

User's manual

AMSoft Paraset 1.1.0 **Readout and parameterization software** **for electricity meter types AMS B2, AMT B0, B1, B2**

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1 Purpose and use

AMSoft Paraset is a program for the Windows operating system intended for setting the functions and parameters of the multifunctional static electricity meters of the company Applied Meters and at the same time to read the recorded data. The password for the electricity meter allows you to set various parameters. AMSoft Paraset runs under operating systems Windows 7, Windows 10, Windows 11. The program communicates with an electricity meter by using an optical probe or converters connected to a computer via USB port.

2 Program installation and starting

The entire program folder must be copied to the hard drive of the computer. If the folder is packed in a zip archive (the file extension is .zip) it is necessary to unzip the archive. The program is launched by double-clicking on the file icon "**App.exe**", located in the main folder of the program.

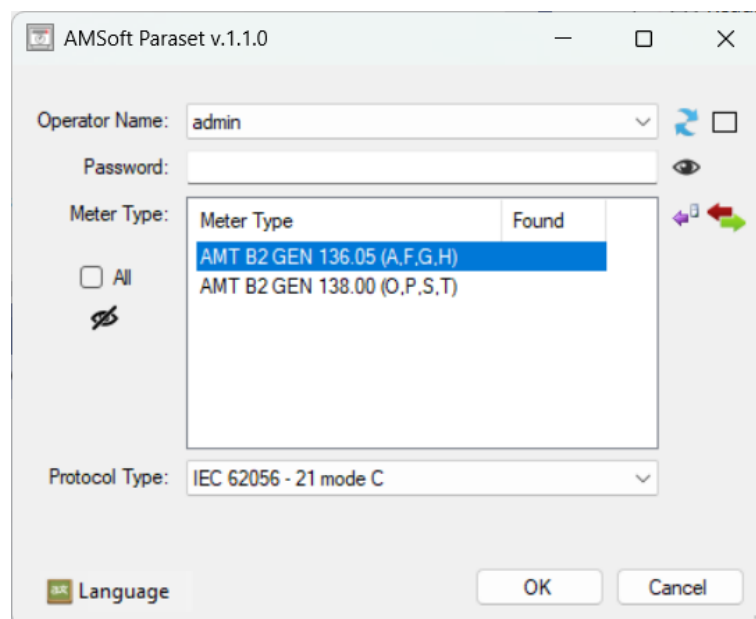
A licence is required to run AMSoft Paraset, issued by the manufacturer - Applied meters, a.s. The licence is associated with a specific PC (unique number).

2.1 Licence obtaining

When the program AMSoft Paraset runs for the first time (or the licence is invalid) the window „**Licence**“ is displayed. The "**ID**" field contains the identification number of the application. This number needs to be sent to the manufacturer, and a licence (serial number) can be obtained after complying with the terms and conditions. The received serial number must be entered in the "**Serial**" field and confirmed with the "**OK**" button. After successfully installing the licence, the application will not ask for a licence at the next launch.

2.2 Home screen

After launch, the splash screen will appear:



Contains the following:

Access level / Operator name:

- 1. Meter reader/operator** ("Level 1" - without password) it is intended for simple reading of the electricity meter status. It only allows data reading from the electricity meter (readout).
- 2. Service** ("Level 2" - required password for level 2) is intended for reading of the meter status, readout of recorded data (Events and Profiles) and setting the date and time of the electricity meter.
- 3. Administrator (admin)** - ("Level 3" required password for level 3) is intended for reading of the meter status, loading the configuration file and setting up the electricity meter.

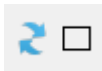
Electricity meter type: single-phase type AMS B2, three-phase types AMT B0, B1, AMT B2

In order to run software at a higher level than "**Level 1**", it is necessary to enter a password. Then press the "**OK**" button. If the password was entered correctly, the main window of the program will appear. If the password was entered incorrectly, the message "**The password is incorrect**" will appear.

Function buttons:



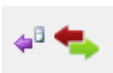
1. Display all types of electricity meters in the list, not only the types used by us.
2. Hide the selected type of electricity meter – the one currently not in use. A hidden meter can be added back to the list by selecting "All", choosing the required type, and starting the program.



1. Reset users;
2. Change the input field for the username. This is used to switch between the list of default users and the text input field where you can enter a username.



1. Display the password in visible form.

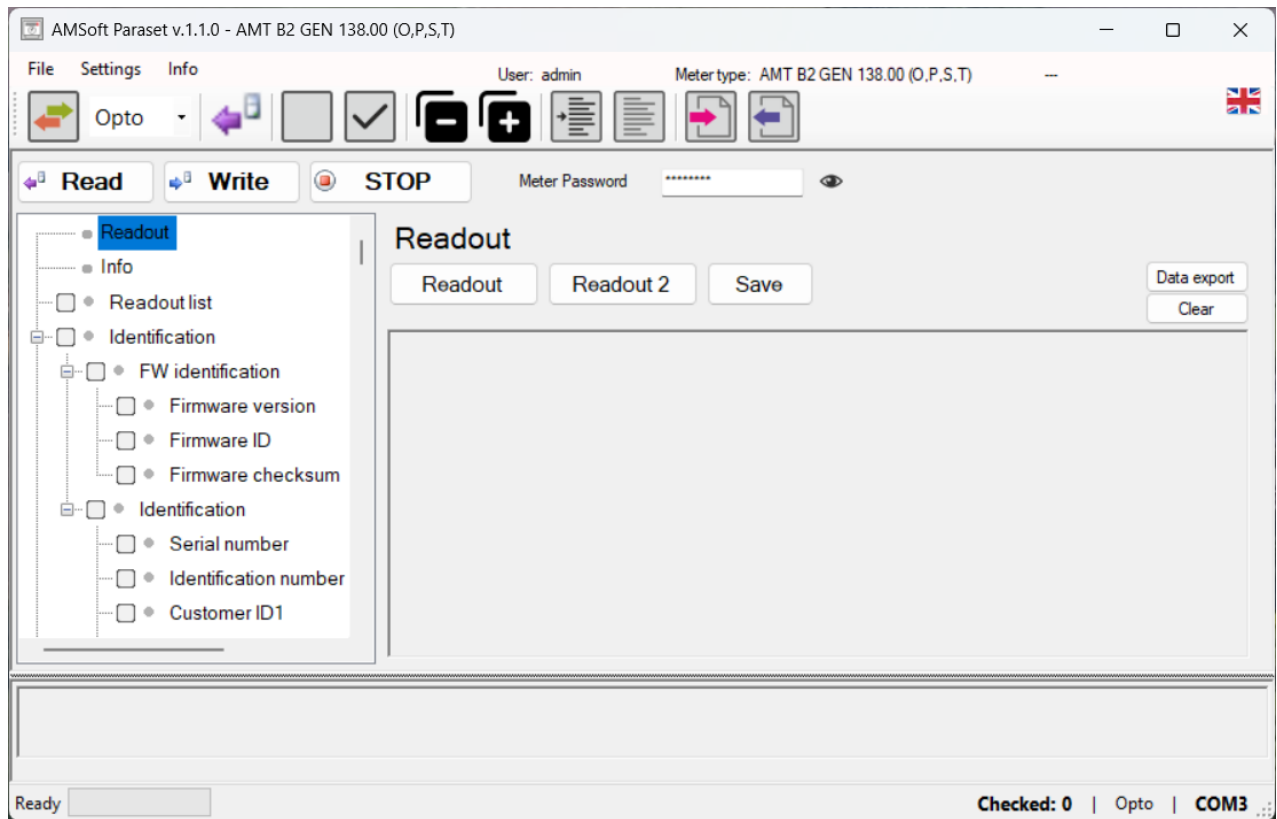


1. Attempt to automatically detect the meter type.
2. Communication settings – a window for configuring communication settings will open.



1. Change language

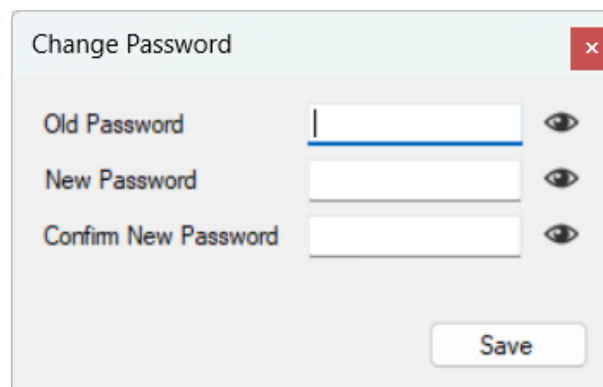
The main window of the program:



3 Initial settings

3.1 Change of password

If necessary, the access password to the AMSoft Paraset program can be changed. Only own password can be changed and a minimum level of **"Level 2" - Service** is required. Click on „**Setting**“ -> „**Change password**“ in the main menu window (top left) a window for changing passwords will appear.



3.2 Change of program language

Changing the language of the program can be done through **"Settings" -> "Language"** and select the language.

3.3 Setting and selecting of the communication interface (COM port)

Communication with the meter is possible by using an optical probe, RS 485 line or a wireless (radio) connection Mesh, if the meter is equipped with them.

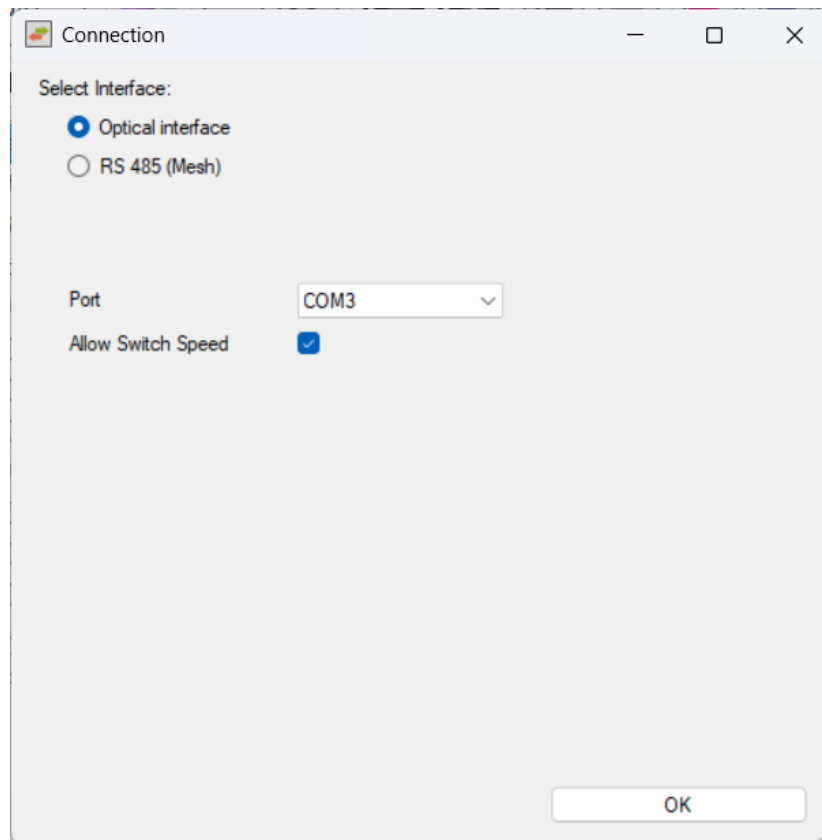
In order for the program to communicate, it is necessary to set the COM port. When connect a device (an optical probe, RS 485 converter) to USB port, the PC operating system will automatically assign the port No for the device.

We get to the settings via the **"Connection"** button on the main program window.



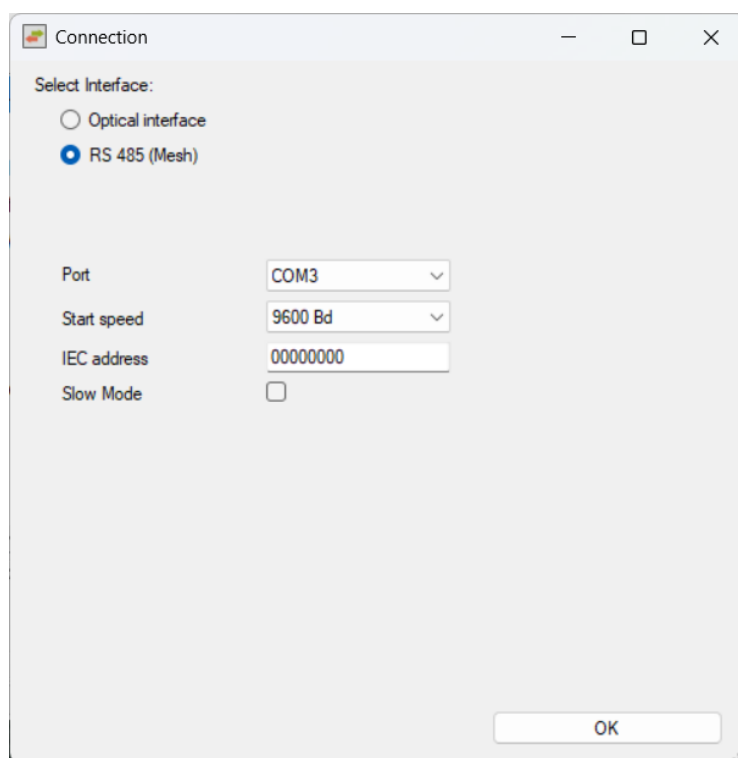
The port setting for the optical probe, RS 485 line and Mesh is performed separately.

At the Optical interface, only the COM port for the probe is set.



The optical communication starts with speed of 300 Bd and subsequently will switch to the proposed speed (default speed 9600 baud). For RS 485 (Mesh radio modules) it is possible to set the initial and the proposed speed, too. Both speeds are normally preset to 9600 Bd. The speed setting for the optical probe, RS 485 line and Mesh is performed separately.

If we do not want to switch the speed and want to communicate at **300 Bd**, we uncheck **"Allow Switch Speed."**



4 Description of Program Functions



The toolbar contains:

1. The first button on the toolbar opens the communication settings
2. Quick switch between Opto and RS485 communication types
3. Reads register settings from the electricity meter
4. Deselects all items in the tree.
5. Selects all selectable items in the tree.
6. Collapses all tree items.
7. Expands all tree items.
8. Performs a reading.
9. Displays the reading.
10. Exports the selected items to a file (Para File).
11. Imports data from a file (Para File).

The main program control buttons located at the top left:



Clicking the **"Read"** button retrieves the electricity meter parameters selected in the tree and updates them immediately.

The **"Write"** button writes the electricity meter parameters selected in the tree.

The **"Stop"** button stops all program activities—writing and reading parameters, meter readout, reading events, reading profiles...

The program functions are listed in a tree structure:

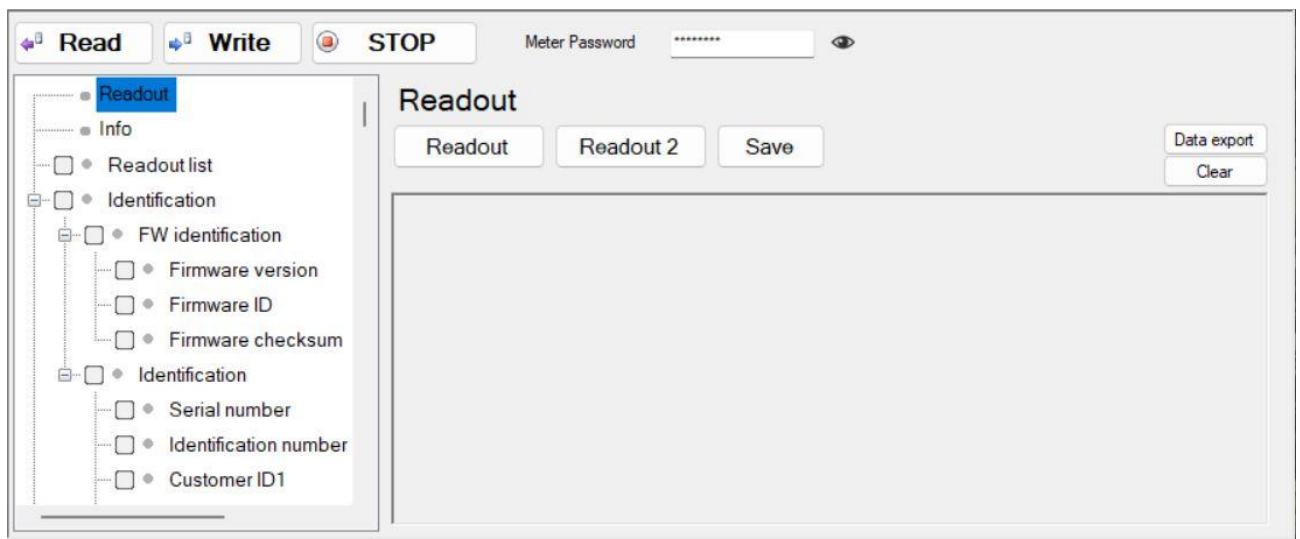
1. Meter reader / Operator - Reading, Information.
2. **Service** - Reading, Information, Meter Parameters, which includes the subcategories Date and Time, Events, and Profiles.
3. Administrator (admin) – all meter items.

The tree contains categories, subcategories, and items. This structure is required to allow future expansion of functionality.

Some items may not be available in all versions/types of meters (firmware)!

4.1 Readout

After clicking on the **"Readout"** tree item, the following window is displayed:



Clicking the **"Readout"** / **"Readout 2"** button retrieves data from the electricity meter and displays it in the field on the right (only the last 3 historical records / all historical records).

The retrieved data can be exported using the **"Data Export"** button to an external program called ReadoutPrinter. ReadoutPrinter will be functional immediately after installation. If the "Data Export" button is not working, check the ReadoutPrinter installation and search for ReadoutPrinter.exe again via **"Settings" -> "Select ReadoutPrinter"**.

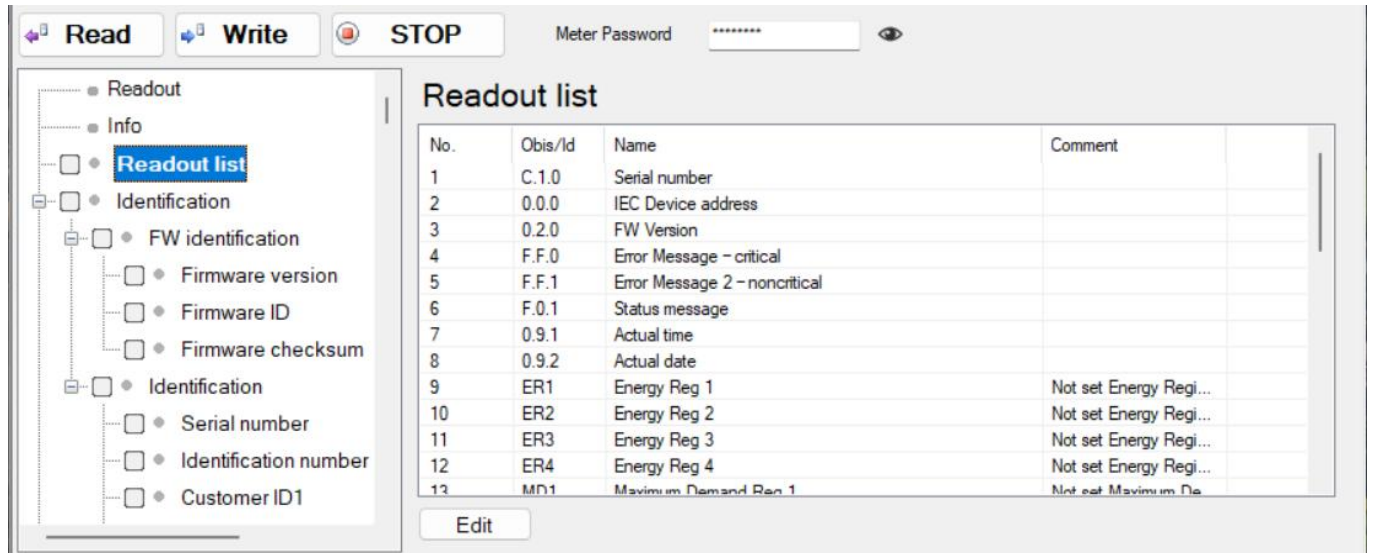
Click the **"Save"** button to save the retrieved data to a text file on your computer's hard drive.

The **"Clear"** button is used to clear the field on the right where the data from the electricity meter was read.

You can stop the meter reading by clicking the **"Stop"** button located in the upper left corner.

4.2 Readout list

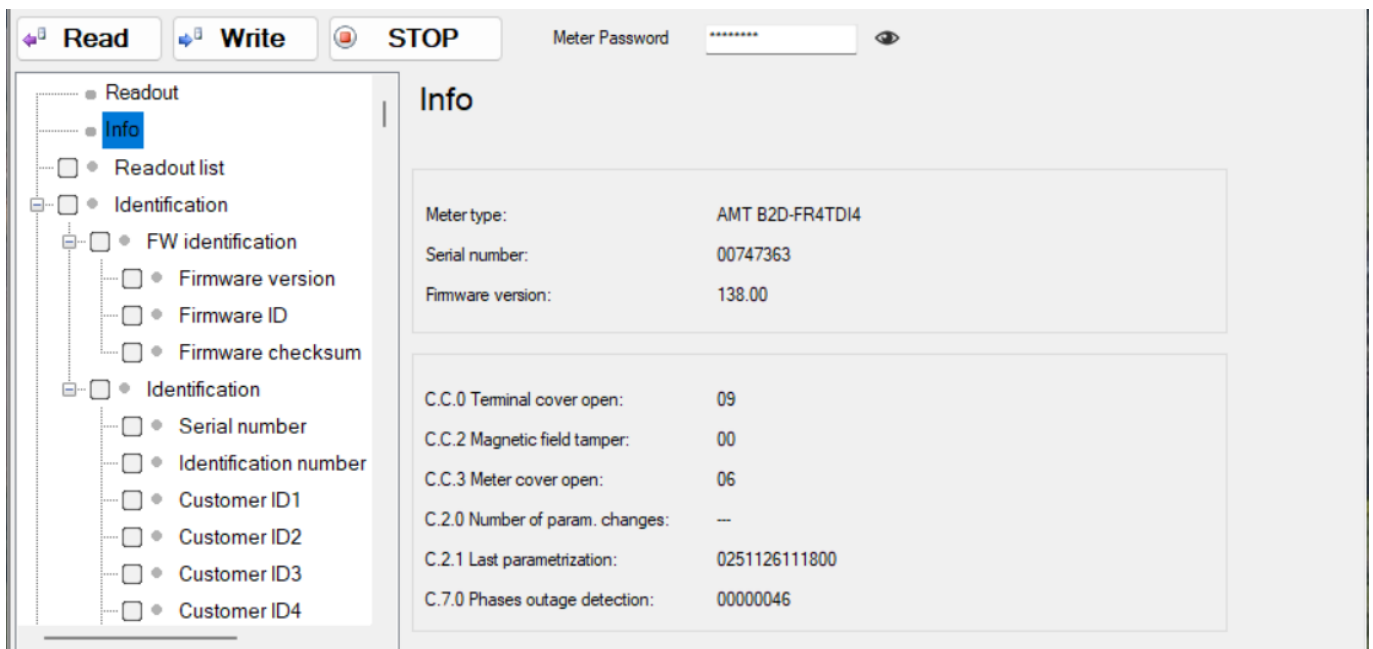
After clicking on the "Readout list" tree item, the following window appears:



In this table, you can select the electricity meter readings to be included in the **Readout**.

4.3 Info

After clicking on the "Info" tree item, the following window appears:



The upper half of the right side of the screen displays: the electricity meter type, serial number, and firmware version.

The lower half displays the tampering logs, the number of parameter changes, and the date of the last parameterization.

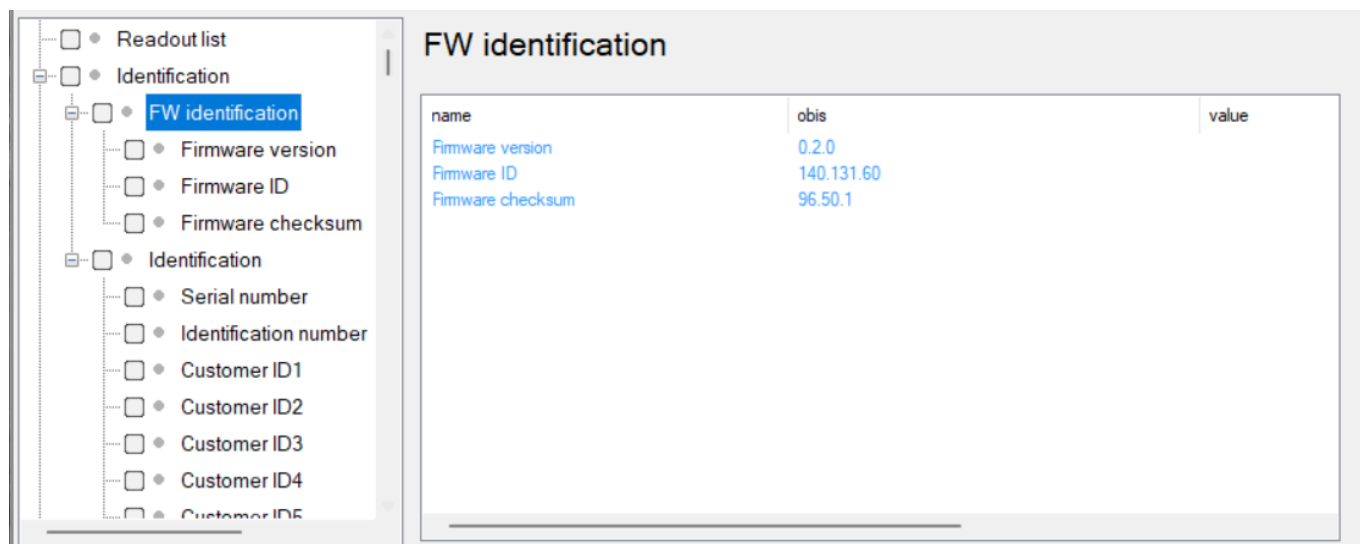
These values are read from the **Readout**.

