enelion

Utility:
DealerToolbox

Instruction for using utility

Contents

1.   Installation

Enelion DealerToolbox is an RFID Reader and dedicated Enelion software that allows you to manage RFID cards and charger configurations.

To begin, unpack the file downloaded from **https://enelion.com/support** and launch the software using file with "DealerToolbox" icon, which is located inside the unpacked folder.

> **ⓘ INFO**
>
> Windows users: DealerToolBox.exe executable file
> Linux users: DealerToolBox extensionless file

After successful launch of the software, you will see a Login Screen.

> **ⓘ INFO**
>
> To login, use Enelion Administration Panel credentials. If your account is not authorized to use this software, please contact Enelion Support.

After successful authentication, you will be redirected to DealerToolbox Main Menu.

> **⚠ WARNING**
>
> Internet connection and a dedicated RFID reader connected to your computer is required to use this application.

2.   User RFID cards

Enelion chargers equipped with RFID reader have the possibility to authorize users based on RFID cards. Every RFID tags that comply with Mifare Classic standard, working on 13.56 MHz frequency can be read by the charger. In case of online chargers an unique tag identifier is being sent to the OCPP server for authorization purposes and usage of DealerToolbox software is not required, however it can be used to read the tag unique identifier.

2.1. Reading a unique card identifier

In order to read a unique card identifier please perform the following steps:

1. Choose User RFID cards manager from the main menu. You will see a window that allows you to manage RFID tags

2. Put an RFID tag to the reader

3. Press "Read card" button. In the corresponding field card unique identifier will be shown.

2.2. Assigning a card to an offline group

An RFID card can also be used for authorization in offline chargers after assigning it to the group in which the charger is present.

In order to assign the card to offline group please perform the following steps:

1. Choose User RFID cards manager from the main menu. You will see a window that allows you to manage RFID tags

2. Put an RFID tag to the reader

3. Press "Read card" button. "RFID card group" field will become active

4. Type a serial number of a charger that already is in the group into the "RFID card group" field

5. Press "Write" button. Data required for offline charger authorization will be written into the card

2.3. Adding card description

You can optionally add a description to the card that will be displayed when reading a card later.

In order to add card description please perform the following steps:

1. Choose User RFID cards manager from the main menu. You will see a window that allows you to manage RFID tags

2. Put an RFID tag to the reader

3. Press "Read card" button. "Tag description" field will become active

4. Type the description into the "Tag description" field

5. Press "Update" button. The tag description will be saved in the Enelion database.

3.   Creating a configuration card

Initialization or changing charger configuration can be done in "Charger configuration card" menu.

> **ⓘ INFO**
>
> If the card already has configuration of another charger, the configuration has to be removed before writing a new one. The previous configuration needs to be removed in Charger configuration card manager using serial number of the charger it was written for.

1. In "Charger configuration card" menu type in a serial number of a charger to be configured. After pressing "Continue" button, serial number is validated by software. After successful validation configuration form will appear

2. The form is similar to the label found on Enelion charger boxes. The picture and details of a configured charger are listed of the left. There are two configuration models: "basic" and "extended". The difference between them are explained below. If the charger has already been configured, the form will display the last known configuration

3. Choose the desired configuration

4. Put an RFID card to the reader

5. Press "Write configuration" button. Charger configuration and UserID (in case RFID card authorization was chosen) will be written to the card

Two configuration models can be distinguished:

1. **Basic mode**, allows the user to configure:

   • **Charging network addressing** — If the charger is a part of a charger network, the charger number in the network (the first field) has to be chosen along with the number of chargers that are in the network (last field). While configuring Enelion Duo charger both socket numbers can be chosen independently with the left and middle field

> **⚠ WARNING**
>
> While configuring a network of chargers make sure every socket number is unique for the whole network.

