CIRCONTROL
Mobility & eMobility

Wallbox eNext Elite

User Manual

Wallbox eNext Elite
User Manual

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Here's your guide to use and configure eNext.

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1

This manual provides information about the usability and configuration of the Wallbox eNext, which has been designed and tested to allow electric vehicle charging, according to IEC 61851.

This manual contains all the necessary information for a safe use and step-by-step configuration instructions.

THE FOLLOWING SYMBOLS ARE USED FOR IMPORTANT SAFETY INFORMATION IN THIS DOCUMENT

ATTENTION!
Indicates that damage to property can occur if appropriate precautions are not taken.

INFORMATION
Informs about useful information to take on account

- Complies with IEC 61851, Electric vehicle conductive charging system (IEC 61851-1 and IEC 61851-21-2).
- Complies with IEC 62196, Plugs, socket-outlets, vehicle couplers and vehicle inlets (IEC 62196-1 and IEC 62196-2).
- Complies with Directives: 2014/35/UE, LVD;2014/30/UE, EMC.
- Complies with *The Electrical equipment (safety) regulations 2016 guidance* and *The Electromagnetic compatibility regulations 2016 guidance*
- RFID complies with ISO/IEC 14443A/B.
- Modem 4G complies with CE/RED and *Radio Equipment Regulations 2017*.

So, hello!

IMPORTANT SAFETY INFORMATION

Read carefully all the instructions before manipulating the unit.

The Charge Point may not include electrical protection elements.

- Read all the instructions before using and configuring this product.
- Do not use this unit for anything other than electric vehicle charging.
- Do not modify this unit. If modified, CIRCONTROL will reject all responsibility and the warranty will be void.
- Installation, maintenance and repairs shall only be performed only by trained and qualified personnel.
- Comply strictly with electrical safety regulations according to your country.
- Do not repair or manipulate the unit when energised.
- Use only CIRCONTROL supplied spare parts.
- Only trained and qualified personnel shall have access to electrical parts inside the device.
- Check the installation annually by a qualified technician.
- Remove from service any item that has a fault and that can be dangerous for users (broken plugs, caps that don't close...).
- Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
- Do not use any adapter, except those approved by the EV manufacturer. Only socket-outlet EV plug adapter is allowed.
- Cord extension sets are not allowed to be used.

2

A General

Authorisation:
Procedure to verify if an EV is allowed to charge.

Charge Point (also EVSE, Electric vehicle supply equipment)
Independently operated and managed part of the Charging Station that can deliver energy to ONE EV at a time. A Charge Point has one or more connectors.

Charging Schedule:
Part of a Charging Profile. Defines a block of charging power or current limits. Can contain a start time and length.

Charging session:
A Charging Session is started when first interaction with user or EV occurs. This can be a card swipe, remote start transaction, connection of cable and/or EV, parking bay occupancy detector, etc.

Identification:
Procedure for the EV charging controller or USER to provide its identifying information for the purpose of authorisation, mostly to provide its capability for payments.

Locking mechanism:
A mechanical mean that prevents from intentional and unintentional disconnection under load of the vehicle connector and/or plug.

Plug:
Accessory having contacts designed to engage with the contacts of a socket-outlet, also incorporating means for the electrical connection and mechanical retention of flexible cables or cords.

Plug and Charge:
Charging method where Charging Session is started without any local identification.

Power balance:
Local management of the available power of the input supply of the Charging Station.

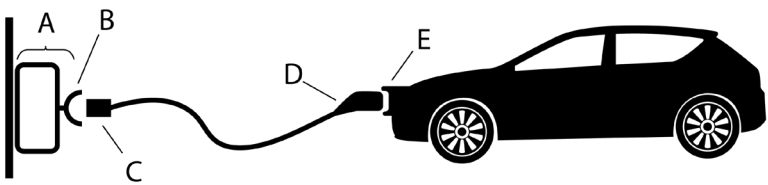
Glossary

Socket-outlet:
Accessory having socket-contacts designed to engage with the contacts of a plug and having terminals for the connection of cables or cords.

User:
Party who will specify, purchase, use and/or operate the Charging Station, or someone acting on their behalf.

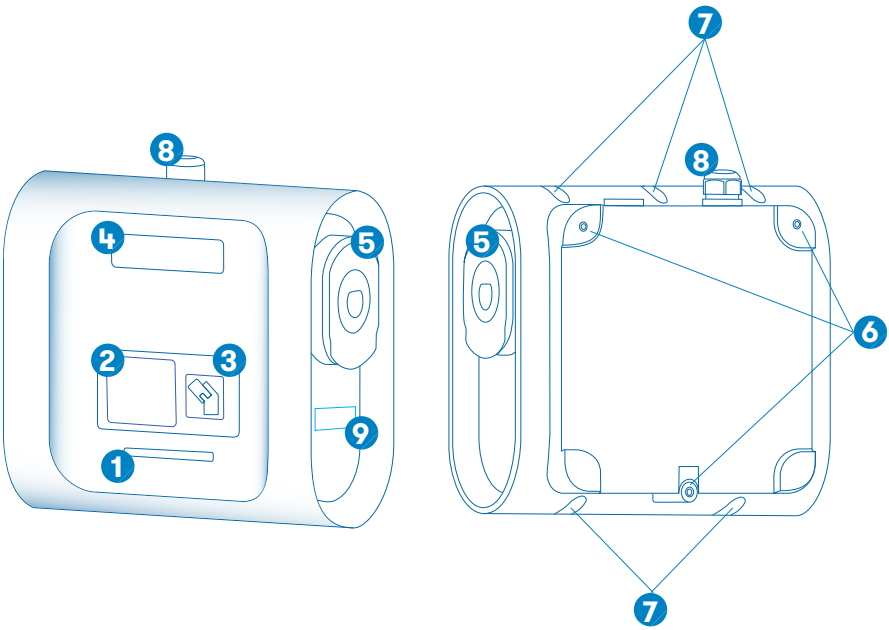
B Abbreviations

- **AC**:
Alternating current.
- **DC:**
Direct current
- **EV**
Electric vehicle
- **HMI:**
Human machine interface
- **http(s):**
HyperText Transport Protocol (Secure)
- **MCB**:
Miniature circuit breaker
- **OCPP**
Open Charge Point Protocol
- **RCD**
Residual Current Device
- **RFID**
Radiofrequency identification
- **Type 2**
EU AC charging connector



- A) Charging Station
- B) Socket-outlet
- C) Plug
- D) Vehicle connector
- E) Vehicle inlet

3



1 — LED beacons **2 — Display** **3 — RFID reader**

4 — Company logo **5 — Socket-outlet*** **6 — Wall support holes**

7 — Closing box holes **8 — Cable glands** **9 — MID meter**

(*) Plug may vary depending on the model

Features

MAIN FEATURES OF THE UNIT

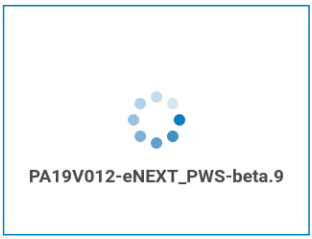
Charge Point may not include electrical protection elements.

- **ABS/PC plastic housing:** Robust Plastic material to resist severe environmental conditions including UV rays and mechanical stress.
- **Connector Lock:** Type 2 connector has a locking system to avoid an EV unduly disconnection.
- **LED Beacon:** Colour LED system that indicates the status of the Charge Point.
- **Display**: Colour screen that shows the necessary information about the charge and the status of the Charge Point and gives instructions for its use.
- **Web configuration:** Use the Charge Point website to configure its functionalities such as the time schedule, the power limitation and the authorised users.
- **RFID reader:** Limit the use of the Charge Point to the users with an authorised RFID identification.
- **Electrical protections;** 6 mA DC leakage detection guarantees the highest safety protection. RCBO can be included as and optional
- **BeOn sensor compatibility:** Sensor that enables the charge point to dynamically adjust electric vehicle's consumption according to the available power of the installation.
- **Energy metering**: Integrated meter built is measuring power and energy consumed by the EV during a charge transaction.
- **Remote charging activation:** It is available an external input signal to switch on/off the charge of the electric vehicle's.
- **Wi-Fi**: Remote connectivity by connecting the Charge Point to your preferred Wi-Fi network.
- **OCPP:** Open standard communication protocol, allows communication between the Charge Point and the Central System.
- **Ethernet**: TCP/IP communication for remote supervision and configuration.
- **4G (Optional)**: For those places where wired communications are not enough.

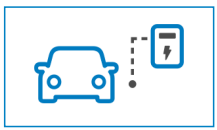
4

On the screen of the Charge Point it is shown the important information about the Charge point and its configuration.

For instance, when the Charge Point is turned on, while the software is starting, it is shown the latest firmware version installed on the Charge Point:



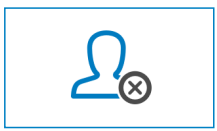
When it is available, it gives instructions to the user to plug or unplug the vehicle or to show the identification. Once the identification is shown (if necessary), it informs whether the user is allowed to start a charge or not.



