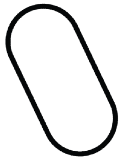
ETREL INCH

ETREL INCH FAMILY

WEB INTERFACE CONFIGURATION GUIDE

Document version: 1.0
Confidential – intended only for recipient



1 GENERAL CONFIGURATION INFORMATION

Etrel Inch charging station is configured using the web interface which can be accessed through the charging station IP. Additional settings can be adjusted using OCPP messages using the backend system. Configurations can't be made using the touch screen LCD as it is only used to show information what is happening with the charging station and offers to user basic controls of the charging session.

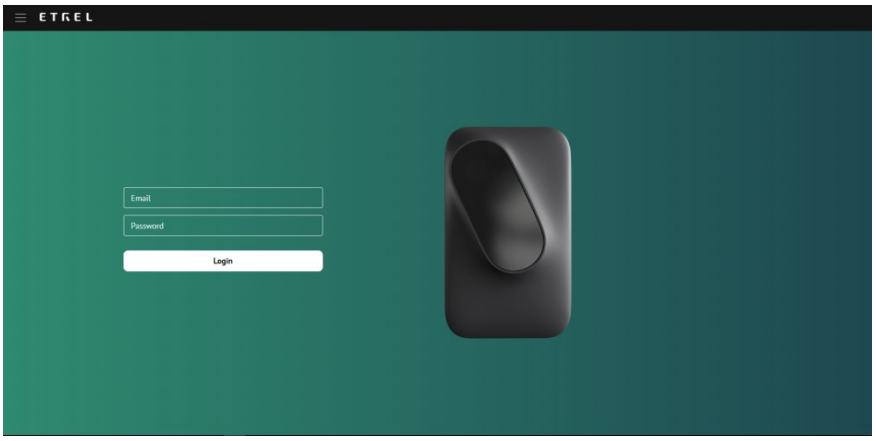
2 SIGN IN

You can access Etrel Inch web interface by connecting to the charging station IP. When username (email) and password are inserted you will be connected to the web interface.

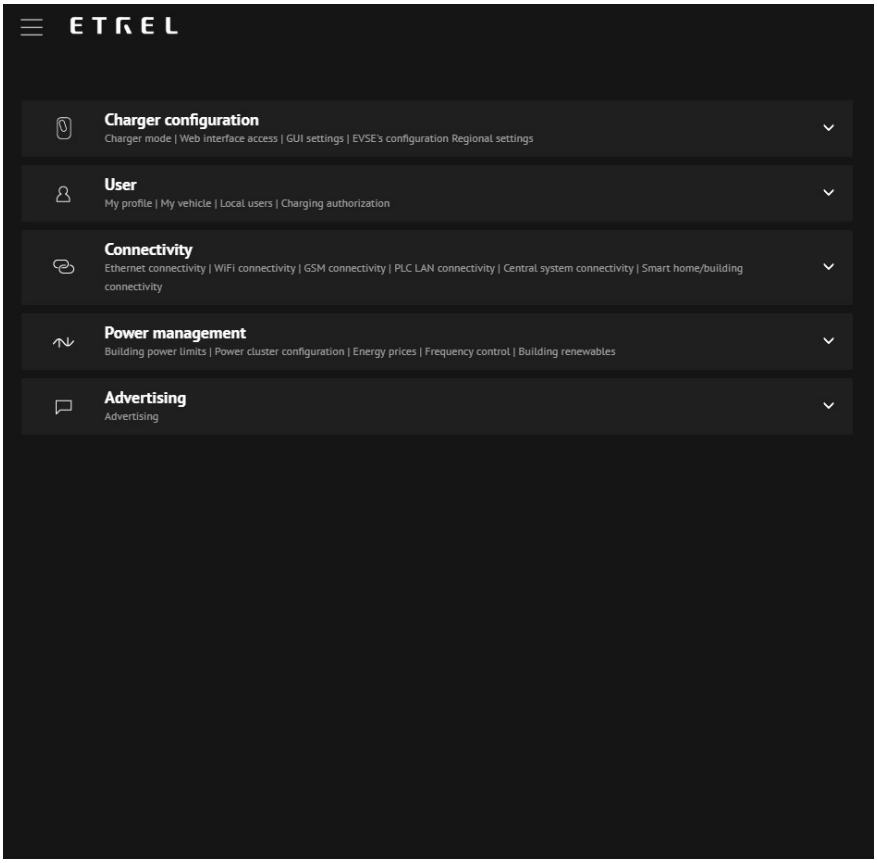
Important: *You can connect to your Etrel Inch web interface by typing the charging station IP in the internet browser you are using. Default IP is written on the sticker inside of the side maintenance doors.*

If DHCP is written on the sticker. You can acquire DHCP address by holding the charging station reset button for 4 s until the first beep sound is heard. Address will be displayed on the LCD screen.

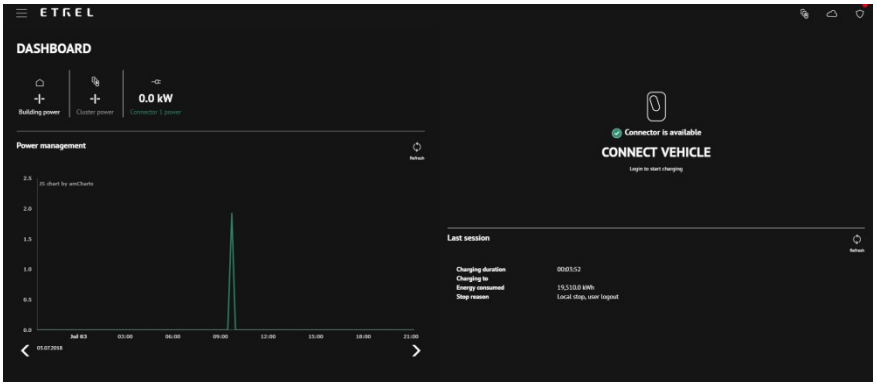
Depending on the charging station supplier's decision you can see username and password written on the sticker inside the side maintenance doors. What type of priorities this username will give you is also decided by the supplier. You can either have admin right or rights of an ordinary operator, which can't change the configuration of charging station.



If this is the first sign in and configuration of charging station was not yet set you will be shown configuration module.



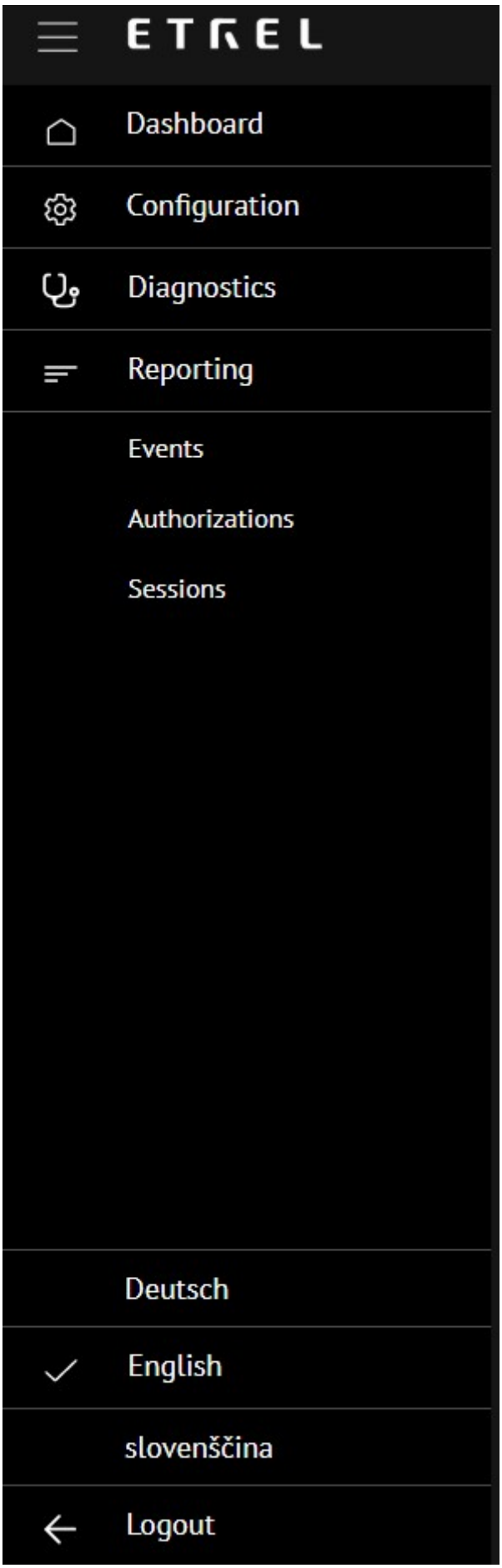
For any subsequent sign in main dashboard window will be displayed where you will be able to see current power, cluster power if the charging station is part of the cluster, building power load, if the load guard unit is also installed, charging station availability and information about the last session.



Last session status will be shown on the right screen. If anything went wrong during the session additional information can be acquired in the Diagnostics menu accesed using the burger menu.

3 | CHANGE THE LANGUAGE

You can change the language of the web interface to one of the languages supported by web interface by pressing the burger menu icon and selecting the desired language.

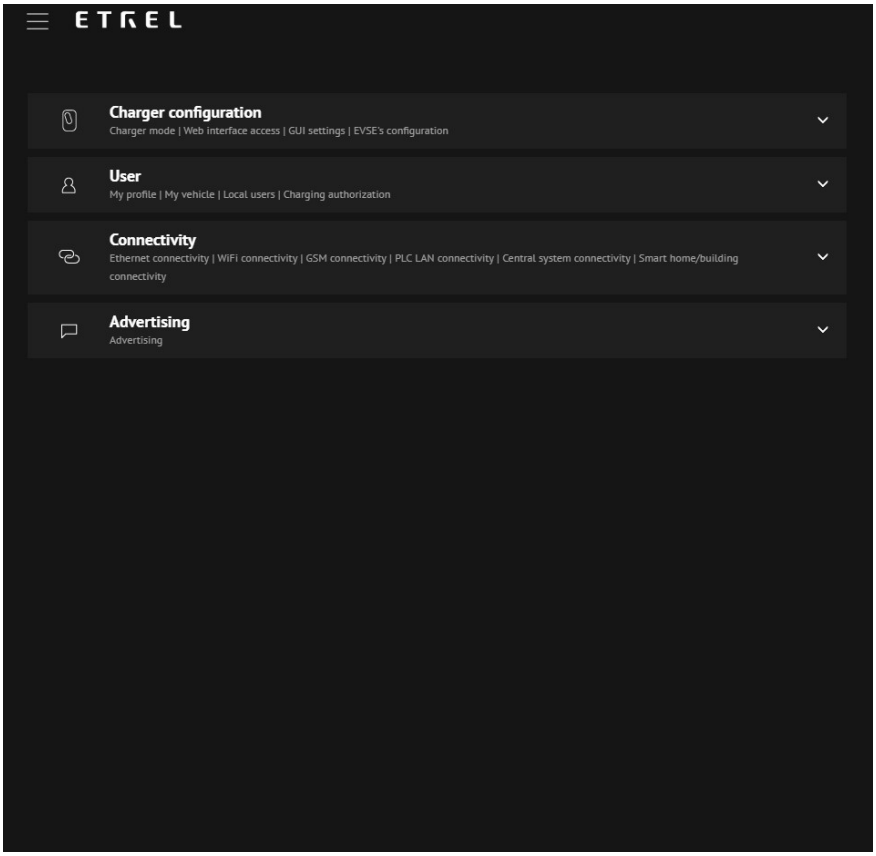

ETREL
Dashboard
Configuration
Diagnostics
Reporting
Events
Authorizations
Sessions
Deutsch
English
slovenščina
Logout

Supported languages are set by admin user in the configuration menu.

4 | CHARGING STATION CONFIGURATION

USER RIGHTS

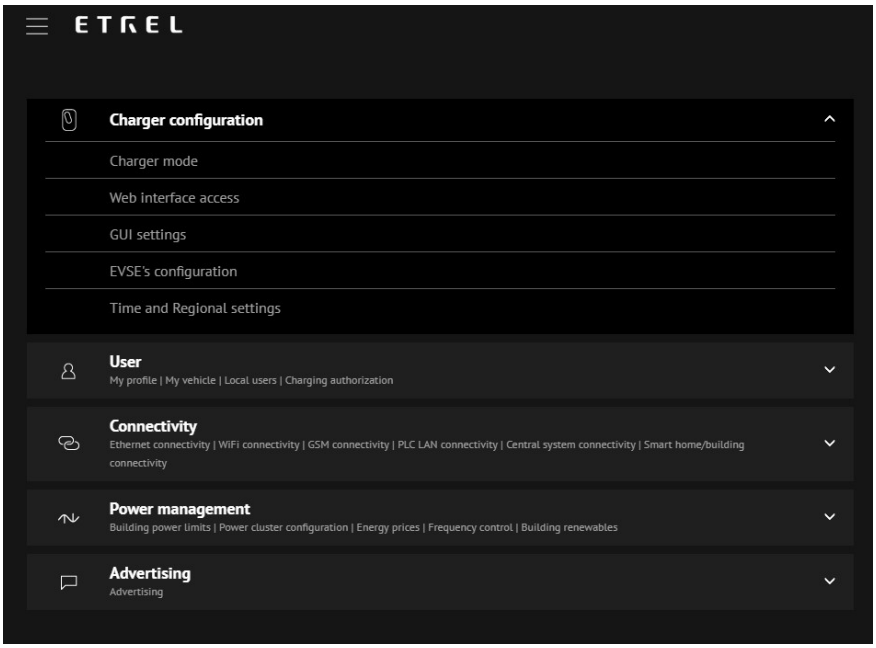
Charging station configuration possibilities differ depending on the Role of the user. Three roles exist: View, Operate and Admin. Users with Admin role are the only ones that have full range of configuration possibilities. Operator has similar right than Admin but lacks Charger configuration options. Viewer can only check Dashboard where he can check what is currently happening with the charging station and data about sessions.

