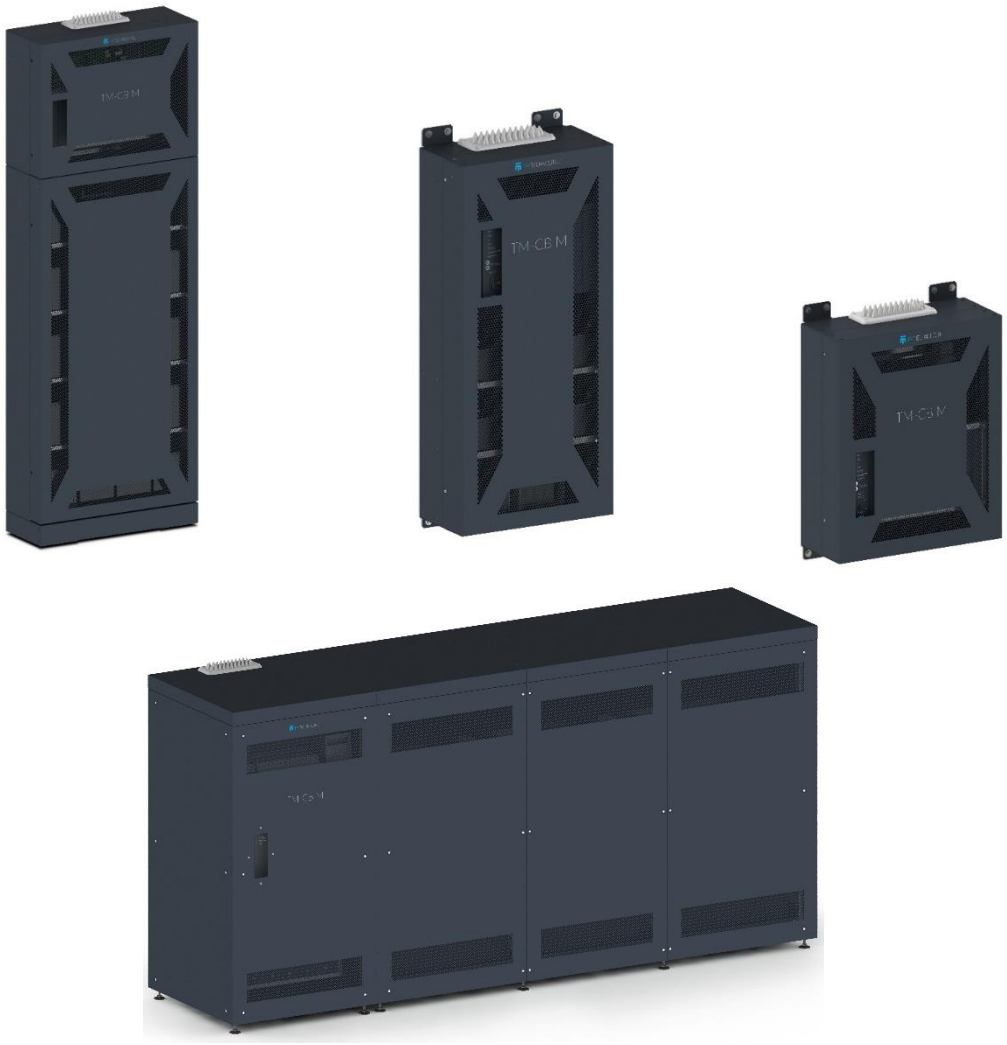
TM-CB M

CENTRAL BATTERY SYSTEM

VisualBase Interface User Manual 1.00.002/04.11.2024



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1. General Information

The VisualBase application is used for monitoring, supervising, and managing the status of devices in the Central Battery System (ATS CB - Automatic Test System for Central Batteries) in the TM-CB M version. The VisualBase application is available for desktop computers and allows connection to the system using a USB cable.

2. Launching the VisualBase Application

2.1. First Launch

The current version of the VisualBase application can be found on the TM Technologie website at: https://tmtechnologie.pl/VisualBase.7z

After downloading the application, it is necessary to unpack the file using the tool built into Windows system, or any other application that supports *.7z files.

To start the application, run the VisualBase.exe file located in the application directory. After launching, a window with available language options will appear. After selecting the appropriate language, a welcome window will appear. The application language can be changed at any time (see: 10.5).

3. Application Interface

The VisualBase application interface consists of three main elements: the side menu on the left, the main window in the middle, and the bottom navigation panel (if available).

3.1. Side Menu

The side menu is located on the left side of the application window and is used to navigate between the following pages:

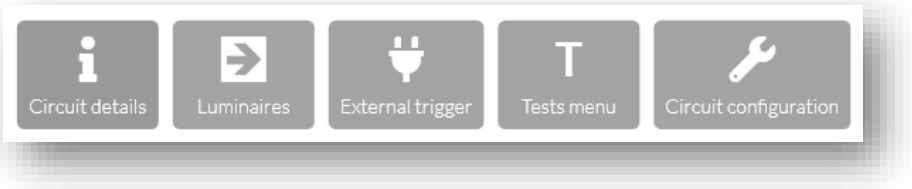
- Home Page – the application's welcome page
- System – a list of devices in the system and information about them
- Schedules – displaying and configuring schedules
- Logs – system logs
- Tools – additional options and tools available in the system and application
- USB Connection Settings – connection to the Central Battery System's USB interface
- Log In / Log Out – displays the login window or logs out the currently logged-in user

3.2. Main Window

The main window of the application displays the currently selected pages. If it is possible to return to the previous page, an icon  is displayed at the top.

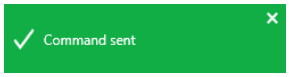
3.3. Bottom Navigation Panel

If there are more options available on the currently selected page, a navigation panel with buttons will be displayed at the bottom of the page. It allows access to currently available other pages or actions.



3.4. Notifications

While using the application, notifications appear in the lower right corner of the screen, occurring in three variants:

- Success 

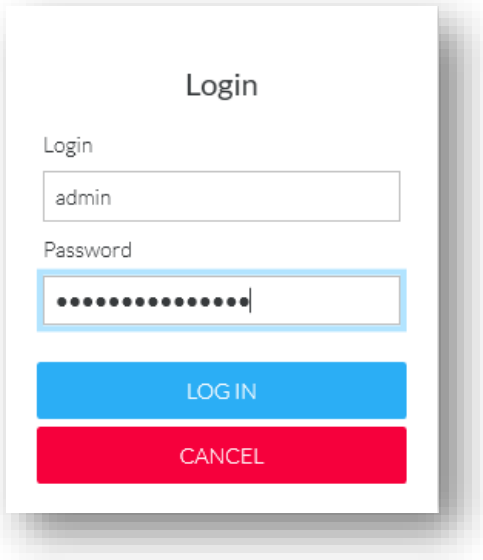
- Warning 

- Error 

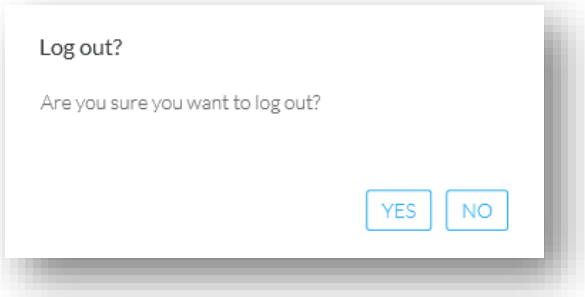
4. Login and User Accounts

4.1. Login Window

To log in, use the Log In button in the application marked with the icon  , located at the bottom of the side menu. After clicking it, a login window will appear, where you need to enter the user's login and password, and then confirm with the LOG IN button.



After successful login, the login button in the side menu will change its functionality, and clicking it will log out the user. Logging out should be confirmed in the window that appears.



4.2. Default User Accounts and Creating a Primary Account

By default, the application has two user accounts with different permission levels:

- „serwis" with the password depending on the serial number of the central (access for TM Technologie service)
- „admin" with the password „1234"

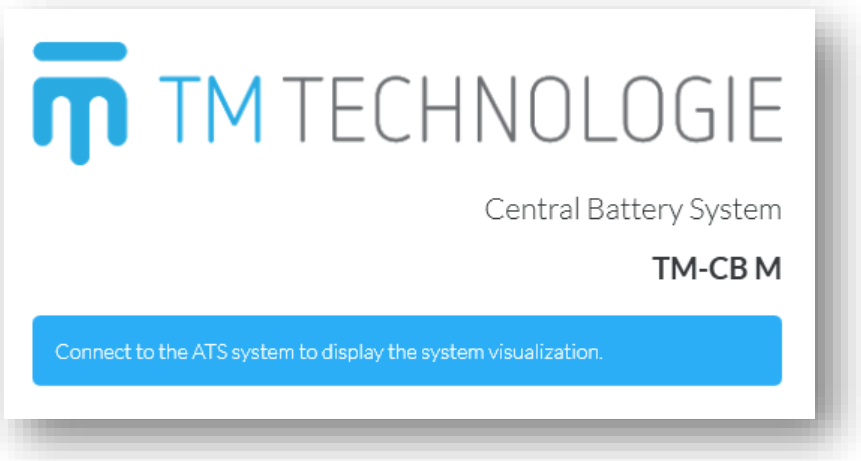
In the first step, log into "admin" account and change the password to be sufficiently strong, preventing unauthorized access to certain application functions. Passwords can consist of any characters but cannot consist solely of whitespace characters (space, tab, etc.). User accounts are created locally on the computer, not in the TM-CB M central unit, so they won't be available when connecting to another computer. Log in by clicking on the user icon at the bottom of the navigation bar (see 10.1).

The next step is to create a primary user account. After logging in, go to the Tools page, then click the Add User button. On the displayed page, fill in all the fields, choose the Basic permission level, and click the Add User button. If all fields are filled correctly, a new account with basic access rights will be created in the application.

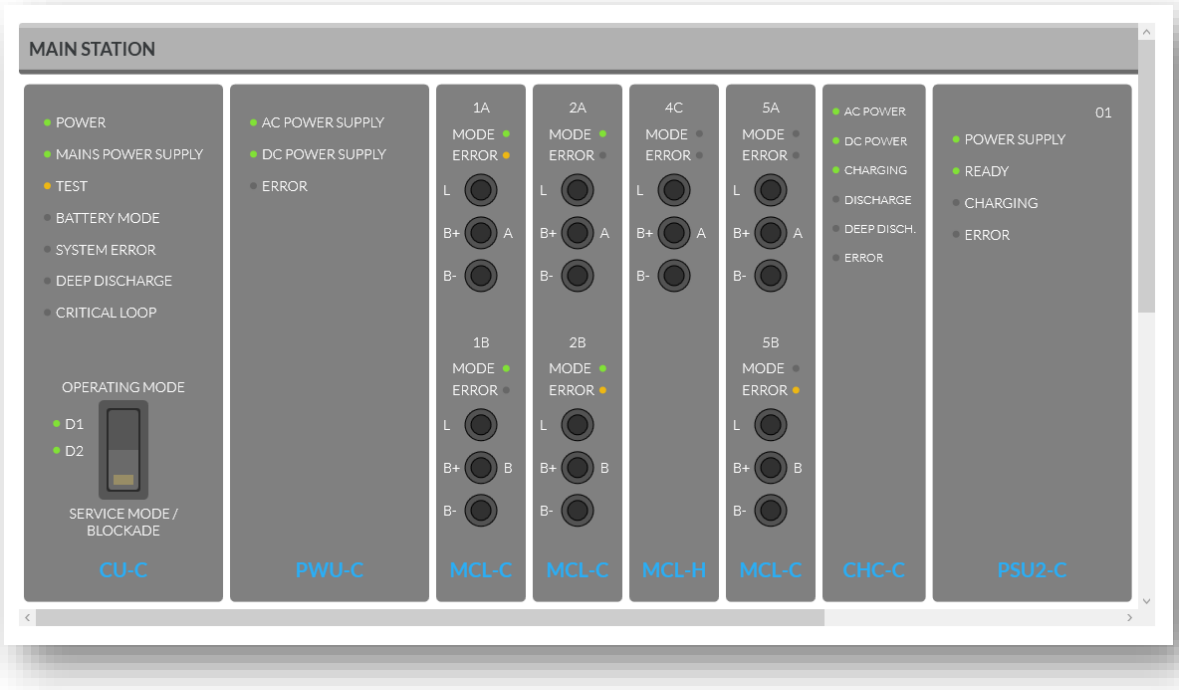
5. Homepage

The homepage is displayed by default upon launching the application. You can also navigate to it by clicking the Homepage button, symbolized by an icon  , in the side navigation menu.

If the application is not connected to the device, a message will be displayed on the page informing you that a connection is necessary to display the system visualization.

