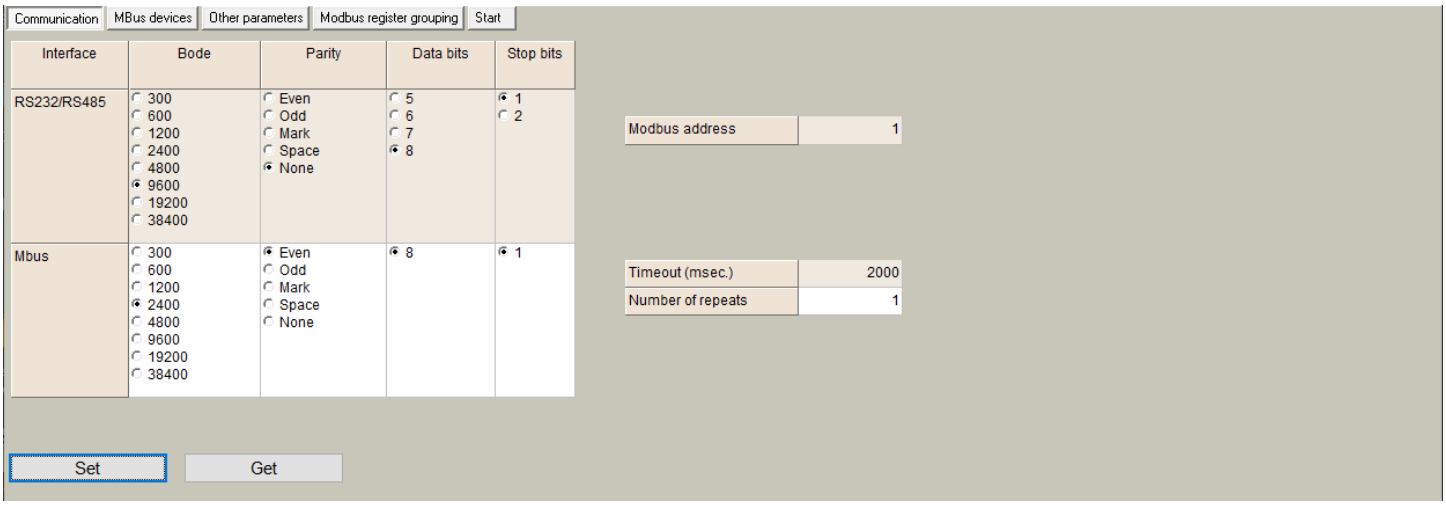
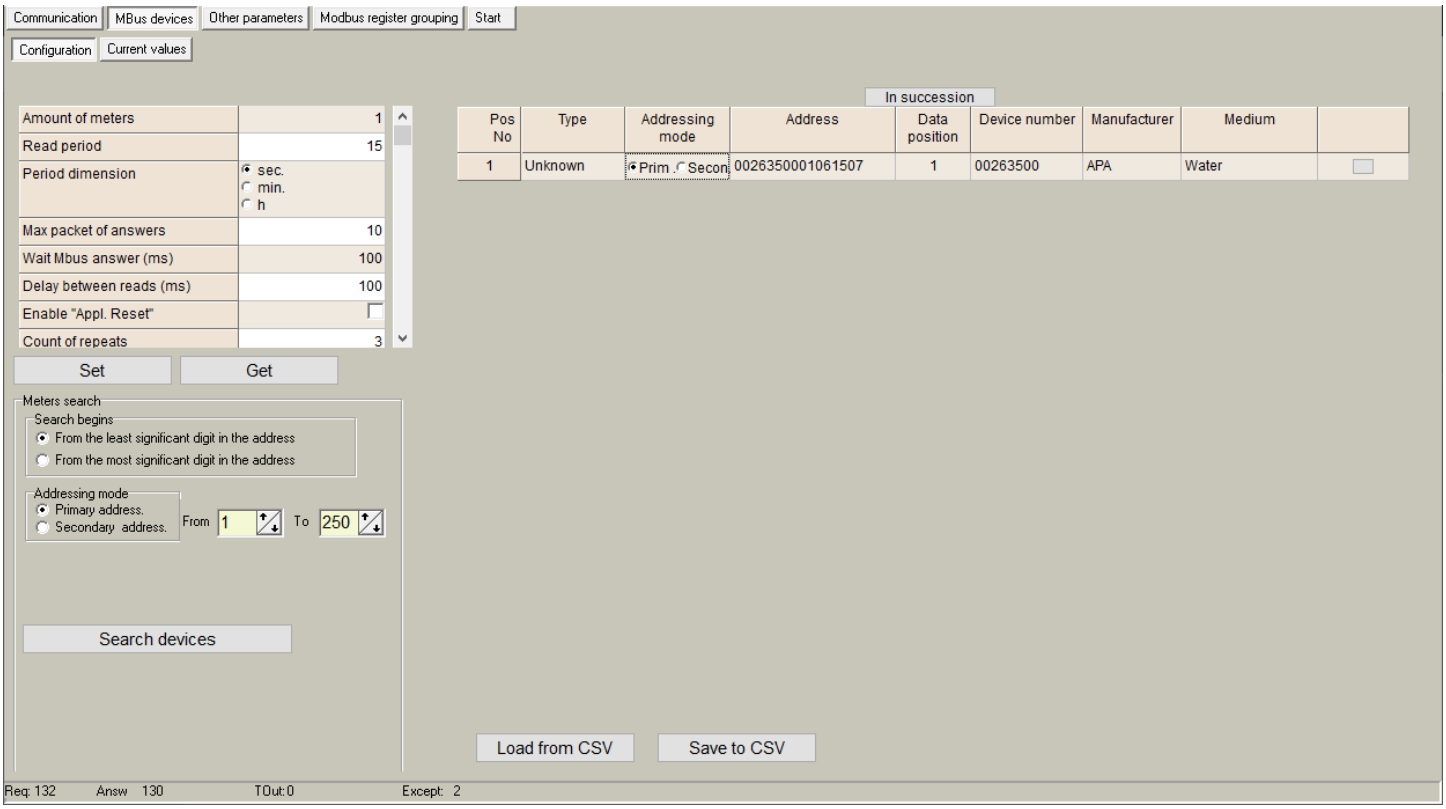
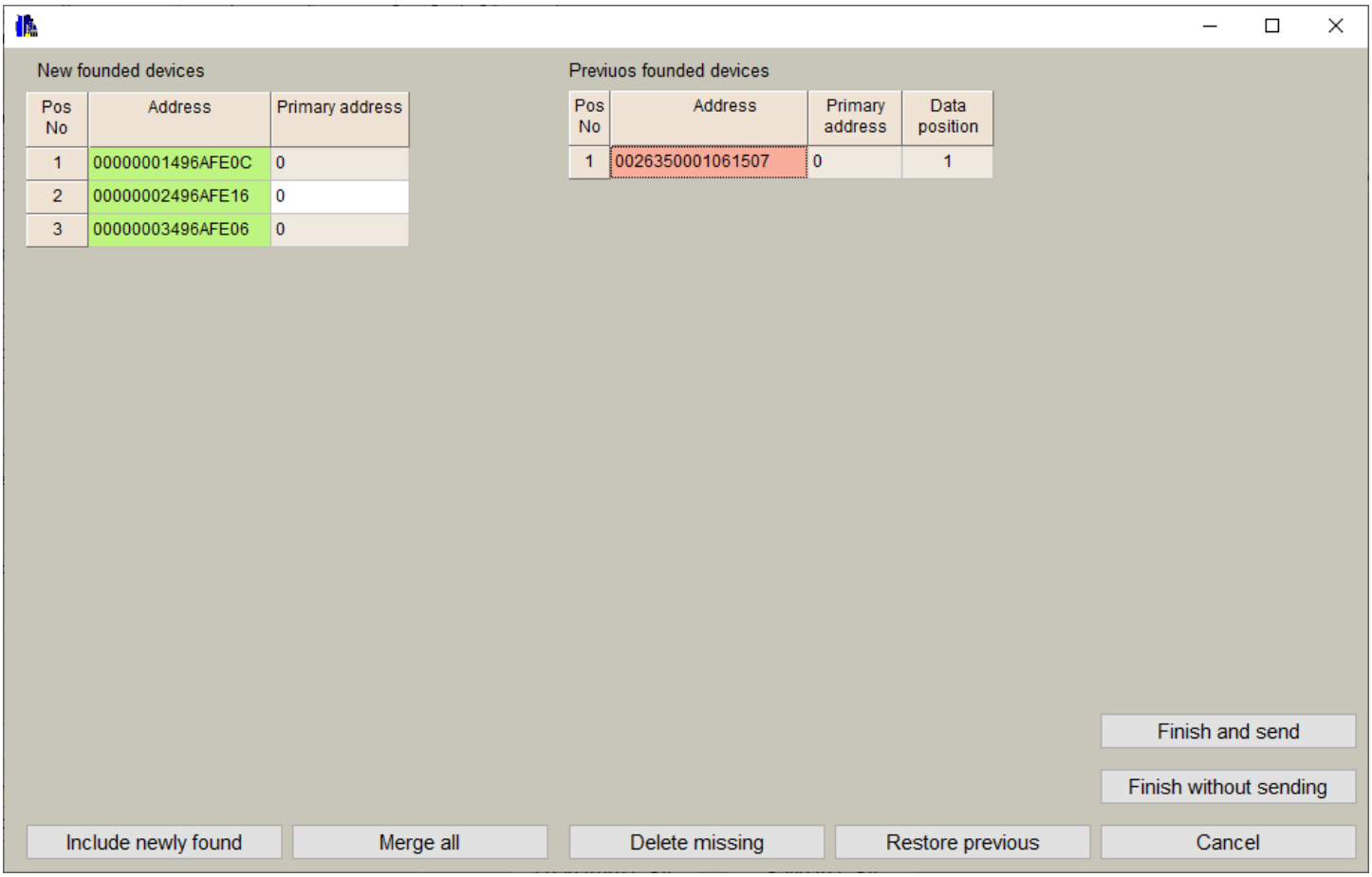
At first you have to set up your Mbus line settings (Bode, Parity, Data bits, Stop bits).