4.4 Identification

The **"Identification"** tree item contains the following nested tree items: **"FW Identification"** and **"Identification."**

4.4.1 FW identification

After clicking on the **"FW identification"** tree item, the following window appears:



The screenshot shows the 'FW identification' window. On the left is a tree view with the following structure:

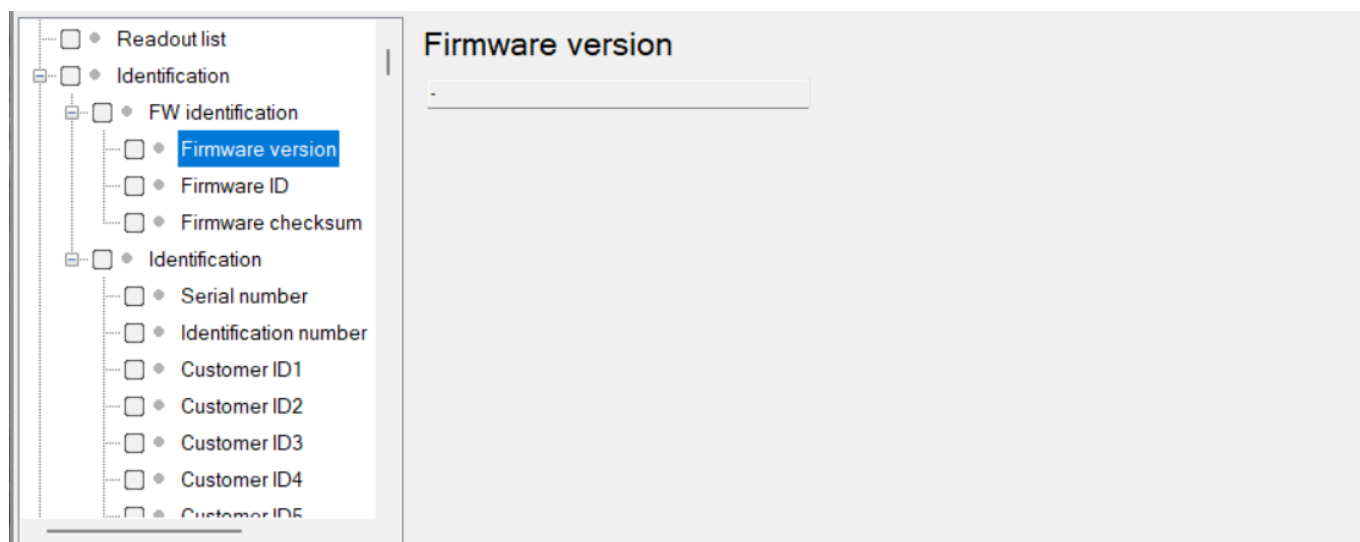
- Readout list
 - Identification
 - FW identification** (selected)
 - Firmware version
 - Firmware ID
 - Firmware checksum
 - Identification
 - Serial number
 - Identification number
 - Customer ID1
 - Customer ID2
 - Customer ID3
 - Customer ID4
 - Customer ID5

On the right is a table titled 'FW identification' with the following data:

name	obis	value
Firmware version	0.2.0	
Firmware ID	140.131.60	
Firmware checksum	96.50.1	

The "FW Identification" tree item contains the following nested tree items: "Firmware Version," "Firmware ID," and "FW Checksum."

These items can only be read from the electricity meter.



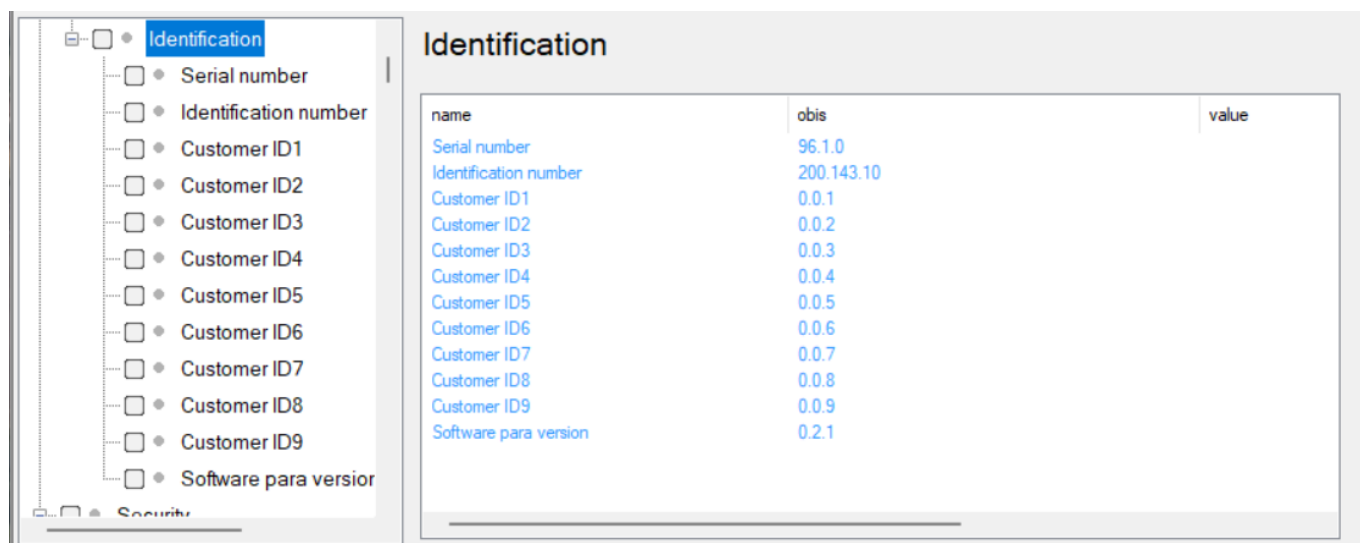
The screenshot shows the 'Firmware version' window. On the left is a tree view with the following structure:

- Readout list
 - Identification
 - FW identification** (selected)
 - Firmware version** (selected)
 - Firmware ID
 - Firmware checksum
 - Identification
 - Serial number
 - Identification number
 - Customer ID1
 - Customer ID2
 - Customer ID3
 - Customer ID4
 - Customer ID5

On the right is a single data field titled 'Firmware version' with a value of '-'. The field is represented by a text box containing the character '-'. The background of the window is light gray.

4.4.2 Identification

After clicking on the **"Identification"** tree item, the following window appears:



The **Identification** window displays a tree view on the left with the following items:

- Serial number
- Identification number
- Customer ID1
- Customer ID2
- Customer ID3
- Customer ID4
- Customer ID5
- Customer ID6
- Customer ID7
- Customer ID8
- Customer ID9
- Software para version

The main area shows a table of parameters:

name	obis	value
Serial number	96.1.0	
Identification number	200.143.10	
Customer ID1	0.0.1	
Customer ID2	0.0.2	
Customer ID3	0.0.3	
Customer ID4	0.0.4	
Customer ID5	0.0.5	
Customer ID6	0.0.6	
Customer ID7	0.0.7	
Customer ID8	0.0.8	
Customer ID9	0.0.9	
Software para version	0.2.1	

The **"Identification"** tree item contains the following nested tree items, which can only be read from the electricity meter: **"Serial Number," "Identification Number,"** and **"Parametrization Version."**

The **"Customer ID"** items (ID1-ID4 - only certain versions, ID5-ID9) can be both read from and written to the electricity meter.

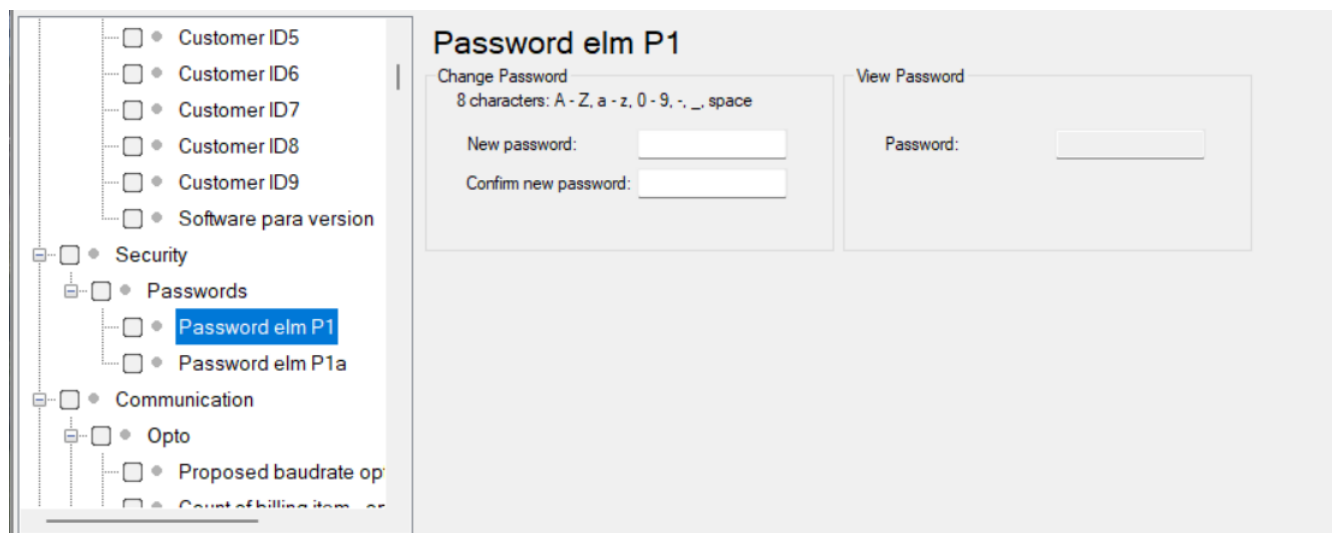
4.5 Security

4.5.1 Passwords

If necessary, you can change the **"P1"** password in the electricity meter ("P1a" for certain models). Select the appropriate menu item, enter the new password twice, and then click Write.



After clicking on the **"Password elm P1"** tree item, the following window appears:



The **Password elm P1** window displays a tree view on the left with the following items:

- Customer ID5
- Customer ID6
- Customer ID7
- Customer ID8
- Customer ID9
- Software para version
- Security
 - Passwords
 - Password elm P1**
 - Password elm P1a
- Communication
 - Opto
 - Proposed baudrate op
 - Count of billing item op

The main area shows a form for changing the password:

Change Password
8 characters: A - Z, a - z, 0 - 9, -, _, space

New password:

Confirm new password:

View Password
Password:

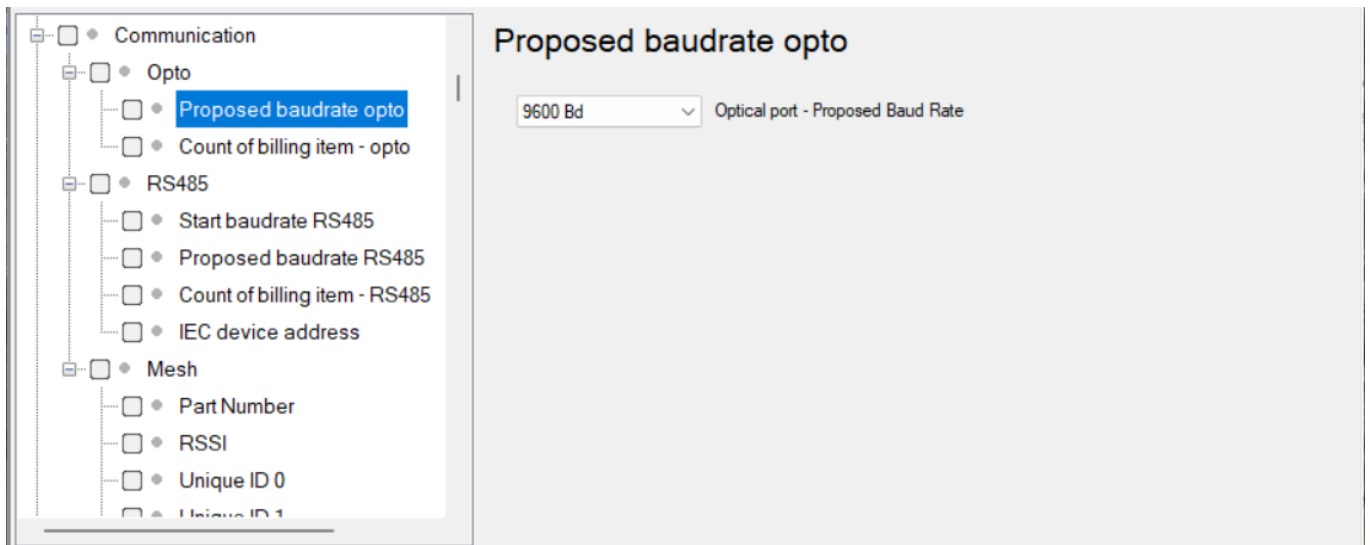
4.6 Communication

4.6.1 Opto

The “Opto” tree item contains the following nested tree items: **“Proposed baudrate opto”** and **“Count of billing item opto”**.

Optical communication always starts at a speed of 300 Bd. The desired communication speed can be set under the **“Proposed baudrate opto”** item. Available speeds: 300, 600, 1200, 2400, 4800, 9600, 19200 Bd.

Under the **“Count of billing item opto”**, the number of historical records displayed in **Readout** can be set.



4.6.2 RS485

The "RS485" tree item contains the following nested tree items: "Start baudrate – RS485", "Proposed baudrate – RS485", "Count of billing item – RS485" a "IEC device address".

RS485 communication begins at the speed set in the **"Start baudrate – RS485"**. The **"Proposed baudrate – RS485"** tree item allows you to set the suggested communication speed. Available baud rates: 300, 600, 1200, 2400, 4800, 9600, 19200 bps.

Under the **"Count of billing item – RS485"** tree item, you can set the number of historical records displayed in the **Readout**. In the **"IEC device Address"** field, you can set the electricity meter's IEC address (the meter's topological address within the network). By default, the manufacturer sets the IEC address to match the serial number.



4.6.3 Mesh module

The "Mesh Module" tree node contains the following nested tree nodes: "Identification Code", "RSSI", "Unique ID0" through "Unique ID3", "RSSI Level", "Enable Carrier", "Reset Module", "Reset Settings", "RF Channel", "RF Power", "Security Level", and "System ID0" through "System ID3".

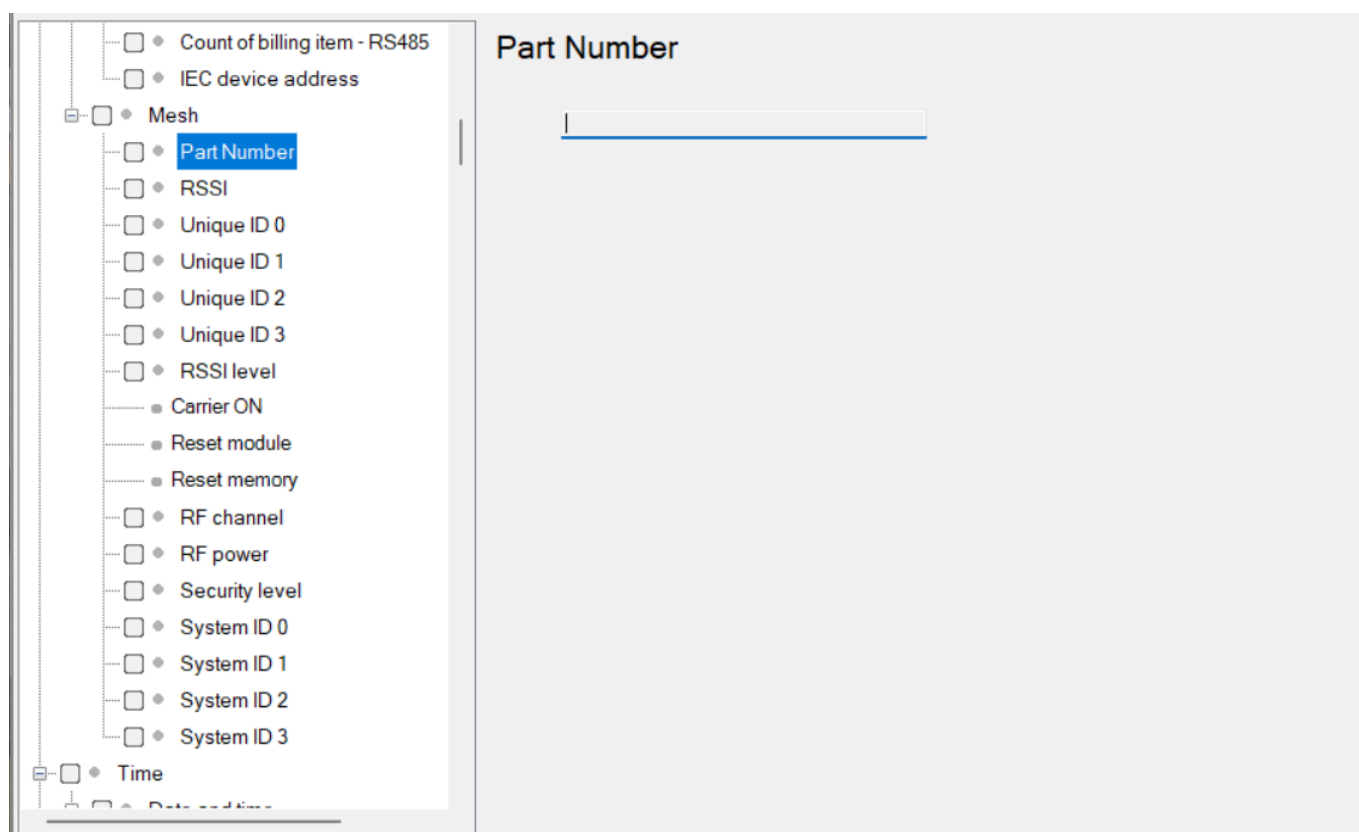
The "Identification Code" item displays the Mesh module number. The "RSSI" item displays the value in dBm. The "Unique ID0" through "Unique ID3" items display the internal IDs—module/manufacture IDs. The "RSSI Level" item – the received signal level of the Mesh module (RSSI level, object C.10.9) – can take values from 0 to 3 (where 0 is the weakest signal and 3 is the strongest).

The following are three commands for enabling the carrier frequency, resetting the module, and resetting the module settings.

Under **"RF Channel,"** you can set the channel from 1 to 18. Under **"RF Power,"** you can set the power from 1 to 5. **"Security Level"** can take values from 0 to 5. **"System ID0"** through **"System ID3"** are the network IDs.

The **"RF Channel," "RF Power,"** and **"System ID0"** through **"System ID3"** items can be both read and written. The other items can only be read.

More detailed information is available in the electricity meter manual.

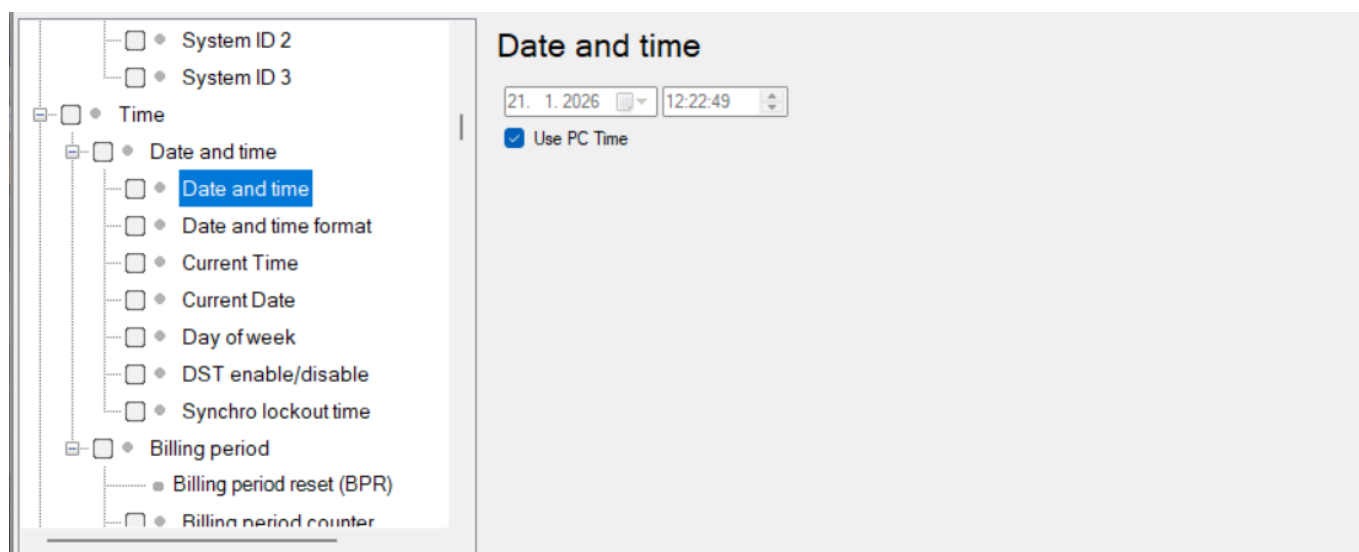


4.7 Time

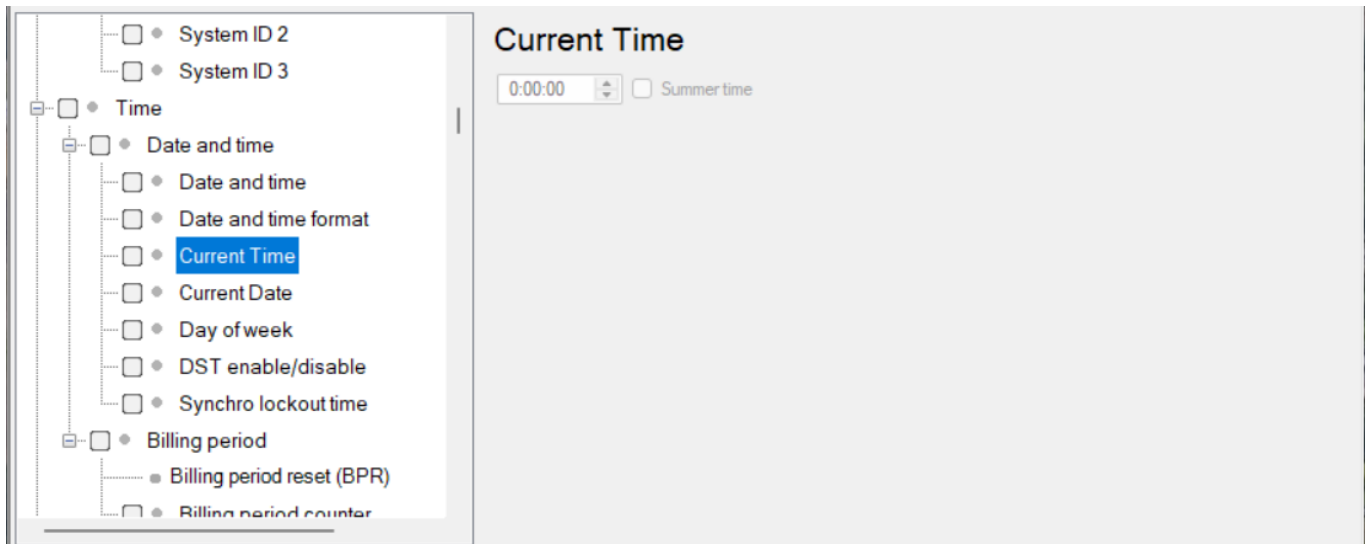
4.7.1 Date and time

The "Date and Time" tree item contains the following nested tree items: "Date and Time," "Date and Time Format," "Current Time," "Current Date," "Day of the Week," "Daylight Saving Time," and "Synchronization."

After clicking on the **"Date and Time"** tree item, the following window appears:

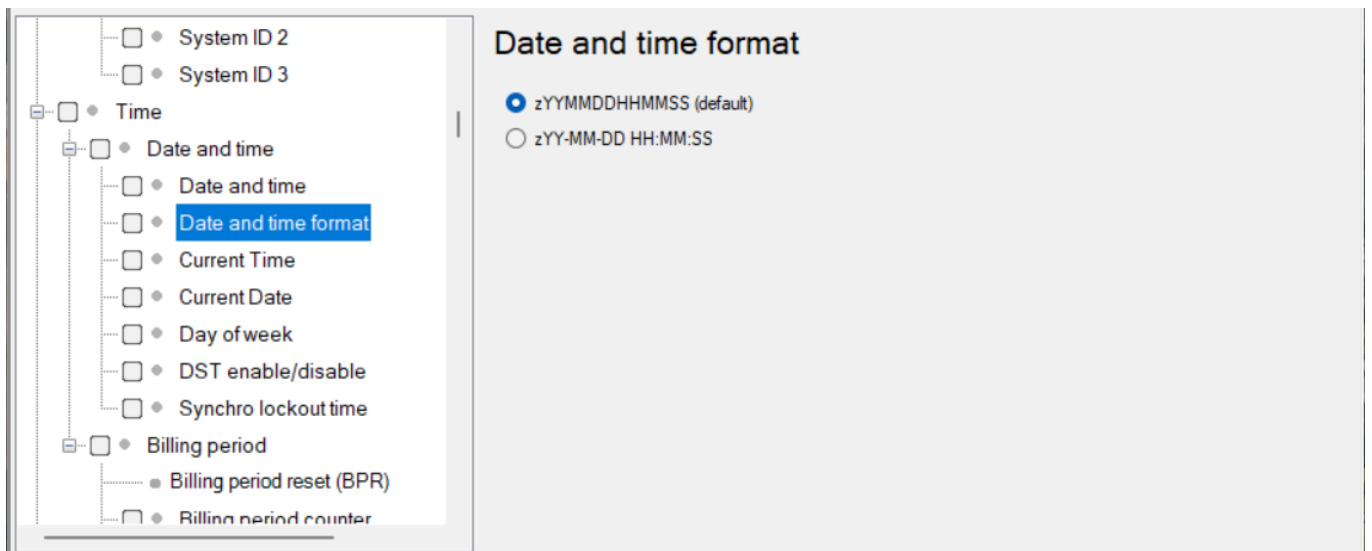


The date and time can be set manually or synced from a PC. Manual setting is enabled when you uncheck the **"Use PC time"** box. Save the settings by checking the corresponding box in the tree and clicking the **"Save"** button. Similarly, you can also read the date and time from the electricity meter: check the corresponding box in the tree and click the **"Read"** button.



The "Current Time," "Current Date," and "Day of the Week" items can only be read.

