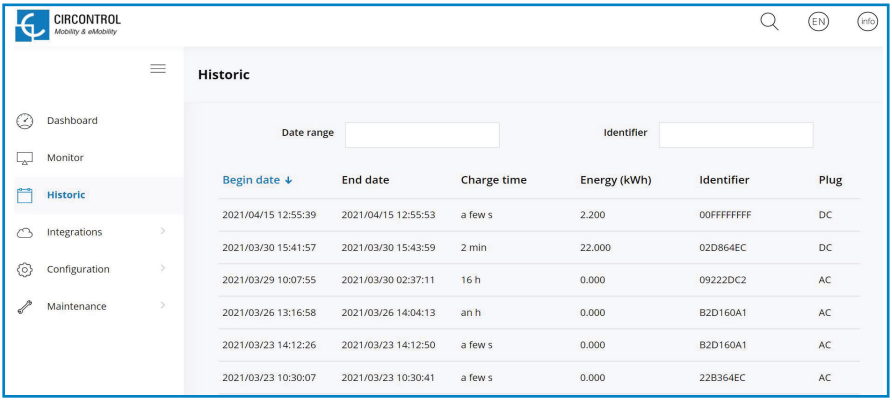


Historic

This section provides information of every charge transaction started in the Charge Point.

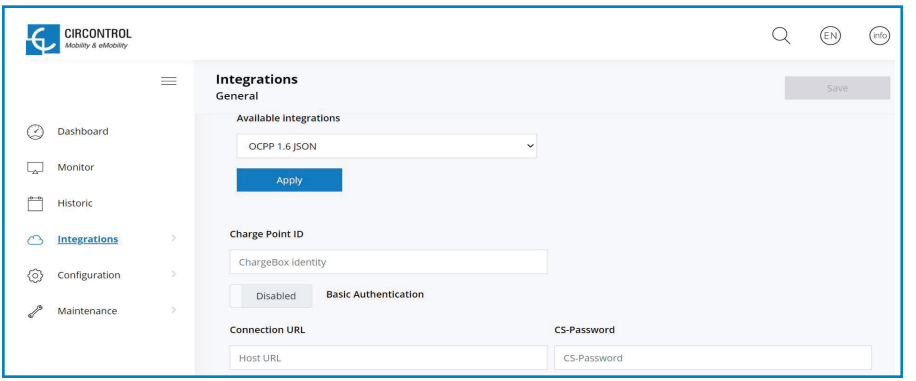
It can be checked date and hour of begin and end of a charge transaction, energy charged, alias of the user and type of charge used.

All of this elements have the chance to be organised depending on the user needs.



D Integrations

Clicking over the **'Integrations'** tab, user will be able to activate OCPP integrations.



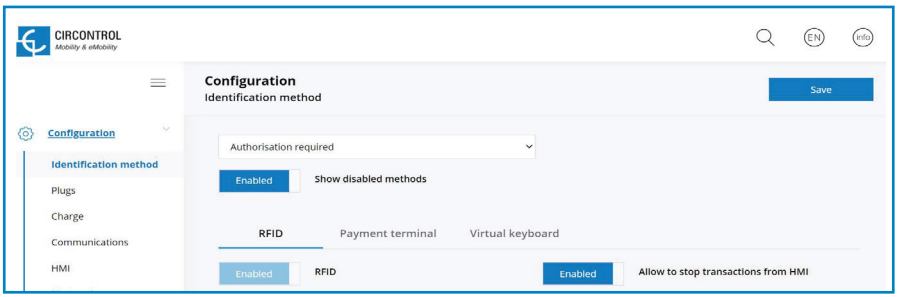
NOTE: the integration of the Charge Point needs a separate chapter. In the next chapters number 6 and 7 it is explained how to integrate OCPP.

E Configuration

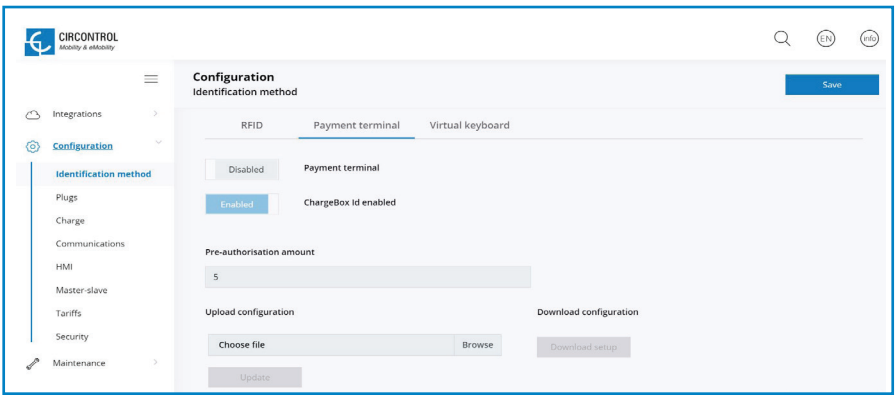
In this section, there can be adjusted many different settings related with the Charge Point, depending on the elements it has and level of security it is desirable to have.

IDENTIFICATION METHOD

It is possible to enable or disable the option to use the Charge Point with or without identification and also if the user is capable to stop charge transaction.



When the Charge Point includes payment terminal, it is necessary to enable the option to let the user pay with this method.

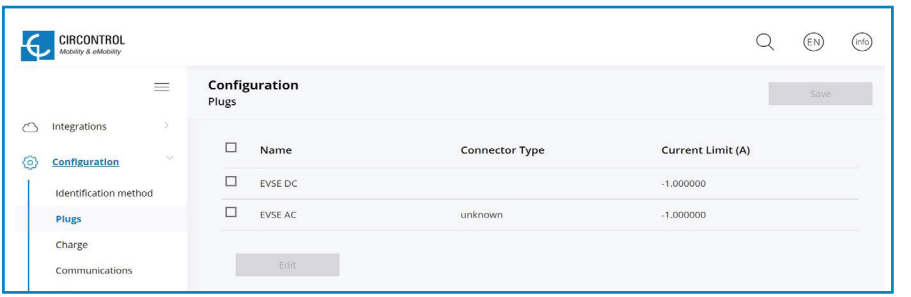


Enable ChargeBox Id option allows the system to differentiate every single charge point separately, in order to use this data by the back end system.

As a Pre-authorisation amount, it can be configurated the amount of money that the bank blocks to the user once the charge transaction starts. When the charge transaction is finished, the blocked fee is returned and only charge to the user according to the tariff described below.

Upload configuration allows to upload the configuration file with the payment gateway keys supplied by the specific finantial service or bank. It can be downloaded the existing file whenever it is necessary.

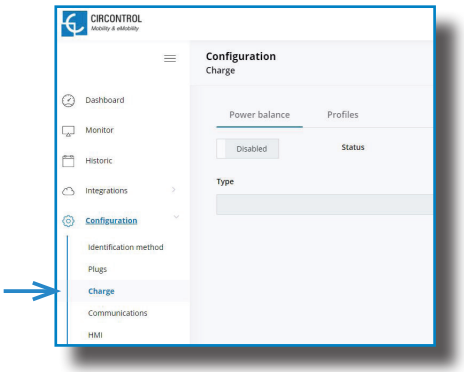
PLUGS



It is possible to enable and disable charging with quick charging (EVSE DC), slow charging (EVSE AC) or both in each Charge Point.

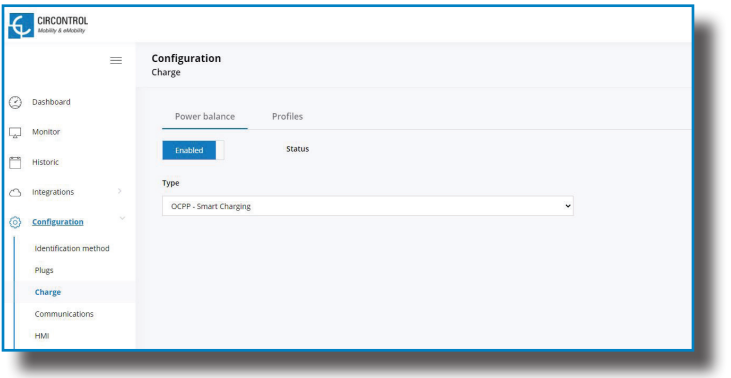
CHARGE:

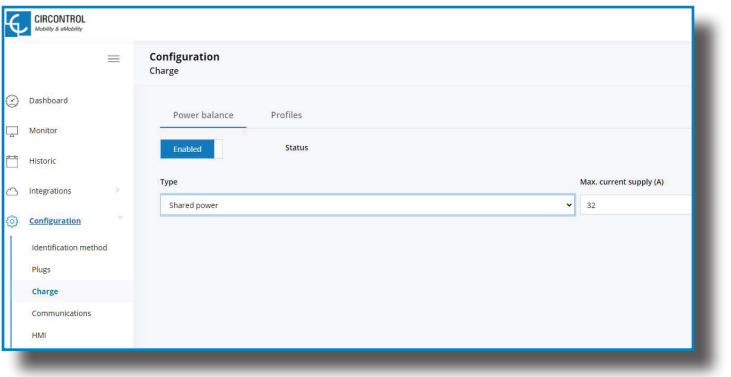
The Charge Point is capable of balancing the available power based on the number of outlets in use.



NOTE:
Option only available in Master-Satellite solution, see Master-Satellite user manual for more information.

Value	Description
Power Balance	The Charge Point is capable of balancing the available power based on the number of outlets in use (only available in Master-Satellite solution). **ENABLE:** the Charge Point shares equally the power delivered to each ongoing Charge Transaction without exceeding the limit configured. **DISABLED:** the Charge Point does not take in consideration any limit, giving the maximum power for each connector.
Profiles	It lets to choose whether from the EV transaction and lock should be disconnected or not and choose the charging cable connection timeout in seconds. idTag option enabled adds a prefix indicating the method of identification chosen by the user, as shown in the table below: **Method of identification** / **Prefix** RFID / RF Contactless Payment / CC PIN-code / KC Plug&Charge / NA

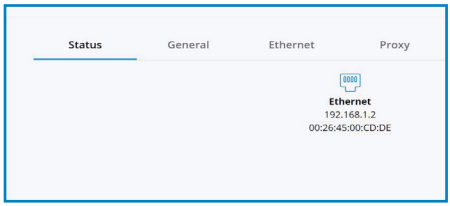


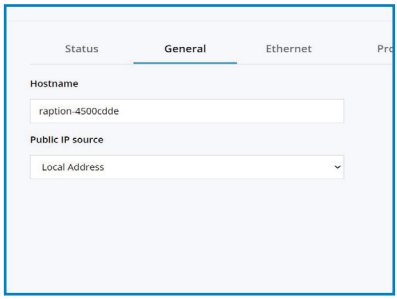


Value	Description
Shared power	It indicates the power available to divide between the connected vehicles. The *Max.current supply (A)* is the available power **ONLY** for AC outlets.
OCPP-Smart Charging	The power balance is made via OCPP.

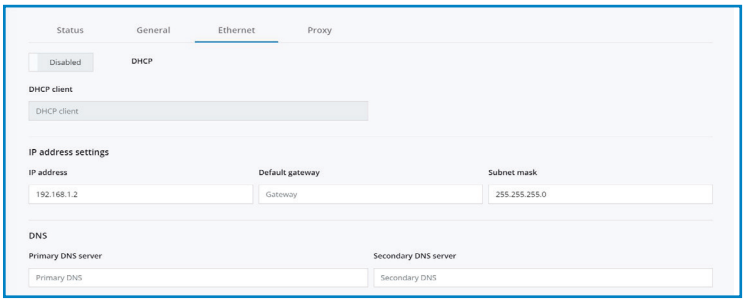
COMMUNICATIONS

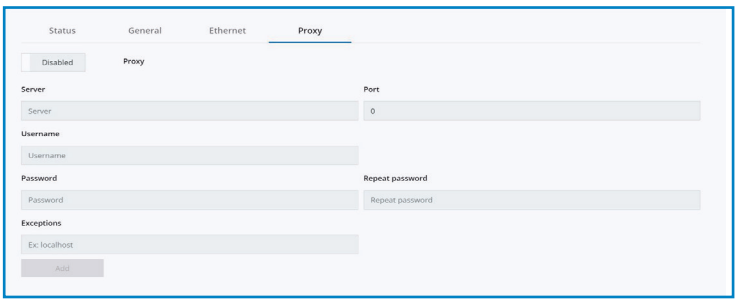
This section provides basic configuration of the network parameters.





DHCP server (router) means to enable or disable the IP address assignment. To be enabled when working with the integrated modems.



