



ConfIT!

Application for configuration and diagnostics of devices



The screenshot displays the ConfIT! application interface. On the left, a sidebar menu includes options like 'Find devices', 'Read devices', 'Demo devices', 'Settings', 'About', and 'Exit'. The main area shows a list of 'Configured Devices' with details for three devices: MacR6-SMART, MacBAT IV, and MacBAT 5. The right pane shows the 'Profile view: Advanced' configuration for the MacBAT 5 device, including fields for 'Configuration lock state', 'Date & Time of device', 'Standard time and Daylight Saving time changes', and 'Registration of data'. A status bar at the bottom right indicates 'COM9, 115200' and 'Sending'/'Receiving' indicators.

USER MANUAL

PROGRAM VERSION: 1.2.39.278

DOCUMENT EDITION: 1.4



ConfIT!



MAIN MENU



TECHNICAL DATA (A)



TRANSMISSION (D)



CONSERVATION (G)



INSTALLATION (B)



CONFIGURATION (E)



ACCESSORIES (H)



SETTINGS (C)



DATA COLLECTION (F)

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A- TECHNICAL DATA



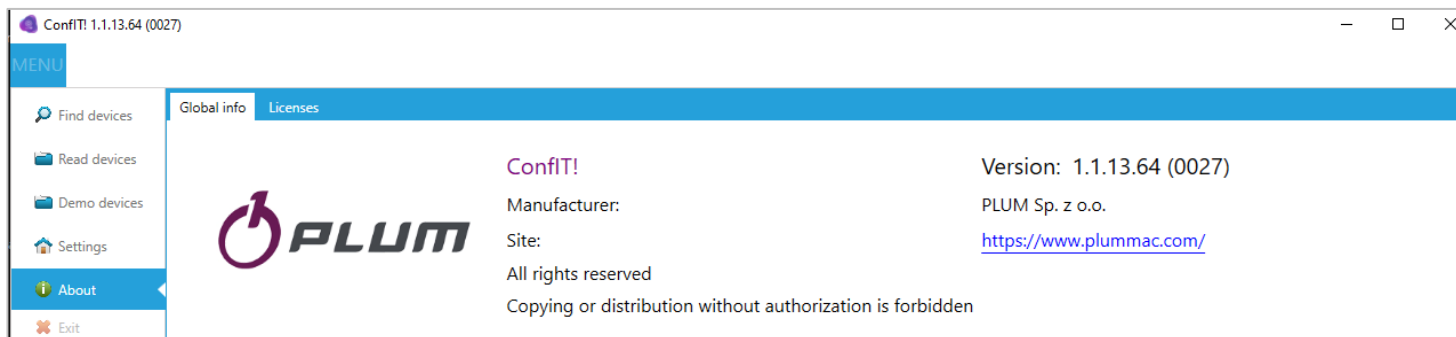
APPLICATION DESCRIPTION

ConfIT! is a software designed for local and remote configuration and diagnostic of PLUM devices. The user-friendly graphic interface allows basic and extended configuration. Interface based on device's profiles can be adapted to customer requirements. Every modified value is highlighted so the end user is aware of every unsaved configuration. ConfIT! supports local firmware upgrade of PLUM devices. It also stores a list of previously connected devices and allows for quick navigation between them. ConfIT! supports communication with devices via Serial port and via Network connection (TCP/IP, UDP/IP).

Due to security issues in many companies, ConfIT! application doesn't have functionality of automatic checking or downloading new version of application. The only TCP/IP or UDP/IP communication of application is related to communication with devices, forced by user.

Application *.zip file name and header of application (e.g. 1.1.13.64(0027)) contains:

- version of application compilation, e.g. 1.1.13.64
- version of data base of devices profiles (in brackets), e.g. (0027)





APPLICATION REQUIREMENTS

ConfIT! can be used on Personal Computers which meets below requirements:

- Operating system: Microsoft Windows Vista/7/8/8.1/10
- Software:
 - Microsoft NET.Framework 4.5.2 or higher
- Hardware (one of below):
 - for wireless communication: internal or external Bluetooth 2.1 + EDR Class 2 standard (required for OptoBTE_x interface)
 - for cable communication: USB or RS232 or RS485 or Ethernet communication port (type of required communication port depends on type of converter used for cable connection between computer and PLUM device).



B- INSTALLATION

INSTALLATION



INSTALLATION OF APPLICATION

ConfIT! is shared as a compressed ***.zip** type file. It must be unpacked before use.

Application doesn't require any installation. To open application it is sufficient to start **ConfIT!.exe** file.

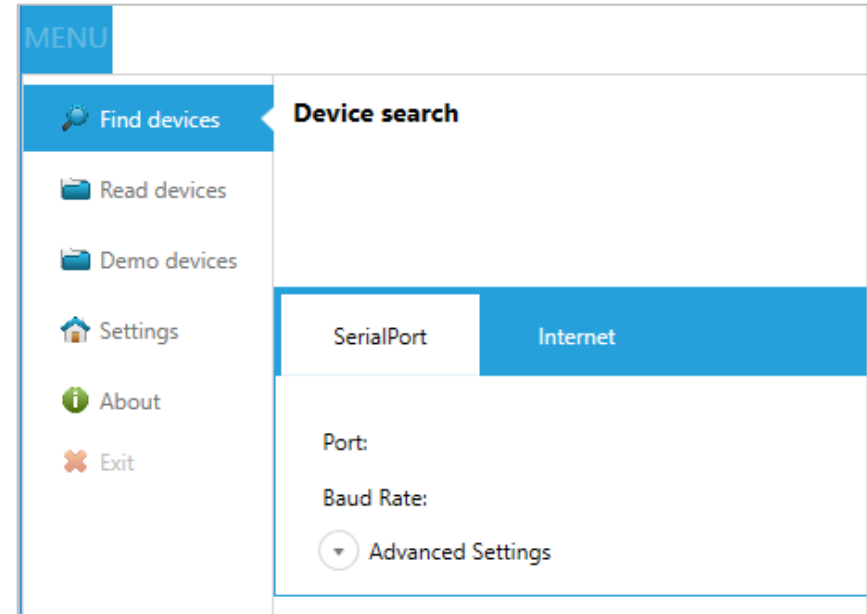


INSTALLATION

FIRST START OF APPLICATION



After first start of application it opens on **Find devices** menu.





MAIN MENU



C- SETTINGS

SETTINGS

APPLICATION SETTINGS



ConfIT! makes it possible to set up some common settings for application.

Username	Password	Set as default
USER-000	••••	<input type="checkbox"/>
SERWIS-1		<input type="checkbox"/>
100000	••••	<input checked="" type="checkbox"/>
10003		<input type="checkbox"/>
301	••••	<input type="checkbox"/>
401	••••	<input type="checkbox"/>

Buttons: Add, Remove, Set producer prefs, Set as default, Save

SETTINGS

USER PREFERENCES



User Preferences

Theme: Windows8

Language: English

Required profile level: Basic

It is possible to set:

- Theme of application
- Languages of application:
 - German
 - English
 - Spanish
 - French
 - Hungarian
 - Polish
 - Portuguese
 - Slovak
 - Turkish
 - Russian
 - Chinese

Other languages can be added on request.

- Level of profile for devices, which should be used by application:
 - Basic (less device's functionalities are visible for user)
 - Advanced (more device's functionalities are visible for user – recommended for advanced users)



After change of profile's level, it is required to communicate with device once again.

SETTINGS



It should be remembered that translation of application's graphics interface it is a different thing than translation of profile of exact type of supported device. For example, it means that when device's profile supports only English language, ConfIT! can be opened in Hungarian but device profile will be visible in English.

If operation system's language is supported by application, ConfIT! can start operation in the same language (default setting). Otherwise it opens in English or the other language which previously was set manually.