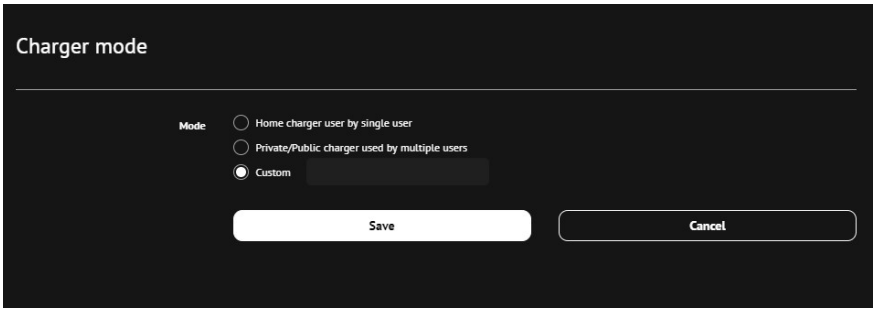


CHANGE CHARGING STATION MODE SETTINGS

These options can be accessed only by users with Admin rights. Charger mode settings can be configured by pressing the “Charger configuration” and then “Charger mode” in the “Configuration” menu. You will have option to choose between **Home charger used by single user**, **Private/Public charger used by multiple users and Custom mode**. This will affect whether the charging station will be displayed on the frontend app if the CPO/EMSP you are connected to uses frontend app. Depending on the choice additional mode settings will be available in the User option. More on this can be read below in the User chapter.

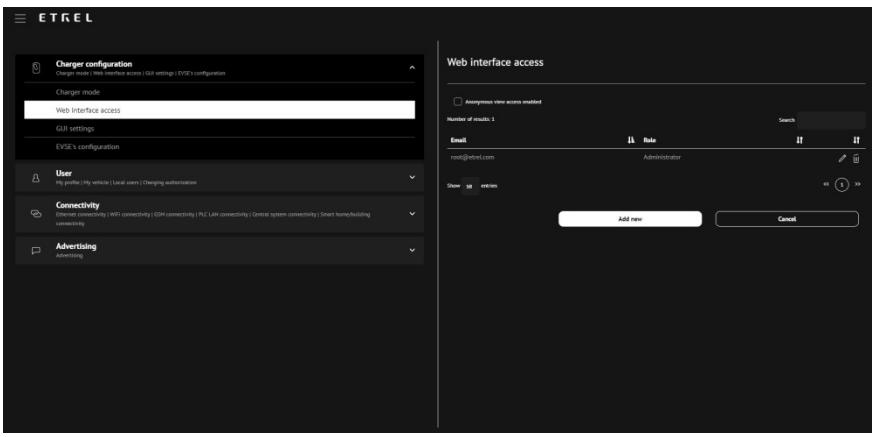
Custom charger mode represents the specific mode defined by the charging station reseller.

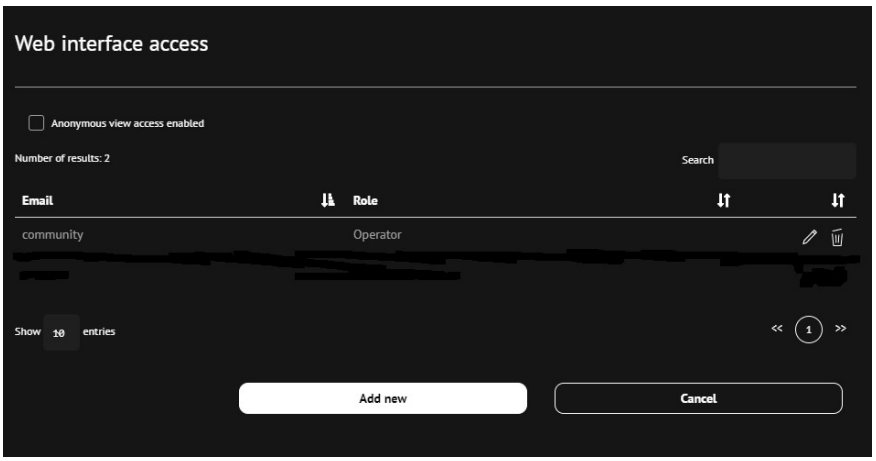




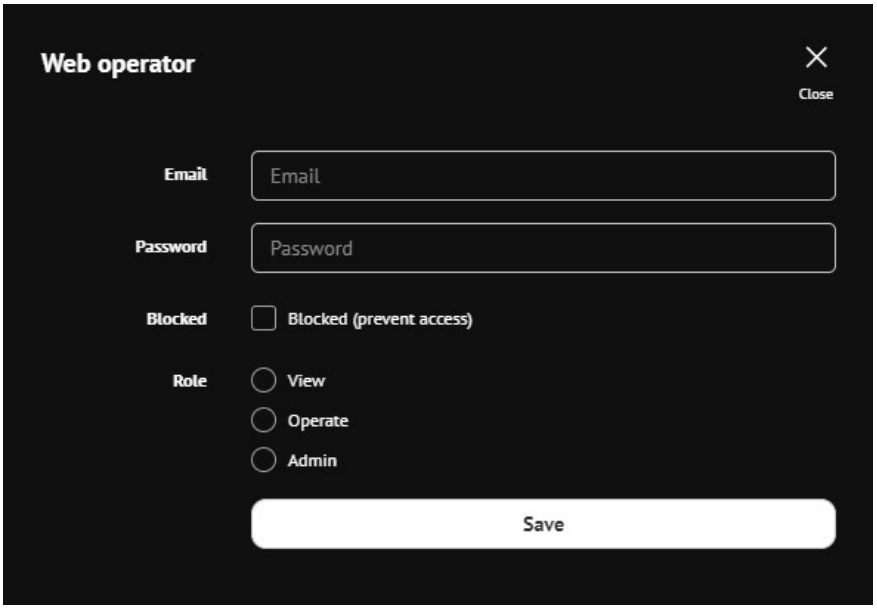
WEB INTERFACE ACCESS

By pressing “Charger configuration” and then “Web interface access” in “Configuration” menu you are able to give certain users roles which will give them different access to the charging station’s settings and options.

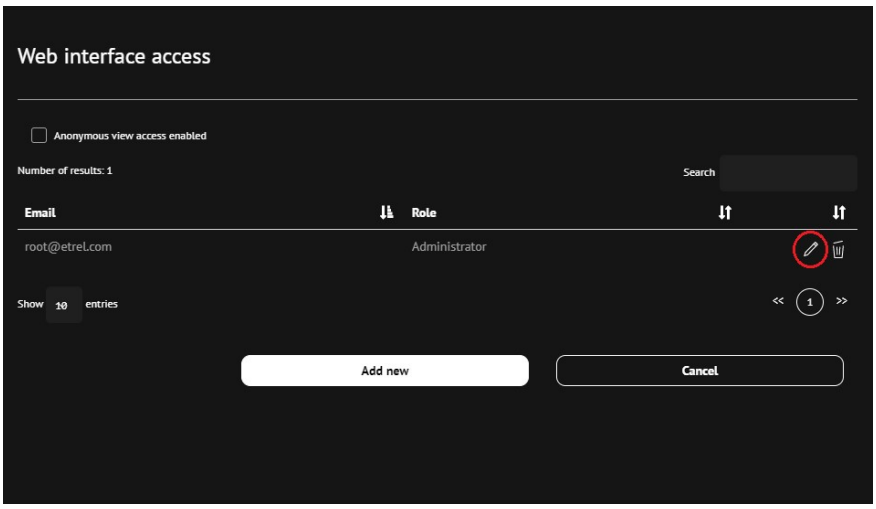




This can be done by pressing the “Add new”. New window will open where you need to input user information (Email, password and role). You can use the same window to Block access for particular user.



You can edit users and their roles by pressing the edit icon (marked with red circle below) or delete them by pressing the trash can icon next to the edit icon.

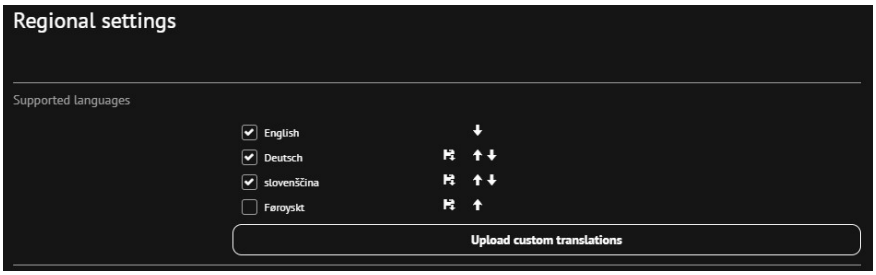


»Anonymous view access enabled« option allows you to provide unsigned users to see the dashboard and check charging session.

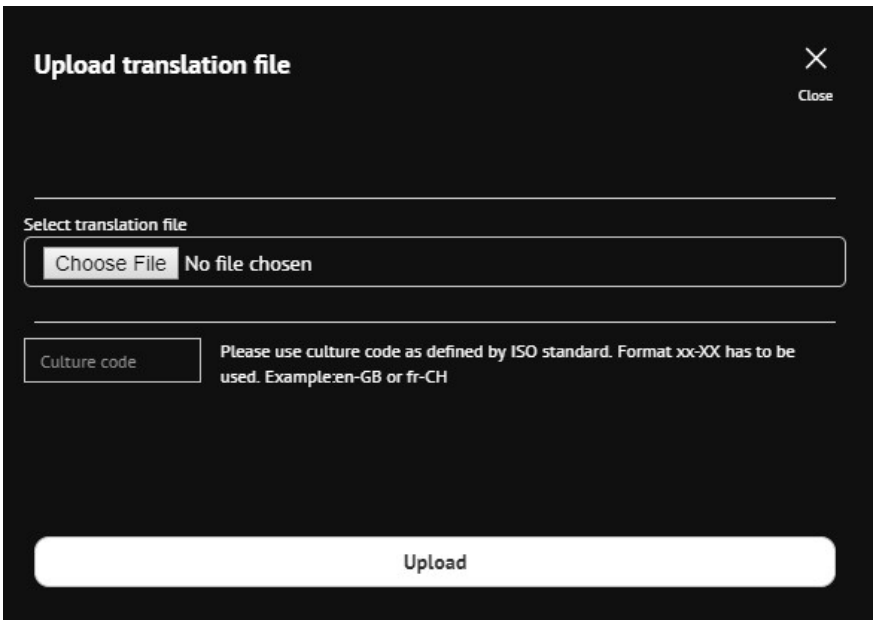
CHANGE SUPPORTED LANGUAGES

You can change the supported language by going to “Charger configuration” and then “Time and Regional settings” in “Configuration” menu where you can choose which languages will be shown on the charging station LCD screen.

Language that is put on the first spot is the default language used.

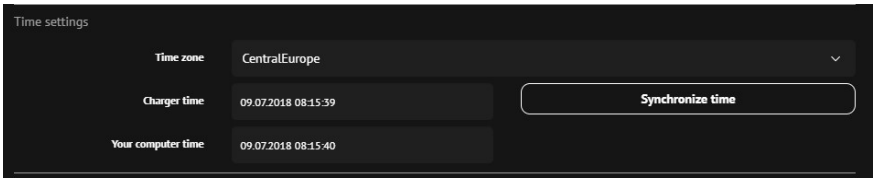


You can upload custom translations of supported language by pressing the “Upload custom translation” button.



CHARGING STATION TIME SETTINGS

You can set time settings of the charging station by going to “Charger configuration” and then “Time and Regional settings”. You are able to set charging station time and you can synchronize it with your computer by pressing the “Synchronize time” button. You can also select the Time zone of the location where your charging station is located.



CURRENCY SETTINGS

In the “Time and Regional settings” in “Charger configuration” you are able to choose the currency in which energy prices will be displayed.

BEHAVIOUR BEFORE AND AT END OF CHARGING

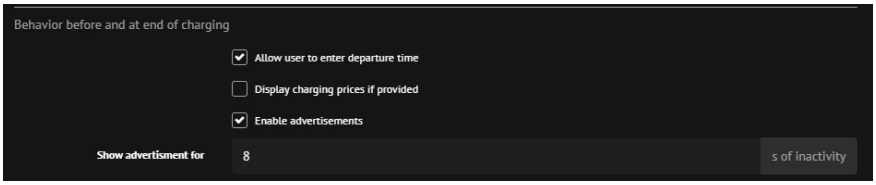
These options allow admin to enable certain functionalities before and at the end of charging. Three functionalities can be enabled:

- Allow users to enter departure time
- Display charging prices if provided
- Enable commercials
    - Time how long the commercial will be shown

Departure time is especially important information when the power management is running on the charging station. When this is the case this option should be enabled. This will improve power management algorithm as it will give charging station additional information about charging preferences.Departure time allows charging station to calculate flexibility and to schedule the charging session.