Connect or disconnect the vehicle

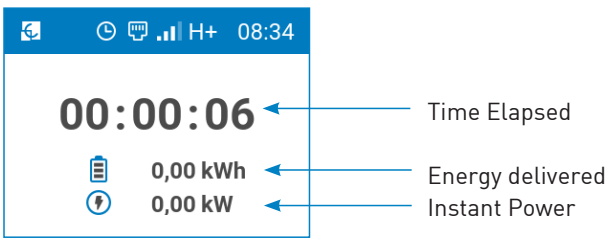
Show the identification to the reader

User authorised



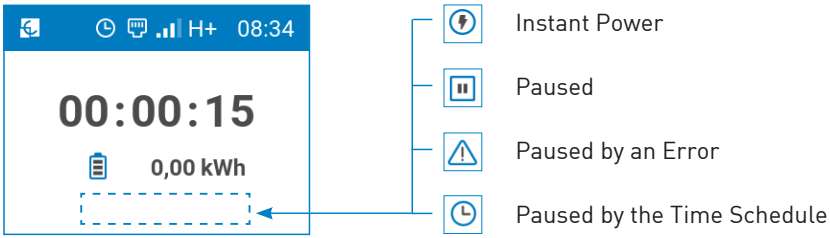
User Not Authorised

During the charge, it indicates the elapsed time, the energy given and the instant power that is being delivered.



Screen information

When the charge transaction is paused, it is indicated the reason instead of the instant power.



It gives information about the states of the Charge Point:

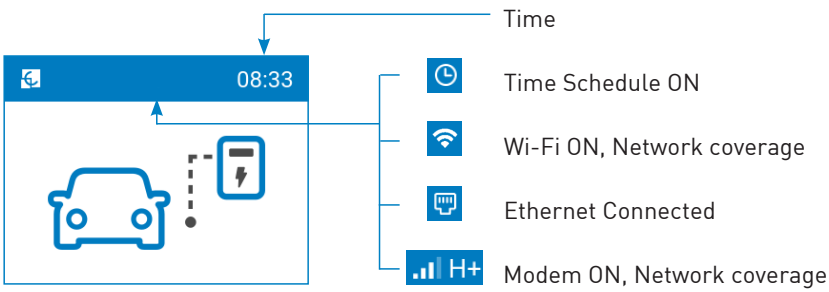
Reserved until "Date, Hour"

Disabled

*Error**

On the top bar it is indicated:

- Whether the time schedule is enabled or not
- The connectivity of the equipment: Ethernet, Wi-Fi and Modem
- The local time



**For more information about Errors, please refer to "Section B". in Chapter 8.*

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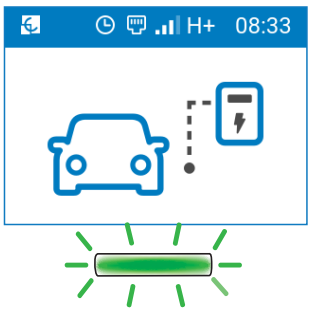
Plug&Charge mode enables the user to start a charging transaction without an identification. This configuration could be adequate for equipment placed in private areas where identification is not required. This configuration can be changed through the Setup Web page. Please, refer to Chapter 10 for more information.

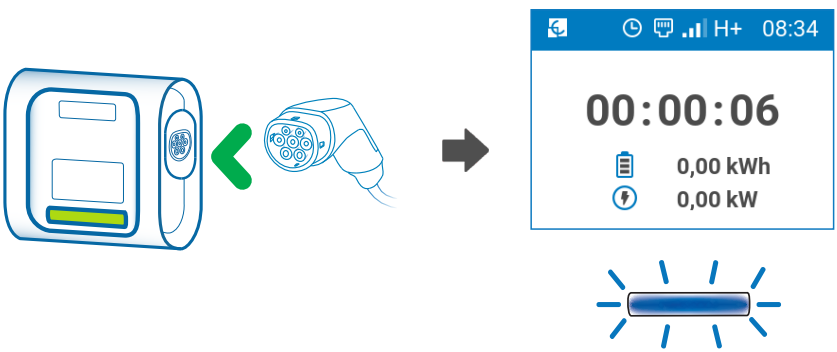
A Available

When the Charge Point is available and ready to start a charge, the LED beacon is green with a fade-in/fade-out effect and the screen shows the instructions to start the charge.



B Start charge

In order to start the charge, connect the electric vehicle to the Charge Point. The charge will start, the LED beacon will turn blue with a fade-in/fade-out effect and the screen will show the summary of the charge.



If the Charge Point has a socket with a locking mechanism, the connector will be locked in the plug during the charge.

How to use it? - Plug&Charge

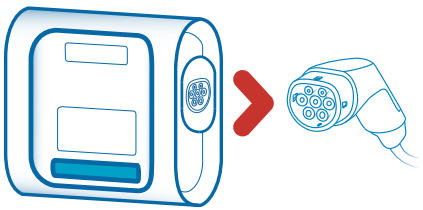
C Finish charge

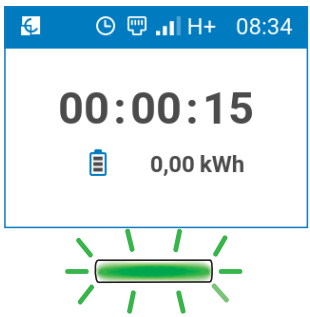
To finish the charge transaction, stop the charge through vehicle.

Once the charge transaction has been stopped, the user will be able to unplug the connector.

Once the connector is unplugged, the LED beacon turns back to green in a fade-in/ fade-out effect and the screen shows the summary of the charge for 20 seconds.

The Charge Point is now available to start a new charge transaction.

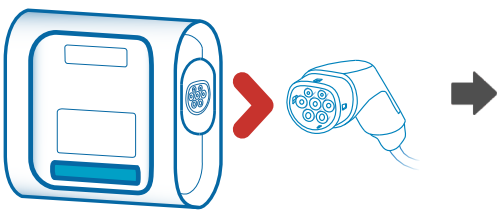


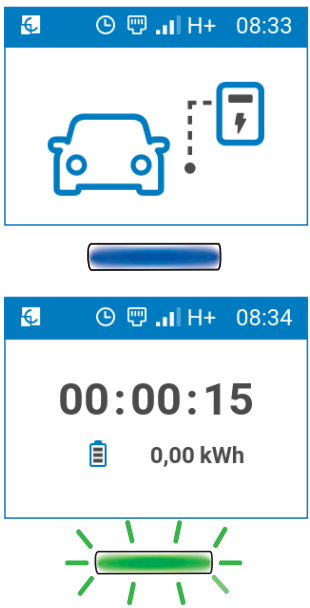


D EV fully charged

When the EV batteries are fully charged, the LED beacon turns fixed blue and the screen shows instructions to disconnect the vehicle.

Once the vehicle is disconnected, the screen shows the summary of the charge and the LED beacon turns back to green in a fade-in/fade-out effect. The Charge Point is now available to start a new charge transaction.





6

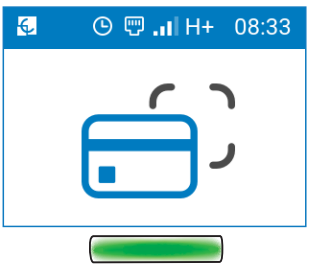
By allowing the RFID identification method you will make the Charge Point more secure, as only users with an allowed RFID will be able to use the Charge Point.

This configuration is recommended for Charge Points placed in public or semi-public places where unauthorised users could access the equipment.

The configuration of the identification method can be changed through the Setup Web page. Please, refer to Chapter 10 for more information.

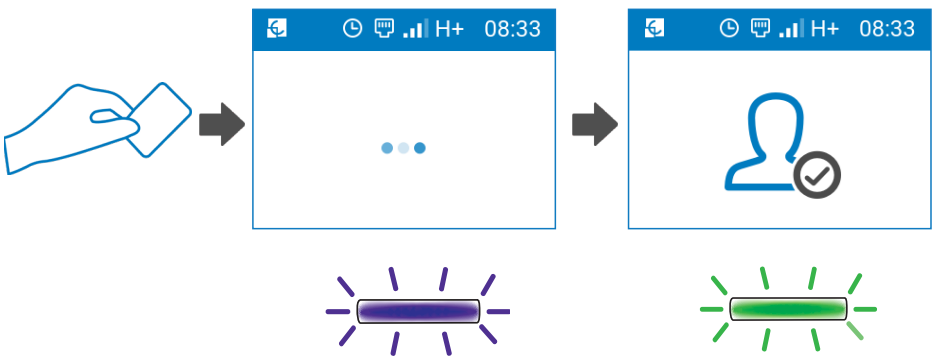
A Available

When the Charge Point is available, the LED beacon will be fixed green and the screen will show instructions to the user to show the identification card to the reader.



B Start charge

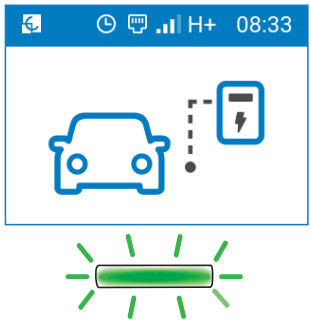
To start the charge transaction, show the identification to the RFID reader of the Charge Point and wait until the identification is authorised.

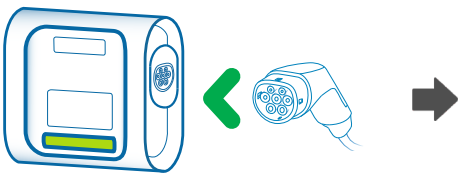


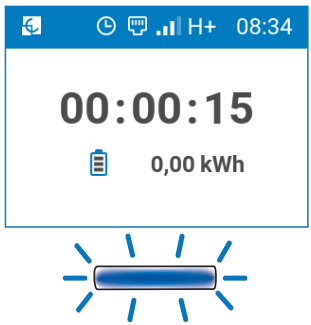
How to use it? - RFID

Once the user has been authorised, connect the vehicle to the Charge point as indicated in the screen within 90 seconds.