SETTINGS

PREDEFINED ACCOUNTS



Username	Password	Set as default
USER-000	••••	<input type="checkbox"/>
SERWIS-1		<input type="checkbox"/>
100000	••••	<input checked="" type="checkbox"/>
10003		<input type="checkbox"/>
301	••••	<input type="checkbox"/>
401	••••	<input type="checkbox"/>

Buttons: Add, Remove, Set producer prefs, Set as default, Save

It is possible to set predefined accounts which are needed to configure devices. Every PLUM device requires user name and password to make configuration possible. So this setting makes possible to set user password for his devices to avoid necessity of set password during configuration of every device. It is also possible to set default account which will be used for every next readout device. Since version 1.2.33.219 application automatically choose proper user account to the device type.

Passwords set by default in application for default predefined accounts, are typical, factory passwords for that user names in PLUM devices.



Sample account names (user names) used in PLUM devices					
Type or user	Type of password	Device names and user accounts (user names)			
		MacBAT 5 MacREJ 5 MacREJ 5 R MacREJ 5 W	MacBAT IV MacMAT IV	MacBAT III	MacR6 MacBATE
Typical	fixed (set by user)	301 - customer 401 - administrator	100000	USER-000	USER-000
Service	generated by PLUM	<i>(not available)</i>	10003	10003	SERWIS-1



D- TRANSMISSION

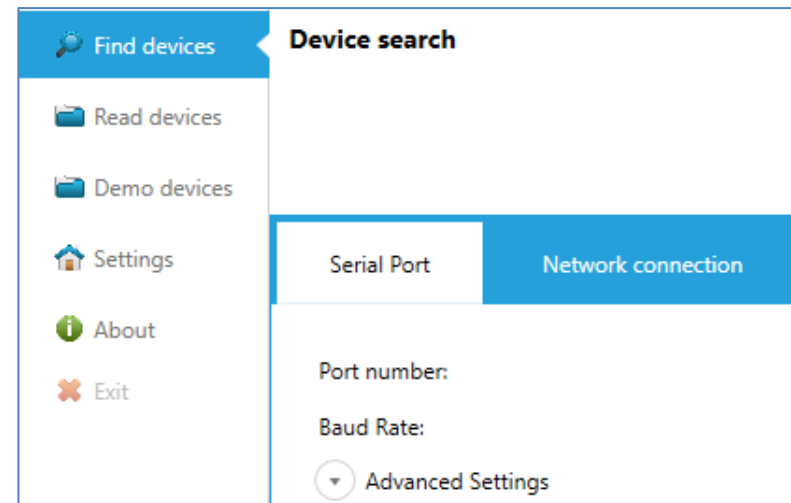
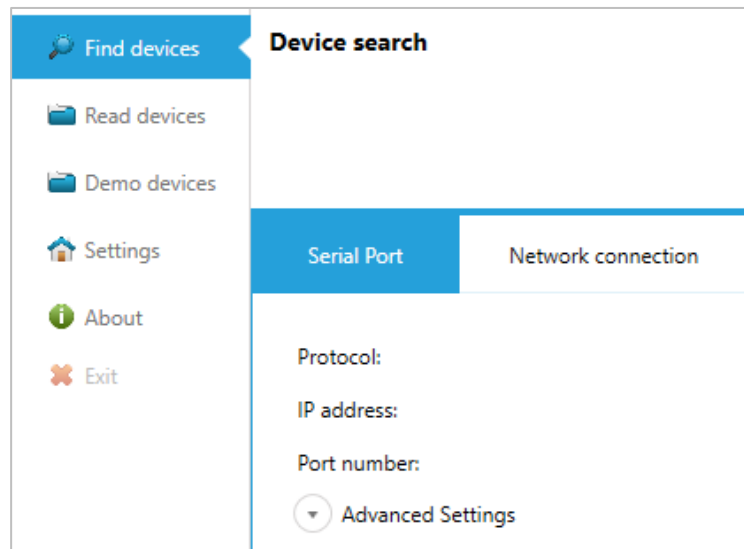


TRANSMISSION

COMMUNICATION WITH DEVICES

ConfIT! supports local and remote communication with devices.

Local connection (via **Find devices/Serial Port** menu) can be done by using communication interface connected to the computer. Interface has to be visible in operating system as COM port. For RS232 communication interface, application automatically enables DTR signal.



Remote connection (via **Find devices/Network connection** menu) can be done by using TCP/IP or UDP/IP communication protocol. This type of communication requires this functionality in devices or in external modems connected to devices. ConfIT! operates only as a master so it can communicate only with devices which operates in Call Windows Server mode (slave mode, PULL mode).



TRANSMISSION

LOCAL CONNECTION (SERIAL PORT)

Serial Port | Network connection

Port number: COM10

Baud Rate: 115200

Advanced Settings

Send data timeout: 500 ms

Read data timeout: 850 ms

COM port opening delay: 30 ms

Com port closing delay: 30 ms

Maximum retries: 3

Minimum delay between retries: 100 ms

Answer byte limit (0 - no limit): 0 B

Parity: N

Data Bits: 8

Stop Bits: 1

Set default

To communicate with device via Serial Port it is needed to:

- Connect communication interface to the computer and the device.
- Set COM **Port** number assigned by operating system for interface.
- Set **Baud Rate** of communication (the same as set in device).
Value of Baud Rate can be restricted by interface and device features.

TRANSMISSION



- Set **Advanced Settings** of communication.
Default values of Advanced Settings (the unit is milliseconds) should provide proper communication but it depends on used communication interface.
- Search the device (see **DEVICE SEARCH** chapter).

TRANSMISSION



REMOTE CONNECTION (NETWORK CONNECTION)

Serial Port	Network connection
Protocol:	TCP/IP
IP address:	10 . 1 . 1 . 23
Port number:	5 000
⬆ Advanced Settings	
Send data timeout:	10 000 ms
Read data timeout:	10 000 ms
Maximum retries:	6
Minimum delay between retries:	100 ms
Answer byte limit (0 - no limit):	0 B

To communicate with device via Network connection it is needed to:

- Be sure that computer and device operates in the same network (like public or private APN etc.)
- Set type of communication **Protocol: TCP/IP** or **UDP/IP**
- Set **IP address** of device.
- Set **Port number** of device.
- Set **Advanced Settings** of communication.
Default values of Advanced Settings (the unit is milliseconds) should provide proper communication but it depends on network quality (e.g. GSM range in device location).
- Search the device (see **DEVICE SEARCH** chapter).



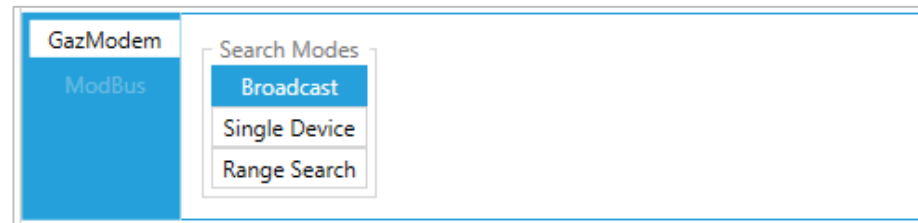
TRANSMISSION

DEVICE SEARCH

ConfIT! supports communication with devices in GazModem communication protocol. Every device has its communication address (it can be the same in many devices). Due to possibility that on one type of connection (local or remote) can be available many devices with different addresses it is required to choose **Search Mode**.

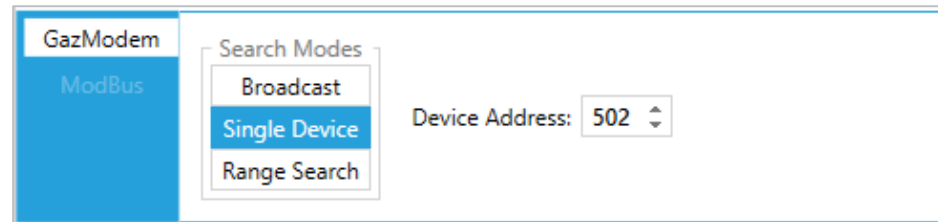
- **Broadcast.**

This mode should be used when **only one device** is available on connection. Otherwise communication will be possible only with device which will response for searching as first. This mode is helpful when we don't know device's address.



