RADIO ADMIN

MANUAL FOR INSTALLATION, SERVICE AND OPERATION

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1 INTRODUCTION

Radio Admin is a mobile application for Android. The application is used for remote reading and setting of Apator Metra products. The Radio Admin application offers a wider use than the previous version - the Radio Reader application. Radio Admin can operate RFU 40 version 1 and 2 readers (Radio Reader is only able to operate RFU 40 version 1). Reading and setting is performed using NFC or the RFU 40 reading unit. The application allows you to operate up to two RFU 40 units at once.

2 APPLICATION INSTALLATION

Find the Radio Admin app on Google Play and install the app on your mobile device. Mobile device means any device such as a mobile phone or tablet and supports Android.

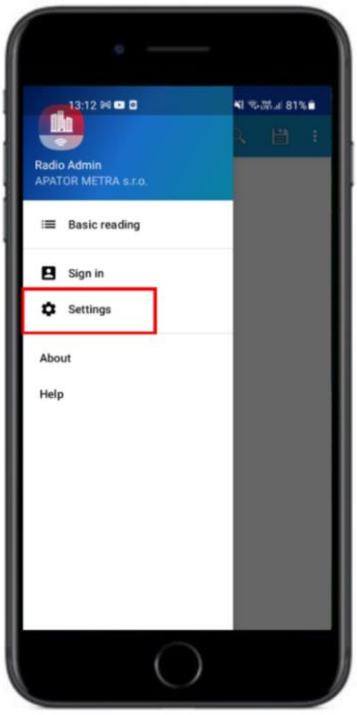
3 APPLICATION LICENSE

The application license allows you to use the advanced features of Radio Admin. The license must be imported to the mobile device. The customer will receive the license from the Apator Metro sales department. The license is valid for 1 year. The Radio Admin application license is called a Ralic license (eg 2022.ralic).

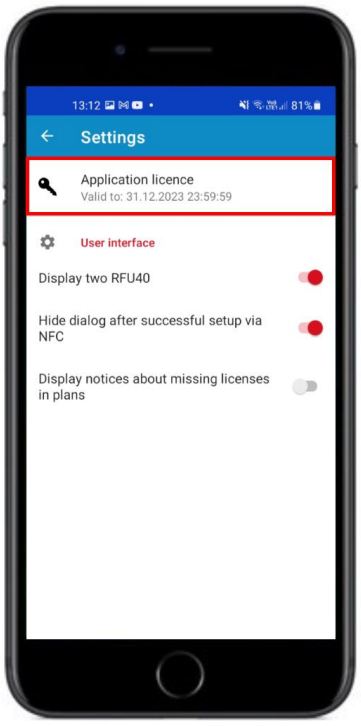
Postup:

1. Import the Ralic license file to your mobile device. The Ralic file can be inserted in the phone's internal memory (documents / folders). Or upload it through cloud services (Google Drive, One Drive, Amazon, etc.)

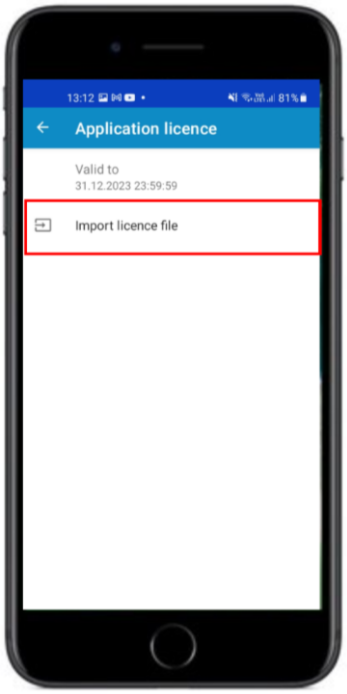
2. Choose – Settings.



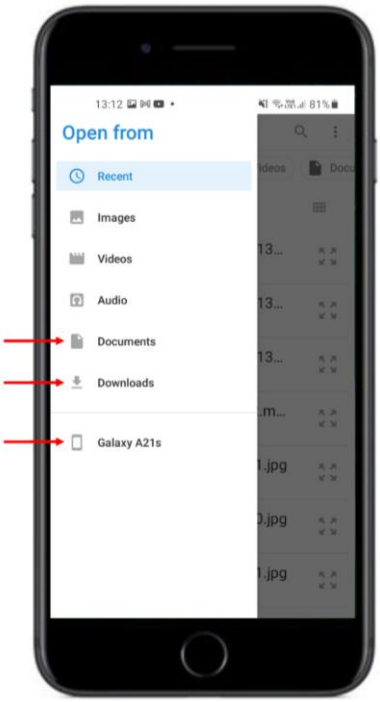
3. Choose – Application license.



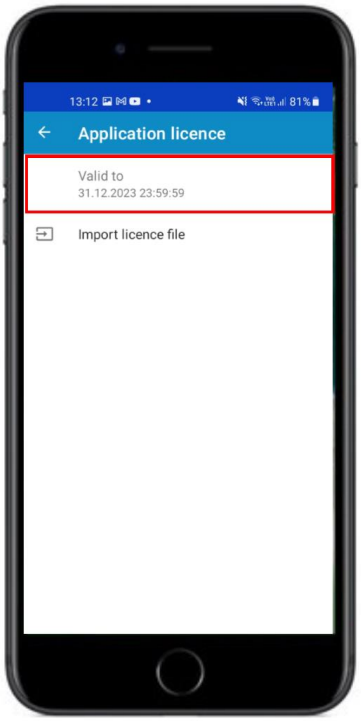
4. Select – import a new license file.



5. Select the option where you inserted the Ralic file (documents, downloads, my files or cloud). Select the Ralic file to be imported into Radio Admin.



6. Select - the Ralic license is successfully imported in the Radio Admin application.



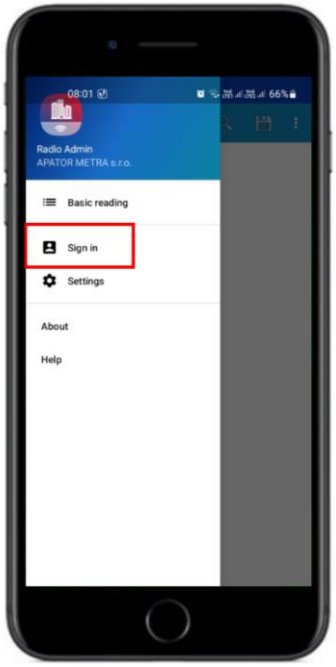
4 LOGIN

You can read data using NFC without logging in. However, the data obtained are limited.

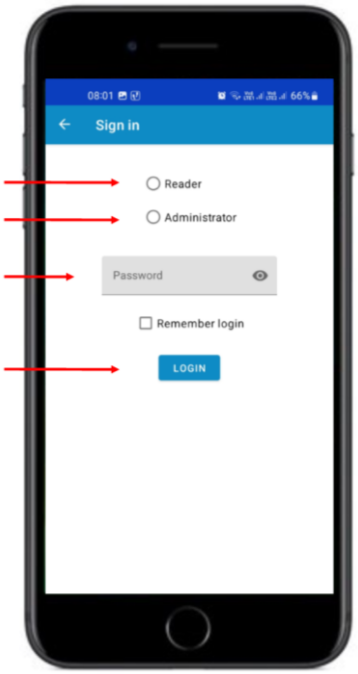
1. Open appliaction Radio Admin.

   Open the Main Menu in the upper left corner.

2. Select – login.



3. Select under which account you want to log in - read technician or administrator. Enter the password (the password will be provided by the Apator Metra sales department. The password will be changed whenever the Ralic license is changed - once a year) and select - log in.



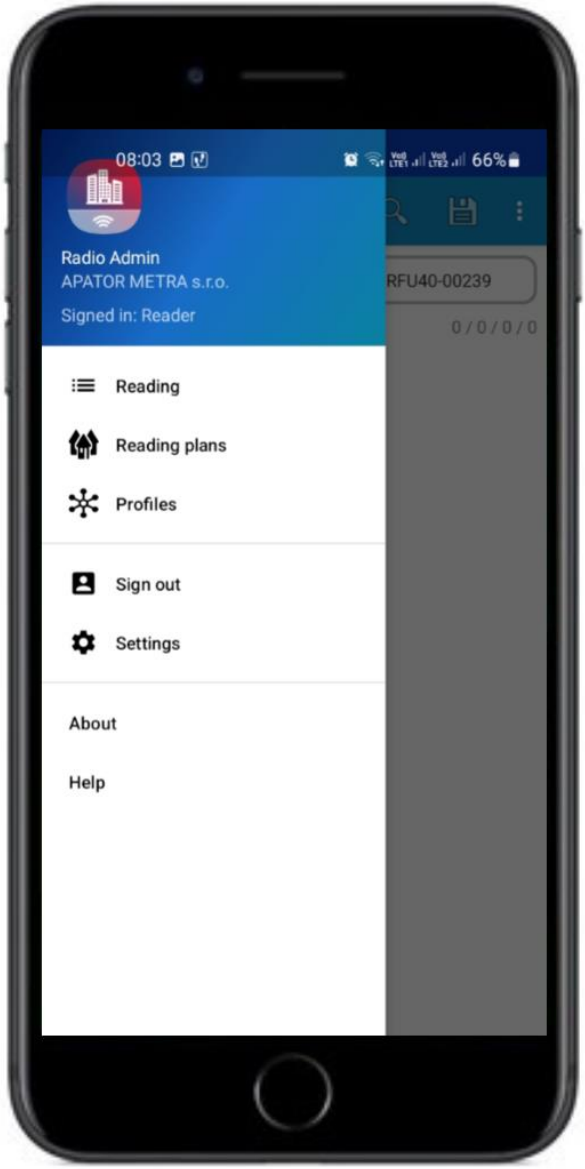
A) <u>Reading technician</u>
- Can read a limited amount of data
- import and export reading plans
- perform NFC readings
- perform a reading using the RFU 40 unit
- export data readable by the administrator

B) <u>Administrator</u>
- Can read data
- tvořit, importovat, exportovat odečtové plány
- perform NFC readings
- perform a reading using the RFU 40
- perform two-way communication
- set the measuring device
- create and edit setting profiles for measuring devices

4.1 READING TECHNICIAN

Reading technician has more limited features in the application than administrator.

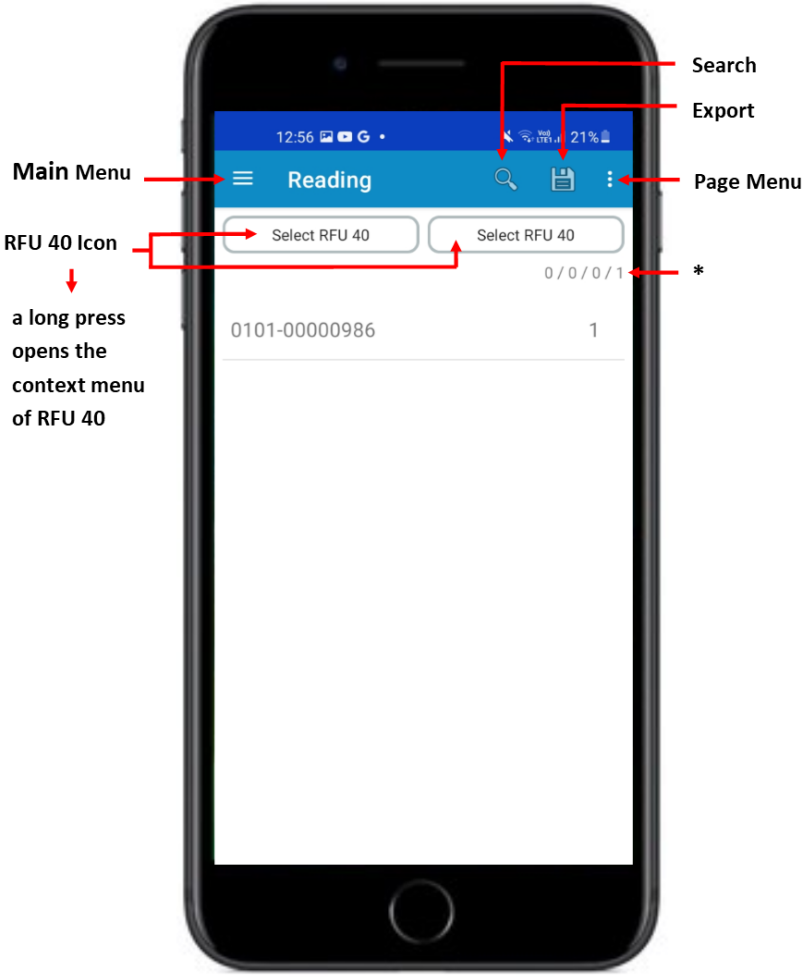
- can read a limited amount of data
- import and export reading plans
- perform NFC readings
- perform a reading using the RFU 40 unit
- export data readable by the administrator



4.1.1 READING

Data can be read from the measuring devices using NFC or the RFU 40 reading unit.