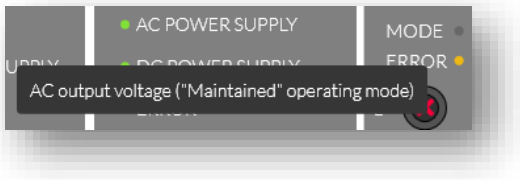


In case the connection has been established, the main page will display the system visualization. This visualization represents all the modules installed in the system and continuously updates their status using LED indicators located in the respective devices.



On the circuit board visualization, a red X symbol may appear near the fuse, indicating a blown fuse.

When hovering over the MODE area, a tooltip will appear describing the exact operating mode of the circuit board.



6. Connecting to the system

To fully utilize the application, connect to the TM-CB M system using a USB cable connected to the USB-C socket on the coordinator.

In the next step, in the VisualBase application, go to the USB Connection Settings page from the side menu by clicking the icon  . Then, from the list of available COM ports, select the one connected to the TM-CB M central unit and press the Connect button. Before connecting, you can

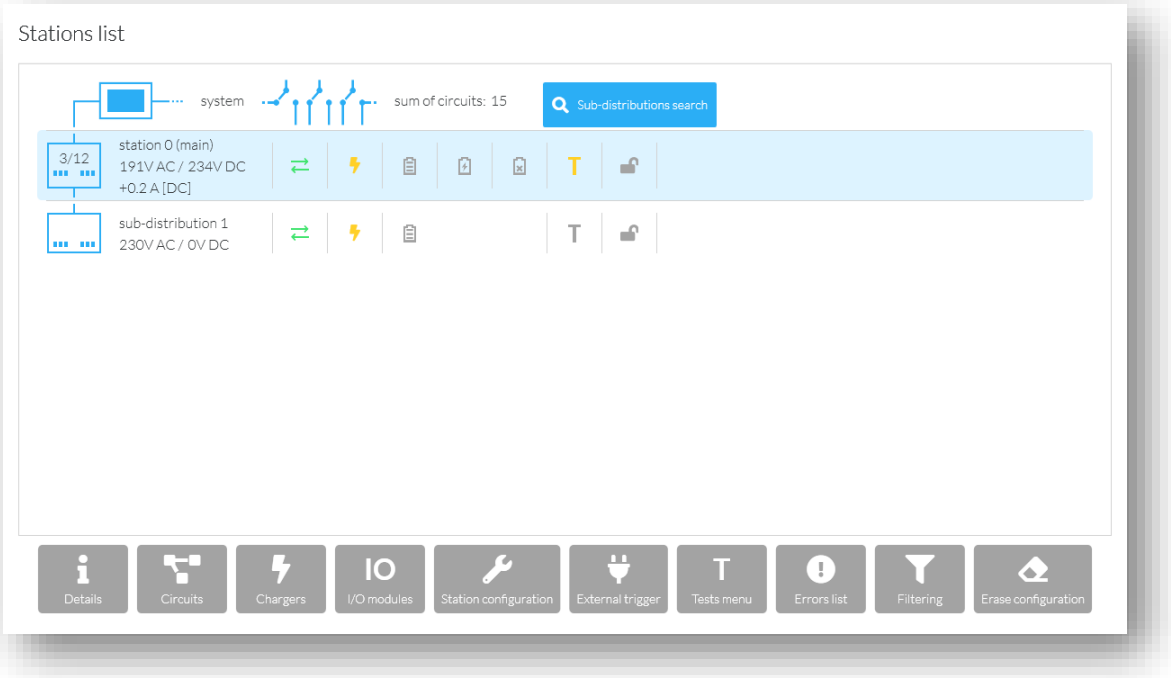
refresh the list by clicking Refresh List. After a successful connection, the Connect button will change to Disconnect, allowing you to end the connection with the central battery system.

7. System (Device List)

7.1. Basic Information

This page displays all devices added to the system, such as the main station, sub-distributions, circuits, luminaires, etc. You can also read detailed information about each device, add and remove them, and perform configurations. To access the System page, select the icon  from the side menu.

7.2. Station List



The first view upon entering the System page is the list of stations added to the system. If the connection to the system is successful, the station 0 (main station) should always be visible on this page. Other sub-distributions will be visible after searching for them.

Above the list of stations is the system status icon  , which turns orange if a warning appears in the system and red in the case of a critical error.

Next to the system status icon is the circuit status icon  , which turns red if there is an error in any of the circuits in the system. To the right of it is information about the total number of circuits in the system.

Below the station list is the navigation menu, where the number of available options depends on whether the main station or a sub-distribution is selected. If no station is selected, only the Tests Menu button is available.

7.3. Stations and Sub-distributions

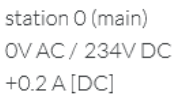
7.3.1. Station/Sub-distribution Status

The status of the main station and each sub-distribution is indicated by information about AC and DC voltage and icons on the station list.

Main Station Status:

The first number indicates the set station operating time (in hours), and the second indicates the battery capacity (in ampere-hours). The blue color indicates no error in the station.

Red color indicates a general error in the main station.



Information about measured AC and DC voltage (second line), DC station current (third line), and the direction of the current flow (+ from the battery, - to the battery).

Communication established

No communication

Station is not powered by AC

Station is powered by AC

Station is not powered by DC

Station is powered by DC

No chargers are charging

One or more chargers are charging

No deep discharge

Deep discharge of batteries occurred

No test in progress

T	Main station is undergoing a test
	Service mode is off
	Service mode is on

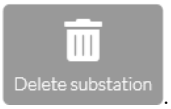
Sub-distribution Status:

	No sub-distribution error
	General error occurred in the sub-distribution
substation 1 230V AC / 0V DC	Information about the sub-distribution number and measured AC and DC voltage
	Communication established
	No communication
	Sub-distribution is not powered by AC
	Sub-distribution is powered by AC
	Sub-distribution is not powered by DC
	Sub-distribution is powered by DC
T	No test in progress
T	Sub-distribution is undergoing a test
	Service mode is off
	Service mode is on

7.3.2. Searching for Sub-distributions

To make the sub-distributions part of the system visible on the station list, they must be searched for beforehand. To do this, click the Sub-distributions search button located above the station list. After successfully sending the command, a green notification with the message „Command sent" will appear. After a few seconds, all the searched sub-distributions will appear on the station list.

7.3.3. Removing Sub-distributions

Each of the searched sub-distributions, except the main station, can be removed by clicking the Remove Sub-distribution button 

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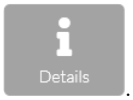
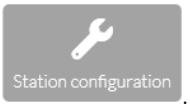
7.3.4. Details of Main Station / Sub-distribution

To access the page containing a detailed list of parameters for the main station and sub-distributions, select the appropriate station and press the Details button marked with the icon 

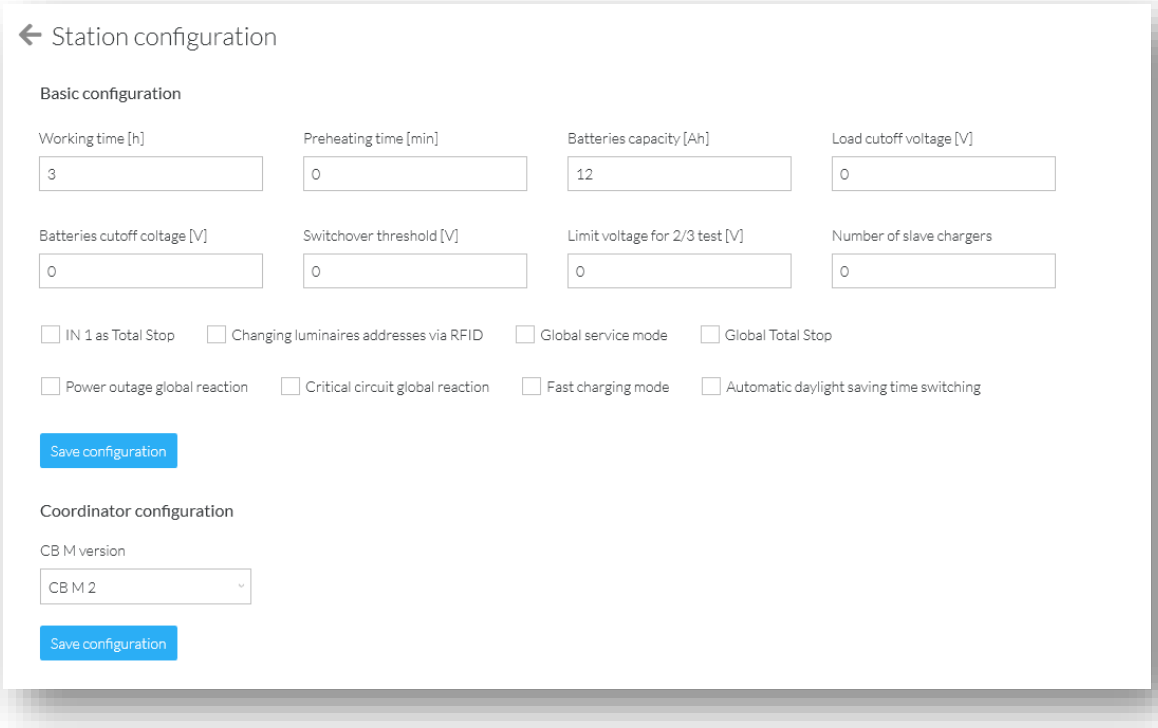
. After navigating to the selected page, you can view information about both the station and the power module used in it, using the navigation bar at the top of the page ← Main station (CU-C) Power supply module .

7.3.5. Station Configuration

The main station allows for the configuration of its basic parameters. This option is available only from an administrator or service account. To configure the main station, click on the Station Configuration button 

. A window will open where you can configure the following parameters:

- Operating time [h]
- Heating time [min]
- Batteries capacity [Ah]
- Load disconnect voltage [V]
- Battery disconnect voltage [V]
- Fault switch voltage [V]
- 2/3 Test cutoff voltage [V]
- Number of slave chargers
- IN1 as Total Stop
- Changing luminaires addresses via RFID
- Global service mode
- System Total Stop
- Power outage global reaction
- Critical circuit global reaction
- Fast charging mode
- Automatic daylight saving time switching

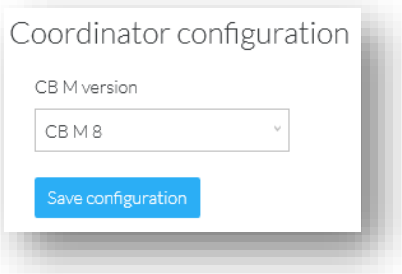


After completing the configuration, press the Save Configuration button to transmit the settings to the main station.

7.3.6. Coordinator Configuration

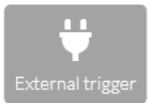
The configuration of the coordinator can only be performed from a service-level account. It involves setting the appropriate type of the TM-CB M system and saving it in the device. This procedure is carried out on the Coordinator Configuration page, accessible via the button 

. The Coordinator Configuration section will appear after the user logs in to the Service account. Then select the appropriate version of TM-CB M from the dropdown list and confirm with the Save Configuration button.

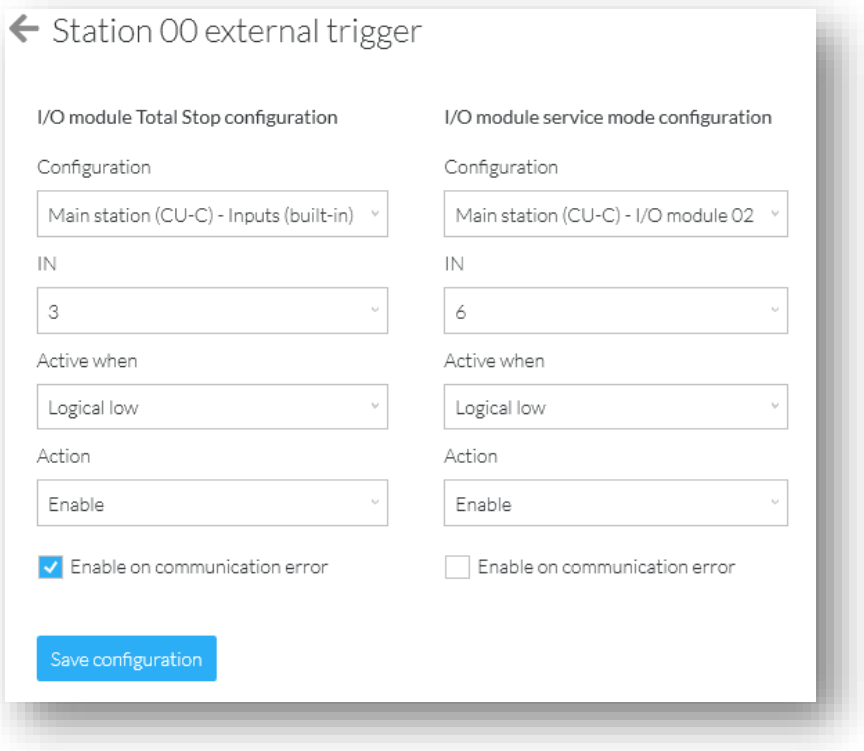


NOTE! Always remember to set the correct configuration before starting to use the system. Leaving it configured as "Not configured" is not allowed. Incorrect configuration results in a lack of communication with sub-distributions and can cause other issues.