- **Single Device.**

This mode makes possible connection with the device when we know its address. This mode is helpful when there are many devices on one connection.

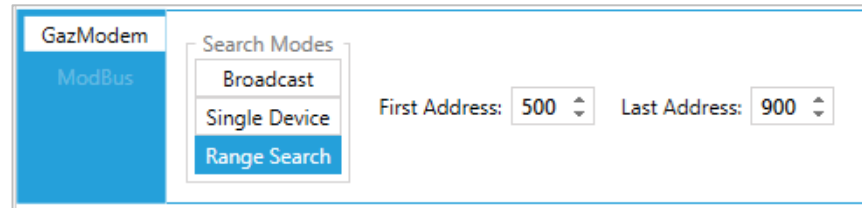


TRANSMISSION

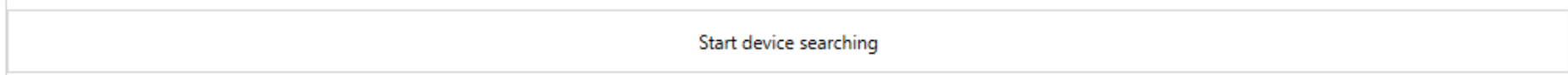


- **Range Search.**

This mode makes possible connection with the device when we don't know exact address of device but it probably lies in some range of addresses. In this mode communication will be possible only with device which will response for searching as first.



When **Search Mode** is chosen it's possible to find the device by clicking on **Start device searching** button.



When device is found, to connect to device, just click on it. Application automatically readout device configuration and switch to **Modification** view (see CONFIGURATION section).





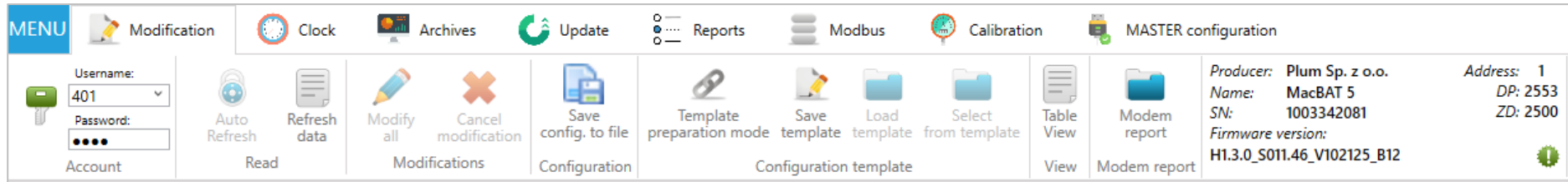
E- CONFIGURATION

CONFIGURATION



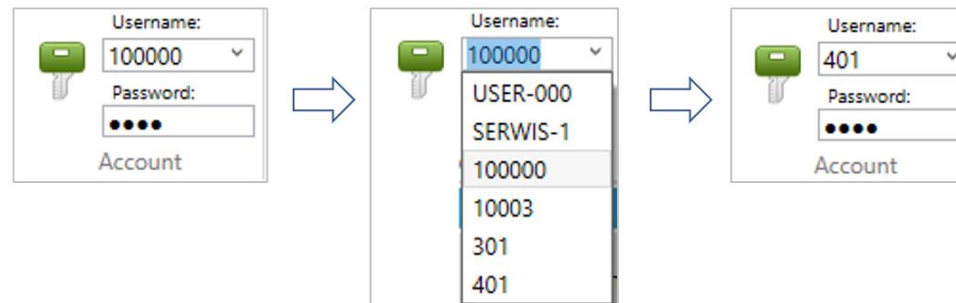
MODIFICATION TAB

Modification tab is related to device configuration.

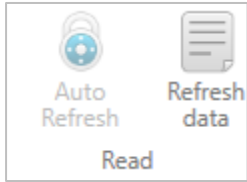


Account section makes possible to set authentication parameters for configuration because every PLUM device needs **User name** and **Password** to make configuration possible. Choose **User name** from list or write it manually. User name list is set in **Predefined accounts** in ConfIT! **Settings** (see **SETTINGS** section). Application automatically choose proper User name for device type. Chosen User name automatically

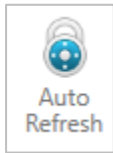
sets **Password** which was previously defined in Predefined accounts. Otherwise it is needed to set password for user.



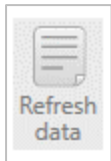
CONFIGURATION



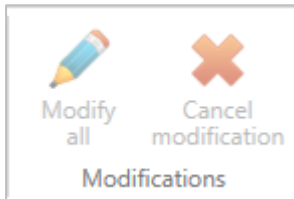
Read section is related to re-readout (refresh) of device configuration.



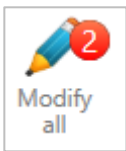
Auto Refresh button makes possible automatic re-readout of device configuration. Application starts new readout instantly after the end of previous readout. This functionality is available not for all PLUM devices and not for every view.



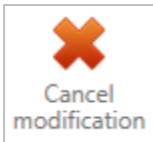
Refresh data button makes possible readout of device configuration on demand.



Modifications section is related to changes of configuration of device.

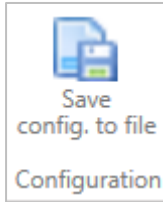


Modify all button is being enabled when some device configuration was set to be changed in device. It is required to click this button to save new configuration in device. The number in red circle shows amount of parameters to be modified. If clicking **Modify all** button doesn't cause any change, it means that authentication parameters was wrong (user name or password).

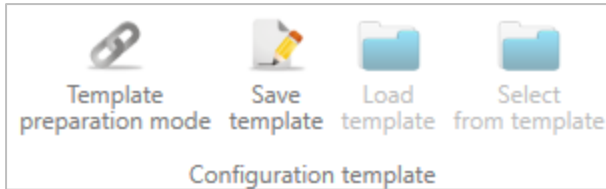


Cancel modification button is being enabled when some device configuration was set to be changed in device. It is required to click this button to cancel intention of configuration change.

CONFIGURATION



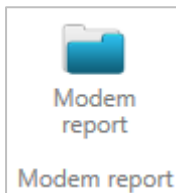
Save config. to file button in **Configuration** section allows to save configuration of device to CSV file. The header of this file includes also information about version of profile used for device readout and main information about read device. Below header there is DP table of device – table of configuration and current data (measured and calculated) of device.



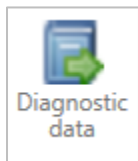
Configuration template section is related to preparing, saving to file template of configuration of device and uploading this configuration to other device.



View section with **Table View** button makes possible to change view of device configuration between *Profile view* (button disabled, see **MODIFICATION TAB – PROFILE VIEW** chapter) and *Table view* (button enabled - marked by blue, see **MODIFICATION TAB – TABLE VIEW** chapter).



Modem report button in **Diagnostic** section allows to readout of communication log from internal modem of connected device (if device supports such a functionality).



Diagnostic data button in **Diagnostic** section allows to readout and save by one button to files all data from device which is typically needed for diagnostics of device (like configuration, alarms, modem report, periodic archives etc.)