After 90 seconds, the Charge Point will ask again for an identification.







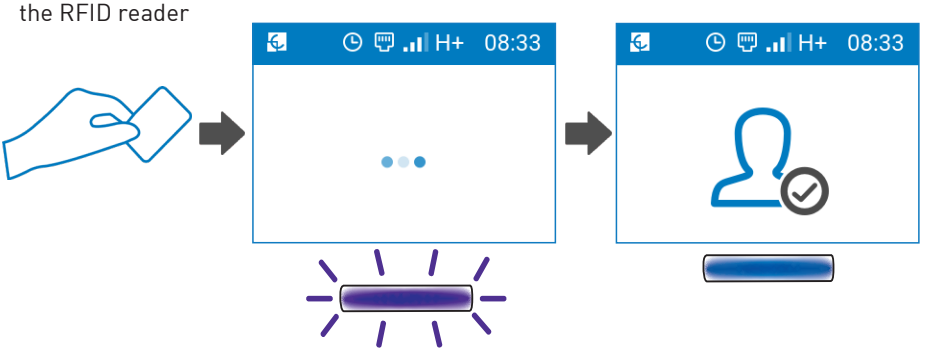
Once the vehicle is connected, the charge will start, the LED beacon will turn blue with a fade-in/fade-out effect and the screen will show the summary of the charge.

If the Charge Point has a socket with a locking mechanism, the connector will be locked in the plug during the charge.

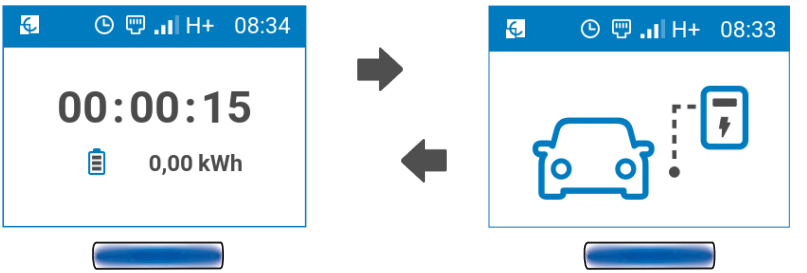
> It is possible to connect the vehicle to the Charge Point before showing the identification to the RFID reader

Finish charge

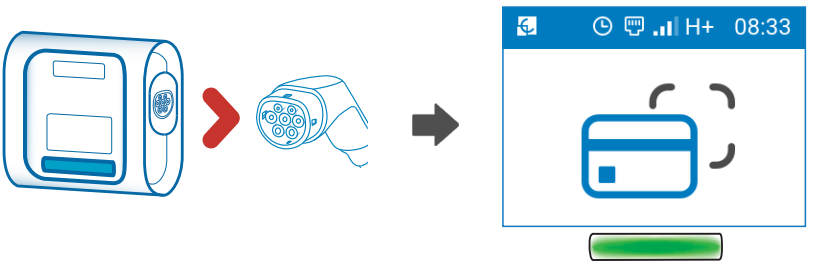
To finish the charge transaction, show the identification used to start the charge to the RFID reader



Once the user has been verified and authorised, the charge transaction will finish and, if it were the case, the locking mechanism released. The LED beacon will turn blue and the screen will show the charge summary and instructions to disconnect the vehicle.



Once the connector is unplugged, the LED beacon turns back to green and the screen asks for a new identification to start a new charge transaction

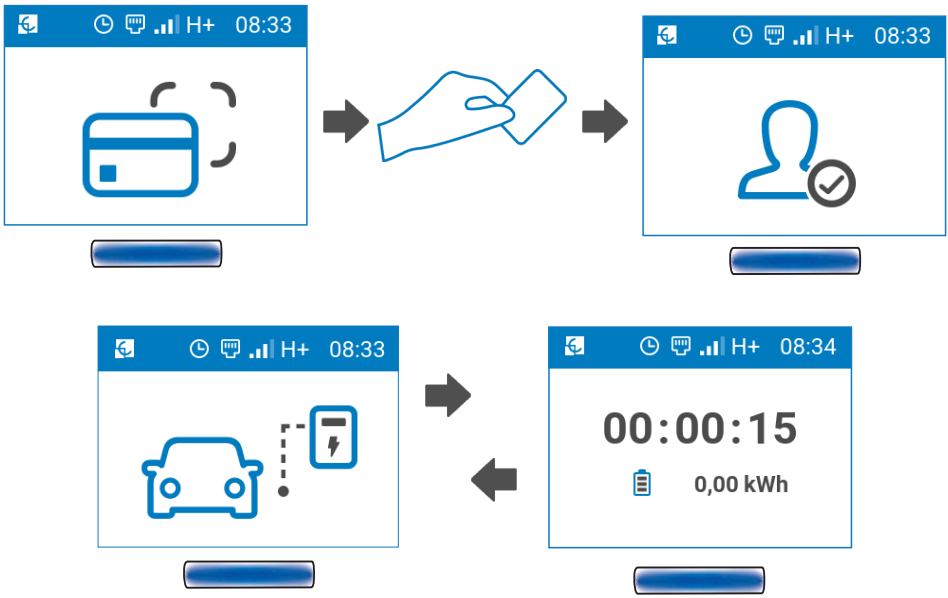


It is possible to finish the charging session by finishing the charge through the vehicle and disconnecting it

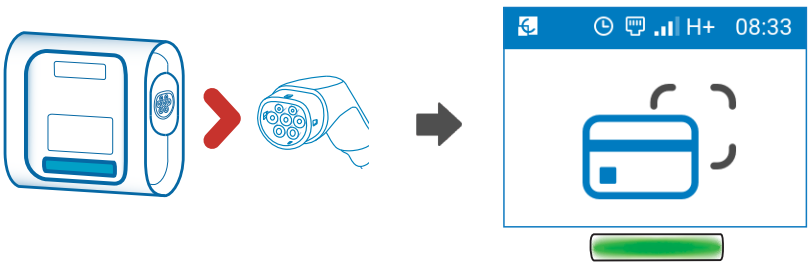
D EV fully charged

When the EV batteries are fully charged, the LED beacon turns fixed blue and the screen shows instructions to show the user identification to the RFID reader.

Once the user that had started the charge is authorised, the screen will alternate the summary aof the charge transaction and instructions to disconnect the vehicle from the Charge Point.



Once the connector is unplugged, the LED beacon turns back to green and the screen asks for a new identification to start a new charge transaction

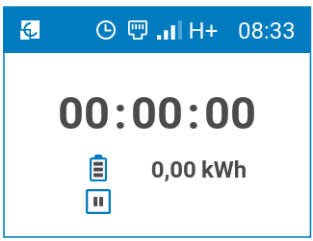


7

A Paused charge

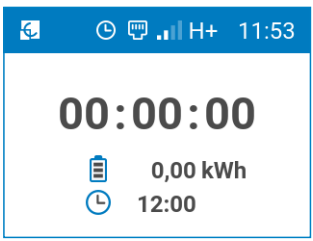
In some cases the charge transaction can be stopped due to different causes such as::

- The EV batteries are too warm to continue the charge transaction.
- A “Stop Charging” was programmed through the Time Schedule
- There is not enough power available in the installation managed by the BeON.
- The Remote Control is not enabling the charge transaction.
- Pause request from the vehicle.
- An error has occurred.



When the charge has been paused due a vehicle request or due a lack of power in the installation managed by the BeON, the screen will show the energy delivered until the moment and will indicate that the charge is paused and that the Charge Point is not delivering power at the moment.

When the charge transaction has been paused because it was programmed on the Time Schedule it will appear a clock icon and the time at which the charge is scheduled to be resumed.



For more information about the Time Schedule, please refer to “Section F - Charge Point configuration, in Chapter 10”

How to use it? - Other scenarios

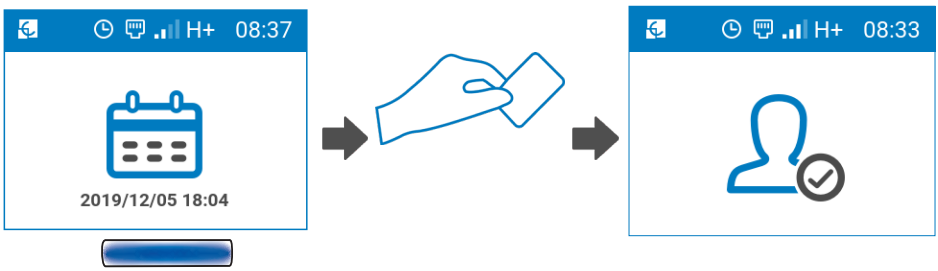
B Reserved Charge Point

A charging season can be reserved on the Charge Point for an specific user to an specific time using OCPP.

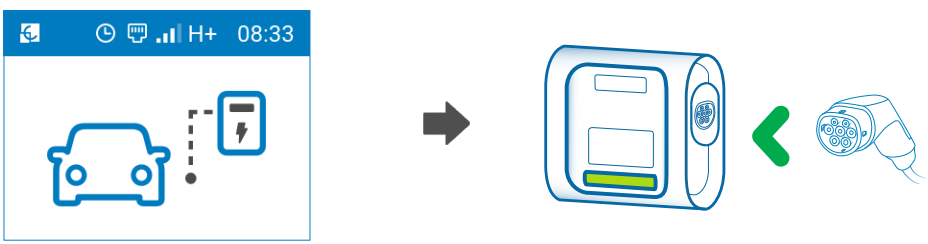
When the Charge Point is reserved, the following information will appear on the screen:

- A figure informing that the Charge Point is reserved
- Date and time when the charge is reserved

When the Charge Point is reserved, only the authorised user will be able to start the charge transaction. To start the charge transaction the user shall show the identification to the RFID reader.