Orientation on the reading page:



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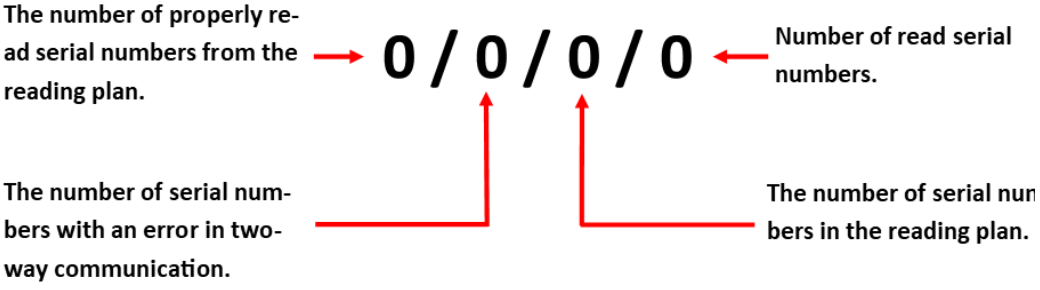


4.1.1.1 READING USING NFC

NFC technology enables a fast, easy-to-use and, in addition, secure form of interaction with products that support this technology. When two devices with NFC touch or are close, their communication starts automatically.

1. Turn on NFC on your mobile device
2. Attach the mobile device to the measuring device and the data will be read. NFC locations may vary on mobile devices.

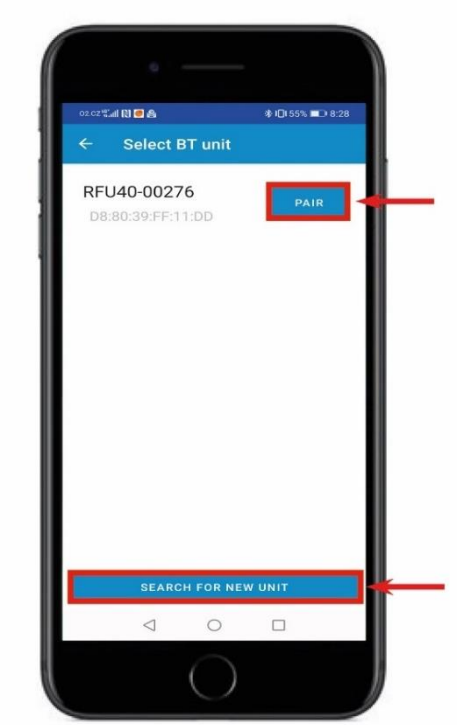
Note:. The NFC in the mobile device must be as close as possible to the NFC in the reading device. Each mobile device has a different NFC location. To retrieve the data, it is necessary to find the correct location of both devices.

4.1.1.2 READING USING RFU 40

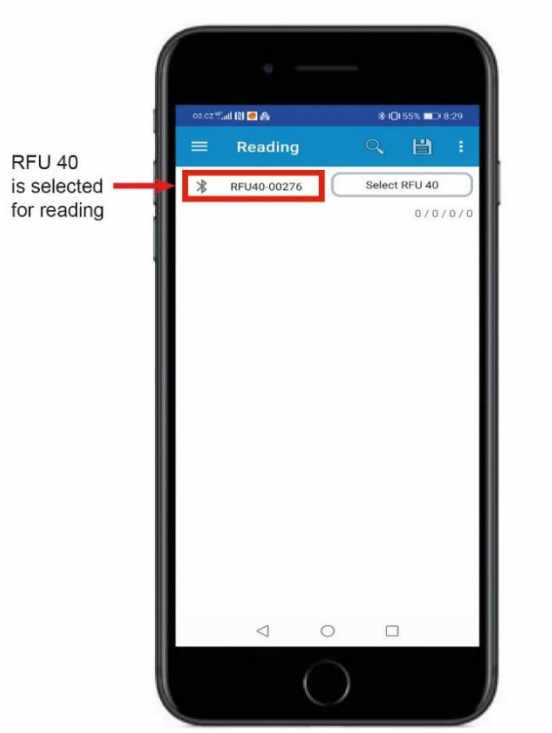
Process:

1. Turn on Bluetooth on your mobile device
2. Switch on the reading unit RFU 40.
3. In the main menu of the Radio Admin application, select - reading.
4. Select the button - Select RFU 40.

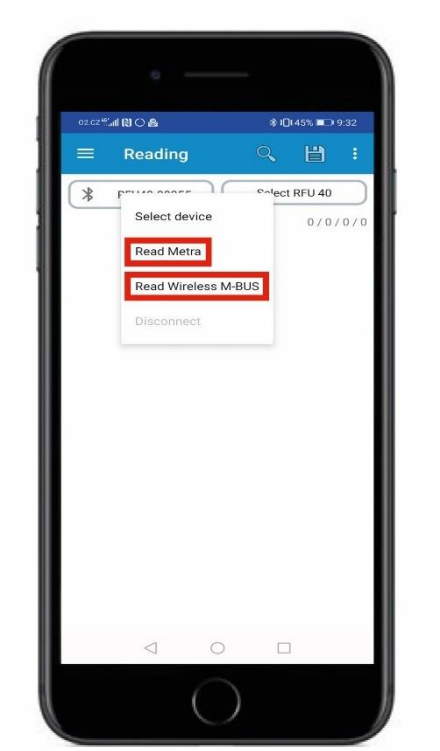
5. After finding the reading units, select the one you want to use. If you want to use a reading unit that has never been associated with an application, select the "find new unit" option. After finding a new reading unit, select - pair. After pairing, select - select.



6. A short click on the RFU 40 icon will start the process of connecting the RFU 40 reading unit to the Radio Admin application and then reading the Metro protocol. The connection is successful - the data transfer starts automatically. The connection does not take place - if the RFU 40 reader is not connected, the error message: error is displayed. Restart the RFU 40 reader, check the battery status and repeat the entire connection process.



7. **To receive the Wireless M-Bus protocol, it is necessary to open the context menu RFU 40 (long press on the icon RFU 40) and select the option "read Wireless M-BUS". Always after connecting a new RFU 40 unit, it is necessary to start the Metra protocol first and only then it will be possible to start the Wireless M-Bus protocol.**



4.1.1.3 RFU 40 ADMINISTRATION

The RFU 40 reading unit is used for radio reading of data from measuring devices. It connects via Bluetooth® with Radio Admin installed. The reading unit is powered by a battery. The battery is charged via the USB-micro connector (the length of the charging cable must not exceed 3 m). More information about the RFU 40 reading unit can be found in the RFU 40 manual.

Meaning of LED symbold on the RFU 40 reading unit:

Bluetooth status signalization

- 1 flash every 3 seconds - Bluetooth not connected (flashes continually when unit is on)
- 2 flashes every 3 seconds - Bluetooth is connected (flashes continually when unit is on)

Signalization of radio data receprion

- 1 green flash – radio data succesfuly received
- 1 red flash – radio data packet not received correctly
- Continual red light – error state

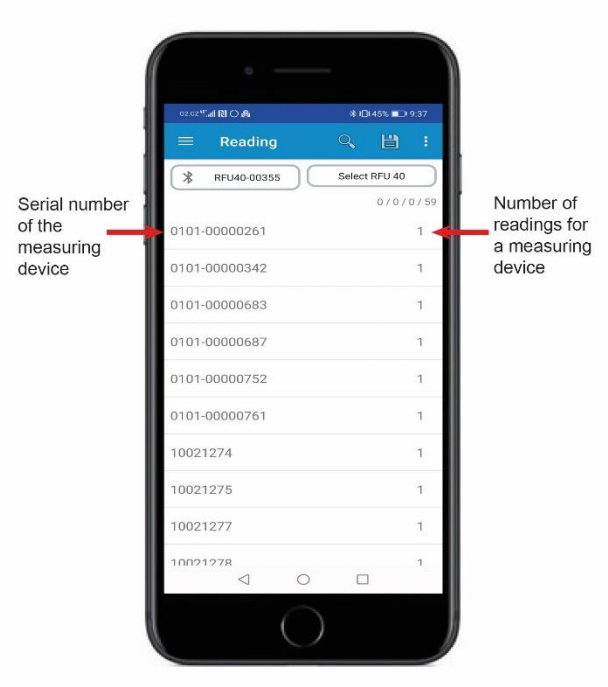
Accumulator state signalization

- 1 flash/ second – the battery capacity is low
- LED flashes continually for 5 seconds – the battery is low, the unit switches off
- Flashes quickly – the accumulator is being charged, the signalization will turn off when the unit is fully charged

4.1.1.4 READ DATA

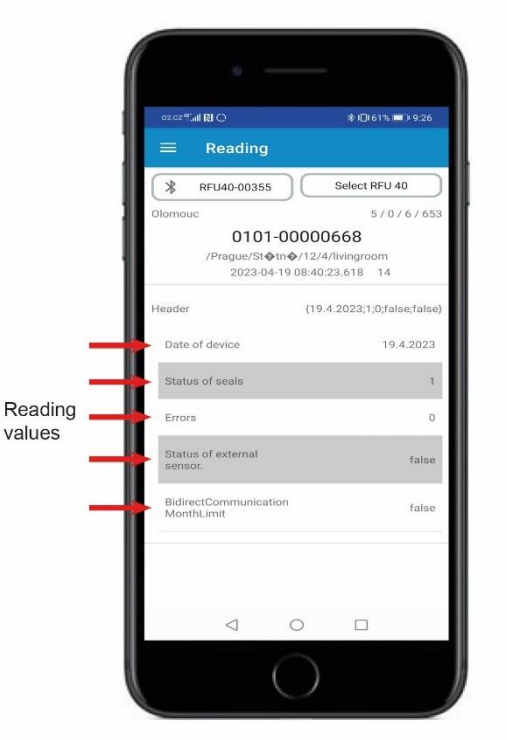
The read data are sorted in rows. To view detailed information of the readings, touch the line you want to display. If the reading technician does not have a license for the measuring devices, he will only see a limited amount of data.

1. Select the row for which you want to see detailed reading information.



2. The date and time of the reading and the number of readings are displayed. To display the detail of the readings, select the line again.

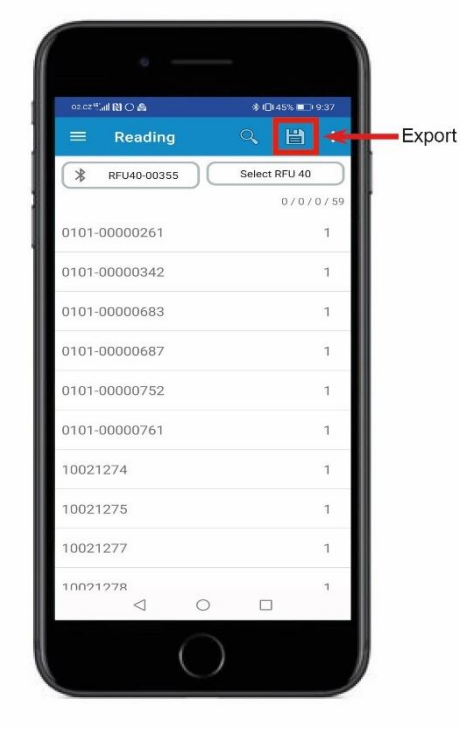
3. Information for each reading will display.



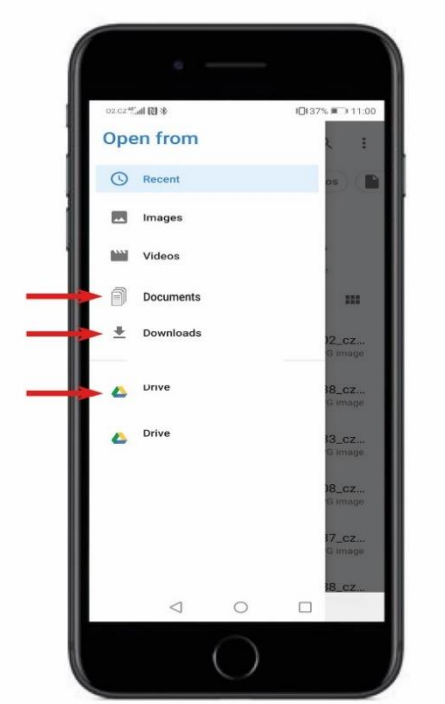
4.1.1.5 DATA EXPORT

The read data can be exported in format CSV, JSON, to your mobile device. The document will be automatically exported in a file for sharing with the administrator (.raw).

1. To export the read data, select the export icon.



3. In the menu, select the option where you want to save the file (eg documents, downloads, my files, or cloud services).