CONFIGURATION



<i>Producer:</i> Plum Sp. z o.o.	<i>Address:</i> 1
<i>Name:</i> MacBAT 5	<i>DP:</i> 3100
<i>SN:</i> 1002355745	<i>ZD:</i> 0400
<i>Firmware version:</i> H1.2.0_S004.16_V1810_B10	

This section shows device's identifier, like **Name**, serial number (**SN**), communication **Address**, **Firmware version**

<i>Producer:</i> Plum Sp. z o.o.	<i>Address:</i> 1
<i>Name:</i> MacBAT 5	<i>DP:</i> 3100
<i>SN:</i> 1002355745	<i>ZD:</i> 0400
<i>Firmware version:</i> H1.2.0_S004.16_V1810_B10	
MID0.00_M02.03_MR004.06_R004.06 MM416_U45519_L00(EN,PL) TL0_GL1 2018-11-19 LL8	

etc.

Green exclamation mark icon shows additional information of device's identifier.

CONFIGURATION



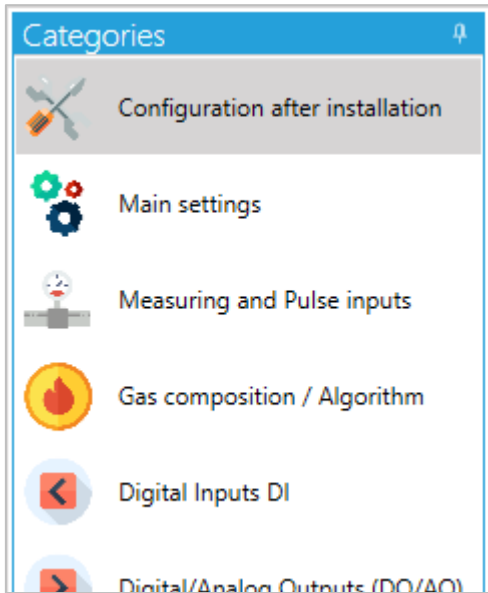
MODIFICATION TAB – PROFILE VIEW

It should be remembered that this user manual describes functionalities available in profiles for devices configuration. It means that it describes the way how some types of parameters of devices can be set. This manual doesn't describe the way how devices works or how they can be configured.

Sample view of device profile:

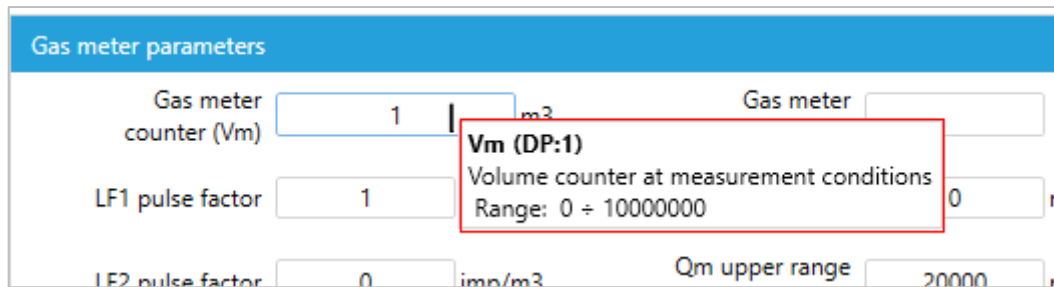
The screenshot displays the 'Modification' tab in the software interface. The top navigation bar includes 'MENU', 'Modification', 'Clock', 'Archives', 'Update', 'Reports', 'Modbus', 'Calibration', and 'MASTER configuration'. The 'Modification' sub-tab is active, showing a toolbar with icons for 'Account', 'Auto Refresh', 'Refresh data', 'Modify all', 'Cancel modification', 'Save config. to file', 'Template preparation mode', 'Save template', 'Load template', 'Select from template', 'Table View', and 'Modem report'. The main content area is divided into three sections: 'Configuration after installation', 'Date & Time of device', and 'Registration of data'. The 'Configuration after installation' section includes 'Configuration lock state (CFG hardware switch inside device)' set to 'OFF', 'Name of device's installation site' set to 'Site name', and 'Device's menu language' set to 'EN'. The 'Date & Time of device' section shows 'Date & Time' as '2022-03-25 17:25:11' and 'Clock operation mode' as 'without automatic summer/winter time change'. The 'Standard time and Daylight Saving time changes' section shows 'Time zone' as '(UTC+01:00) Belgium, Croatia, Hungary, Poland', 'Difference between winter time and UTC time' as '1 hour', and 'Difference between daylight saving time and winter time' as '1 hour'. The 'Registration of data' section shows 'Registration period' as '60 min' and 'Billing Hour' as '06:00'. The bottom status bar indicates 'Sending' and 'Receiving' with red dots.

CONFIGURATION



Categories section it is a list of groups of device's parameters which are related by their functionalities. It makes easier to find parameter to change it.

The way how Categories section looks like depends on device functionalities.



When mouse cursor is put on some parameter, application shows its **description** (marked in red on the picture), name of this parameter (e.g. Vm) and position in DP table (e.g. DP:1) (see **MODIFICATION TAB – TABLE VIEW chapter**)

CONFIGURATION



LF1 pulse factor imp/m3

Editable **Text box** contains short name of the parameter (e.g. LF1 pulse factor), value of parameter (e.g. 0,1) and its unit (if parameter has units, e.g. imp/m3).

LF1 pulse factor imp/m3

If value of parameter was changed (but before modification in device) value box changes its colour to orange. After modification (see **Modify all** button in **MODIFICATION TAB** chapter) it backs to white with new value.

Qm flow rate m3/h
Lower Limit

If value of parameter was changed but this value is out of permissible range for this parameter, the border of parameter box changes its colour to red, and **Modify all** button stays inactive.

Description

Atmospheric pressure bar

Non-editable **Text box** shows value of parameter which is read only. This box occurs also in version where value is converted to text.

State

Schedule #1

ON/OFF switch box makes possible to enable (ON) or disable (OFF) some device functionality.

Schedule #1

CONFIGURATION



Power supply mode

Dropdown list box contains short name of parameter and list of possible settings of this parameters.

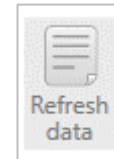
Power supply mode

Pulse inputs configuration
LF input time between pulses

Dropdown list box also makes possible to show other boxes depending on setting chosen from the list.

Pulse inputs configuration
Current HF/LF pulses ratio

On some views, after the change of parameter via dropdown list, to see additional parameters boxes, it is required to **Refresh data** once again.



CONFIGURATION



MODIFICATION TAB – TABLE VIEW

It should be remembered that this user manual describes functionalities available in table view for devices configuration. This manual doesn't describe the way how devices works or how they can be configured.

Table View of device configuration shows all **DP table** (configuration/current data table) of device. It's a list of all **Device Parameters** for configuration and current data of device. This view also supports device configuration modification but unlike Profile view, it requires knowledge about how parameters can be changed (meaning of values).

Table View is a default view for devices which are not supported as Profile view.

Parameters (DP table)

Index	Name	Unit	Actual Value	New Value	Long Description
0	Vb	m3	0		Volume counter at base conditions; Range: 0; 1000000000
1	Vm	m3	0		Volume counter at measurement conditions; Range: 0; 1000000000
2	Vm2	m3	0		Additional volume counter at measurement conditions; Range: 0; 1000000000
3	E	kWh	0		Energy counter; Range: 0; 1000000000
4	M	kg	0		Mass counter; Range: 0; 1000000000
5	Vme	m3	0		Emergency volume counter at measurement conditions; Range: 0; 1000000000

CONFIGURATION



Table View also supports modification of configuration. Editable parameters has white fields in New Value column (instead of non-editable parameters which are grey). New value of parameter has to be set in **New Value** column. Saving new configuration is possible by **Modify all** button or **Edit** button which appears next to new value. **Edit** button supports modification of one parameter only.