Once the identification has been checked with the central system and the user has been authorised to start the charge transaction, the user will be required to connect the vehicle to the Charge Point.



8

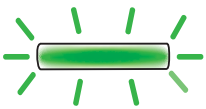
A LED colours

The LED beacon on the Charge Point informs about different status or error messages, using different colors and sequences.

GREEN LIGHT

Green light indicates RFID identification method is enabled and that the Charge Point is waiting for a user identification.

GREEN FADE-IN/ FADE-OUT LIGHT

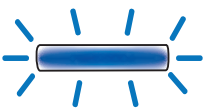


Green fade-in/fade-out light indicates that the Charge Point is available to start a charge transaction and waiting for the user to connect the vehicle.

BLUE LIGHT

Blue light indicates that the vehicle is connected but charge transaction is not on going

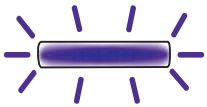
BLUE FADE-IN/FADE-OUT LIGHT



Blue fade-in/fade-out light indicates that the charge transaction is on going.

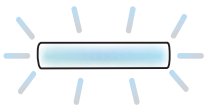
LED beacon notifications

PURPLE BLINKING



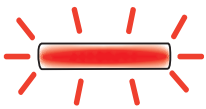
Three purple blinks indicate that the user has been identified by the Charge Point through the RFID reader.

WHITE LIGHT



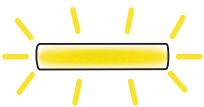
White light indicates that the Charge Point is running an auto-diagnostic. For further information, please refer to Section “H - Diagnostic” in Chapter 10.

RED BLINKING



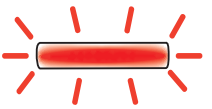
Red blinking light indicates that the Charge Point is not working properly. The number of blinks informs about the error type. For further information about the possible errors, please refer to Section “B - Blinking red errors” of this chapter.

YELLOW BLINKING



Yellow light blinking indicates that the Charge Point is not working properly. The number of blinks informs about the error type. For further information about the possible errors, please refer to Section “C - Blinking yellow status” of this chapter.

B Blinking red errors

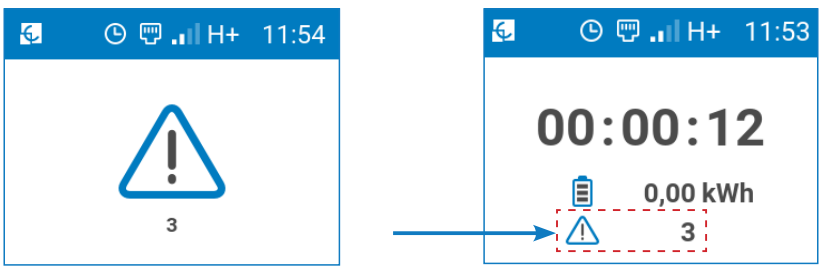


Nº of blinks	Error	Description	Solution
3	Low voltage	No voltage detected in the power circuit	Make sure all protections are armed
4	High voltage	Overvoltage detected in the power circuit	Rearm the protections. If you have any question, contact technical support
5	Electric protection	The electric protections of the unit are tripped	Rearm the protections. If you have any question, contact technical support
6	Current leak	A current leakage has been detected.	Rearm the protections. If you have any question, contact technical support
9	Master communication	Communications lost with the control unit	Check the connection and operation of the control unit
10	Meter	Communication with the meter has been lost	Please contact technical support
11	Connector lock	The connector lock has failed	Try repeating the operation. If the error persists, contact technical support
12	Welded contact	An internal short circuit has been detected	Unplug the vehicle, restart the unit and try again. If the error persists, contact technical support
14	Damaged cable	The cable plugged to the Charge point is damaged	Try using another cable. If the error persists, contact technical support
15	Negative PWM	Invalid communication response from the EV	Unplug the cable and wait until the LED beacons turn green to plug it again. If the error persists, contact technical support
16	E Status	Communication error between the vehicle and the equipment	Try using another cable. If the error persists, contact technical support
17	D Status	Ventilation system is needed because of EV request	Please contact technical support
18	Maintenance required (Relays)	Some internal components need maintenance	Please contact technical support
22	Remote error	The control unit has detected an error	Unplug the vehicle, wait until the LED turns green, plug it again. If the error persists, contact technical support

Blinking yellow status

Nº of blinks	Error	Description	Solution
7	High temperature	The temperature inside the charger is too high to charge.	Wait until the temperature goes back to normal and try again.
8	Low temperature	The temperature inside the charger is too low to charge.	Wait until the temperature goes back to normal and try again.
19	High frequency	The frequency of the power supply is too high to charge	Wait until the frequency goes back to normal conditions. If the error persists, contact technical support
20	Low frequency	The frequency of the power supply is too low to charge	Wait until the frequency goes back to normal conditions. If the error persists, contact technical support

Note: The number of the error is shown in the screen of the Charge Point, as shown::



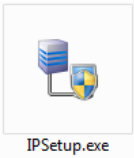
9

The Charge Point can be configured and monitored to establish preferences or specific setup using integrated Ethernet communication port allocated in the main controller deviace.

Before proceeding with the configuration, an IP shall be assigned to the Charge Point. To do so, make sure all the following is ready:

Computer running Microsoft Windows, at least Windows XP.

UTP Cable



IPSetup.exe *

* Software provided by Circontrol. Click **here** or contact PS-support to obtain it. (ps-support@circontrol.com)

A Previous steps

To setup the IP of the Charge Point, the Ethernet port used for the configuration shall be ready for it.

- Go to the "Ethernet settings" of your computer and select "Change adapter options".
- Click with the right button on the Ethernet port that it is going to be used and open its "Properties".
- Go to the "Properties" of the "Internet Protocol version 4 (TCP/IPv4)"
- Select "Use the following IP address" and set the "IP address of the port being used".

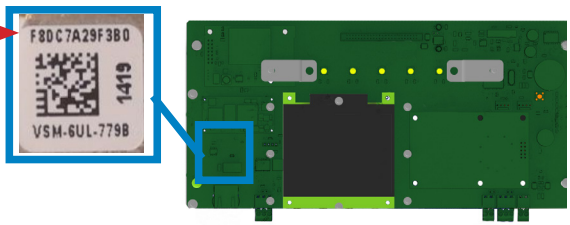
Please note thet the IP that will be assigned to the Charge Point will need to have the same range as the IP assigned to the Ethernet port.

How to configure it?

B Setup the Charge Point IP

Charge Point is delivered with default network setting of “DHCP enabled”. It means that the charge station will try to obtain an IP address from a DHCP server available on the network.

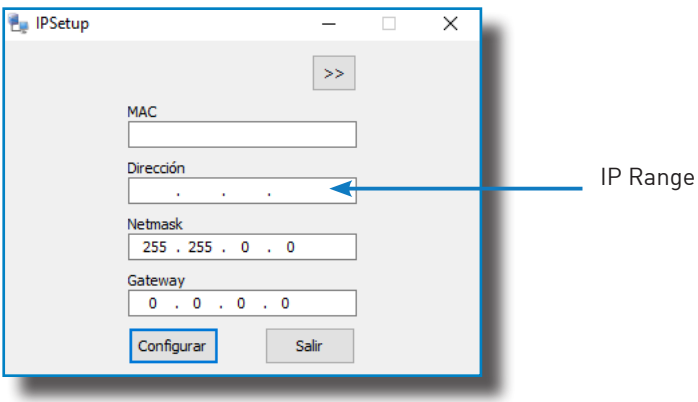
Find the MAC in the sticker over the CPU or Scan the QR code in order to obtain the code.



Connecting a PC directly with the Charge Point needs to be done with static IP address. The PC and the Charge Point must be in the same network and in the same range.

In order to change the IP of the Charge Point, use “IP Setup”.

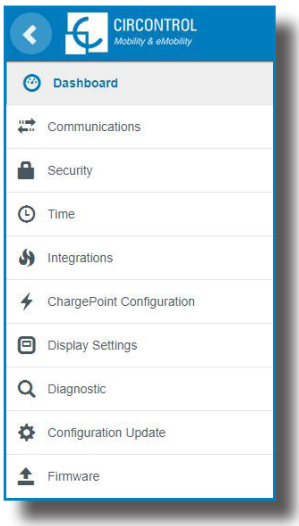
- Enter the MAC of the device (Remember to use this format: XX:XX:XX:XX:XX:XX):
- Enter the desired IP Address considering that it shall have the same range as the Ethernet port where it is connected.
- Click on “Configure”



Once done, the Setup Web page will open automatically on the default web browser.

10

The Setup Web page allows configuration the Charge Point preferences, the communications setup, and upgrading devices among other options.

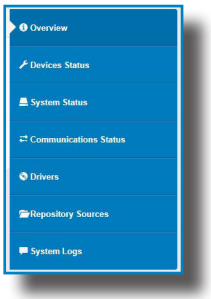


To access the setup web page, open a web browser and enter the IP address previously configured.

The Setup Webpage can be accessed through the IP assigned to the Ethernet port of the Charge Point in "Chapter 8" or through the IP assigned to the Wi-Fi of the Charge Point (refer to Section "B – Communications, Wi-Fi" of this chapter for more information on how to configure the IP of the Wi-Fi).