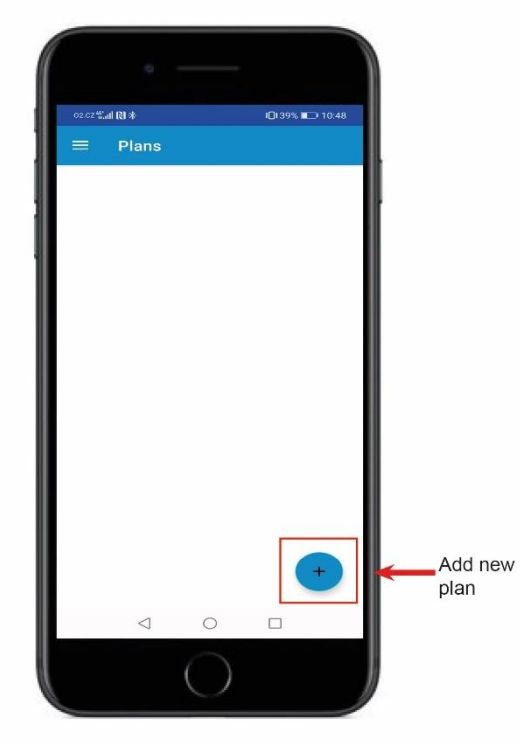
4.1.2 READING PLANS

The reading plan is a structure with information about the location of the measuring unit. The reading plan is creating administrator for reading technician, who imports it to their mobile device. Reading plans can be reused several times

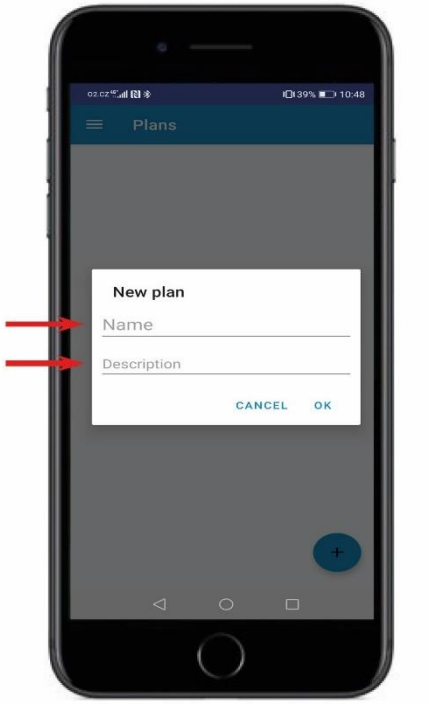
4.1.2.1 CREATION OF READING PLAN

1. Import the reading plan file into your mobile device. Insert the file into the internal memory (eg documents / folders). Or upload it through cloud services (Google Drive, One Drive, Amazon, etc.)
2. In the main menu of the Radio Admin application, select - reading plans.

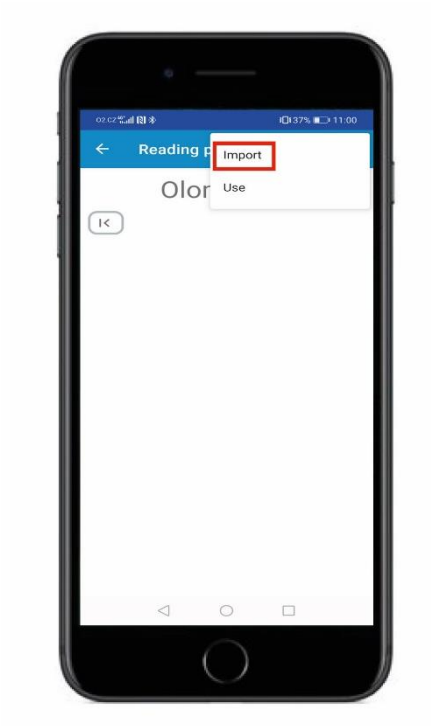
3. In the lower right corner, select +.



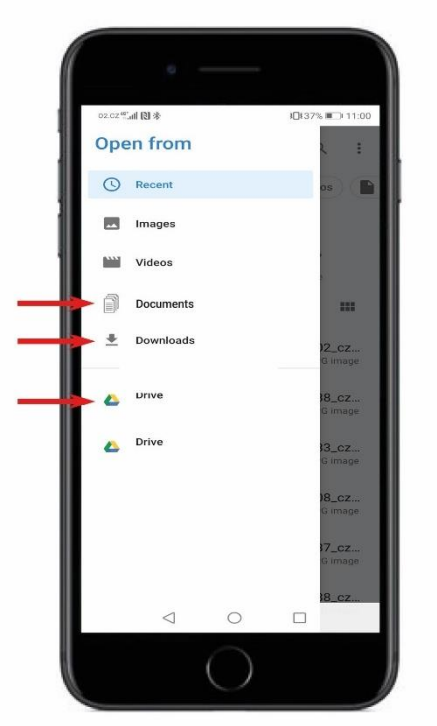
4. Enter a name for the new reading plan and confirm - OK.



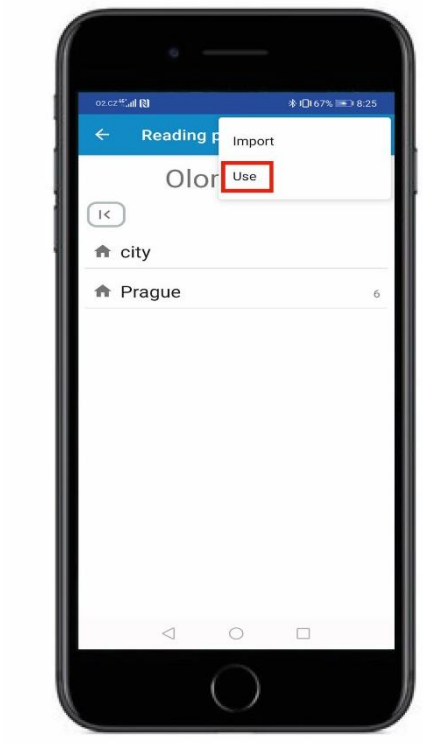
5. Open the newly created plan and in the page menu (upper right corner) select - import.



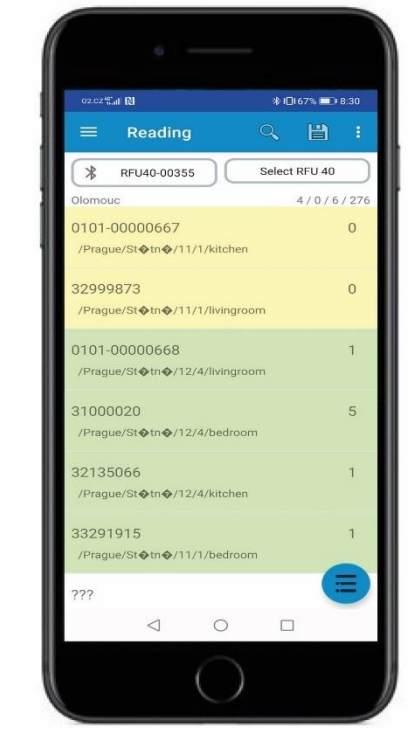
6. Select the option where you saved the reading plan file (eg documents, downloads, my files, or cloud services).



7. Open the plan you want to use for the reading and select - use in the page menu (in the upper right corner).

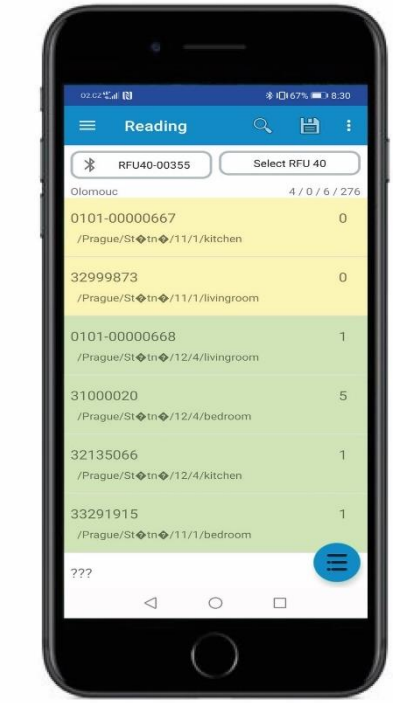


8. You will be automatically transferred to the page - Reading. To start the reading, proceed according to chapter 4.1.1. Reading.



4.1.2.2 Display types of reading plan

1. **Display in the list**
   The numbers of the measuring devices are arranged in a line below each other.



2. **Structured view**
   The numbers of the measuring devices are displayed in the structure.

4.1.2.3 Color resolution in the reading plan

Green

- Reading is ok

Blue

- in one-way communication = an empty packet without data was received
- in two-way communication = error in two-way communication

Yellow

- in list view = serial numbers contained in the reading plan
- in structured view = some devices were read well, but all of them

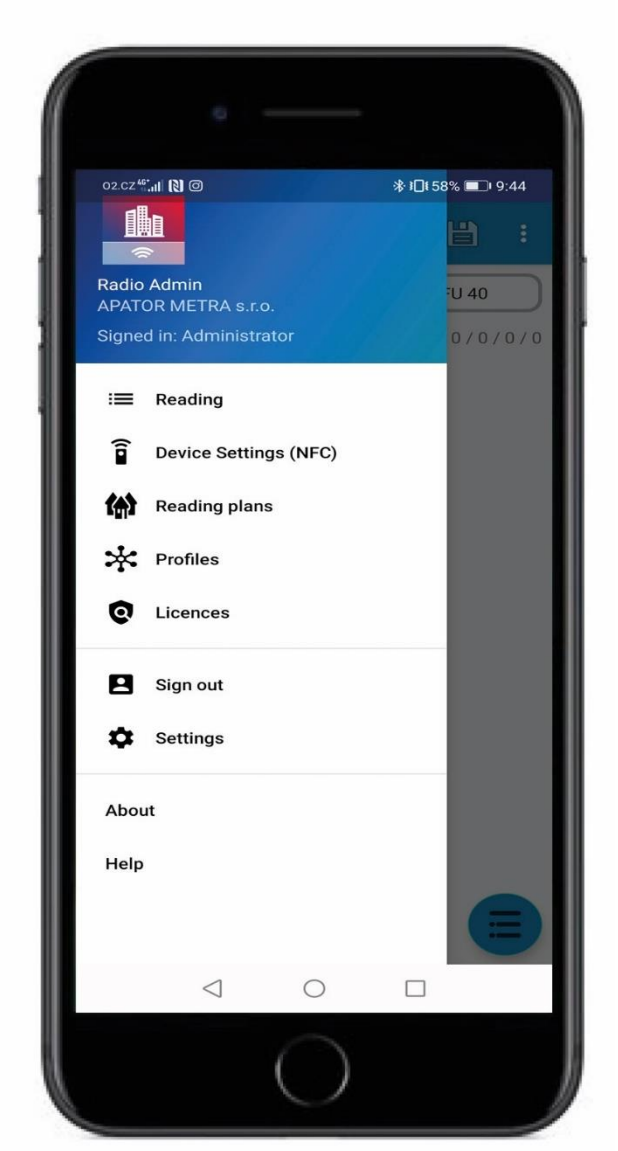
Red

- in list view = can be shown in two-way communication. The monthly limit for two-way communication has been exceeded for this device. (The limit for two-way communication in one calendar month is 30).
- in structured view = error found

4.2 ADMINISTRATOR

Administrator

- can read data
- create, import, export reading plans
- perform reading using NFC
- perform a reading using the RFU 40 unit
- perform two-way communication
- set the measuring device
- create and edit setting profiles for measuring devices



4.2.1 READING

4.2.1.1 READING USING NFC

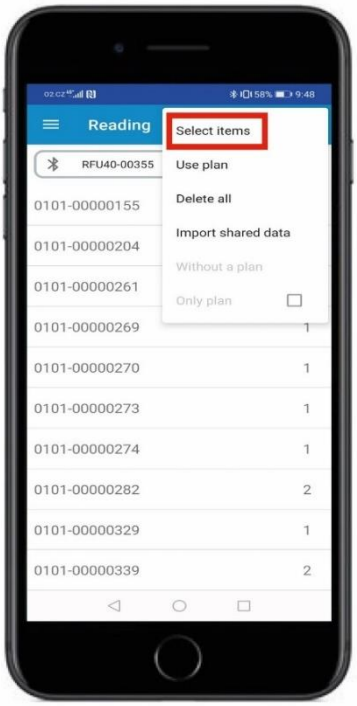
For complete data reading using NFC it is essential to have an imported application license a measuring device license and be logged in to the Radio Admin application. Without these necessities you can read only limited data. Two-way communication with the measuring device can be set up via NFC.

1. Turn on NFC on your mobile device.
2. Attach the mobile device to the measuring device and the data will be read

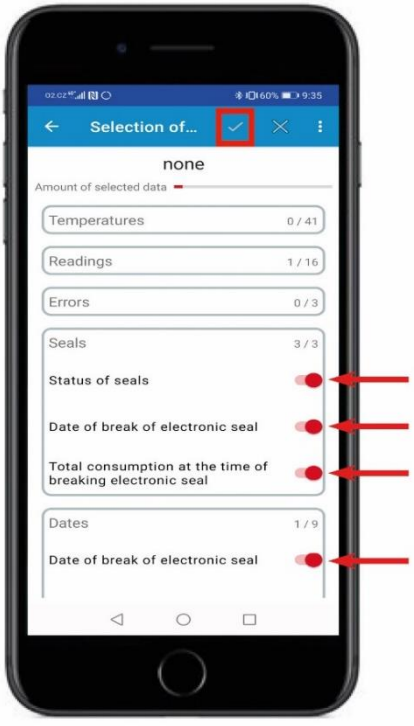
4.2.1.2 ADVANCED READING USING NFC

Advanced reading allows data to be obtained from the measuring device in a one-time form. This type of data reading does not change the original settings of the measuring device. It is primarily used to obtain data that is beyond the normal content of the transmitted packet.

