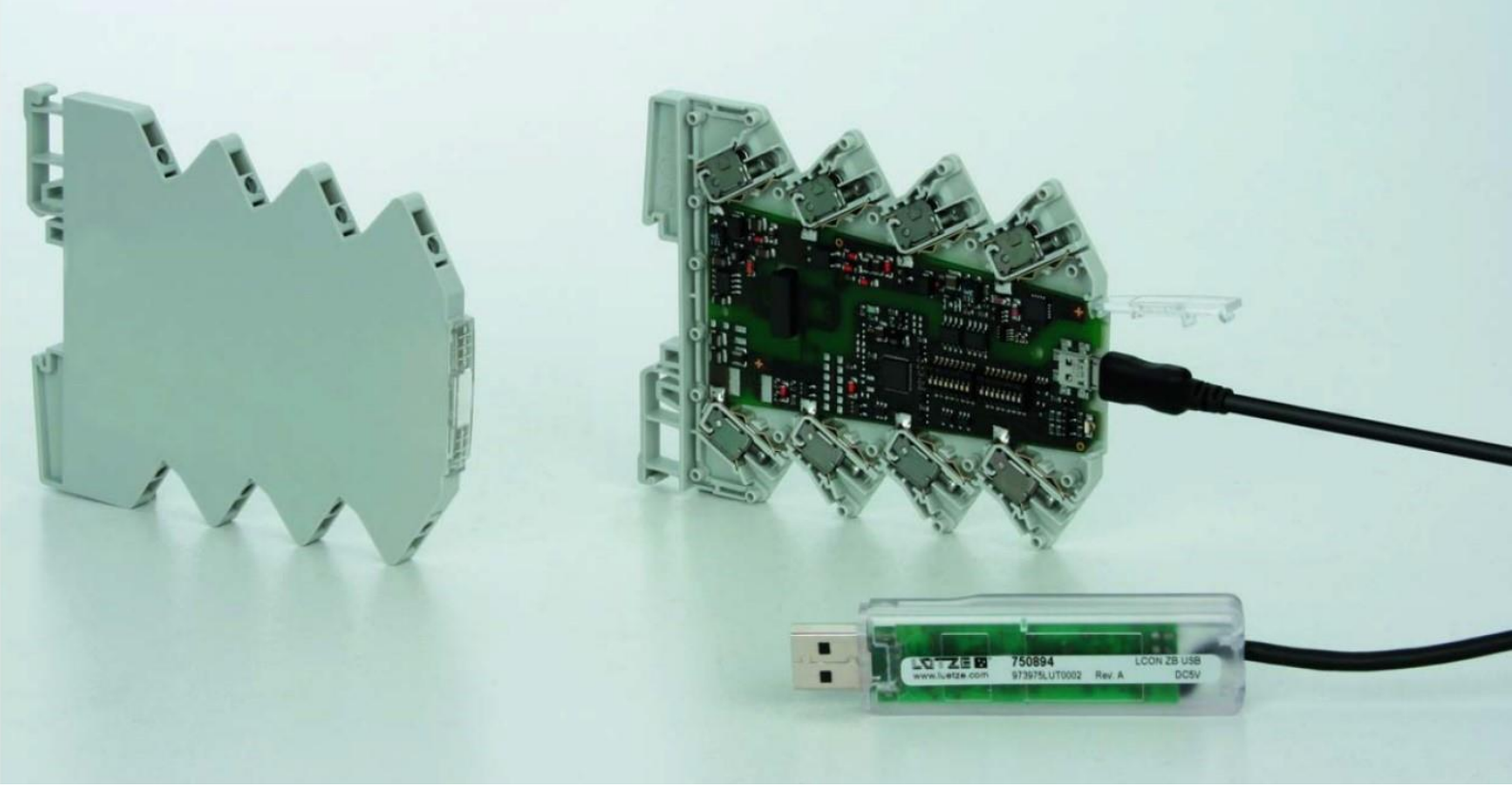

Transportation Solutions

LCON Parameterizable transducers

Parameterization

Application manual

Version 03

LUTZE TRANSPORTATION

Lütze Transportation GmbH reserves the right to make changes to its products in the interest of further technical development. These changes are not necessarily documented in each individual case.

These operating instructions are an integral part of the device and contain important information on safety and operation. Read the operating instructions before use to exclude possible dangers and to ensure proper use.