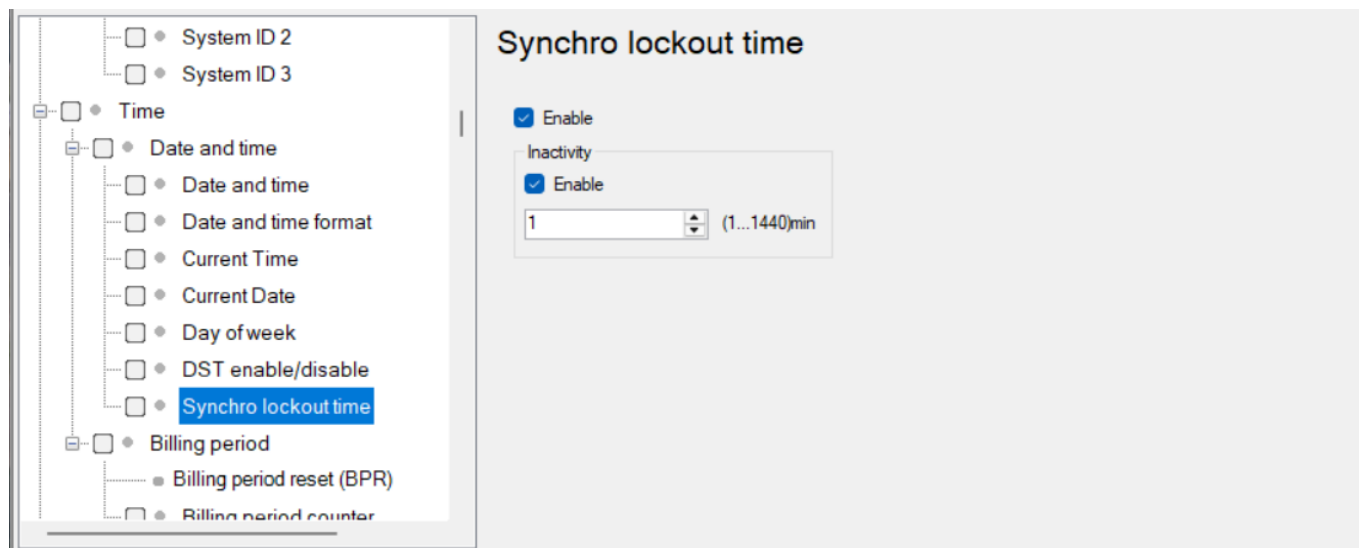
Clicking the **"Date and Time Format"** tree item displays the following window:



Select the format. Save the settings by checking the corresponding box in the tree and clicking the **"Save"** button. Similarly, you can read the settings from the electricity meter: check the corresponding box in the tree and click the **"Read"** button.

We follow a similar procedure for the **"Daylight Savings Time"** item. The Daylight savings time change is activated by checking the "Active" box. The time shift in March and October occurs according to the European standard.

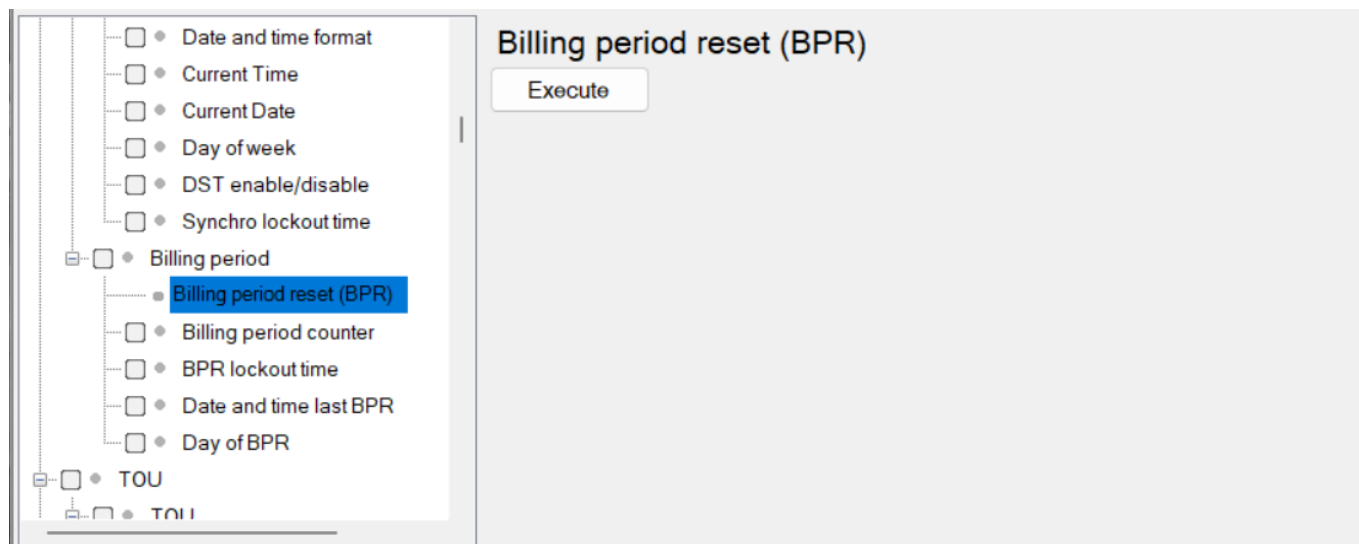
For certain types of electricity meters, you can enable time synchronization and set a lockout time for it. The **"Synchronization"** tree item:



4.7.2 Billing period

The "Billing Period" tree node contains the following nested tree nodes: "Billing Period Reset (BPR)", "Billing Period Counter", "BPR Lockout Time", "Date and Time of last BPR", and "Day of Billing Period Reset (BPR)".

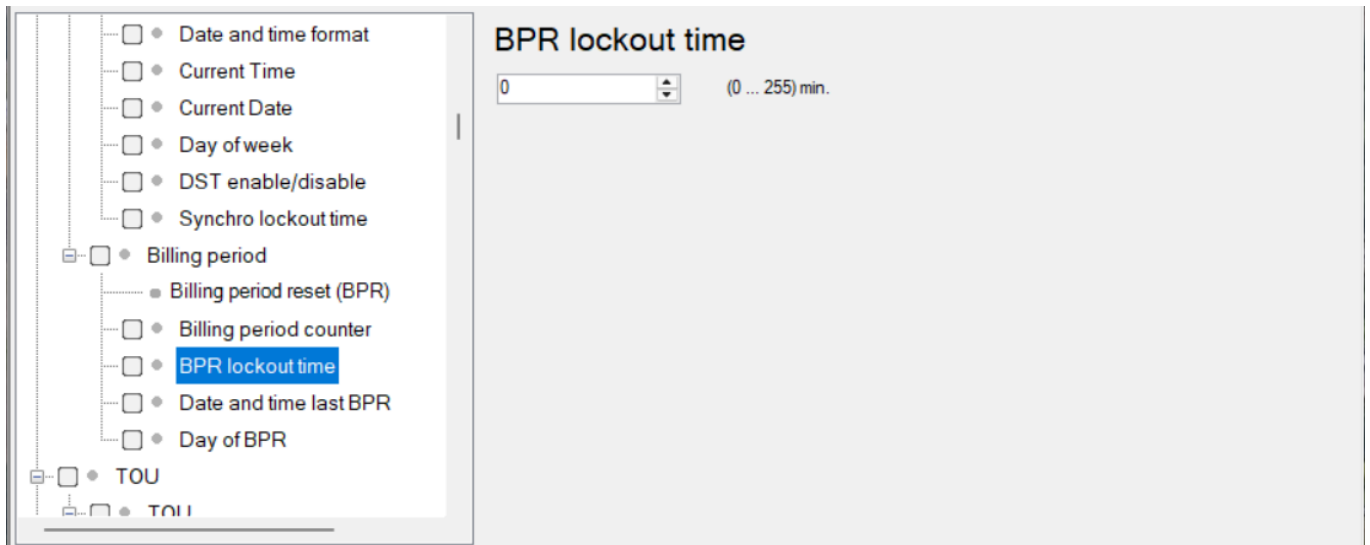
After clicking on the **"Billing Period Reset (BPR)"** tree item, the following window appears:



You can reset the billing period by clicking the **"Execute"** button.

The "Billing Period Counter" and "Date and Time of last BPR" fields are read-only.

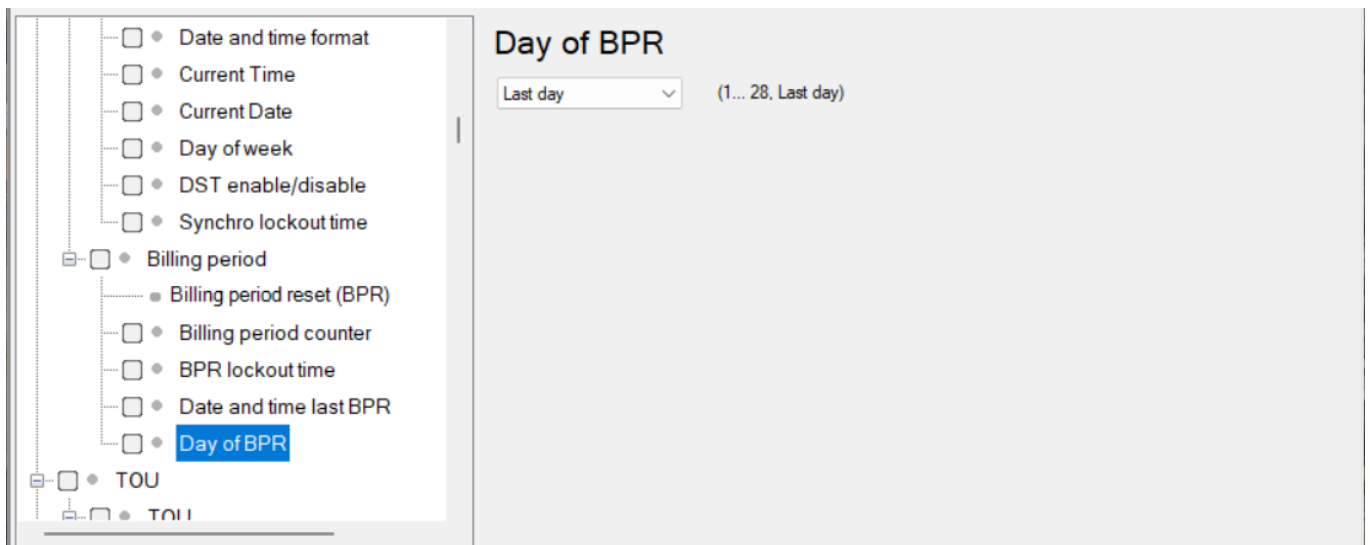
After clicking on the **"BPR lockout time"** tree item, the following window will appear:



The screenshot shows the 'BPR lockout time' configuration window. On the left, a tree view lists various settings, with 'BPR lockout time' highlighted. The main area displays the title 'BPR lockout time' and a numeric input field containing the value '0'. To the right of the input field, the text '(0 ... 255) min.' indicates the valid range for the lockout time.

You can retrieve a value, set a new value, and save the value.

After clicking on the tree item **"Day of Billing Period Reset (BPR)"**, the following window will appear:



The screenshot shows the 'Day of BPR' configuration window. On the left, a tree view lists various settings, with 'Day of BPR' highlighted. The main area displays the title 'Day of BPR' and a dropdown menu currently set to 'Last day'. To the right of the dropdown, the text '(1... 28, Last day)' indicates the valid range for the day of the billing period reset.

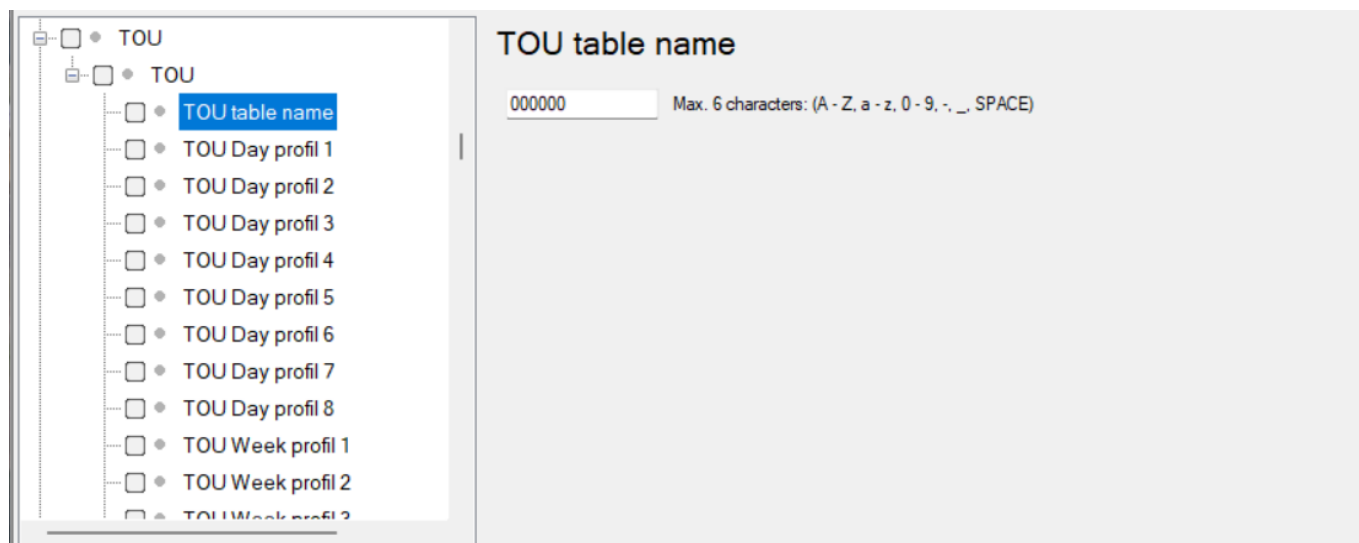
You can retrieve a value, set a new value, and save the value.

4.8 Time of Use (TOU)

The "Time of Use TOU" tree node contains the following nested tree nodes: "TOU Table Name", "TOU Day Profil 1-8", "TOU Week Profil 1-5", "TOU Season Profil", and "Special Days (ToU) 1-5".

4.8.1 TOU table name

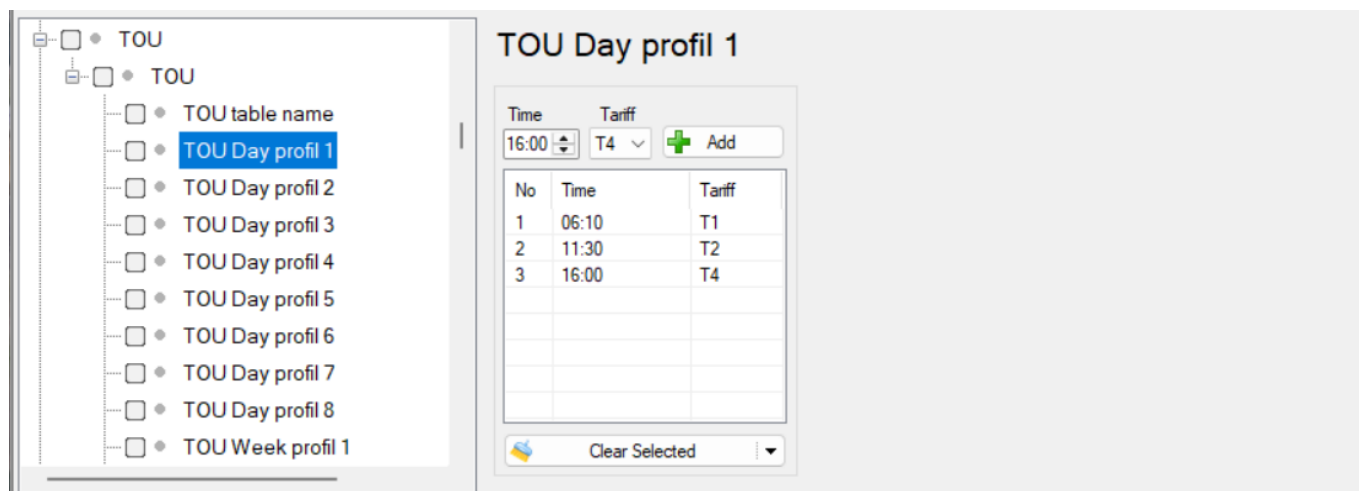
After clicking on the "TOU Table Name" tree item, the following window will appear:



On this tab, you can assign a name to the given switch table configuration (max. 6 characters). You can read the current value, set a new value, and save it.

4.8.2 TOU Day profile

After clicking on the "TOU Day profil 1-8" menu item, the following window will appear:

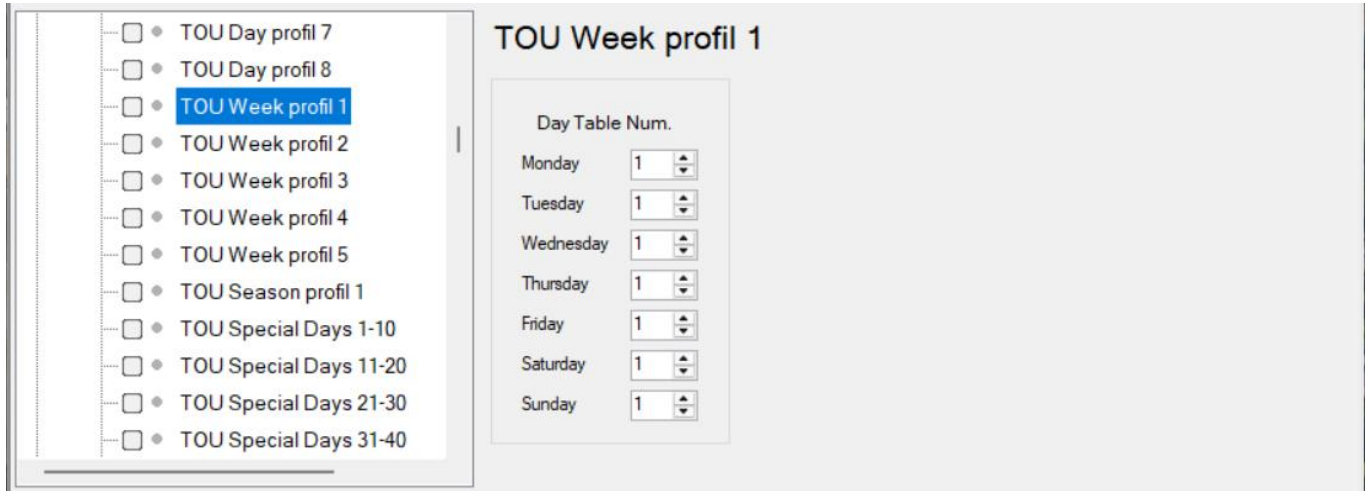


No	Time	Tariff
1	06:10	T1
2	11:30	T2
3	16:00	T4

On this screen, you can configure the daily table. After setting the time and selecting the tariff, click the "Add" button. A new row will then be added to the table. At the bottom, there is a "Clear Selected" button that removes the selected rows. The maximum number of switching time entries is 24 in each table. The smallest time increment is one minute. Daily tables that are not used in weekly tables are inactive. You can load a table, set up a new table, and save a table. There are 8 daily tables.

4.8.3 TOU Week profile

After clicking on the "TOU Week profil 1-5" menu item, the following window will appear:



TOU Week profil 1

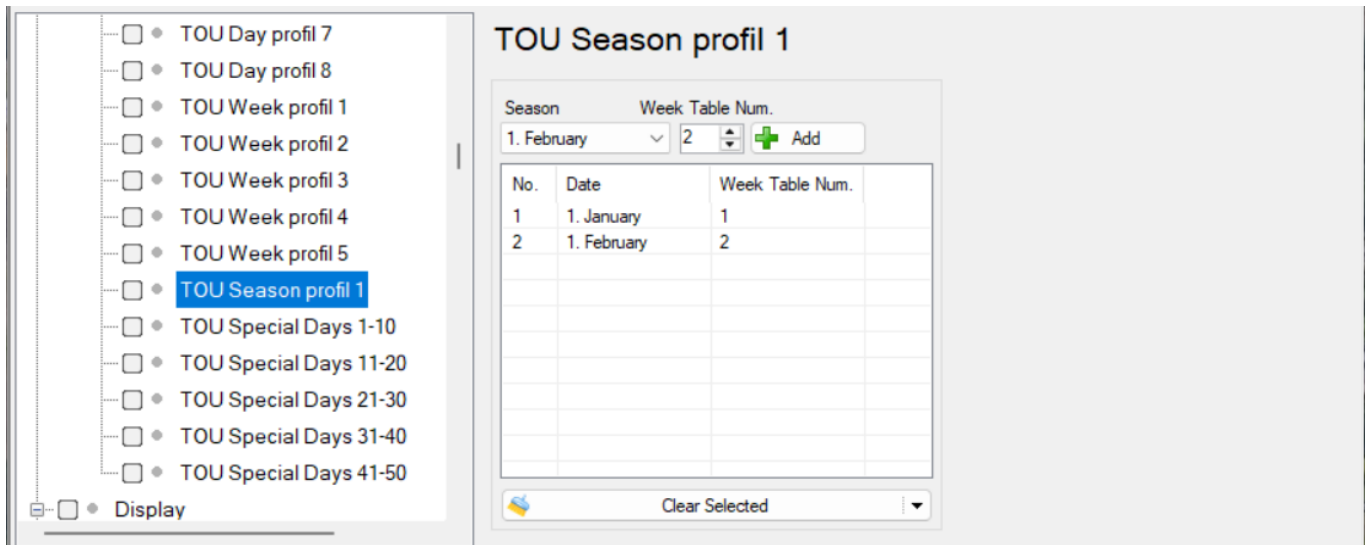
Day Table Num.

Monday	1
Tuesday	1
Wednesday	1
Thursday	1
Friday	1
Saturday	1
Sunday	1

On this screen, you can configure the weekly table. Select the appropriate daily table for each day. You can load a table, set up a new table, and save a table. There are 5 weekly tables.

4.8.4 TOU Season profile

After clicking on the "TOU Season profil" menu item, the following window will appear:



TOU Season profil 1

Season: 1. February Week Table Num.: 2 + Add

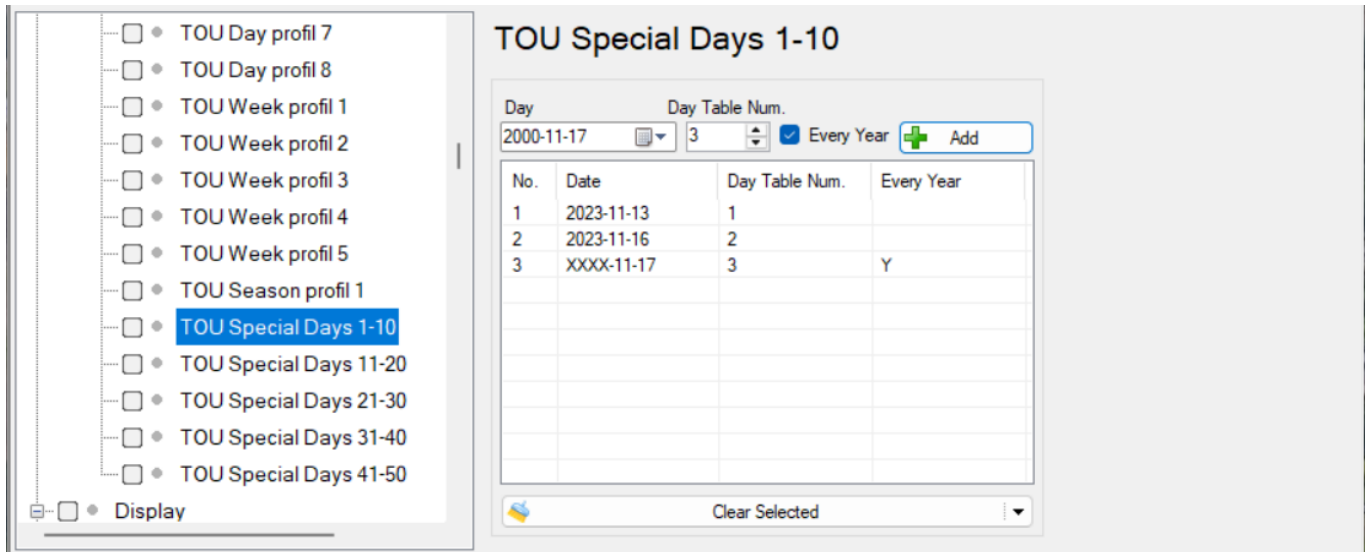
No.	Date	Week Table Num.
1	1. January	1
2	1. February	2

🗑️ Clear Selected

On this screen, you can configure the season table. After selecting the time and the weekly table number, click the "Add" button. A new row will then be added to the table. At the bottom, there is a "Clear Selected" button that removes the selected rows. The maximum number of season entries is 5. You can load the table, set up a new table, and save the table.

4.8.5 TOU Special days

After clicking on the "TOU Special Days 1-10" menu item, the following window will appear:



TOU Special Days 1-10

Day: 2000-11-17 Day Table Num.: 3 ☒ Every Year + Add

No.	Date	Day Table Num.	Every Year
1	2023-11-13	1	
2	2023-11-16	2	
3	XXXX-11-17	3	Y

↩ Clear Selected

On this screen, you can set special days. After setting the day and selecting a weekly table, click the **"Add"** button. A new row will then be added to the table. At the bottom, there is a **"Clear Selected"** button that removes the selected rows. The maximum number of entries is 10 in each table. The smallest time increment is one minute. Daily tables that are not used in weekly tables are inactive. You can load a table, set up a new table, and save a table. There are 5 daily tables.

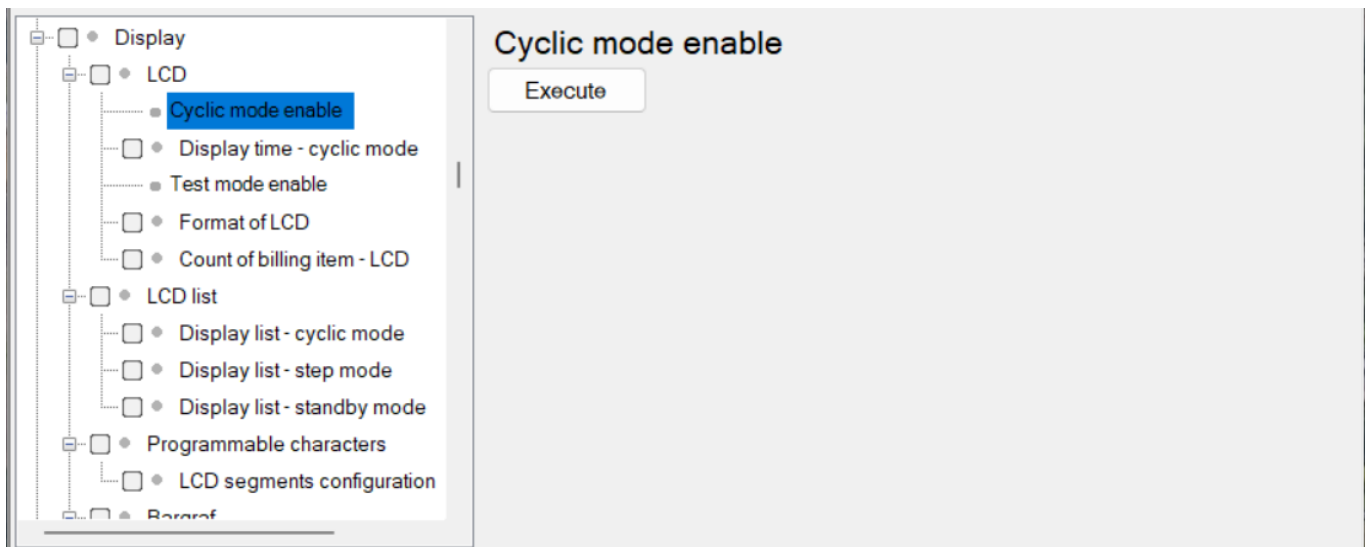
4.9 Display

The **"Display"** tree node contains the following nested tree nodes: **"LCD"**, **"LCD List"**, and **"Bar Graph"**.