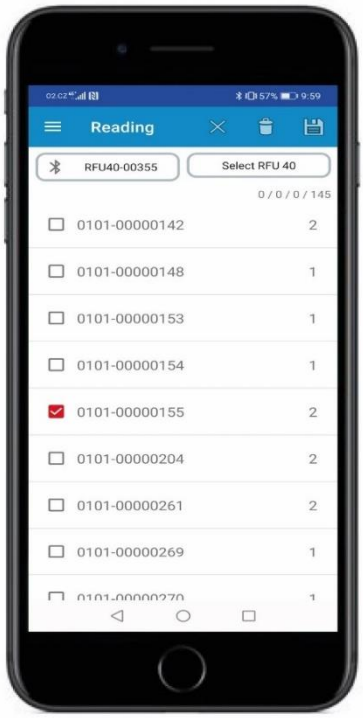
1. Open the page menu (in the upper right corner) and select - select an item.



2. Select any items for which you want to perform advanced reading, see chapter 4.2.2.3. Adjustable values and parameters. Select OK.



3. Right after you confirm the selected items, the application will automatically transfer you back to category reading. The measuring device for which you want to perform extended reading remains marked. Now attach the mobile device to the measuring device and advanced data reading via NFC will take place.



4.2.1.3 READING USING RFU 40

Information about one way reading and its procedure see chapter 4.1.1.2 Reading using RFU 40.

4.2.1.4 RFU 40 ADMINISTRATION

Information on managing the RFU 40 reading unit can be found in chapter 4.1.1.3 Managing the RFU 40.

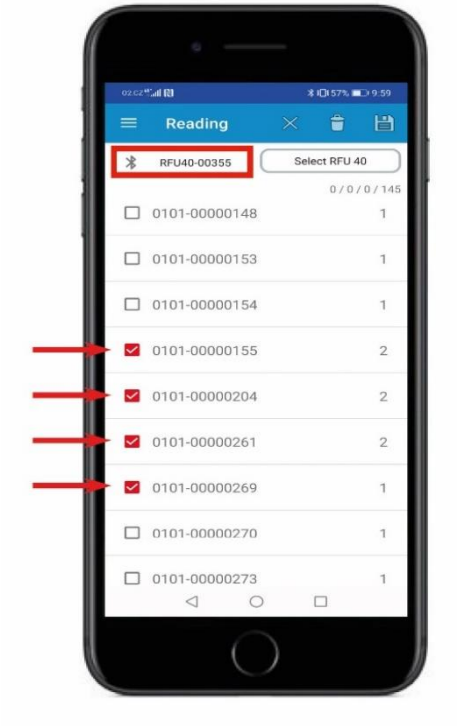
4.2.1.5 TWO WAY COMMUNICATION USING RFU 40

Two-way communication ensures communication between the measuring device (E-ITN 40) and the Radio Admin application. Two way reading can be used for advanced reading or for device settings (E-ITN 40).

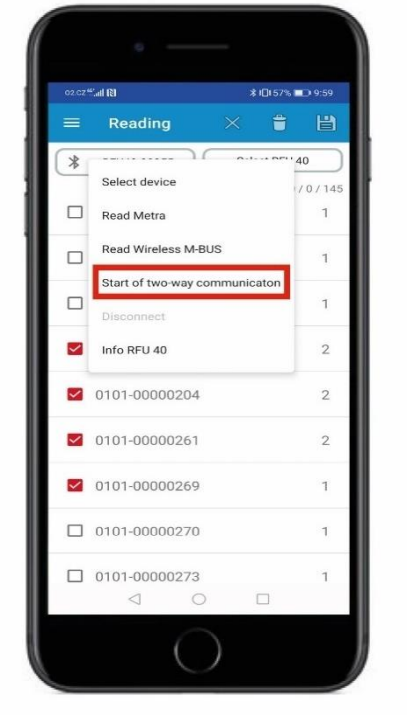
4.2.1.5.1 Advanced reading

Advanced reading allows data to be obtained from the measuring device in a one-way form. This type of data reading does not change the original settings of the measuring device. It is primarily used to obtain data that is beyond the normal content of the transmitted packet.

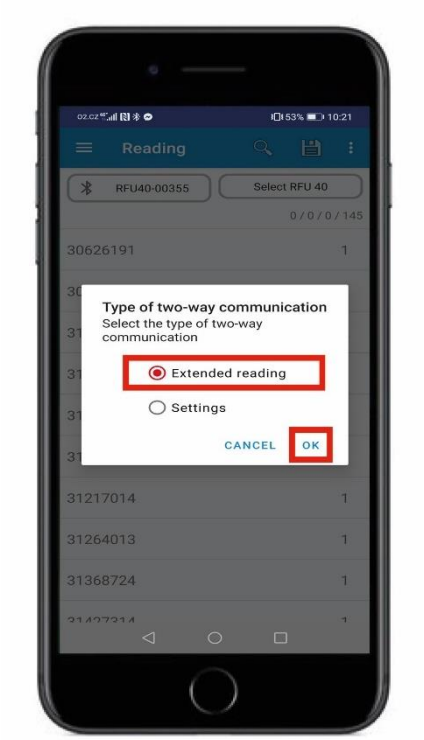
1. Select the items you want to perform advanced reading. Select which RFU 40 you want to perform extended reading and open its RFU 40 context menu (long press).



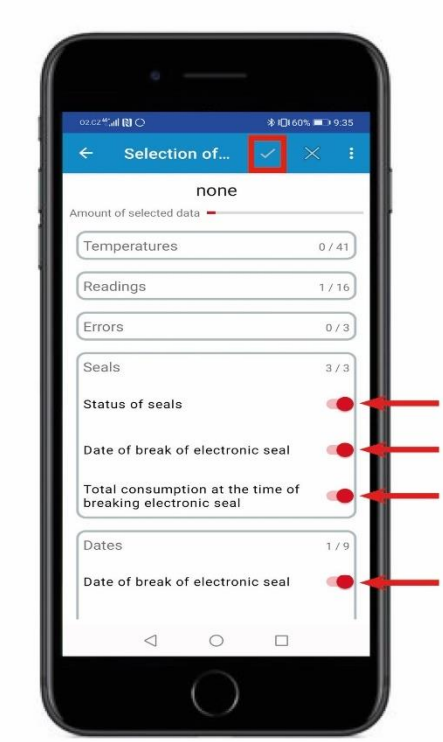
2. In the context menu of the RFU 40, select - start two way communication.



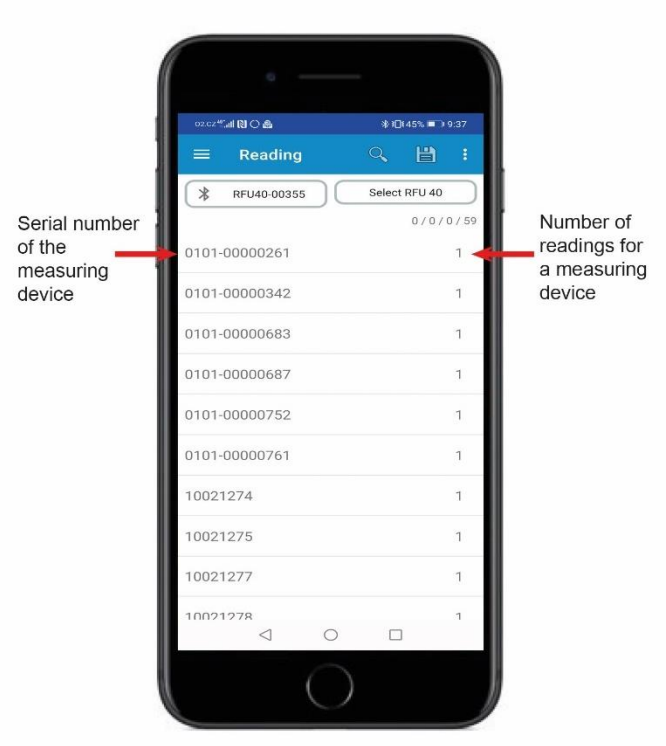
3. Choose - advanced reading - OK.



4. Select any items for which you want to perform extended reading, see chapter 4.2.2.3. Adjustable values and parameters. To start the two-way communication of the reading, select - confirm.



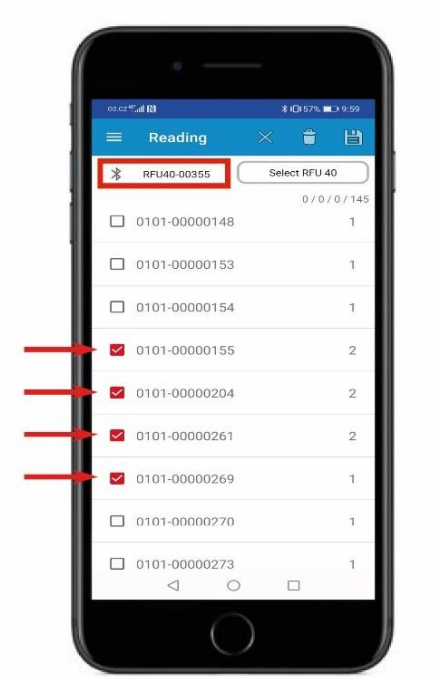
5. The read data will begin to line up, see chapter 4.1.1.4 Read data.



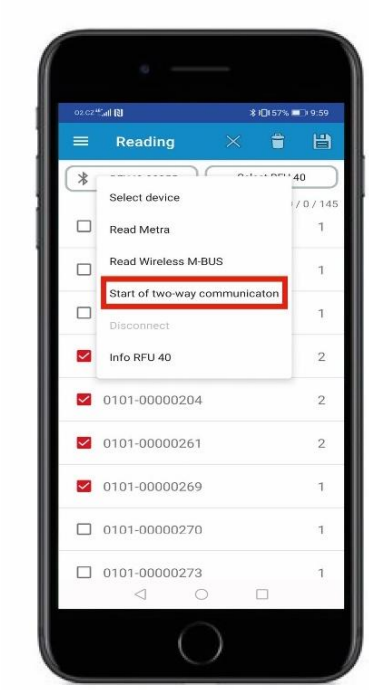
4.2.1.5.2 Settings

Remote complete setup of measuring devices that support two-way communication (E-ITN 40).

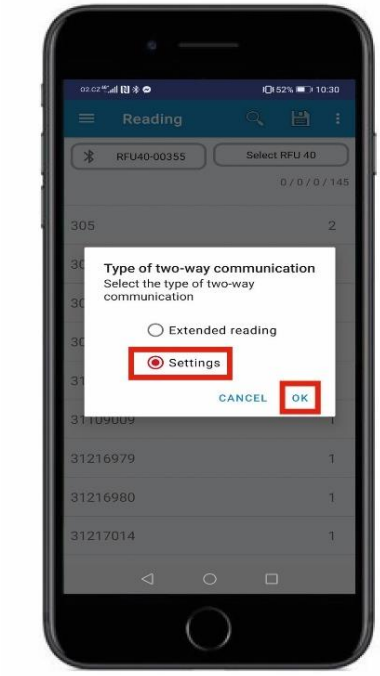
1. Select the items you want to set. Select which RFU 40 you want to set and open its RFU 40 context menu (long press).



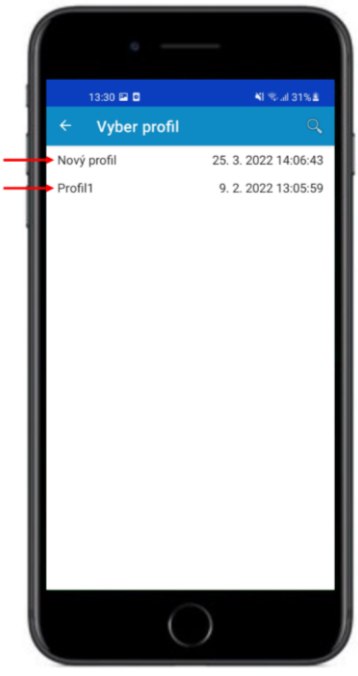
2. Select - start two-way communication.



3. Select - settings - OK



4. Select the setup profile you want to use for the setup. More about creating setting profiles in chapter 4.2.2.4. Setup profile.

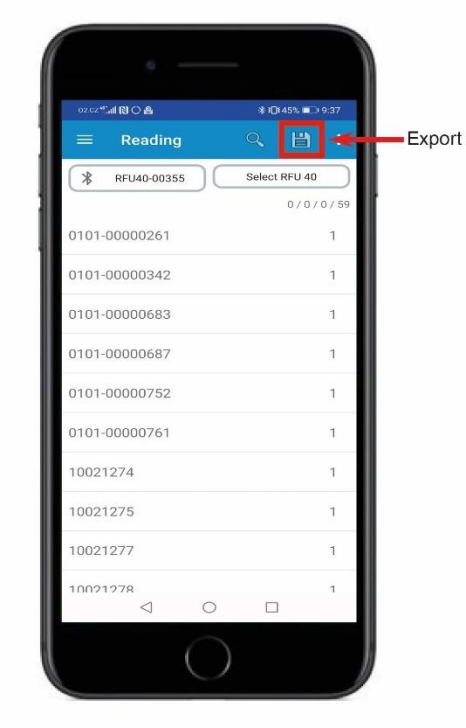


5. After marking the profile, you will be automatically redirected to the category - Reading and the setting of measuring devices will start.