The screenshot shows the 'Table View' of the configuration interface. The top menu bar includes: MENU, Modification, Clock, Archives, Update, Reports, Modbus, Calibration, and MASTER configuration. Below the menu is a toolbar with buttons for: Account (Username: 401, Password: masked), Auto Refresh, Read, Refresh data, Modify all, Cancel modification, Save config. to file, Configuration, Template preparation mode, Save template, Load template, Select from template, Configuration template, Table View (View), Modem report, Modem report, and a status indicator. On the right, device information is displayed: Producer: Plum Sp. z o.o., Name: MacBAT 5, SN: 1003342081, Firmware version: H1.3.0_S011.46_V102125_B12, Address: 1, DP: 2553, ZD: 2500.

The main area is titled 'Parameters (DP table)' and contains a table with the following data:

Index	Name	Unit	Actual Value	New Value	Long Description
0	Vb	m3	0		Volume counter at base conditions; Range: 0; 1000000000
1	Vm	m3	0	535,5	Volume counter at measurement conditions; Range: 0; 1000000000
2	Vm2	m3	0		Additional volume counter at measurement conditions; Range: 0; 1000000000
3	E	kWh	0		Energy counter; Range: 0; 1000000000
4	M	kg	0		Mass counter; Range: 0; 1000000000
5	Vme	m3	0		Emergency volume counter at measurement conditions; Range: 0; 1000000000

CONFIGURATION



After pressing any parameter of DP table and using Ctrl+F on keyboard of computer, Searching section will appear, which allows to search parameters of device.

Parameters (DP table)

Full Text Search

Drag a column header and drop it here to group by that column

Index	Name	Unit	Actual Value	New Value	Long Description
34	ProgCntCap1		9		Capacity of the main counters (configuration); Range: 4; 11
35	ProgCntCap2		9		Capacity of the counters at measurement conditions (configur
82	ConfImp		36		Configuration of counting inputs; Values: 0 - STOP; 30 - LF1; 34
85	ConfADC		1		ADC-assess transmitter number 1; Values: 1; 2

CONFIGURATION



CLOCK TAB

In **Clock** tab it is possible to set device clock. Every clock modification requires to set proper authentication parameters (Account – User name / Password).

The screenshot displays the 'Clock' configuration tab in a software interface. At the top, a navigation menu includes 'MENU', 'Modification', 'Clock' (highlighted with a red box), 'Archives', 'Update', 'Reports', 'Modbus', 'Calibration', and 'MASTER configuration'. Below the menu, the 'Account' section shows a username of '401' and a password field. The device information section lists: Producer: Plum Sp. z o.o., Name: MacBAT 5, Address: 1, DP: 2553, SN: 1003342081, ZD: 2500, and Firmware version: H1.3.0_S011.46_V102125_B12. A green status indicator is visible next to the firmware version. The main content area features a large analog clock with a blue face and orange border. To the right of the clock, the 'Comparison of times' section shows 'Winter time: 2022.03.25 18:11:20', 'Local Time: 2022.03.25 18:11:20', and 'Device time: -----'. Below this is a 'Read device time' button. The 'Synchronization' section includes radio buttons for 'Set winter time', 'Set local time', and 'Set manually' (which is selected). There is an 'Enter date' input field and a 'Set device time' button.

It is needed readout clock of device first by **Read device time** button, to check difference between computer time (**Local time**) or **Winter time** and **Device time**.

CONFIGURATION



New device clock can be synchronised automatically to **winter time**, **local time** or **set manually**. It can be set with accuracy of 1 second.

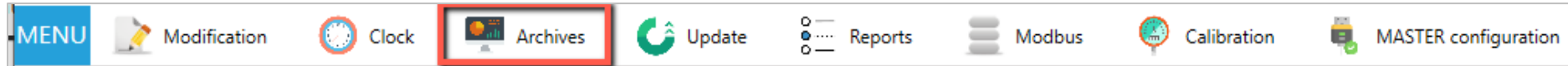
After choosing of these options, new time must be send to device by clicking on **Set device time**.

The screenshot shows a configuration interface for a device's clock. On the left is a large analog clock face with a red border and a blue inner ring. The clock shows the time as approximately 10:10. To the right of the clock is a 'Comparison of times' section with the following text: 'Winter time: 2022.03.25 18:14:14', 'Local Time: 2022.03.25 18:14:14', and 'Device time: -----'. Below this section is a button labeled 'Read device time'. To the right of the comparison section is a 'Synchronization' section. It contains three radio button options: 'Set winter time', 'Set local time', and 'Set manually'. The 'Set manually' option is selected. Below these options is a text input field containing the placeholder text 'Enter date' and a calendar icon. At the bottom of the synchronization section is a button labeled 'Set device time'.

CONFIGURATION



ARCHIVES TAB



For details see **DATA COLLECTION** section.

CONFIGURATION



UPDATE TAB

ConfIT! supports firmware update of devices (**Update** tab). For now, this functionality is available only for a few types of PLUM devices.

MENU Modification Clock Archives **Update** Reports Modbus Calibration MASTER configuration

Username: 401 Password: Account

Open file Update Updater operations

Producer: Plum Sp. z o.o. Name: MacBAT 5 SN: 1003342081 Firmware version: H1.3.0_S011.46_V102125_B12

Address: 1 DP: 2553 ZD: 2500

0,00%

Log

Log info	Message
----------	---------

File list

File name:

Type	Version
------	---------

● Sending ● Receiving

CONFIGURATION

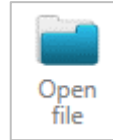


Firmware update procedure:

1. Choose account **User name** and **password** allowed for updating the device

Username: 401
Password: ●●●●
Account

2. Click **Open file** button

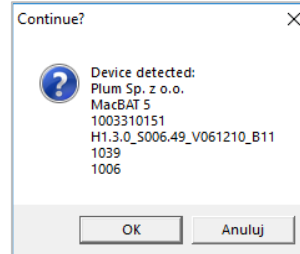
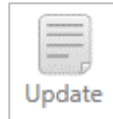


3. Choose firmware file (*.pfp extension), e.g.: *MB5_pack_S006.49_R06_H1.3.0_M32_V061210.pfp*

4. Chosen file will appear in **Log** section

Log	
Log info	Message
03.10.2019 2:12:36 PM [INFO]	File name:: D:\PLUM\MB5_pack_S006.49_R06_H1.3.0_M32_V061210.pfp

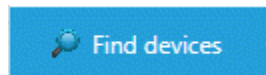
5. Click **Update** button



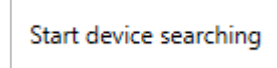
6. Follow the instructions on screen

7. Firmware update must be finished successfully. If any ERROR appear in LOG list, start firmware update once again.

8. After successful update go to



menu and search device once again



CONFIGURATION



REPORTS TAB

ConfIT! supports creation of reports from devices (**Reports** tab). Reports are PDF documents prepared on the basics of configuration and current data of device. Template of report is being prepared as XML file. Sample XML report templates (Configuration report, Audit trail report) are placed in **ReportTemplates** folder which is in main ConfIT! application folder.

The screenshot shows the 'Reports' tab in the ConfIT! application. The interface includes a top navigation bar with icons for Modification, Clock, Archives, Update, Reports (highlighted with a red box), Modbus, Calibration, and MASTER configuration. Below the navigation bar, there is a section for device information: Username (401), Password (masked), Producer (Plum Sp. z o.o.), Name (MacBAT 5), SN (1003011063), Address (1), DP (3653), and ZD (0200). The Firmware version is H1.3.0_S012.80_V122436_B14. The main content area is divided into three sections: 'Report template' with a 'Path to file' input field and a 'Load report template' button; 'Data for report' which is currently empty; and 'Reading device data' with a 'Last read time' input field and a 'Refresh data' button. Below these is the 'Export of report' section, featuring a 'Path to report file' input field, a 'Choose path' button, and a checkbox for 'Save report after data refresh' with a 'Save report' button. At the bottom right, there is a status bar showing 'COM9, 115200' and two indicator lights for 'Sending' and 'Receiving'.