These operating instructions and the information contained therein have been compiled with due care. However, Lütze accepts no liability for printing or other errors or for any damage resulting therefrom.

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Content

1 Introduction

These operating instructions are part of the LCON parameterisation and driver software. These installation instructions contain important information on the operation of the software, as well as on the safety and operation of the corresponding devices.

This manual must be read and understood before installing, operating, maintaining, or disposing of the device. Keep this document for later use.

CAUTION

Risk of injury and damage to property due to non-observance of the operating instructions.

Always read these operating instructions before planning the system in order to avoid or reduce risks and damage.

NOTICE

These operating instructions contain important information on safety, commissioning, operation, maintenance and disposal of the device.

Always keep the document at hand. This applies until the device is disposed of. Pass on the operating instructions if the device is sold, distributed or loaned.

You can also find these operating instructions at
***www.luetze-transportation.com*.**
In the search field, enter either the product name or the product number.

1.1 About this operating manual

These instructions provide information on how to handle the products throughout its entire product life cycle, from delivery to disposal.

Further documents apply in addition to this operating manual.

If you have suggestions for improving this document, please contact Lütze Transportation GmbH.

2 General Information

2.1 Symbol Description

2.1.1 Safety Messages

This document contains several safety messages. Each safety message contains a defined signal word and a color. The color and the word are referring to an alert level. There are 4 levels. The safety messages point out hazardous situations and give information on how to avoid these.

DANGER	**Indicates a hazardous situation, which if not avoided will result in death or serious injury.**
WARNING	**Indicates a hazardous situation, which if not avoided can result in death or serious injury.**
CAUTION	**Indicates a hazardous situation, which if not avoided can result in minor or moderate injury.**
NOTICE	**Indicates a situation which could damage the product or the environment. This notice does not apply to personal injury.**

2.1.2 Handling Notes

Additionally, the following symbols can be found. These refer to important technical information and instructions:

	**Refers to important technical information. This indicates to the user a specific action that must be performed to operate the device safely.**
	**Refers to the use of different tools.**

2.2 Copyright

This document is intended for the operator and his employees. It is forbidden to give the content to a third party, to duplicate, exploit or impart it. The Lütze Transportation GmbH has to allow it explicit in writing.

General data, text, images and drawings are copyrighted and are liable to the industrial property right. Contravention can be prosecuted. The named brands and product names in this document are trademarks or registered trademarks by titleholder.

2.3 Disclaimer

The document was written under consideration of the applied standards, regulations and the current state of technology.

The content is verified of accuracy. Discrepancies are not excluded. For those discrepancies we disclaim liability. Applicable changes and additional information will be in the next version of the document.

The Lütze Transportation GmbH does not assume liability for any damages and accidents of following reasons:

- Nonobservance of the document
- Untrained and unqualified personnel
- Non conventional use
- Non approved reconstructions and functional modifications of the product
- Using non original or non admitted parts or equipment

2.4 Standards and norms

The product is state of the technology and comply with the applicable safety regulations and the corresponding harmonized European standards (EN).).

NOTICE	**The latest versions of the standards and further information about the product can be found in the corresponding data sheets that are valid with this document.**

2.4.1 Observe other applicable documents

When operating the device, please also observe all operating instructions enclosed with other components of your system.

NOTICE	**Always keep these operating instructions and the other applicable documents (e.g. data sheets, package inserts, declarations of conformity, etc.) at hand so that they are available when required.** **This applies until the device is disposed of. Hand over all documents in case of sale, distribution or rental of the device.**

For reasons of clarity, we would like to point out that these operating instructions cannot describe all conceivable problems in connection with the use of this device.

Should you require further information or encounter special problems that are not dealt with in sufficient detail in the operating instructions, you can request the necessary information about service from Lütze Transportation GmbH.
(See also chapter "Service")

3 Safety

3.1 Applicable documents

The software is used for the parameterization of various transducers.

NOTICE	**Before installing the software, also read the documentation of the transducer to be parameterized and, if necessary, the online help of the PACTware as well as the external "Installation Instructions PACTware and HART DTM".**

3.2 Safety informations

3.2.1 Contents of the operating instructions

NOTICE	**These instructions must be read and understood before installing, operating or maintaining the device.**

These operating instructions must be read and observed before any work is carried out on or with the units. This applies to all persons who come into contact with the devices. Trained personnel and specialists, especially electricians (see also chapter „Electrically qualified persons“) who have already worked with similar equipment should also have read and understood the manual.