   • **Authorization type**:
     – Any RFID tag — the charger will accept every RFID tag and will not stop charging if other tags are presented to the charger
     – *Plug and charge* — the charger will start charging instantly after a car is connected. The cable will remain unlocked

   • **Power option** — choose maximum power that can be used for charging

   • **Custom statusbar message** — choose the text to be displayed at the bottom of the screen

   • **Default language** — choose the language in which messages should be displayed on the screen

2. **Extended mode** extends Basic mode with:

   • **Authorization type** — additional options:
     – Authorized RFID tag — any card assigned to the charger offline group
     – Plug and charge with lock - the charger will start charging instantly after a car is connected. The cable will be locked in the charger socket while charging

   • **Charger group configuration** (available only when "Authorized RFID tag" has been chosen in Authorization type). This feature requires a RFID tag without UserID and writes a new UserID based on selected options
     – Create a new group — creates a new offline charger group and allows other chargers to be added to this group
     – Add charger to existing group - after selecting this option and typing in any serial number that is already in the group, all RFID tags accepted by the chargers already in group will also be accepted by the charger that is being configured

- **Deauthorization type**

  - RFID that started charging — charging can be stopped only by the RFID tag that started it

  - Any RFID from the charger group — charging process can be stopped by any RFID card accepted by the charger

- **Power option**

  - Custom - Specifies number of phases and maximum current that can be used in charging. If the configuration of your charger triggers overcurrent protection in your household, it can be configured for lower power output below market standard values, e.g. margin of 2A can be added by setting 30A output

- **Additional features**

  - Dynamic load balancing (DLB) — enables charger cooperation in limiting total output power of all chargers in the network in order not to exceed the determined limit. Dynamic load balancing current limit can be set with the field the right side of the DLB checkbox

  - Additional RCD type B — determines existence of additional RCD type B in the charging station

  - Enable language menu — allow user to temporarily change charger language. After enabling sleep mode the charger will switch back to the default language

- **Terminal blocks configuration** — determines the order in which phases are connected to the charger

- **EnergyGuard metering point** — it specifies the location for the installation of the external Enelion Energy Guard energy meter. The installation details for the Enelion Energy Guard are described in the device's instruction manual, in subsection 5.3 Configuration.

> **⚠ WARNING**
>
> To ensure the correct operation of the DLB algorithm, if the charging network does not have the Enelion Energy Guard device installed, select the „Powered equipment without charging network" option in the EnergyGuard metering point settings. If the station is being configured for the first time, the „Powered equipment without charging network" option is set by default.
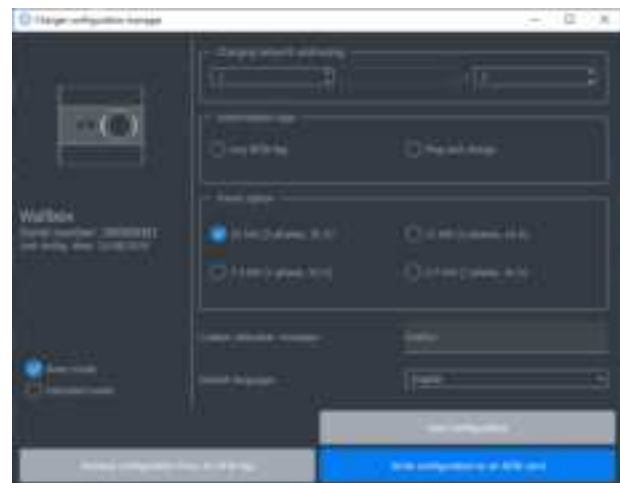
3.1. Wallbox Duo Power configuration