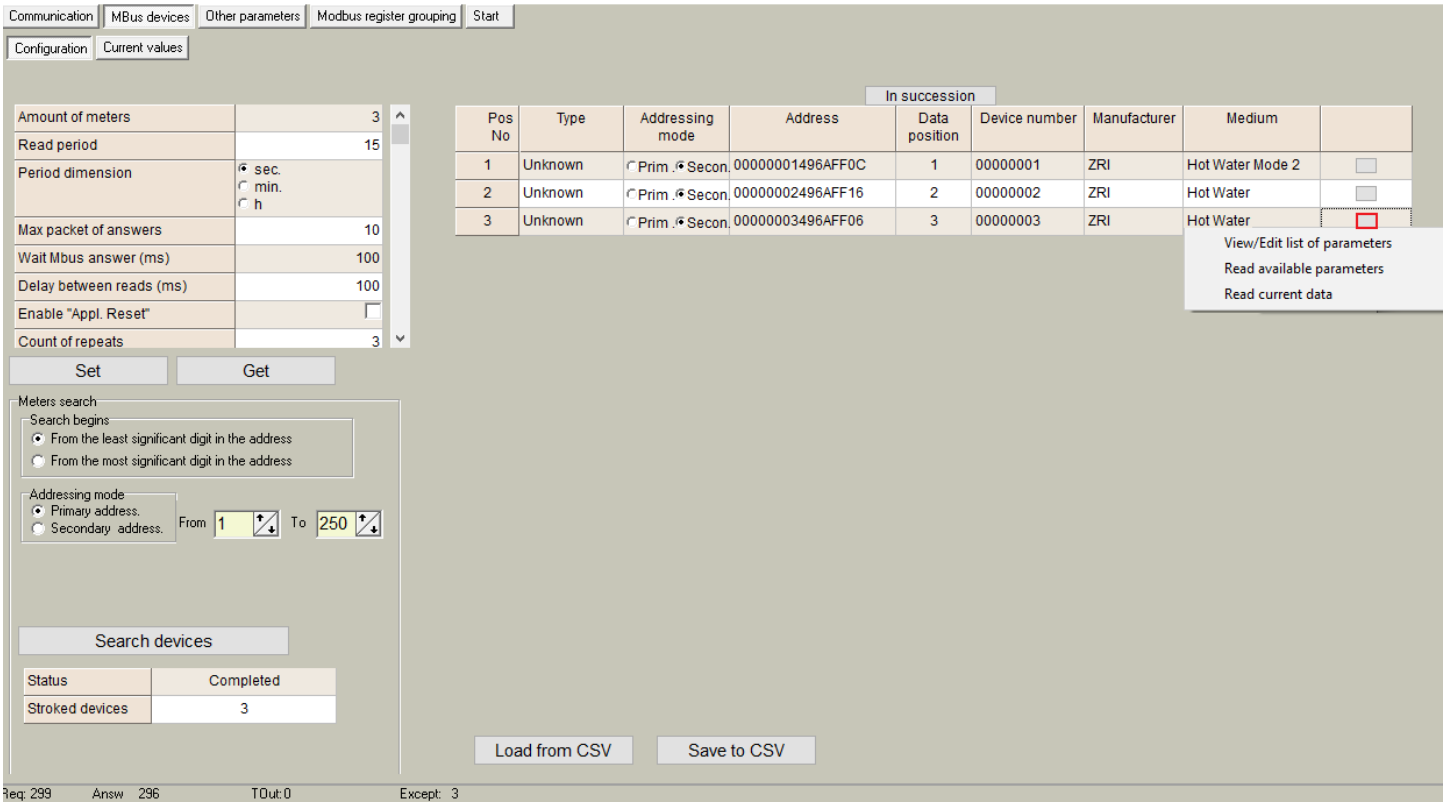

Then you have to perform the Mbus meters searching. Before searching, you have to choose, what type the Mbus meter will be searching, primary or secondary addressing. if you know the address of the Mbus meter, you can enter it in the Address field.