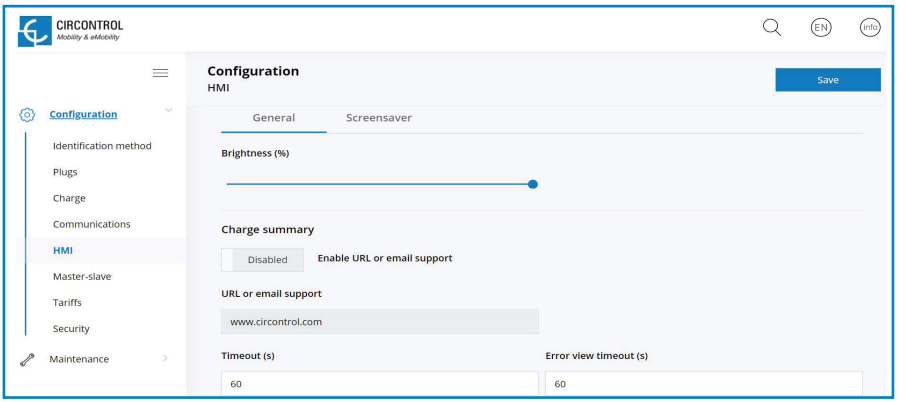


HMI

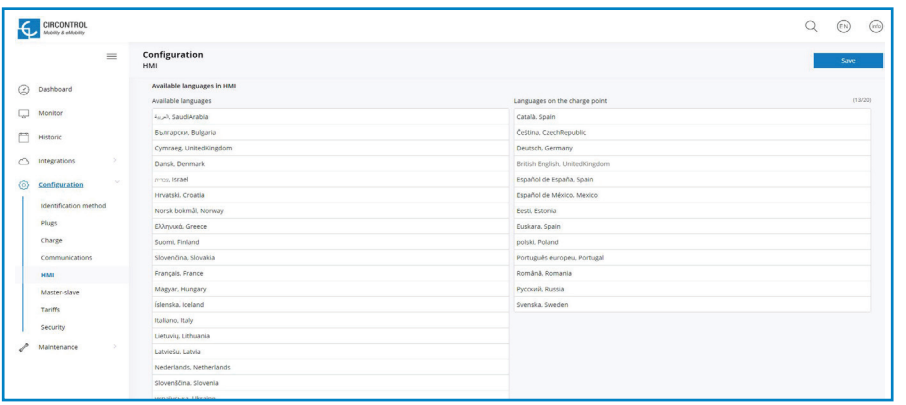
Short for Human Machine Interface.

In this section, there can be adjusted many settings related with the Display.

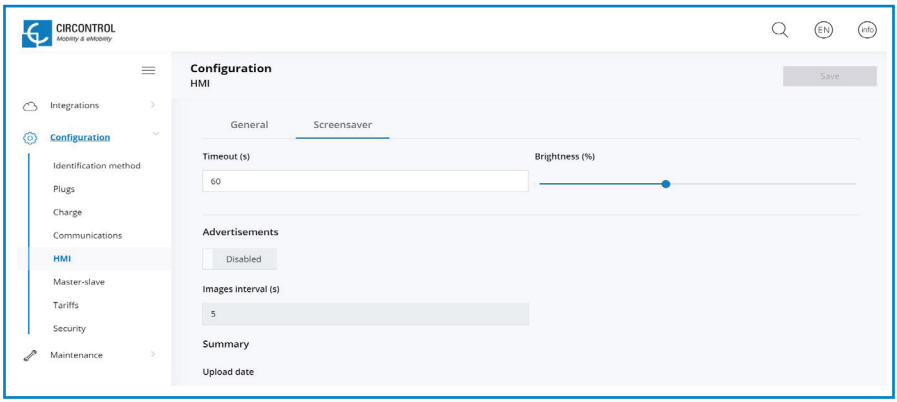
In General tab it is possible to adjust screen brightness and enable or disable the email support and timeout. Also, in the Charge Point can be uploaded up to 20 languages between the wide variety able to choose.



Also, it is possible to customise the languages in the Charge Point. In the left column are all the available languages between the wide variety able to choose and in the right column are the ones chosen to be displayed in the Charge Point, organised as shown on screen.



In Screensaver tab it is possible to adjust timeout and brightness and enable or disable advertisements, what lets customise the Screensaver image by uploading a file.



TARIFFS

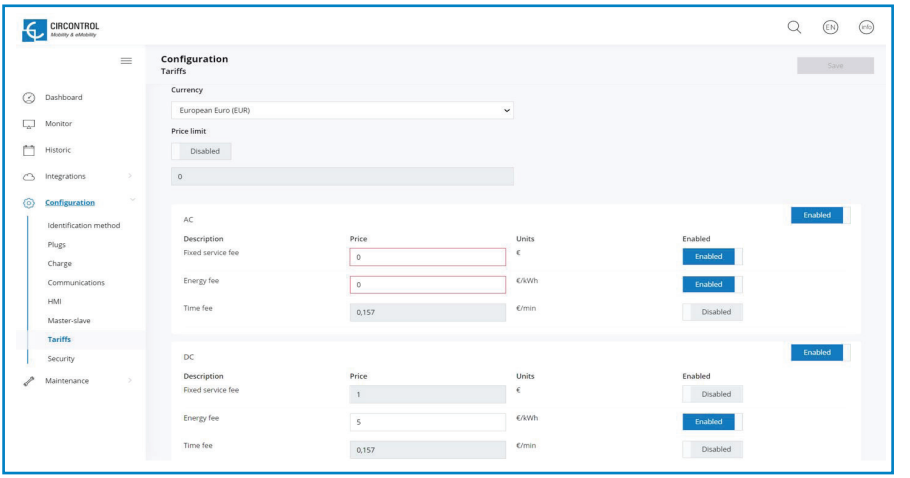
In this section, it can be adjusted the cost of a charge transaction in the Raption station. These settings are just displayed to inform the customer.

It is necessary to work with an integrated system for the payment, such as contactless payment or OCPP Integrations. The payment will be done through one of these platforms.

As explained in the previous paragraphs, this is just information for the final user. When adjusting these settings, they will be displayed in the charger screen even if there is not a platform in charge of the receipt.

Make sure that values are set according to the final price from these platforms.

Remember to press 'Save button to apply the settings.

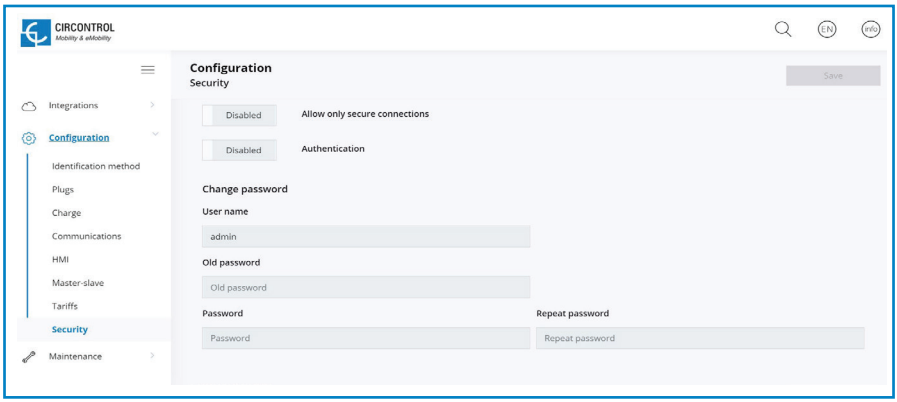


There are few parameters that can be adjusted:

Value	Description
Currency	Choose the proper currency according to the area the Charge Point is installed
Price Limit	Maximum cost of the charge transaction
Fixed service fee	Price of a new charge transaction
Energy fee	Amount of money to be payed based on the energy delivered to the EV
Time fee	Amount of money to be payed based on the duration of charge transaction

All these settings can be combined according to the customer preferences.

SECURITY



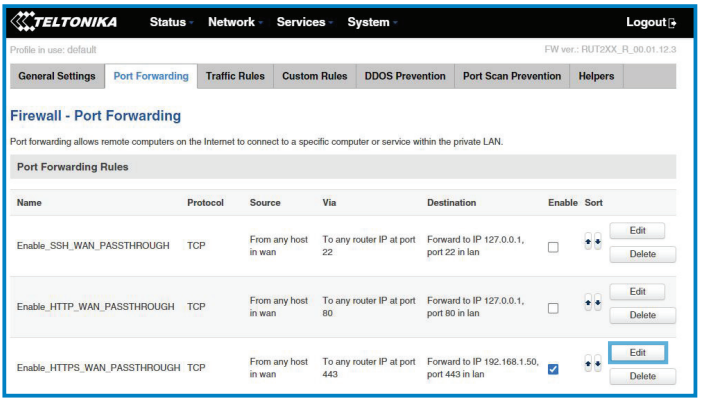
Value	Description
Allow only secure connections	**ENABLE:** Information transferred between Charge Point and laptop is strictly encrypted. Once enabled, it must be done some modifications in modem configuration, as explained below. **DISABLED:** not possible to assure secure connections between Charge Point and laptop.
Authentication	**ENABLE:** Introduce a user and a password in order to enter in the web setup. NOTE: Old password is 1234 by default. **DISABLED:** not password required to enter in the web setup. It is possible this option to be changed whenever is desired.

Configure modem to allow secure connections:

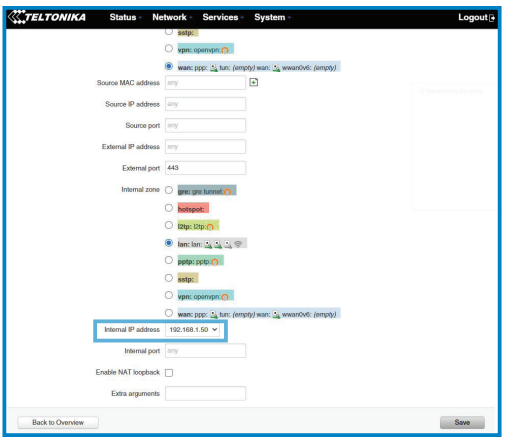
After you're complete with the setting up as described in the section 5, you are ready to start logging into your router and start configuring it.

1. Go to **Network > Firewall > Port Forwarding >** *Port Forwarding Rules*

Locate the port named "Enable_ HTTPS_WAN_PASSTHROUGH" and click Edit button.



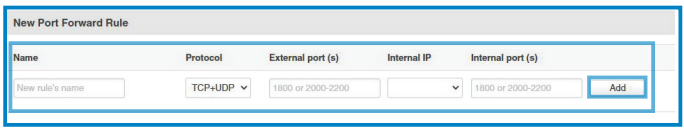
Once in Edit screen, insert 192.168.1.50 in "Internal IP address" field and click Save button.



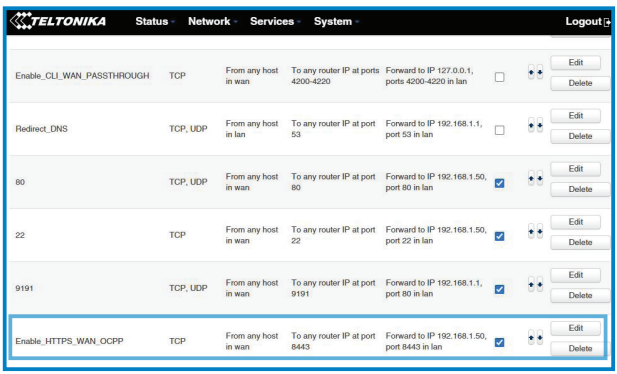
2. Go to **Network > Firewall > Port Forwarding >** *New Port Forward Rule*

At the bottom part of the screen, add a new port forward rule with the following parameters and once introduced click Add button:

Name: Enable_HTTPS_WAN_OCPP
Protocol: TCP
External port: 8443
Internal IP: 192.168.1.50
Internal port: 8443

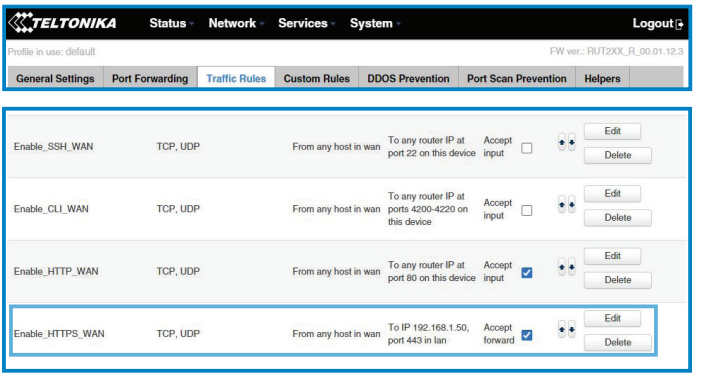


Check that the new line appears and tap enable check in case is disabled.

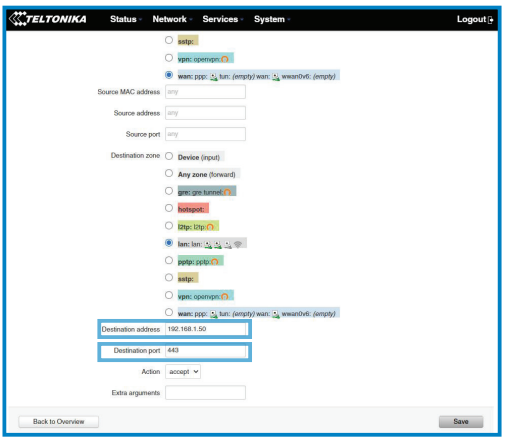


3. Go to **Network > Firewall > Traffic Rules**

Locate the port named “Enable_ HTTPS_WAN” and click Edit button.