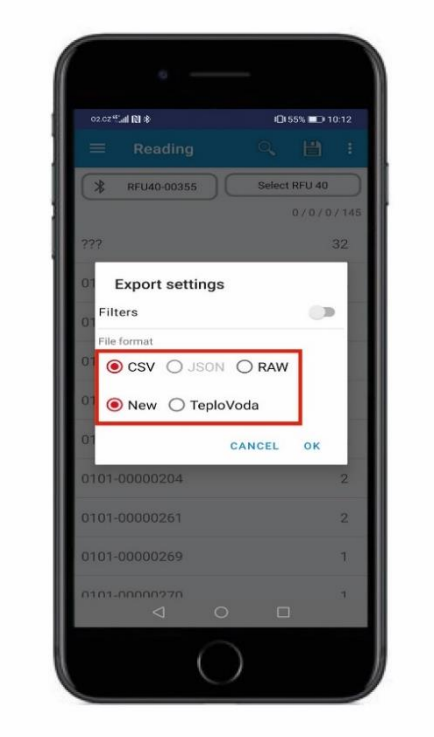
4.2.1.6 DATA EXPORT

The read data can be exported in CSV, JSON format to your mobile device.

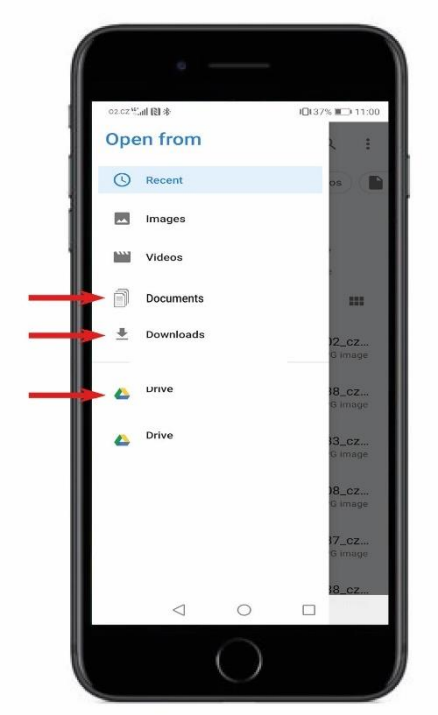
1. To export the read data, select the export icon.



2. Select the type of file in which you want to export the read data.



3. In the menu, select the option where you want to save the file (e.g. documents, downloads, my files, or cloud services).



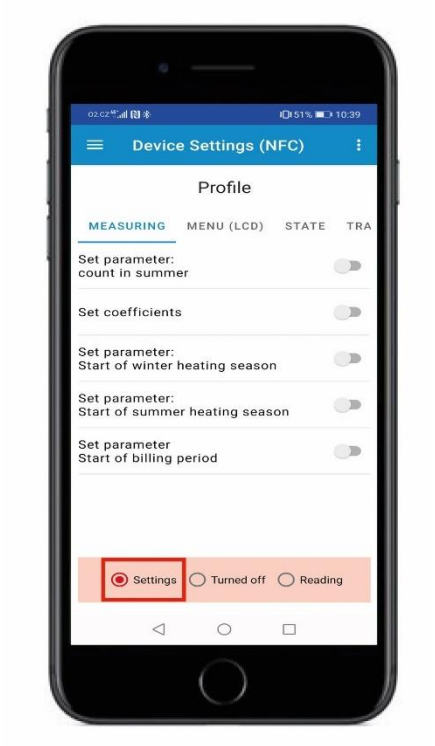
4.2.2 DEVICE SETTINGS (NFC)

For products with support for two-way communication (E-ITN 40), you can set the values and parameters that they transmit regularly. To set values and parameters, it is necessary to have its license imported for the given measuring device in the Radio Admin application.

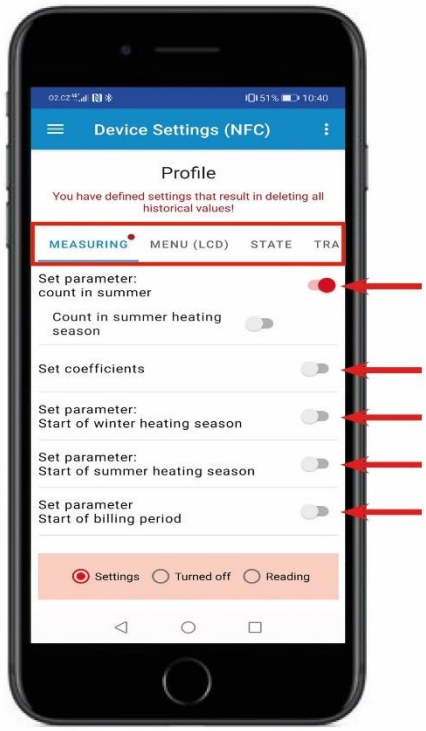
Products can be easily adjusted using adjustment profiles. More about setting profiles in chapter 4.2.2.4 Setting profile.

4.2.2.1 DEVICE SETTING USING NFC

1. In the main menu of the application, select - Devicet settings (NFC). At the bottom of the screen, select - settings.



2. Select the required values and parameters. If at least one parameter is modified, a red dot lights up next to the name.

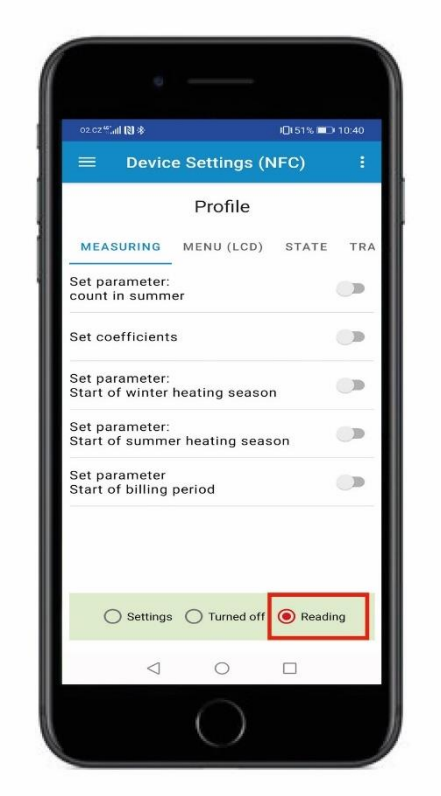


3. To set the selected parameters, place the phone near the measuring device and the setting will take place via NFC.

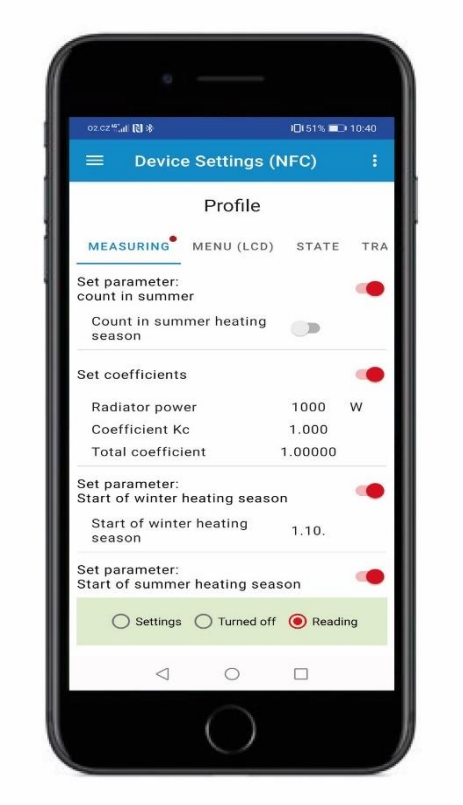
4.2.2.2 CURRENT SETTINGS OF THE MEASURING DEVICE

The current setting profile (set values and parameters) of the measuring device can be easily found using NFC.

1. In the main menu of the application, select - Device settings (NFC). At the bottom of the screen, select - reading.



2. Place the mobile device near the measuring device.



The current setting profile of the measuring device will be loaded using NFC. You can continue to work with the loaded setting profile. It can be saved and exported in the page menu.

4.2.2.3 ADJUSTABLE VALUES AND PARAMETERS

It is possible to set individual values and transmission parameters at measuring device (E-ITN 40).

4.2.2.3.1 MEASURING

When changing any setting in the measurement category, all measurements and values, including historical ones, will be deleted!

- Set parametr
  - ↳ Count in summer
  - ↳ Start of winter heating season
  - ↳ Start of summer heating season
  - ↳ Start of billing period

- Set coefficients
  - ↳ Radiator power 1000 W
  - ↳ Coefficient Kc 1,000
  - ↳ Total coefficient 1,00000

4.2.2.3.1.1 MENU (LCD)

- Set options of displaying items on display
  - ↳ Turn display low readability:
    - ↳ Turned off
    - ↳ 6 years
    - ↳ 8 years
    - ↳ 10 years

- Radiator power
- Coefficient kc
- Current temperature of radiator sensor
- Current temperature of environment
- Maximum temperature of radiator sensor for past yearly billing period
- Maximum temperature of radiator sensor for past monthly billing period
- Average temperature of radiator sensor for past yearly billing period
- Average temperature of radiator sensor for past monthly billing period
- Date
- Time
- Total consumption

4.2.2.3.1.2 STATE

- Set parametr: Time of device
  - ↳ UTC +0
  - ↳ UTC +1
  - ↳ UTC +2
  - ↳ UTC +3
  - ↳ UTC +4

- Reset sign of broken electronic seal
- Reset of temperature parameters
- Reset total consumption value
- Set device to saving mode

↳ Set date of start

4.2.2.3.1.3 TRANSMISSION

The measured data is transmitted in short radio telegrams of ~ 5-22 ms length (according to the customer's settings) and protected against misuse by encryption. Data is transmitted according to customer settings.

Transmission protocol:

- Beacon
- Metra
- Wireless M-BUS, Wireless M-BUS encrypted
- Wireless M-BUS OMS, Wireless M-BUS OMS encrypted

4.2.2.3.1.4 MAJÁK

- Date of device
- Errors
- Status of external sensor
- Status of seals

4.2.2.3.1.5 METRA

- Packet header
  - ↳ Date of device
  - ↳ Errors
  - ↳ Status of external sensor
  - ↳ Status of seals

- Temperatures

↳ Temperatures
- ↳ Current temperature of radiator sensor
  - ↳ Maxmums
    - ↳ Max. temperature of radiator sensor for current monthly billing period
    - ↳ Max. temperature of radiator sensor for current yearly billing period
    - ↳ Max. temperature of radiator sensor for past yearly billing period
    - ↳ Date of maximum temperature of radiator sensor from past billing period
    - ↳ Maximum temperature of radiator sensor for -1. to -3. monthly billing period
    - ↳ Maximum temperature of radiator sensor for -4. to -6. monthly billing period
    - ↳ Maximum temperature of radiator sensor for -7. to -9. monthly billing period
    - ↳ Maximum temperature of radiator sensor for -10. to -12. monthly billing period
  - ↳ Minimums
    - ↳ Min. temperature of radiator sensor for current monthly billing period
    - ↳ Min. temperature of radiator sensor for current yearly billing period
    - ↳ Min. temperature of radiator sensor for past yearly billing period
    - ↳ Date of minimum temperature of radiator sensor from past billing period
    - ↳ Minimum temperature of radiator sensor for -1. to -3. monthly billing period
    - ↳ Minimum temperature of radiator sensor for -4. to -6. monthly billing period
    - ↳ Minimum temperature of radiator sensor for -7. to -9. monthly billing period
    - ↳ Minimum temperature of radiator f sensor or -10. to -12. monthly billing period
  - ↳ Averages
    - ↳ Average temperature of radiator sensor for current monthly billing period
    - ↳ Average temperature of radiator sensor for previous day
    - ↳ Average temperature of radiator sensor for -1. to -3. monthly billing period
    - ↳ Average temperature of radiator sensor for -4. to -6. monthly billing period
    - ↳ Average temperature of radiator sensor for -7. to -9. monthly billing period
    - ↳ Average temperature of radiator sensor for -10. to -12. monthly billing period
  - ↳ Environment temperatures

- Current temperature od environment
  - Averages
    - Average temperature of environment for current monthly billing period
    - Average temperature of environment for current yearly billing period
    - Average temperature of environment for past yearly billing period
    - Average temperature of environment for previous day
    - Average temperature of environment for -1. to -3. monthly billing period
    - Average temperature of environment for -4. to -6. monthly billing period
    - Average temperature of environment for -7. to -9. monthly billing period
    - Average temperature of environment for -10. to -12. monthly billing period