Charging prices can be displayed on the LCD screen when second option is enabled. This is currently not supported but in the future when OCPP 2.0 is implemented option will be available.

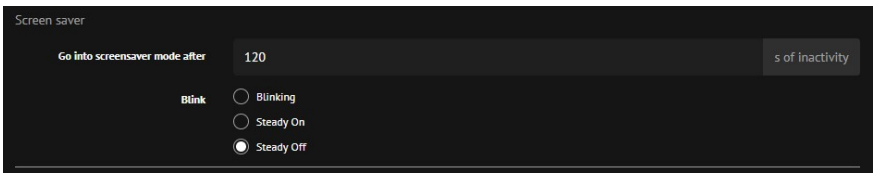
In order to show **commercials** on the charging station's LCD screen third option should be enabled. You can set how long the commercial will be shown on the screen by setting the time.



CHANGE SCREEN SAVER PARAMETERS

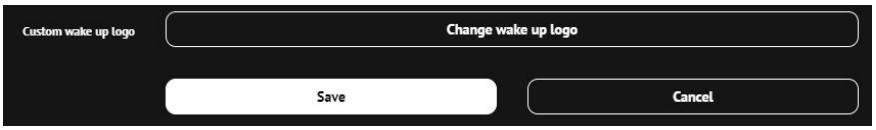
You are able to change the number seconds of inactivity needed for charging station to go into screensaver mode. You can change this settings by going into "Charger configuration" and then "GUI settings" in "Configuration" menu.

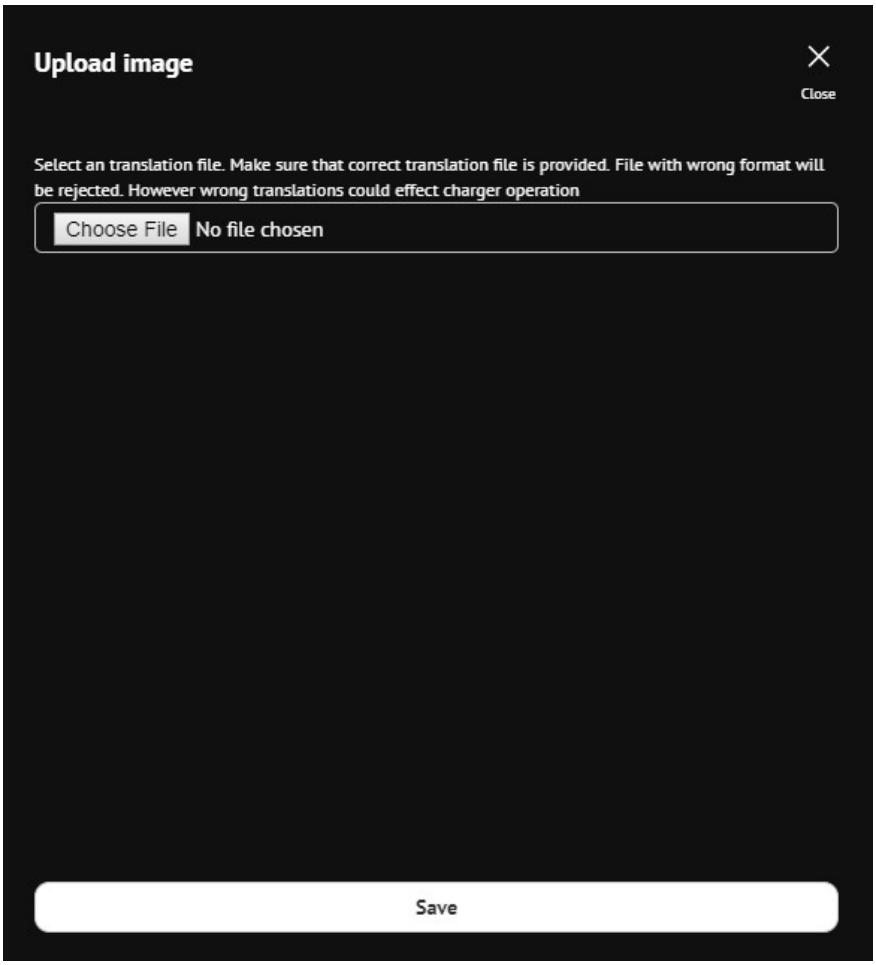
You can choose that screen either Blinks is turned On or Off in standby mode. Blinking screen is a good option for public charging station as the screen tells users from the distance that the charging station is on and in standby mode. If the Steady On option is chosen LCD screen will have higher possibility to malfunction as it will be turned on all the time. Charging station will also use more electricity. Steady Off option is best to use for private charging station or where blinking light will provide enough information about charging station status to users.



Change wake up logo

Wake up logo can be change in the “Charger configuration” and then “GUI settings” in “Configuration” menu. By default Etrel logo will be shown. By pressing the “Change wake up logo” you can change that.

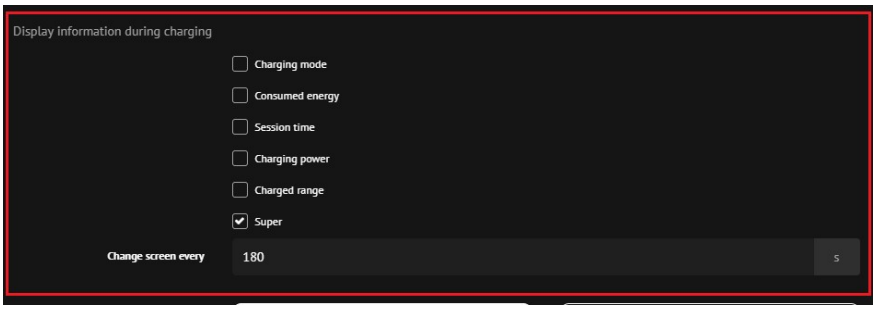




CHANGE DISPLAY INFORMATION DURING CHARGING

You can change the display settings in “Configuration” menu by going into “Charger configuration” and then “GUI settings”. Various options what can be displayed are available. You can also choose

multiple options and the screen will switch every x seconds based on the “Change screen settings” setting.



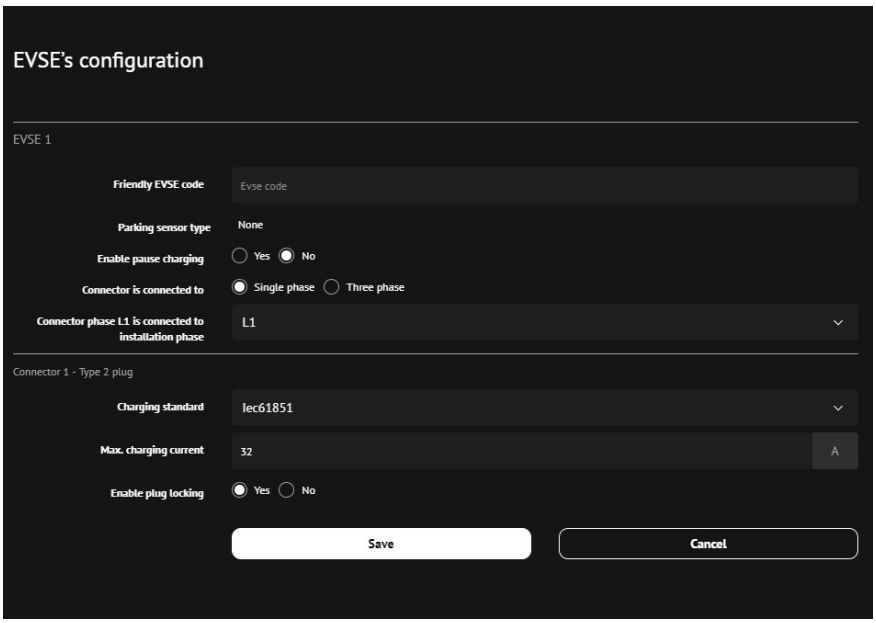
“Super” option is a special option and displays information about range, charging mode and departure time all on one screen.

EVSE’S CONFIGURATION

In order to change the charging station EVSE’s configuration you need to go to “Configuration” in the burger menu then to “Charger configuration” and “EVSE’s configuration”. You are able to change various parameters of each EVSE:

- Friendly EVSE code,
- Enable pause charging,
- Number of phases,
- Which phase is used for single phase EVs,
- Max charging current per phase and
- Enable plug locking.

Especially important option is which connector will be used to charge single phase EVs. Least loaded phase should be chosen if only one charging station is connected to grid. If charging station is part of the cluster you should vary the phases that charge single phase EVs.



Limit max charging current

You can limit the charging station charging power by limiting the max current value. With the limitation you can prevent the possibility of overloading the grid. This option is available under the "Charger configuration" in the "EVSE's configuration" option under the "Configuration" menu.

5 | USER

User settings have different options depending on the charger mode chosen.

If the "Home charger used by single user" is chosen you will see two options:

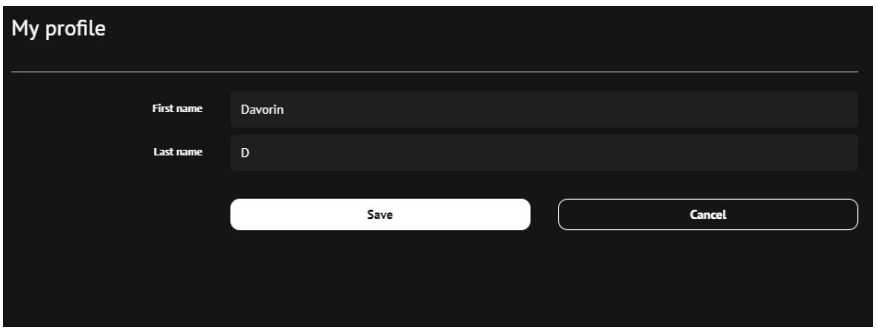
- My profile
- My vehicle

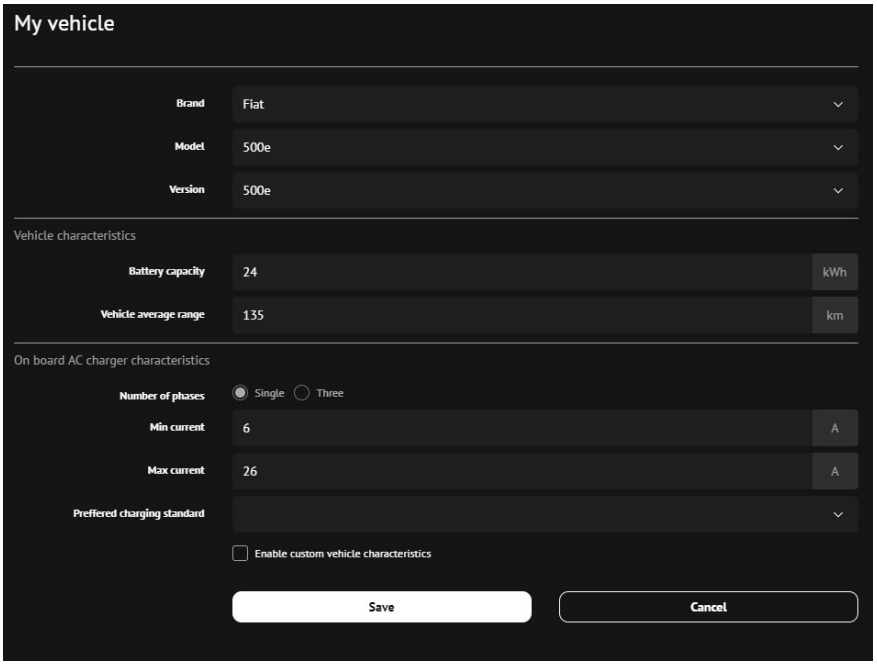
If the Private/Public charger used by multiple users is chosen you will be able to change following settings:

- Local users
- Charging authorization

HOME CHARGER USED BY SIGLE USER MODE

"My profile" option is used to write in First and last name of the user that will be using this charging station. You can add EV user is using in the "My vehicle" options.