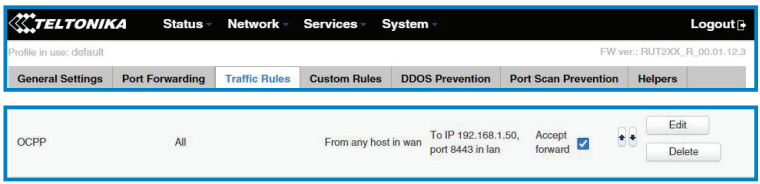
Once in Edit screen, insert 192.168.1.50 in "Destination address" field and 443 in "Destination port" field; then click Save button.



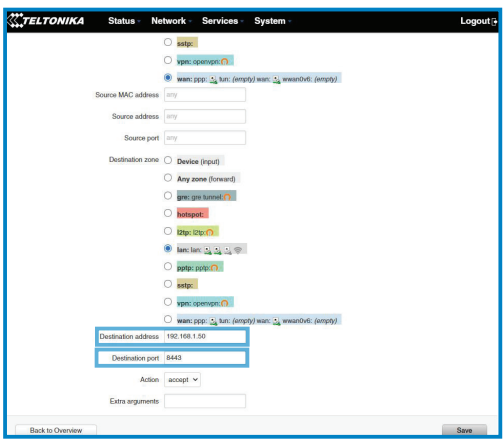
4. Go to **Network > Firewall > Traffic Rules**

At the bottom part of the screen, add a new traffic rule with the following parameters and once introduced click Add button:

Name: OCPP
Protocol: All
Destination address: 192.168.1.50
Destination port: 8443



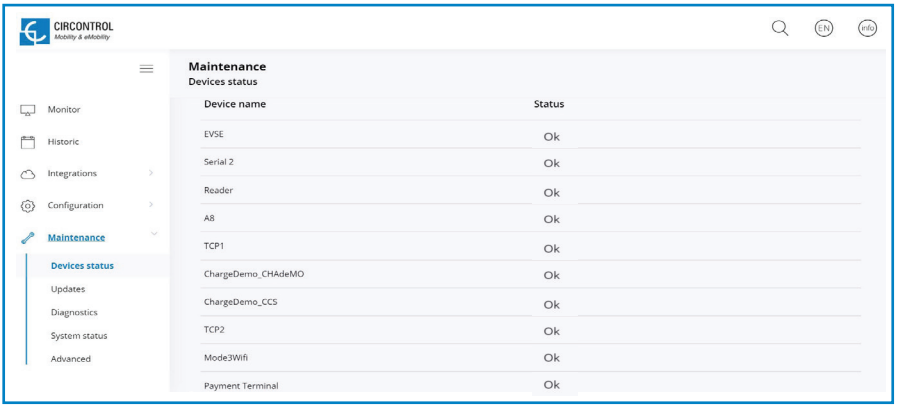
Check that the new line appears and tap enable check in case is disabled.



F Maintenance

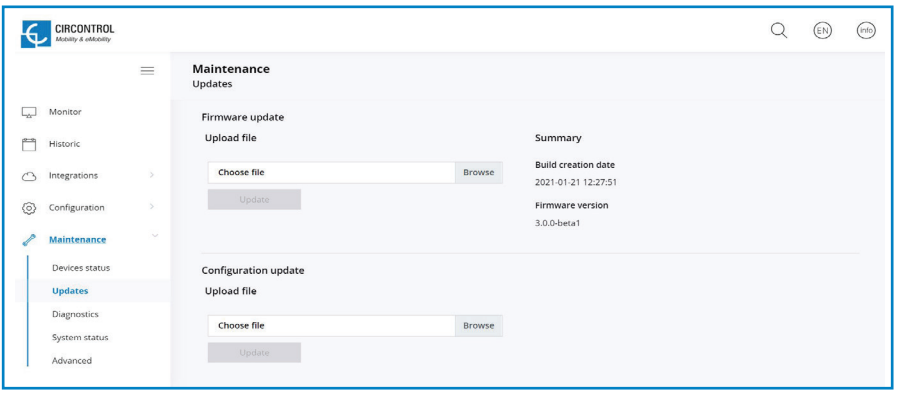
DEVICES STATUS

In this section, it can be consulted the status of the devices which are communicating via RS-485.



UPDATES

Through this tab, the Charge Point firmware and the application can be upgraded remotely.



To obtain the latest firmware version or need any special configuration update, please contact CIRCONTROL Support Department.

DIAGNOSTICS

Clicking over the **'HW Testing'** tab, it appears to enable or disable Grid test option.

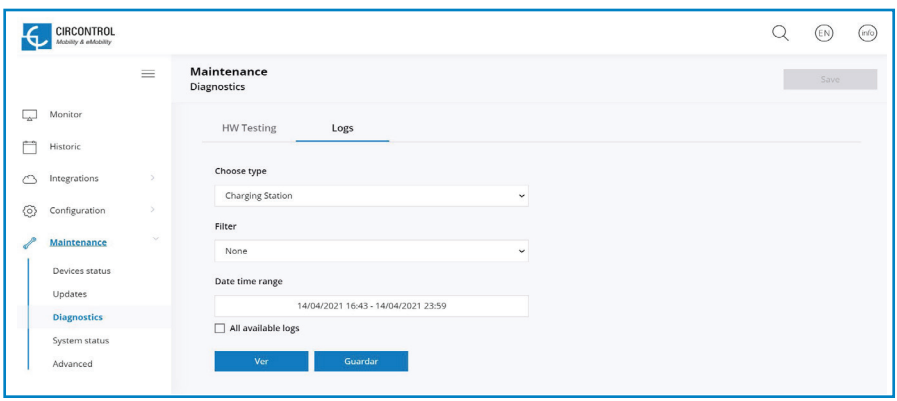
That means HMI shows a test screen to check that touch function works properly.

The logs shown in this section are automatically produced by the Charge Point. It is a detailed list of the charging sessions, system performance or user activities.

When Charge Point is powered ON, system begins to register log files. If the Charge Point is restarted these logs are lost and immediately are created new ones.

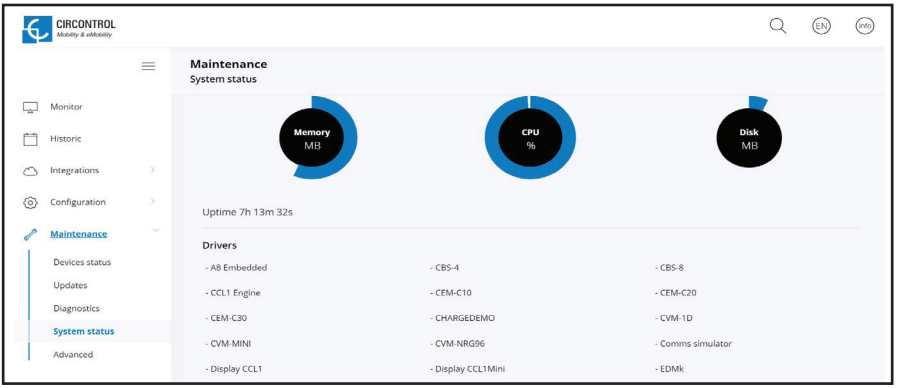
However, it is highly recommended to check log files in the next URL:

http://IPADDRESS/services/cpi/log



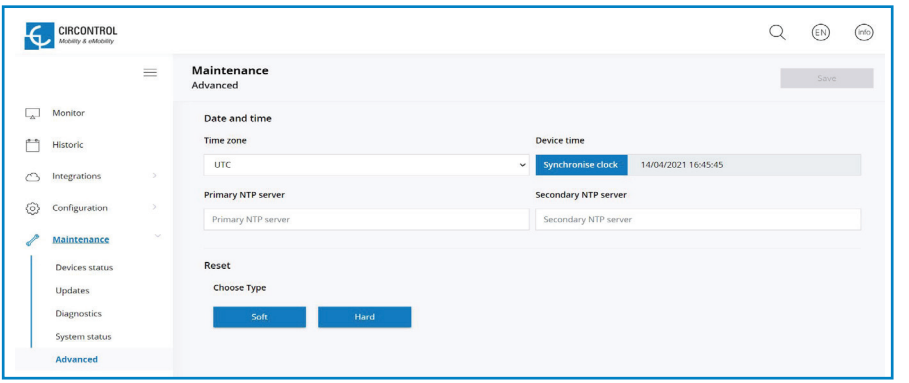
SYSTEM STATUS

The information shown in this section is basically relative to the state of the PC of the Charge Point. It is necessary for the technical service staff but does not show any information regarding to the external connection of the Charge Point or to the charging session.



ADVANCED

This section allows setting the time and region time for the Charge Point. Also, it offers the possibility to reset the Charge Point.



Next, we will explain the different sections of the **'Date and time'** and **'Reset'**

Value	Description
Time Zone	Select the regional time for the Charge Point according to the location
Time	Current date and time of the Charge Point
Primary NTP Server	Synchronize the time through internet automatically
Secondary NTP Server	
Soft Reset	Restart of the Charge Point, closing applications and clearing any data in RAM. Unsaved data in current use may be lost but data stored on the hard drive, applications and settings are not affected.
Hard Reset	Also known as a factory reset or master reset, is the restoration of the Charge Point to the state it was in when it left the factory.

7

A Introduction

The goal of the Open Charge Point Protocol (OCPP) is to offer a uniform solution for the communication between Charge Point and a Central System. With this open protocol it is possible to connect any Central System with any Charge Point, regardless of the vendor.

Follow next steps in order to configure OCPP 1.5 in the Circontrol Charge Points.

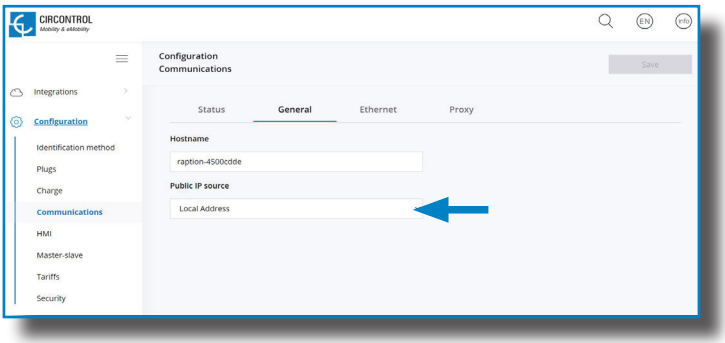
OCPP 1.5

B Before starting

Check following steps in order to ensure the correct function of OCPP 1.5:

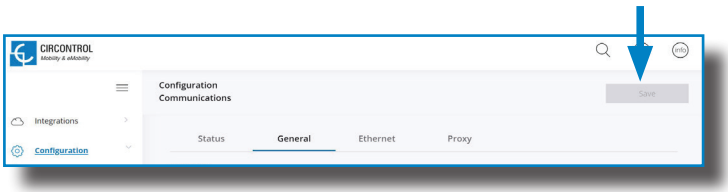
Go to the **Setup Webpage** → **'Configuration'** tab → **'Communications'** tab

Once in **'General'** section, **'Public IP source'** establishes where the Charge Point must obtain the public IP address in order to send it later to the backend. Different values can be selected:



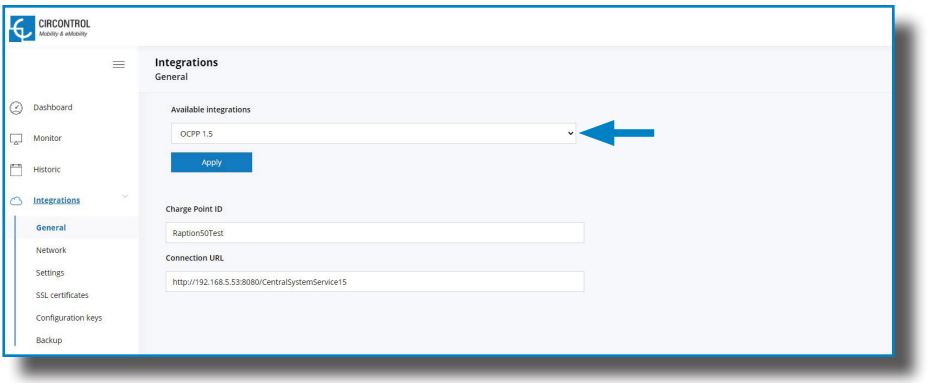
Choose the option selected under **'Public IP source'** according to your network topology.

When done, please do not forget to save changes using **'Save'** button in the screen upper right part.