3.2.2 Appropriate use

The parameterization software, as well as the driver software, is exclusively for the parameterization of the following transducers from Lütze Transportation GmbH and Friedrich Lütze GmbH:

- Analogue/analogue transducer
- Temperature/analogue transducer
- Analogue limit value switch
- Temperature limit switch
- USB service cable.

3.2.3 Addressees

This operating instruction is directed towards planers, project managers and programmers, as well as to staff authorized to commission, operate and maintain the devices and systems.
A distinction is made between various qualification levels of the staff.

3.2.3.1 Operating Personnel

Only qualified personnel may carry out the following work on the modules:

Working range	Competency
Installation, transport and storage	Experts
Commissioning, decommissioning	Trained Employee <
Operation	Trained Employee <
Servicing and maintenance	Experts
Troubleshooting	Experts

WARNING

Risk of injury by usage through insufficient qualified operating personnel! Misusage through performed insufficient or qualified personnel can cause property damage and personal injuries.

- Tasks which apply special procedures should be done by trained and qualified employees or experts, especially electricians.

(according to EN 60204-1)

Trained Employee

The employee was trained by the employer on the task and possible hazardous situations. The employee does not have any technical knowledge.

Experts

The employee has a technical education, knowledge and/or experience in the required field. The employee is capable to perform specific operations on and with the product.

Electrically qualified persons

The employee has a technical education in the required field. The employee is capable to perform special operations on and with the product. The different sections of the document refer to the qualification level of the operating personnel.

According to European Standard EN 50110-1:2008-09-01 Section 3.2.3.

NOTICE The individual sections refer to the qualification level of the personnel.

3.2.4 Responsibility of the operator

NOTICE The customer is subject to an obligation to report back when safety-related errors are discovered.

Since the device is used in a commercial area, the operator of the device is subject to the legal obligations for occupational safety:

- The operator of the device is obliged to instruct the operating personnel and to inform himself about the industrial safety regulations.
- The operator must ensure that safety, accident prevention and environmental protection regulations are observed.
- The operator must make an appropriate risk assessment on the
- Workplace/location to detect and warn of special hazards.
- The manual must be kept in the immediate vicinity of the device.
- The information in the operating instructions must be followed.
- The device may only be operated in technically perfect condition.

4 Installation

In addition to the PACTware software, the HART DTM driver is installed. The Lütze DTM driver and the USB driver are necessary for the subsequent configuration of the transducers.

NOTICE Read this in ***chapter 5 "Installation"*** in the externally available manual ***Installation FDT Software***.

4.1 System requirements

Before installing the software, check whether your system meets the necessary requirements. You will find this information in "ReadMe.txt" in the installation files.

4.2 Download

The software and the drivers are available for download as a zip file from the Lütze Transportation website: www.luetze-transportation.de.

4.3 Installing PACTware and HART DTM drivers

NOTICE Read this in ***chapter 5.3 "Installing PACTware and HART DTM drivers "*** in the externally available manual ***Installation FDT Software***.

4.4 Installing Lütze DTM driver

NOTICE Read this in ***chapter 5.4 "Installing Lütze DTM driver"*** in the externally available manual ***Installation FDT Software***.

4.5 Installing USB driver

NOTICE Read this in ***chapter 5.5 "Installation USB driver"*** in the externally available manual ***Installation FDT Software***.

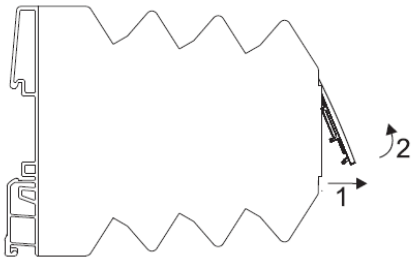
5 Connecting the transducers via LCON USB cable

To configure the transducers with PACTware, connect the respective transducer with the computer via the LCON USB service cable (part no. 815900). Proceed as follows:

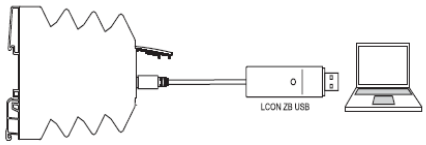
5.1 Enclosure type 1

Open the front shield.