Enelion Wallbox Duo Power is a device with two charging controllers that are configured separetely. Under the device icon in configuration form you will see two additional buttons for switching the form between left and right socket. Please notice that a card with configuration for the left socket will not configure the right socket and vice versa and that switching between sockets without writing chosen configuration to a card will result in loss of changes made to the configuration form.
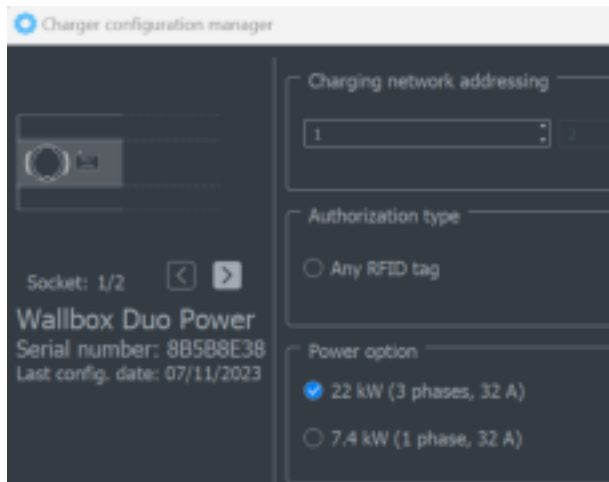
4.   Settings

Settings allow for basic configuration of the DealerToolbox software. You can see the settings vies by clicking a button with a rack icon in the main menu or login window. The settings are divided into two sections:

4.1. General

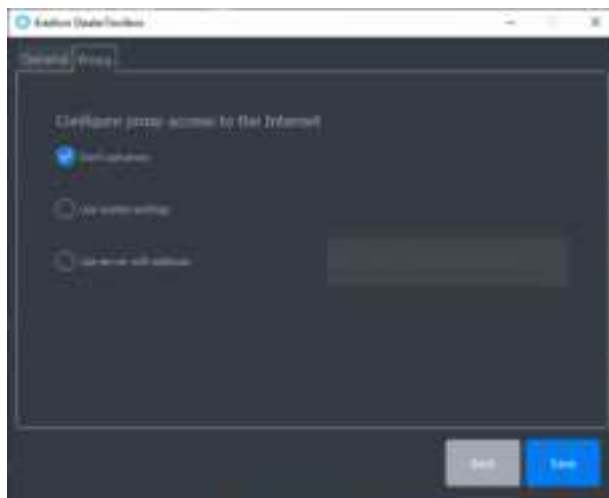In the general settings you can change app displayed language.

4.2. Proxy

This tab allows you to set proxy server address that will be used by the DealerToolbox for internet connection. You can choose three options:

- Don't use proxy

- Use system settings

- Use server with specified address

In order to save settings please click "Save" button. You can go back to the main menu by clicking "Back" button.

5.   Example use cases and steps to execute

5.1. Configuring an offline network of two chargers with RFID tags working for both of them

Configuring the first charger

1. Open Charger configuration manager and type in a serial number of the first charger.

2. "Charging network addressing" choose 1 in the left field and 2 in the field on the right. This will set the socket as the first one in the network of two connectors.

3. Switch to the Extended mode.

4. In "Authorization type" section choose "Authorized RFID tag".

5. In "Charger group configuration" section choose "Create a new group".

6. Adjust other settings to your preferences.

7. Put an RFID card to the reader.

8. Press "Write configuration to an RFID card" button.

9. Putting this card to the first charger should result in configuring it. The card can be used later for authorization in both chargers.

Configuring the second charger

1. Open Charger configuration manager and type in a serial number of the second charger.

2. In "Charging network addressing" choose 2 in the left field and 2 in the field on the right. This will set the socket as the second one in the network of two connectors.

3. Switch to the Extended mode.

4. In "Authorization type" section choose "Authorized RFID tag".

5. In "Charger group configuration" section choose "Add charger to existing group" option and type in a serial number of the first charger.

6. Adjust other settings to your preferences.

7. Put an RFID card to the reader.

8. Press "Write configuration to an RFID card" button.

9. Putting this card to the second charger should configure it. The card can be used later for authorization in both chargers too.