4.9.1 LCD

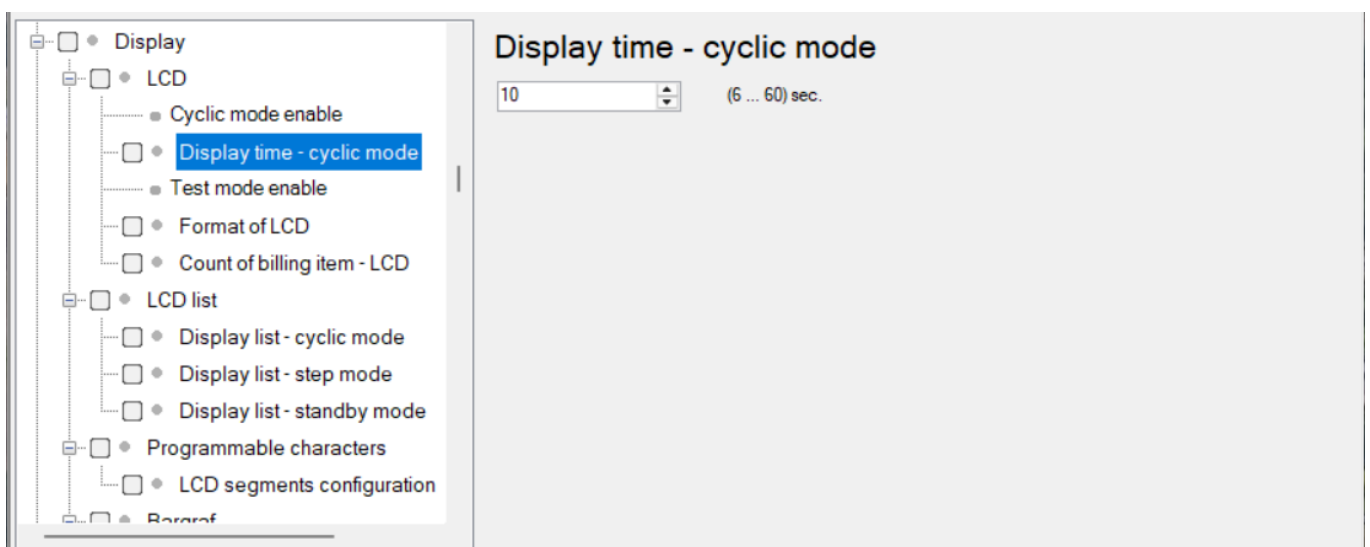
The **"LCD"** tree item contains the following nested tree items: **"Cyclic Mode - Enable"**, **"Display Time – Cyclic Mode"**, **"Test Mode - Enable"**, **"Format of LCD"**, and **"Count of billing item - LCD"**.

After clicking on the **"Cyclic Mode - Enable"** tree item, the following window appears:



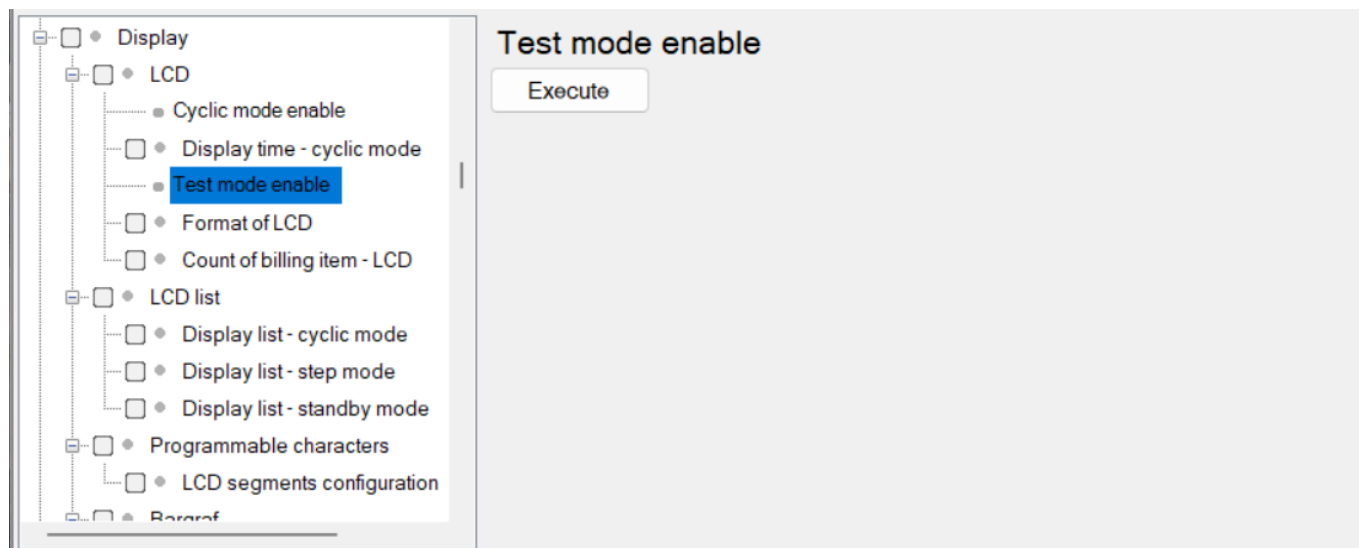
You can switch the electricity meter display to cyclic mode by pressing the **"Execute"** button.

When you click on the **"Display time – cyclic mode"** menu item, the following window will appear:



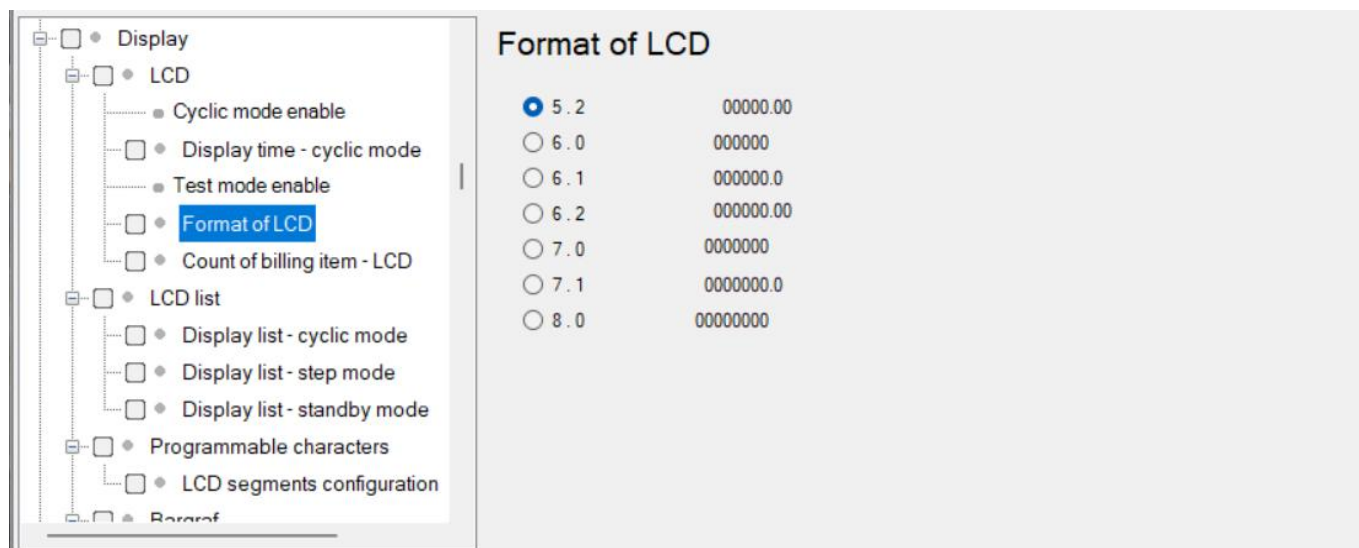
You can read a value, set a new value, and write a value.

After clicking on the **"Test Mode - Enable"** tree item, the following window will appear:



You can switch the electricity meter display to test mode by pressing the **"Execute"** button.

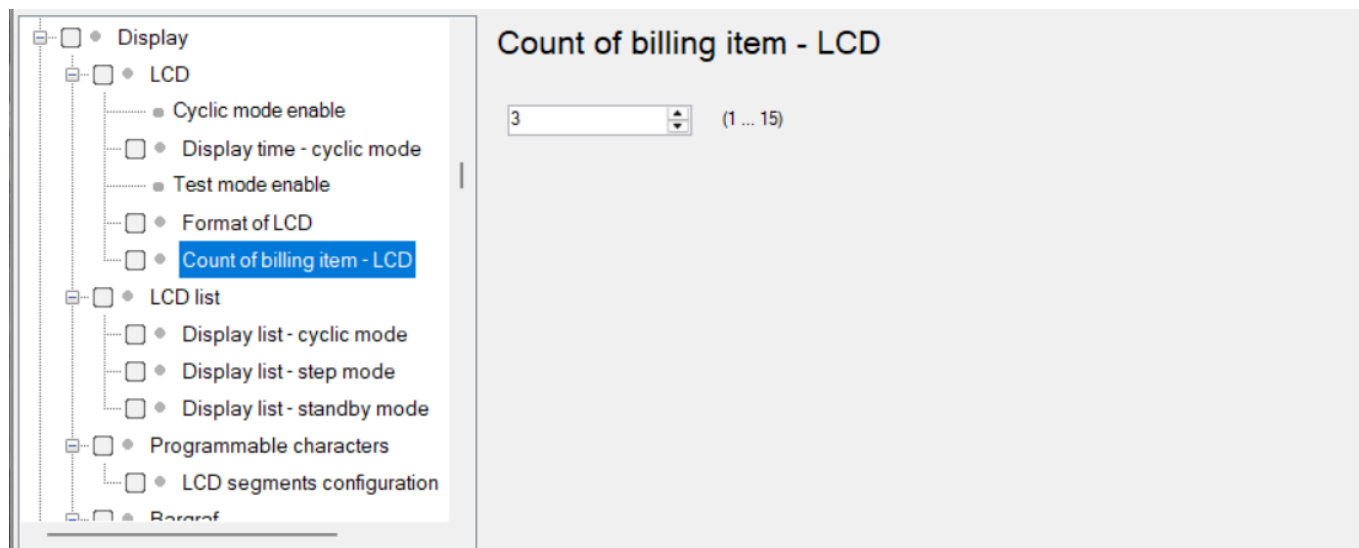
After clicking on the **"Format of LCD"** menu item, the following window will appear:



For electricity meters, you can set the display format (number of decimal places).

You can read the value, set a new value, and save the value.

After clicking on the **"Count of billing item - LCD"** tree item, the following window will appear:



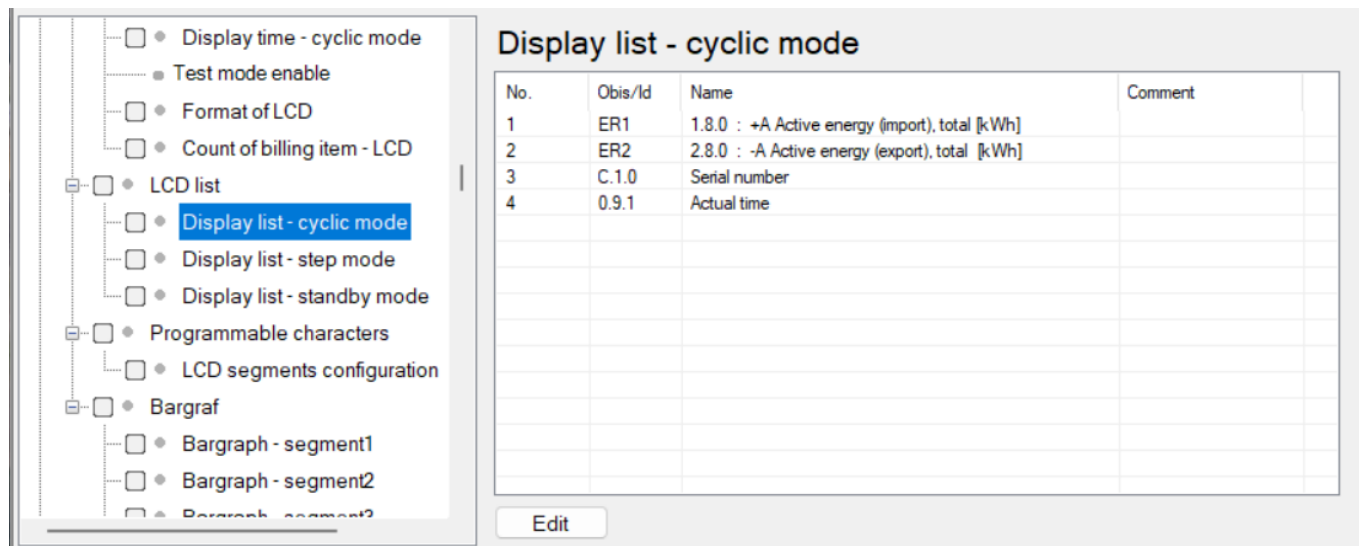
You can set the number of historical records displayed on the LCD.

You can read a value, set a new value, and save the value.

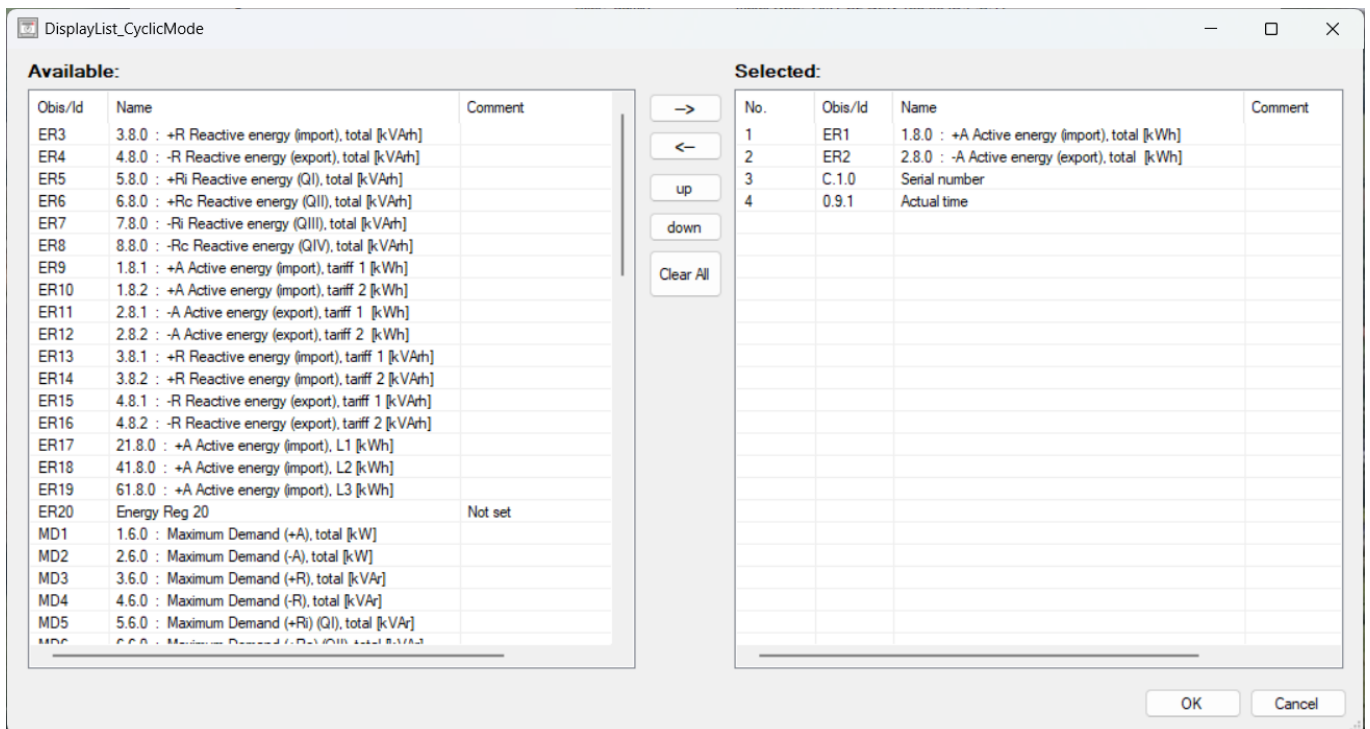
4.9.2 LCD list

The "LCD List" tree item contains the following nested tree items: **"Display list – Cyclic Mode,"** **"Display list – Step Mode,"** and **"Display list – Standby Mode"**.

When you click on the **"Display list – Cyclic Mode"** tree item, the following window appears:



Cyclic mode. In this mode, you can configure the display to show up to 16 items. Clicking the **"Change"** button opens a window with a list of items from which you can select the desired ones:



The window is divided into three sections. The left section contains all available items. You can select the desired items by double-clicking on them or using the arrow button on the right. The middle section contains action buttons, and the selected items are displayed on the right. In the selected items, you can move individual items using the **"Up"** and **"Down"** buttons. To delete an individual item from the selected items, double-click on the item or use the left arrow button. The **"Clear All"** button deletes all items in the selected list. Save by clicking **"OK"**.

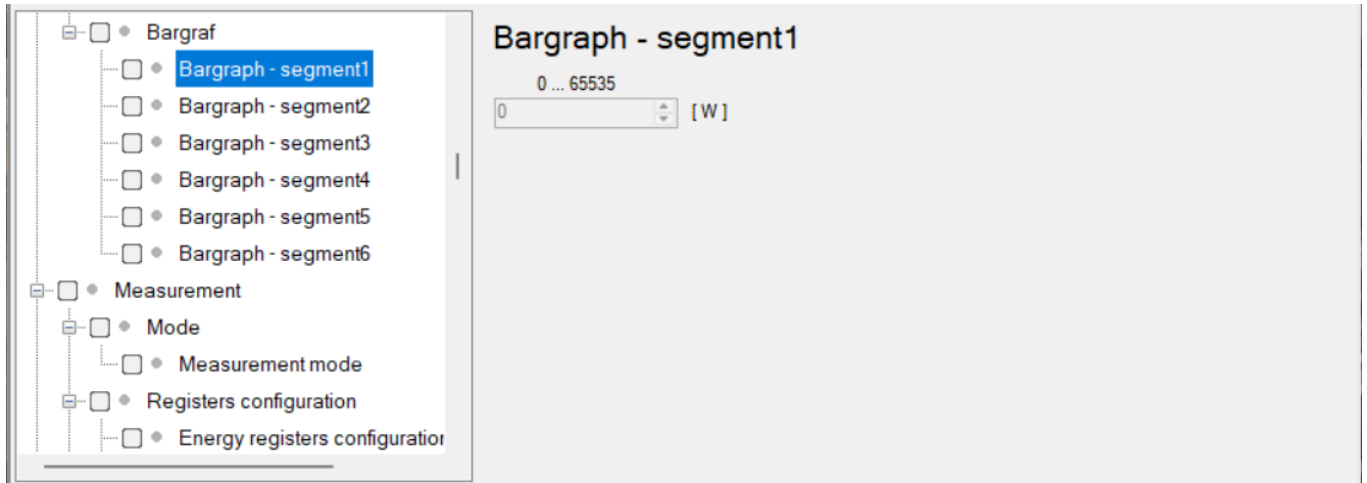
You can read a value, set a new value, and write the value.

The same procedure applies to **"Display – Cyclic Mode"** as well as **"Display – Step Mode"** and **"Display – Standby Mode."**

4.9.3 Bargraph

The **"Bargraph"** tree node contains nested **"Bargraph - Segment 1-6"** tree nodes.

After clicking on the **"Bargraph - Segment 1"** tree node, the following window appears:



Set the value for the corresponding segment on the LCD (1–6).

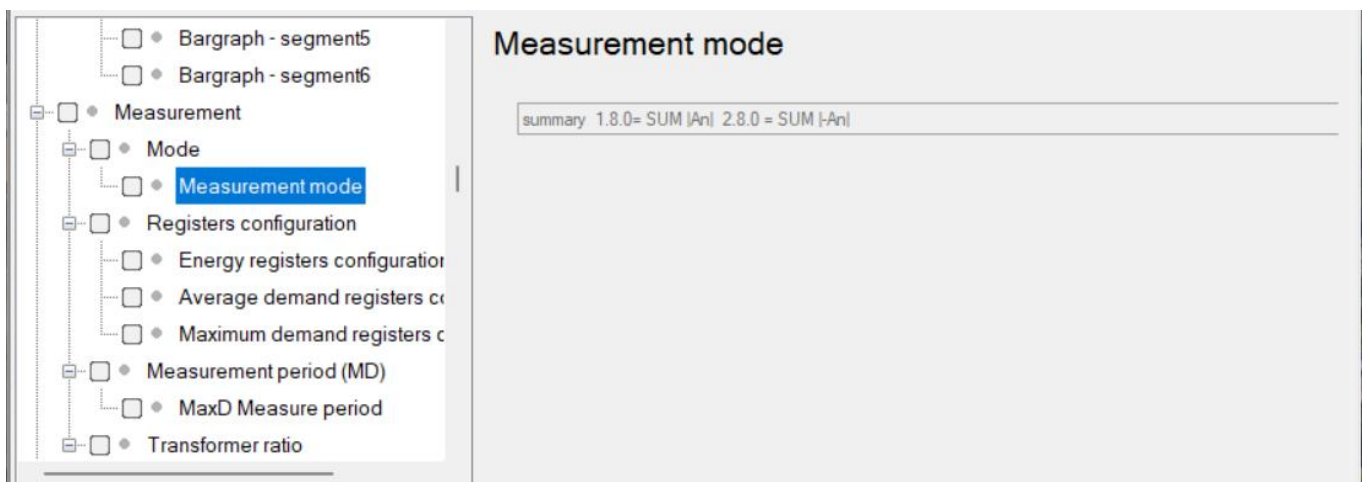
You can read the value, set a new value, and save the value.

4.10 Measurement

The **"Measurement"** tree node contains the following nested tree nodes: **"Mode"**, **"Register Configuration"**, and **"Measurement Period (MD)"**.

4.10.1 Mode

The **"Mode"** tree node contains the nested tree node **"Measurement Mode"**.



After clicking on the **"Measurement Mode"** tree item, the following window will appear:

In measurement mode, the following two modes can be set for the **AMS** electricity meter:

- cumulative $1.8.0 = |+A| + |-A|$ $2.8.0 = |-A|$
- separate $1.8.0 = |+A|$ $2.8.0 = |-A|$

And for the **AMT** electricity meter, the following three modes::

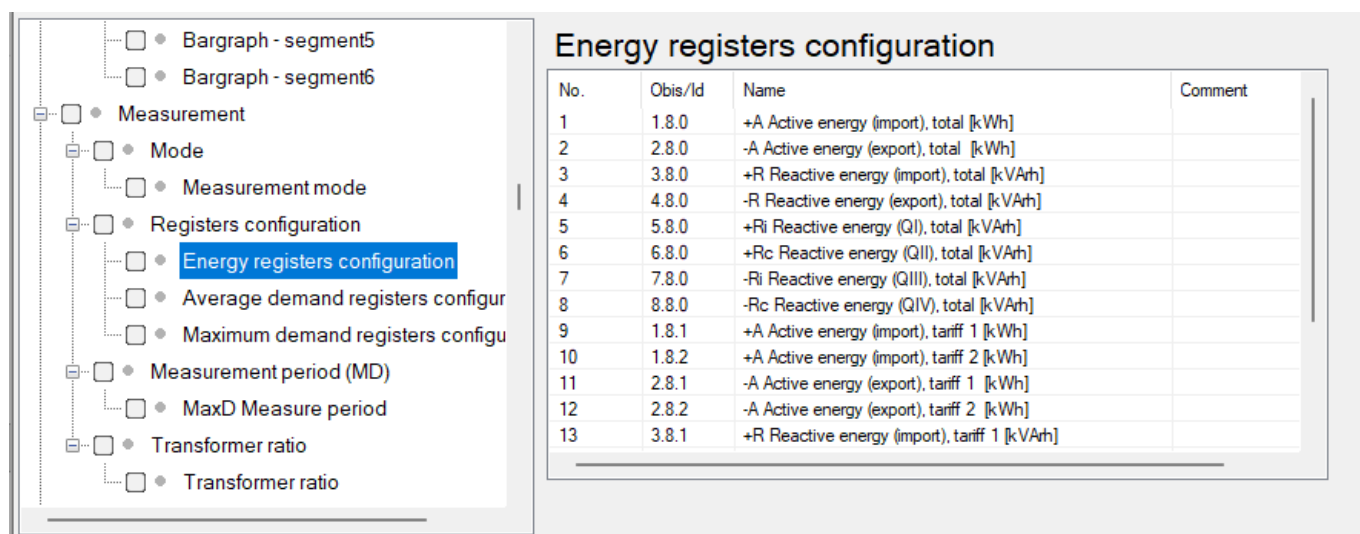
- cumulative 1.8.0= SUM |An| 2.8.0 = SUM |-An|
- separate 1.8.0= SUM |+An| 2.8.0 = SUM |-An|
- ferraris 1.8.0= (SUM An)>0 2.8.0= (SUM An)<0

You can read, set, and save the mode.