- Ti(ss)
  - Averages
    - Average temperature Ti(ss) for current monthly billing period
    - Average temperature Ti(ss) for yearly monthly billing period
    - Average temperature Ti(ss) for previous day
  - Day counters
    - Number of days with updated Ti(ss) temperature for current monthly billing period
    - Number of days of changing temperature Ti(ss) for -1. až -3. monthly billing period
    - Number of days of changing temperature Ti(ss) for -4. až -6. monthly billing period
    - Number of days of changing temperature Ti(ss) for -7. až -9. monthly billing period
    - Number of days of changing temperature Ti(ss) for -10. až -12. monthly billing period

- Readings
  - Total consumption
  - Date of beginning of measuring of total consumption
  - Total consumption at the time of breaking electronic seal
  - Total consumption at the time of error
  - Monthly billing period
    - Consumption for current monthly billing period
    - Consumption for -1. až -3. monthly billing period
    - Consumption for -4. až -6. monthly billing period
    - Consumption for -7. až -9. monthly billing period
    - Consumption for -10. až -12. monthly billing period
    - Consumption for -13. až -15. monthly billing period
    - Consumption for -16. až -18. monthly billing period
    - Consumption for -19. až -21. monthly billing period
    - Consumption for -22. až -24. monthly billing period
  - Yearly billing period
    - Consumption for current yearly billing period
    - Consumption for -1. až -3. yearly billing period
    - Consumption for -4. až -6. yearly billing period

- Errors
  - Date of error
  - Total consumption at the time of error

- Seals
  - Date of break of electronic seal
  - Total consumption at the time of breaking electronic seal

- Dates
  - Date of breake of electronic seal
  - Date of error
  - Date of beginning of measuring of total consumption
    - Date of reading/ Current date
    - Start of winter heating season
    - Start of summer heating season
    - Date of beginning of billing period

  - ↳ Date of maximum temperature of radiator sensor from past billing period
  - ↳ Date of minimum temperature of radiator sensor from past billing period

- Device state
  - ↳ Count is summer heating season
  - ↳ Kq power of radiator
  - ↳ Coefficient Kc
  - ↳ Current time of allocator
  - ↳ Counters
    - ↳ Number of days of operation for current monthly billing period
    - ↳ Number of days of operation for -1. to -3. monthly billing period
    - ↳ Number of days of operation for -4. to -6. monthly billing period
    - ↳ Number of days of operation for -7. to -9. monthly billing period
    - ↳ Number of days of operation for -10. to -12. monthly billing period
    - ↳ Count of switching to single sensor mode for current monthly billing period
    - ↳ Count of switching to single sensor mode for past monthly billing period
    - ↳ Count of switching to single sensor mode for current yearly billing period
    - ↳ Count of switching to single sensor mode for past yearly billing period

4.2.2.3.1.6 WIRELESS M-BUS, WIRELESS M-BUS ENCRYPTED

- Current date
- Serial number of device
- Status of seals
- Status of external sensor
- Start of billing period
- Consumption for current monthly billing period
- Consumption for -1. až -3. yearly billing period
- Consumption in current month
- Consumption for -1. až -15. monthly billing period
- Average temperature of environment for current yearly billing period
- Average temperature of environment for past yearly billing period

4.2.2.3.1.7 WIRELESS M-BUS OMS, WIRELESS M-BUS OMS ENCRYPTED

- Current date
- Sériové číslo odečtového indikátoru
- Status of seals
- Status of external sensor
- Start of billing period
- Consumption for current monthly billing period
- Consumption for 1 year billing period
- Consumption in current month
- Consumption for -1. až -15. monthly billing period
- Average temperature of environment for current yearly billing period
- Average temperature of environment for past yearly billing period

4.2.2.4 SETUP PROFILE

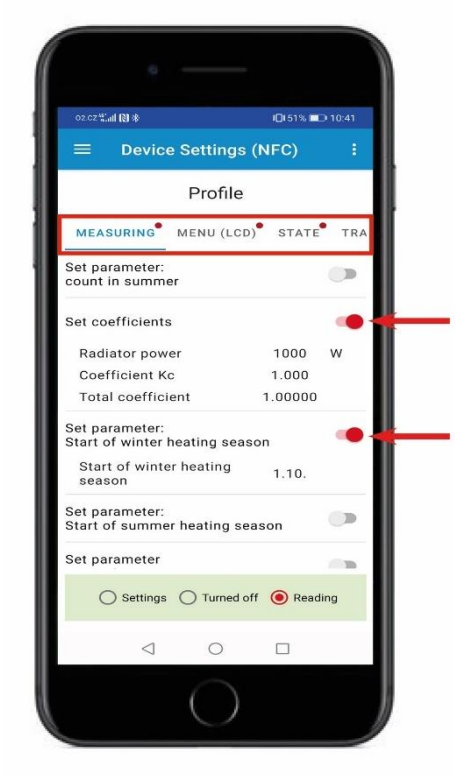
The measuring device (E-ITN 40) has defined settings, see chapter 4.2.2.3. Adjustable values and parameters.

You can save the defined settings for the reading device as a profile, either for later use or to share with the manufacturer. The profile can also be used for the production of new measuring devices (E-ITN 40). The settings you save in the profile will be used during production.

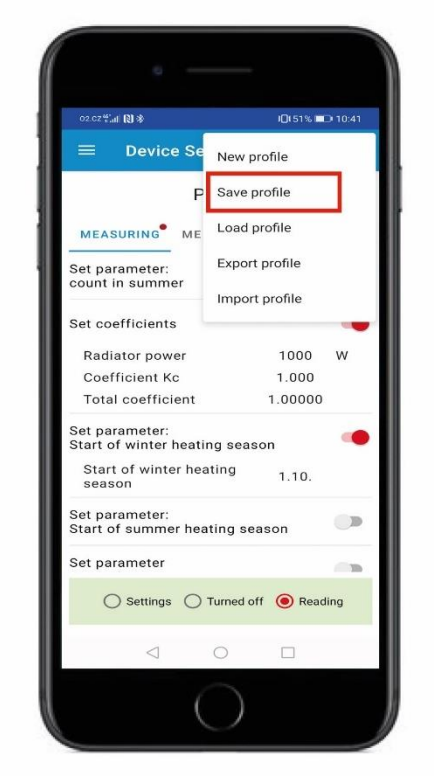
4.2.2.4.1 Creation of a setting profile

1. In the main menu of the application, select - Device settings (NFC).

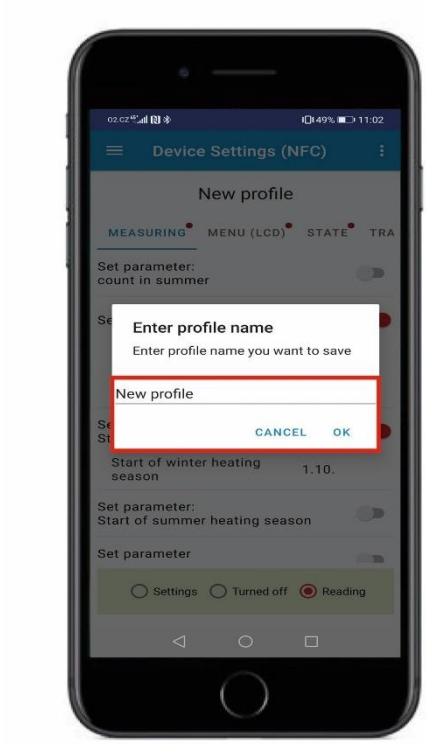
2. Choose the parameters you want to set from the menu. See chapter 4.2.2.3 Adjustable values and parameters.



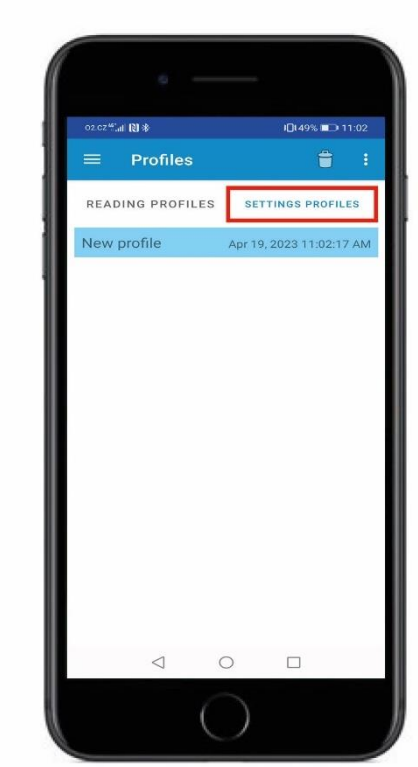
3. In the page menu, choose - save profile.



4. Enter the name of the newly created configuration profile.



5. The saved setting profiles can be found in the main menu of the application - profiles.

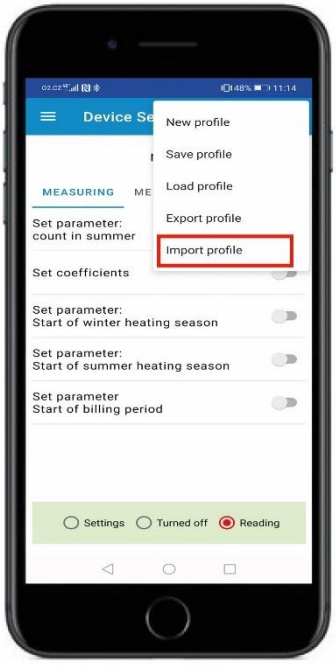


4.2.2.4.2 Import of a setting profile

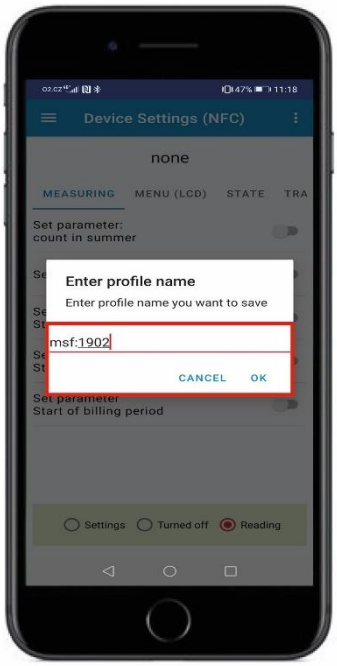
1. Import the settings profile to your mobile device. The file can be placed in the phone's internal memory (in the documents file/folder). Or upload it through cloud services (Google Drive, One Drive, Amazon, etc.)

2. In the main menu of the application, select - Devicet settings (NFC).

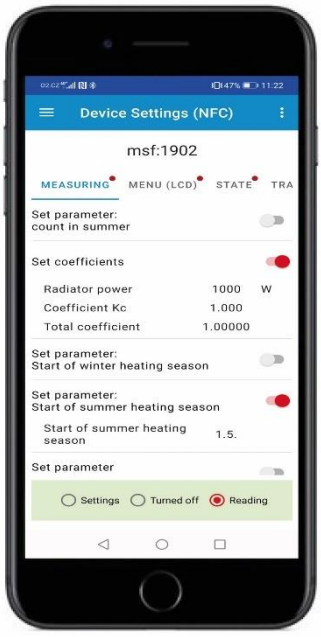
3. Select - import profile in the page menu.



4. In the menu, select the option where you saved the file with the reading plan (e.g. documents, downloads, my files, or cloud services). Enter the name under which you want to save the imported profile.



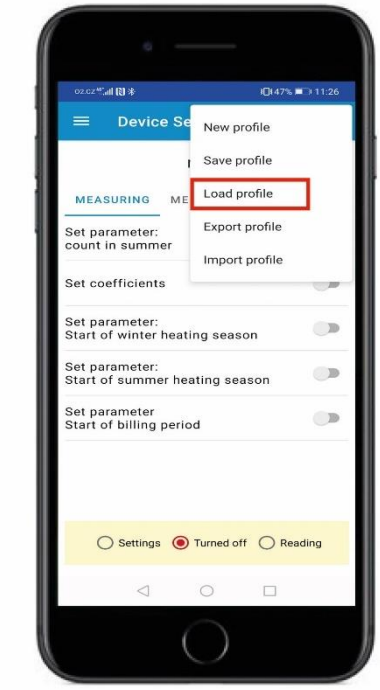
5. The imported profile is also displayed with its set parameters. You can further work with the profile as you like - save, export.



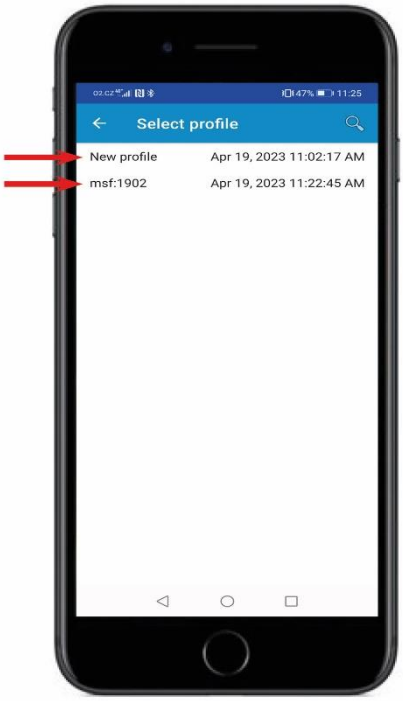
4.2.2.4.3 Export of a setting profile

1. In the main menu of the application, select - Device settings (NFC).

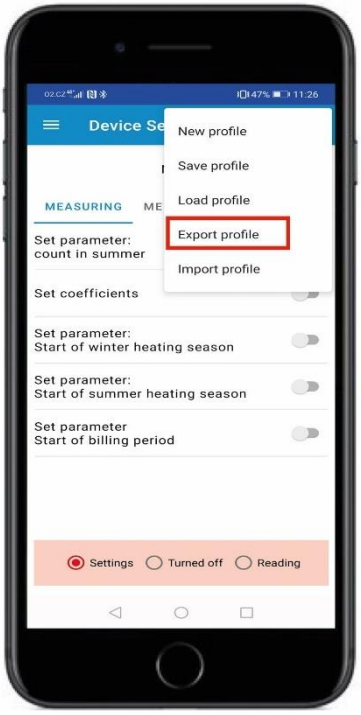
2. In the menu of the page (in the upper right corner) choose - load profile.