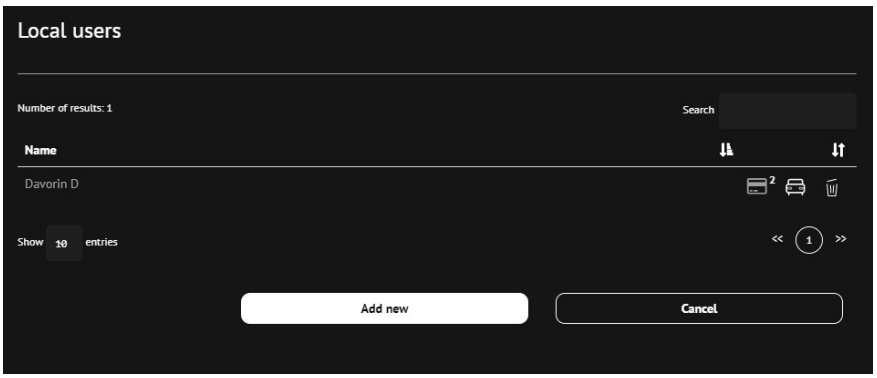




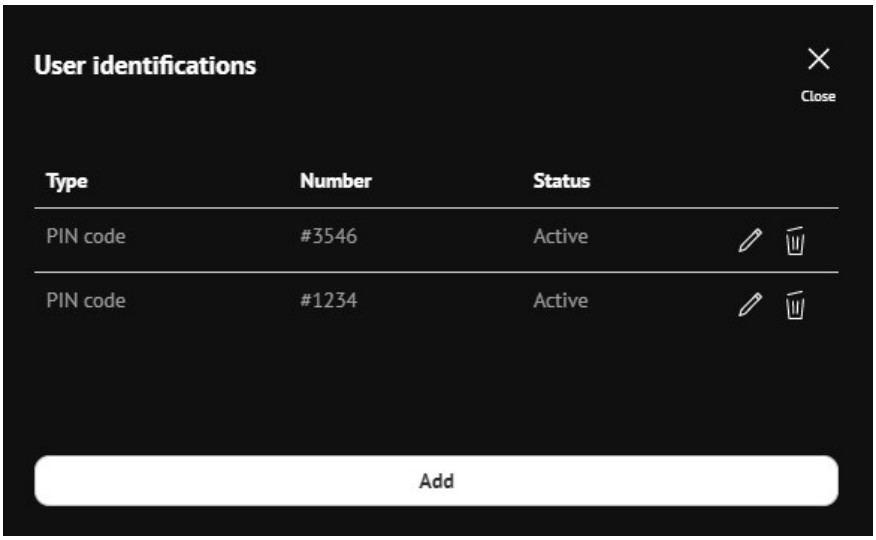
PRIVATE/PUBLIC CHARGER USED BY MULTIPLE USERS

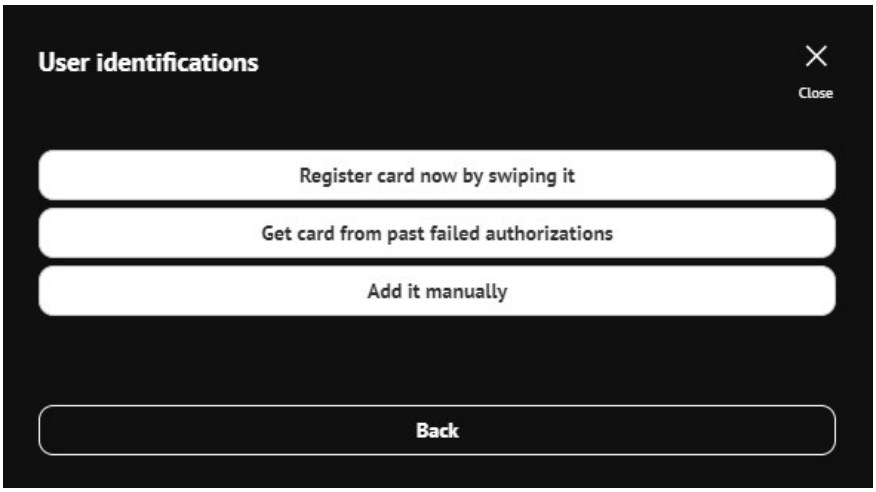
This mode is used for multiple users so the options that become available allow you to add multiple users that will be able to use charging station.

“Local users” option opens where by pressing the “Add new” button allows you to create new users. You will need to insert first and last name of the user.



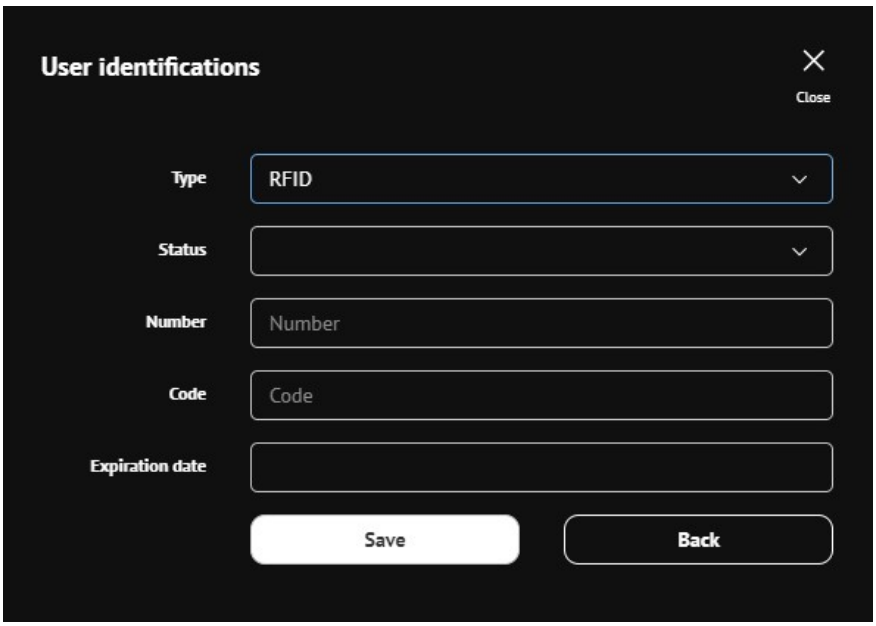
You can give each user one or multiple identification means. Pressing the RFID card icon option you will be able to see all the identification that are assigned to the user and you will be able to add new ones or edit and delete already assigned identification.





When adding new identification you will be able to choose already swiped RFID cards or the system will ask you to swipe the card and then add it to the system.

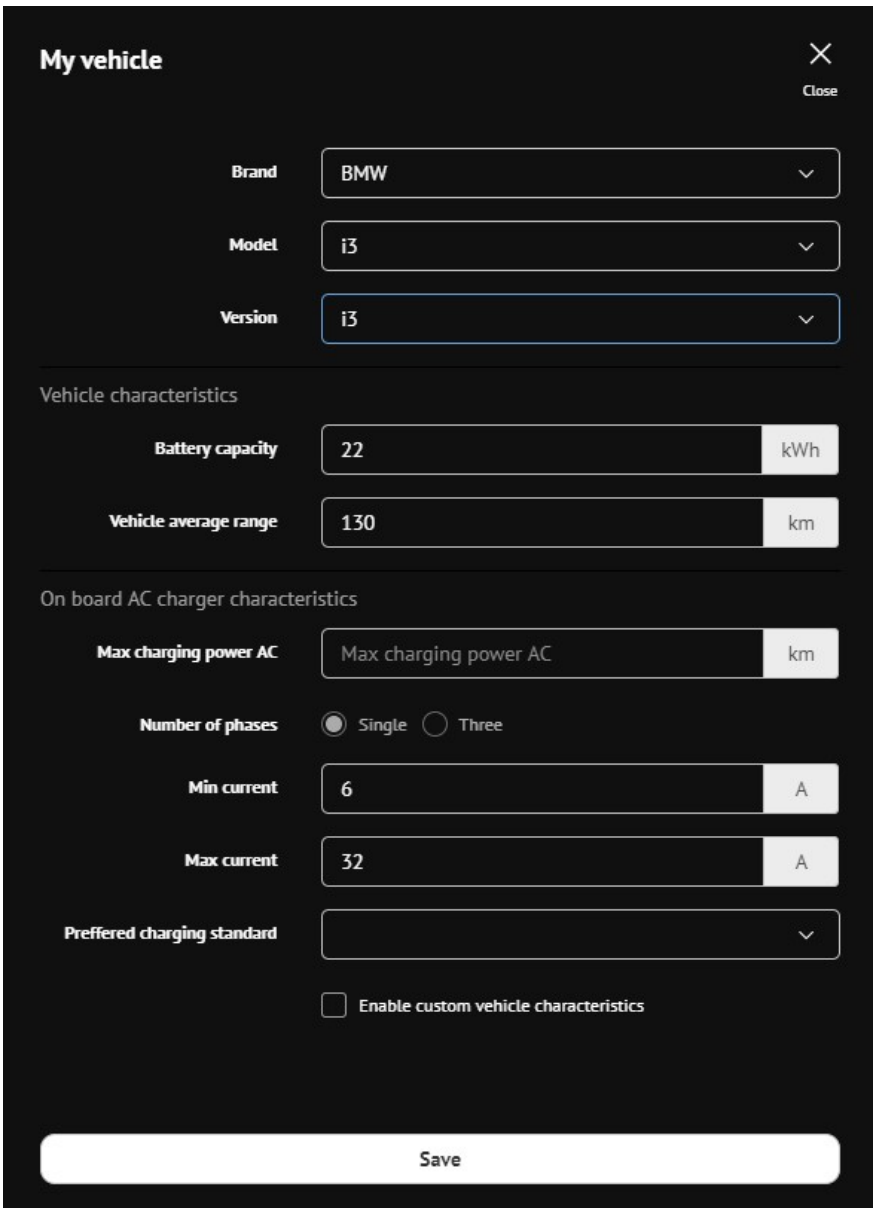
If you press “Add it manually” you are able to choose what type of identification you will add for this user. You can choose between: RFID, PIN, Vehicle ID (EIC 15118) and Remote identification (mobile app).



You can set:

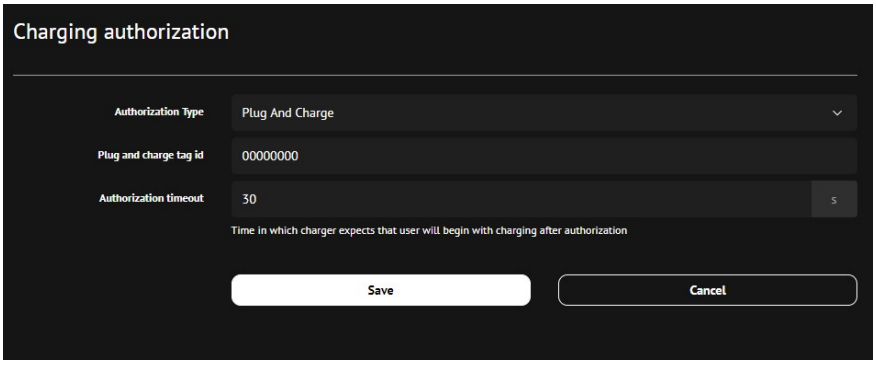
- Status (Active, blocked, expired, invalid and unknown)
- Number – Number on the identification mean (RFID often has number written)
- Code – identification unique code
- Expiration date

You can add EV to each user individually by pressing the EV icon. New window will open that will give you option to choose predefined EV or defined it yourself.



In the Charging authorization you are able to set what Authorization type will be used whether the station will be Plug and Charge or only Charger white list users will be able to charge, only Central system users or both central system users and white list users.

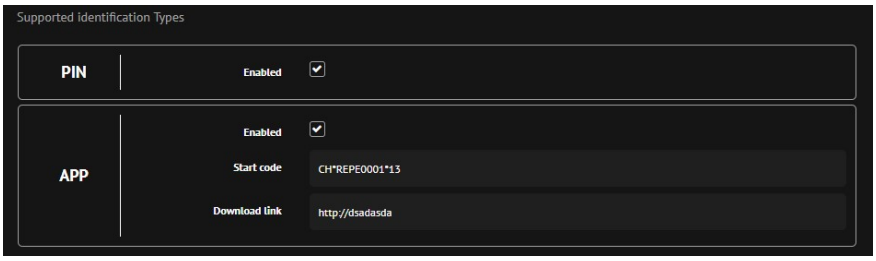
If you decide that Authorization type will be Plug and Charge you have to set also **Plug and charge tag id** which is code charging station sends to the backend when plug and charge mode is used.



CHOOSE SUPPORTED IDENTIFICATIONS

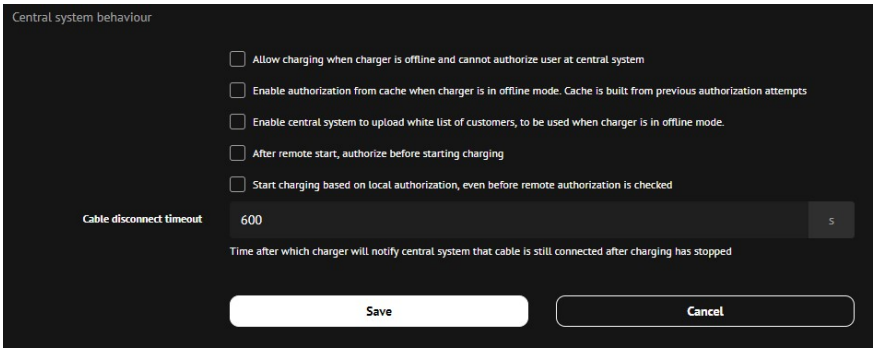
Which identifications are supported by the charging station is first of all dependent on the type of charging station and which authorization modules are installed inside the charger. Depending on the module installed you can then in the web interface select whether particular authorization will be available for the users of particular charging station. You can set this in the “User” “Charging authorization” window.

You can enable the authorization type and set particular settings for example in the case of App authorization you need to insert app download link and Start code.