4.10.2 Registers configuration

The "Register Configuration" tree node contains the following nested tree nodes: **"Energy Registers - Configuration," "Average Power Registers - Configuration,"** and **"Maximum Power Registers - Configuration."**

After clicking on the **"Energy Registers - Configuration"** tree node, the following window appears

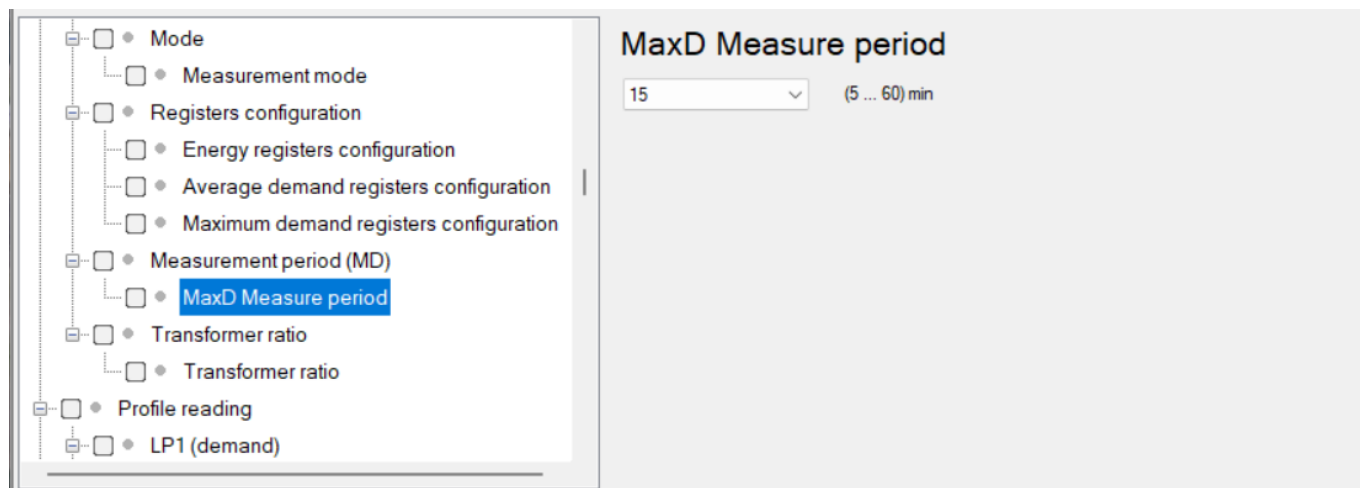


No.	Obis/Id	Name	Comment
1	1.8.0	+A Active energy (import), total [kWh]	
2	2.8.0	-A Active energy (export), total [kWh]	
3	3.8.0	+R Reactive energy (import), total [kVAh]	
4	4.8.0	-R Reactive energy (export), total [kVAh]	
5	5.8.0	+Ri Reactive energy (QI), total [kVAh]	
6	6.8.0	+Rc Reactive energy (QII), total [kVAh]	
7	7.8.0	-Ri Reactive energy (QIII), total [kVAh]	
8	8.8.0	-Rc Reactive energy (QIV), total [kVAh]	
9	1.8.1	+A Active energy (import), tariff 1 [kWh]	
10	1.8.2	+A Active energy (import), tariff 2 [kWh]	
11	2.8.1	-A Active energy (export), tariff 1 [kWh]	
12	2.8.2	-A Active energy (export), tariff 2 [kWh]	
13	3.8.1	+R Reactive energy (import), tariff 1 [kVAh]	

Just as with **"Energy Registers - Configuration,"** we can also view **"Average Demand Registers - Configuration"** and **"Maximum Demand Registers - Configuration."**

4.10.3 Measurement Period

After clicking on the **"Measurement Period (MD)"** tree item, the following window appears:



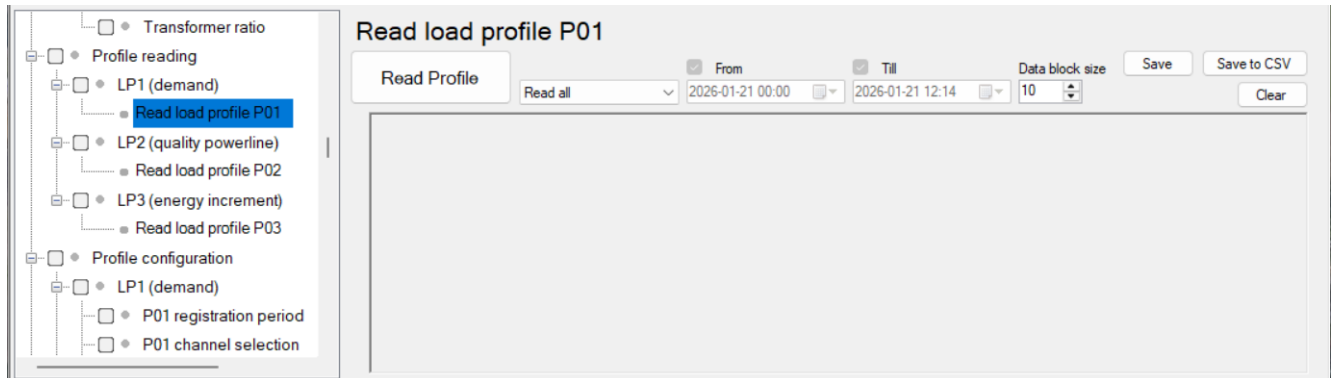
MaxD Measure period

15 (5 ... 60) min

You can set the measurement period in this tree node. The available values are: 5, 10, 15, 20, 30, 60 min.

4.11 Profiles

After clicking on the **"Read Load Profile P01"** tree item, the following window will appear (the same applies to the **"Read Load Profile P02"** and **"Read Load Profile P03"** items):



Use the **"Read Profile"** button to retrieve the relevant profile from the electricity meter:

"Read All" – reads the entire profile

"Read by Date" – select a time period (From – To)

"Data Block Size" – data is transmitted in blocks. Here you can set the block size.

Click the **"Save"** button to save the retrieved data to a text file on your computer's hard drive.

The **"Clear"** button is used to clear the field on the right where the data from the electricity meter was loaded. You can stop reading the profile from the electricity meter by clicking the **"Stop"** button located in the upper left corner.

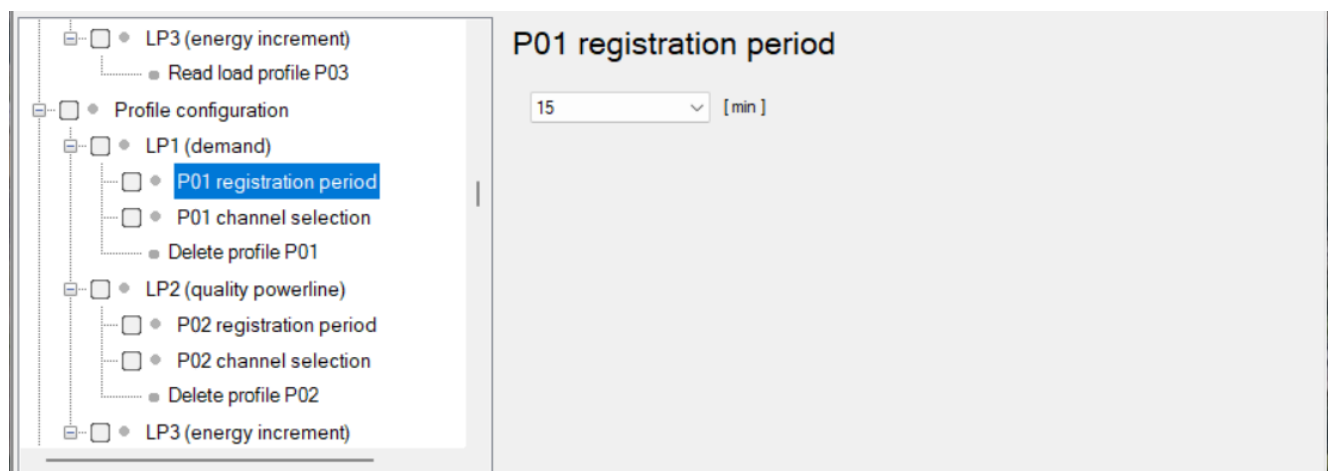
4.12 Profile Configuration

The **"Profile Configuration"** tree node contains the following nested tree nodes: **"LP1 (demand)"**, **"LP2 (quality powerline)"**, and **"LP3 (energy increment)"**.

4.12.1 LP1 (demand)

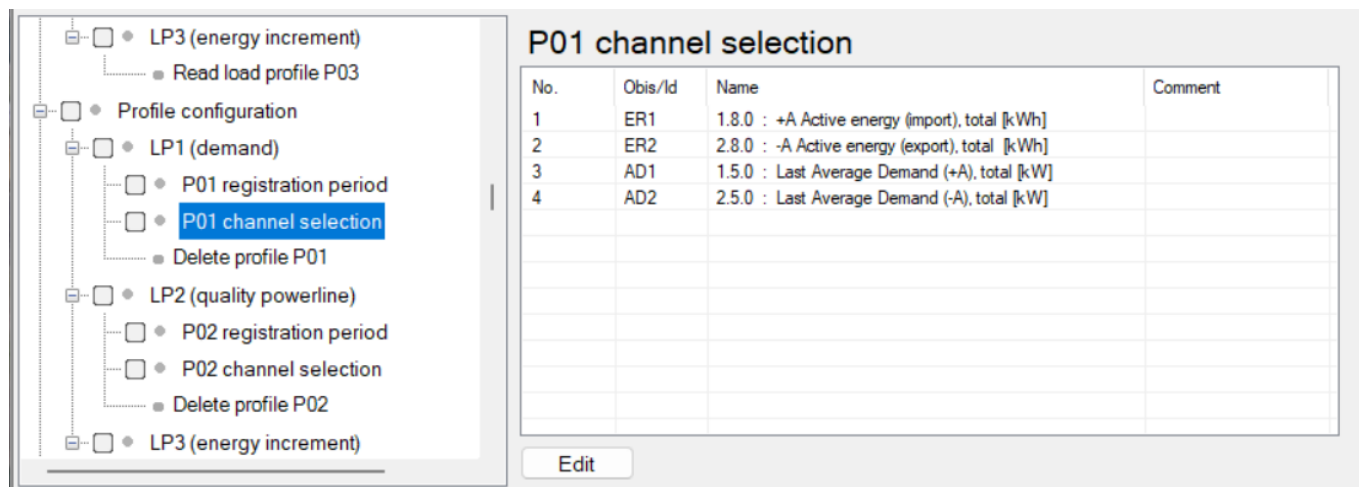
The tree item **"LP1 (demand)"** contains the following nested tree items: **"P01 registration period,"** **"P01 channel selection,"** and **"Delete P01 profile."**

After clicking on the tree item **"P01 registration period,"** the following window appears:

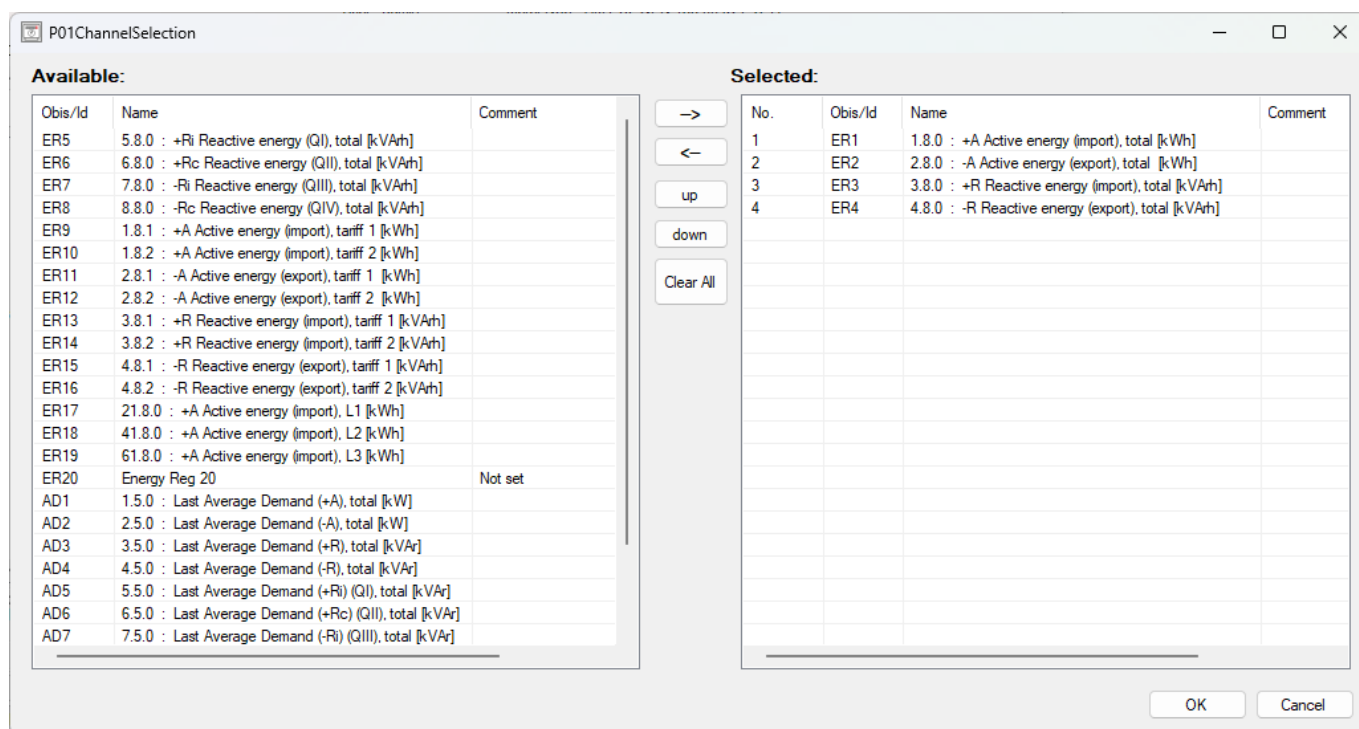


In this tree node, you can set the **registration period for profile P01**. The available values are: 1, 2, 3, 5, 10, 15, 20, 30, 60 min.

When you click on the **"P01 Channel Selection"** tree node, the following window appears:



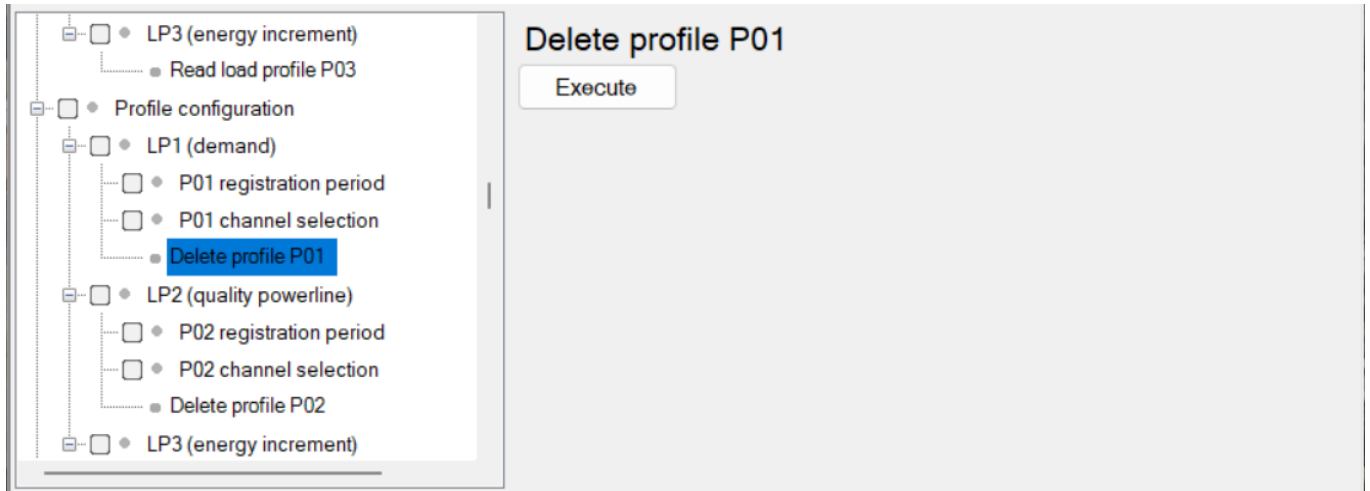
You can set up to 20 items (registers). Clicking the **"Edit"** button opens a window with a list of items from which you can select the desired items:



The window is divided into three sections. The left section contains all available items. You can select the desired items by double-clicking on them or using the arrow button on the right. The middle section contains action buttons, and the selected items are displayed on the right. In the selected items, you can move individual items using the **"Up"** and **"Down"** buttons. To delete an individual item from the selected items, double-click on the item or use the left arrow button. The **"Clear All"** button deletes all items in the selected list. Save by clicking **"OK"**.

You can read a value, set a new value, and write the value.

After clicking on the **"Delete Profile P01"** tree item, the following window will appear:

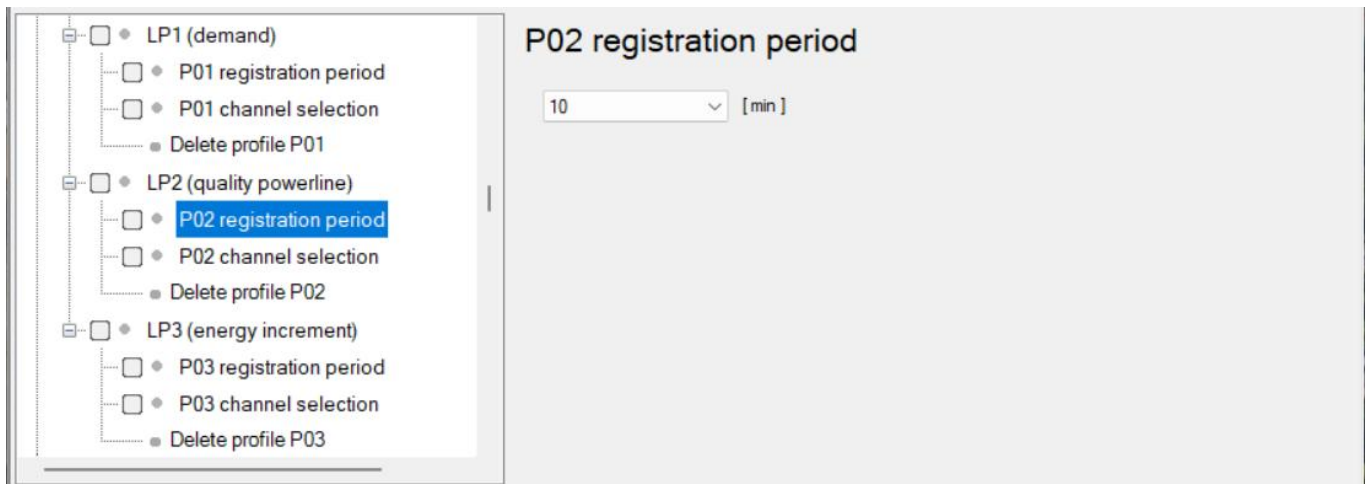


You can delete the entire P01 profile by clicking the **"Execute"** button.

4.12.2 LP2 (quality powerline)

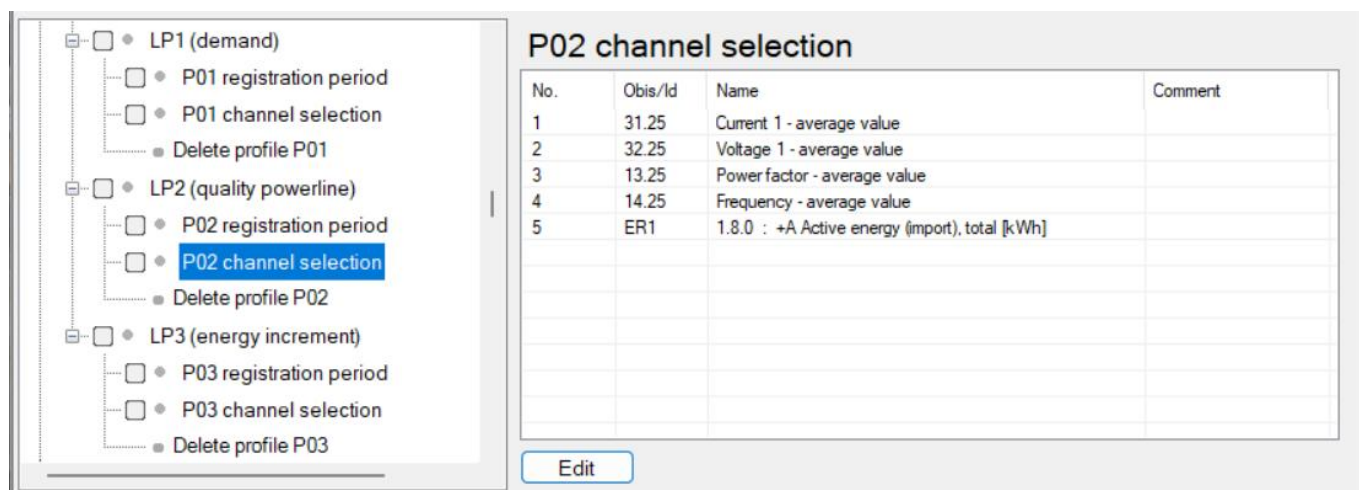
The tree node **"LP2 (quality powerline)"** contains the following nested tree nodes: **"P01 registration period"**, **"P02 channel selection"**, and **"Delete profile P03"**.

After clicking on the tree item **"P02 registration period,"** the following window appears:



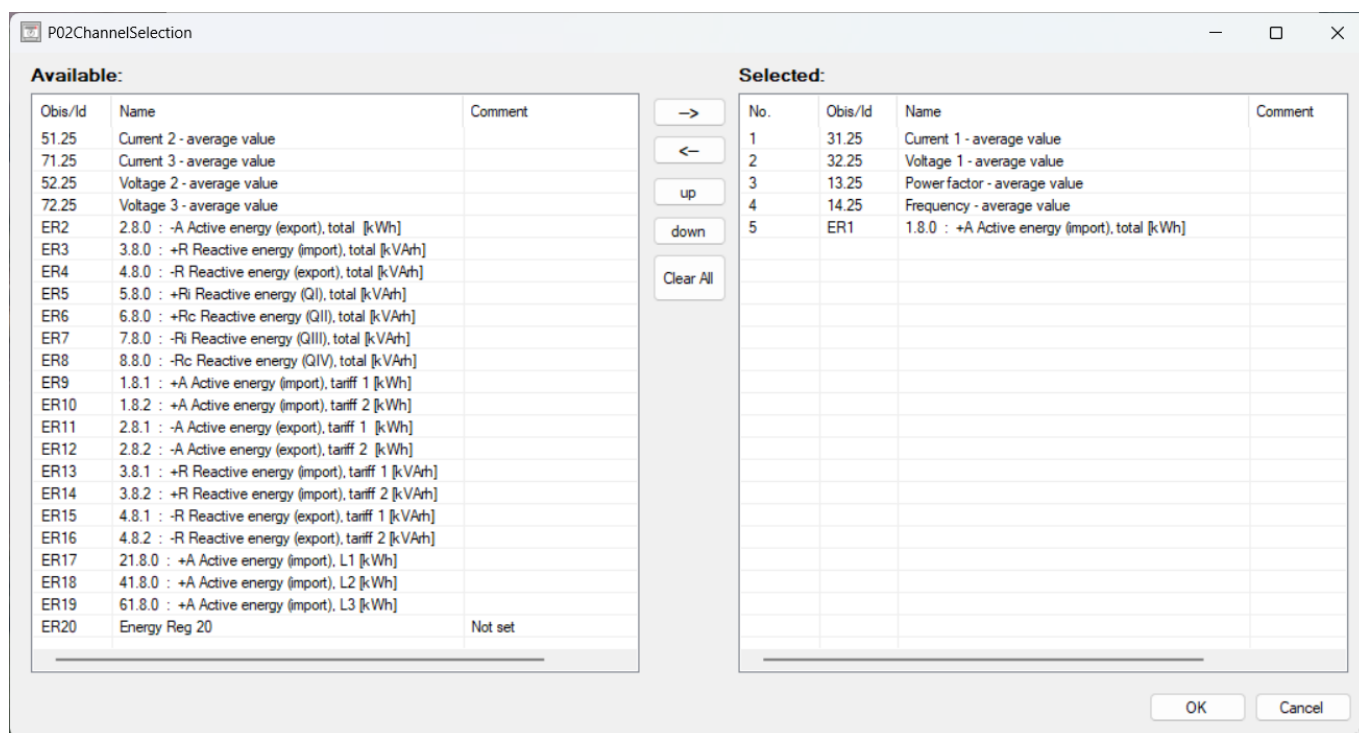
In this tree node, you can set the **registration period for profile P01**. The available values are: 1, 2, 3, 5, 10, 15, 20, 30, 60 min.

After clicking on the **"P02 Channel Selection"** tree node, the following window appears:



No.	Obis/Id	Name	Comment
1	31.25	Current 1 - average value	
2	32.25	Voltage 1 - average value	
3	13.25	Power factor - average value	
4	14.25	Frequency - average value	
5	ER1	1.8.0 : +A Active energy (import), total [kWh]	

You can set up to 20 items (registers). Clicking the **"Edit"** button opens a window with a list of items from which you can select the desired items:



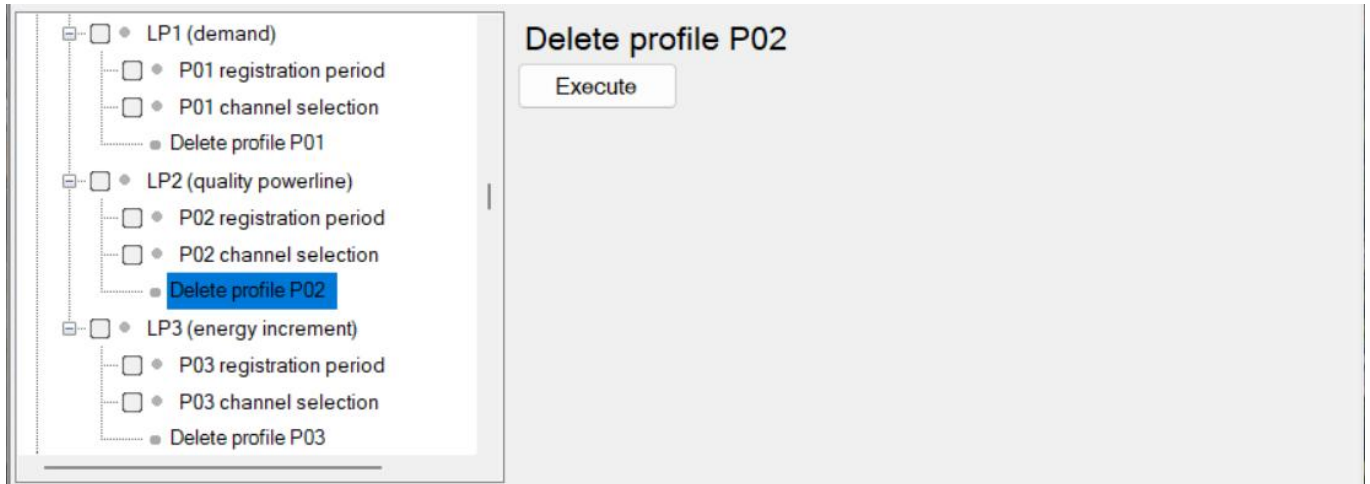
Obis/Id	Name	Comment
51.25	Current 2 - average value	
71.25	Current 3 - average value	
52.25	Voltage 2 - average value	
72.25	Voltage 3 - average value	
ER2	2.8.0 : -A Active energy (export), total [kWh]	
ER3	3.8.0 : +R Reactive energy (import), total [kVAh]	
ER4	4.8.0 : -R Reactive energy (export), total [kVAh]	
ER5	5.8.0 : +Ri Reactive energy (QI), total [kVAh]	
ER6	6.8.0 : +Rc Reactive energy (QII), total [kVAh]	
ER7	7.8.0 : -Ri Reactive energy (QIII), total [kVAh]	
ER8	8.8.0 : -Rc Reactive energy (QIV), total [kVAh]	
ER9	1.8.1 : +A Active energy (import), tariff 1 [kWh]	
ER10	1.8.2 : +A Active energy (import), tariff 2 [kWh]	
ER11	2.8.1 : -A Active energy (export), tariff 1 [kWh]	
ER12	2.8.2 : -A Active energy (export), tariff 2 [kWh]	
ER13	3.8.1 : +R Reactive energy (import), tariff 1 [kVAh]	
ER14	3.8.2 : +R Reactive energy (import), tariff 2 [kVAh]	
ER15	4.8.1 : -R Reactive energy (export), tariff 1 [kVAh]	
ER16	4.8.2 : -R Reactive energy (export), tariff 2 [kVAh]	
ER17	21.8.0 : +A Active energy (import), L1 [kWh]	
ER18	41.8.0 : +A Active energy (import), L2 [kWh]	
ER19	61.8.0 : +A Active energy (import), L3 [kWh]	
ER20	Energy Reg 20	Not set

No.	Obis/Id	Name	Comment
1	31.25	Current 1 - average value	
2	32.25	Voltage 1 - average value	
3	13.25	Power factor - average value	
4	14.25	Frequency - average value	
5	ER1	1.8.0 : +A Active energy (import), total [kWh]	

The window is divided into three sections. The left section contains all available items. You can select the desired items by double-clicking on them or using the arrow button on the right. The middle section contains action buttons, and the selected items are displayed on the right. In the selected items, you can move individual items using the **"Up"** and **"Down"** buttons. To delete an individual item from the selected items, double-click on the item or use the left arrow button. The **"Clear All"** button deletes all items in the selected list. Save by clicking **"OK"**.