CONFIGURATION



MODBUS TAB

ConfIT! supports creation and edition of Modbus Maps of device (**Modbus** tab). This functionality is available only for devices which supports edition of Modbus Maps. It allows to prepare document with description of Map.

The screenshot displays the Modbus configuration interface. The top menu includes: MENU, Modification, Clock, Archives, Update, Reports, **Modbus** (highlighted), Calibration, and MASTER configuration. Below the menu, there are fields for Username (401), Password, and buttons for 'From device', 'From file', 'To device', 'To file', and 'Generate document'. A 'Generate from DP' button is also present. The device information section shows: Producer: Plum Sp. z o.o., Name: MacBAT 5, SN: 1003011063, Firmware version: H1.3.0_S012.80_V122436_B14, Address: 1, DP: 3653, ZD: 0200.

The main area is divided into two sections:

- Sections Summary:** A table listing various data sections.
- Registers:** A detailed view of individual registers, showing their names, ranges, types, and read/write permissions.

Type	Start number	End number	Section quantity
Current data	5000	5053	-
Current data	5100	5115	-
Current data	5200	5235	-
Current data	5300	5355	-
Current data	5400	5417	-
Current data	5500	5529	-
Current data	5600	5617	-
Current data	5700	5715	-
Current data	5800	5831	-
Current data	5900	5927	-
Current data	6000	6023	-
Periodical data	10000	10031	60
Hourly data	15000	15031	72
Daily data	20000	20031	35
Monthly data	25000	25031	12

The detailed register view shows the following registers:

- Register: C[153], Registers range: 5000 - 5001, Type: float, R: 4, W: 0
- Register: tamb[129], Registers range: 5002 - 5003, Type: float, R: 4, W: 0
- Register: AtmPress[107], Registers range: 5004 - 5005, Type: float, R: 4, W: 0
- Register: BattLv[624], Registers range: 5006 - 5007, Type: float, R: 4, W: 0
- Register: MBattLv[625], Registers range: 5008 - 5009, Type: float, R: 4, W: 0
- Register: (empty), Registers range: 5010 - 5011, Type: (empty), R: (empty), W: (empty)

At the bottom right, the status bar shows: COM9, 115200, Sending, Receiving.

CONFIGURATION



CALIBRATION TAB

ConfIT! supports creation of calibration report of device's measuring inputs, like pressure and temperature (**Calibration** tab). To prepare calibration report it is needed to use calibrator for such a type of measuring input. This functionality is available only for a part of types of devices.

The screenshot displays the 'Calibration' configuration page in the ConfIT! software. The 'Calibration' menu item is highlighted with a red box. The page is divided into several sections:

- Device Information:** Username: 401, Password: [masked], Producer: Plum Sp. z o.o., Name: MacBAT 5, SN: 1003011063, Firmware version: H1.3.0_S012.80_V122436_B14, Address: 1, DP: 3653, ZD: 0200.
- Calibration Type:** Measured parameter: Pressure P1.
- Measuring devices:** A table for recording calibrator details.
- Environment settings:** Options for Absolute (abs) and Relative (gauge) pressure, and Ambient temperature.
- Measurement:** Fields for Current pressure, Current pressure (relative), Atmospheric pressure, and Pressure to report, along with a 'Read' button and 'Continuous readout' checkbox.
- Table:** A table with columns: Index, Calibrator value, Device value, Difference, Relative error, Is error unaccepted, and Delete.
- Report generation date:** 2023-07-10 08:14:34.

At the bottom right, the status bar shows 'COM9, 115200' and indicators for 'Sending' and 'Receiving'.

CONFIGURATION



This **Calibration** module supports also **Adjustment** of measuring inputs, if measurement accuracy is out of acceptable range. To make adjustment of input it is needed to use calibrator for such a type of measuring input. This functionality is available only for a part of types of devices.

The screenshot displays the 'Calibration' module's 'Adjustment' configuration page. The interface includes a top navigation bar with options like 'MENU', 'Modification', 'Clock', 'Archives', 'Update', 'Reports', 'Modbus', 'Calibration', and 'MASTER configuration'. The 'Calibration' tab is active and highlighted. Below the navigation bar, there is a header section for the device configuration, including fields for Username (401), Password, Producer (Plum Sp. z o.o.), Name (MacBAT 5), Address (1), DP (3653), SN (1003011063), ZD (0200), and Firmware version (H1.3.0_S012.80_V122436_B14). The 'Adjustment' section is expanded, showing the following configuration options:

- Input Selection:** Input for Adjustment is set to 'Pressure P1'.
- Calibration Coefficients:** Pressure P1 calibration coefficient 'a' is set to 1, and coefficient 'b' is set to 0. There are 'Read' and 'Set default coefficients (obligatory)' buttons. The state of metrological lock is 'off'.
- Measuring range of input:** Pressure P1 Range Min is 0,8 bar and Range Max is 6 bar.
- Adjustment type:** Set to 'Two-point'.
- Two-point adjustment:**
 - Point no. 1:** Calibrator value is 0,80 bar. Value must be in range: 0,8 - 2,53. Current value is 0 bar. There is a 'Read and lock' button.
 - Point no. 2:** Calibrator value is 6,00 bar. Value must be in range: 4,27 - 6. Current value is 0 bar. There is a 'Read and lock' button.

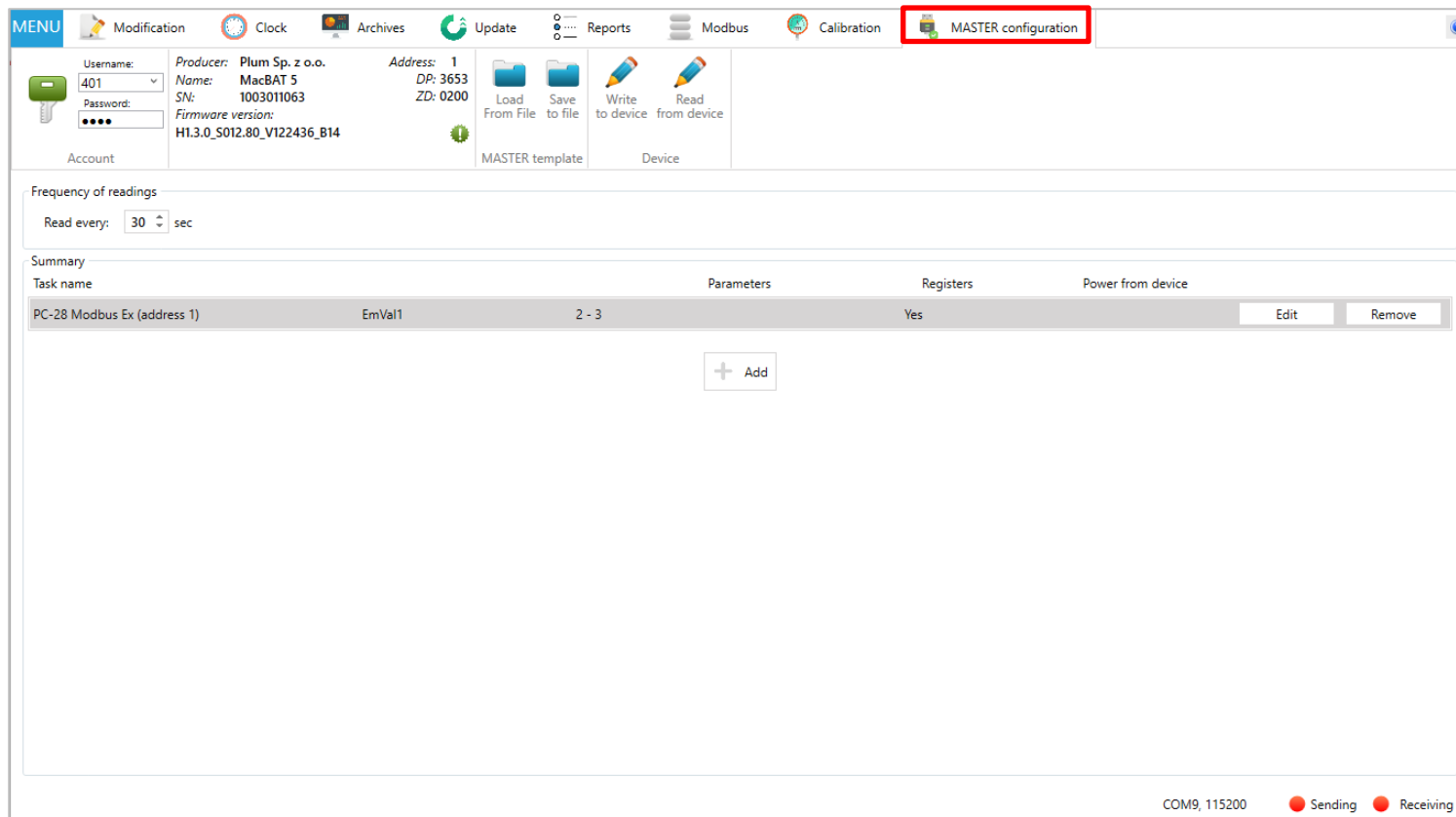
At the bottom right of the interface, there is a status bar showing 'COM9, 115200' and two indicator lights for 'Sending' and 'Receiving'.