Note: The Wi-Fi is an optional of the Charge Point.

A Dashboard



In the Dashboard can be found all the information referring to the Charge Point and its status.

At the right of the screen will appear the following menu:

Overview

The Overview shows the main information of the Charge Point, such as the name of the **product**, the name and the URL of the **manufacturer** (CIRCONTROL S.A.), the **firmware versio**n currently running in the Charge Point and the date of **creation**.

Devices Status

The Device Status section shows the status of the main devices of the Charge Point.

- Status: OK (communicating)/ NOT OK (not communicating)

Setup web page

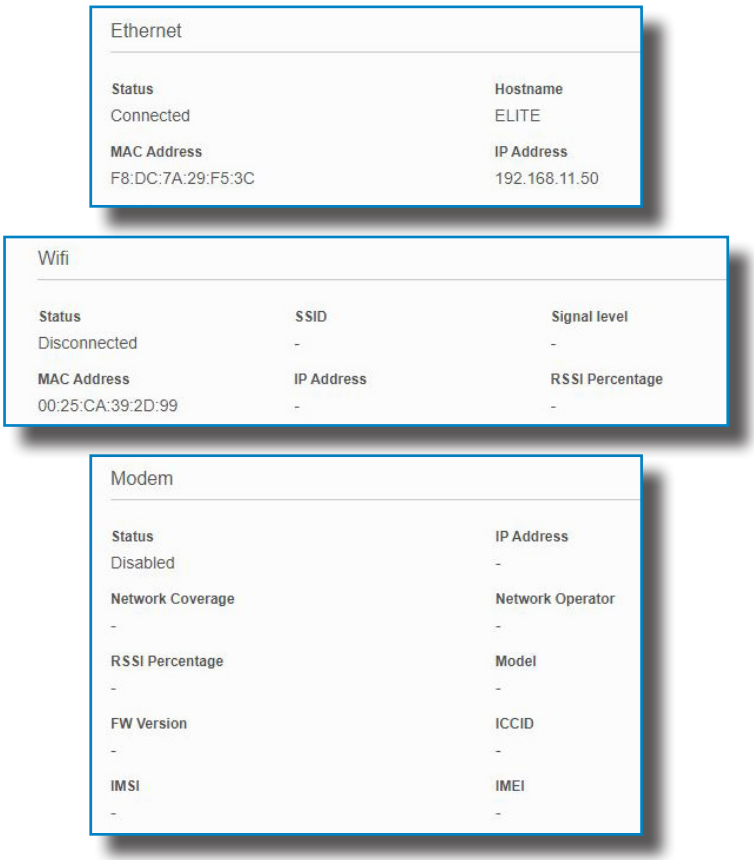
System Status

The information shown in this section is basically relative to the state of the Control Board of the Charge Point

This is necessary for the technical service staff but does not show any information regarding the external connection of the Charge Point or the charging session.

Communication Status

The Communication Status section shows the information and the status of the different devices used for communication with the Charge point.



Drivers

The information shown in this section is regard to the drivers that the Charge Point needs in order to recognize the different devices inside the Charge Point, such as the meter, the Mode 3 controller, the RFID reader, the modem, etc.

Repository Sources

The information shown in this section is basically related to the internal behavior of the Charge Point.

This is necessary for the technical service staff but does not show any information regarding the external connection of the Charge Point or the charging session.

System Logs

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.

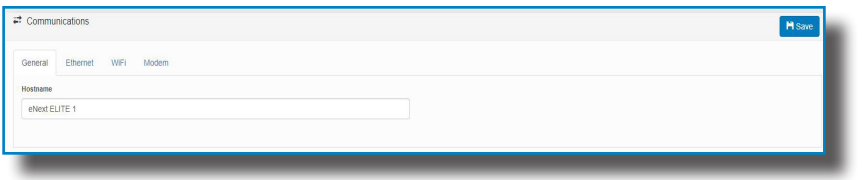
This logs are created since Charge Point is powered-on. Even if Charge Point is restarted the logs are saved.

B Communications

Make sure to Save the changes made in this section by pressing on the top-right button after all the modifications are done.

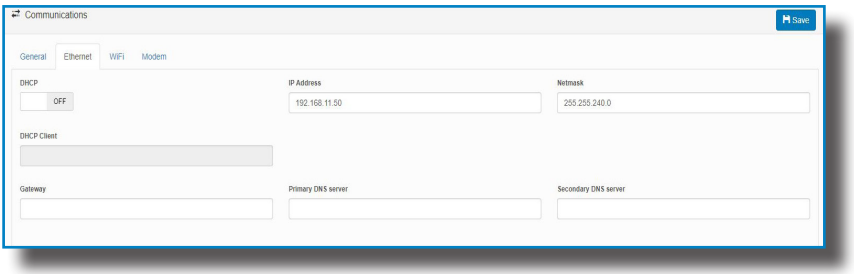
General

In this section, the name of the Charge Point on the network (the Hostname) can be changed.



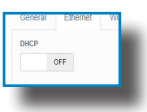
Ethernet

The characteristics of the Ethernet port can be modified and configured in this tab.



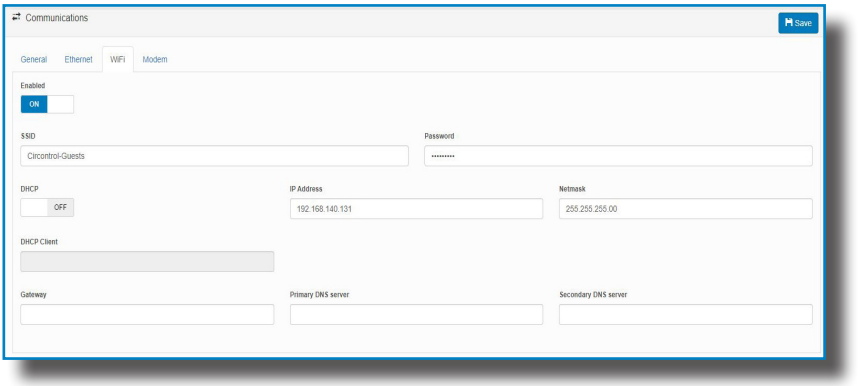
Value	Description
IP Address	IP Address assigned to the Charge Point
Netmask	Netmask of the network
DHCP Client	Client ID associated to the DHCP server (if enabled)
Gateway	Gateway of the network
Primary DNS Server	IP adress of the Primary DNS Server
Secondary DNS Server	IP adress of the Secondry DNS Server, if any

DHCP is enabled by default.



Wi-Fi

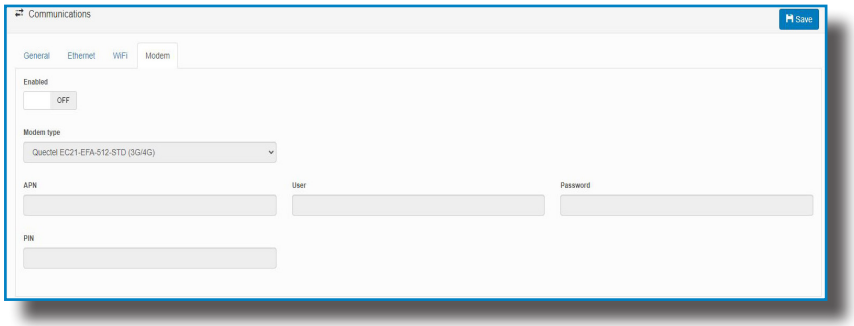
In this section can be configured the Wi-Fi settings such as the Wi-Fi Network where the equipment is connected and the IP address to access the Charge Point when connected to the Wi-Fi.



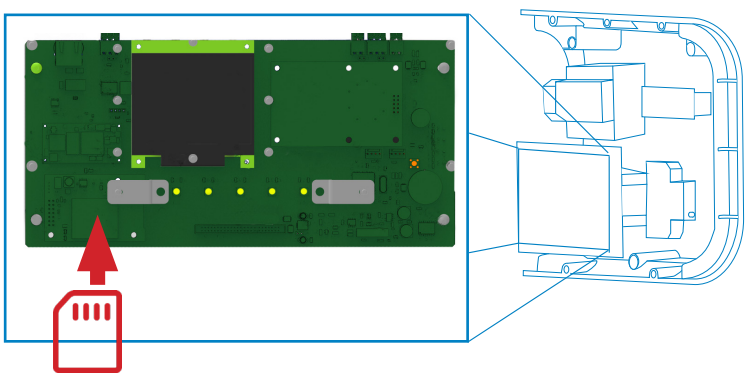
Value	Description
SSID	Name of the Wi-Fi network
Pasword	Password of the Wi-Fi network
IP Address	IP Address assigned to the Charge Point
Netmask	Netmask of the network
DHCP Client ID	Client ID associated to the DHCP server (if available)
Gateway	Gateway of the network
Primary DNS server	IP adress of the Primary DNS Server
Secondary DNS server	IP adress of the Secondry DNS Server, if any

Modem

Insert the SIM card into the modem before configuring the cellular communications. If the LEDs are not lighted on after inserting the SIM card, check the modem configuration.