You can read a value, set a new value, and write the value.

After clicking on the **"Delete Profile P02"** tree item, the following window will appear:

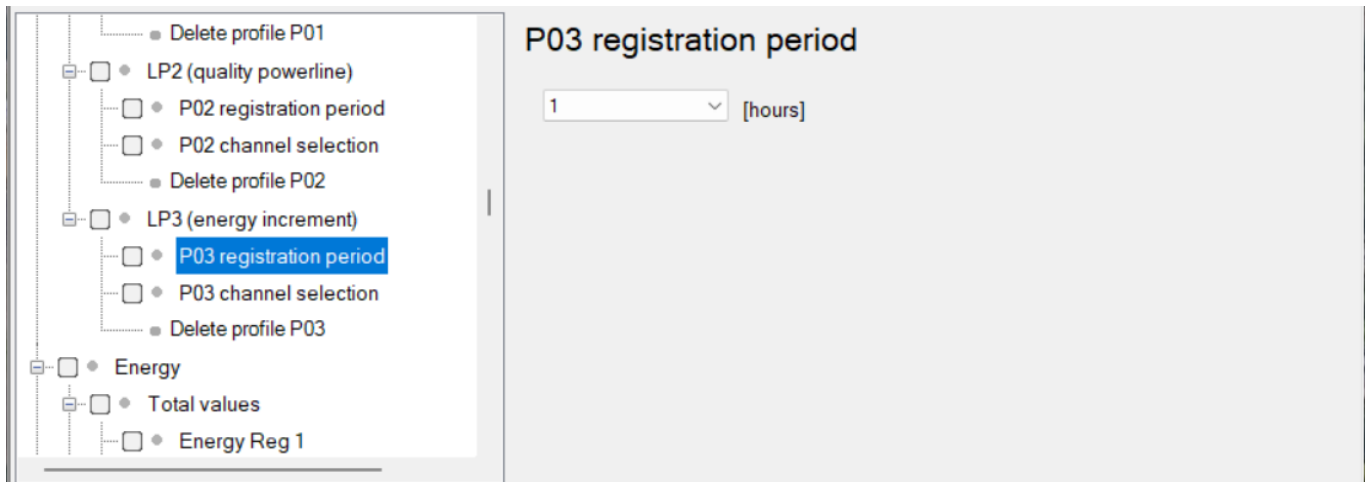


You can delete the entire P02 profile by clicking the **"Execute"** button.

4.12.3 LP3 (energy increments)

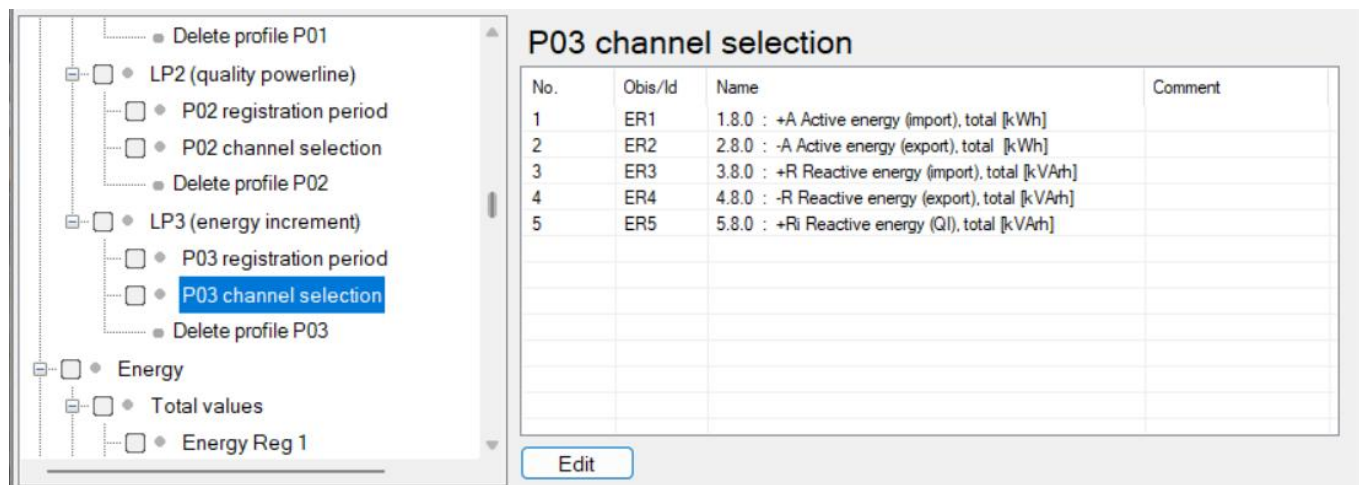
The tree item **"LP3 (energy increments)"** contains the following nested tree items: **"P03 registration period," "P03 channel selection,"** and **"Delete P03 profile."**

After clicking on the tree item **"P03 registration period,"** the following window appears:

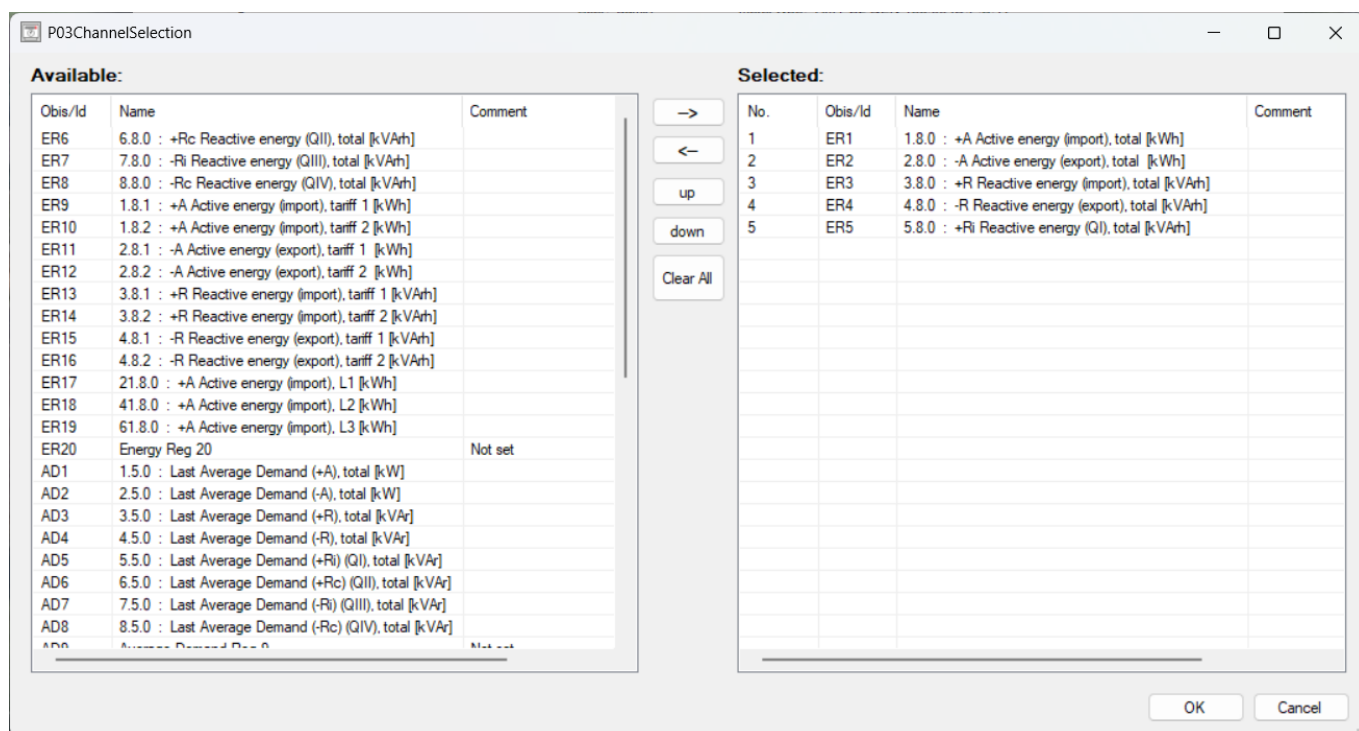


In this tree node, you can set the **registration period for profile P03**. The available values are: 1, 2, 3, 4, 6, 8, 12, and 24 hours.

After clicking on the **"P03 Channel Selection"** tree item, the following window will appear:



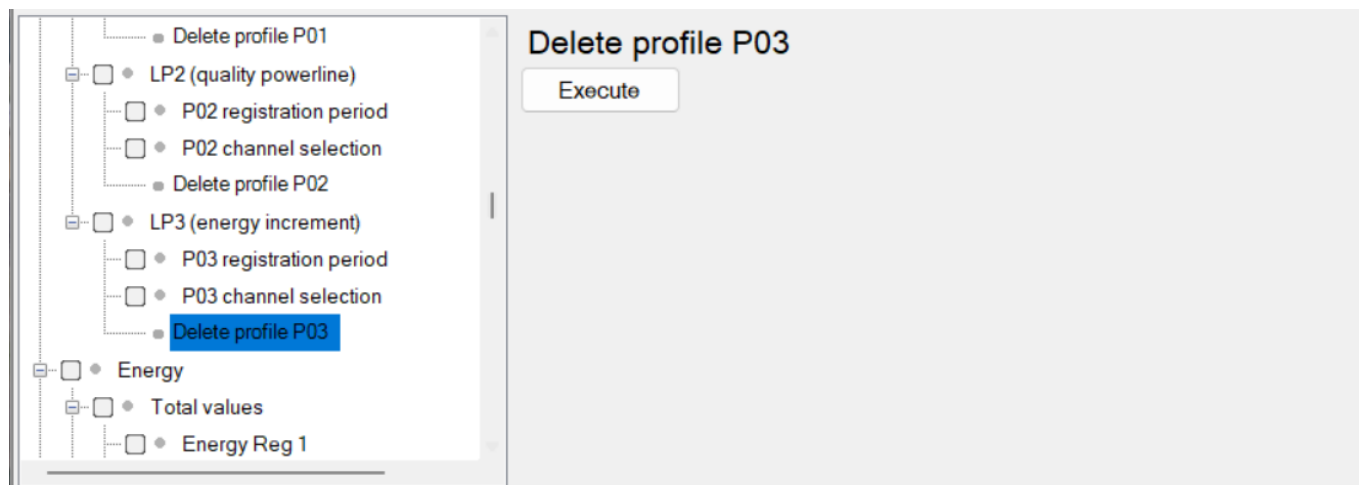
You can set up to 20 items (registers). Clicking the **"Edit"** button opens a window with a list of items from which you can select the desired items:



The window is divided into three sections. The left section contains all available items. You can select the desired items by double-clicking on them or using the arrow button on the right. The middle section contains action buttons, and the selected items are displayed on the right. In the selected items, you can move individual items using the **"Up"** and **"Down"** buttons. To delete an individual item from the selected items, double-click on the item or use the left arrow button. The **"Clear All"** button deletes all items in the selected list. Save by clicking **"OK"**.

You can read a value, set a new value, and write the value.

After clicking on the **"Delete Profile P03"** tree item, the following window will appear:

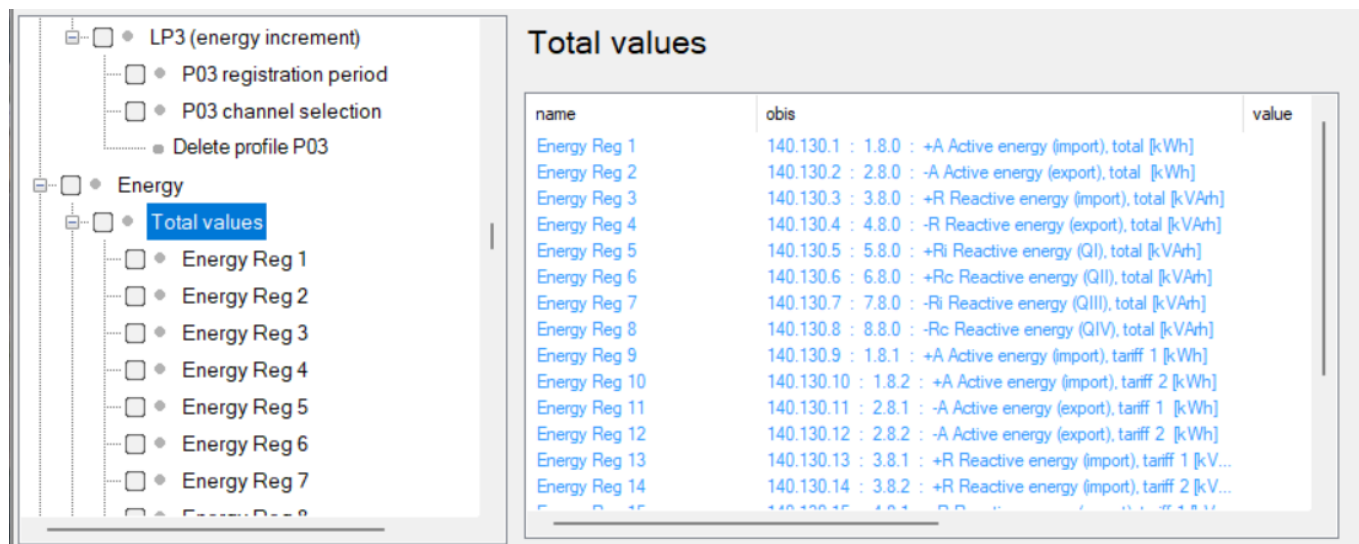


You can delete the entire P03 profile by clicking the **"Execute"** button.

4.13 Energy

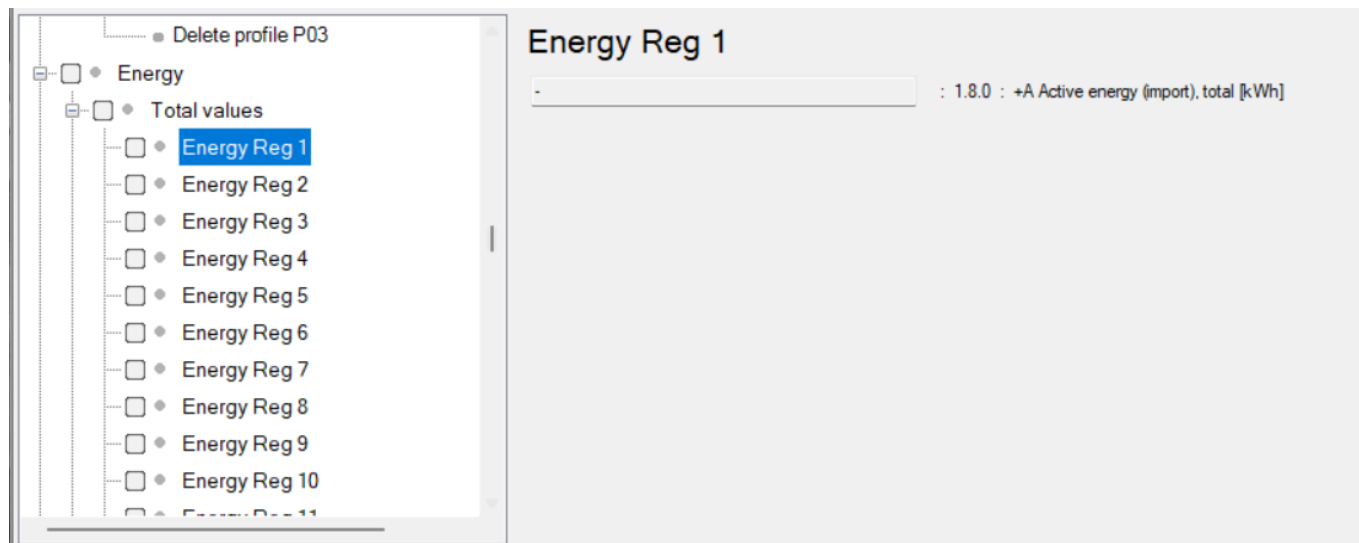
The **"Energy"** tree node contains the following nested tree nodes: **"Total Values"** and **"Incremental Values"**.

After clicking on the **"Total Values"** tree node, the following window appears:



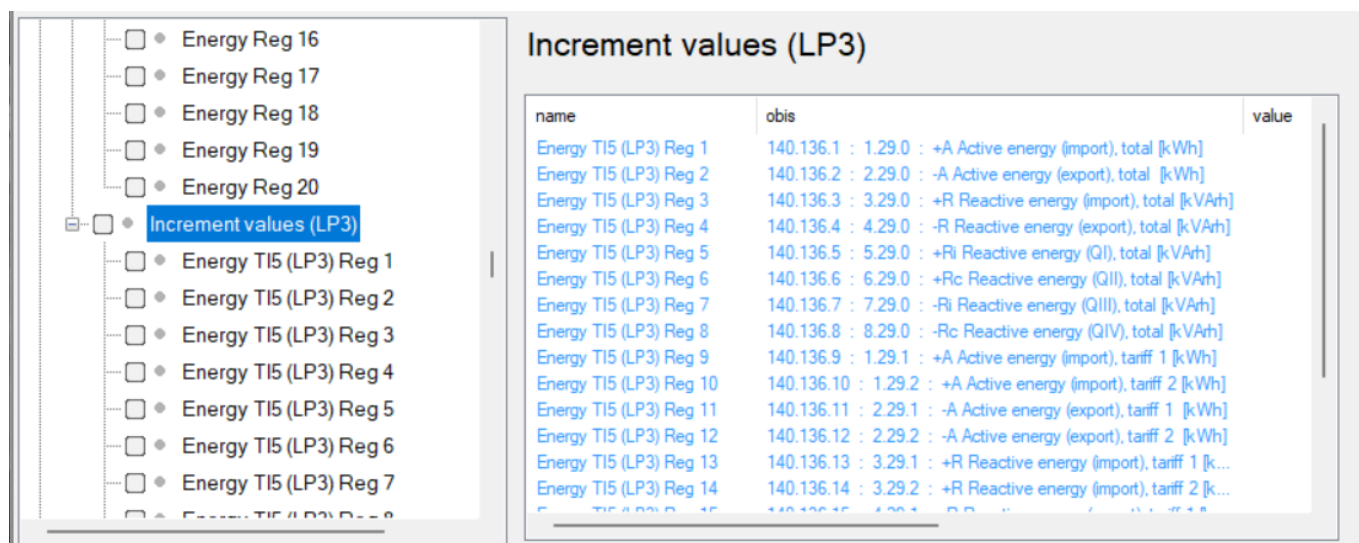
An overview of the registry settings and their values will be displayed (after loading).

After clicking on each tab, the following window will appear:



You can only load the values here.

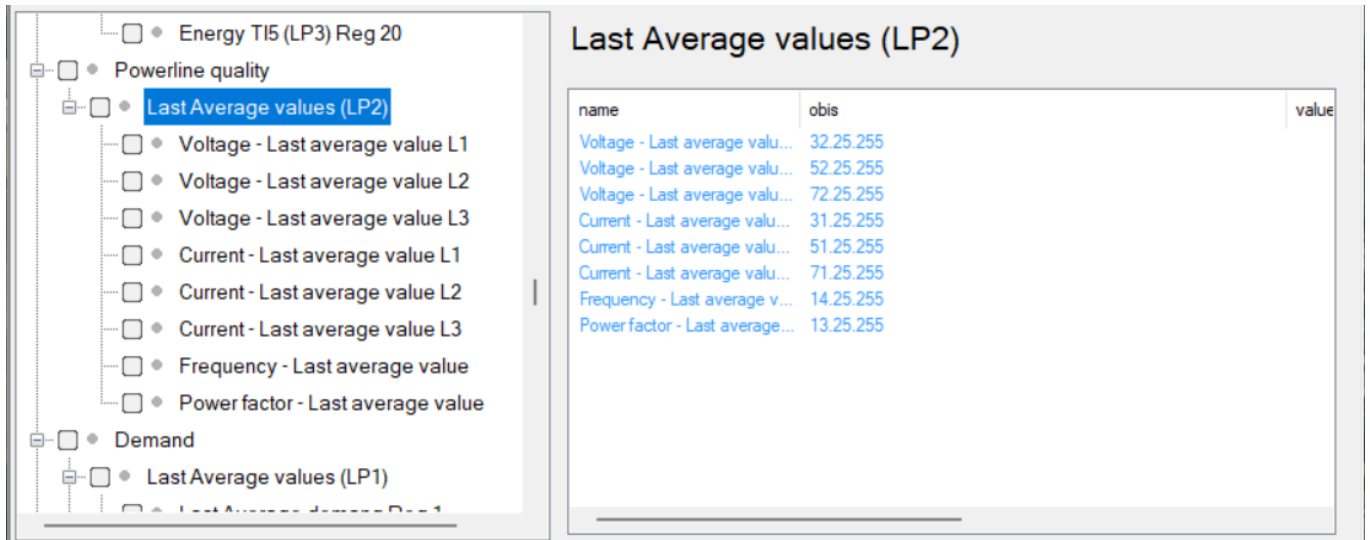
The same applies to the **"Increment Values"** tree node:



4.14 Powerline Quality

The **"Powerline Quality"** tree node contains a nested tree node: **"Last Average Values"**.

After clicking on the **"Last Average Values"** tree node, the following window appears:



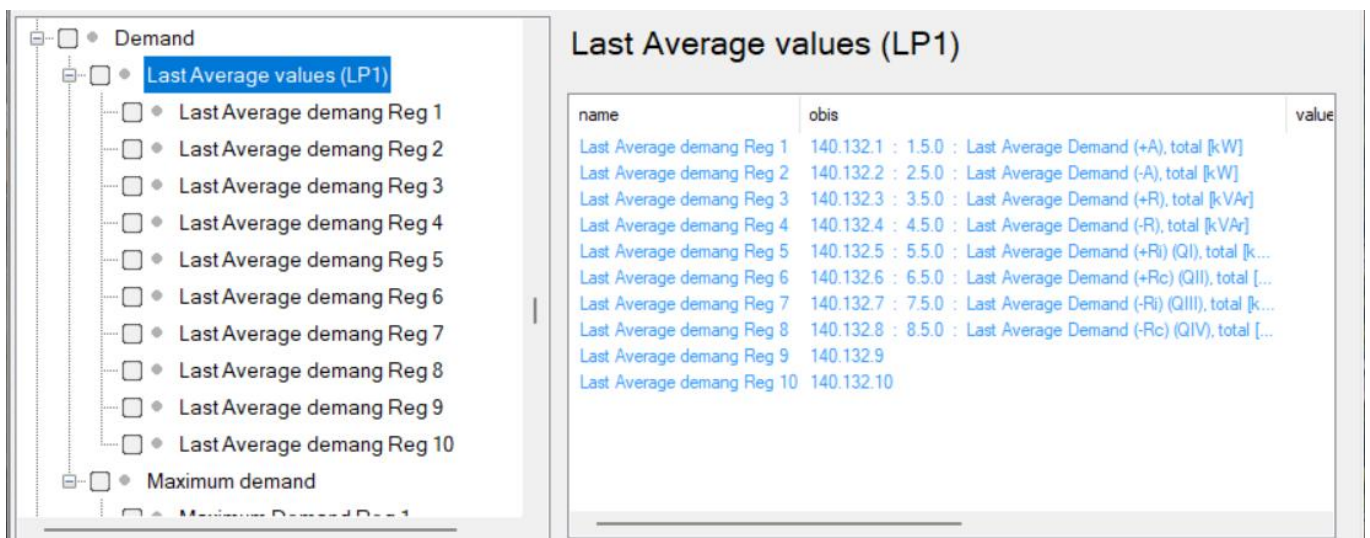
name	obis	value
Voltage - Last average valu...	32.25.255	
Voltage - Last average valu...	52.25.255	
Voltage - Last average valu...	72.25.255	
Current - Last average valu...	31.25.255	
Current - Last average valu...	51.25.255	
Current - Last average valu...	71.25.255	
Frequency - Last average v...	14.25.255	
Power factor - Last average...	13.25.255	

You can only load the values here.

4.15 Demand

The **"Demand"** tree node contains the following nested tree nodes: **"Last Average Values"** and **"Maximum Demand"**.