Generating more authorization cards for the network

1. Open User RFID cards manager.

2. Put an RFID card to the reader.

3. Press "Read card" button. "RFID card group" field will become active

4. Type a serial number of a charger that already is in the group into the "RFID card group" field

5. Press "Write" button. Data required for offline charger authorization will be written into the card

5.2. Configuring a new charger added to existing charger network

1. Open Charger configuration manager and type in a serial number of the charger you want to add to the network.

2. In "Charging network addressing":
   - In the left field choose number of connector you want to assign to the charger.
   - In case you are configuring a Wallbox Duo, use the middle field to assign a number to the right socket as well.
   - Use the right field to indicate how many sockets will be connected in the network.

3. In "Charger group configuration" section choose "Add charger to existing group" option and type in a serial number of any of the chargers that are already assigned to the group.

4. Adjust other settings to your preferences.

5. RFID card must be placed on top of the RFID reader.

6. Press "Write configuration to an RFID card" button.

7. Putting this card to the second charger should configure it. The card can also be used later for authorization in all chargers in this group.

5.3. Configuring a charger for home use (group members can stop charging process started by another user)

1. Open Charger configuration manager and type in a serial number of the charger you want to add to the network.

2. Switch to the Extended mode.

3. In "Authorization type" section choose "Authorized RFID tag".

4. In "Charger group configuration" section choose "Create a new group".

5. In "Deauthorization type" section choose "Any RFID from charger group".

6. Adjust other settings to your preferences.

7. Put an RFID card to the reader.

8. Press "Write configuration to an RFID card" button.

9. Putting this card to the charger should configure it. The card can be used later for authorization in this and other chargers if added to the same group in their configuration.

5.4. Configuring charger for commercial use (Only user who started charging process can interrupt)

1. Open Charger configuration manager and type in a serial number of the charger you want to add to the network.

2. Switch to the Extended mode.

3. In "Authorization type" section choose "Authorized RFID tag".

4. In "Charger group configuration" section choose "Create a new group".

5. In "Deauthorization type" section choose "RFID that started charging".

6. Adjust other settings to your preferences.

7. Put an RFID card to the reader.

8. Press "Write configuration to an RFID card" button.

9. Putting this card to the charger should configure it. The card can be used later for authorization in this and other chargers if added to the same group in their configuration.

5.5. Configuring chargers network for symmetrical phase load

Two chargers can use different phases for charging one-phase EVs to avoid overcurrent of one phase. This case assumes the L1 input in the first charger is connected to grid L1 and L1 input in the second charger is connected to grid L2.

Configuring the first charger

1. Open Charger configuration manager and type in a serial number of the first charger.

2. Switch to the Extended mode.

3. In "Terminal blocks configuration" section make sure L1 is set up as the first phase.

4. Adjust other settings to your preferences.

5. Put an RFID card to the reader.

6. Press "Write configuration to an RFID card" button.

7. Putting this card to the charger should configure it. The card can be used later for authorization in this and other chargers if added to the same group in their configuration.

Configuring the second charger

1. Open Charger configuration manager and type in a serial number of the second charger.

2. Switch to the Extended mode.

3. In "Terminal blocks configuration" section make sure L2 is set up as the first phase. Other phases settings will adjust automatically.

4. Adjust other settings to your preferences.

5. Put an RFID card to the reader.

6. Press "Write configuration to an RFID card" button.

7. Putting this card to the charger should configure it. The card can be used later for authorization in this and other chargers if added to the same group in their configuration.

5.6. Configuring charger network to use Dynamic Load Balancing (DLB)

1. Open Charger configuration manager and type in a serial number of the charger you want to configure.

2. Switch to the Extended mode.

3. In "Additional features" option "Dynamic load balancing" should already be enabled. If you ordered DLB for this charger and the feature is not enabled, please contact Enelion support.

4. In the field on the right type in a maximum grid current that is available for charging.

5. Adjust other settings to your preferences.

6. Put an RFID card to the reader.

7. Press "Write configuration to an RFID card" button.

8. Putting this card to the charger should configure it. The card can be used later for authorization in this and other chargers if added to the same group in their configuration.