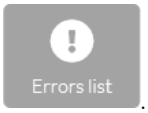
7.3.7. External Trigger

In the main station and each sub-distribution, you can configure an external triggering mechanism for the total stop mode and service mode. The trigger can be a signal on the built-in inputs or signals on the inputs of I/O modules attached to the station. Configuration is done by navigating to the External Trigger page through the button 

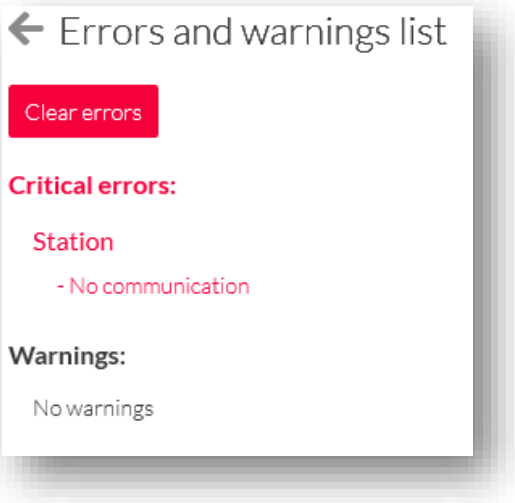
. Press the Save Configuration button to save the settings.



7.3.8. Error list

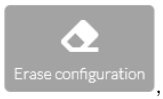
To read the list of currently occurring errors and warnings in a particular station, navigate to the Error List page 

. If any warning appears, the icon will be orange, while in the case of a critical error, it will be red.



Existing errors can be cleared using the Clear Errors button. If the cause has been eliminated, after successfully sending the error clearing command, they will disappear from the list.

7.3.9. Clearing Station Configuration

The VisualBase application allows for a complete clearing and resetting of the currently saved station configuration. After selecting the station and clicking the Erase Configuration button 

, and then confirming the choice, the configuration will be cleared.

NOTE! Deleting the configuration of the main station or sub-distribution is irreversible!

7.4. Tests Menu

To initiate a test or check the status of a currently running test, use the button 

to go to the Tests Menu page. If no test is currently being conducted, fields with the option to select Station, Circuit, Test Type, and Heating Time will appear on the page. The Run Test button will also be active. Once the test begins, its parameters in the Test Status section will be updated, the Cancel Test button will become active, and data will appear on the chart at the bottom of the page. A running test is also indicated by a yellow icon T on the station list.

Types of tests that can be initiated:

- Functional Test: Measures the current in the circuit and compares it with the reference value. Users can enable or disable heating. The test can be conducted for selected or all circuits in a given station.

- Duration (limited): Lasts for 2/3 of the nominal operating time of a given sub-distribution, checking the state of the batteries and luminaire status (by measuring circuit current and/or reading status from addressable modules).
- Calibration: Measures the current in the circuit and records it as a reference value. Users can enable or disable heating (circuits work on AC for a set time). Calibration should be conducted for all circuits in a given station during system startup.
- Duration (full): Tests the nominal operating time of a given sub-distribution, checking the state of the batteries and luminaire status (by measuring circuit current and/or reading status from addressable modules).

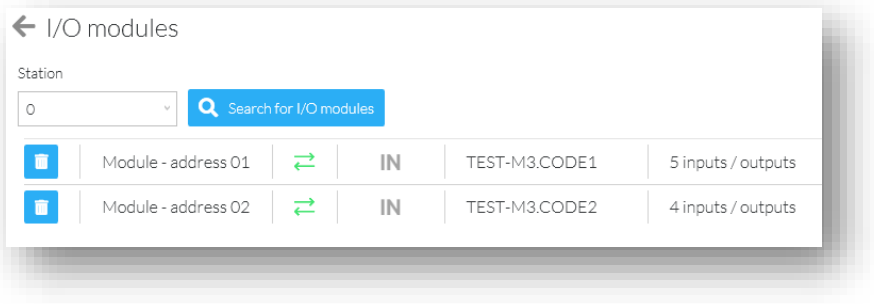
After the test is completed, its result is saved in the test history (see 9.3). Information about all previously conducted tests is stored there.

7.5. I/O Modules

7.5.1. List of I/O Modules

To access the list of available I/O modules, select a station from the list and click on the I/O Modules button 

. If the list is empty, initiate the search for modules using the Search for I/O Modules button. The station will then start the search procedure, and all the discovered devices will appear on the list. A dropdown list is also available at the top of the page to change the currently selected station.



7.5.2. Removing I/O Modules

The buttons  are used to remove the selected module. After removing a specific module, it will be necessary to search for it again to reappear on the list.

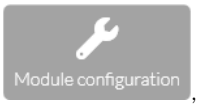
NOTE! Removing an I/O module results in the loss of its configuration.

7.5.3. I/O Module Details

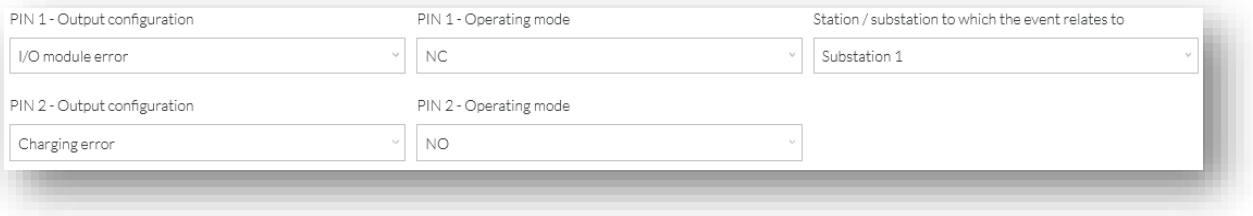
Detailed information about the selected I/O module can be obtained by navigating to the details page using the Module Details button 

. In addition to information about communication or module type, you can also check the configuration of individual inputs or outputs and their current status. This is symbolized by the following graphic:

7.5.4. I/O Module Configuration

On the Configuration Module page 

, you can configure individual pins of a given module by selecting the appropriate options from the dropdown lists.



- Output configuration - set the reaction to one of the possible states in the system:

  - System error
  - Charging error
  - Deep discharge
  - Batteries error
  - I/O module error (applies to stations/sub-distributions)
  - Station/sub-distribution error (circuits, luminaires or I/O modules error)
  - Circuits error (applies to stations/sub-distributions)
  - Luminaires error (applies to stations/sub-distributions)
  - Power outage (applies to stations/sub-distributions)
  - Primary power (applies to stations/sub-distributions)

- Batteries operation (applies to stations/sub-distributions)

- ATS in test

- Operating mode - choose whether the occurrence of an event should:

  - Open the relay output (NC - normally closed)

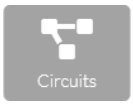
  - Close the relay output (NO - normally open)

- Station/sub-distribution to which the event relates to – select the station or sub-distribution to which the event applies. This option is only available for events described above with the annotation applies to stations/sub-distributions.

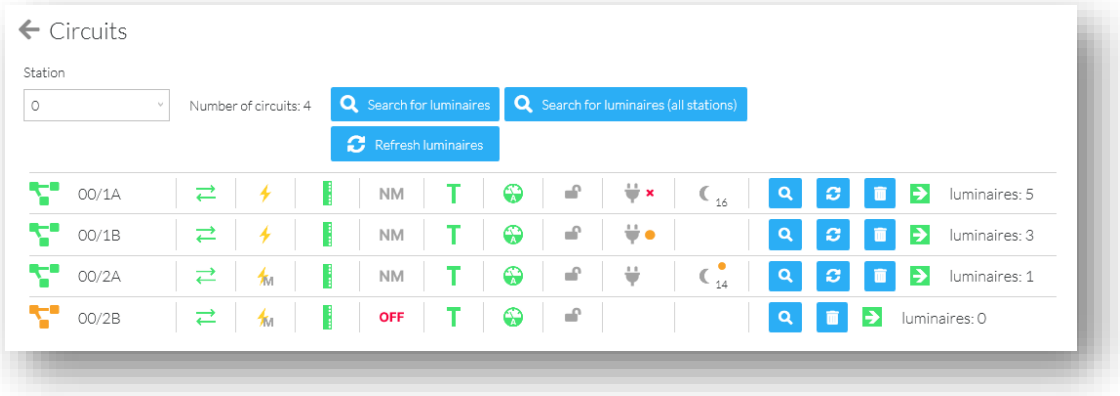
To save the configured settings, confirm them with the Save Configuration button.

7.6. Circuits

7.6.1. Circuit List

You can access the list of circuits by clicking the Circuits button 

on the station and sub-distribution list page. The loaded page shows all circuits along with their basic status determined by icons, as well as buttons for searching, refreshing, and removing luminaires from circuits. In the top left corner, there is also a dropdown list that allows you to switch between all stations in the system.



The circuit status is determined by icons:

Circuit disabled or not configured to operate in light/dark mode

Circuit configured to operate in light/dark mode

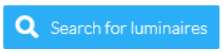
Circuit error

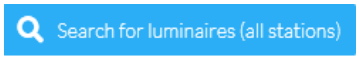
01/1A	Circuit identifier (station number/circuit number)
	Communication with the circuit
	No communication with the circuit
	No voltage at the output
	AC voltage at the circuit output
	Modified AC voltage at the circuit output
	DC voltage at the circuit output
	The circuit card indicates no errors
	An error occurred in the circuit card
OFF	Circuit disabled or not configured to operate in light/dark mode
M	Circuit configured to operate in light mode
NM	Circuit configured to operate in dark mode
T	Test result is correct
T	The circuit is in the test mode
T	An error occurred during the circuit test
	Power measurement result is correct
	Incorrect power measurement result
	The station containing the circuit is not in service mode
	The station containing the circuit is in service mode
	Night group inactive
	Night group with number 64 active
	Searching or refreshing luminaires in the circuit
	None of the luminaires in the circuit indicate a light source error
	At least one luminaire in the circuit signals a light source error
	At least one luminaire in the circuit indicates an error other than a light source error
luminaires: 3	The number of luminaires found in the circuit

7.6.2. Search for luminaires

If luminaires are installed on a circuit, and their quantity in the program is displayed as 0, you need to conduct a luminaire search. This can be done in three ways:

- Searching on a specific circuit – using the button  next to the service mode icon

- Searching in all circuits in the selected station – using the button 

above the circuit list
- Searching in all circuits in all stations in the system – using the button 

located above the list of circuits.
- You can cancel the search for luminaires using the 

button located above the list of circuits.

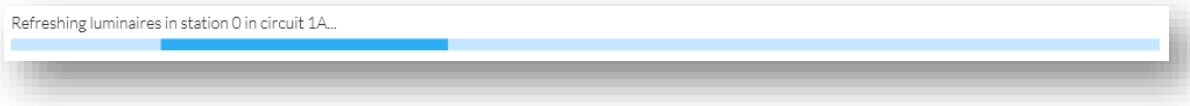
After starting the search, information about which station the search is currently taking place in will appear above the circuit list, and a bar will show that the procedure is in progress.

7.6.3. Refreshing Luminaire Status

Before reading information about installed emergency lighting luminaires on circuits, you need to refresh their status. This can be done using the button  on a specific circuit next to the search button 

or using which will start the process of refreshing luminaires in all circuits in the selected station.

Once the refresh starts above the list of circuits, you'll see information indicating the station and circuit where the refresh is currently taking place, along with a progress bar showing that the procedure is underway.

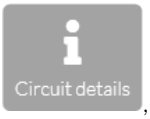


Refresh buttons will only be available if there is at least one luminaire found on at least one circuit in the selected station.

7.6.4. Removing Luminaires from the Circuit

Found luminaires can be removed from a specific circuit using the button  . After successfully processing the command by the central unit, the number of luminaires on the selected circuit should change to zero. Despite deleting luminaires, their configuration will be remembered.

7.6.5. Detailed Circuit Information

After selecting a circuit from the list and clicking the button 

, the user will be redirected to a page with detailed device parameters.

Data is divided into Circuit Card Details, Circuit Details, and Circuit Errors. This allows users to check the current status of the circuit and identify any errors.