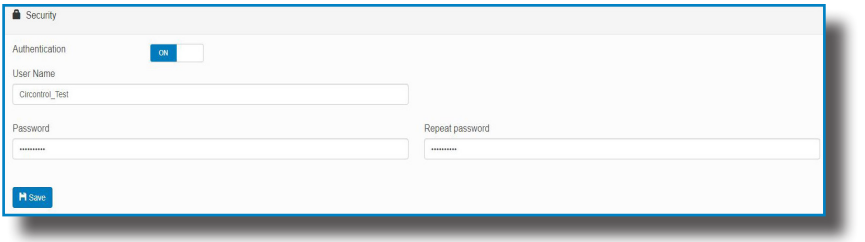


Value	Description
Modem type	Information about the modem model
APN	Access point name (consult the SIM card network operator)
User	Credentials assigned to the APN (consult the SIM card network operator) **Note:** If credentials are not needed, insert "1234" on both fields
Password	
PIN	Consult the SUM card network operator for the PIN.



C Security

This section provides basic configuration of the security parameters. Avoiding unauthorised access to the Setup Web page. All parameters are disabled from factory settings.

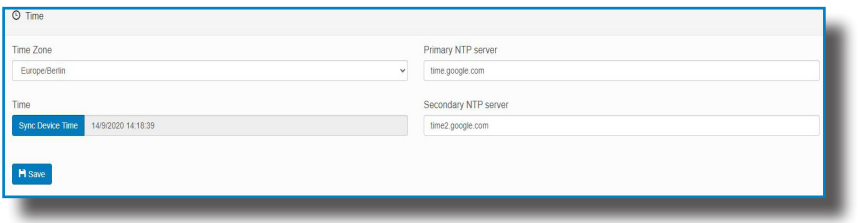


Value	Description
Authentication	**ON:** authentication enableb / **OFF:** authentication disabled
User Name	User name and Password authentication for the Setup web page
Password	

Do not forget the credentials. There is no way to restart the Charge Point to default factory settings.

D Time

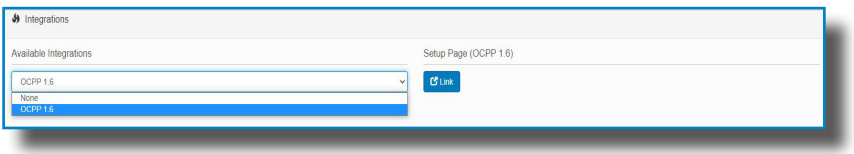
This section allows setting the time and region time for the Charge Point.



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	

E Integrations

This section allows to enable and disable OCPP 1.6 service of the Charge Point.



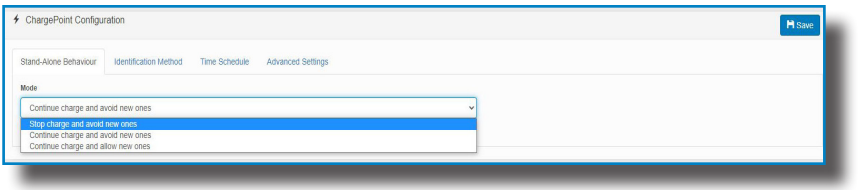
For more information about the parameters and configuration, please refer to **OCPP 1.6'** chapters of this manual.

F Charge Point configuration

This section allows setting the functionalities and behaviour of the Charge Point.

Stand-Alone Behavior

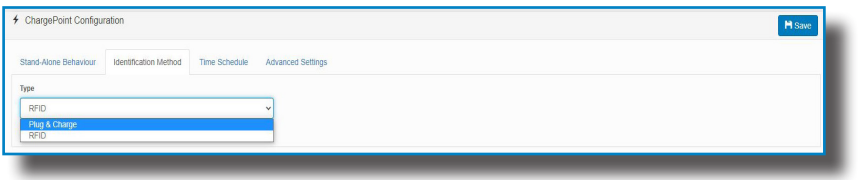
In this tab can be set how the Charge Point shall behave when there is any non-critical device that is not working properly.



- **Stop charge and avoid new ones:** The Charge Point would stop the on-going charge (if any) and would not allow new charge transactions.
- **Continue charge and avoid new ones:** The Charge Point would allow to finish the on-going charge but would not allow to start new charge transactions later.
- **Continue charge and allow new ones:** The Charge Point would continue working normally, so new charge transactions would be allowed to start.

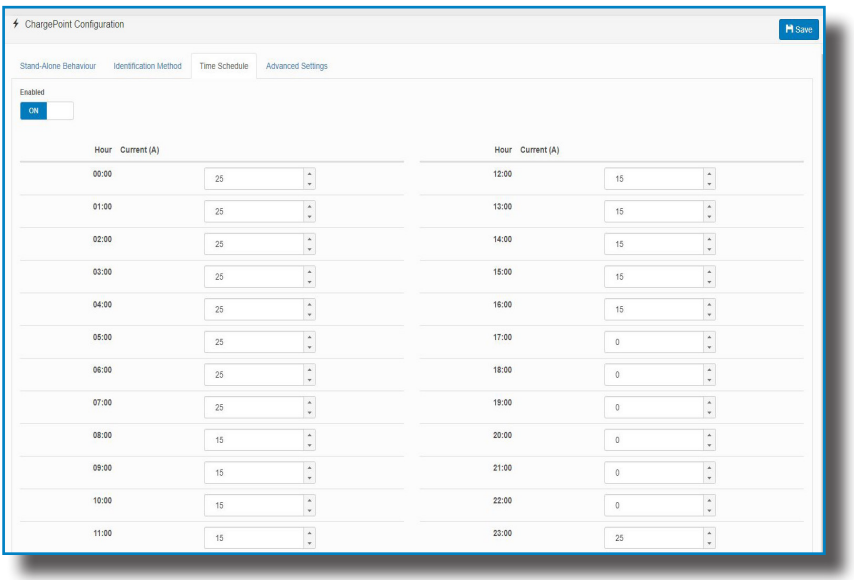
Identification Method

In this tab can be set whether the Charge Point shall work in Plug&Charge mode (with no user identification required) or in RFID mode (an RFID identification is needed to start and finish a charge transaction).



Time Schedule

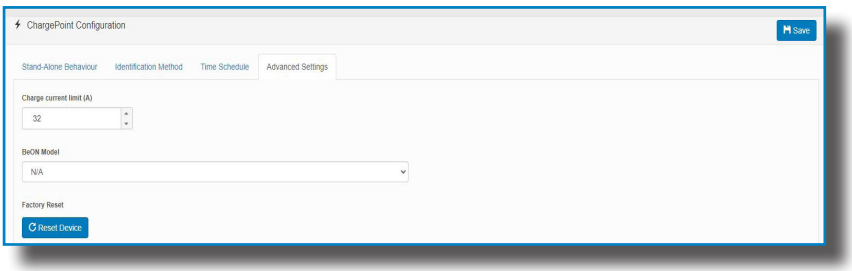
In this section can be scheduled the maximum current delivered from the Charge Point to the vehicle along the day. It can be set by writing down the maximum current (A) at each hour. If the current set is higher than the maximum current set in the "Advanced Settings", the web page will show an error.



Advanced Settings

In this section can be limited the maximum current to be delivered from the Charge Point to the vehicle.

It can also be configured the Home BeOn device for the dynamic load balancing.

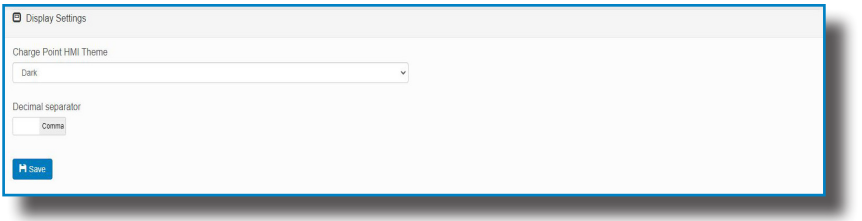


Take in consideration that factory reset is a function of the Charge point to reset its configuration to factory values.as explained in chapter 12.

G Display settings

In the Display Settings section, it can be configured some aspects from the HMI:

- Charge point HMI Theme: Choose the background style of the display: Dark or Light
- Decimal separator: Choose the separating method for the decimal values of the display: Comma or Dot.



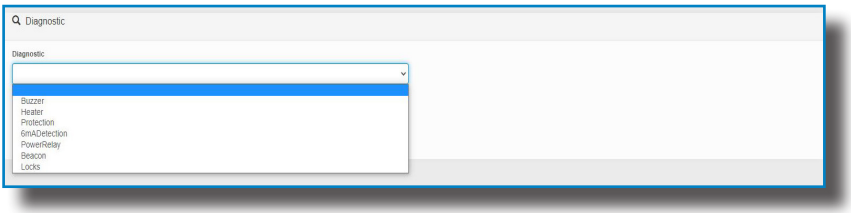
H Diagnostic

In the Diagnostic section it can be checked the performance of the different devices of the Charge Point.

- **Buzzer:** Checks the buzzer used to indicate than an RFID has been detected.
- **Heater:** Checks the resistors used to heat the equipment when the temperature is under the operating temperature.
- **Protection:** Checks that the protections work properly. Please, note that after running this diagnostic, you will need to access the inside of the equipment to rearm the protections. Protections are an optional, so not all the Charge Points may have the protections inside.
- **6mADetection:** Checks that the 6 mA dc leakage detection works properly. Please, note that after running this diagnostic, you will need to access the inside of the equipment to rearm the protections. This protection is an optional, so not all the Charge Points may have this device.
- **PowerRelay:** Checks the Power Relay, used to start or stop delivering power to the vehicle.