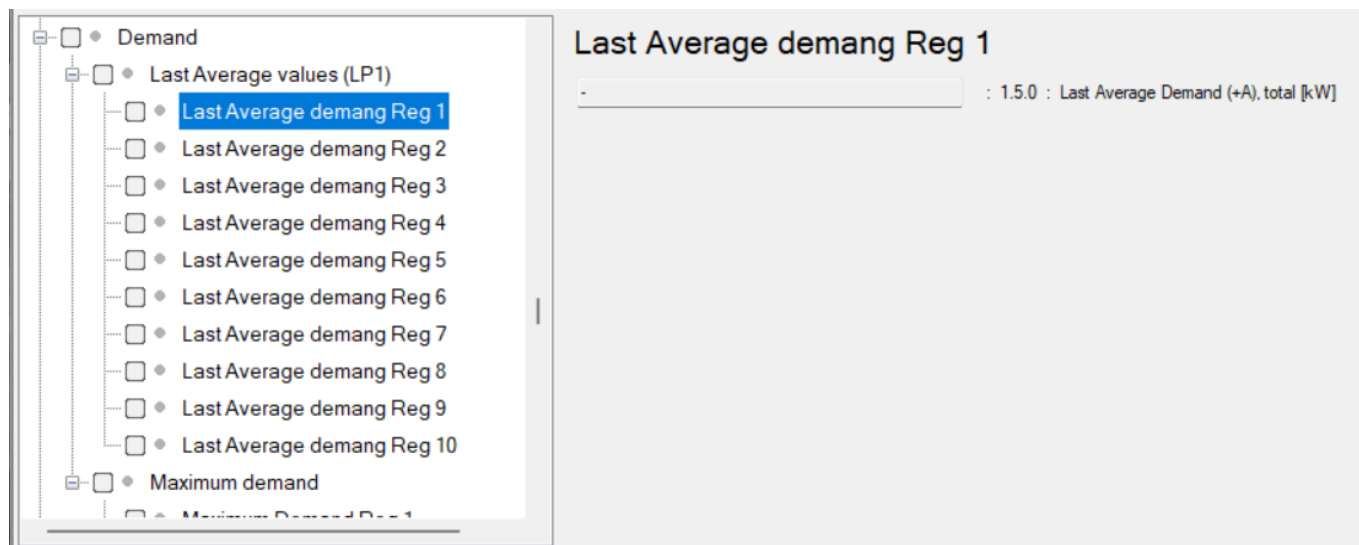
After clicking on the **"Last Average Values"** tree node, the following window appears:



name	obis	value
Last Average demang Reg 1	140.132.1 : 1.5.0 : Last Average Demand (+A), total [kW]	
Last Average demang Reg 2	140.132.2 : 2.5.0 : Last Average Demand (-A), total [kW]	
Last Average demang Reg 3	140.132.3 : 3.5.0 : Last Average Demand (+R), total [kVAr]	
Last Average demang Reg 4	140.132.4 : 4.5.0 : Last Average Demand (-R), total [kVAr]	
Last Average demang Reg 5	140.132.5 : 5.5.0 : Last Average Demand (+Ri) (QI), total [k...	
Last Average demang Reg 6	140.132.6 : 6.5.0 : Last Average Demand (+Rc) (QII), total [...]	
Last Average demang Reg 7	140.132.7 : 7.5.0 : Last Average Demand (-Ri) (QIII), total [k...	
Last Average demang Reg 8	140.132.8 : 8.5.0 : Last Average Demand (-Rc) (QIV), total [...]	
Last Average demang Reg 9	140.132.9	
Last Average demang Reg 10	140.132.10	

An overview of the registry configuration and its values (after loading) will be displayed.

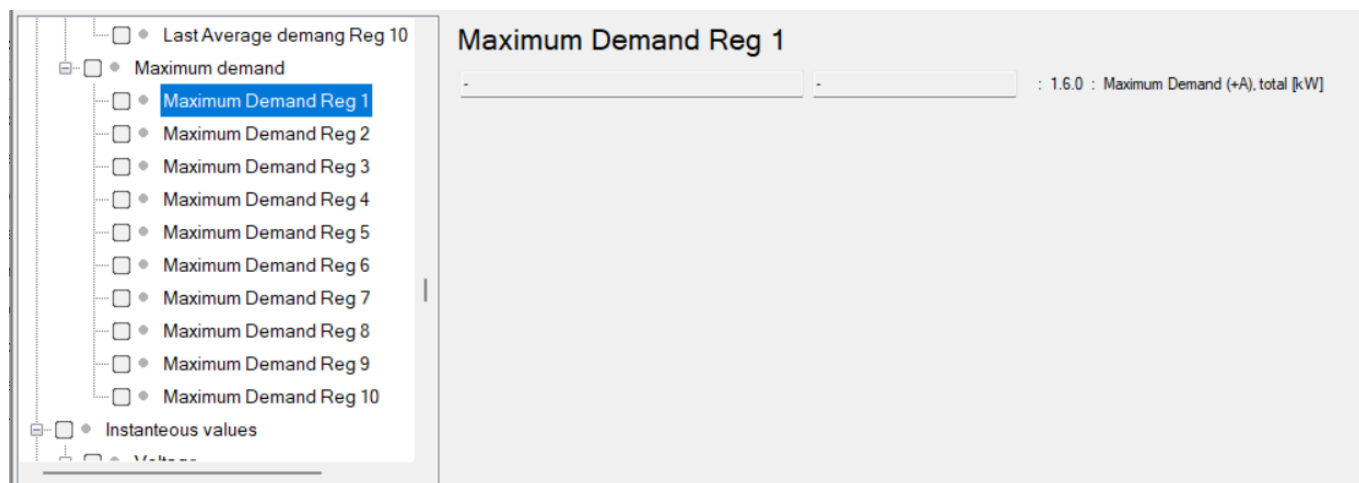
After clicking on individual items in the tree, the following will be displayed:



The screenshot shows the software interface with a tree view on the left and a data display on the right. The tree view is expanded to 'Demand', and 'Last Average values (LP1)' is selected. Under this, 'Last Average demand Reg 1' is highlighted. The right panel displays the title 'Last Average demand Reg 1' and a data field showing a value of 1.5.0, with the unit 'Last Average Demand (+A), total [kW]'.

You can only load the values here.

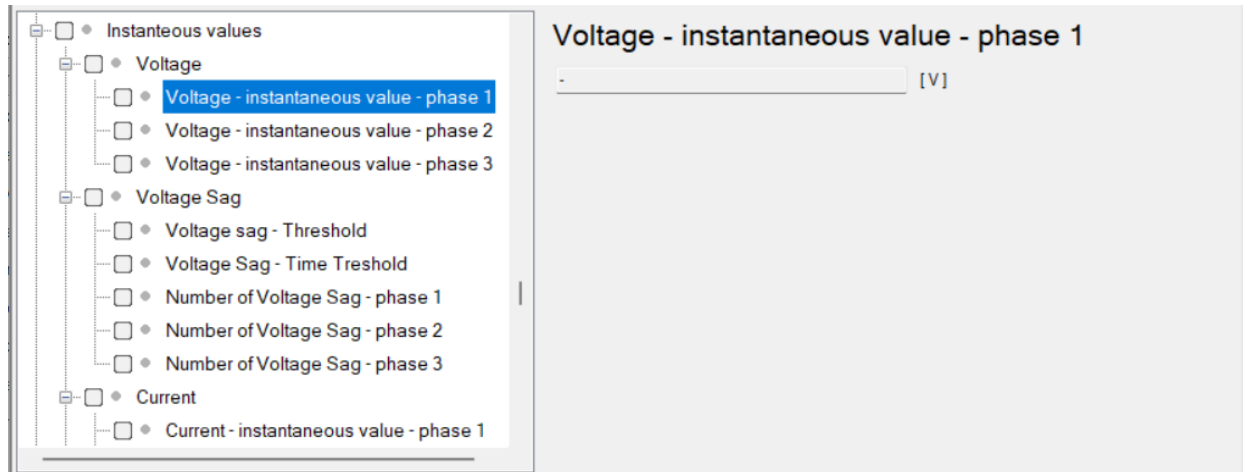
The same applies to the **"Maximum Demand"** tree node:



The screenshot shows the software interface with a tree view on the left and a data display on the right. The tree view is expanded to 'Demand', and 'Maximum demand' is selected. Under this, 'Maximum Demand Reg 1' is highlighted. The right panel displays the title 'Maximum Demand Reg 1' and a data field showing a value of 1.6.0, with the unit 'Maximum Demand (+A), total [kW]'.

4.16 Instantaneous Values

The **"Instantaneous Values"** tree node contains the following nested tree nodes: **"Voltage,"** **"Current,"** **"Frequency,"** **"Power Factor,"** and **"Demand."**



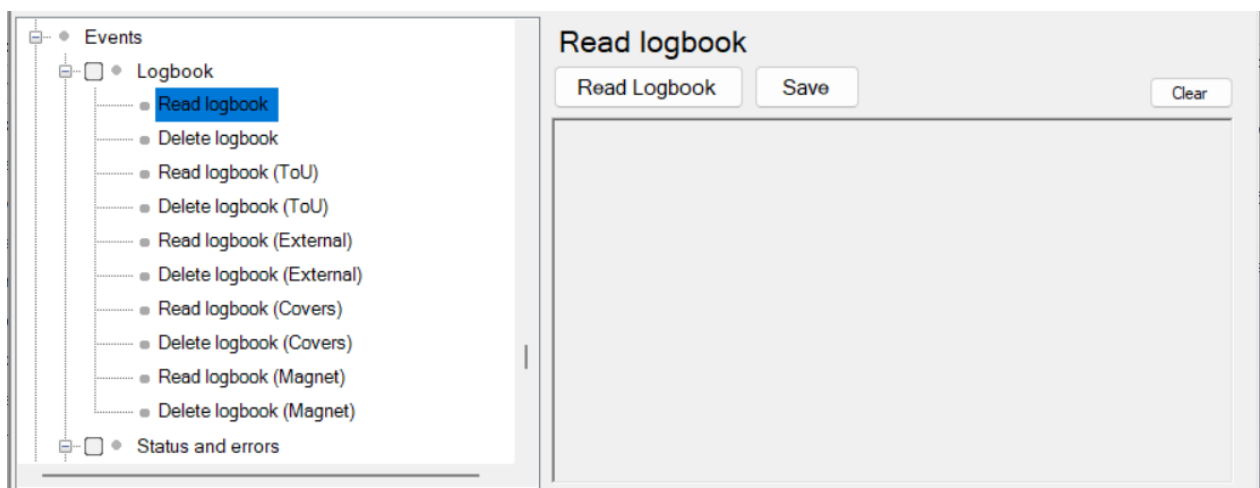
You can only load the values here.

4.17 Events

The **"Events"** tree node contains the following nested tree nodes: **"Logbook,"** **"Status and Errors,"** and **"Tamperings."**

4.17.1 Logbook

After clicking on the **"Logbook"** tree item, the following window will appear:



On this tab, you can read events.

Clicking the **"Load Logbook"** button retrieves data from the electricity meter and displays it in the field on the right.

Clicking the **"Save"** button saves the retrieved data to a text file on the computer's hard drive.

The **"Clear"** button clears the field on the right where the data from the electricity meter was loaded.

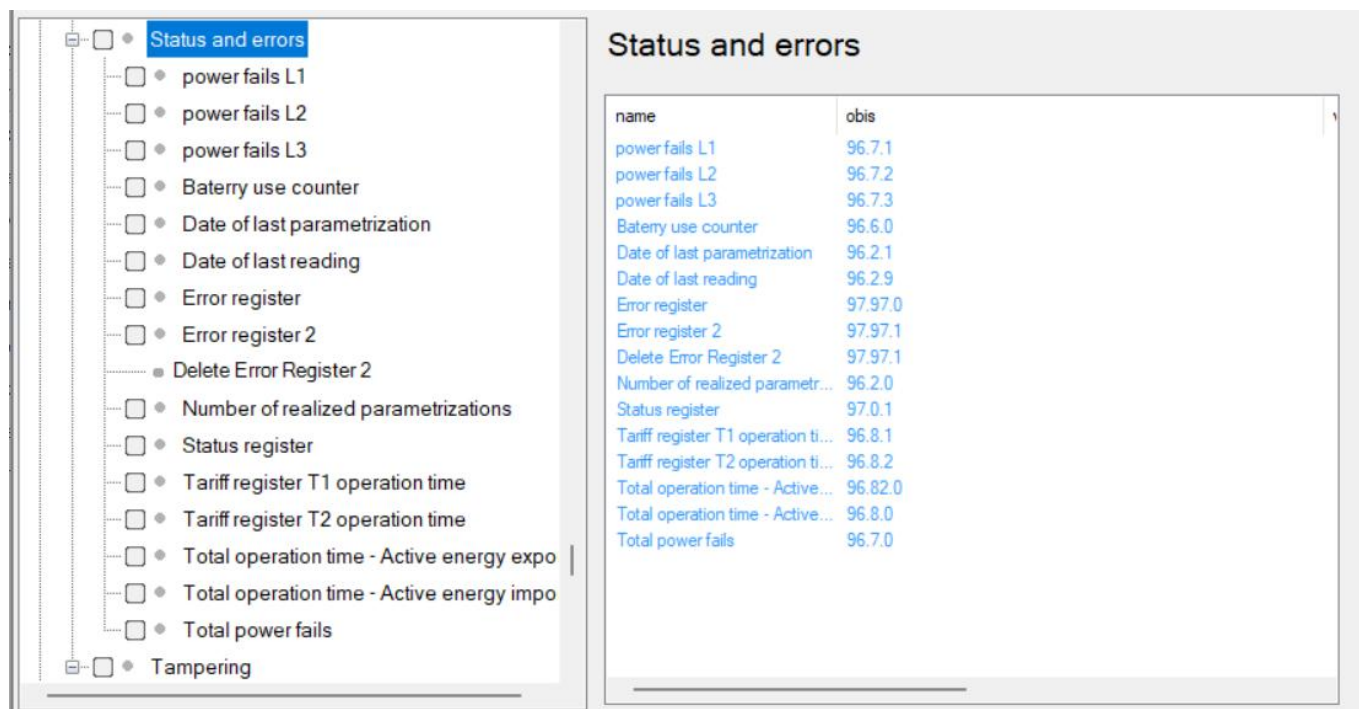
You can stop reading events from the electricity meter by clicking the **"Stop"** button located at the top left.

You can delete events by clicking the **"Delete Events"** menu item.

The same procedure as for **"Read Logbook"** applies to the other individual logbooks.

4.17.2 Status and Errors

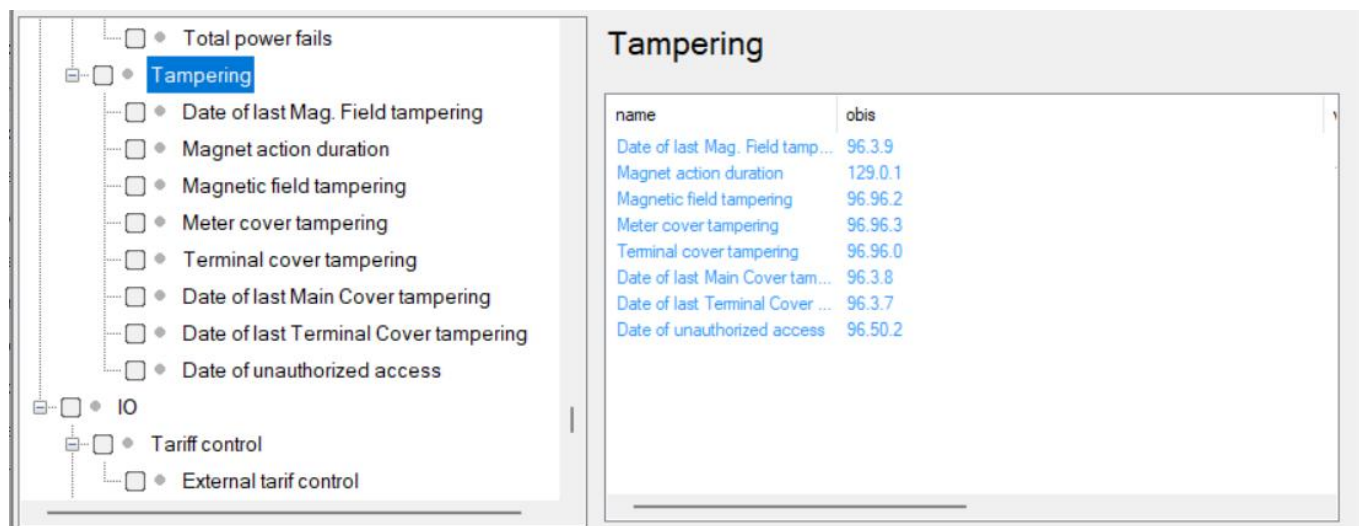
Under the tree node **"Status and Errors,"** you can view various statuses and errors.



name	obis
power fails L1	96.7.1
power fails L2	96.7.2
power fails L3	96.7.3
Battery use counter	96.6.0
Date of last parametrization	96.2.1
Date of last reading	96.2.9
Error register	97.97.0
Error register 2	97.97.1
Delete Error Register 2	97.97.1
Number of realized parametrizations	96.2.0
Status register	97.0.1
Tariff register T1 operation time	96.8.1
Tariff register T2 operation time	96.8.2
Total operation time - Active energy expo	96.82.0
Total operation time - Active energy impo	96.8.0
Total power fails	96.7.0

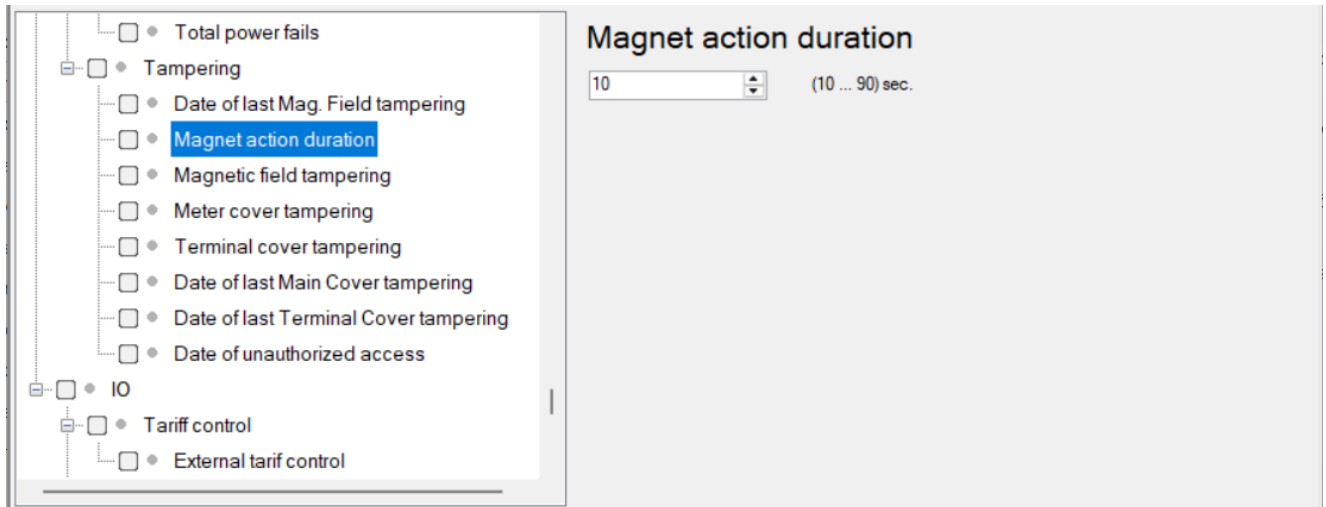
4.17.3 Tampering

Under the tree node **"Tampering,"** you can view various tamperings.



name	obis
Date of last Mag. Field tampering	96.3.9
Magnet action duration	129.0.1
Magnetic field tampering	96.96.2
Meter cover tampering	96.96.3
Terminal cover tampering	96.96.0
Date of last Main Cover tampering	96.3.8
Date of last Terminal Cover tampering	96.3.7
Date of unauthorized access	96.50.2

After clicking on the **"Magnet Action Duration"** tree item, the following window will appear:



Here you can set the threshold value for the duration of the magnetic field.

You can read the current value, set a new value, and save the value.

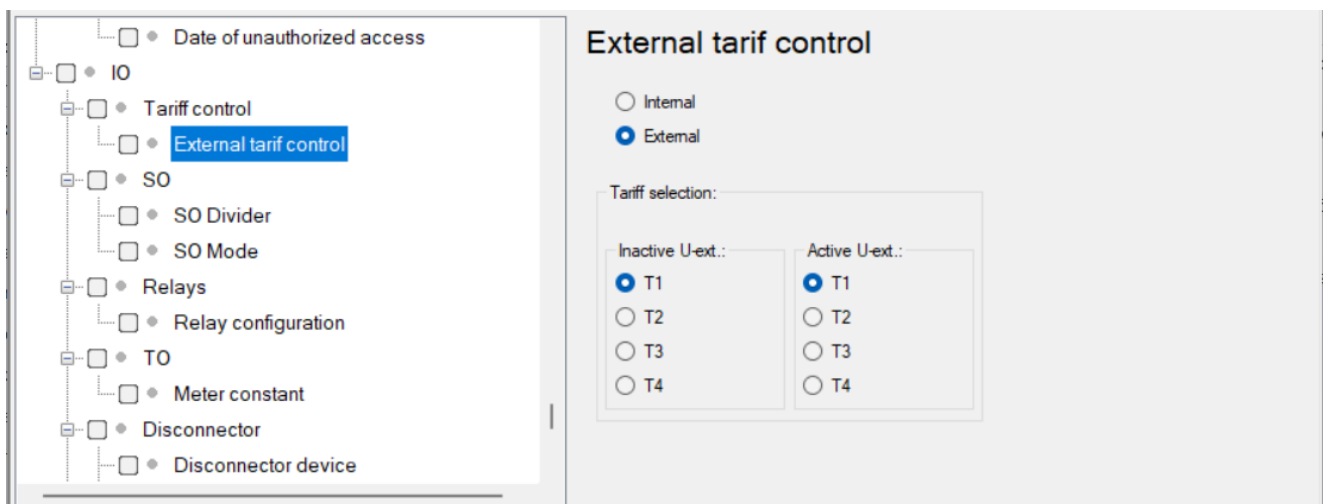
4.18 Inputs/Outputs

The **"Inputs/Outputs"** tree node contains the following nested tree nodes: **"Tariff Control," "SO," "Relays,"** and **"TO."**

4.18.1 Tariff Control

The **"Tariff Control"** tree node contains a nested tree node: **"External Tariff Control"**.

After clicking on the **"External Tariff Control"** tree node, the following window appears:



External tariff control is configured here.

The method of tariff control can be set by the manufacturer:

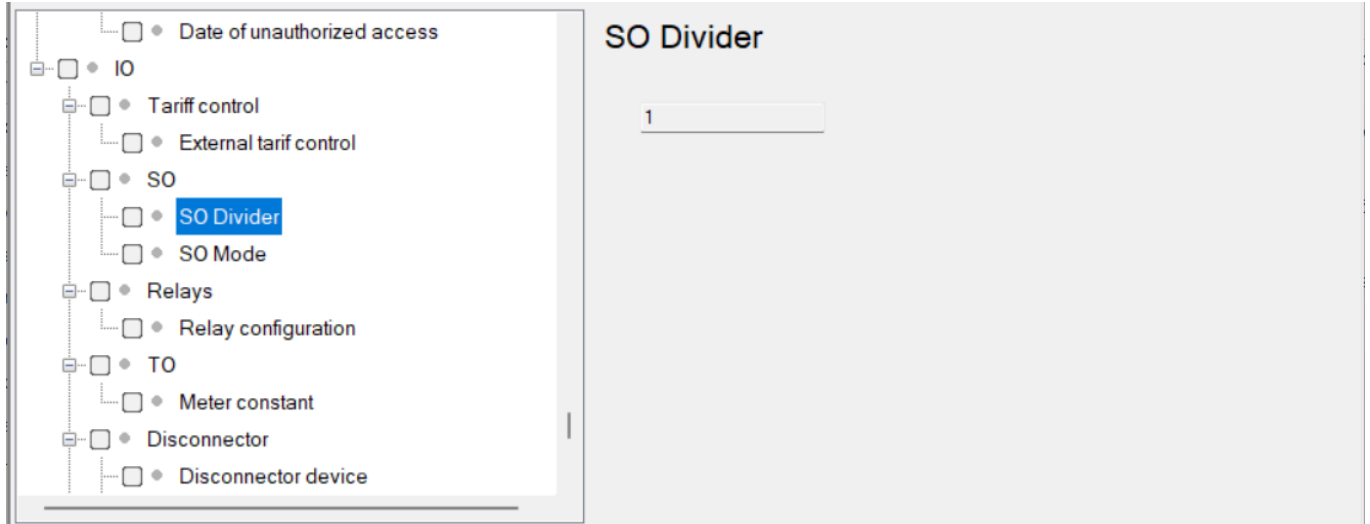
Internal – using the internal clock

External – by applying voltage to meter terminals 13 and 15. At the same time, you can select the tariff that activates when voltage is applied to the terminals, as well as the tariff that activates when the terminals are without voltage (T1 to T4).

4.18.2 SO

The "SO" tree node contains the following nested tree nodes: **"SO divider"** and **"SO mode"**.

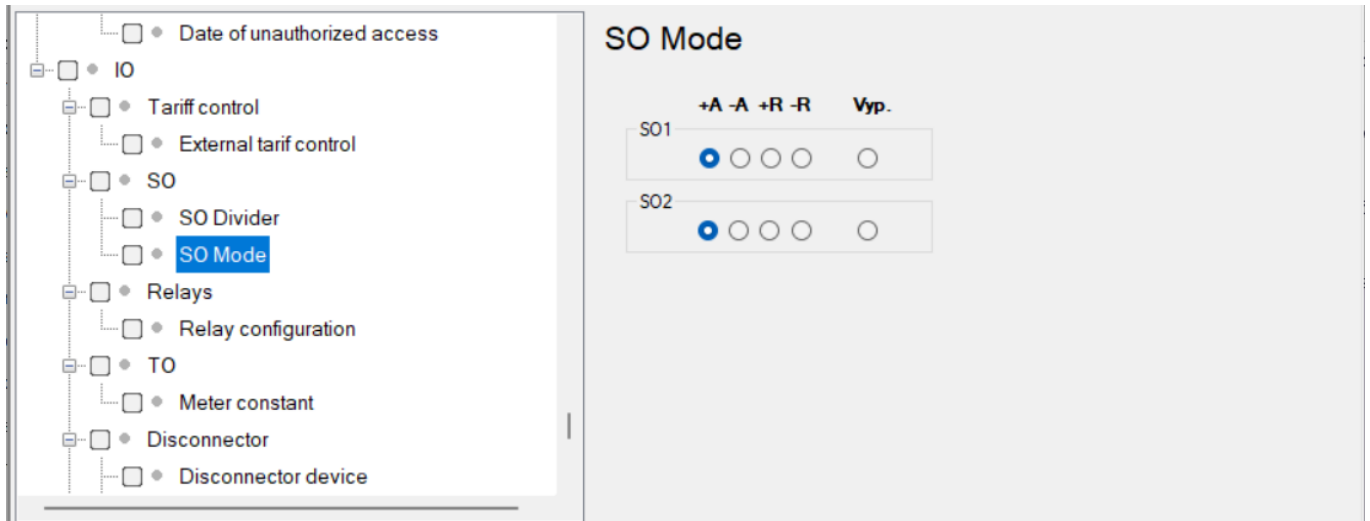
When you click on the **"SO divider"** tree node, the following window appears:



In this tree node, you can set the **SO output divider**. The available values are: 0, 1, 2, 4, 5, 10.

You can read the current value, set a new value, and save the value.