7.6.6. External Trigger Configuration

In each circuit, four configurations can be set for external triggering. This can be done by selecting a specific circuit and going to the appropriate page using the External Trigger button External trigger 

. On the open page, there are four sections that can be configured as follows:

- Configuration

  - Disabled

  - Inputs (built-in) - monitoring the signal on three built-in station inputs

  - I/O Module – monitoring the signal on the input of the selected I/O module

- IN

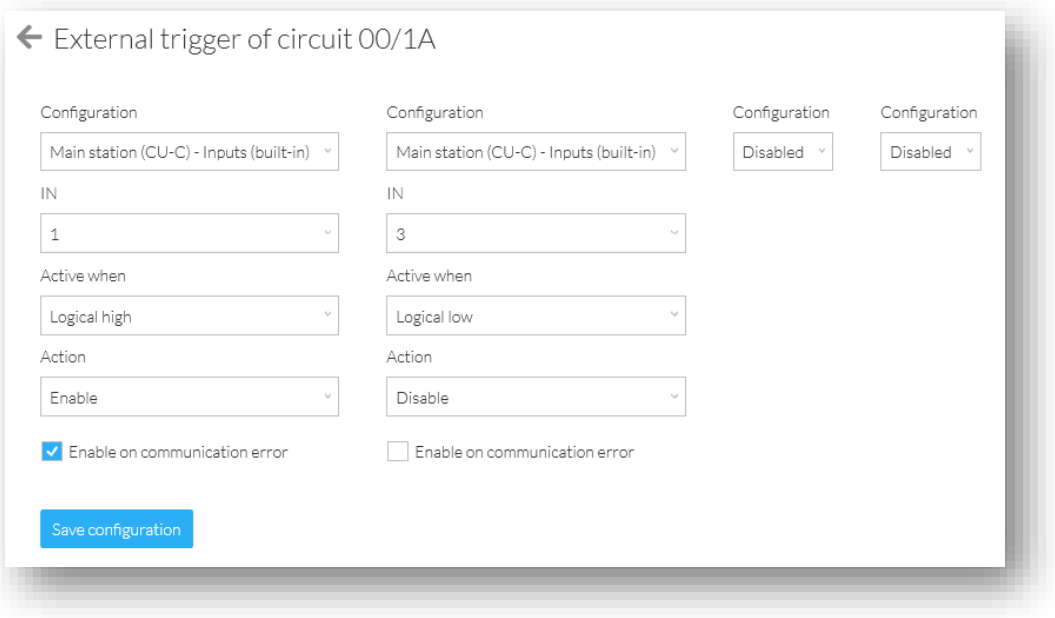
  - Input number (1-3 for built-in inputs and 1-8 for I/O module)

- Active when

  - Logical high – triggering in case of a high state on the input

  - Logical low – triggering in case of a low state on the input

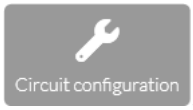
- Action
  - Turn On - the circuit will be activated
  - Turn Off - the circuit will be deactivated
- Trigger on Communication Loss



To confirm the configuration, press the Save Configuration button.

After receiving a signal consistent with the configuration, the circuit will switch to light mode.

7.6.7. Circuit Configuration

Circuit configuration can be performed by going to the Circuit Configuration page using the button 

. This is necessary for the circuit to operate correctly. Editable parameters include:

- Operating mode

  - Disabled - the circuit is turned off, does not provide voltage at the output, and will not switch to emergency mode

  - Non-Maintained - the circuit operates intermittently, no voltage at the output during normal operation, DC voltage in the event of a primary power failure

  - Maintained - the circuit operates continuously, provides AC voltage during normal operation, and DC voltage in the event of a primary power failure

  - Not configured - the circuit has not been configured yet, does not provide voltage at the output, and will not switch to emergency mode

- Power tolerance - (5 - 50 [%]) - the tolerance with which the measured current in the test will be compared to the reference value (5 – 50%); setting the value to zero means that currents will not be compared after the test

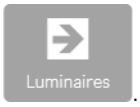
- Delay after emergency mode - (0 - 30 [min]) - the time in minutes that must pass for the circuit to switch to normal operation mode after the return of primary power
- Working in a failure - (0 - 8 [h]) - the operating time after which the circuit will turn off during emergency operation
- Night group - (0 - 64) - the system allows the addition of 64 night groups for lighting control; setting the value to 0 means that the circuit is not assigned to any night group.

To save the configured circuit configuration, confirm it with the button 

.

7.7. Luminaires

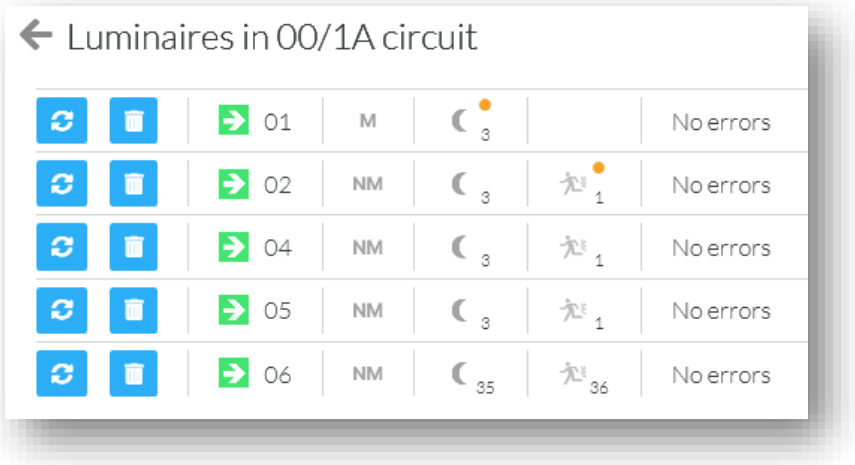
7.7.1. Luminaire List

To view the list of luminaires found on a specific circuit, select the circuit and go to the luminaire list using the Luminaire button 

. The list provides basic information about the luminaires, such as their address, backup mode, or reported errors.

The status is determined using the following icons:

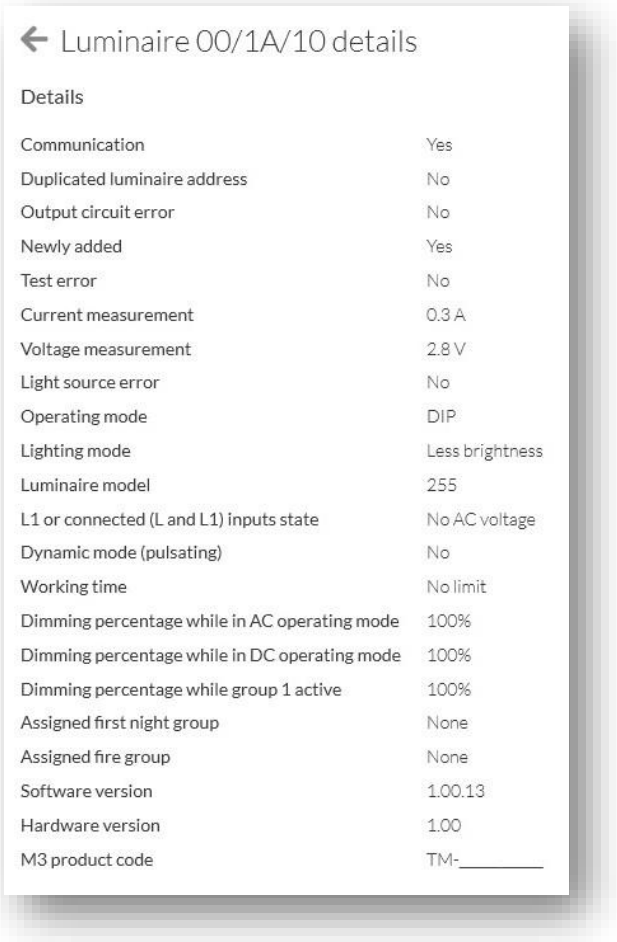
- The luminaire does not indicate errors
- An error occurred in the light source of the luminaire
- An error occurred other than the light source error in the luminaire
- 02 Luminaire address
- DIP The backup mode is set using the DIP switch
- M The luminaire is lit continuously, even in the event of a power failure
- NM The luminaire is lit only in the event of a power failure
- Night group inactive
- Night group active
- Fire group inactive
- Fire group active



7.7.2. Detailed Information About the Luminaire

To check detailed parameters of a luminaire, use the **Luminaire Details** button 

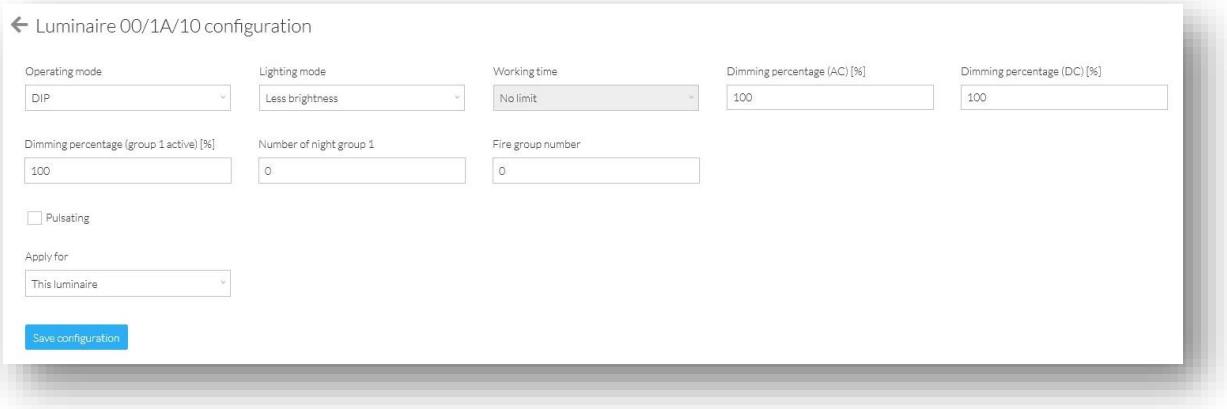
. This will take the user to a page where all the data that can be read from the luminaire is listed. This information can be used for both checking its status and diagnosing errors.



7.7.3. Luminaire Configuration

Each luminaire in the system can be configured by setting its operating parameters. This can be done on the **Luminaire Configuration** page 

. On this page, there are several dropdown lists and text fields that can be edited or not, depending on whether a particular luminaire supports the change of a specific parameter.



The application allows changing the following parameters (if their change is supported by the specific luminaire):

- Operating mode

  - DIP – the backup mode is set using the DIP switch

  - M - the luminaire is lit continuously, even in the event of a power failure

  - NM - the luminaire is lit only in the event of a power failure

- Lighting mode

  - Less brightness – lower luminous flux

  - Greater brightness – greater luminous flux

- Working time – specifies the operating time of the luminaire after a power failure:

  - No limit

  - 1 hour

  - 2 hours

  - 3 hours

  - 8 hours

- Dimming percentage (AC) [%] – brightness level in AC mode
- Dimming percentage (DC) [%] – brightness level in DC mode
- Dimming percentage (group 1 active) [%] – brightness level when the first night group is active
- Number of night group 1 – the number of the first night group to which the luminaire is assigned; setting the value to 0 means that the luminaire is not assigned to any night group

- Fire group number – the number of the fire group to which the luminaire is assigned; setting the value to 0 means that the luminaire is not assigned to any fire group
- Pulsating – the luminaire will pulse during operation with DC

Addressable luminaires (CBM) have the capability to adjust lighting intensity in AC mode, DC mode, or during the activation of the assigned night group within the range of 0 – 100 [%] (DIMM function).

- In DC mode, the luminaire illuminates at a brightness level corresponding to the dimming percentage (DC) [%] or pulses (if the pulsing mode is active and supported).
- In modified mode, the luminaire illuminates at a brightness level corresponding to the dimming percentage (DC) [%] or pulses (if the pulsing mode is active and supported).
- In AC (M) mode, the luminaire illuminates at a brightness level corresponding to the dimming percentage (AC) [%].
- In the mode selected by DIP switch, the luminaire illuminates at a brightness level corresponding to the dimming percentage (AC) [%].
- In night group mode, the luminaire illuminates at a brightness level corresponding to the dimming percentage (active group 1) [%].
- In fire group mode, the luminaire illuminates at 100 [%] brightness.
- If the luminaire does not support dimming mode, it always illuminates at 100 [%] brightness.

From the Apply to dropdown list, you can select whether the configuration should be saved for the selected fixture, all fixtures on the circuit, or all fixtures at the station.

After completing the configuration, transmit the parameters to the luminaire using the Save Configuration button. Updating the luminaire configuration in the system may take a few seconds.