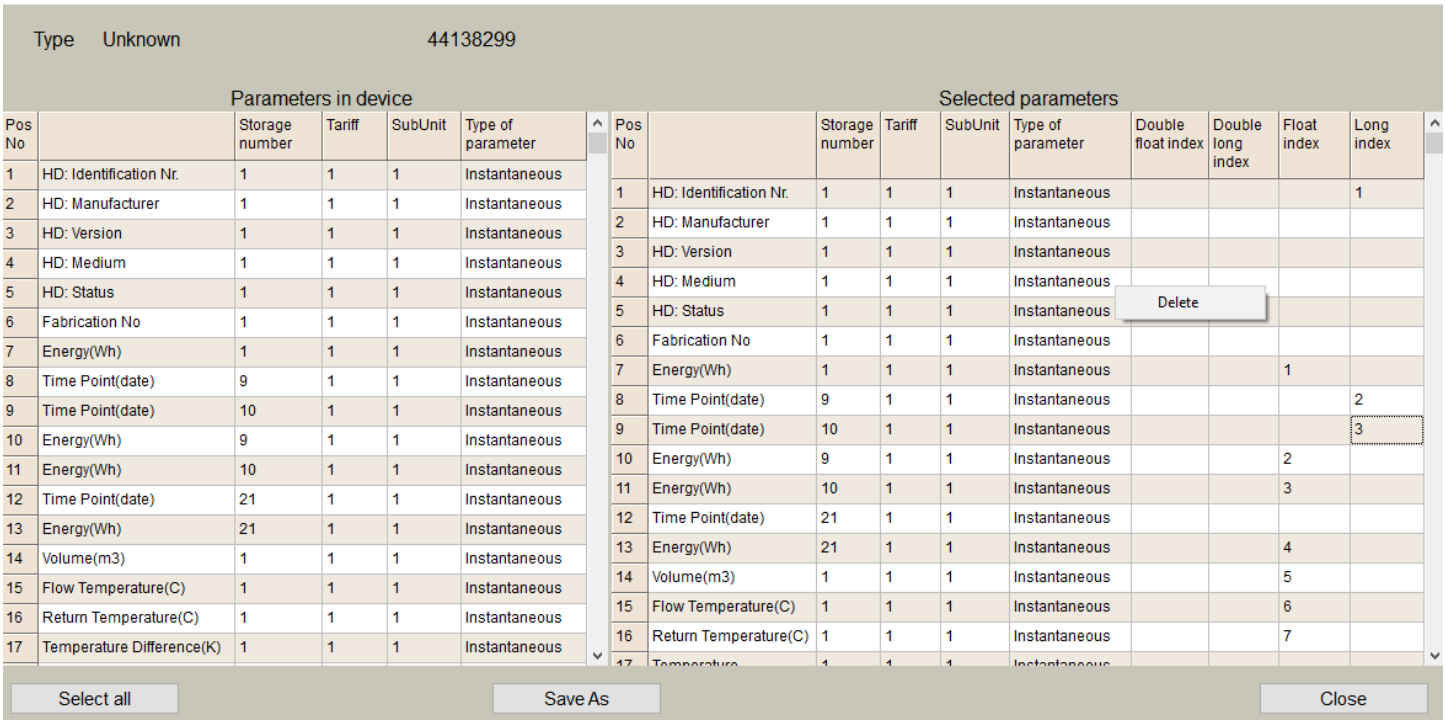

After a successful search, a new window will open showing the Mbus meters found. You have to push “Include new found” then “Delete missing” and “Finish and send”. This will transfer the new meters to the converter.




Then, you have to create the meter Type. At first you have to push “Read available parameters”, a new window will open.



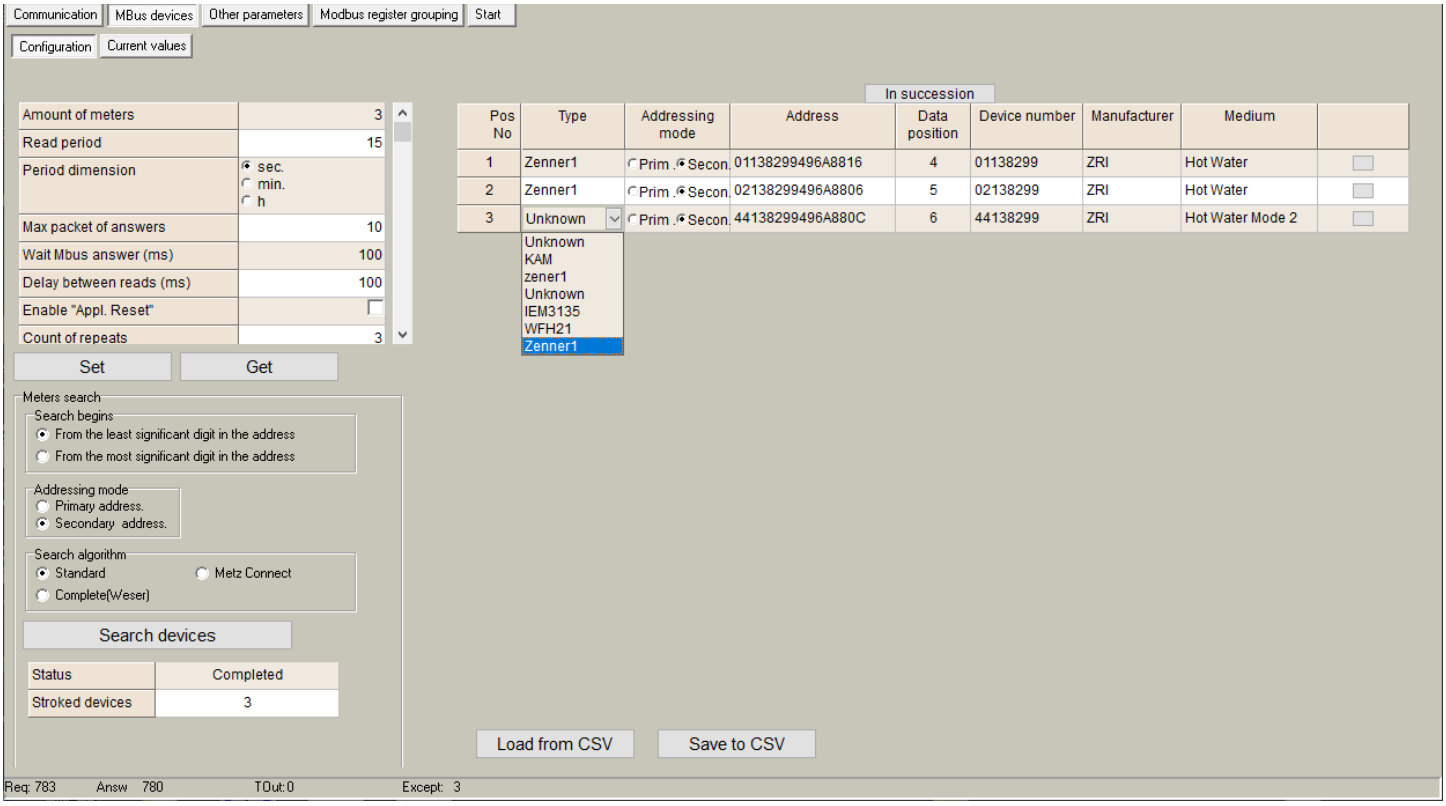
The table on the left shows all possible this Mbus meter parameters. In the table on the right, you have to select the parameters you want to read from the Mbus meter. The parameters you want to read are selected by listing the indexes next to the required parameter name in the rows and in the required number format column. Double float - 64bit, Float - 32bit, Double long - 64bit integer, Long - 32bit integer. It is important to note that indexes in the same column (e.g. Float) cannot be repeated and must go in sequence 1,2,3,4 ... We recommend deleting unfilled rows with indexes using the right mouse button. After all the steps - save with the right name for you.