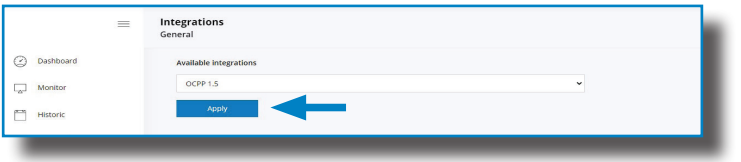
Go to the **Setup Webpage** → **'Integrations'** tab → **'General'** tab

Choose the option selected under **'Available integrations'** according to your backend policies as shown in the picture:



Charge Point supports different versions of OCPP but only one can be enabled at the same time.

When done, please do not forget to save changes pressing **'Apply'** button just below the option list.

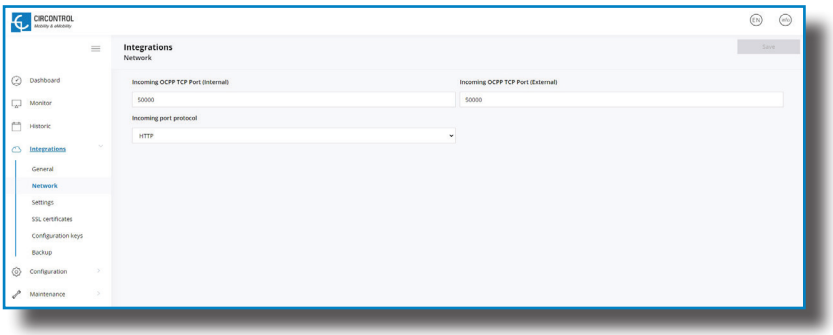


NOTE: Charge Point is working as stand-alone if **'none'** option is selected. All ID cards are authorized to start/stop a new charge transaction and no requests are sent to the backend.

Configuration

Go to the **Setup Webpage** → **'Integrations'** tab → **'Network'** tab

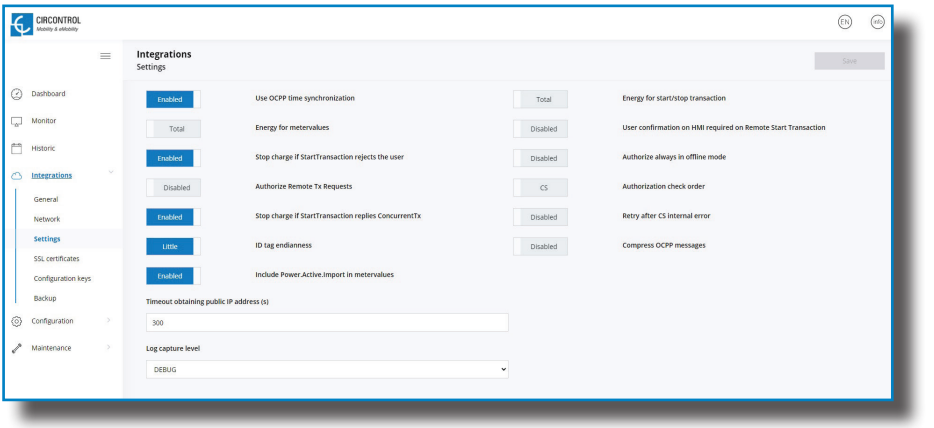
In this section it is possible to modify some parameters related with network.



Value	Description
Incoming OCPP TCP Port (Internal)	Incoming listening port for remote request (internal)
Incoming OCPP TCP Port (External)	Incoming listening port for remote request (public)
Protocol	If HTTPS is selected, make sure to have CS Server CA certificate

Go to the **Setup Webpage** → **'Integrations'** tab → **'Settings'** tab

Check OCPP Settings according to the backend policies, please contact to the Central System to get the configuration parameters:



Before making any changes read following table and set each option according to your backend provider.

Value	Description
Use OCPP time synchronization	**ENABLED:** Synchronization of date and time. **DISABLED:** Synchronization of date and time. ***NOTE:** Date and Time is sent from backend on each heartbeat response.
Energy for MeterValues	**PARTIAL:** Sends partial energy consumption while vehicle is charging. **TOTAL:** sends the actual count of the total accumulated energy meter.
Stop charge if StartTransaction rejects the user	**ENABLED:** Stop existing charge transaction after response from backend (StartTransaction.conf) when user is blocked, expired or Invalid. **DISABLED**: Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf) ***NOTE:** Set this option according to your backend system.
Authorize Remote Tx Requests	**ENABLED:** The Charge Point asks for authorization when the Central System sends a remote start. **DISABLED**: The Charge Point starts the Charge Transaction when the Central System sends a remote start.
Stop charge if StartTransaction replies ConcurrentTx	**ENABLED:** Stop existing charge transaction after response from backend (StartTransaction.conf) when user has already involved in another transaction. **DISABLED:** Charge transaction does not stops even if backend rejects the user. (StartTransaction.conf) ***NOTE:** Set this option according to your backend system.

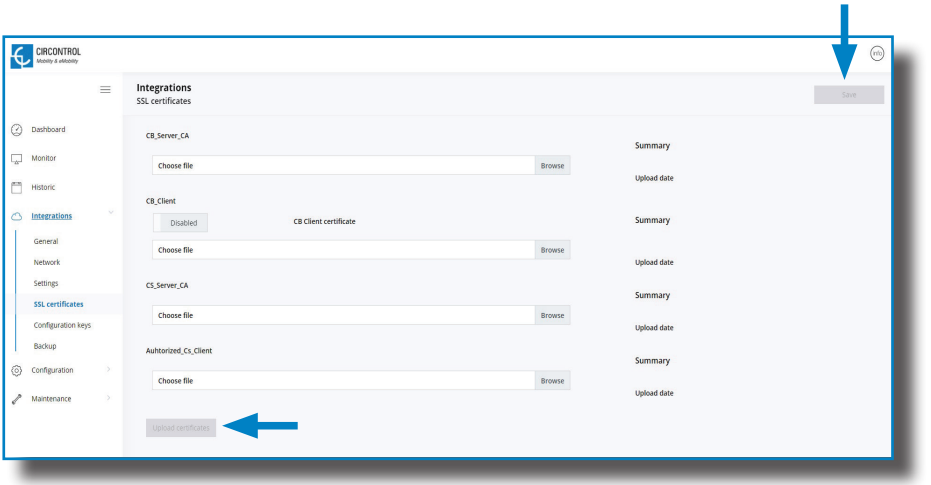
Value	Description
ID Tag Endianness	Storage type for system data. Able to choose between (**LITTLE>BIG**)
Include Power Active Import in MeterValues	**ENABLED:** Send power (Power.Active.Import) and energy (Energy.Active.Import.Register) consumed by the vehicle within meter values requests. **DISABLED:** Only enrgy consumed is sent within meter values request.
Energy for Start/Stop transaction	**PARTIAL:** Consumed value of energy by the vehicle sent between start and stop. **TOTAL:** Count of the total accumulated energy meter sent between start and stop.
User confirmation on HMI required on Remote Start Transaction	**ENABLED:** Charge point sends an authorization request before starting a new remote charge transaction request. **DISABLED:** Charge point starts a new remote charge transaction without authorization request.
Authorize always in offline mode	**ENABLED:** If user is not present locally in the local white-list and charge point cannot ask to the backend, the user is allowed to start a new charge transaction. **DISABLED:** If user is not present locally in the local white-list and charge point cannot ask to the backend, the user is not allowed to start a new charge transaction.
Authorization check order	**LOCAL:** ID authorization has first place on the local white-list. If the user does not exist locally, then in second place backend is asked to obtain the authorization. **CS:** ID authorization is always asked to the backend. ***NOTE:** This setting only applies when Charge Point is online; otherwise the authorization is only locally.

Value	Description
Retry after CS internal error	**ENABLED:** If StatusNotification, StartNotification or StopNotification are not received correctly by the backend, the Charge Point retries again to send those requests until it is received correctly. **DISABLED:** The Charge Point is not allowed to retry after an internal error. ***NOTE:** Special development must be done in backend in order to retry the messages by charge point.
Compress OCPP messages	**ENABLED:** Reduce messages between Charge Point and backend. **DISABLED:** Not reduces messages between Charge Point and backend. ***NOTE:** Before enabling this option consult to your backend administrator if central system allows this function.
Timeout obtaining public IP address	Timeout (in seconds) before connecting to the central system.
Log capture level	Level of information detailed (**DEBUG>INFO>ERROR>NONE**)

Go to the **Setup Webpage** → **'Integrations'** tab → **'SSL Certificates'** tab

When working with 'secure' connections, HTTPS, a certificate from the backoffice (normally a 'bundle' file) may be needed to assure proper communication with the charging station.

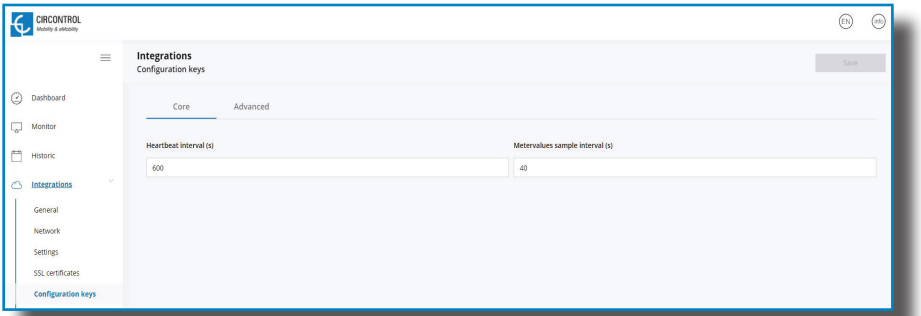
Depending on the case, select the proper option and press Browse button in order to upload the certificate. Most common case is 'CS Server CA':

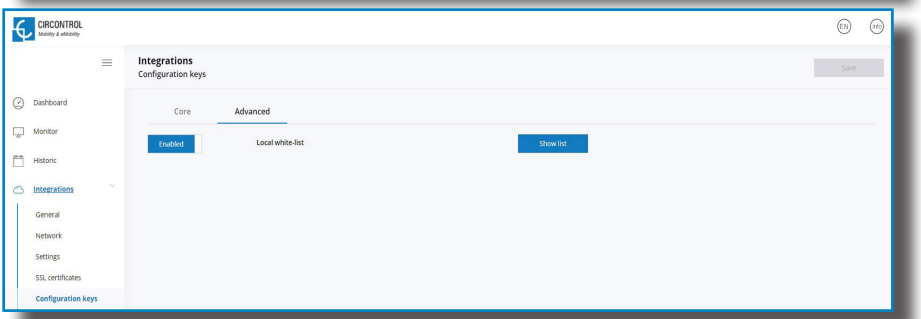


Once finished, please do not forget to apply changes pressing **'Upload certificates'** in the screen lower part and to save changes using **'Save'** button in the screen upper right part.

Please, wait until the new configuration is being applied to the Charge Point. A message is displayed informing the progress:

Go to the **Setup Webpage** → **'Integrations'** tab → **'Configuration keys'** tab

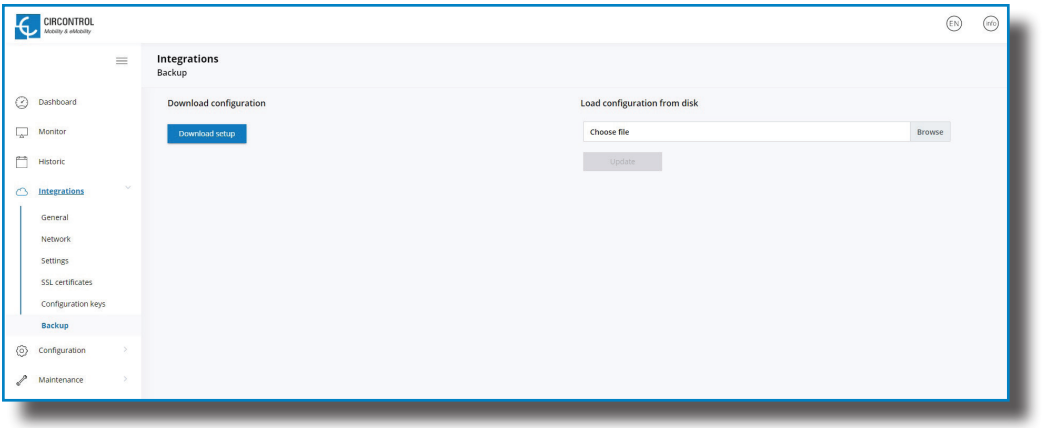




Value	Description
Heartbeat interval	Number of seconds between Heartbeats. ***NOTE:** setting this value to 0 disables the Heartbeat.
Metervalues sample interval	Number of seconds between MeterValue during an ongoing Charge Transaction. ***NOTE:** setting this value to 0 disables the MeterValue.
Local white-list	**ENABLED:** Local list of authorized users. **DISABLED:** Local list of authorized users.

When done, please do not forget to save changes using **'Save'** button in the screen upper right part.