7.7.4. Refreshing the status of a single luminaire

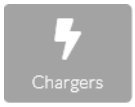
Similar to the list of circuits, you can also refresh the status of a specific luminaire using the luminaire list. To do this, use the button  . When pressed, a command will be sent to update the status of the selected luminaire.

7.7.5. Removing a single luminaire

To remove a selected luminaire from the circuit, click the button  next to the chosen luminaire. It is essential to remember that after removal, it will be necessary to search for it again to make it visible on the list. Despite deleting the luminaire, its configuration will be retained.

7.8. Charging Controller and Chargers

7.8.1. Charging Controller and Charger List

Basic information about the charging controller and chargers can be found on the list of these devices. You can view it by clicking the Chargers button 

on the station list. It is visible only after selecting the main station because only it contains the mentioned devices.

The status of the devices is indicated by the following icons:

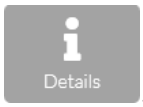
Charging Controller

- Communication is established with the charging controller
- No communication with the charging controller
- No error
- An error has occurred

Chargers

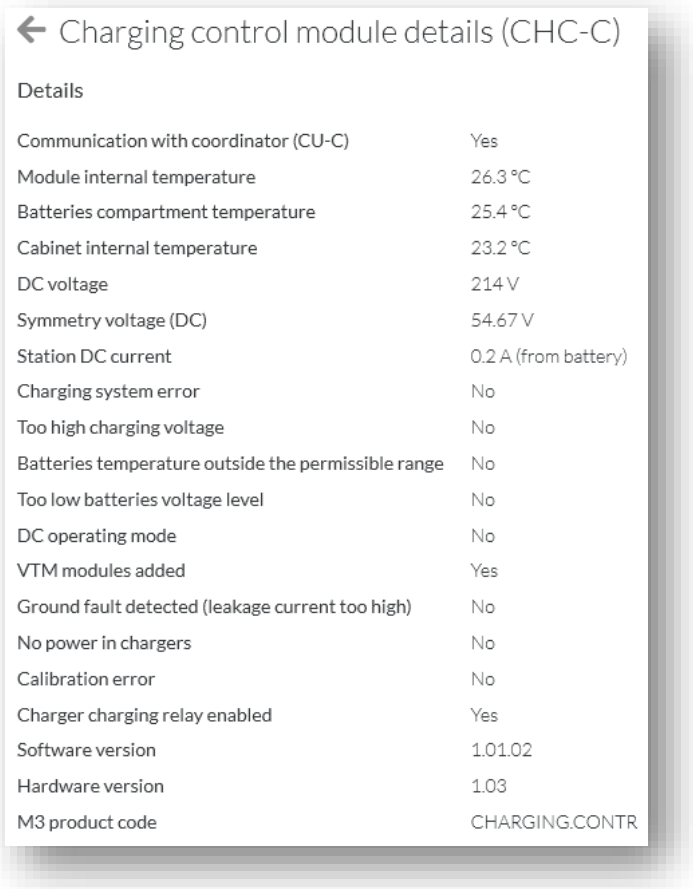
- Communication is established with the charger
- No communication with the charger
- No error
- An error has occurred
- Charger ready for operation
- Charger not ready for operation
- Charger is not powered
- Charger is powered
- Charger is not charging
- Charger is charging

7.8.2. Detailed information about the charging controller

To obtain detailed information about the charging controller, click the Details button 

. This will take the user to a page containing all relevant parameters and data regarding the charging controller.

To read information about any of the chargers, select the appropriate charger from the list and press the same button.



7.8.3. List of VTM Modules

VTM modules are devices that monitor the state of batteries, specifically their voltage and temperature. To view a list of all modules detected in the system, select the charging control module on the Chargers page in the main station and go to the VTM Modules page using the button 

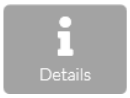
.

After the page loads, you will see a list of detected VTM modules, where you can read their status, including communication status, voltage, and temperature of each battery.

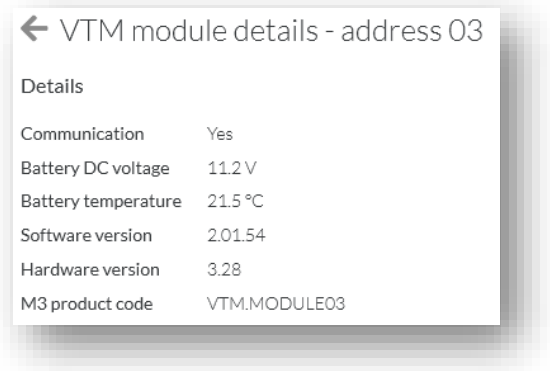
Device status is symbolized by the following icons:

02	Module address
	Communication with the module is established
	No communication
	Battery voltage is correct (if there is communication with the module)
	Deviation of battery voltage by more than 1.2V from the average voltage value of all modules
	Battery voltage is out of the range 9.6V-14.8V
13.8 V	Measured battery voltage
23.2 °C	Measured battery temperature

7.8.4. Detailed Information about the VTM Module

After selecting a VTM module from the list and clicking the Details button 

you will be redirected to a page with all the parameters read from the device. These include communication status, battery voltage and temperature, software and hardware version, and the M3 product code.



7.8.5. Removing VTM Modules

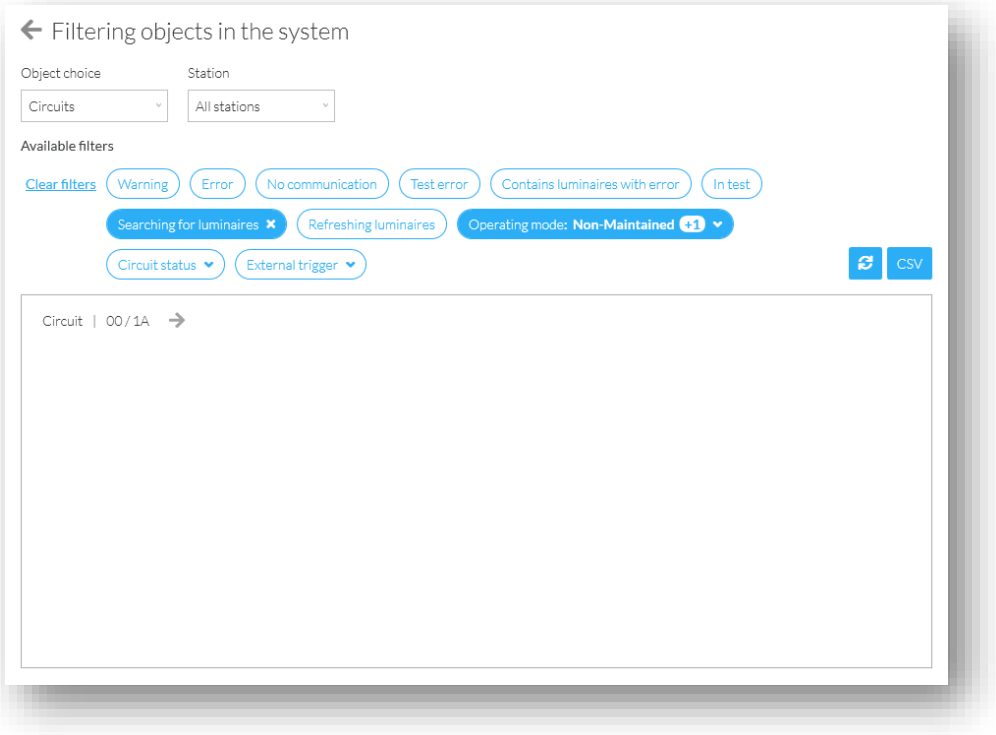
To remove all VTM modules, use the button 

above the list of modules and confirm the decision in the window that appears.

NOTE! To detect VTM modules again after removal, you must restart the central battery system.

7.9. Filtering

This page allows filtering the list of stations, circuits, and luminaires installed in the system. Each of the objects selected using the lists at the top of the page has a different set of filters that can be applied.



The active filter is indicated by a blue color. If a filter allows multiple selections and more than one option is selected, a number with a + sign will appear next to it.

The button  refreshes the list of objects (for example, after changing their status in the system), and the button  allows exporting the results to a *.csv file.

Next to each of the filtered objects, there is an arrow icon  that takes the user to the page with details of the selected object.

8. Schedules

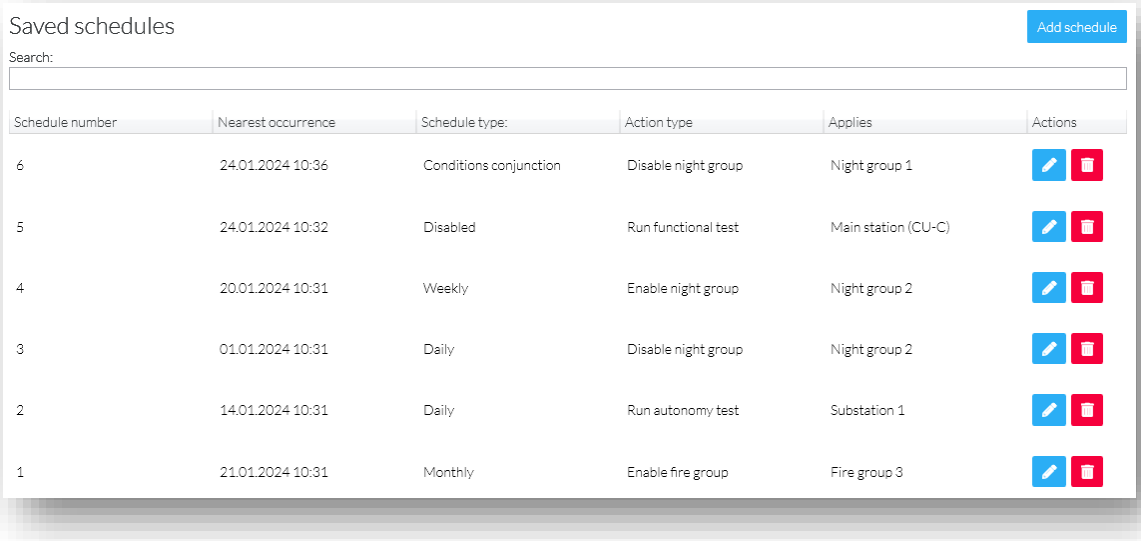
8.1. Operation Description

The TM-CB M system has pre-configured triggers for automatic tests that execute at specified times. This can be observed during the execution of such a test when the ATS changes its status to "In Test." After the completion of such a test, its result will appear in the test history (see 9.3).

Additionally, the system allows the addition of 128 user-defined schedules. These schedules enable the configuration of conditions for specific events in the system. Schedules can be freely added, removed, and edited.

8.2. List of Added Schedules

To view the list of schedules added by system users, select the Schedules page from the side menu, symbolized by the icon  . On the opened page, all schedules will be listed, including their number, the date of the next occurrence, the type of schedule, the type of action to be performed, and the device or group of luminaires to which the event pertains.



8.3. Adding New Schedules

New schedules can be added using the button Add schedule. Clicking it will open a page where you can choose the type of event and configure its activation accordingly.

Each of the available schedules has a choice of one of six actions that can be triggered:

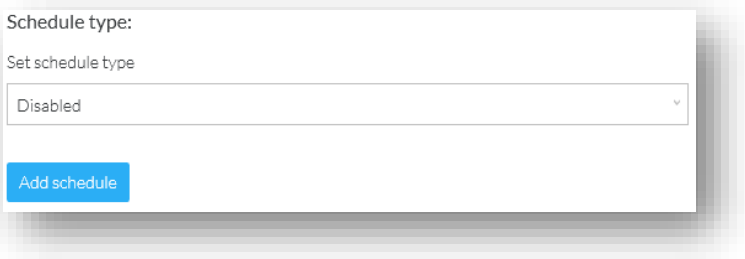
- Run functional test
- Run autonomy test
- Enable night group
- Disable night group
- Enable fire group
- Disable fire group

For the selected action, you must also specify which device it should apply to. If you choose Run functional test or Run autonomy test as the event, you should specify the station number (0-15) or enter 255 to run the schedule for all stations. For the other options, i.e., enabling and disabling night and fire groups, you should provide the group number (1-64) that the event should apply to.

There are 8 types of schedules available in the system.