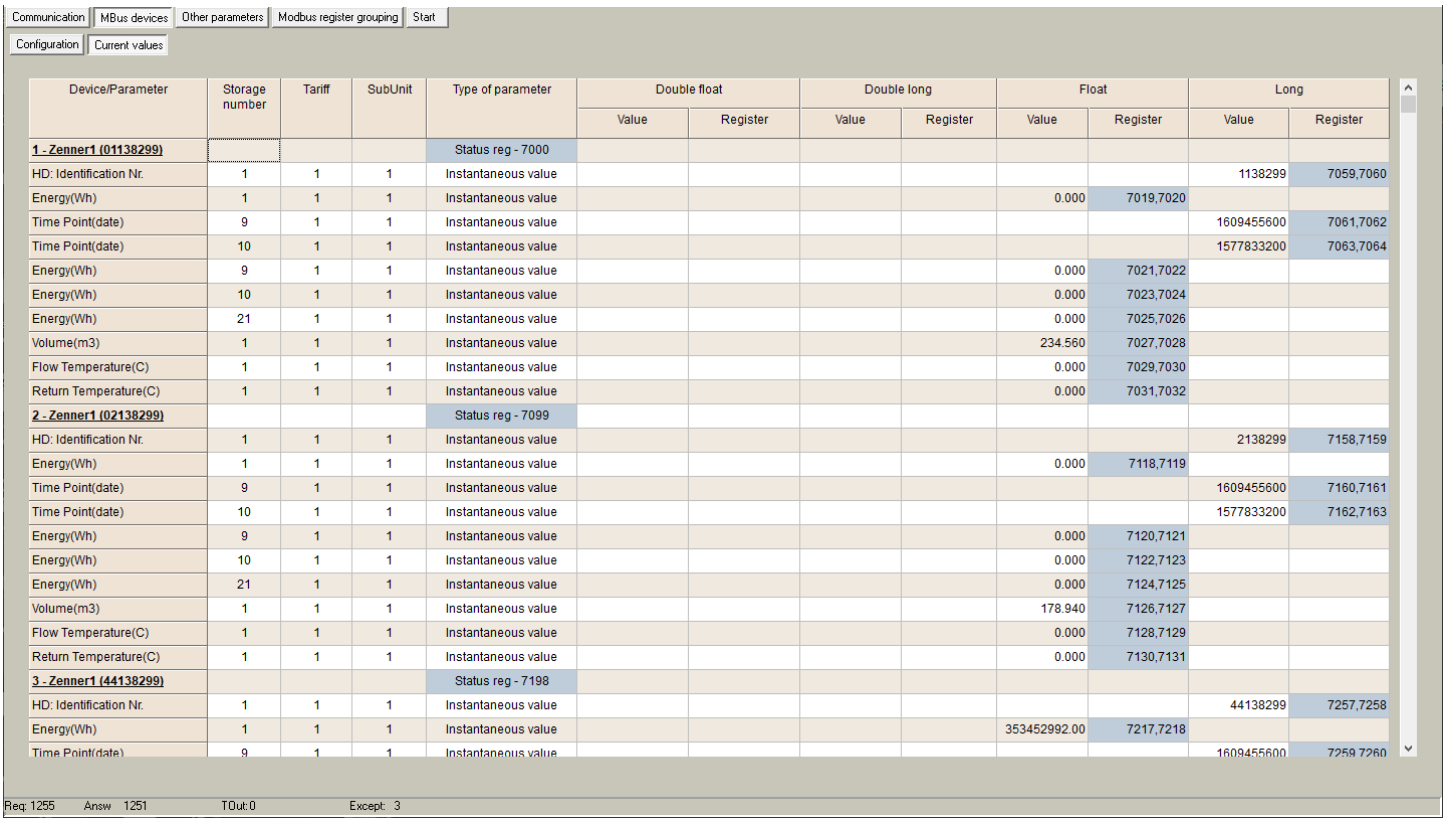

| Pos No | | Storage number | Tariff | SubUnit | Type of parameter |
|---|---|---|---|---|---|
| 1 | HD: Identification Nr. | 1 | 1 | 1 | Instantaneous |
| 2 | HD: Manufacturer | 1 | 1 | 1 | Instantaneous |
| 3 | HD: Version | 1 | 1 | 1 | Instantaneous |
| 4 | HD: Medium | 1 | 1 | 1 | Instantaneous |
| 5 | HD: Status | 1 | 1 | 1 | Instantaneous |
| 6 | Fabrication No | 1 | 1 | 1 | Instantaneous |
| 7 | Energy(Wh) | 1 | 1 | 1 | Instantaneous |
| 8 | Time Point(date) | 9 | 1 | 1 | Instantaneous |
| 9 | Time Point(date) | 10 | 1 | 1 | Instantaneous |
| 10 | Energy(Wh) | 9 | 1 | 1 | Instantaneous |
| 11 | Energy(Wh) | 10 | 1 | 1 | Instantaneous |
| 12 | Time Point(date) | 21 | 1 | 1 | Instantaneous |
| 13 | Energy(Wh) | 21 | 1 | 1 | Instantaneous |
| 14 | Volume(m3) | 1 | 1 | 1 | Instantaneous |
| 15 | Flow Temperature(C) | 1 | 1 | 1 | Instantaneous |
| 16 | Return Temperature(C) | 1 | 1 | 1 | Instantaneous |
| 17 | Temperature Difference(K) | 1 | 1 | 1 | Instantaneous |