3. Select the profile you want to export.



4. The selected setting profile is displayed. In the menu of the page (in the upper right corner) choose – export profile.



5. In the menu, choose the option where you want to save the document. E,.g. documents, downloads, my files, or cloud services).

4.2.3 READING PLANS

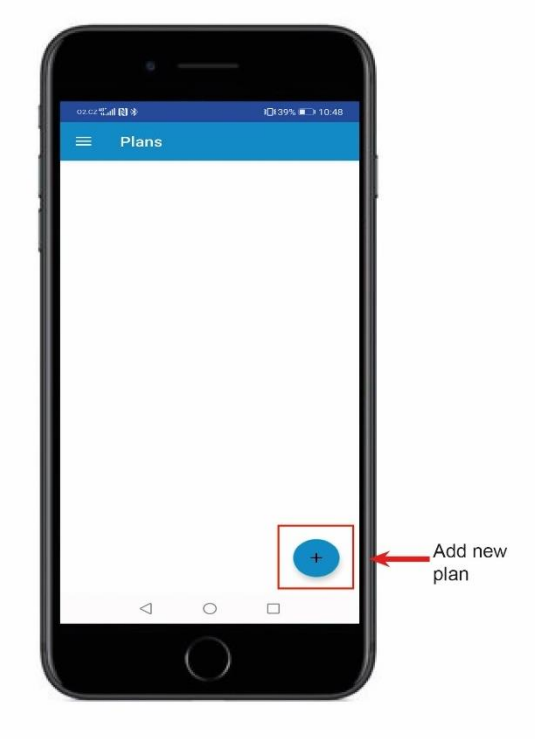
The reading plan represents a tree-like structure with information about the location of the measuring unit. The number and size of reading plans is not limited. They can be used repeatedly. The measuring device can be located in any level of the reading plan.

4.2.3.1 PLAN CREATION

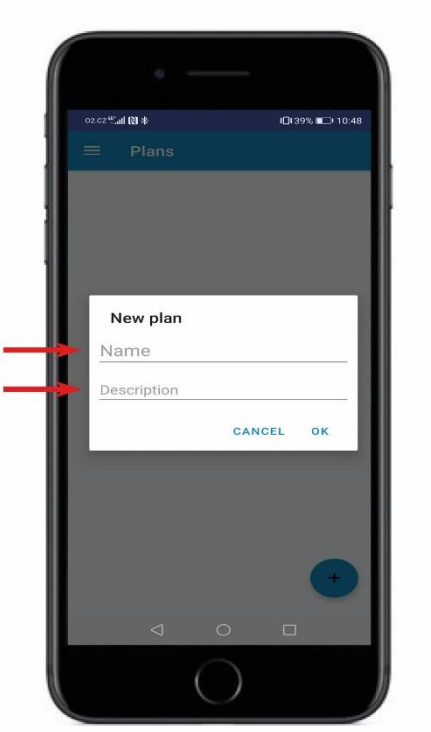
The creation of the reading plan can be done directly in the Radio Admin application, or you can create a file with the plan, which is then imported into the Radio Admin application. The file can be created, for example, in Excel or another text or spreadsheet editor.

4.2.3.1.1 PLAN CREATION IN RADIO ADMIN

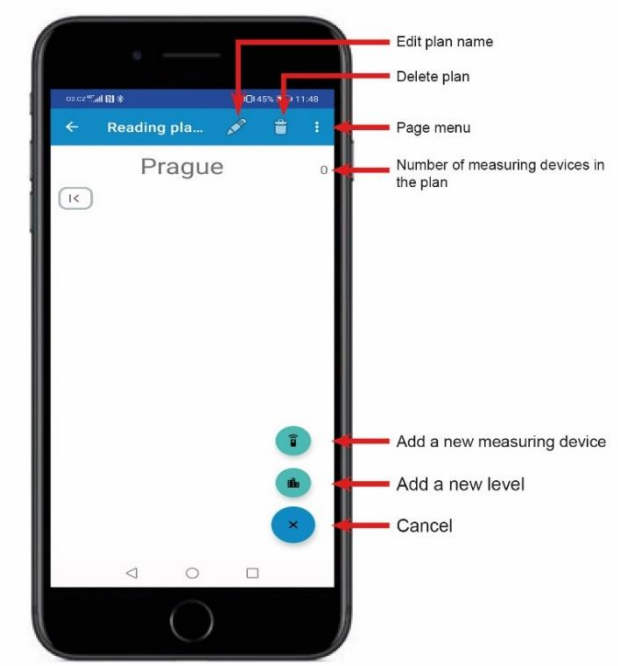
1. In the main menu of the application, select reading plans. In the lower right corner, select the option to add a new plan.



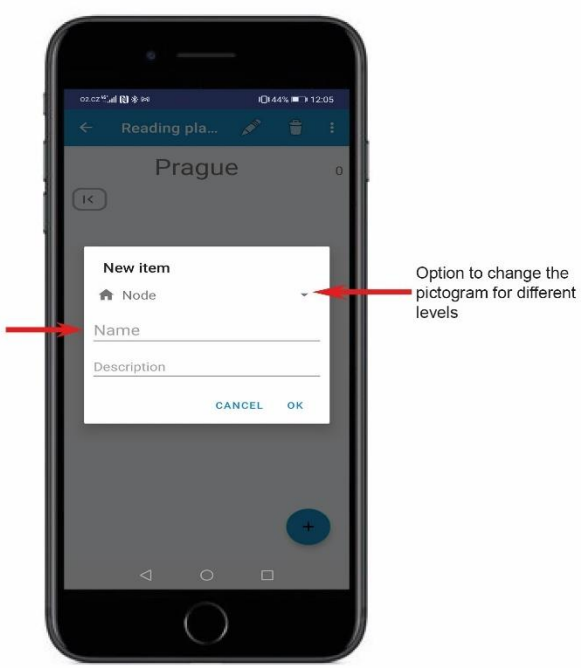
2. Enter the name of the new plan, or add a note, and select OK.



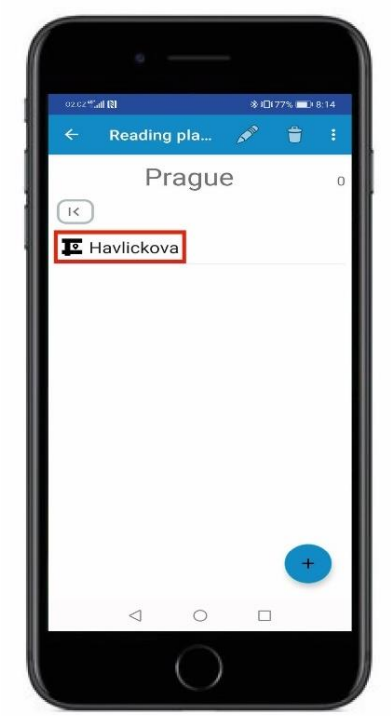
3. In the lower right part, choose the option to add a new measuring device or add a new level.



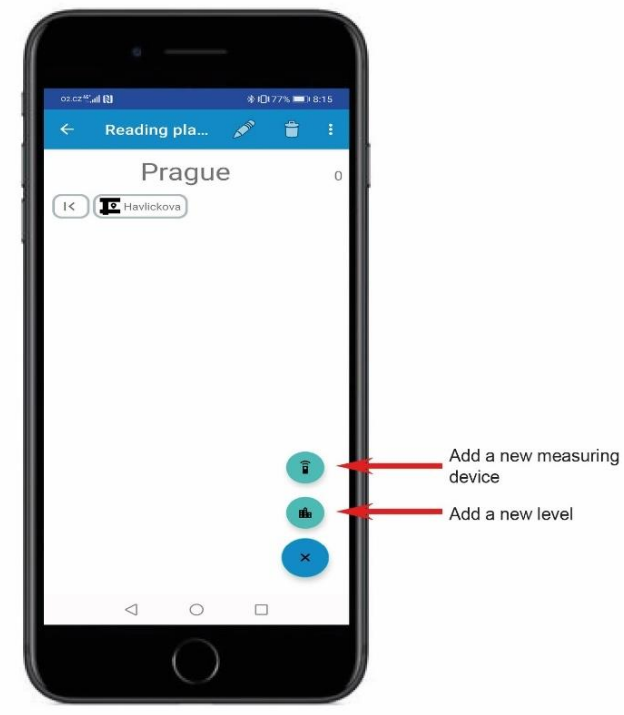
4. A different pictogram can be chosen for each level, for better clarity and orientation in the reading plan. Select the desired icon, enter the name of the level and select OK.



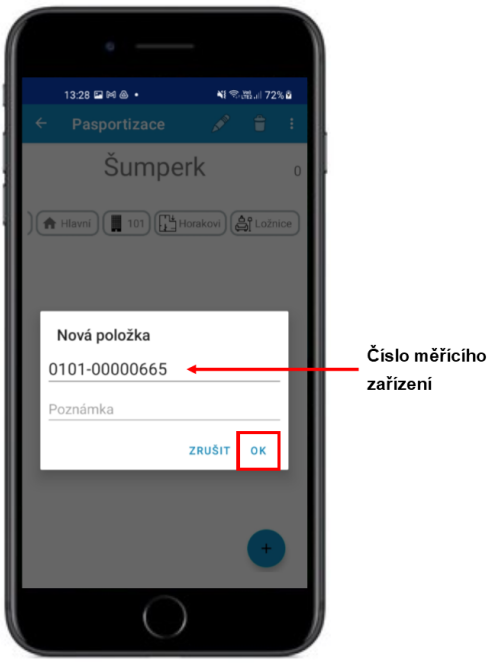
5. To add more sub-levels, click on your newly created level.



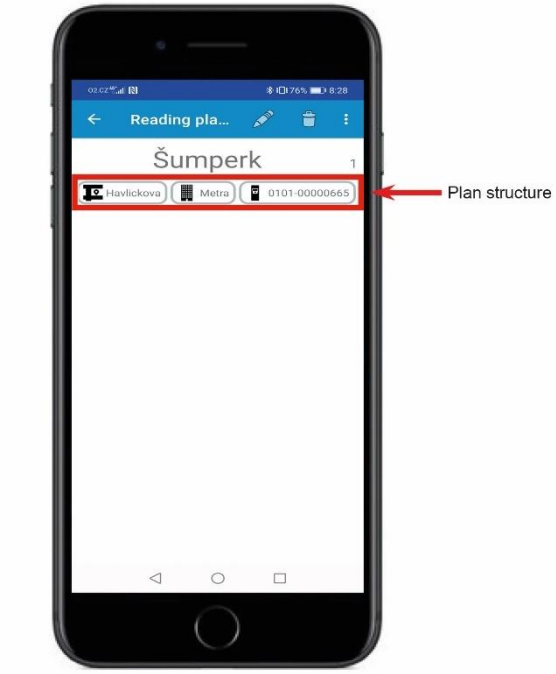
6. Additional plan sublevels or measuring devices can be added.



7. To add a measuring device, it is necessary to enter its serial number. The serial number can be entered manually, or bring the mobile device to the measuring device and the reading will take place



8. The complete plan structure with individual levels is displayed at the top of the screen. To delete any plan level, mark the level and select the delete button.



4.2.3.1.2 PLAN CREATIO IN OTHER PROGRAMS

The reading plan can be created in any text editor that supports saving in CSV format.

All rows do not have to have the same number of items. Individual columns must be separated by a ";" character. The line does not have to contain the serial number of the measuring device. If it contains it, it must always be the last one!

Example

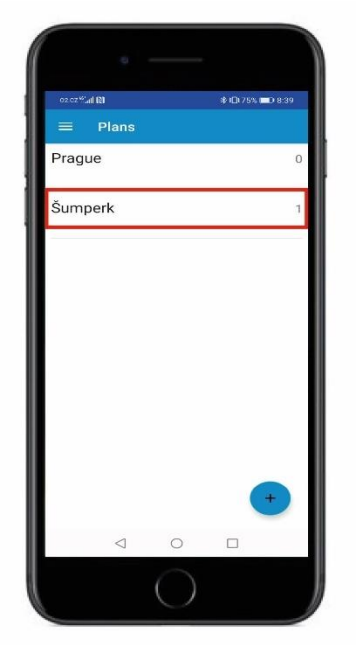
Reading plan created in Excel. Each column represents 1 branch of the tree structure.