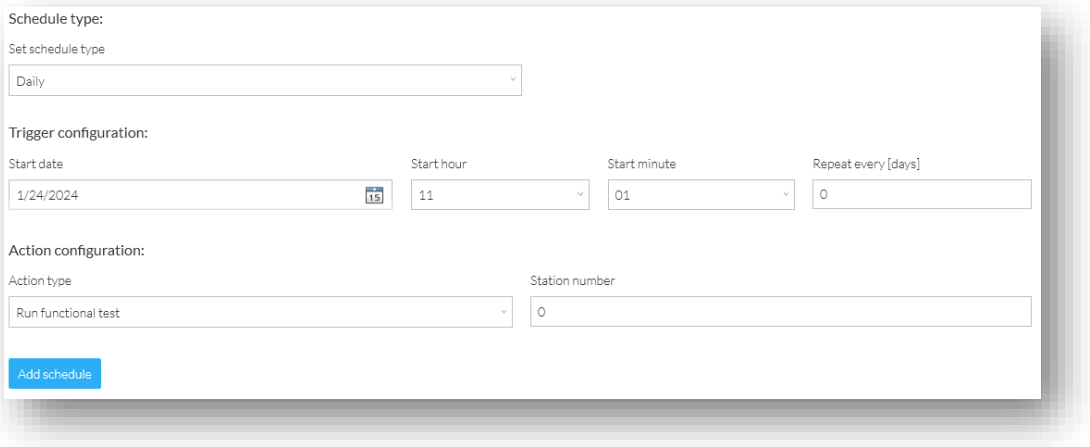
8.3.1. Disabled Schedule

With this setting, the schedule will be added to the system but will not be triggered.



8.3.2. Daily Schedule

It triggers an event at a specific time, repeating every specified number of days.

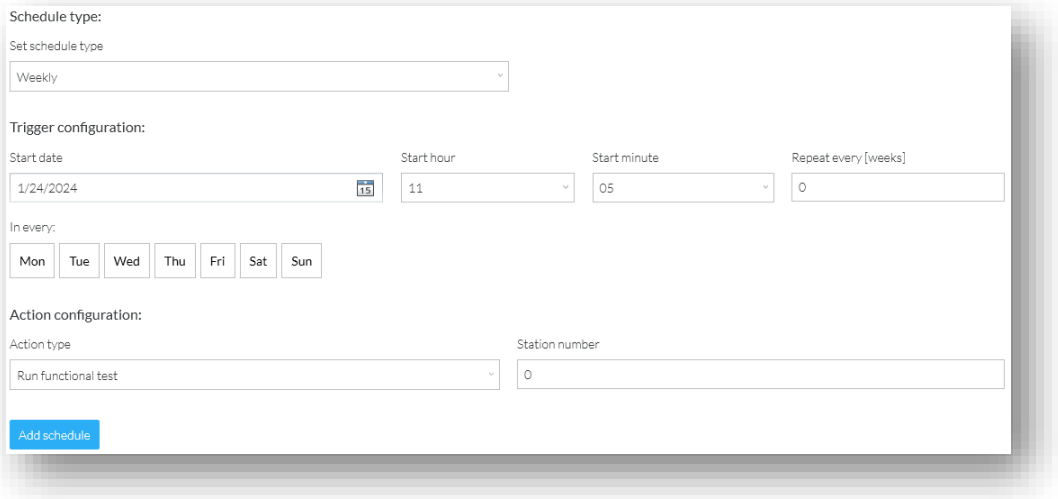


Schedule Trigger Configuration:

- Start date, hour, and minute – specifies the date and time of the first schedule activation
- Repeat every [days] – specifies how often the event should be repeated at the same time

8.3.3. Weekly Schedule

The event will be triggered at the chosen time on selected days of the week and repeated every specified number of weeks.



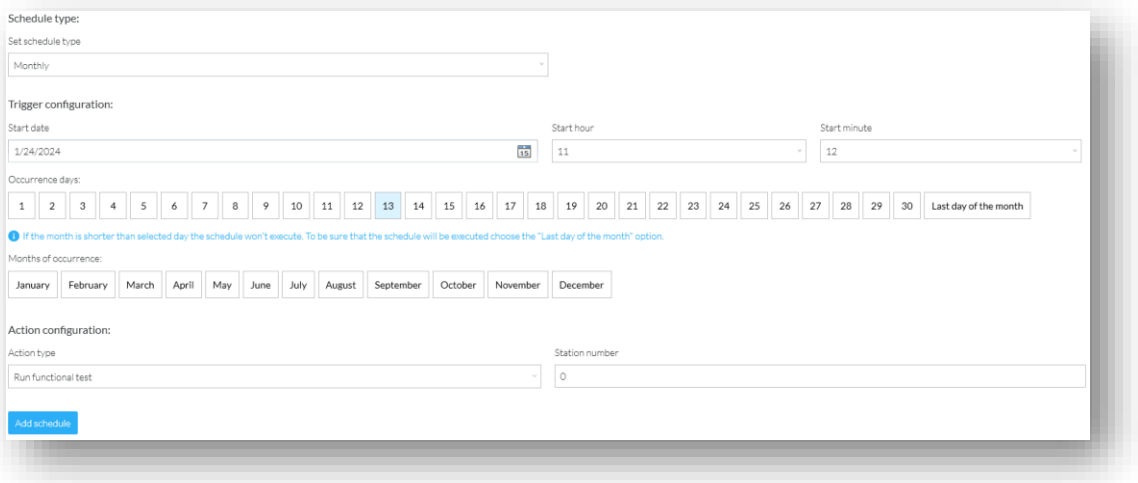
Schedule Trigger Configuration:

- Start date, hour, and minute – specifies the date and time of the first schedule activation
- Repeat every [weeks] – specifies how often the event should be repeated
- In every – days of the week on which the event should occur

8.3.4. Monthly Schedule

The schedule will be activated on selected days of selected months at a specific time.

To ensure that the schedule runs at the end of the month, check the "Last day of the month" option.

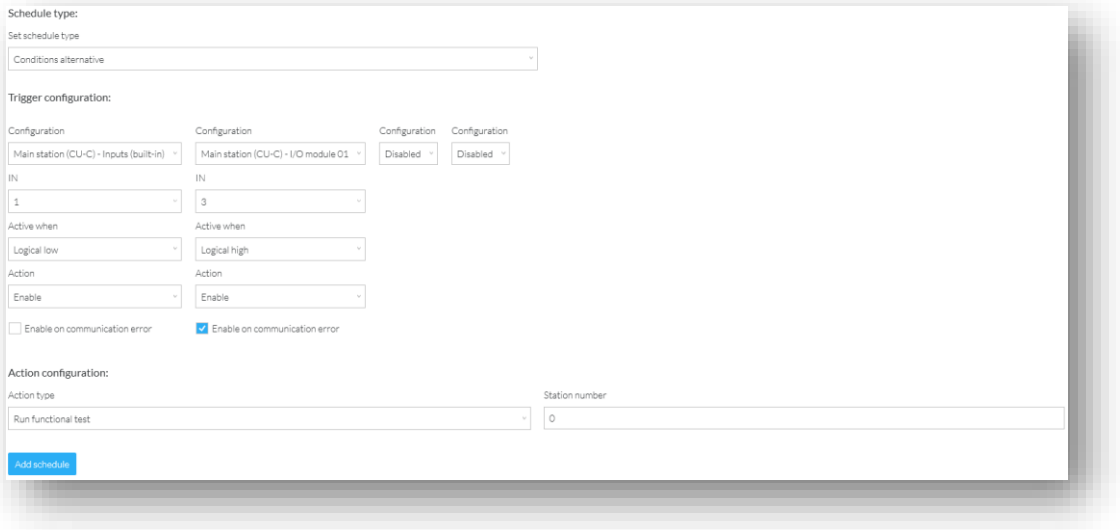


Schedule Trigger Configuration:

- Start date, hour, and minute – specifies the date and time of the first schedule activation
- Occurrence days – days of the month when the event should be triggered
- Months of occurrence – months when the event should be triggered

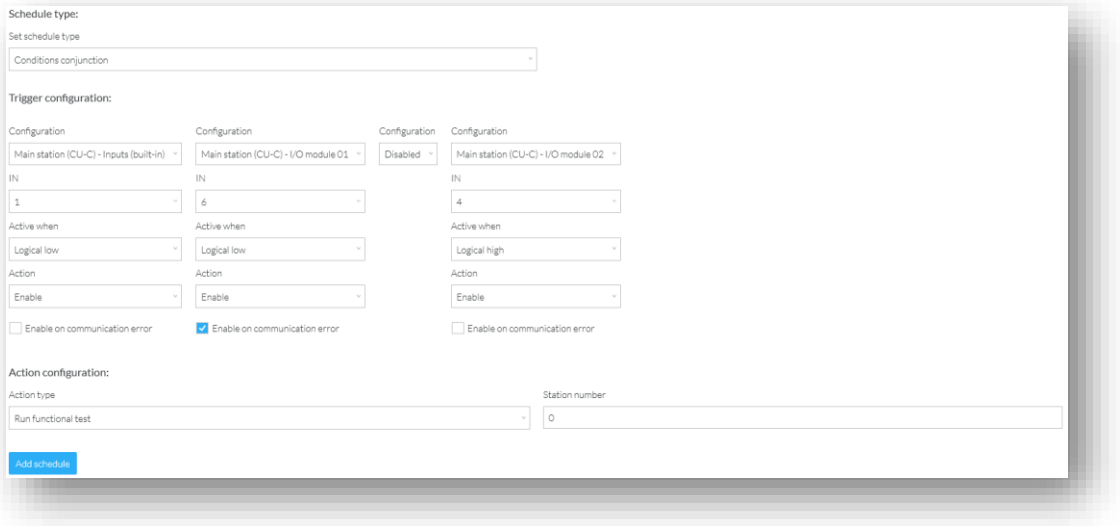
8.3.5. Conditions alternative

The event will be triggered if any of the conditions set for the built-in station inputs or I/O modules are met.



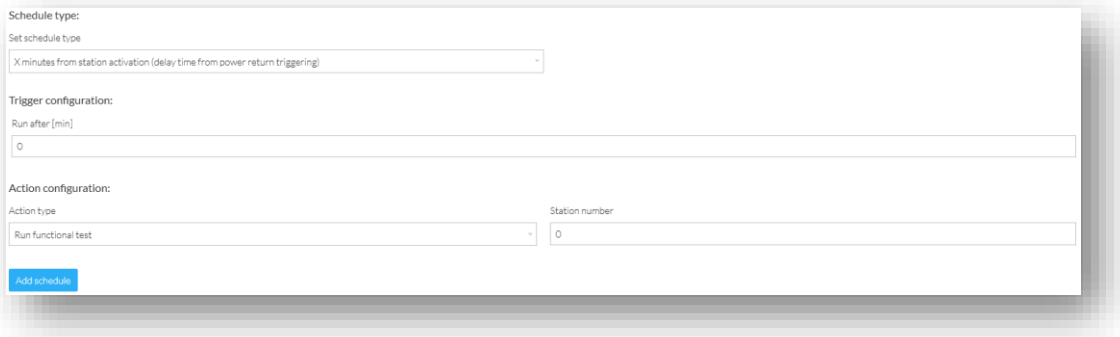
8.3.6. Conditions conjunction

The event will be triggered only if all conditions set for the built-in station inputs or I/O modules are met.



8.3.7. X minutes from station activation

The schedule will be triggered after the specified number of minutes from the system startup.

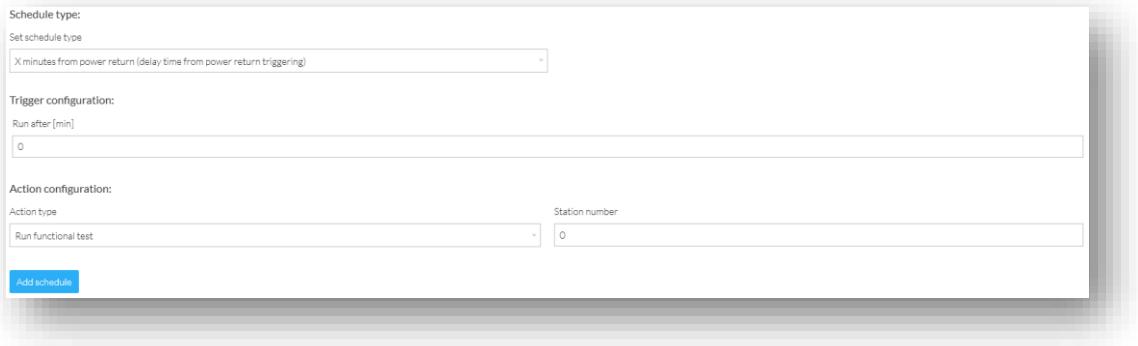


Schedule Trigger Configuration:

- Run after [min] – time from the system startup when the event should occur

8.3.8. X minutes from power return

The schedule will be triggered after the specified number of minutes from the power return.



Schedule Trigger Configuration:

- Run after [min] – time from the power return when the event should occur

8.4. Deleting Schedules

Each of the schedules added to the system can be deleted. To do this, click on the button next to the schedule to be deleted and then confirm the decision in the window that appears.