| Pos No | | Storage number | Tariff | SubUnit | Type of parameter | Double float index | Double long index | Float index | Long index |
|---|---|---|---|---|---|---|---|---|---|
| 1 | HD: Identification Nr. | 1 | 1 | 1 | Instantaneous | | | | 1 |
| 2 | HD: Manufacturer | 1 | 1 | 1 | Instantaneous | | | | |
| 3 | HD: Version | 1 | 1 | 1 | Instantaneous | | | | |
| 4 | HD: Medium | 1 | 1 | 1 | Instantaneous | | | | |
| 5 | HD: Status | 1 | 1 | 1 | Instantaneous | | | | |
| 6 | Fabrication No | 1 | 1 | 1 | Instantaneous | | | | |
| 7 | Energy(Wh) | 1 | 1 | 1 | Instantaneous | | | 1 | |
| 8 | Time Point(date) | 9 | 1 | 1 | Instantaneous | | | | 2 |
| 9 | Time Point(date) | 10 | 1 | 1 | Instantaneous | | | | 3 |
| 10 | Energy(Wh) | 9 | 1 | 1 | Instantaneous | | | 2 | |
| 11 | Energy(Wh) | 10 | 1 | 1 | Instantaneous | | | 3 | |
| 12 | Time Point(date) | 21 | 1 | 1 | Instantaneous | | | | |
| 13 | Energy(Wh) | 21 | 1 | 1 | Instantaneous | | | 4 | |
| 14 | Volume(m3) | 1 | 1 | 1 | Instantaneous | | | 5 | |
| 15 | Flow Temperature(C) | 1 | 1 | 1 | Instantaneous | | | 6 | |
| 16 | Return Temperature(C) | 1 | 1 | 1 | Instantaneous | | | 7 | |

Select the type of Mbus device you created earlier, sort the Mbus devices in sequence "In succession" and transfer the information to the data logger by pressing the SET button.




Mbus data are compiled in modbus registers, which are presented in gray fields. You have to read these registers through RS845/RS232 modbus interface.




| Device/Parameter | Storage number | Tariff | SubUnit | Type of parameter | Double float | | Double long | | Float | | Long | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Value | Register | Value | Register | Value | Register | Value | Register |
| **1 - Zenner1 (01138299)** | | | | Status reg - 7000 | | | | | | | | |
| HD: Identification Nr. | 1 | 1 | 1 | Instantaneous value | | | | | | | 1138299 | 7059,7060 |
| Energy(Wh) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7019,7020 | | |
| Time Point(date) | 9 | 1 | 1 | Instantaneous value | | | | | | | 1609455600 | 7061,7062 |
| Time Point(date) | 10 | 1 | 1 | Instantaneous value | | | | | | | 1577833200 | 7063,7064 |
| Energy(Wh) | 9 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7021,7022 | | |
| Energy(Wh) | 10 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7023,7024 | | |
| Energy(Wh) | 21 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7025,7026 | | |
| Volume(m3) | 1 | 1 | 1 | Instantaneous value | | | | | 234.560 | 7027,7028 | | |
| Flow Temperature(C) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7029,7030 | | |
| Return Temperature(C) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7031,7032 | | |
| **2 - Zenner1 (02138299)** | | | | Status reg - 7099 | | | | | | | | |
| HD: Identification Nr. | 1 | 1 | 1 | Instantaneous value | | | | | | | 2138299 | 7158,7159 |
| Energy(Wh) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7118,7119 | | |
| Time Point(date) | 9 | 1 | 1 | Instantaneous value | | | | | | | 1609455600 | 7160,7161 |
| Time Point(date) | 10 | 1 | 1 | Instantaneous value | | | | | | | 1577833200 | 7162,7163 |
| Energy(Wh) | 9 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7120,7121 | | |
| Energy(Wh) | 10 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7122,7123 | | |
| Energy(Wh) | 21 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7124,7125 | | |
| Volume(m3) | 1 | 1 | 1 | Instantaneous value | | | | | 178.940 | 7126,7127 | | |
| Flow Temperature(C) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7128,7129 | | |
| Return Temperature(C) | 1 | 1 | 1 | Instantaneous value | | | | | 0.000 | 7130,7131 | | |
| **3 - Zenner1 (44138299)** | | | | Status reg - 7198 | | | | | | | | |
| HD: Identification Nr. | 1 | 1 | 1 | Instantaneous value | | | | | | | 44138299 | 7257,7258 |
| Energy(Wh) | 1 | 1 | 1 | Instantaneous value | | | | | 353452992.00 | 7217,7218 | | |
| Time Point(date) | 9 | 1 | 1 | Instantaneous value | | | | | | | 1609455600 | 7259,7260 |

# Connecting to device

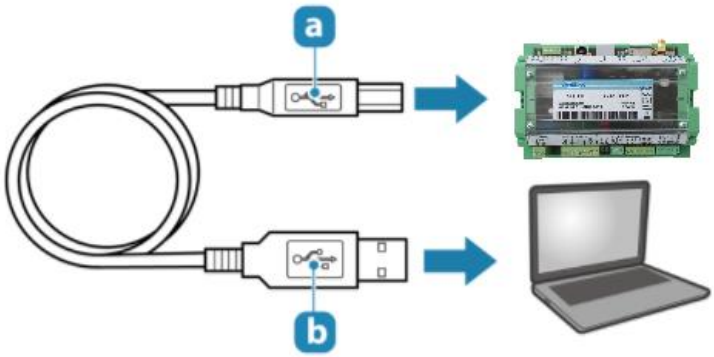
## Overview

USB port is used for local configure of device. Also it is possible configure device via Ethernet, 3G modem or any of UARTS if them are used as Modbus slaves. All configuration is made using Modbus protocol and using device configuration tool software which can be downloaded from manufacture website.