SET CENTRAL SYSTEM BEHAVIOUR

In the “User” “Charging authorization” option menu you are able to set Central system behaviour. Options that can be set are seen below on the image:

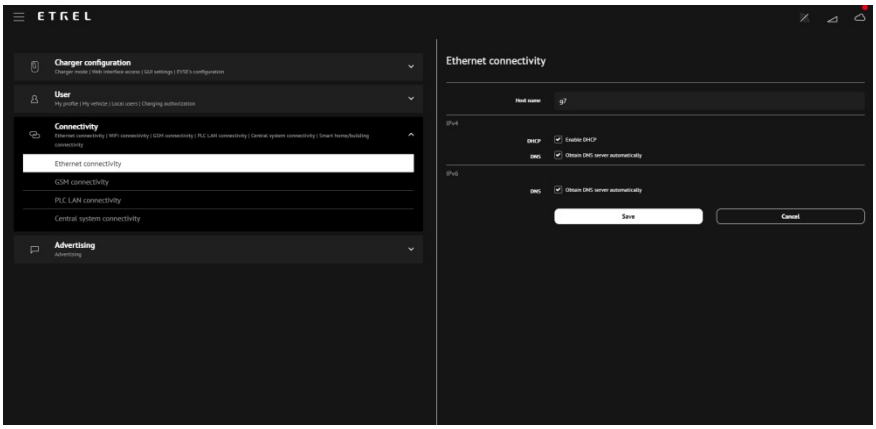


6 CONNECT THE CHARGING STATION TO THE NETWORK

Connectivity section of “Configuration” menu is especially important during the installation of charging station or if communication problems are occurring. Connectivity menu allows you to set parameters of connectivity available in your charging station. Depending on the charging station model particular connectivity options will be available for you to set.

You can set following connectivity options:

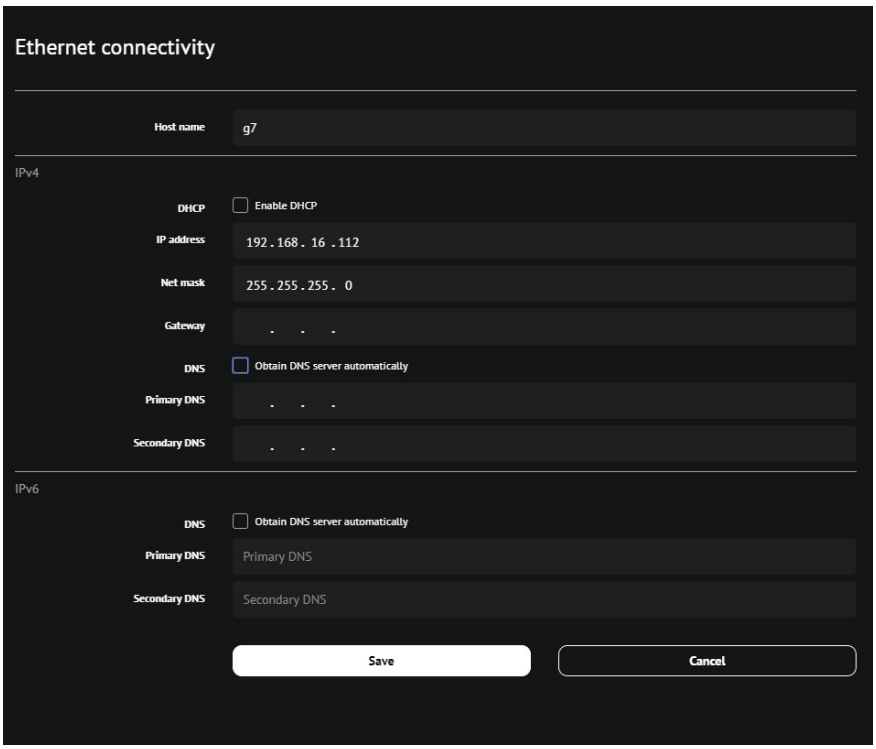
- Ethernet
- Wi-Fi
- GSM
- PLC
- Central system



ETHERNET CONNECTIVITY

When setting up connection using the Ethernet you need to go to the Connectivity section of “Configuration” menu and to Ethernet connectivity.

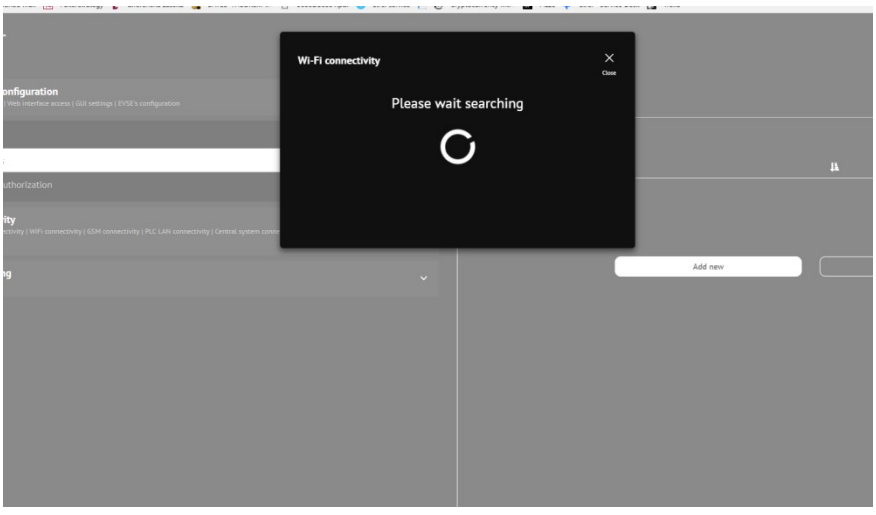
You will be able to set all the basic settings host name, IP, net mask, gateway... or enable automatic acquisition of options if this is supported in the network.

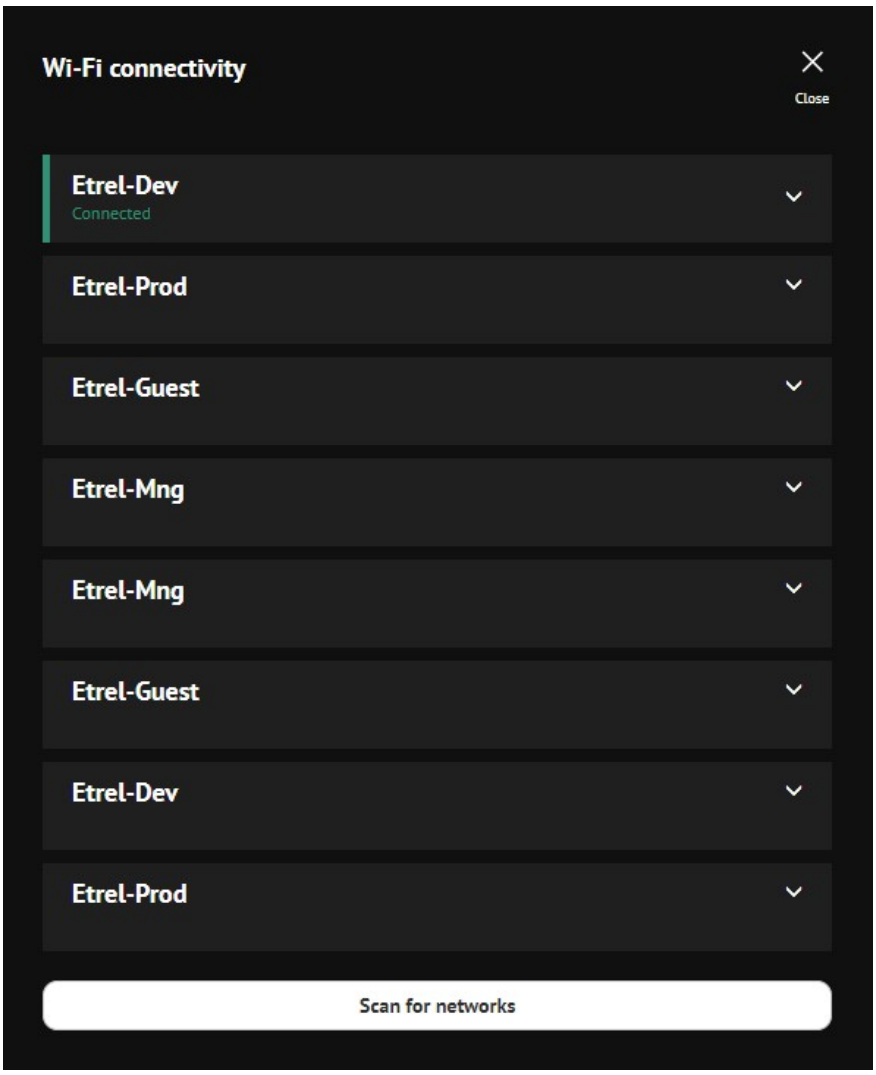


WI-FI CONNECTIVITY

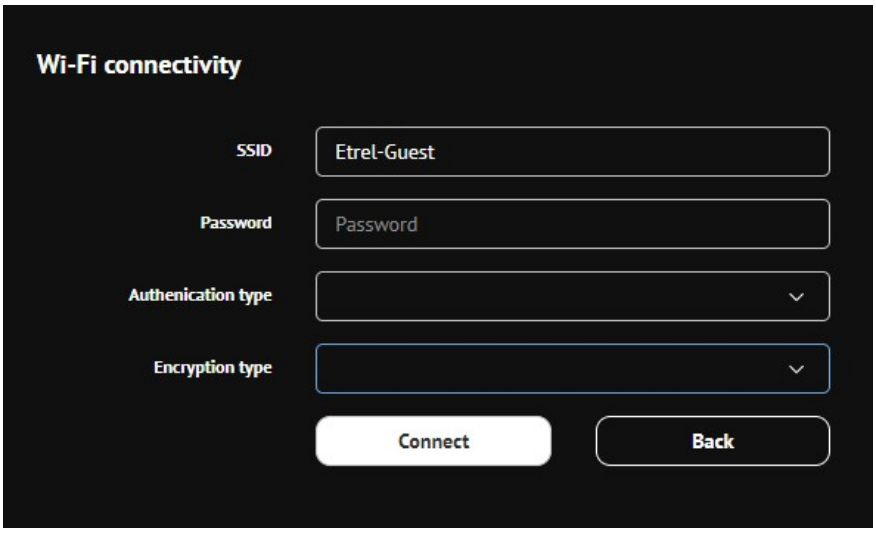
When setting up connection using the Wi-Fi module you need to go to the Connectivity section of “Configuration” menu and to Wi-Fi connectivity.

By pressing the Wi-Fi connectivity option web interface will try to find all the networks that are available for you to connect to.

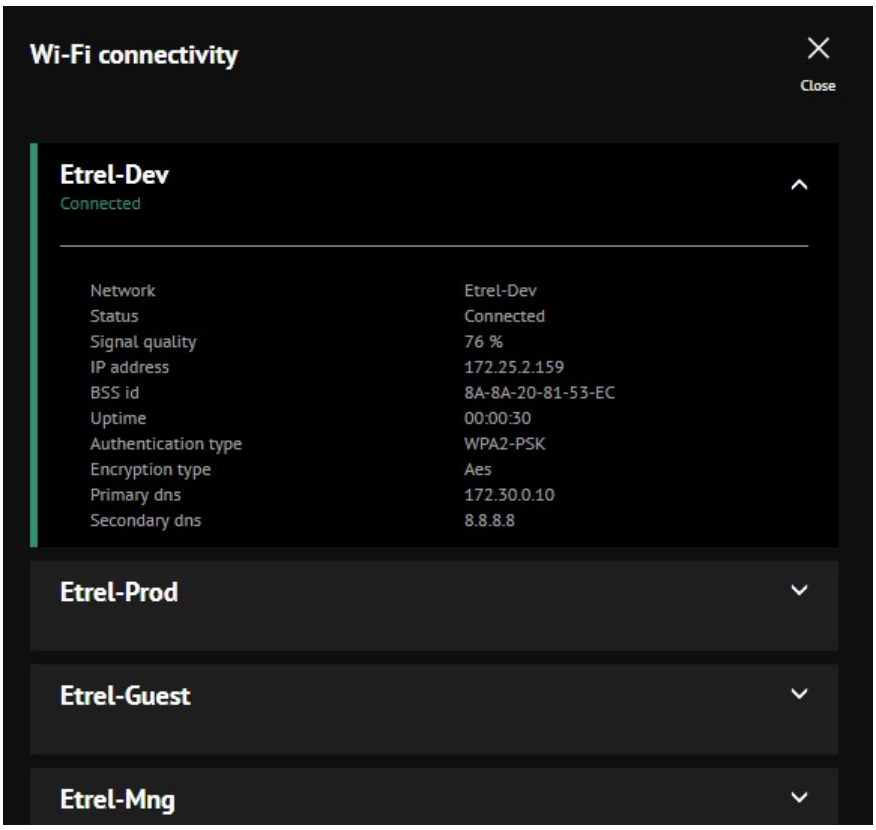




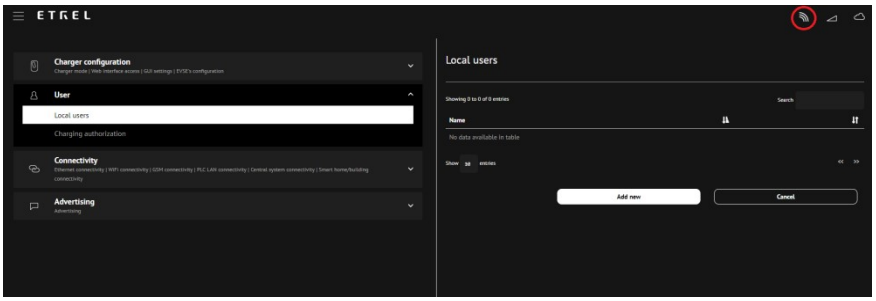
The searching process can take significant time at the beginning. Once all the available networks are presented you can choose the one you want to connect and input necessary information (password, authentication type, Encryption type).



When you are connected to the Wi-Fi network you can check additional information about the network by clicking on it.



Same process of identifying available Wi-Fi networks and connecting to one can be started by pressing the Wi-Fi icon in the top right corner.