8.5. Editing Schedules

Schedules can be edited freely using the icon next to the selected schedule. Clicking it will open an editing window that looks similar to the one used for adding new events. The only difference is the Save Schedule button, which is used to confirm the changes made.

8.6. Searching for Schedules

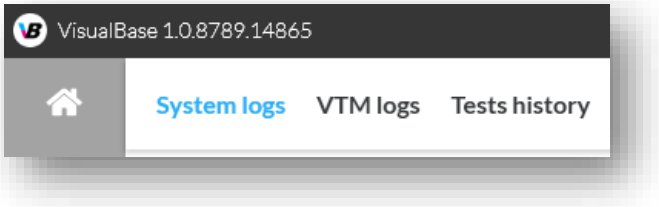
To search for a specific schedule, enter a phrase in the text field above the list of schedules. If the entered phrase is found in any of the schedule columns, the list will be updated to show matching elements.

9. Logs and Test History

During system operation, it continuously records information about its status and any changes that occur in it. This data is saved in logs and is particularly useful for system diagnostics.

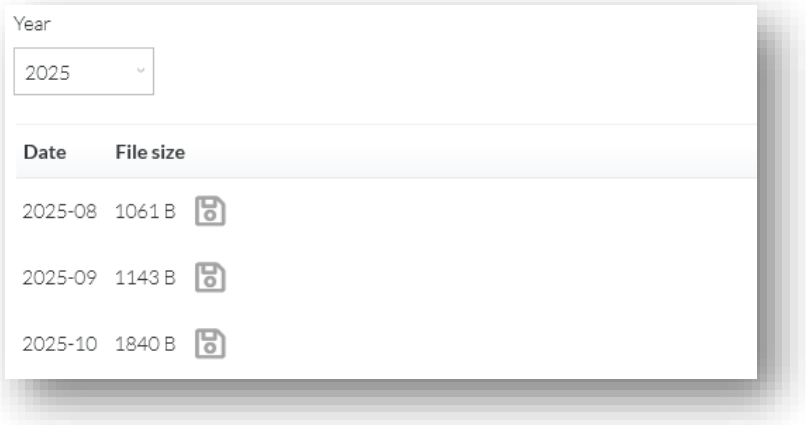
In addition to logs, the system also saves the history of all executed tests, both those triggered automatically and manually by the user.

Access to this information can be obtained by going to the Logs page using the button  located in the side navigation menu. Buttons at the top of the page facilitate navigation between logs and test history.

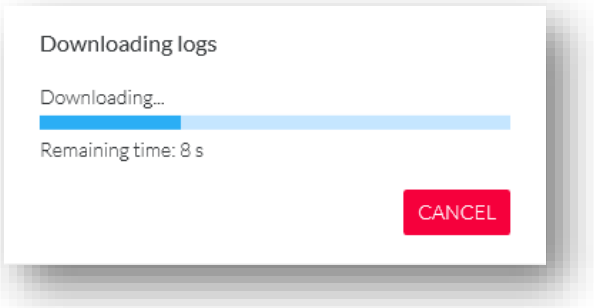


9.1. System Logs

The first view that appears after navigating to the Logs page is the System Logs. Here, a list of saved log files with a monthly interval is displayed. Entries from the selected year can be seen using the Year dropdown menu directly above the list. Additionally, each record contains information about the file's save date by the system and its size.



To save a file on the disk, use the icon  . Clicking it will open a window to choose the location on the disk, and after confirmation, a download progress window will appear. The download can be canceled using the Cancel button.

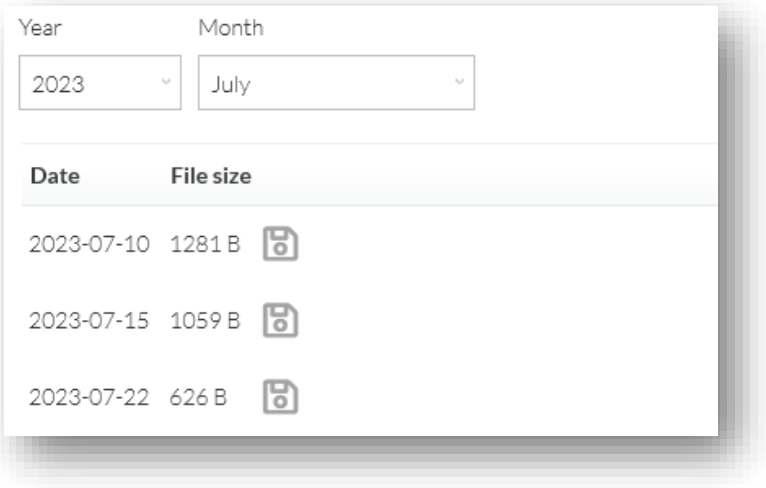


System log files are saved in *.csv format and can be read using programs like Microsoft Excel.

9.2. VTM Logs

In addition to system logs, those related to installed VTM modules are also saved. They provide information about the current and voltage of the station, as well as the voltage and temperature measured by each VTM module.

The VTM Logs page presents entries for a specific year and month, which can be set using the dropdown menus directly above the list of log files stored in the system. Each record contains information about the file's save date by the system and its size.



To save a file on the disk, use the icon . Clicking it will open a window to choose the location to save the file, and after confirmation, the icon will change its appearance to , indicating that the file is being saved. After the download is complete, the floppy disk icon will be visible again.

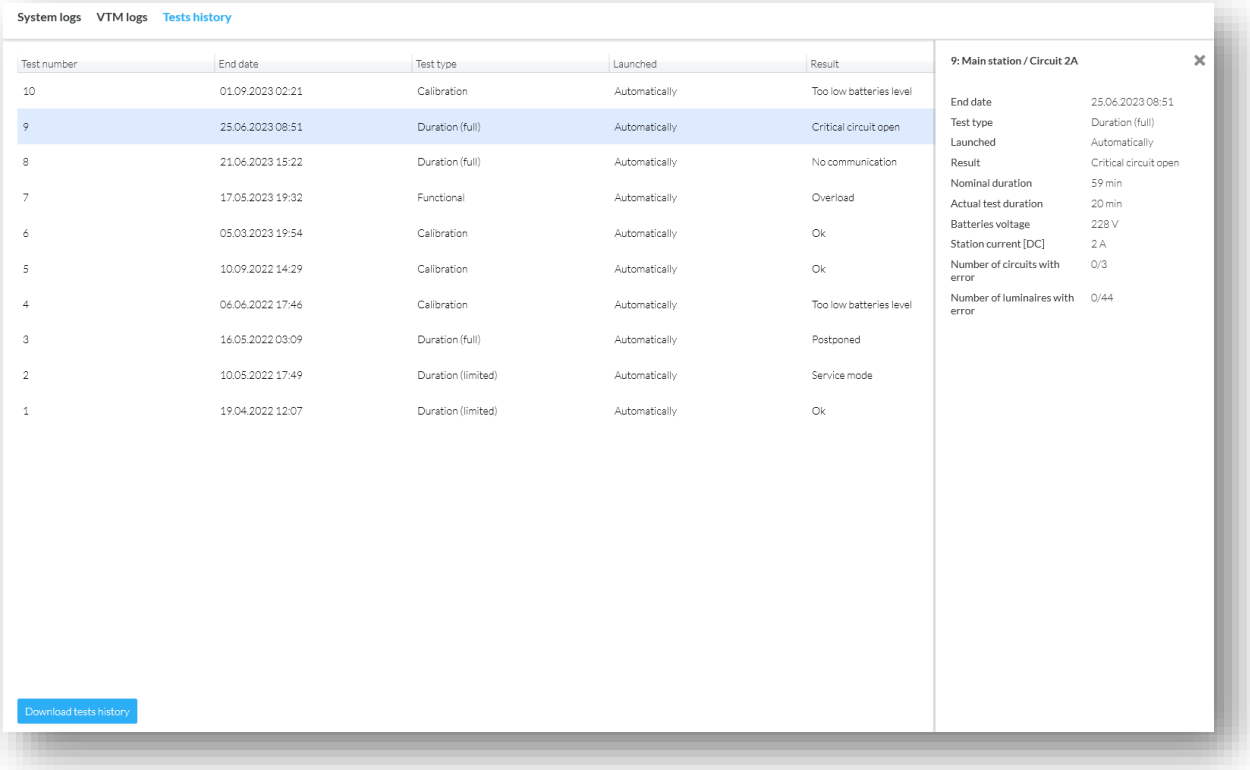
VTM log files are saved in *.csv format and can be read using programs like Microsoft Excel.

9.3. Test History

Users can browse the history of tests performed in the system by clicking the Tests History button on the logs page. Once the system loads the data, a list will be displayed, sorted by default from the most recently executed to the oldest. The list presents basic information such as:

- Test number
- Completion date
- Test type
- Lunched (automatically or manually)
- Result
- Station / sub-distribution and circuit the test applied to

To read detailed information about a selected test, click on it, which will open a panel on the right side containing basic and extended data about the selected item.

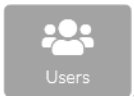


To save the test history to a *.csv file, you need to log in to the Administrator or Service account, and then use the button Download tests history.

10. Tools

On the Tools page, additional features of the application can be found, such as user management, report generation, language change, and more. You can access this page by clicking the Tools button in the side navigation menu, marked with the icon  .

10.1. User Management

The User page is used for managing user accounts and can be accessed by clicking the button 

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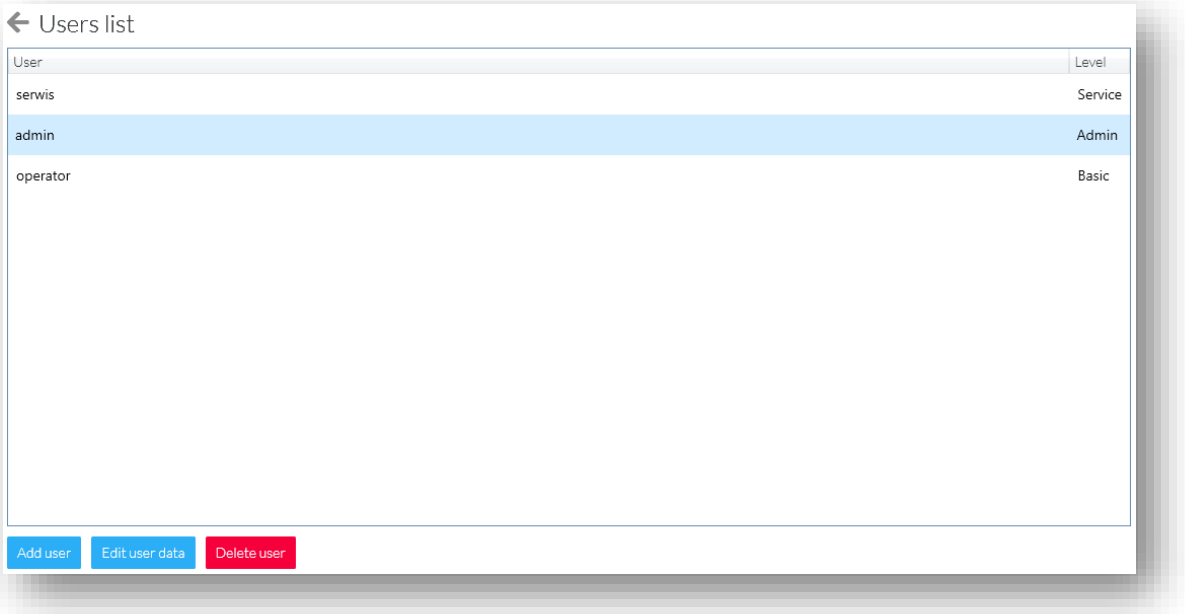
10.1.1. User List

The User List displays all accounts added to the application along with their access levels. Users with the Administrator or higher access level may see the Add User, Edit User Data, and Remove User buttons after logging in with the appropriate permissions.

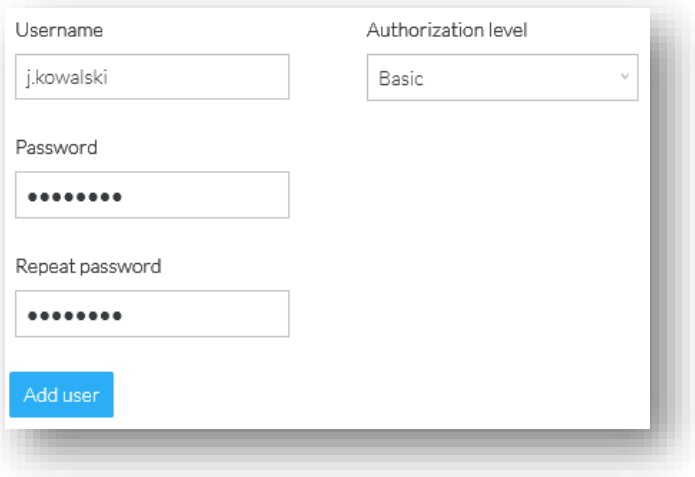
The visibility of these buttons is influenced by the following dependencies:

- Adding new users can be done by a user with an Administrator level or higher.
- Editing the data of a selected user can be done only by the same user or a person with higher permission levels.
- Deleting a user account can be done only by the same user or a person with higher permission levels.