After clicking on the **"SO divider"** tree node, the following window appears:



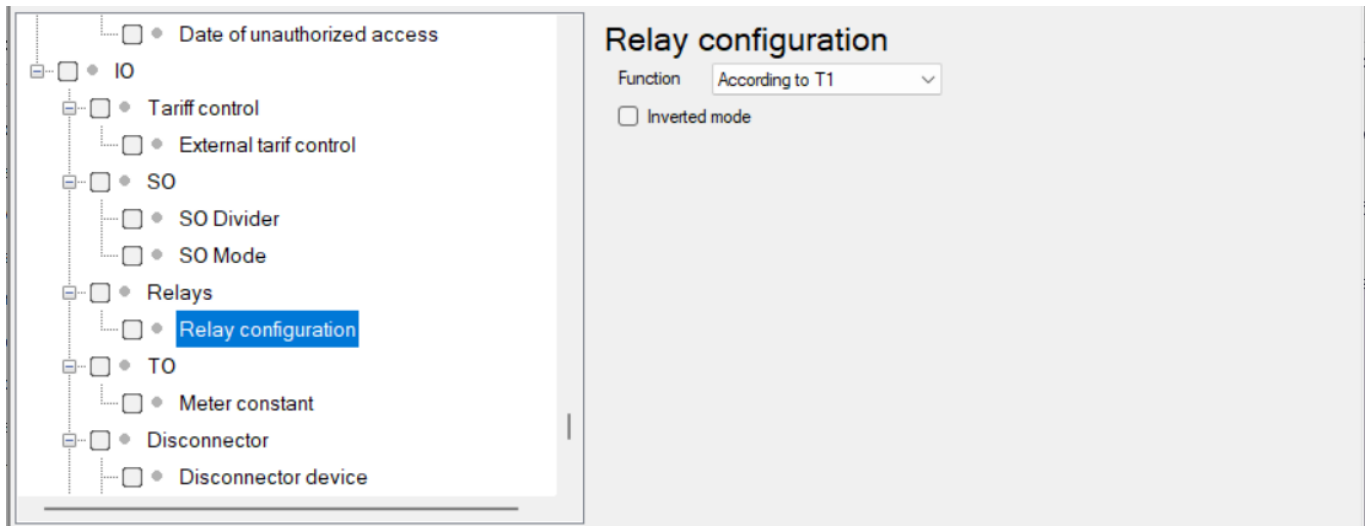
In this tree node, you can configure the **SO output mode**.

You can read a value, set a new value, and write a value.

4.18.3 Relays

The **"Relays"** tree node contains a nested tree node: **"Relay Configuration"**.

After clicking on the **"Relay Configuration"** tree node, the following window appears:



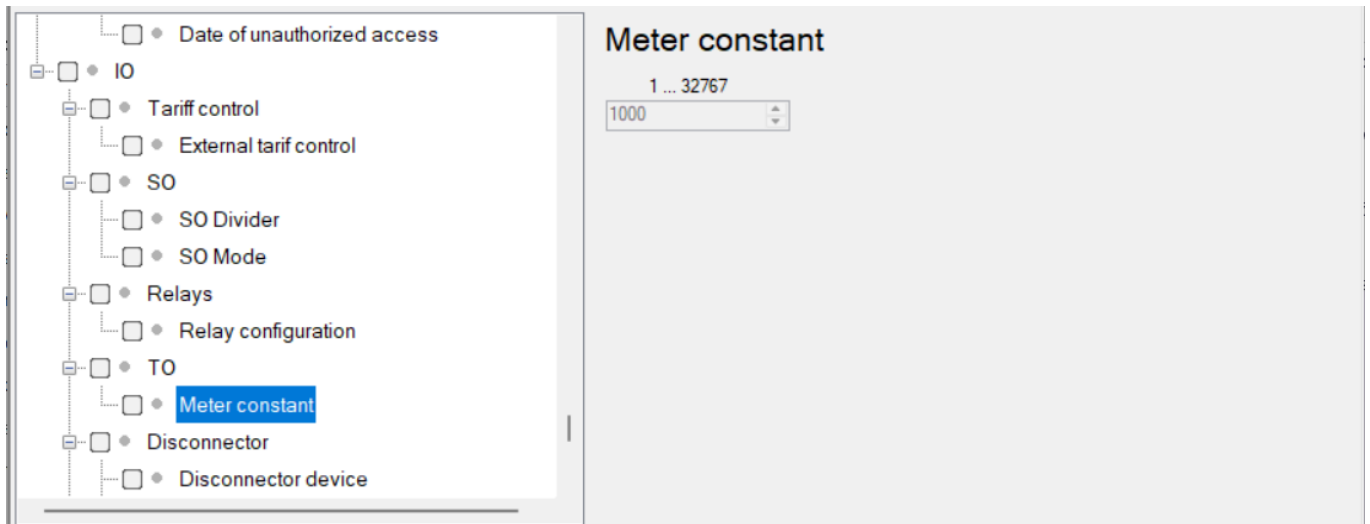
You can configure the **relay** at this node in the tree.

You can read the value, set a new value, and write the value here.

4.18.4 TO

The **"TO"** tree node contains a nested tree node: **"Meter Constant"**.

When you click on the **"Meter Constant"** tree node, the following window appears:



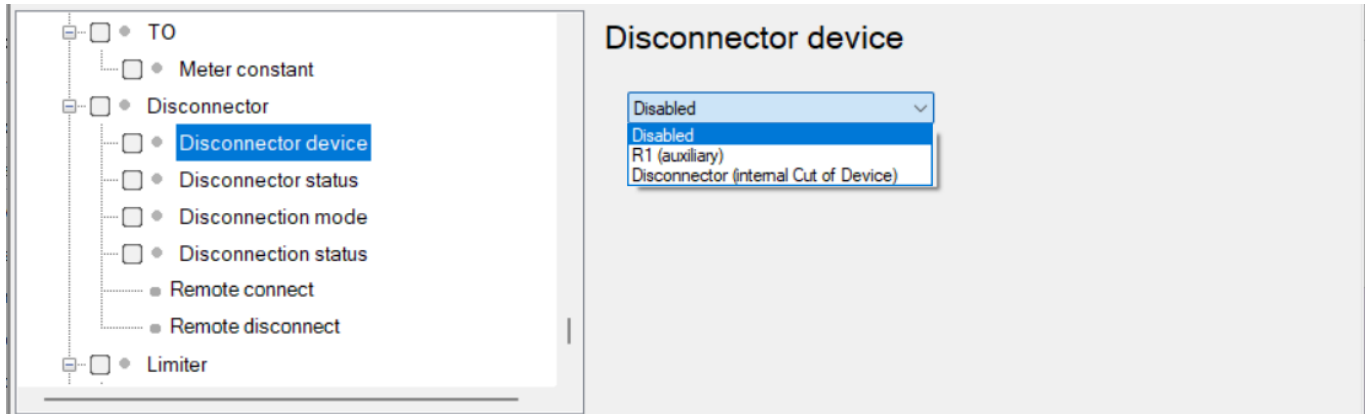
In this tree node, you can read the **Meter constant**.

You can only read the value here.

4.18.5 Disconnecter

The "**Disconnecter**" tree node contains the following nested tree nodes: "**Disconnecter Device**", "**Disconnecter Status**", "**Disconnection Mode**", "**Disconnection Status**", "**Remote Connect**", and "**Remote Disconnect**".

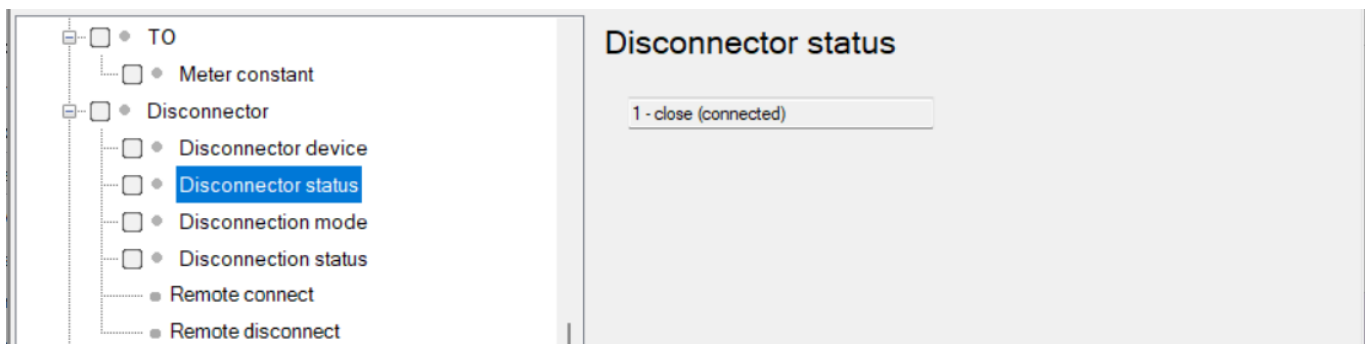
When you click on the "**Disconnecter Device**" tree item, the following window appears:



You can configure the **disconnecting device** at this node in the tree.

You can read the current value, set a new value, and save the value.

After clicking on the "**Disconnecter Status**" node in the tree, the following window appears:



In this tree node, you can view the status of the **disconnecter** (physical device). It can take the values 0 – open (disconnected) and 1 – closed (connected).

You can only read the value here.

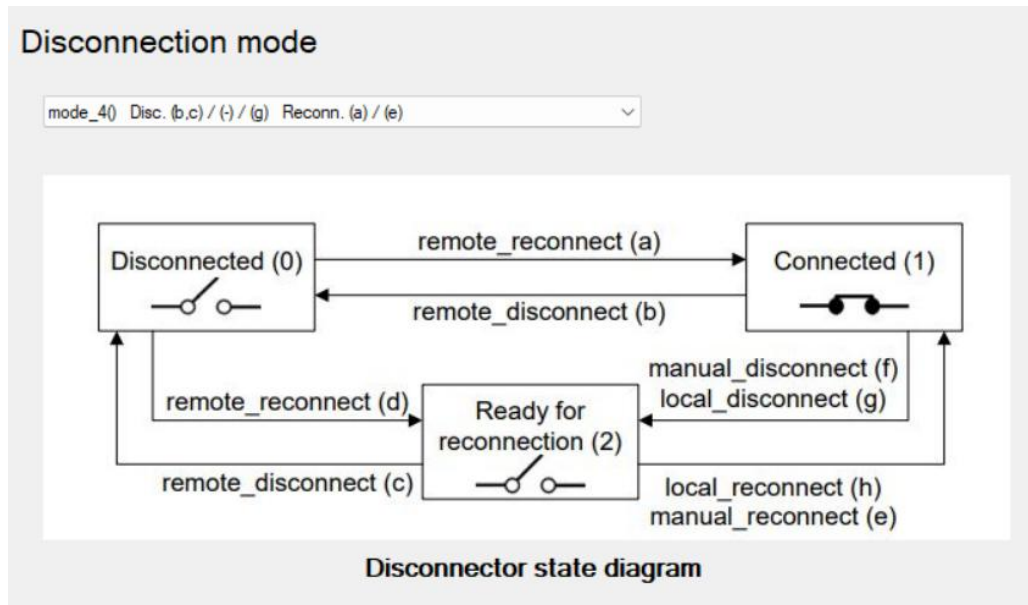
Clicking on the "**Disconnection Mode**" tree node displays the following window:



In this tree node, you can select one of the **disconnection modes**.

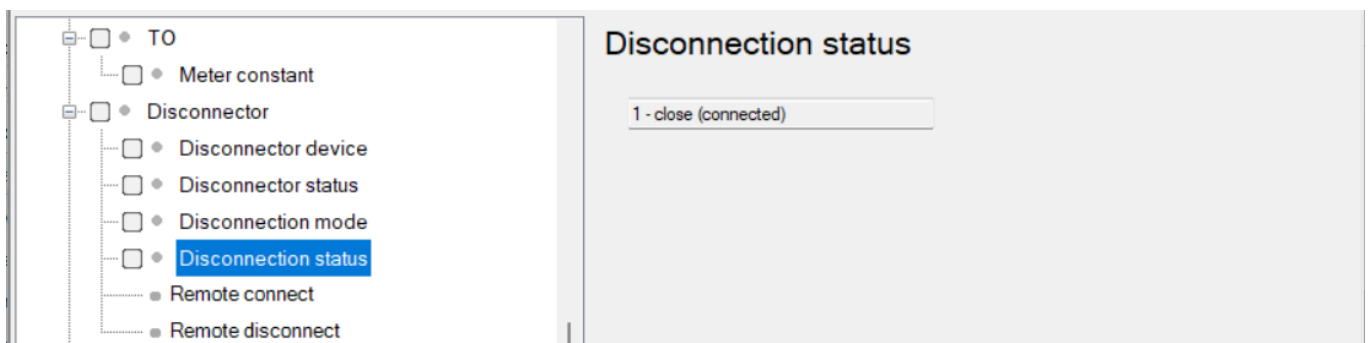
You can read the current value, set a new value, and save the value.

The window also displays a **Disconnecter state diagram**, which shows how the individual modes work:



More detailed information is available in the electricity meter manual.

After clicking on the **"Disconnection Status"** menu item, the following window will appear:



In this tree node, you can view the **status of the disconnection (Disconnecter state diagram)**. It takes on the values 0 – open (disconnected), 1 – closed (connected), and 2 – Ready for reconnection.

You can only read the value here.

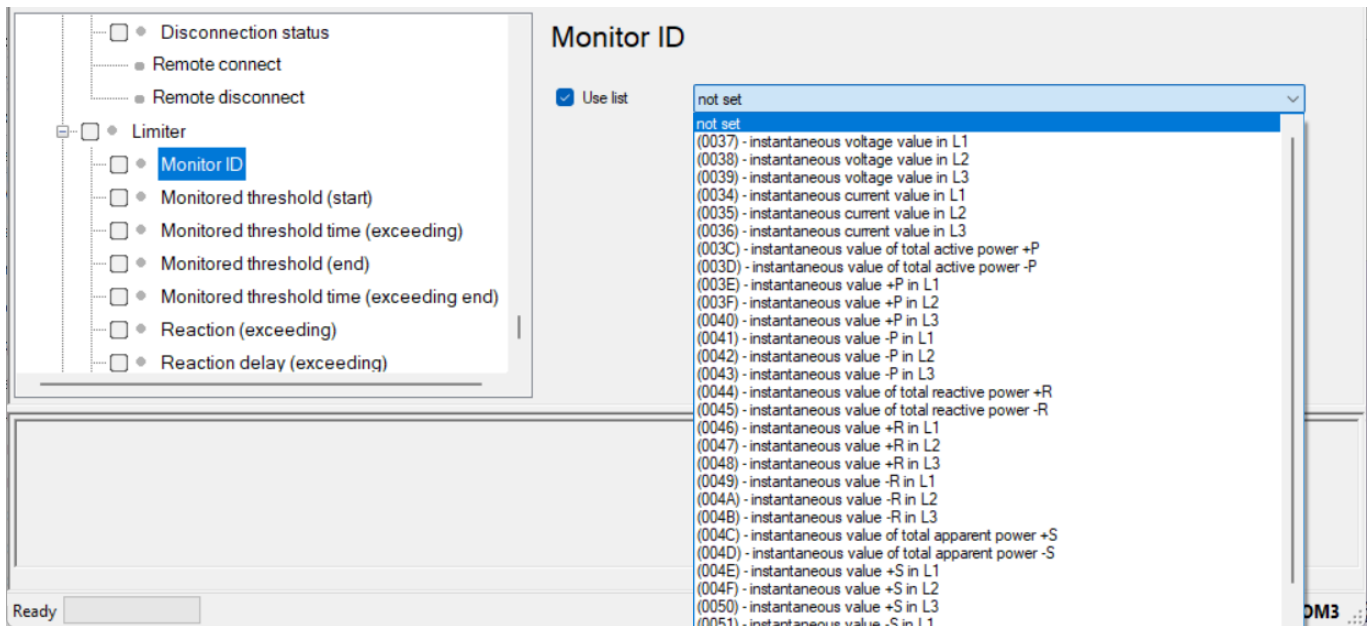
The following are two commands for Remote Connection and Remote Disconnection.

4.18.6 Limiter

The **"Limiter"** tree node contains the following nested tree nodes: **"Monitor ID"**, **"Monitored threshold (start)"**, **" Monitored threshold time (exceeding)"**, **" Monitored threshold (end)"**, **" Monitored threshold time (exceeding end)"**, **"Reaction (exceeding)"**, **"Reaction Delay (exceeding)"**, **"Reaction delay time (exceeding)"**, **"Reaction (exceeding end)"**, **"Reaction delay (exceeding end)"** and **"Reaction delay time (exceeding end)"**.

For these items, you can read the value, set a new value, and write the value.

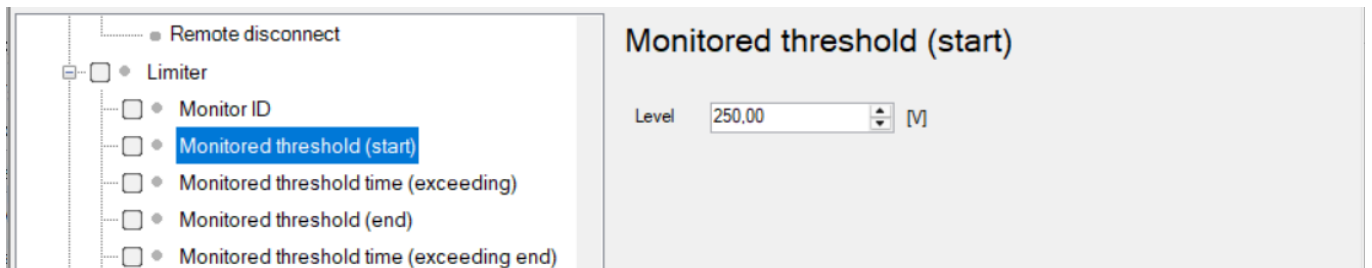
After clicking on the “**Monitor ID**” tree item, the following window appears:



In this tree node, you can select one monitored **variable**. Based on the selected variable, the corresponding **units** [V, A, W, var, VA, Hz] are set in the subsequent nodes.

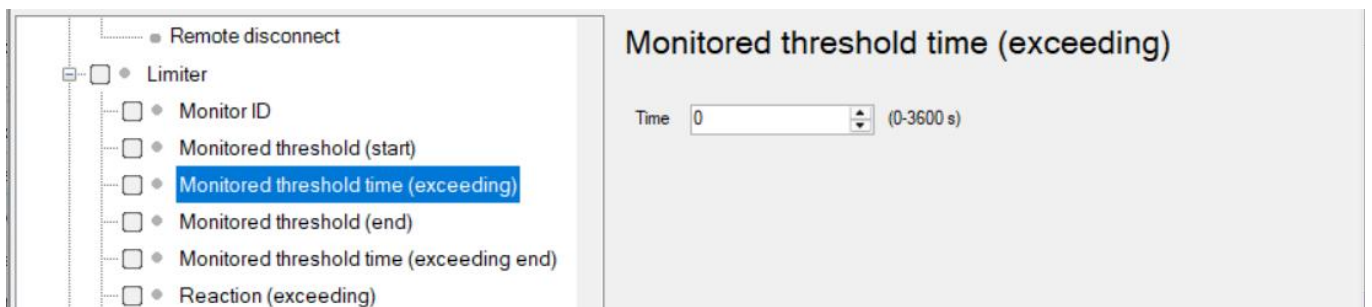
More detailed information is available in the electricity meter manual.

After clicking on the tree item “**Monitored threshold (Start),**” the following window appears:



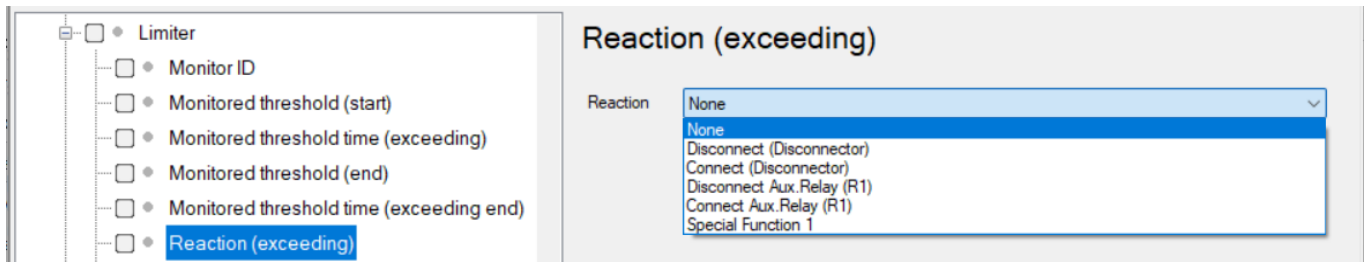
In this tree node, you can set the desired value for the **monitored variable**. When this value is reached, the **Monitored threshold time (exceeding)** timer is triggered. If the Monitored threshold time (exceeding) timer expires and the monitored variable has not fallen below the set level, the action specified in **Reaction (exceeding)** is executed.

After clicking on the “**Monitored threshold time (exceeding)**” tree item displays the following window:



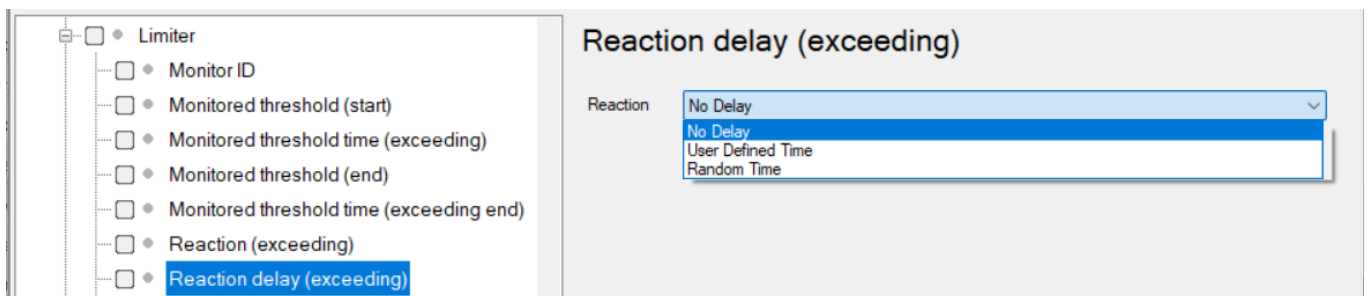
In this tree node, you can set the desired duration for which **the monitored variable must remain above the set value**.

After clicking on the **"Reaction (exceeding)"** tree node, the following window will appear:



You can set the desired **Reaction** at this node in the tree.

After clicking on the **"Reaction delay (exceeding)"** node in the tree, the following window will appear:



At this node in the tree, you can set the **Delay** for the desired **Reaction**. If the monitored variable is exceeded, the Reaction can be executed immediately (No delay) or a custom delay can be set (User-defined time), and in the **"Reaction delay time (exceeding)"** tree node, you can set a specific time or select a Random time.

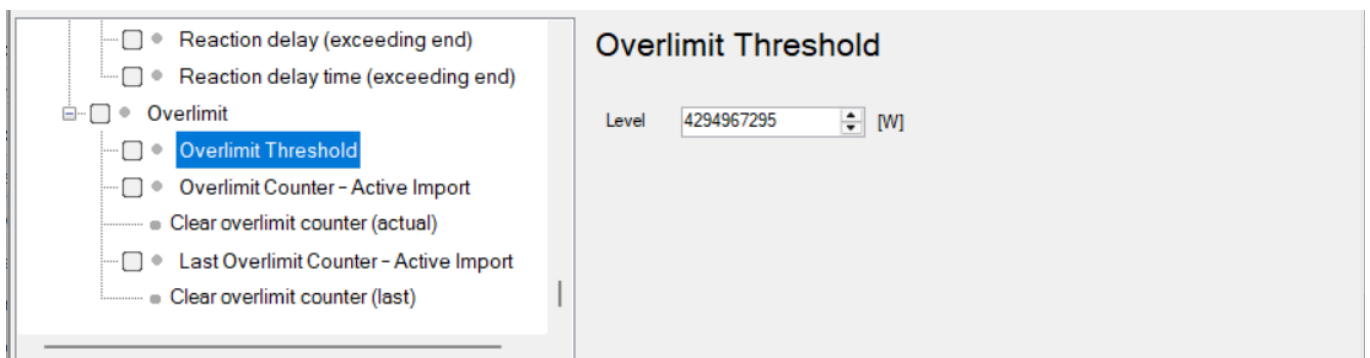
In the tree items **"Monitored threshold (end)"**, **"Monitored threshold time (exceeding end)"**, **"Reaction (exceeding end)"**, **"Reaction delay (exceeding end)"** and **"Reaction delay time (exceeding end)"** the configuration is similar, except that it applies to the **Reaction (exceeding end)**.

4.18.7 Overlimit

The "Overlimit" tree node contains the following nested tree nodes: **"Overlimit Threshold"**, **"Overlimit Counter – Active Import"**, **"Clear Overlimit Counter (actual)"**, **"Last Overlimit Counter - Active Import"**, **"Clear Overlimit Counter (last)"**.

These tree items contain the **Overlimit counters**.

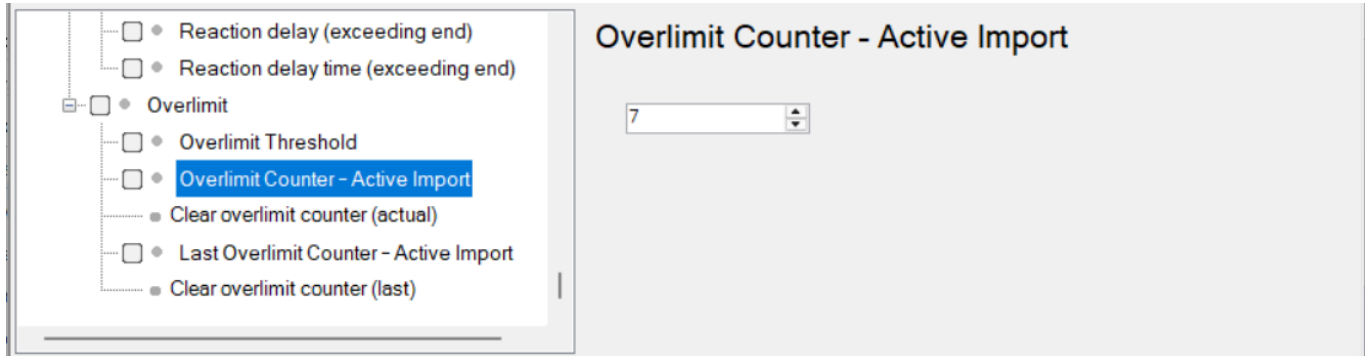
After clicking on the **"Overlimit Threshold"** tree item, the following window appears:



In this tree node, you can set the **desired power level value**. When the value is exceeded, the counter increments by 1.

You can read the value, set a new value, and save the value.

After clicking on the tree item “**Current Overlimit Counter – Active Import**,” the following window will appear:



In this tree node, you can view the **current overlimit counter**.

You can read the value, set a new value, and save the value.

Similarly, the tree node “**Last Overlimit Counter (Active, Import)**”.

The tree nodes “**Clear Overlimit Counter (actual)**” and “**Clear Overlimit Counter (Last)**” are used to clear the respective counters.