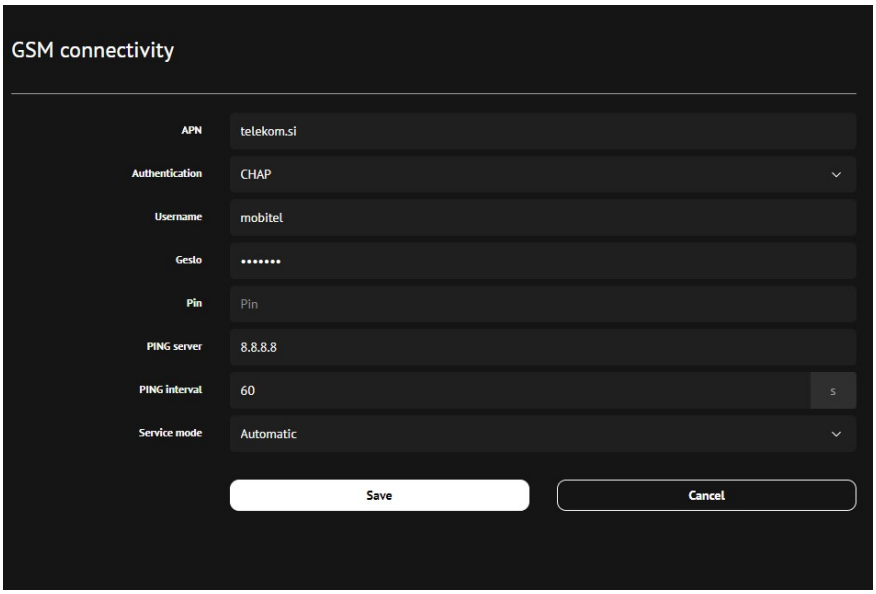
GSM CONNECTIVITY

When setting up connection using the GSM module you need to go to the Connectivity section of “Configuration” menu and to GSM connectivity.

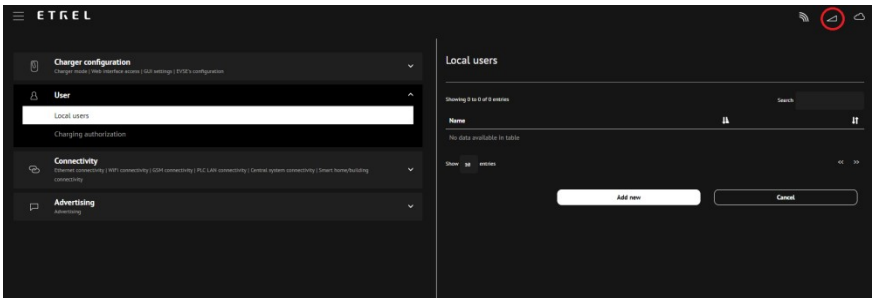
There you are going to be able to change multiple settings to properly set up GSM communication.

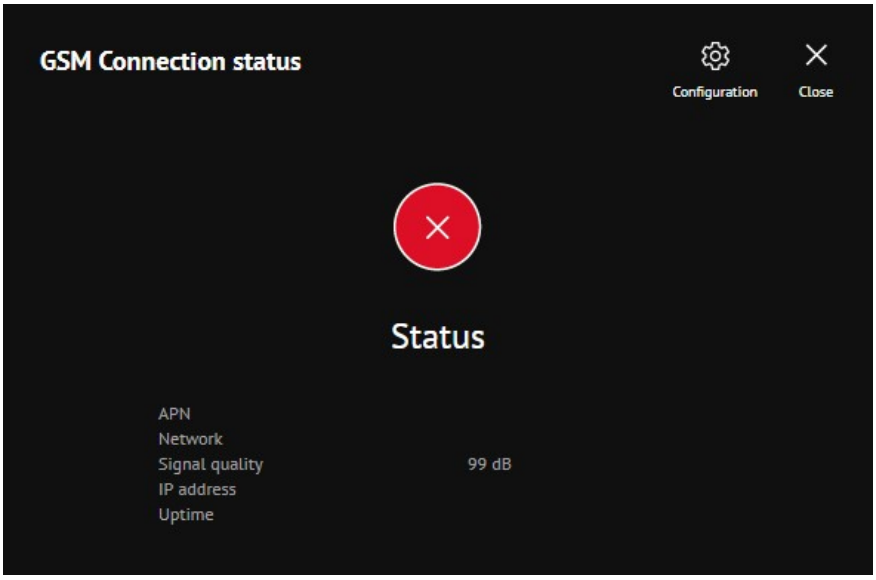
- APN settings
- Authentication
- Username
- Password

- Pin
- Ping settings



You can check the status of GSM connection by pressing the GSM icon in the top right corner of the main web interface window.





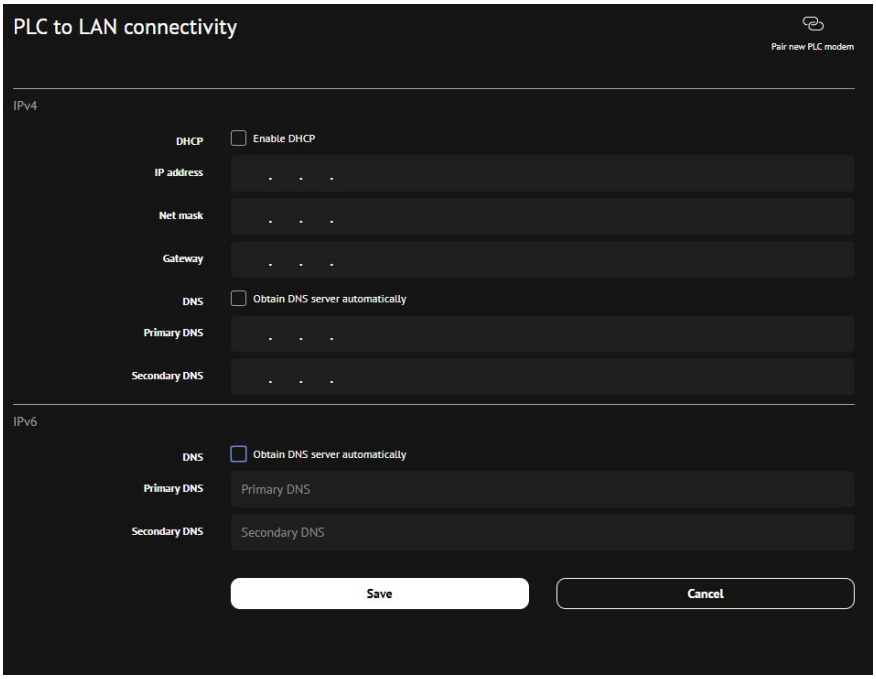
By pressing the “Configuration” button “GSM connectivity” settings will open.

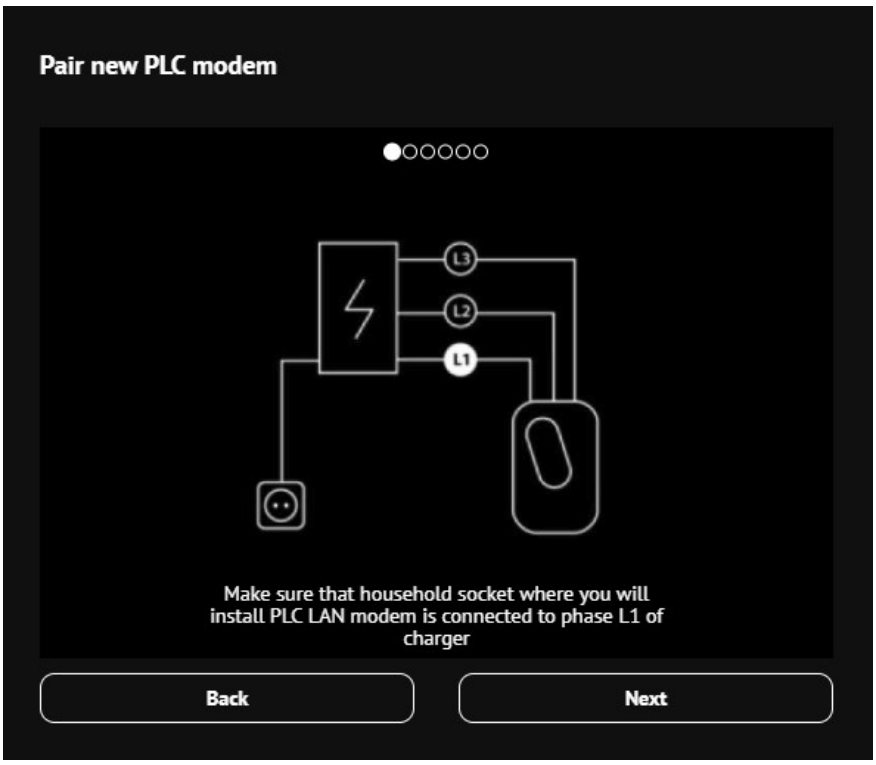
PLC LAN CONNECTIVITY

When setting up connection using the PLC module you need to go to the Connectivity section of “Configuration” menu and to PLC connectivity.

There you are going to be able to change multiple settings to properly set up PLC LAN communication.

By pressing the Pair new PLC modem in the top right corner whole process how to pair modem will be visually described.





CENTRAL SYSTEM CONNECTIVITY

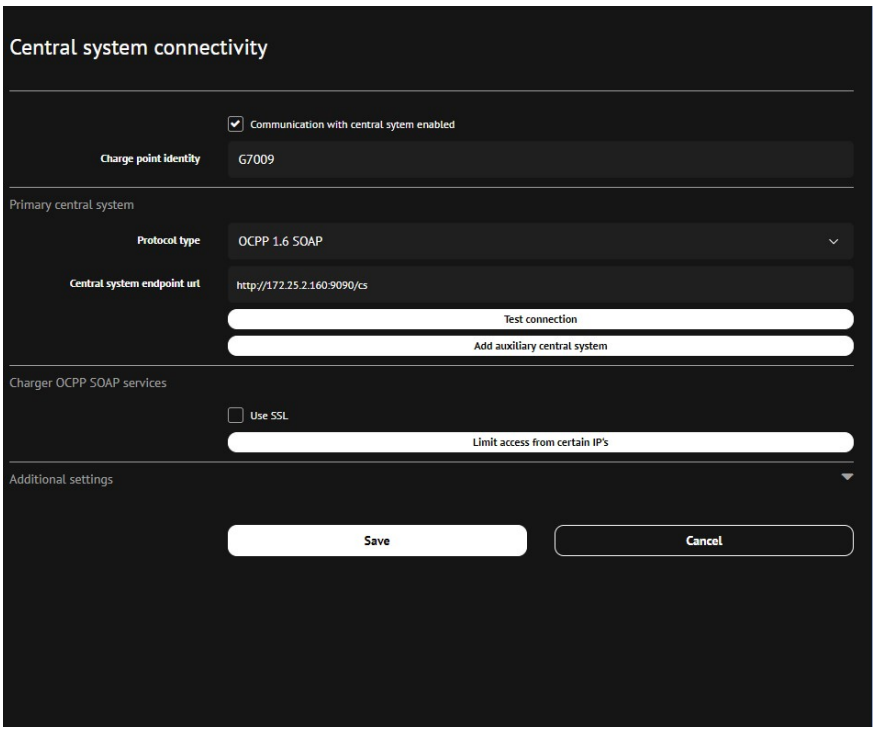
If you want to connect charging station to the central system you will need to set various settings in the “Central system connectivity” module. You can enable the communication with central system by ticking the enable button.

In the options you can define:

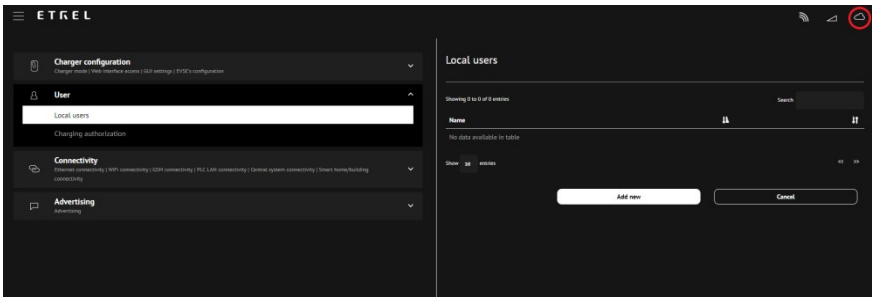
- Charge point identity
- Protocol type
- Central system endpoint url

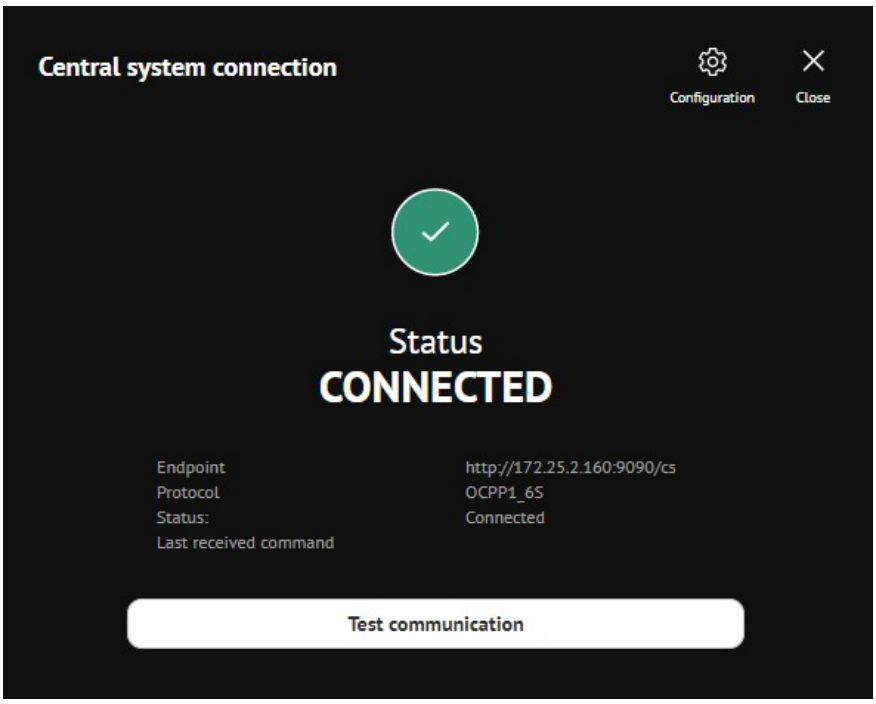
By pressing the “Test connection” button you are able to check whether the connection with the backend system is established.