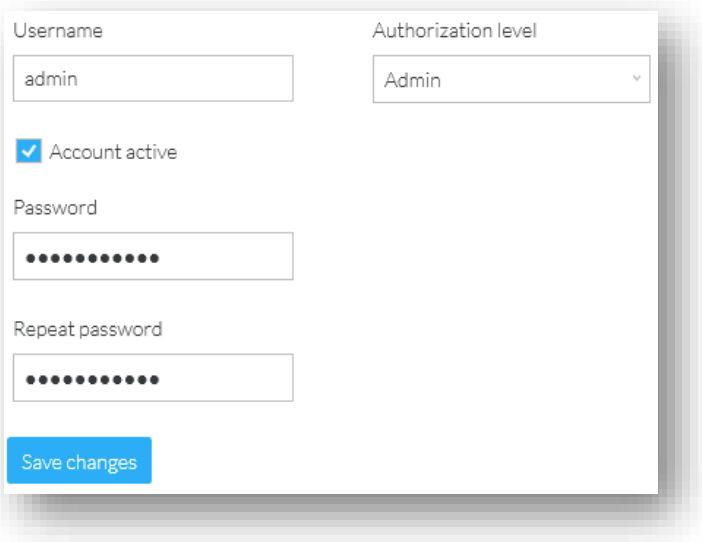
10.1.2. Adding a New User

To add a new user, click the Add User button. Keep in mind that only individuals with administrator or higher permission levels can add new users. On the newly opened page, enter the username, password, and access level. The access level can be the same or lower than the currently logged-in user. Confirm the creation of the user account with the Add User button.



10.1.3. Editing User Data

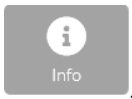
To update the data of a selected user, choose them from the list, and then click the Edit User Data button. Only the same user or a person with higher permission levels can edit user data. On the opened page, update the username, password, and access level. The access level can be the same or lower than the currently logged-in user. The editing page includes an additional Account Active field, deselecting it will prevent logging into the account. Confirm the data update with the Save Changes button.



10.1.4. Deleting a User Account

To delete a selected user account, check it in the list, then click the Remove User button and confirm the decision in the window that appears. Only the same user or a person with higher permission levels can delete a user.

10.2. ATS Information

On the ATS information page, detailed information about the system can be found. This includes installation and service dates, the status of used memory, and network configuration. To access this information, go to the Info page marked with the button 

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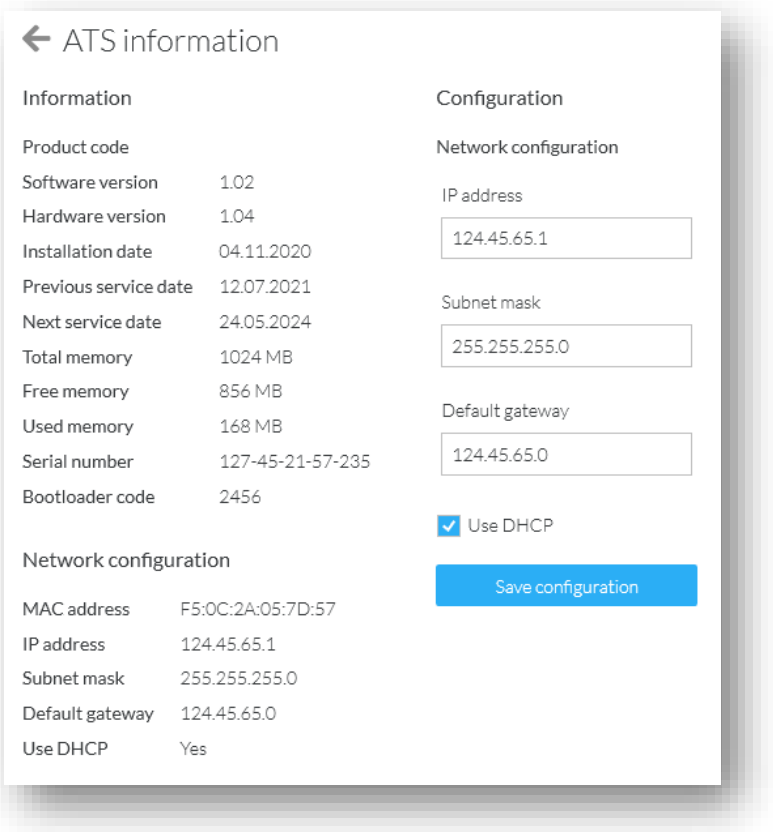
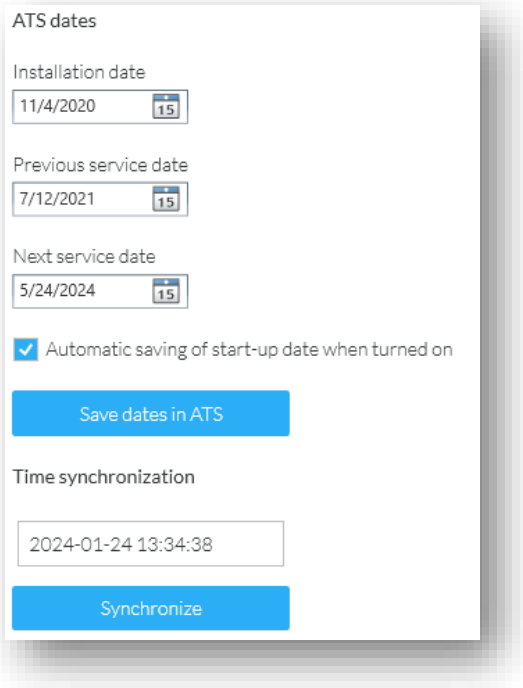
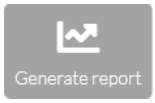


For users with administrator-level permissions, standard network module configuration is also available. Enter the IP address, subnet mask, and default gateway. If the Use DHCP option is selected, the text fields will be locked, and the device will assign itself a free IP address using the DHCP server.

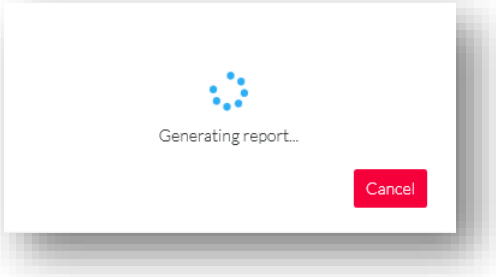
For users with service-level permissions, additional options for configuring the ATS system are available on the information page. These include serial number settings, installation and service dates, and device time synchronization.



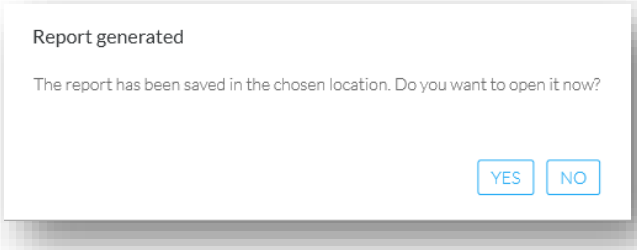
10.3. Report Generation

The VisualBase application allows you to save a system status report in PDF format. To do this, click the Generate report button marked with the icon 

, then specify the location to save the report. After confirming the save location, a new window will appear informing about the report generation, with the option to cancel the process using the Cancel button.

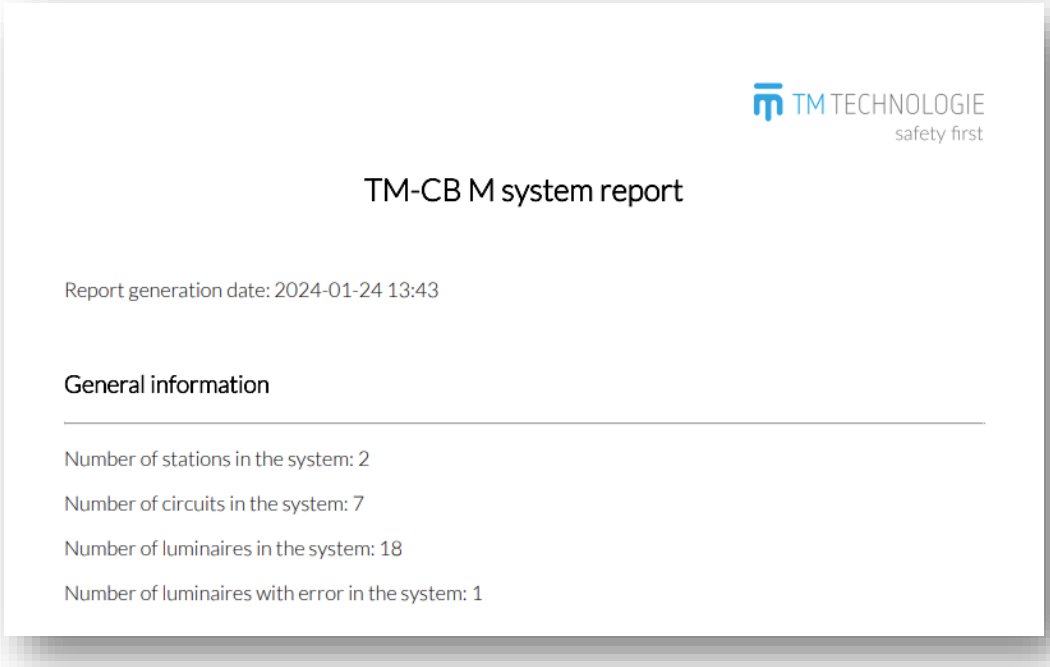


After completing the report generation process, a window will appear asking whether to open the file. If confirmed, it will be opened in the default PDF file viewer.



The generated report includes the following sections:

- General information – a summary of the number of stations, circuits, and luminaires installed in the system
- System information (for each station and sub-distribution) – includes information about the basic state of devices
    - Power supply module
    - Charging control module (only for the main station)
    - Chargers (only for the main station)
    - VTM modules (only for the main station)
    - Circuits
    - Luminaires



10.4. Downloading and Uploading Configuration

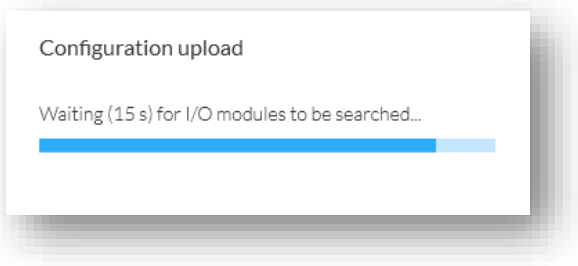
Another tool available in the application is the ability to save the TM-CB M system configuration to the disk and upload it back to the device when needed. This provides the capability to copy configurations between systems or restore them in case of deletion.

NOTE! Downloading the configuration does not save luminaire settings in the file. After uploading it to the device, luminaires must be manually configured.

To save the system configuration to the disk, use the Download Configuration option marked with the icon 

, then specify the location where it should be saved. The device will read the current system state and create a file with the extension *.dat. Such a file can be uploaded to the central unit using the Upload Configuration option, marked with the icon 

. In the next step, select the file containing the previously saved data, and after selecting it, a new window will appear showing the subsequent stages and progress of uploading data to the system.

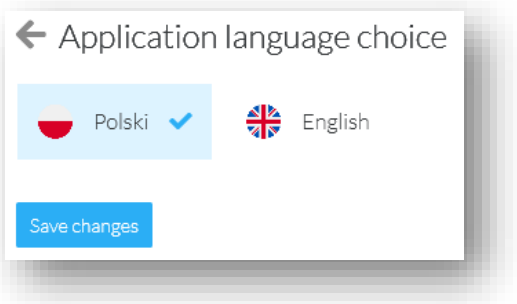


If the process completes successfully, all devices in the central unit, except luminaires, will be configured as saved in the previously downloaded file.

10.5. Changing the Application Language

To change the application language, use the Language button 

which, when clicked, will open a page with available language options. They are described and marked with country flags. After selecting one of them, confirm with the Save Changes button. After saving, a window will appear asking to restart the application, which is necessary for the language change. After confirmation, the program will restart; otherwise, you can continue using the application, and the language will be changed upon the next startup.



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