CONFIGURATION



MASTER CONFIGURATION TAB

MASTER configuration tab in ConFIT! allows to configure how device should communicate with third party devices via Modbus RTU protocol in Master mode. This functionality is available only for devices which supports MASTER communication. Sample configurations for third party devices are placed in **MASTERmodeSamples** folder which is in main ConFIT! application folder.



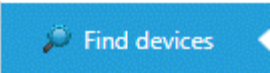
CONFIGURATION

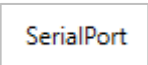



STEP-BY-STEP CONFIGURATION


Sample of connecting to the device and change of its configuration.

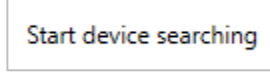
1. Connect device to computer via communication interface.

2. Start ConfIT! and go to  menu.

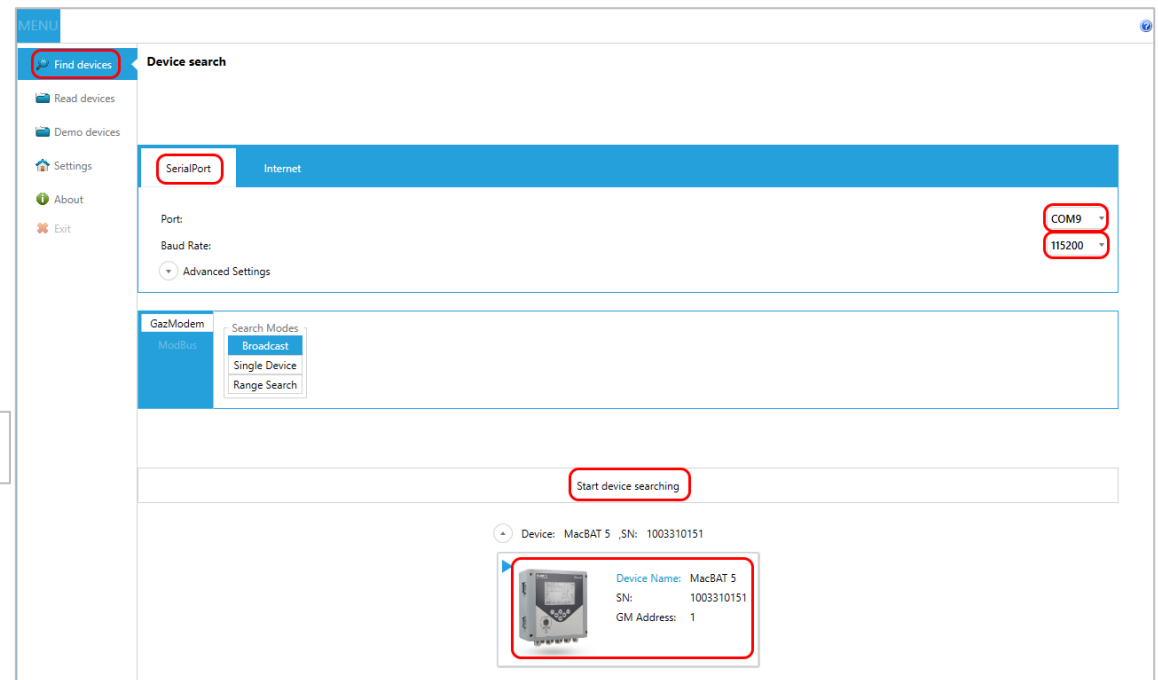
3. Choose  communication channel.

4. Set Port number  assigned to communication interface.

5. Set Baud Rate  of communication.

6. Start searching of  device.

7. When device is found, click on it to connect.



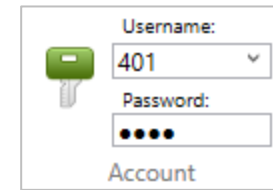
CONFIGURATION



8. Application automatically readouts device configuration and opens Profile view.

If Profile view is not supported, application opens Table view.

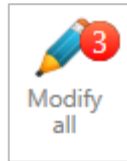
9. Set or choose authentication parameters (user name and password) in Account section, which allows device configuration.



10. Choose categories and set parameters which should be modified in the device.

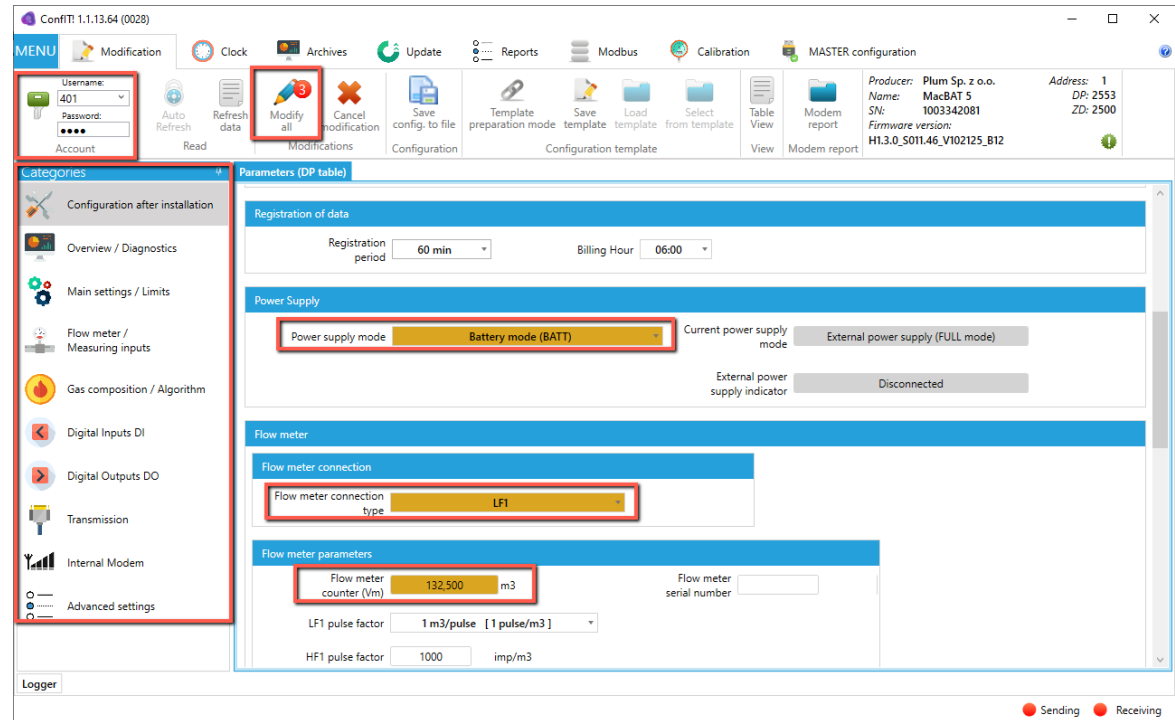


11. Confirm modification by clicking on **Modify all** button.



12. After modification, changed parameters will back from orange mark to white and Modify all button back to disabled.

13. If clicking **Modify all** button doesn't cause any change, it means that authentication parameters (user name or password) was wrong.