Go to the **Setup Webpage** → **Integrations** → **'Backup'** tab



It is possible to download a backup of the Charge Point pressing 'Download setup' button. On the other hand, it can also be uploaded a backup previously downloaded from another Charge Point.

8

A Introduction

The goal of the Open Charge Point Protocol (OCPP) is to offer a uniform solution for the communication between Charge Point and a Central System. With this open protocol it is possible to connect any Central System with any Charge Point, regardless of the vendor.

Follow next steps in order to configure OCPP 1.6 in the Circontrol Charge Points.

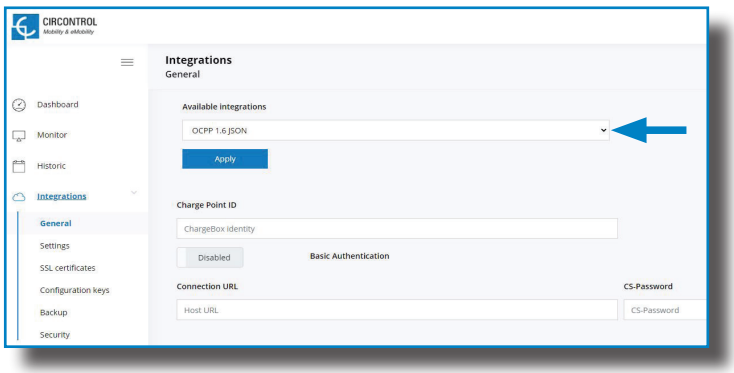
OCPP 1.6

B Before starting

Check following steps in order to ensure the correct function of OCPP 1.6:

Go to the **Setup Webpage** → **'Integrations'** tab → **'General'** tab

Once in **'General'** section, Public IP source establishes where the Charge Point must obtain the public IP address in order to send it later to the backend. Different values can be selected:



Choose the option selected under **'Public IP source'** according to your network topology.

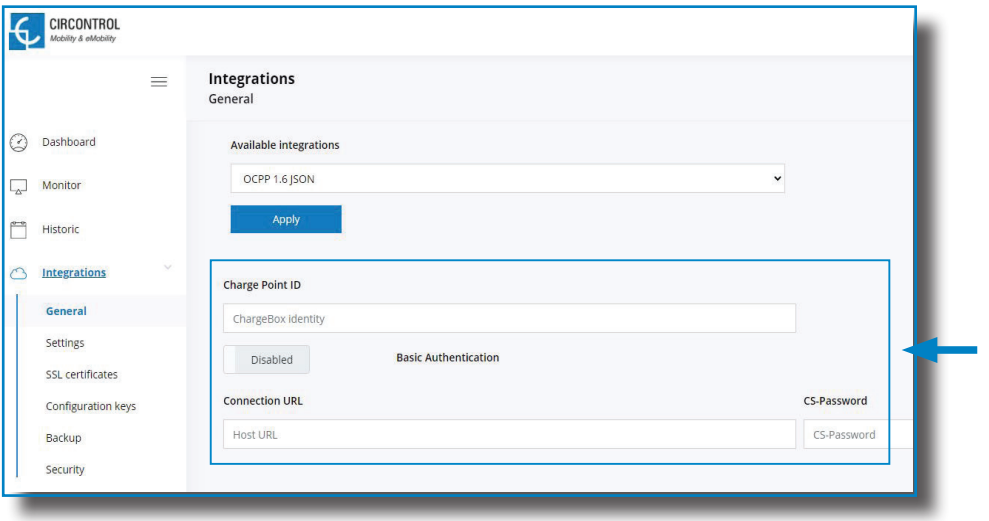
When done, please do not forget to save changes using **'Apply'** button just below the option selected.

Configuration

Go to the **Setup Webpage** → **'Integrations'** tab → **'General'** tab

Charge Point supports different versions of OCPP but only one can be enabled at the same time.

Go back to setup web page and click on the **'Integrations'** tab, choose the option selected under **'Available integrations'** according to your backend policies as shown in the picture:



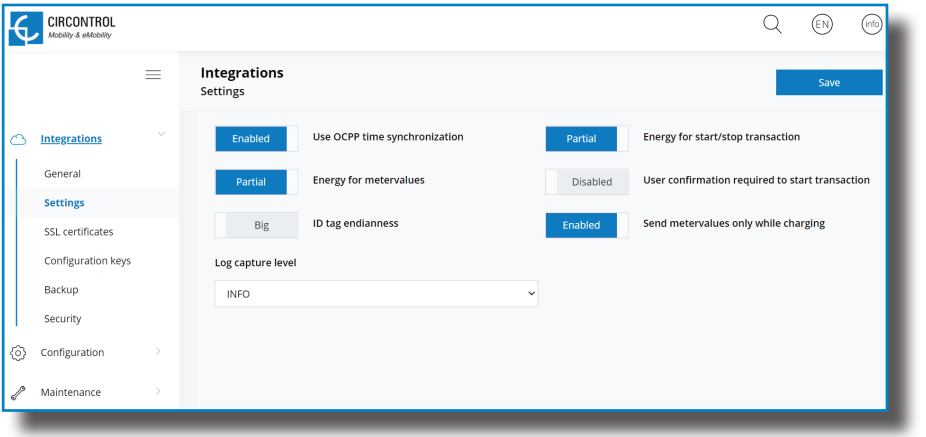
NOTE: Charge Point is working as stand-alone if **'none'** option is selected. All ID cards are authorized to start/stop a new charge transaction and no requests are sent to the backend.

Value	Description
Charge Point ID	Charge Point identifier
Basic Authentication	Set an authentication if required, being the options 'Enabled' and 'Disabled'
Connection URL	URL address of the central system
CS-Password	Introduce CS-Password if required

Go to the **Setup Webpage** → **Integrations** → **'Settings'** tab

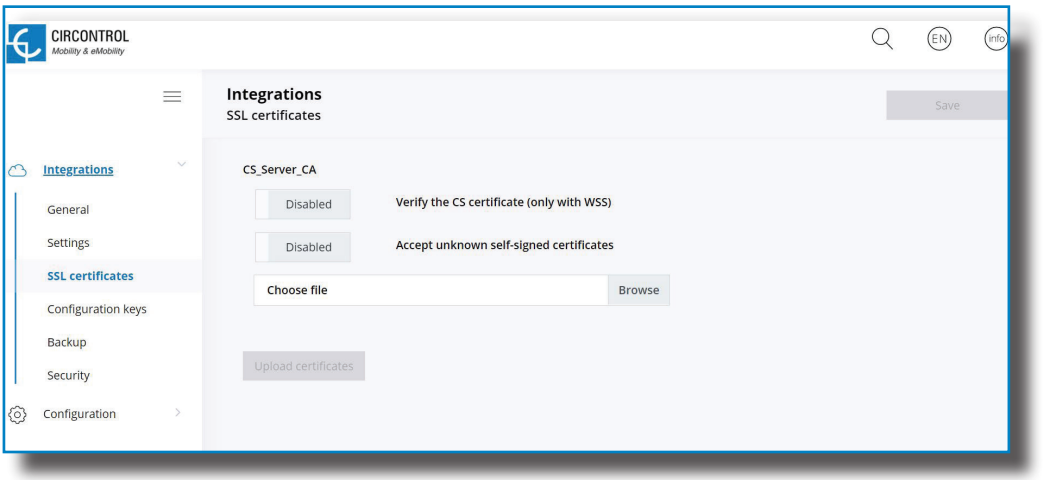
Once OCPP 1.6 option is selected, a link appears allowing access to the OCPP configuration.

Please, click on the link button as shown in the picture:



Value	Description
Use OCPP time synchronization	**ENABLED:** Synchronization of date and time **DISABLED:** Synchronization of date and time ***NOTE:** Date and Time is sent from backend on each heartbeat response.
Energy for Start/ Stop transaction	**PARTIAL:** Consumed value of energy by the vehicle sent between start and stop. **TOTAL:** Actual count of the total accumulated energy meter sent between start and stop.
Energy for metervalues	**PARTIAL:** Sends partial energy consumption while vehicle is charging. **TOTAL:** sends the actual count of the total accumulated energy meter.
User confirmation required to start transaction	**ENABLED:** user confirmation needed to proceed with a remote start (i.e. touch the screen) **DISABLED:** user confirmation NOT needed to proceed with a remote start
ID tag endianness	Storage type for system data (**BIG** or **LITTLE**)
Send metervalues only while charging	Choose between (**ENABLED** or **DISABLED**)
Log capture level	Level of information detailed (**DEBUG>INFO>ERROR>NONE**)

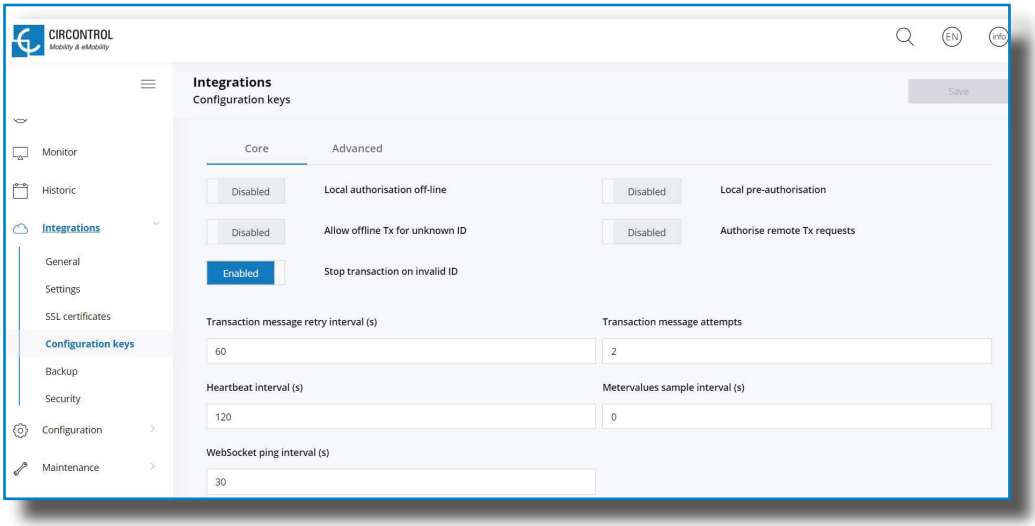
Go to the **Setup Webpage** → **Integrations** → **'SSL certificates'** tab

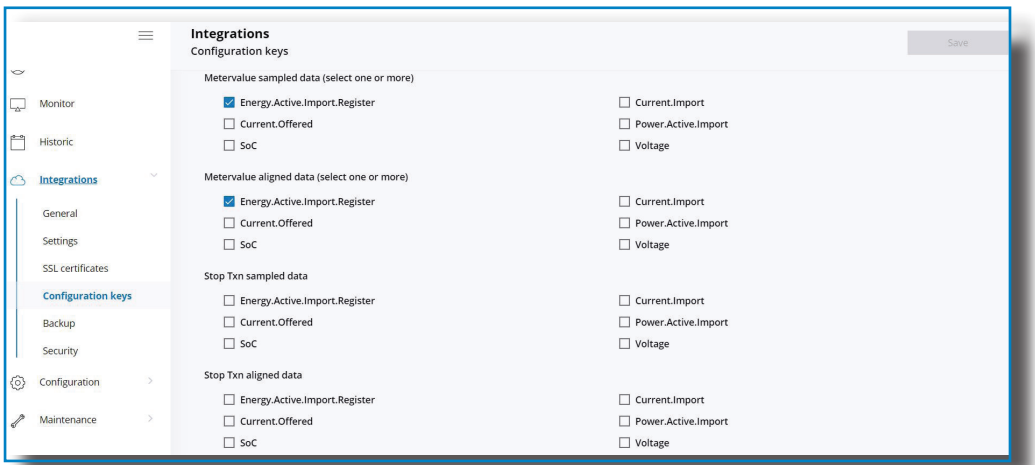


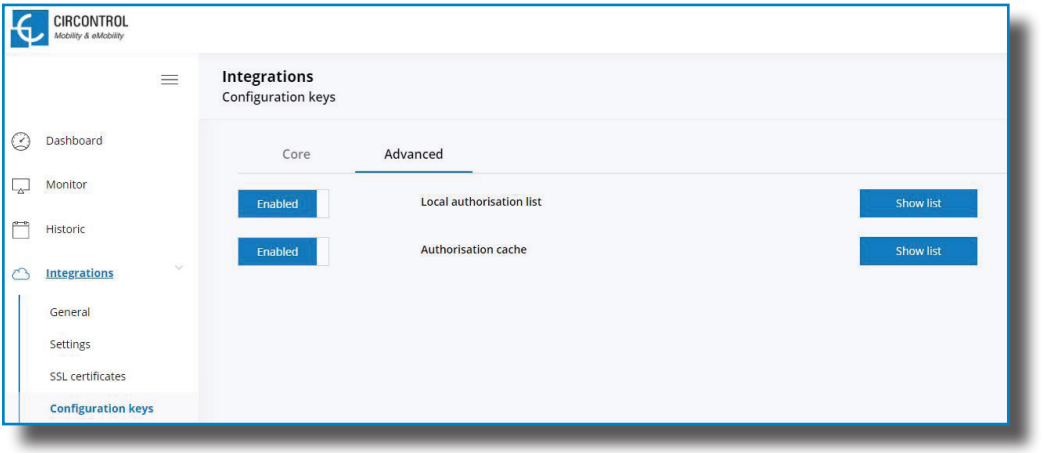
For WSS connections is needed a Central System certificate. Upload it in this section.