Pressing the “Limit access from certain IP’s” will give you the possibility to limit certain IP to access the web interface.



By pressing the Central system connection icon in the top right corner you are able to check the status of connection and basic information of the connection (Endpoint, Protocol and last received command). “Configuration” button in the top right corner of the opened window will open you the main options of “Central system connectivity” settings.





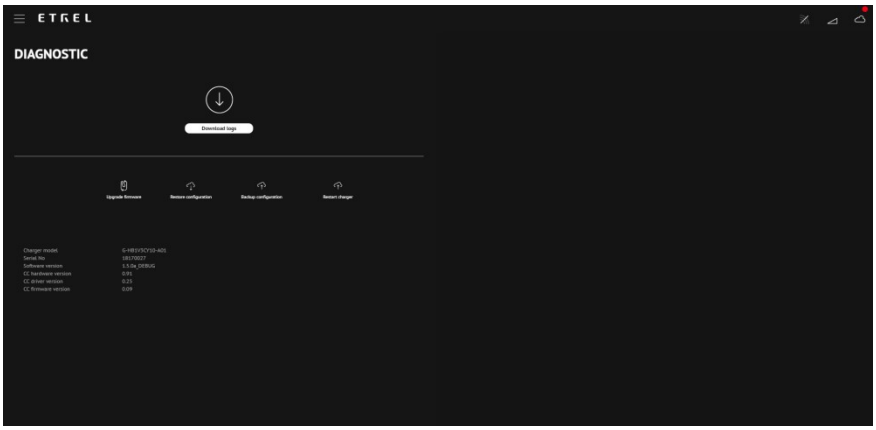
7 EXPERIENCING PROBLEMS

If you are experiencing problems you can go to the “Diagnostic” menu where you are going to be able to download logs, which can be sent to the operator to check what is wrong with charging station. You will also get basic information about the charging station:

- Model,
- Serial number,
- Hardware version,
- Software version,
- CC hardware version,
- CC driver version and
- CC firmware version.

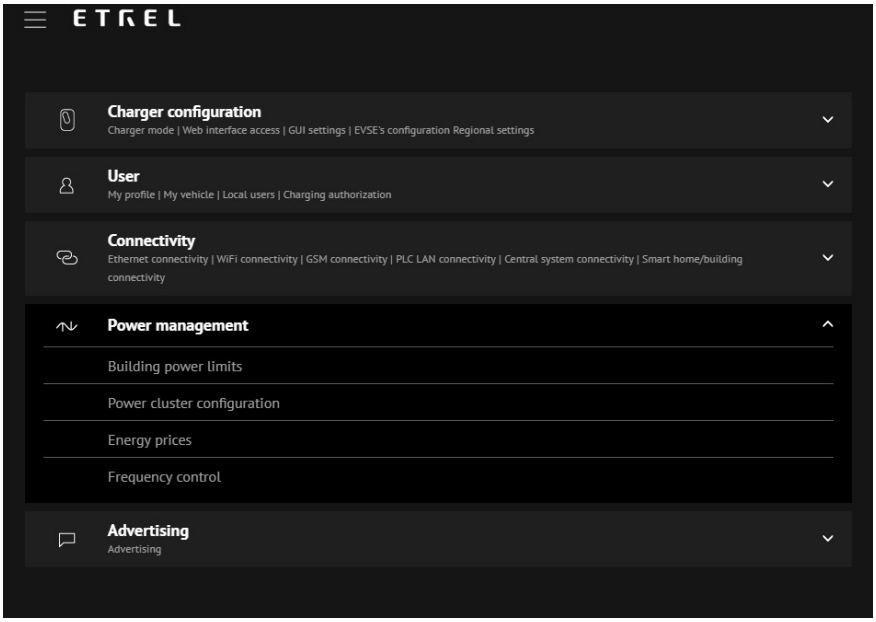
“Diagnostic” module can also be used to upgrade firmware, restore data and backup you charging session data and reset charging station remotely.

Backup configuration gives operator option to restore charging station to the same configuration if something malfunctions with the system and charging station needs to be restored to default settings.



8 POWER MANAGEMENT

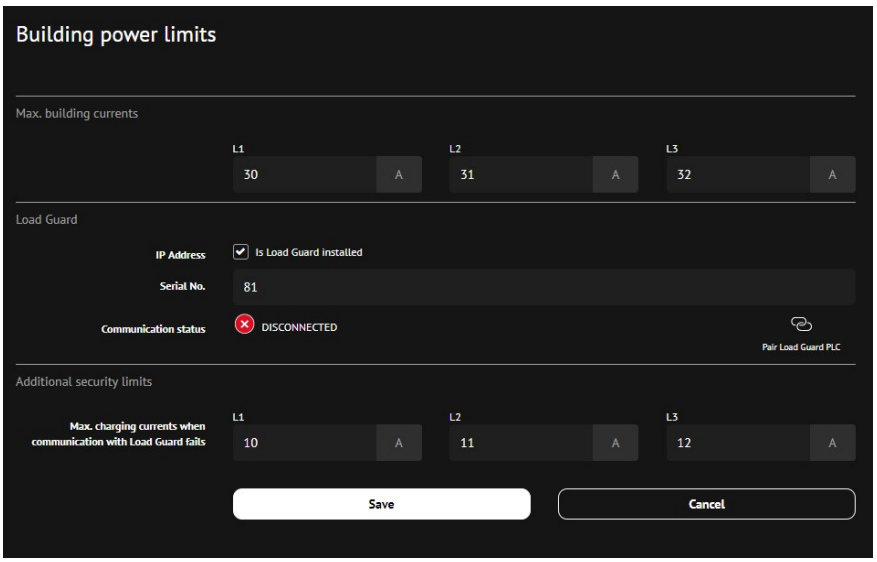
Power management settings allow operators to set various aspects of power management functionalities and cluster settings. You are able to change Building power limits, Power cluster configuration, Energy prices and Frequency control.



BUILDING POWER LIMITS

Building power limits settings allows you to set current limitation for the charging station for each phase separately in order not to exceed the household grid limits. Here it is advisable not to set the max current limits for household to avoid blowing the fuse.

You can also set additional security limits to reduce the max current of each phase in the event when the communication with the Load guard is interrupted.



Load Guard settings

In the same option menu you are able to set Load guard:

- IP address
- Serial no.

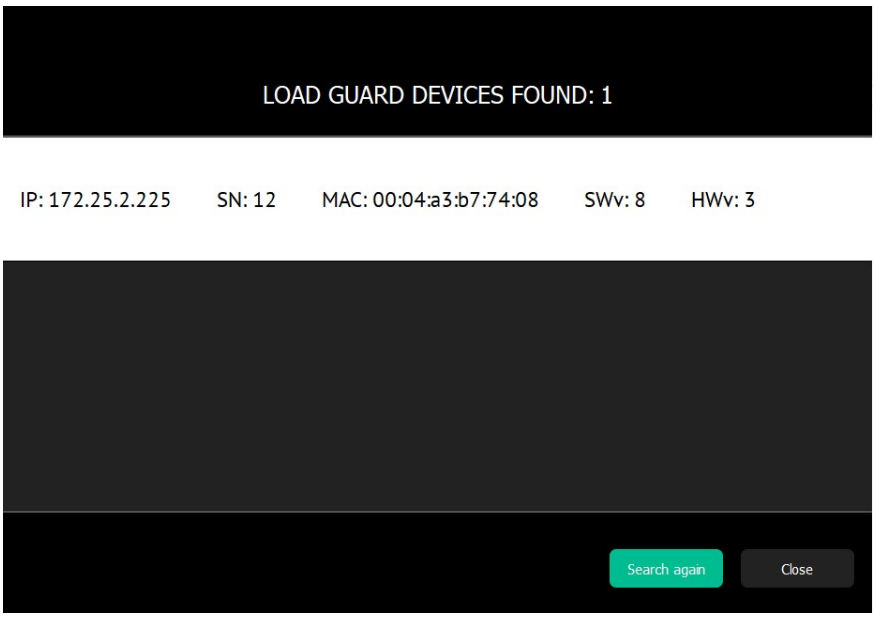
You can pair the Load guard to PLC if this is the communication type used by pressing the “Pair Load Guard PLC” button. Button will show you the window with the description of procedure how to do this. If the load guard is bought together with the charging station load guard will already be paired with the station. Same information window can be also seen in the PLC LAN connectivity section of this document. Communication status can also be checked.

“Pair Load Guard PLC” window will also give you the description what to do in case you are experiencing difficulties with Load Guard.

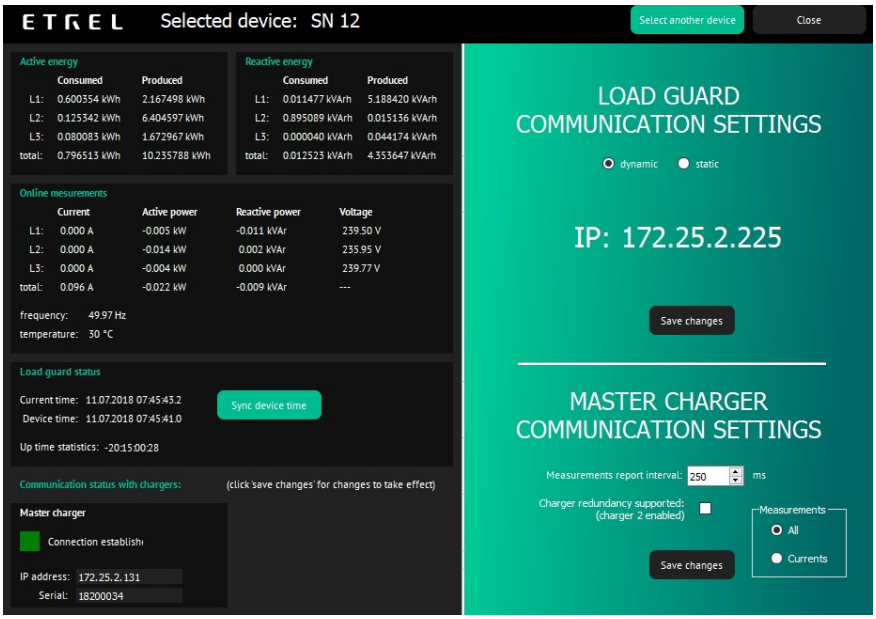
Load guard configuration

In order to configure the Load guard you are able to download software developed by Etrel to do this. Download link can be found on the Etrel internet site (link).

When software is ran all the load guards in the same network will be found and displayed on the screen as it is shown on the figure below.

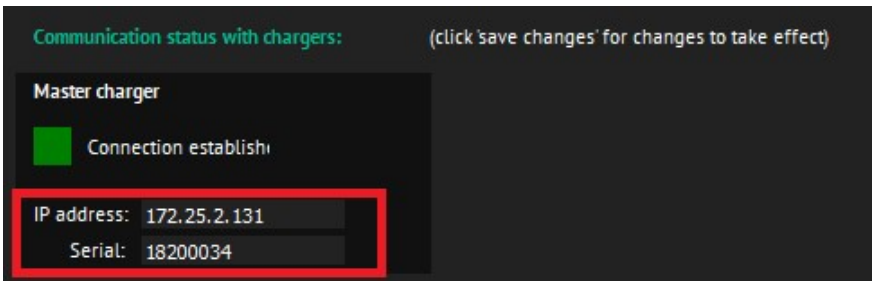


When particular load guard is pressed new screen will be shown with configuration options for load guard and all the measurement of each phase that load guard is currently measuring.



In case device time and current time are not synchronized you are able to synchronize them by pressing “Sync Device time” button.

Most important setting that may influence the load guard data received by the station us the IP address of the charging station. IP will be set up in the production but if the IP of the charging station was changed it needs to be changed also in the Load guard software.