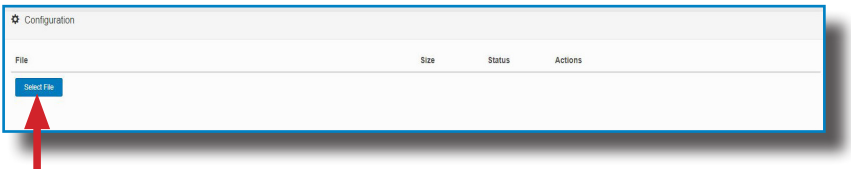
- **Beacon:** Checks that the LED beacon works properly by showing a sequence of colours.

- **Locks:** Checks that the locking of the connector in the socket works properly.

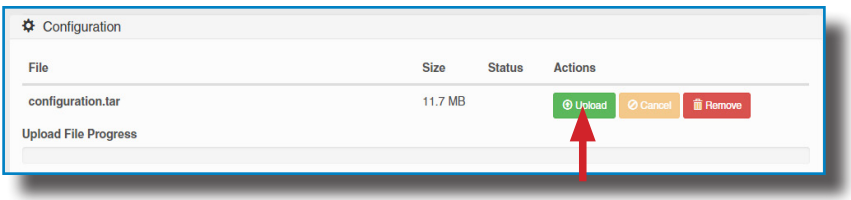


Configuration update

In this section it can be uploaded a file in order to automatically configure the Charge Point in an established way.



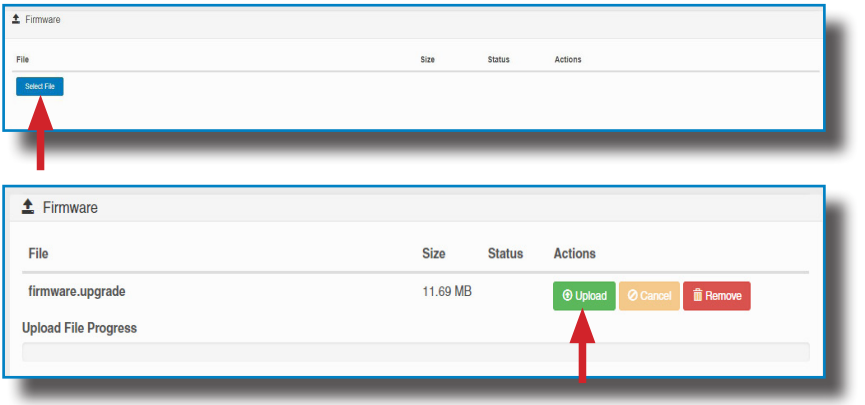
Press the button "Select File"and window will pop up in order to choose the file, then click on '**upload'.**



To obtain the appropriate configuration file please contact CIRCONTROL Post Sales Department. More information in **'Need help?'** Chapter.

J Firmware

The Charge Point firmware can be upgraded remotely by clicking on the **'Select File'** button.



To obtain the latest firmware version please contact CIRCONTROL Post Sales Department. More information in **'Need help?'** chapter.

11

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.

A Before starting

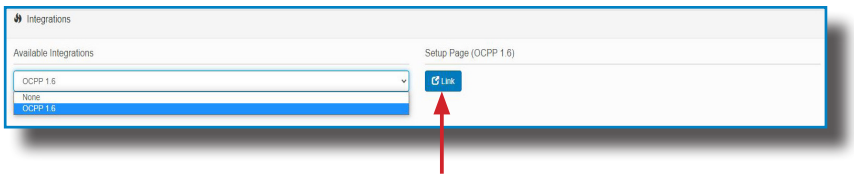
In order to ensure the correct function of OCPP 1.6, make sure that the connectivity of the Charge Point is enabled.

Go to the ***Setup Webpage*** → "***Communications***"

Make sure that at least one of the tree types of communications (***Ethernet, Wi-Fi, Modem***) is enabled.

To enable the OCPP, go to the **Setup Webpage** → **'Integrations'** tab

Enable the OCPP 1.6 integration and select the "Link" button to go to the Setup Page.



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 back-end.

OCPP 1.6

B Setup page (OCPP 1.6)

The "Link" button mentioned in the previous section will direct you to the OCPP Setup Webpage.

These tabs require a user identification:

- User: admin
- Password: 1234

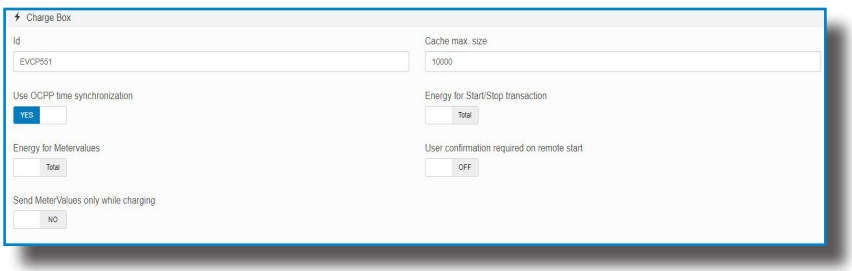
First time is running the integration selected on the Charge Point, it starts as configuration mode and all fields are empty.

Settings are always stored even when the Charge Point is powered off or even the integration is disabled/stopped.

ChargeBox

On the OCPP web page, go to **'Charge Box'** tab

Check Charge Box Identity and the incoming ports according to the backend policies. Please contact to the Central System to get the configuration parameters:

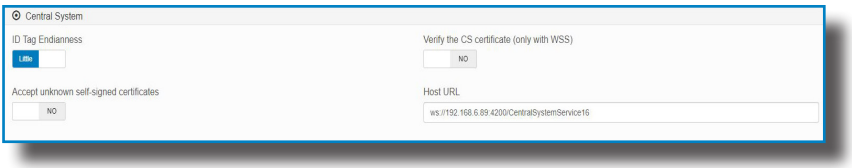


Value	Description
ID	Charge Point identifier
Cache max. size	Maximum size of the *Authorization Cache*, that autonomously maintains a record of previously presented identifiers that have been successfully authorized by the Central System.
Use OCPP time synchronization	**YES:** Synchronization of date and time --> Enabled. **NO:** Synchronization of date and time --> Disabled. ***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 on remote start	**ON:** user confirmation needed to proceed with a remote start (i.e. touch the screen) **OFF:** user confirmation NOT needed to proceed with a remote start

Central System

The '**Central System**' tab allows the Charge Point to know where the central system is hosted to notify all the requests.

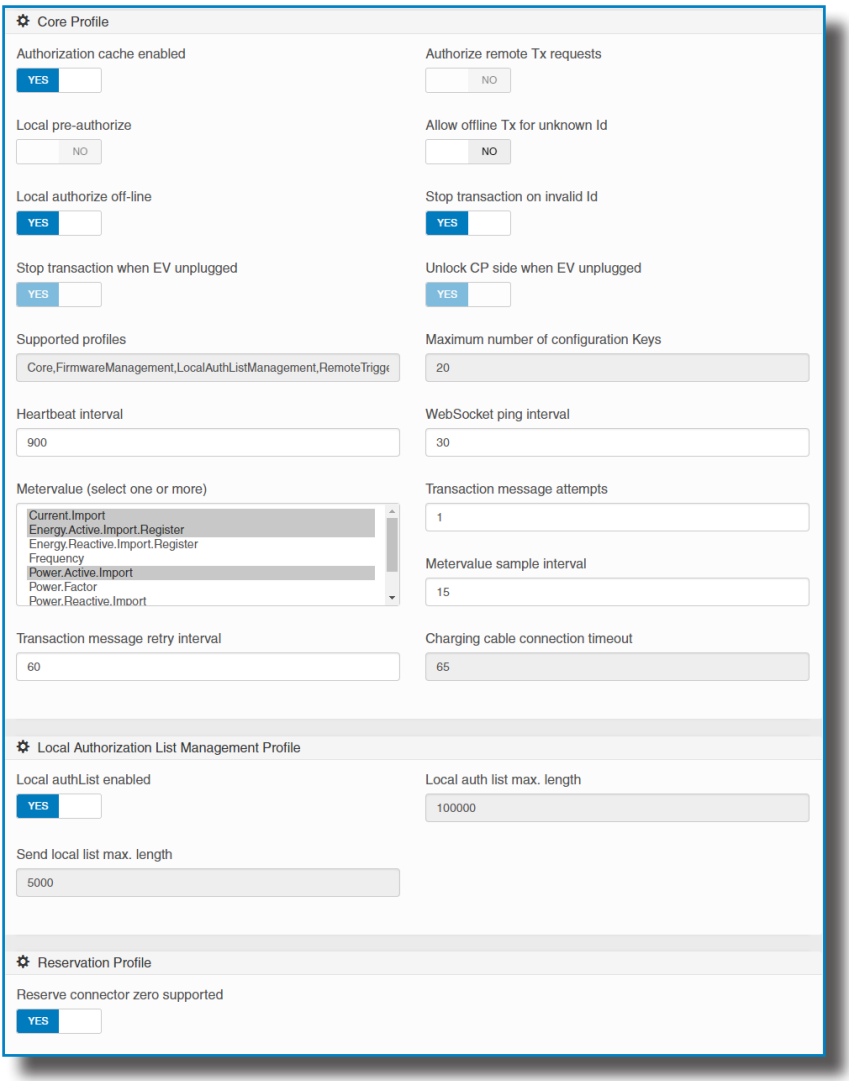
Check Central System URL according to the back-end policies, please contact to the Central System to get the configuration parameters:



Value	Description
ID Tag Endianness	Storage type for system data: Little/Big
Verify the CS certificate	**YES:** check certificate with the common trusted certificate authority **NO:** bypass certificate validation with the common trusted certificate authority
Accept unknowns self-signed certificates	**YES:** allow self-signed certificates **NO:** deny self-signed certificates
Host URL	URL address of the central system