To obtain the latest certificates, please contact Central System you are working with.

Go to the **Setup Webpage** → **Integrations** → **'Configuration keys'** tab



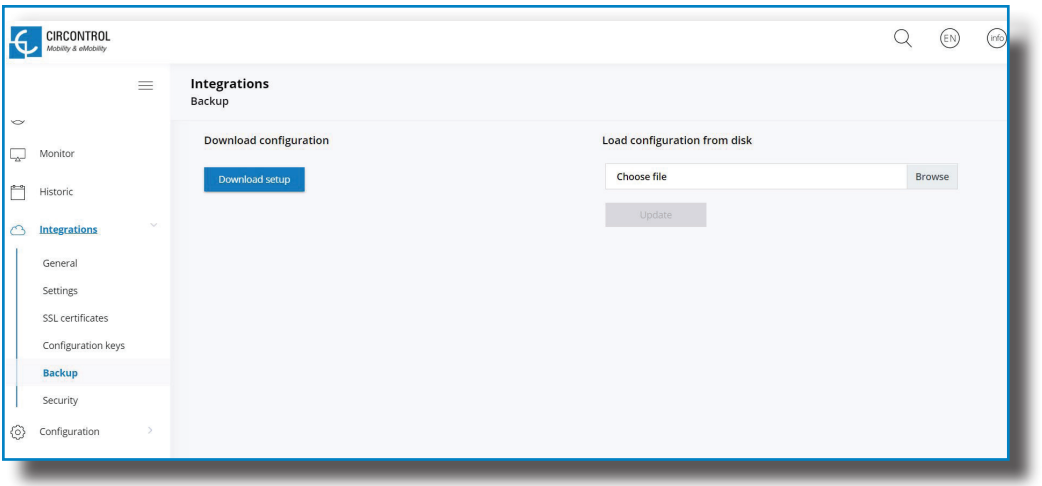




Value	Description
Authorisation cache	**ENABLED:** maintain a local list of all presented identifiers that have been successfully authorized by the Central System. **DISABLED:** authorization for presented identifiers is requested directly to the Central System
Authorise remote Tx requests	**ENABLED:** the Charge Point asks for authorization when the Central System sends a remote start **DISABLED:** the Charge Point starts the Charge Transaction when the Central System sends a remote start
Local pre-authorisation	**ENABLED:** Charge Point looks for locally-authorized identifiers without waiting for the Central System authorization. **DISABLED:** Charge Point requests authorization for presented identifiers to the Central System.
Allow offline Tx for unknown ID	**ENABLED:** during offline period unknown identifiers are allowed to start charging **DISABLED:** during offline period unknown identifiers are NOT allowed to start charging

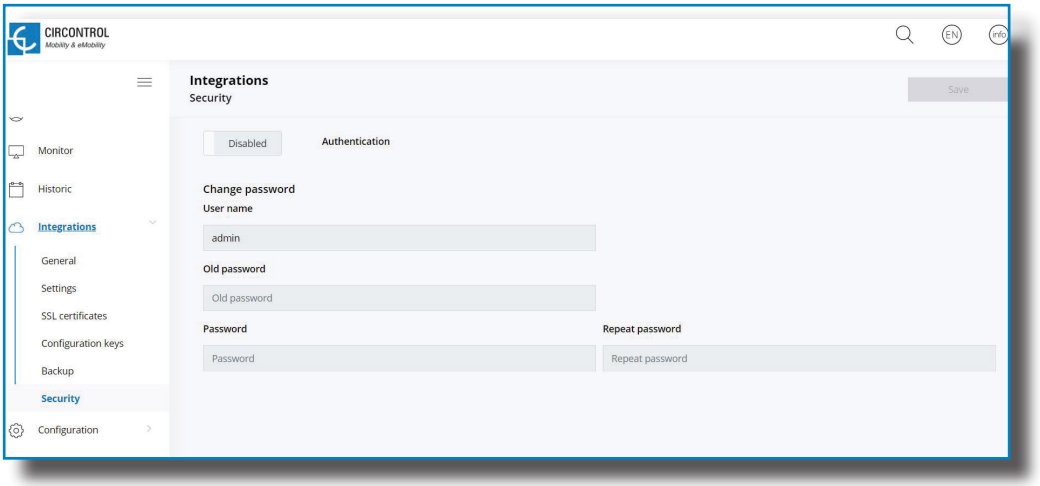
Value	Description
Local authorisation off-line	**ENABLED:** during offline period locally-authorized identifiers are allowed to start charging **DISABLED:** during offline period locally-authorized identifiers are NOT allowed to start charging
Stop transaction on invalid ID	**ENABLED:** stop existing Charge Transaction after response from Central System when user is blocked, expired or invalid. **DISABLED**: Charge Transaction does not stop even if backend rejects the user.
Metervalue (select one or more)	List of supported values used in the MeterValue.
Transaction message retry interval	Number of seconds between transaction message attempts. ***NOTE:** setting this value to 0 disables the attempts.
Transaction message attempts	How many times the Charge Point should try to send a request to the Central System.
Heartbeat interval	Number of seconds between Heartbeats. ***NOTE:** setting this value to 0 disables the Heartbeat.
Metervalues sample interval	Number of seconds between MeterValue during an ongoing Charge Transaction. ***NOTE:** setting this value to 0 disables the MeterValue.
WebSocket ping interval	Number of seconds between Pings. ***NOTE:** setting this value to 0 disables the Websocket Ping/Pong

Go to the **Setup Webpage** → **Integrations** → **'Backup'** tab



It is possible to download a backup of the Charge Point pressing 'Download setup' button. On the other hand, it can also be uploaded a backup previously downloaded from another Charge Point.

Go to the **Setup Webpage** → **Integrations** → **'Security'** tab



In this chapter could be introduced a user and password in order to enter in this section. It is possible this option to be changed whenever is desired.

NOTE: Old password is 1234 by default.

9

SCADA Client

The IP address assigned in the section 4, will be useful to connect with the Charge Point in order to monitor the real-time status.

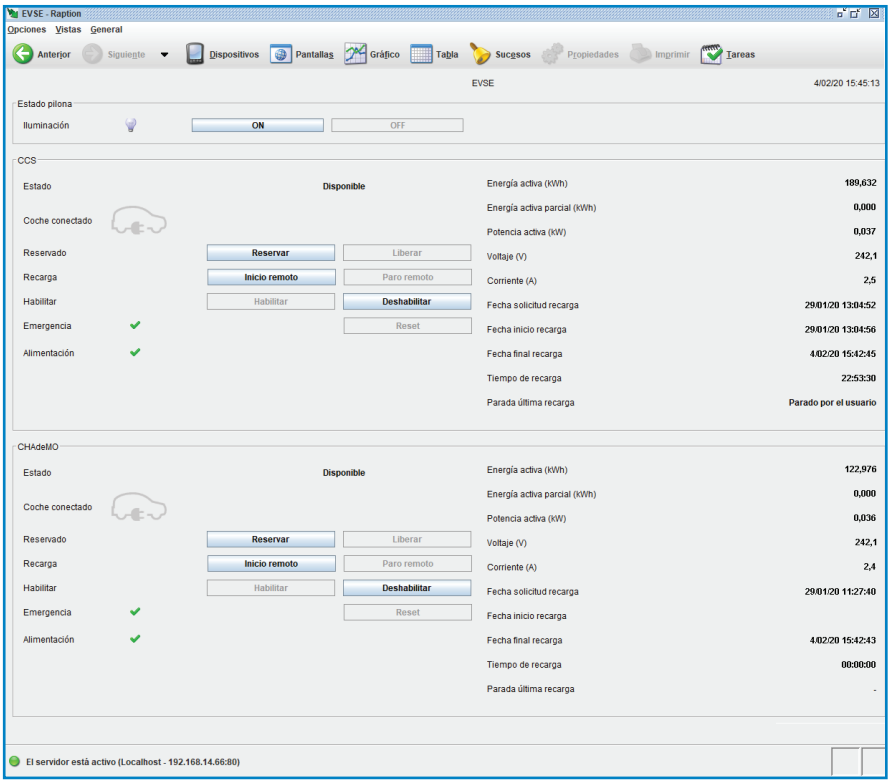
The main way to connect is using the **CirCarLife client software** (Supplied by Circontrol Support Department).

NOTE: Java software needs to be installed on your computer in order to run the client software, please, download last version from: www.java.com

In remote connections, where is required communicate via 3G/4G data with the Charge point in order to monitor its parameters, it should be noted that there will be a HIGH consumption of data.

In the case of doing the Charge point monitoring, it is reccommended to use Ethernet communications via internet (see chapter 4).

Monitoring


EVSE - Raption
Opciones Vistas General
Anterior Siguiente Dispositivos Pantallas Gráfico Tabla Sucesos Propiedades Imprimir Tareas
EVSE
4/02/20 15:45:13
Estado pilona
Iluminación
ON
OFF
CCS
Estado
Disponible
Coche conectado
Reservado
Reservar
Liberar
Recarga
Inicio remoto
Paro remoto
Habilitar
Habilitar
Deshabilitar
Emergencia
Reset
Alimentación
Energía activa (kWh) 189,632
Energía activa parcial (kWh) 0,000
Potencia activa (kW) 0,037
Voltaje (V) 242,1
Corriente (A) 2,5
Fecha solicitud recarga 29/01/20 13:04:52
Fecha inicio recarga 29/01/20 13:04:56
Fecha final recarga 4/02/20 15:42:45
Tiempo de recarga 22:53:30
Parada última recarga Parado por el usuario
CHAdeMO
Estado
Disponible
Coche conectado
Reservado
Reservar
Liberar
Recarga
Inicio remoto
Paro remoto
Habilitar
Habilitar
Deshabilitar
Emergencia
Reset
Alimentación
Energía activa (kWh) 122,976
Energía activa parcial (kWh) 0,000
Potencia activa (kW) 0,036
Voltaje (V) 242,1
Corriente (A) 2,4
Fecha solicitud recarga 29/01/20 11:27:40
Fecha inicio recarga
Fecha final recarga 4/02/20 15:42:43
Tiempo de recarga 00:00:00
Parada última recarga -
El servidor está activo (Localhost - 192.168.14.66:80)

10

A Introduction

This section shows how to manage the output power delivered by the Charge Point for DC and AC. To do this action you have to keep connected through the program CirCarLife Client software.

Limiting the output power will be useful if the input power supply for the Charging Point is not enough powerful to feed and keep a good level of charge for electric vehicles.

The power reduction can be done for both, DC and AC outlet

- DC output power can be limited in watts.

- AC output power can be limited in amps.