Fold the front shield upwards.



3. Now you can connect the transducer via
   the LCON ZB USB cable with the computer.



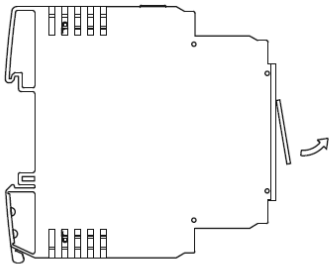
4. If the driver is installed correctly
   the LED on the USB connector lights up green.

NOTICE

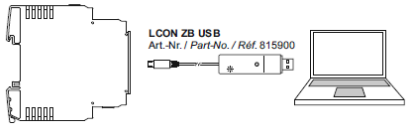
If errors occur during the automatic installation, try to install the driver yourself. Further information can be found in *chapter 5.5 "Installation USB driver"* in the external manual ***Installation FDT Software.***

5.2 Enclosure type 2 (LCON Rail Infinity)

1. Remove the white front shield
   to access the interface.



2. Now you can connect the unit via the
   LCON ZB USB cable with the computer.



3. If the driver is installed correctly
   the LED on the USB plug lights up green.

NOTICE

If errors occur during the automatic installation, try to install the driver yourself. Further information can be found *in chapter 5.5 "Installation USB driver"* in the external manual ***Installation FDT Software.***

6 Parameterization with PACTware

CAUTION

Possible malfunction of the transducer!

Set the DIP switches of the LCON transducers 817006 and 817002 to OFF during parameterization.