OCPP Settings

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

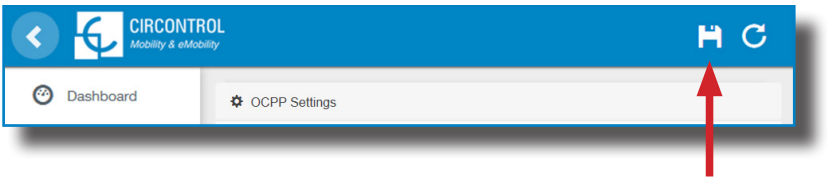


Value	Description
Authorization cache enabled	**YES:** maintain a local list of all presented identifiers that have been successfully authorized by the Central System. **NO:** authorization for presented identifiers is requested directly to the Central System
Authorize remote Tx requests	**YES:** the Charge Point asks for authorization when the Central System sends a remote start **NO:** the Charge Point starts the Charge Transaction when the Central System sends a remote start
Local pre-authorize	**YES:** Charge Point looks for locally-authorized identifiers without waiting for the Central System authorization. **NO:** Charge Point requests authorization for presented identifiers to the Central System.
Allow offline Tx for unknown Id	**YES:** during offline period unknown identifiers are allowed to start charging **NO:** during offline period unknown identifiers are NOT allowed to start charging
Local authorize off-line	**YES:** during offline period locally-authorized identifiers are allowed to start charging **NO:** during offline period locally-authorized identifiers are NOT allowed to start charging
Stop transaction on invalid Id	**YES:** stop existing Charge Transaction after response from Central System when user is blocked, expired or invalid. **NO**: Charge Transaction does not stop even if backend rejects the user.
Stop transaction when EV unplugged	**YES:** Charge Transaction stops when the cable is disconnected from the EV.

Value	Description
Stop transaction when EV unplugged	**NO:** Charge Transaction does not stop when the cable is disconnected from the EV; furthermore, if it is reconnected energy transfer is allowed again. It is required for the user to present the identifier in order to stop the Charge Transaction.
Unlock CP side when EV unplugged	**YES:** Charge Point unlocks the connector when the cable is disconnected from the EV **NO:** Charge Point keeps the connector locked when the cable is disconnected from the EV, it is required for the user to present the identifier in order to unlock the connector
Supported profiles	List of supported profiles on the Charge Point ***NOTE:** this field is for information purposes, it cannot be modified.
Maximum number of configuration Keys	Maximum number of requested configuration keys that can be requested by the Central System. ***NOTE:** this field is for information purposes, it cannot be modified.
Heartbeat interval	Number of seconds between Heartbeats. ***NOTE:** setting this value to 0 disables the Heartbeat.
WebSocket ping interval	Number of seconds between Pings. ***NOTE:** setting this value to 0 disables the Websocket Ping/Pong.
Metervalue (select one or more)	List of supported values used in the MeterValue. ***NOTE:** hold 'Ctrl' key in order to select more than one Measurand.
Transaction message attempts	How many times the Charge Point should try to send a request to the Central System.

Value	Description
Metervalue sample interval	Number of seconds between MeterValue during an ongoing Charge Transaction. ***NOTE:** setting this value to 0 disables the MeterValue.
Transaction message retry interval	Number of seconds between transaction message attempts. ***NOTE:** setting this value to 0 disables the attempts.
Charging cable connection timeout	Number of seconds the Charge Point must wait for the user to plug/unplug the cable. ***NOTE:** this field is for information purposes, it cannot be modified.
Local authList enabled	**YES:** Local Authorization List enabled **NO**: Local Authorization List disabled
Local auth list max. length	Maximum size of the *Local Authorization List*, a list of identifiers that can be synchronized with the Central System. ***NOTE:** this field is for information purposes, it cannot be modified.
Send local list max. length	Maximum number of identifications that can be send in a single request from the Central System. ***NOTE:** this field is for information purposes, it cannot be modified.
Reserve connector zero supported	**Yes:** Charge Point supports reservations on connector 0. That reservation is not done on a specific connector, one connector remains available for the reserved idTag. **NO**: Charge Point does NOT support reservations on connector 0.

Once done, please do not forget to save changes using **'Save'** button on the upper right bar:



Checkup

After applying new settings, please go to next URL from Charge Point in order to check properly connection from the integration chosen:

http://<IP>/services/cpi/log?app=ocpp1.6

If **'CB boot notification: success'** appears, then the Charge Point is properly connected to the back-end.

Otherwise, if the message shown is **'Registering CB in the CS: failed'**, then check the following items:

- Backend URL. Case sensitive. Check all the URL is correct.

- Charge Point ID. Case sensitive. Check if the name entered is same as backend expects to receive.

- Connectivity. Check if modem is power up and connected to the HMI screen. Ask to the backend provider if any request has been received from the charge point (BootNotification, StatusNotification or HeartBeat) after upgrading.

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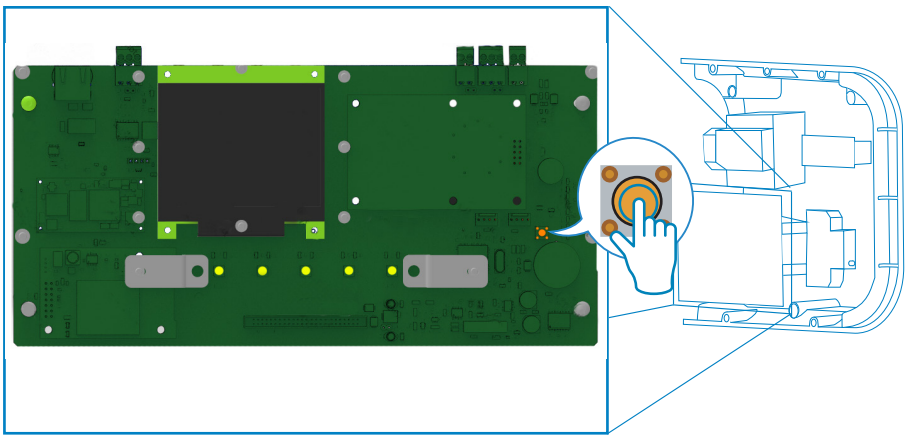
Factory reset is a function of the Charge Point to reset its configuration to factory values.

Factory reset button

The main PCB is located inside the Charge Point equipment. As shown in the figure below, a yellow button can be found in the main PCB. The factory reset is executed by pressing and holding the yellow button for three seconds.



ATTENTION!
After that, the Charge Point will perform a system reboot and all the settings will be restored to factory values.

Factory reset

Settings that will be reestablished:

- Communication settings
- Time schedule
- Identification method
- Power supply current limit
- Home BeON configuration

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GENERAL DATA	
Beacon lights	Frontal LED bar
Display	3,5" colour screen
RFID reader	ISO/IEC 14443A/B FeliCa ISO 15693 ISO 18092
Available connectors	Type 1 Cable (B)
	Type 2 Cable (C)
	Type 2 Socket (C) with locking system + shutter (optional)
Meter	MID Class 1 - EN50470-3
Charging mode	Mode 3

MECHANICAL DATA	
Enclosure rating	IP54 / IK10*
Enclosure material	ABS / PC
Enclosure closing system	Anti-vandalism Allen screws
Net weight	4 kg
Dimensions (D x W x H)	200 x 335 x 315 mm

(*) IK08 in some components appended to the body ie: beacon lights.

ENVIRONMENTAL CONDITIONS	
Operating temperature	-5ºC to +45ºC
Operating temperature with Low Temperature Kit (optional)*	-25ºC to +45ºC
Storage temperature	-40ºC to +60ºC
Operating humidity	5% to 95% Non-condensing

(*) Equipment to be installed outdoor shall be provided with the Low Temperature Kit in order to comply with the IEC 61851-1:2017

Technical data

CONNECTIVITY	
Ethernet	10/100BaseTX (TCP-IP)
Wi-Fi	2.4GHz (IEEE 802.11b/g/n)
Cellular (optional)	Modem 4G / 3G / GPRS / GSM
Interface protocol	OCPP 1.6J

ELECTRICAL DATA	
Power supply	1P+N+PE / 3P+N+PE
Input/Output voltage	230VAC+/-10% / 400VAC+/-10%
Frequency	50Hz / 60Hz
Protections	DC 6mA leakage detector (MCB/RCBO with shunt trip is required to open the circuit)
	Optional: RCBO: RCD Type A + MCB - includes shunt trip Optional: RCBO: RCD Type B + MCB - includes shunt trip
Protection against electric shock	Class II

RCD complies with IEC 62955
MCB complies with IEC 60898-1

MODEL	CONNECTORS BY DEFAULT	OUTPUT CURRENT	OUTPUT POWER	MINIMUM CABLE CROSS SECTION*
eNext S	Type 2 Socket	32A	7,4kW	6/10mm^2
eNext T	Type 2 Socket	32A	22kW	10mm^2

(*) This is the minimum cable cross section recommended for the maximum AC input current.
(**) It is recommended 10mm^2 if the installation doesn't require more than one circuit passing through the same cable gland, and 6 if there is more than one additional circuit. The final cross section shall be calculated by a qualified technician taking into account the specific conditions of installation.

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Need help?

In case of any query or if further information is required, please contact our **Post-Sales Department**

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CIRCONTROL
Mobility & eMobility

CIRCONTROL WALLBOX ENEXT ELITE USER MANUAL

A comprehensive guide on how to use and configure your Wallbox eNext Elite

V1.3, July edition 2021

R390

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