F- DATA COLLECTION

DATA COLLECTION



LOGGED DATA AND EVENTS READOUT

ConfIT! supports readout of logged data and Alarms/Events from devices (**Archives** tab). For now, this functionality is available only for a few types of PLUM devices.

There is a possibility to readout different types of archives (Periodic, Hourly, Daily, Monthly, Triggered data – if device support it) and select which parameters from archives should be read. Read data are saved to CSV file.

Archives Reader

Archive Type:

Triggered data | Monthly data | Daily data | Hourly data | **Periodic data** | Alarms/Events | Read all archives

Data Range:

Date From: 01.06.2023 00:00

Date To: 10.07.2023 07:38

Data Format:

Index	Time	Vb	dVb	dVm
5	16.02.2017 06:00	1986,233	221	2181,254
6	17.02.2017 06:00	1986,233	8	2181,254
7	18.02.2017 06:00	1986,233	8	2181,254
8	19.02.2017 06:00	1986,233	8	2181,254
9	20.02.2017 06:00	1986,233	8	2181,254
10	21.02.2017 06:00	1986,233	8	2181,254
11	22.02.2017 06:00	1986,233	8	2181,254

Names in header

Index	Time	Archive Id	Value
5	16.02.2017 06:00	Vb	1986,233 221
6	17.02.2017 06:00	Vb	1986,233 8
7	18.02.2017 06:00	Vb	1986,233 8
8	19.02.2017 06:00	Vb	1986,233 8
9	20.02.2017 06:00	Vb	1986,233 8
10	21.02.2017 06:00	Vb	1986,233 8
11	22.02.2017 06:00	Vb	1986,233 8

Names in rows

Selected parameters to read:

Vb, Vm, E, Vbe, Ee, dVb, dVm, dE, Qb, Qm, p1, p2, tamb, t, C, p1Avg, p1Min, p1Max, p2Min, p2Max, Alarm1, BattLvl, DTStamp, UTCStamp

Select parameters

File Path:

D:\temp\MacBAT_5_1003011063_periodical_20230710074001.csv

Choose path and file type

Read and Save

COM9, 115200 ● Sending ● Receiving



MAIN MENU




G- CONSERVATION

CONSERVATION



UPDATE OF APPLICATION

Due to security issues in many companies, ConfIT! application doesn't have functionality of automatic checking or downloading new version of application.

The newest version of ConfIT! is always available on  **PLUM** website: gas.plummac.com/en

Application is shared as a compressed ***.zip** type file. It must be unpacked before use.

Change log of application is placed in **!! READ ME.txt** file which is in main ConfIT! application folder.

Technical support: support@plummac.com



H- ACCESSORIES



ACCESORIES

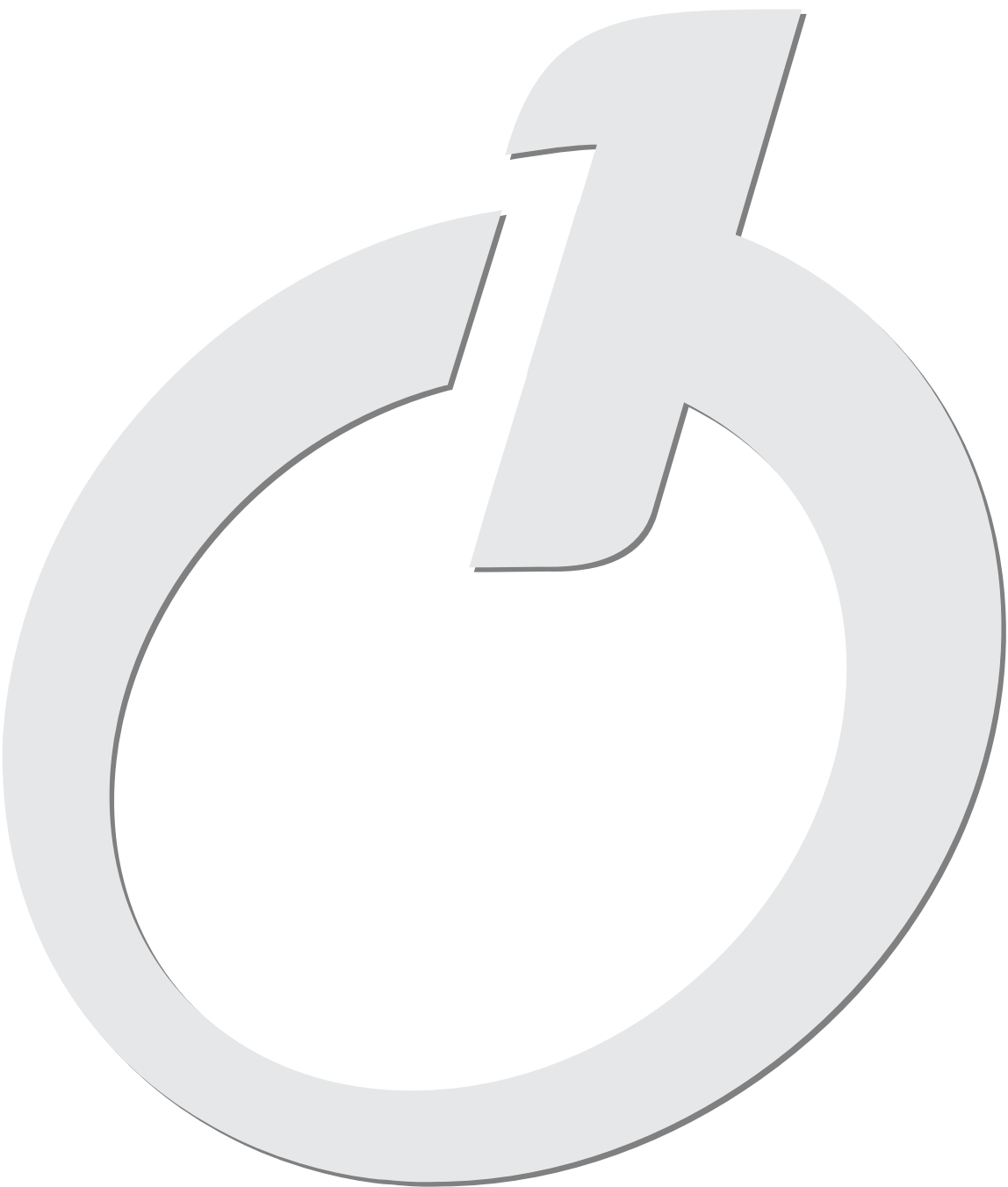
OPTICAL TRANSMISSION INTERFACE, OPTO-BLUETOOTH

The transmission interface **OptoBTE_x** is used to read data from the data loggers or battery powered conversion devices equipped with wireless transmission connection, compatible with standard IEC 62056-21 (OPTO). Data readout can be realized using portable computer (such as laptop) or other device equipped with Bluetooth communication port.

Hardware version of this interface starting from 1.2 (**HW:1.2** mark on name plate) supports also cable connection to the computer (via microUSB-USB cable). OptoBTE_x allows for data readout from devices in explosion-hazard-zone (only via Bluetooth connection).

Specifications about this transmission interface are described in „OptoBTE_x user manual”.





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National Waste Database no.: 000009381