	A	B	C	D	E	F	G
1	Šumperk	Havlíčkova	Dům 1	Novákovi	Ložnice	0101-00000665/0121	
2	Šumperk	Havlíčkova	Dům 1	Novákovi	Pokoj	0101-00000666	
3	Šumperk	Havlíčkova	Dům 2	Havelkovi	Ložnice	0101-00000667	
4	Šumperk	Hlavní	Dům 3	Pavelkovi	Koupelna	0101-00000668	
5							
6							

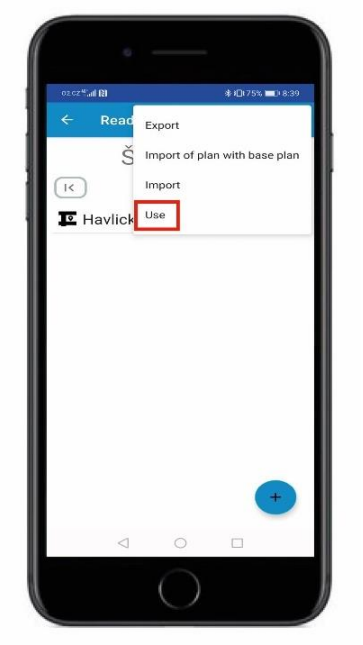
4.2.3.2 USING A READING PLAN

Reading plan can be used very simply to read data from measuring devices.

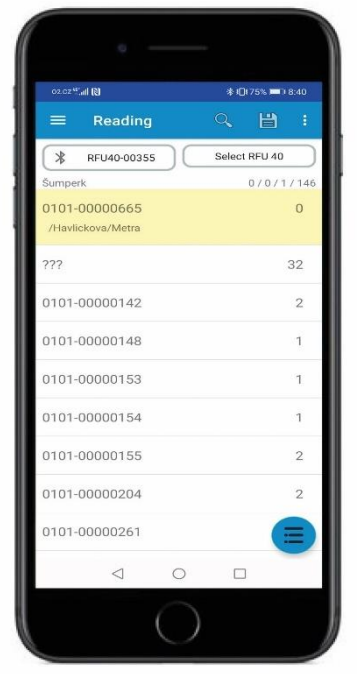
1. In the main menu, select - reading plans. Select the plan you want to use.



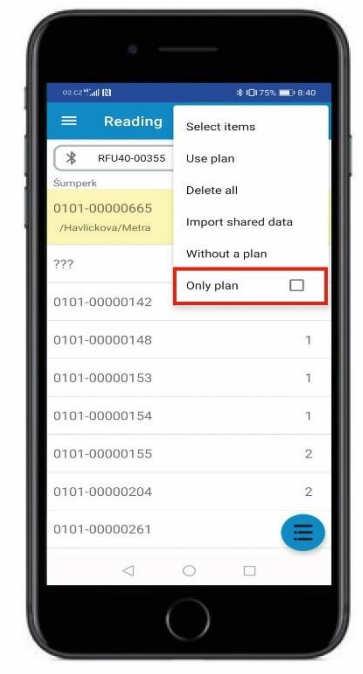
2. Open the page menu (in the upper right corner) and choose - use.



3. The reading plan is automatically transferred to the "readings" section. The serial numbers contained in your selected reading plan will turn yellow.



4. To display only the serial numbers from the plan, open the page menu (in the upper right corner) and select - plan only.

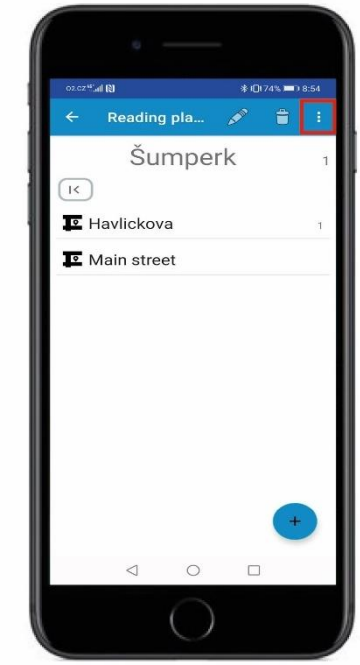


5. To start the reading, connect the reading unit RFU 40 and start reading the data (see chapter 4.2.1.2 reading with the RFU 40).

4.2.3.3 PLAN EXPORT

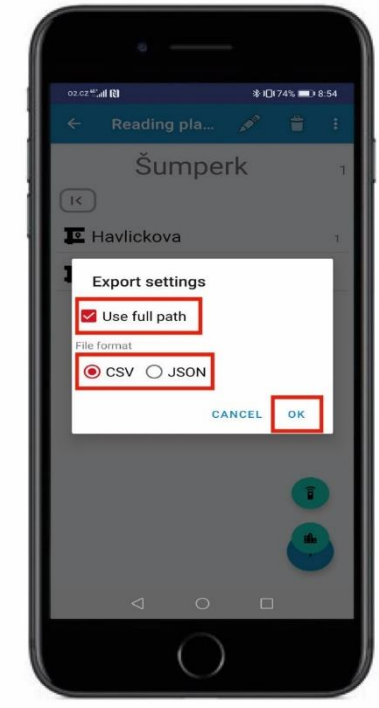
The reading plan can be exported to a mobile device. Export can be done at any level of the reading plan. The plan can be exported from any level.

1. In the main menu of the Radio Admin application, select - reading plans. Open the plan you want to export and select - page menu.



2. Select - export in the page menu.

3. Choose in which file you want the exported file (CSV, JSON) and choose OK. In the menu, choose the option where you want to save the file (e.g. documents, downloads, my files, or cloud services).

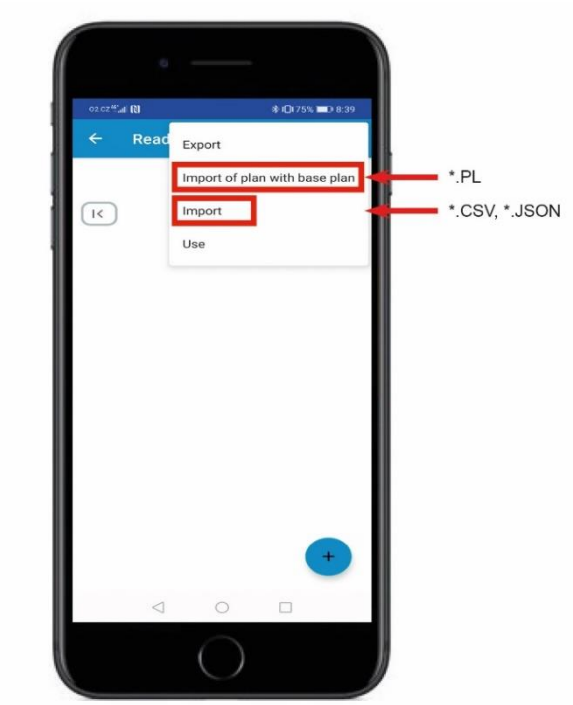


4.2.3.4 IMPORT PLAN

The reading plan you want to import into Radio Admin must be in CSV, JSON or PL format (original plans with base), other files are not supported by Radio Admin! The reading plan can be imported to any level.

Process:

1. Import the reading plan you have created into your mobile device (eg documents, downloads, files, or cloud services).
2. In the main menu of the application, select - reading plans.
3. Create a new plan and enter its name (see chapter 4.2.3.1.1. Creating a plan in the Radio Admin application)
4. Open the page menu.
5. Choose - import for plans in CSV or JSON format. Or choose - import plan with base, for plans in PL format.



4.2.4 PROFILES

In the profiles category you will find your saved profiles. The set values and parameters transmitted by the measuring device are called – profile.

The measuring device (E-ITN 40) has adjustable measurement values and parameters. Together, it creates a set of data that is broadcast regularly. Individual values and parameters can be set during the production of the measuring device, or they can be changed arbitrarily during the lifetime of the measuring device.

2 types of profiles:

1. **Reading profiles -** serves to determine the current setting of the measuring device.

2. **Settings profiles –** is used to change the settings of individual values and parameters on the measuring device. To create a setting profile, see chapter 4.2.2.4.1 Creating a setting profile.

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The setting profile serves for later use or for sharing with the manufacturer. The profile can also be used for the production of new measuring devices (E-ITN 40).

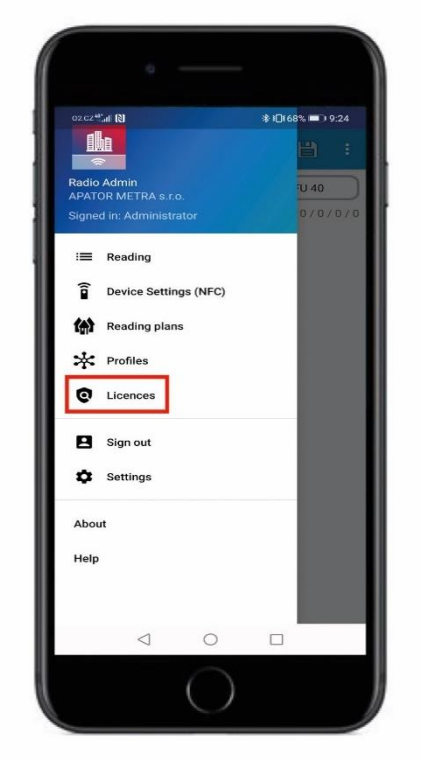
4.2.5 LICENCE

For each measuring device we want to manage, set up and read its data, it is necesarilly to have license. Without license of measuring device data can be read using NFC but obtained data are limited.The license for individual measuring devices is available for download after logging in at www.metra-su.cz

Process:

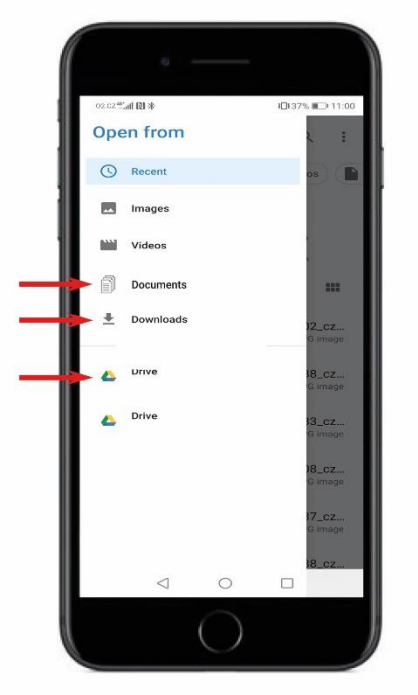
1. Import licence to your mobile device. The license can be inserted into the internal memory (in the documents / folders file). Or through cloud services (Google Disk, One Drive, Amazon, etc.)

2. In the main menu of the application and select

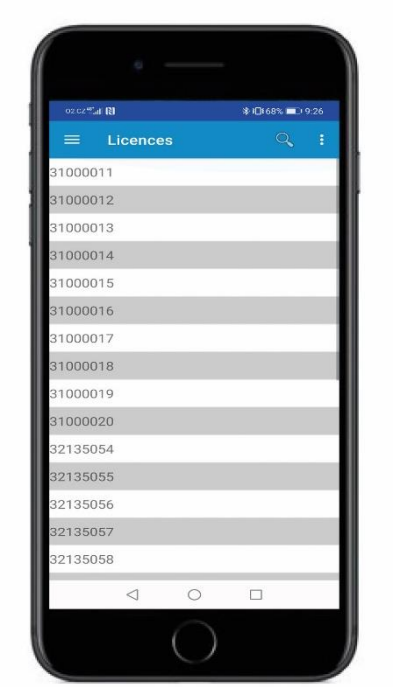


3. Select + in the upper left corner.

4. Select the option where you imported the license file (most often documents, downloads, my files, or cloud services).

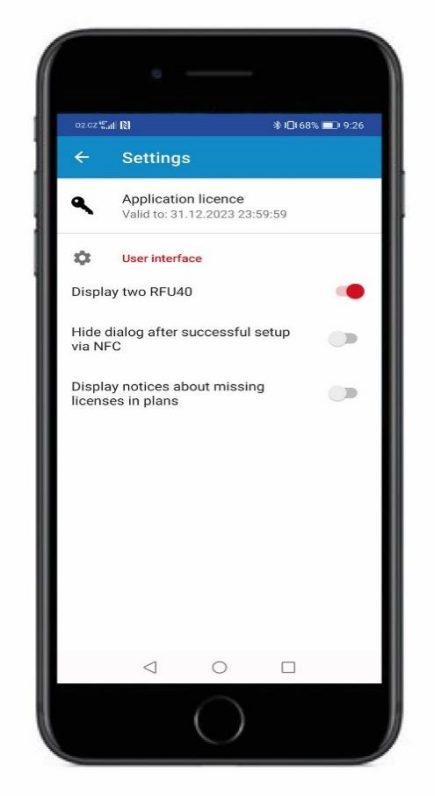


5. Imported licenses are sorted by serial number.



4.3 SETTINGS

The settings category is used to import a Ralic license. For moe info see chapter 3. Application License.



Two RFU 40 reading units can be used for reading at the same time. To set the use of only one reading unit, adjust the settings.