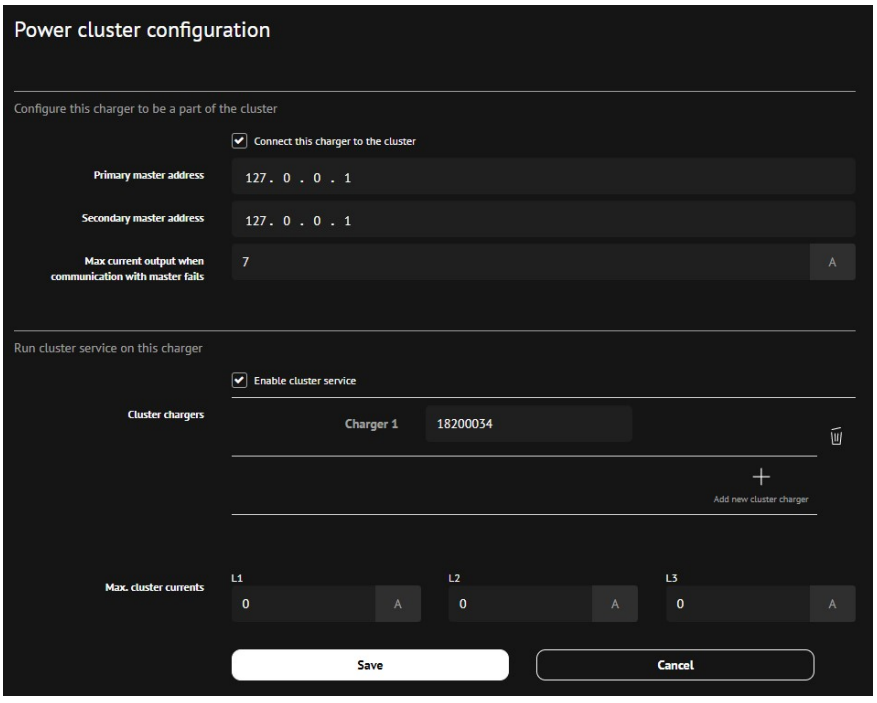


Apart from this you can also change the load guard communication settings from dynamic IP to static one.

POWER CLUSTER CONFIGURATION

Power cluster configuration options in the web interface allow you to define which charging stations are parts of the cluster, set IP of the primary and secondary master and set max current output if the communication with the cluster master is interrupted, which is very important setting in order to prevent blowing the fuse if the grid limitations change during the time of no communication.

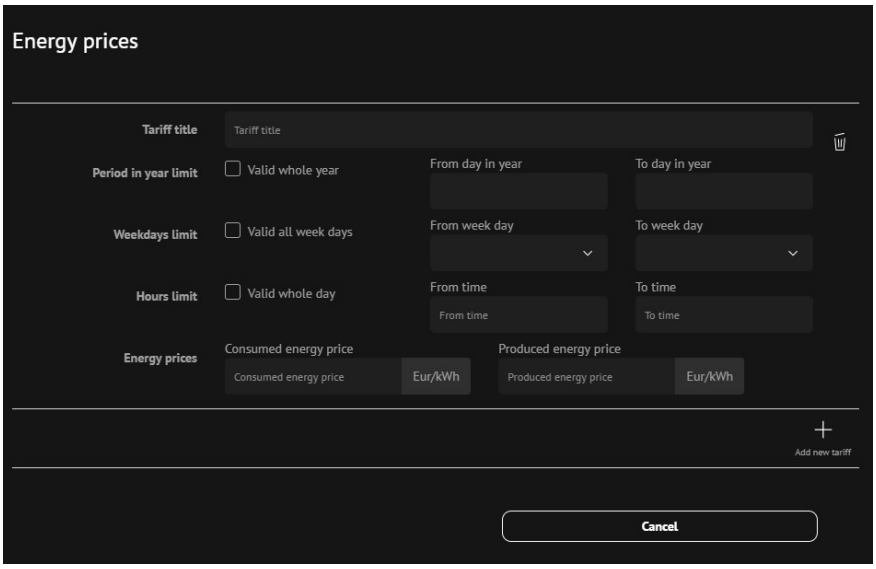
You can also limit cluster currents by setting limit on each phase separately.



ENERGY PRICES

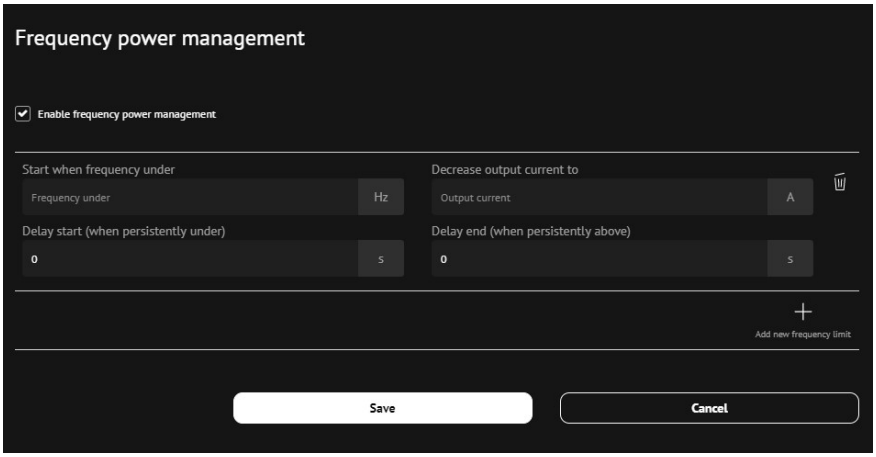
In the Energy prices menu you are able to define multiple electricity tariffs, which will allow you to charge your car using the economic power management. This means that your charging station will be able to charge using the price signal and consequently reduce the price of charging.

When creating the tariff you are able to define prices and times when the tariff is valid.



FREQUENCY CONTROL

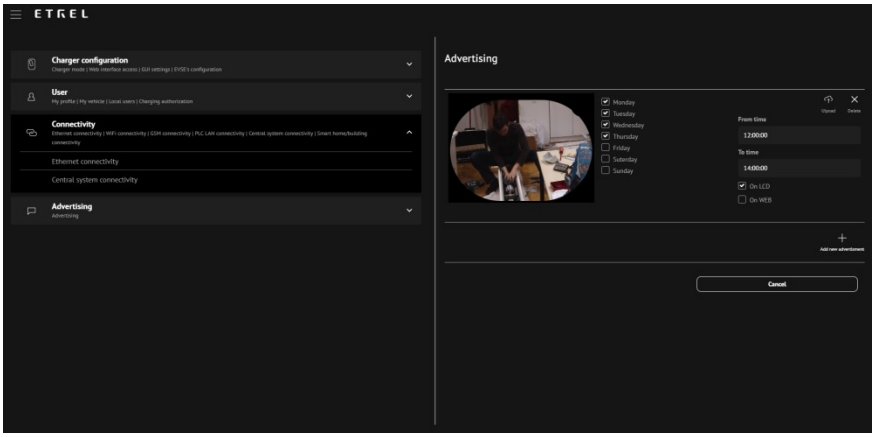
Etrel Inch charging station is capable to help with the frequency regulation. In the Frequency control menu you are able to set frequency parameters in order that charging power of the charger is lowered by the value needed and is kept at that value until the frequency is restored to the normal value.



9 SETTING ADVERTISEMENTS ON THE LCD SCREEN

LCD screen advertisement can be set in the “Configuration” “Advertising” option. Here you are able to set on which days and at which hour particular picture/advertisement will be shown. You can add new advertisement by pressing the “Add new advertisement” button. After you select the right parameters you can upload it to the charging station by pressing the “Upload” button.

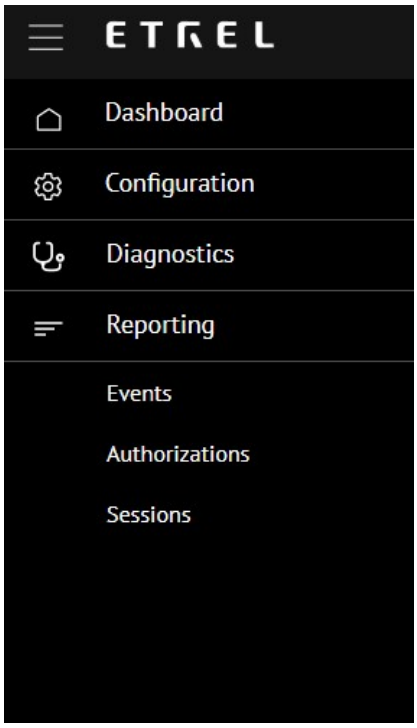
Advertisement is shown on the LCD of the charging station before the charging session.



In order to enable the advertisements on the charging station LCD screen you should thick this option in the “Configuration” “Charger configuration” “GUI settings”. You can also set the advertisement length in seconds.

10 | REPORTING

Reporting section of the web interface can be accessed using the burger menu.



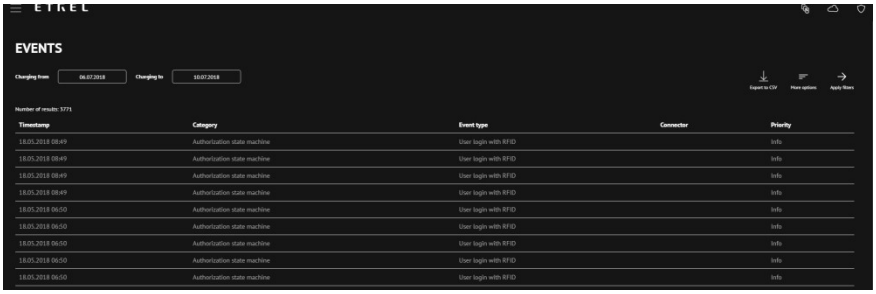
Reporting is split into three different reports:

- Events,
- Authorizations and

- Sessions.

Events

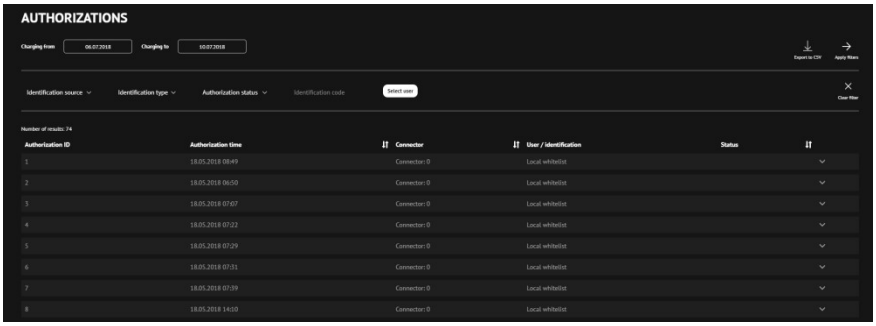
Events report allows you to see all the events that happen on the charging station in the chosen timeframe. You are able to apply various filters to find specific events. You can search based on the Priority, Category and Event type. All the data can be exported to CSV file.



Authorizations

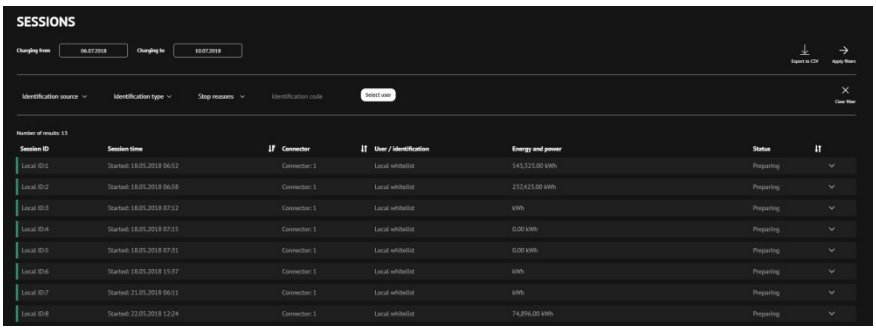
Authorizations report allows you to see all the authorizations that took place on the particular charging station. You can modify search functionality to search for a particular authorization. You can search for identifications based on the identification source (local whitelist, Whitelist sent from back end or white list added from back end authorization), based on identification type (RFID, remote, pin code or vehicle id), based on authorization status, you can search for identification based on identification code by simply inputting the code in the specified field and for authorizations from specific user.

As for the event report you can simply export the report to CSV.



Sessions

In the session reports you are able to check all the sessions that took place on the particular charging station during the time frame chosen. You are able to filter the station based on the identification source, identification type, identification code, stop reason and based on the selected user. If needed you can simply export all the data by pressing the “Export to CSV” button.


SESSIONS
Charging from
06.07.2018
Charging to
10.07.2018
Export to CSV
Apply filters
Identification source
Identification type
Stop reasons
Identification code
Select user
Clear filter
Number of results: 15
Session ID
Session time
Connector
User / identification
Energy and power
Status
Local ID:1
Started: 18.05.2018 06:52
Connector: 1
Local whitelist
543,323.00 kWh
Preparing
Local ID:2
Started: 18.05.2018 06:58
Connector: 1
Local whitelist
237,423.00 kWh
Preparing
Local ID:3
Started: 18.05.2018 07:12
Connector: 1
Local whitelist
kWh
Preparing
Local ID:4
Started: 18.05.2018 07:15
Connector: 1
Local whitelist
0.00 kWh
Preparing
Local ID:5
Started: 18.05.2018 07:31
Connector: 1
Local whitelist
0.00 kWh
Preparing
Local ID:6
Started: 18.05.2018 15:57
Connector: 1
Local whitelist
kWh
Preparing
Local ID:7
Started: 21.05.2018 06:11
Connector: 1
Local whitelist
kWh
Preparing
Local ID:8
Started: 22.05.2018 12:24
Connector: 1
Local whitelist
74,896.00 kWh
Preparing