### Connecting over USB

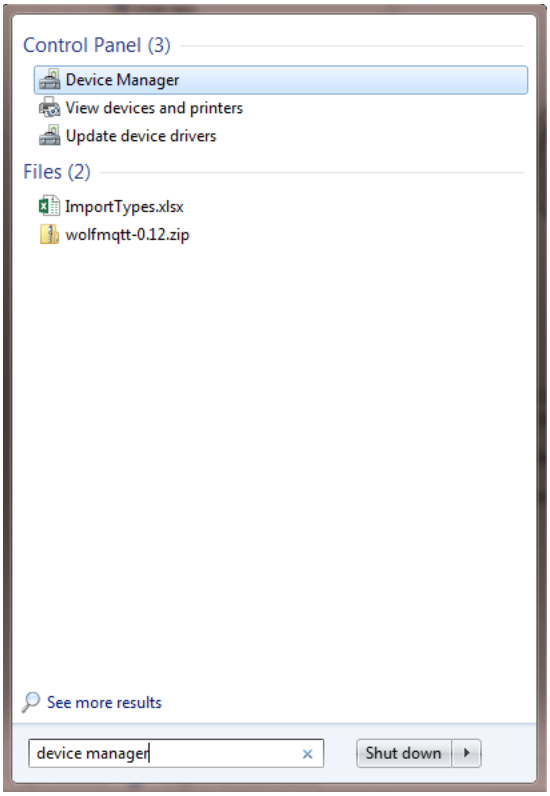
Use USB Type-A to Type-B cable to connect device to computer.

- a) To device USB Type-B
- b) To computer USB Type-A



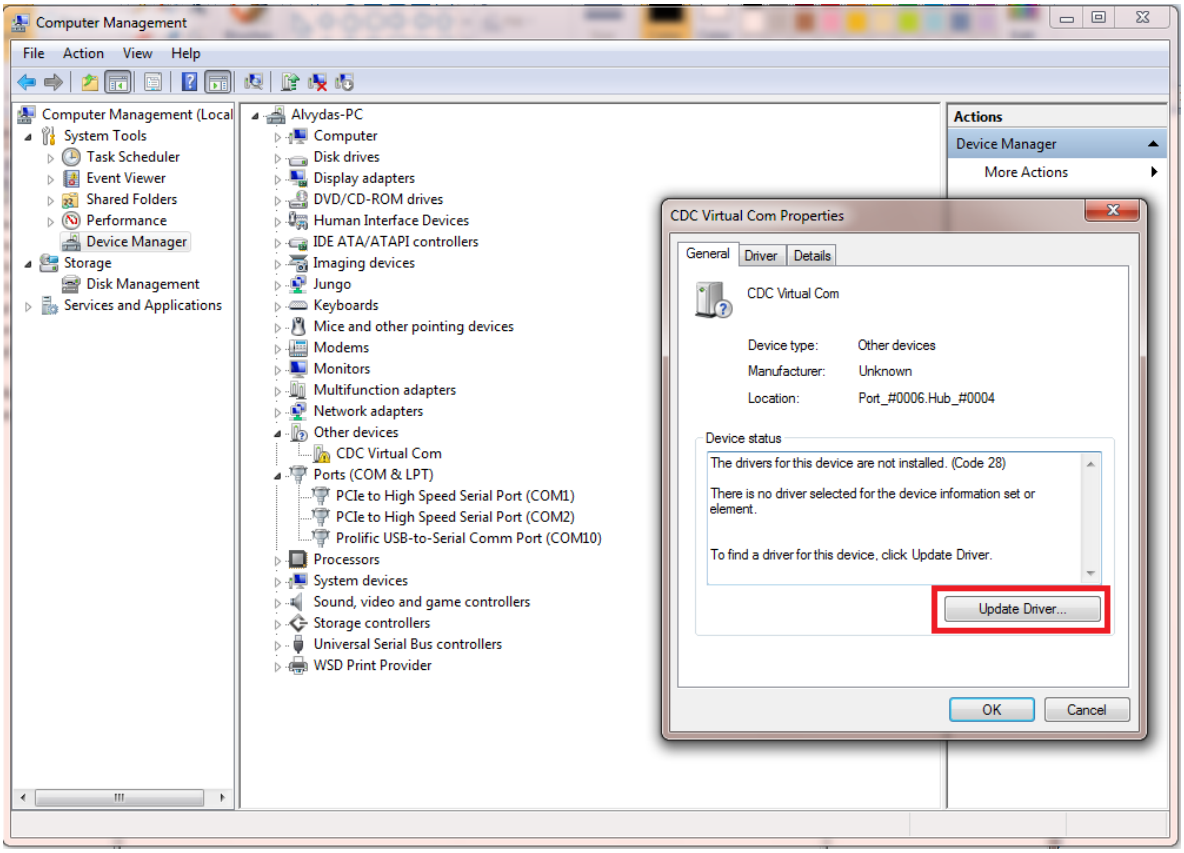

If USB drivers not installed automatically you need to install them manually. Follow this steps:

1. In the search box type into and then click **Device Manager**.



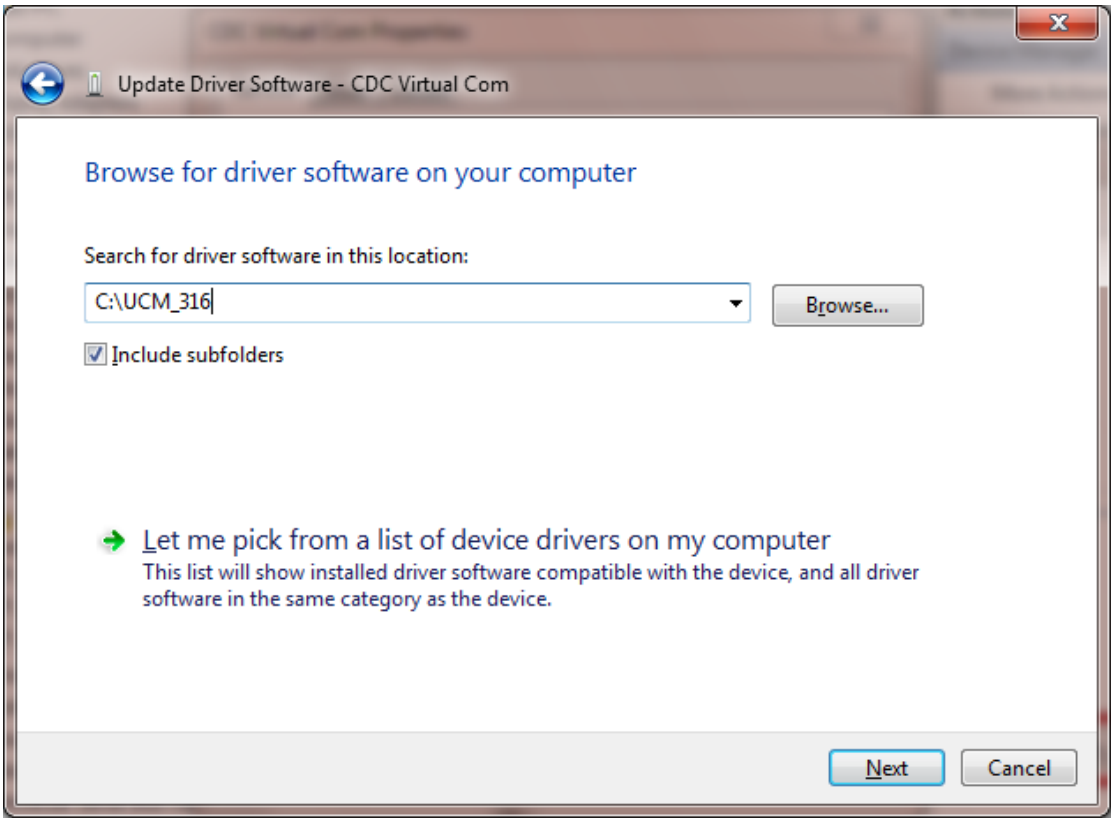

2. Double-click the device category, and then double-click the device you want.

3. Click Update Driver, and follow the instruction



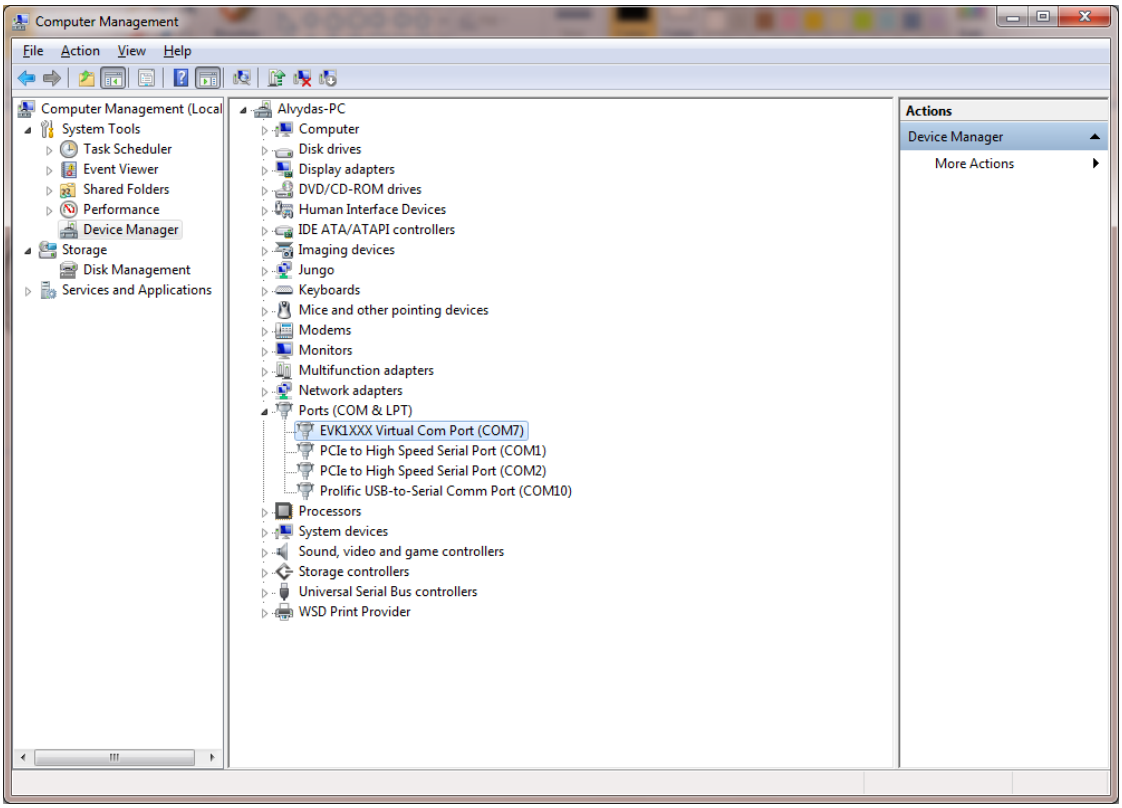

4. Select "Browse my computer for driver software", click "Browse" and select configuration  software folder.

5. Click "Next".




6. Wait while Windows installs driver. If you see message "Windows can't verify the publisher ...." select "Install this driver software anyway".

7. After installation you will see something like "EVK1XXX Virtual Com Port" and com port number. Use this com port for connection with configuration tool.



 **On some Windows versions (Windows 8, windows 10) you will need to disable third party driver signature checking before installing device driver. Please check on Internet how to do this.**