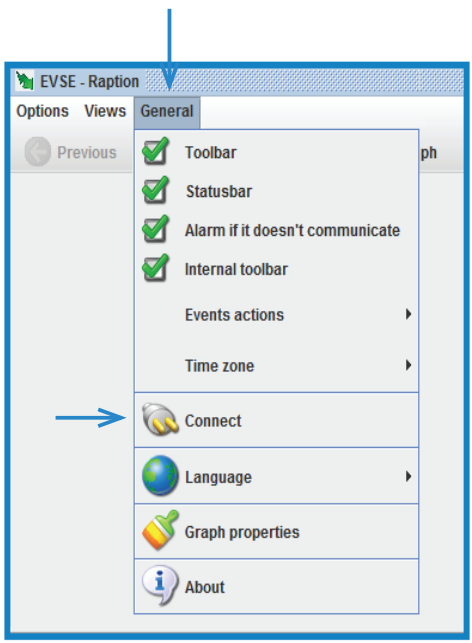
Output power setup

B Maximum output power for DC

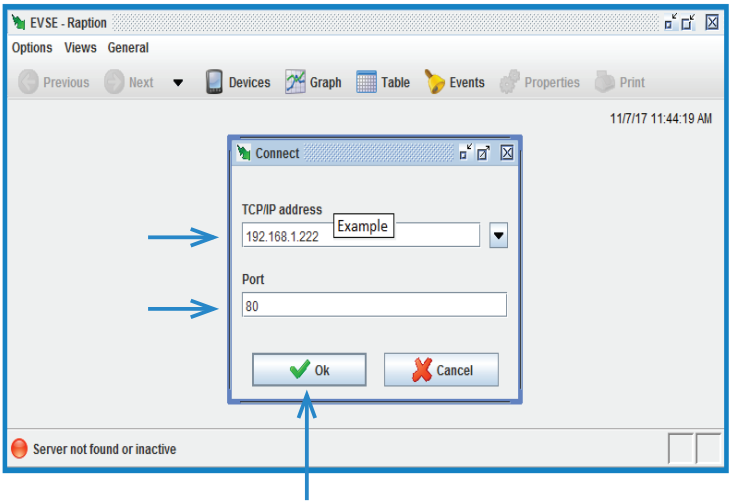
Steps:

1- Execute CirCarLife Client software

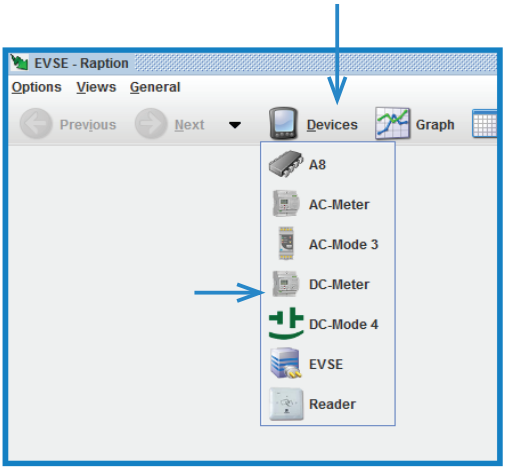
2- Push on **'General'** tab and after on **'Connect'** tab



3- Enter the IP address given to the Charge Point and port number **80**, after, press over **'Ok'**

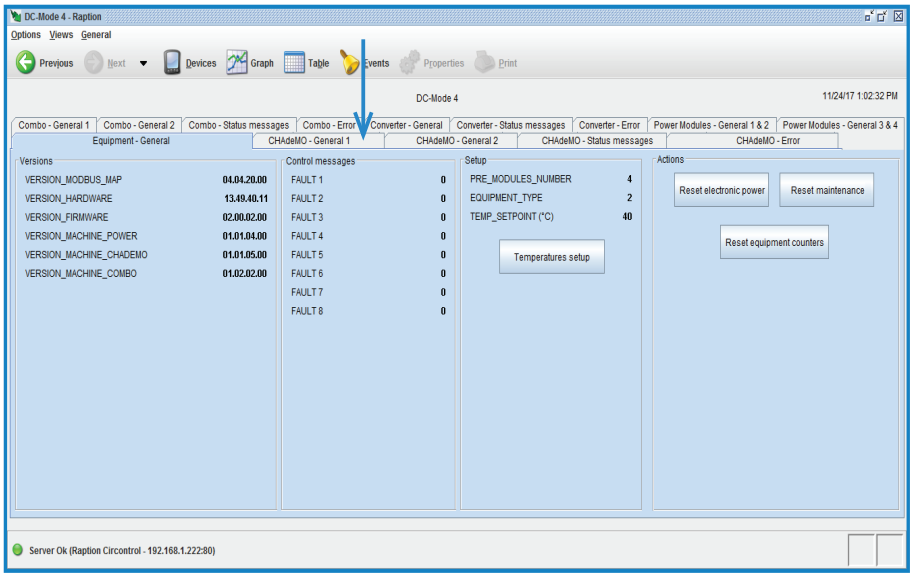


4- Press on the **'Device'** tab icon at the TOOLBAR and after click on **'DC-Mode 4'**:

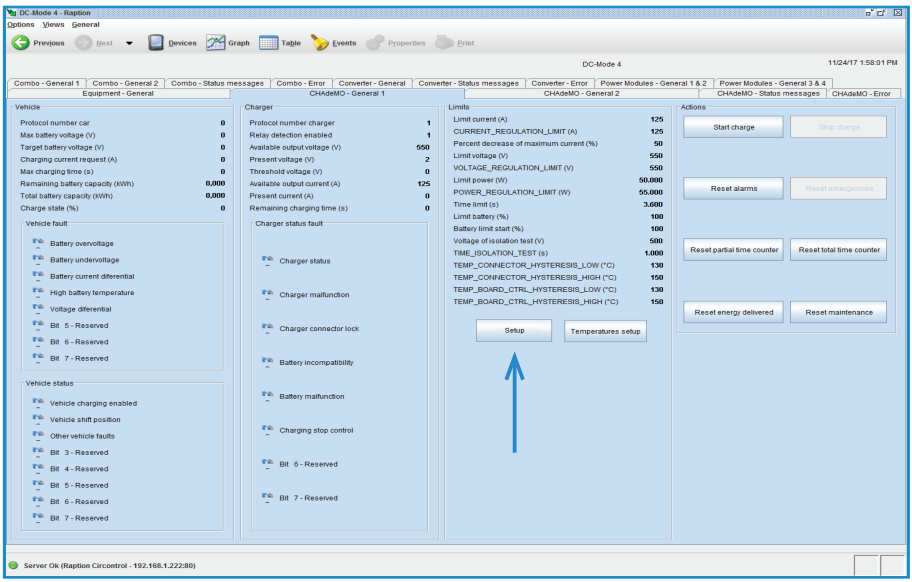


NOTE: inside DC-mode 4 is necessary to modify the output power for both DC charges type, CHAdeMO and Combo (CCS)

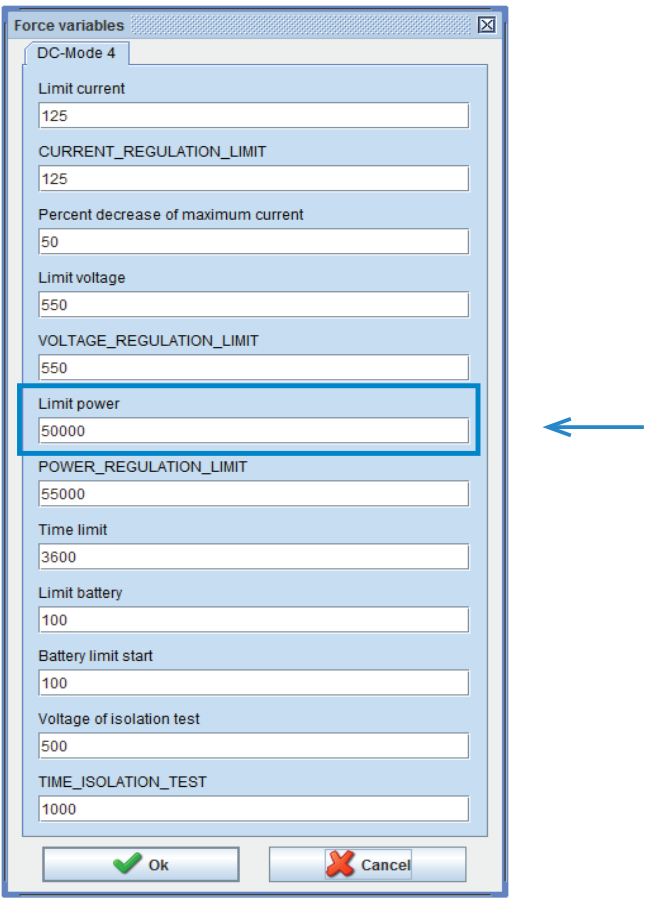
5- Once the **'DC-Mode4' device** is already opened, press over the **'CHAdeMO-General 1' tab:**



6- Once the **'CHAdeMO-General 1'** is already opened, press over **'Setup' tab:**



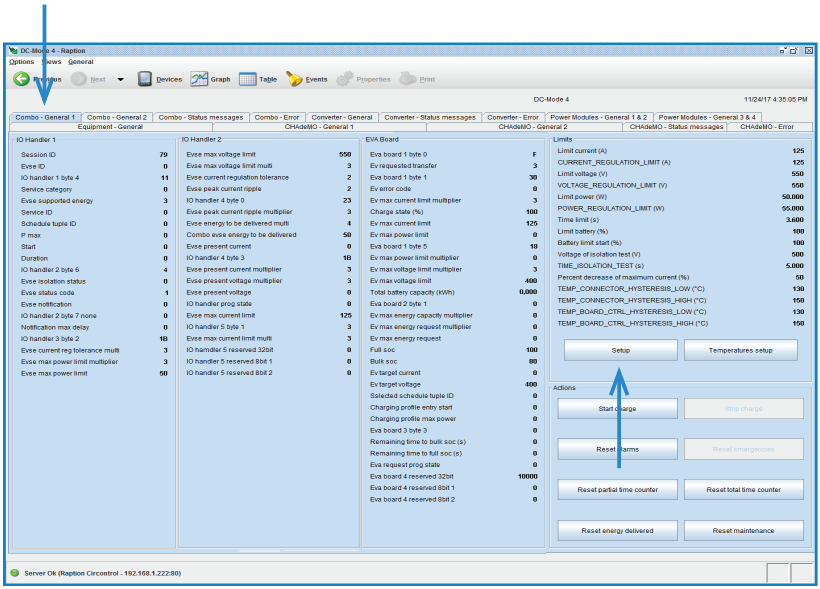
7- The pop-up window below appears, at **'Limit Power'** tab it is possible to set the maximum DC power output, it can be selected from 10000 W until 50000 W.



Click **'OK'** to confirm changes.

NOTE: It is mandatory to write the same variables for CHAdeMo as for Combo (CCS). Do not change any other variable.

8- After changing the CHAdeMO output power, we are going to change the CSS output power, press over **'Combo - General 1'** tab and then over **'Setup'** tab:



9- Force the **'Limit power'** variable between 10000 W until 50000 W as has been shown in the previous step 7 **for CHAdeMO.**

Click **'OK'** to confirm changes.

NOTE: It is mandatory to write the same variables for CHAdeMo as for Combo (CCS). Do not change any other variable.

Maximum output power for AC

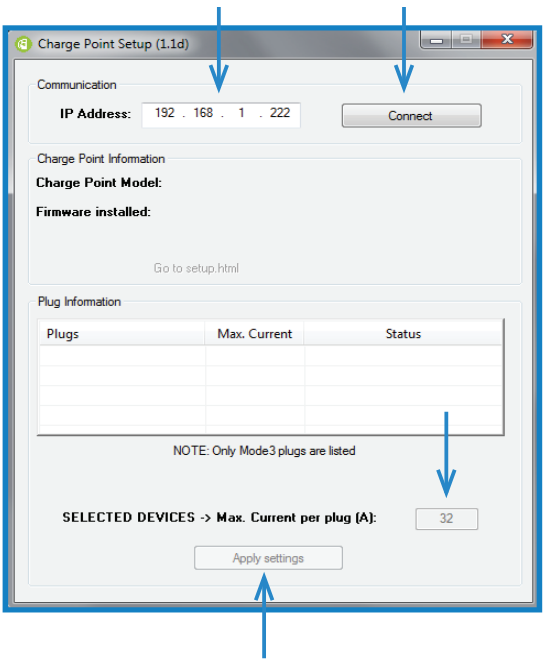
For setting the maximum output power for AC is necessary to use de software **'Charge Point Setup'**, ask for it to the CIRCONTROL technical support staff.

Steps:

1- Execute Charge Point Setup

2- Introduce the Charge Point's IP and push over **'Connect' tab.**

3- Write down the **'Max. Current per plug (A)'**and push over **'Apply settings' tab.**



11 A Raption 50 Standard Model

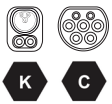
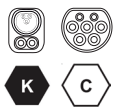
GENERAL DATA	
AC Power Supply	3P + N + PE
AC Voltage	400V AC +/- 10%
Power Factor	>0.98
Efficiency	95 % at nominal output power
Frequency	50 / 60 Hz
Electrical input protection	Main breaker disconnection
Overcurrent protections	MCB
Safety protection	RCD Type B
Network connection	Ethernet 10/100BaseTX
Interface protocol	OCPP 1.5 or OCPP 1.6J
Compliance	CE / Combo-2 (DIN 70121; ISO15118) IEC 61851-1; IEC 61851-23; IEC 61851-21-2
	CHAdeMO compatible
Enclosure rating	IP54 / IK10
Enclosure material	Stainless steel
Operating temperature	-30 °C to +50 °C
Ambient temperature storage	-40 °C to +60 °C
Operating humidity	5 % to 95 % Non-condensing
Socket protection	Locking System
RFID system	ISO / IEC14443-1/2/3 MIFARE Classic
Display HMI	8" colour antivandal touch screen
Power limit control	DC & AC by software

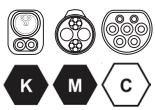
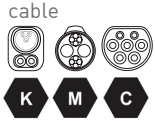
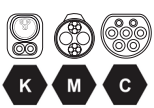
Technical Data

Cable Length	3 m (all cables)
Lights for status indication	RGB colour indicator
Dimensions (D x W x H)	355x940x1800 mm (without cable engaged)
Weight	235 kg
Cooling system	Air cooling fans
Operational noise level	< 55 dBA
AC Meter	Compliant with the EN 50470-1 and EN 50470-3 (MID European standards) or IEC 62052-11
Wireless Comunication EU	4G LTE/WiFi Hotspot/GPRS/GSM

OPTIONAL DEVICES	
Wireless Comunication	LATAM/APAC/4G LTE/GPRS/GSM
Surge protection	Four pole transient surge protector IEC 61643-1 (class II)
Cable Length	5.5 m (all cables)
Anti-vandal connector protection	CHAdeMO, CCS (mechanical connector locking)
Type 2 Charging Socket	Shutter
25 kW DC version	Power output DC of 25 kW (upgradable up to 50 kW)
Network hub	Switch TCP ethernet 8 ports
	Switch TCP ethernet 12 ports
RFID Extension	Legic Advant / Legic Prime ISO 15693/ISO 18092. Sony FeliCa
Contacless payment	Integrated credit card payment terminal

Models Specifications

MODELS	CCS	CCS T2C32	CCS T2S32
Maximum AC input current	76 A (38 A*)	108 A (70 A*)	108 A (70 A*)
Required power supply capacity	53 kVA (26 kVA*)	75 kVA (48 kVA*)	75 kVA (48 kVA*)
Maximum output power	50 kW (25 kW*) (@400 VDC)	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW
Output voltage range	DC:50 - 500 V	DC: 50 - 500 V AC: 400 V	DC: 50 - 500 V AC: 400 V
Maximum output current	DC:125 A (63 A*)	DC:125A AC:32 A	DC:125A AC:32 A
Connection	CCS 2  	CCS 2 Type 2 Tethered cable  	CCS 2 Type 2 Socket (Lock system) 

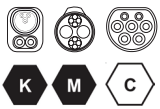
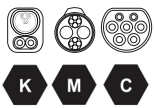
MODELS	CCS CHA	CCS CHA T2S32	CCS CHA T2C32	CCS CHA T2C63
Maximum AC input current	76 A (38 A*)	108 A (70 A*)	108 A (70 A*)	138 A (101 A*)
Required power supply capacity	53 kVA (26 kVA*)	75 kVA (48 kVA*)	75 kVA (48 kVA*)	96 kVA (70 kVA*)
Maximum output power	50 kW (25 kW*) (@400 VDC)	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW	DC:50 kW (25 kW*) (@400 VDC) AC:43 kW
Output voltage range	DC:50 - 500 V	DC: 50 - 500 V AC: 400 V	DC: 50 - 500 V AC: 400 V	DC: 50 - 500 V AC: 400 V
Maximum output current	DC:125 A	DC:125 A AC:32 A	DC:125 A AC:32 A	DC:125 A (63 A*) AC:63 A
Connection	CCS 2 - JEVS G105  	CCS 2 - JEVS G105 Type 2 Socket (Lock system)  	CCS 2 - JEVS G105 Type 2 Tethered cable  	CCS 2 - JEVS G105 Type 2 Tethered cable 

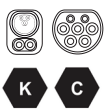
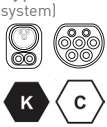
* 25 kW DC version

B Raption 50 480Vac

ADDITIONAL SPECIFICATIONS	
Power supply III	3P + N + PE
Voltage range III	480/277 Vac +/- 10%
Power supply II	2P
Voltage range II	208-240 Vac +/- 10%
Frequency	60Hz

Models Specifications

MODELS	CCS CHA T2S32	CCS CHA T2C32	CCS CHA
Maximum AC input current	108 A	108 A	76 A
Required power supply capacity	75 kVA	75 kVA	53 kVA
Maximum output power	DC:50 kW (@400 VDC) AC:22 kW	DC:50 kW (@400 VDC) AC:22 kW	50 kW (@400 VDC)
Output voltage range	DC: 50 - 500 V AC: 400 V	DC: 50 - 500 V AC: 400 V	DC:50 - 500 V
Maximum output current	DC:125 A AC:32 A	DC:125 A AC:32 A	DC:125 A
Connection	CCS 2 - JEVS G105 Type 2 Socket (Lock system) 	CCS 2 - JEVS G105 Type 2 Tethered cable 	CCS 2 - JEVS G105 

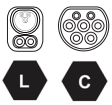
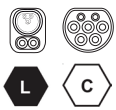
MODELS	CCS	CCS T2C32	CCS T2S32
Maximum AC input current	76 A (38 A*)	108 A (70 A*)	108 A (70 A*)
Required power supply capacity	53 kVA (26 kVA*)	75 kVA (48 kVA*)	75 kVA (48 kVA*)
Maximum output power	50 kW (25 kW*) (@400 VDC)	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW	DC:50 kW (25 kW*) (@400 VDC) AC:22 kW
Output voltage range	DC:50 - 500 V	DC: 50 - 500 V AC: 400 V	DC: 50 - 500 V AC: 400 V
Maximum output current	DC:125 A (63 A*)	DC:125A AC:32 A	DC:125A AC:32 A
Connection	CCS 2 	CCS 2 Type 2 Tethered cable 	CCS 2 Type 2 Socket (Lock system) 

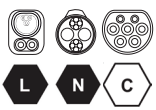
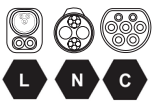
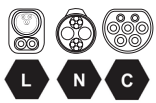
* 25 kW DC version

Raption 51 & Raption 52

ADDITIONAL SPECIFICATIONS	
Raption 51	Power output DC of 50 kW (non upgradable)
Raption 52	Power output DC of 50kW (upgradable up to 100kW)
Output voltage range	150 -920 Vdc

Models Specifications

MODELS	CCS	CCS T2C32	CCS T2S32
Maximum AC input current	76 A	108 A	108 A
Required power supply capacity	53 kVA	75 kVA	75 kVA
Maximum output power	50 kW (@400 VDC)	DC:50 kW (@400 VDC) AC:22 kW	DC:50 kW (@400 VDC) AC:22 kW
Output voltage range	DC:150 - 920 V	DC: 150 - 920 V AC: 400 V	DC: 150 - 920 V AC: 400 V
Maximum output current	DC:125 A	DC:125A AC:32 A	DC:125A AC:32 A
Connection	CCS 2 	CCS 2 Type 2 Tethered cable 	CCS 2 Type 2 Socket (Lock system) 

MODELS	CCS CHA	CCS CHA T2S32	CCS CHA T2C32	CCS CHA T2C63
Maximum AC input current	76 A	108 A	108 A	138 A
Required power supply capacity	53 kVA	75 kVA	75 kVA	96 kVA
Maximum output power	50 kW (@400 VDC)	DC:50 kW (@400 VDC) AC:22 kW	DC:50 kW (@400 VDC) AC:22 kW	DC:50 kW (@400 VDC) AC:43 kW
Output voltage range	DC:150 - 920 V	DC: 150 - 920 V AC: 400 V	DC: 150 - 920 V AC: 400 V	DC: 150 - 920 V AC: 400 V
Maximum output current	DC:125 A	DC:125 A AC:32 A	DC:125 A AC:32 A	DC:125 A AC:63 A
Connection	CCS 2 - JEVS G105 	CCS 2 - JEVS G105 Type 2 Socket (Lock system) 	CCS 2 - JEVS G105 Type 2 Tethered cable 	CCS 2 - JEVS G105 Type 2 Tethered cable 

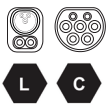
D Raption 100 Standard Model

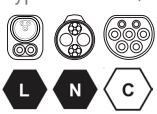
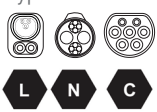
GENERAL DATA	
AC Power Supply	3P + N + PE
AC Voltage	400V AC +/- 10%
Power Factor	>0.98
Efficiency	95 % at nominal output power
Frequency	50 / 60 Hz
Electrical input protection	Main breaker disconnection
Overcurrent protections	MCB
Safety protection	RCD Type B
Network connection	Ethernet 10/100BaseTX
Interface protocol	OCPP 1.5 or OCPP 1.6J
Compliance	CE / Combo-2 (DIN 70121; ISO15118) IEC 61851-1; IEC 61851-23; IEC 61851-21-2
	CHAdeMO compatible
Enclosure rating	IP54 / IK10
Enclosure material	Stainless steel
Operating temperature	-30 °C to +50 °C
Ambient temperature storage	-40 °C to +60 °C
Operating humidity	5 % to 95 % Non-condensing
Socket protection	Locking System
RFID system	ISO / IEC14443-1/2/3 MIFARE Classic
Display HMI	8" colour antivandal touch screen
Power limit control	DC & AC by software

Cable length	3 m (all cables)
Lights for status indication	RGB colour indicator
Dimensions (D x W x H)	355x940x1800 mm (without cable engaged)
Weight	255 kg
Cooling system	Air cooling fans
Operational noise level	< 55 dBA
AC Meter	Compliant with the EN 50470-1 and EN 50470-3 (MID European standards) or IEC 62052-11
Wireless Comunication EU	4G LTE/WiFi Hotspot/GPRS/GSM

OPTIONAL DEVICES	
Wireless Comunication	LATAM/APAC/4G LTE/GPRS/GSM
Surge protection	Four pole transient surge protector IEC 61643-1 (class II)
Cable Length	5.5 m (all cables)
Anti-vandal connector protection	CHAdeMO, CCS (mechanical connector locking)
Type 2 Charging Socket	Shutter
Network hub	Switch TCP ethernet 8 ports
	Switch TCP ethernet 12 ports
RFID Extension	Legic Advant / Legic Prime ISO 15693/ISO 18092. Sony FeliCa
Contacless payment	Integrated credit card payment terminal

Models Specifications

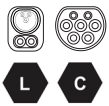
Models	CCS	CCS T2C32	CCS T2S32
Maximum AC input current	160 A	192 A	192 A
Required power supply capacity	110 kVA	132 kVA	132 kVA
Maximum output power	100 kW (@400 VDC)	DC:100 kW (@400 VDC) AC:22 kW	DC:100 kW (@400 VDC) AC:22 kW
Output voltage range	DC:150 - 920 V	DC:150 - 920 V AC: 400 V	DC:150 - 920 V AC: 400 V
Maximum output current	DC: 250 A	DC:250 A AC:32 A	DC:250 A AC:32 A
Connection	CCS 2 	CCS 2 Type 2 Tethered cable 	CCS 2 Type 2 Socket (Lock system) 

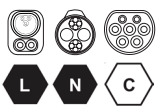
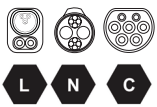
Models	CCS CHA	CCS CHA T2S32	CCS CHA T2C32
Maximum AC input current	160 A	192 A	192 A
Required power supply capacity	110 kVA	132 kVA	132 kVA
Maximum output power	100 kW (@400 VDC)	DC:100 kW (@400 VDC) AC:22 kW	DC:100 kW (@400 VDC) AC:22 kW
Output voltage range	DC:150 - 920 V	DC:150 - 920 V AC: 400 V	DC:150 - 920 V AC: 400 V
Maximum output current	DC: CSS 250 A / CHA 200 A	DC: CSS 250 A / CHA 200 A AC: 32 A	DC: CSS 250 A / CHA 200 A AC: 32 A
Connection	CCS 2 - JEVS G105 	CCS 2 - JEVS G105 Type 2 Socket (Lock system) 	CCS 2 - JEVS G105 Type 2 Tethered cable 

Raption 100 480Vac

ADDITIONAL SPECIFICATIONS	
Power supply III	3P + N + PE
Voltage range III	480/277 Vac +/- 10%
Power supply II	2P
Voltage range II	208-240 Vac +/- 10%
Frequency	60Hz

Models Specifications

Models	CCS	CCS T2C32	CCS T2S32
Maximum AC input current	160 A	192 A	192 A
Required power supply capacity	110 kVA	132 kVA	132 kVA
Maximum output power	100 kW (@400 VDC)	DC:100 kW (@400 VDC) AC:22 kW	DC:100 kW (@400 VDC) AC:22 kW
Output voltage range	DC:150 - 920 V	DC:150 - 920 V AC: 400 V	DC:150 - 920 V AC: 400 V
Maximum output current	DC: 250 A	DC:250 A AC:32 A	DC:250 A AC:32 A
Connection	CCS 2 	CCS 2 Type 2 Tethered cable 	CCS 2 Type 2 Socket (Lock system) 

Models	CCS CHA	CCS CHA T2S32	CCS CHA T2C32
Maximum AC input current	160 A	192 A	192 A
Required power supply capacity	110 kVA	132 kVA	132 kVA
Maximum output power	100 kW (@400 VDC)	DC:100 kW (@400 VDC) AC:22 kW	DC:100 kW (@400 VDC) AC:22 kW
Output voltage range	DC:150 - 920 V	DC:150 - 920 V AC: 400 V	DC:150 - 920 V AC: 400 V
Maximum output current	DC: CSS 250 A / CHA 200 A	DC: CSS 250 A / CHA 200 A AC: 32 A	DC: CSS 250 A / CHA 200 A AC: 32 A
Connection	CCS 2 - JEVS G105 	CCS 2 - JEVS G105 Type 2 Socket (Lock system) 	CCS 2 - JEVS G105 Type 2 Tethered cable 

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Need help?

In case of any query or need further information, please contact our **Support Department**

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