6.1 Creating Lütze devices / Creating a new project

6.1.1 Wizard

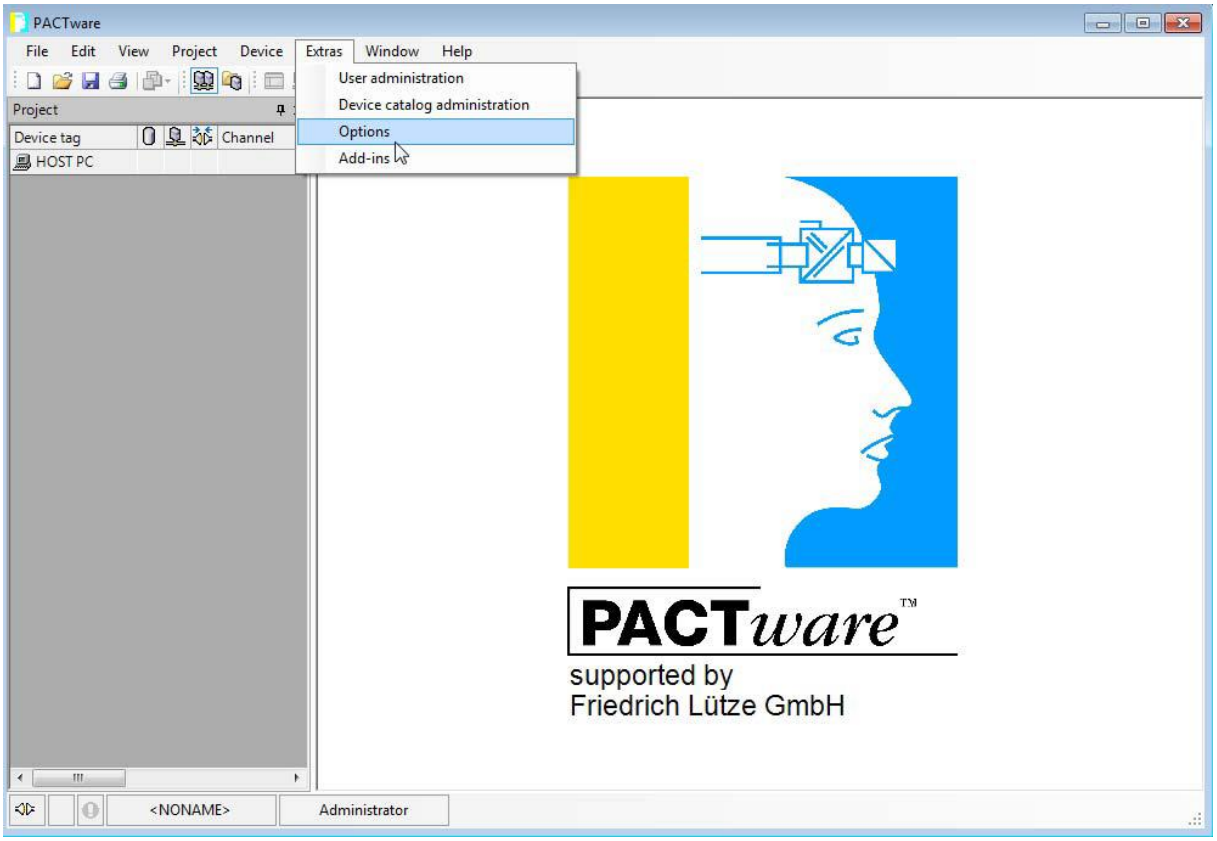
NOTICE

If the wizard does not open automatically after a new installation, perform the following steps.

After the settings have been successfully changed and saved, the wizard will be displayed each time the program is restarted.

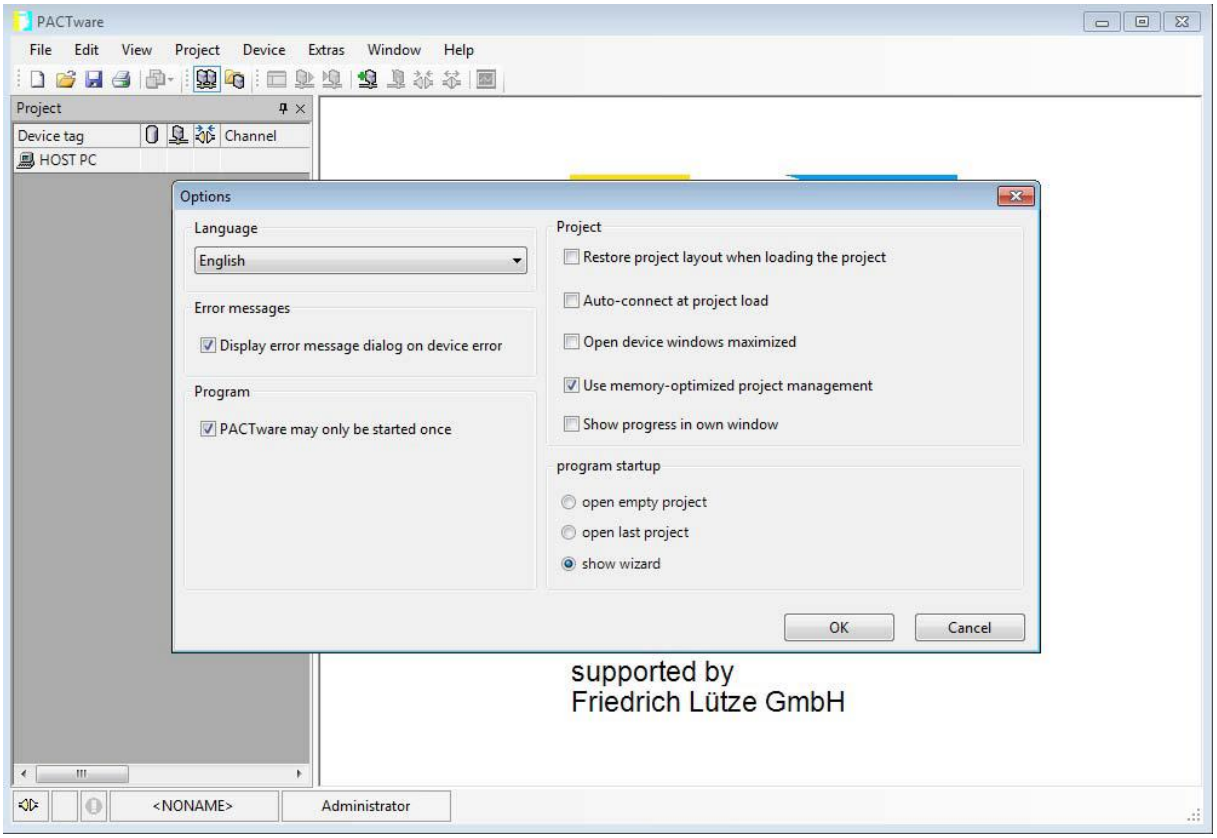
6.1.1.1 Changing the start-up settings

1. Start PACTware.
2. Select under the menu item ***Extras*** the sub-item ***Options***.



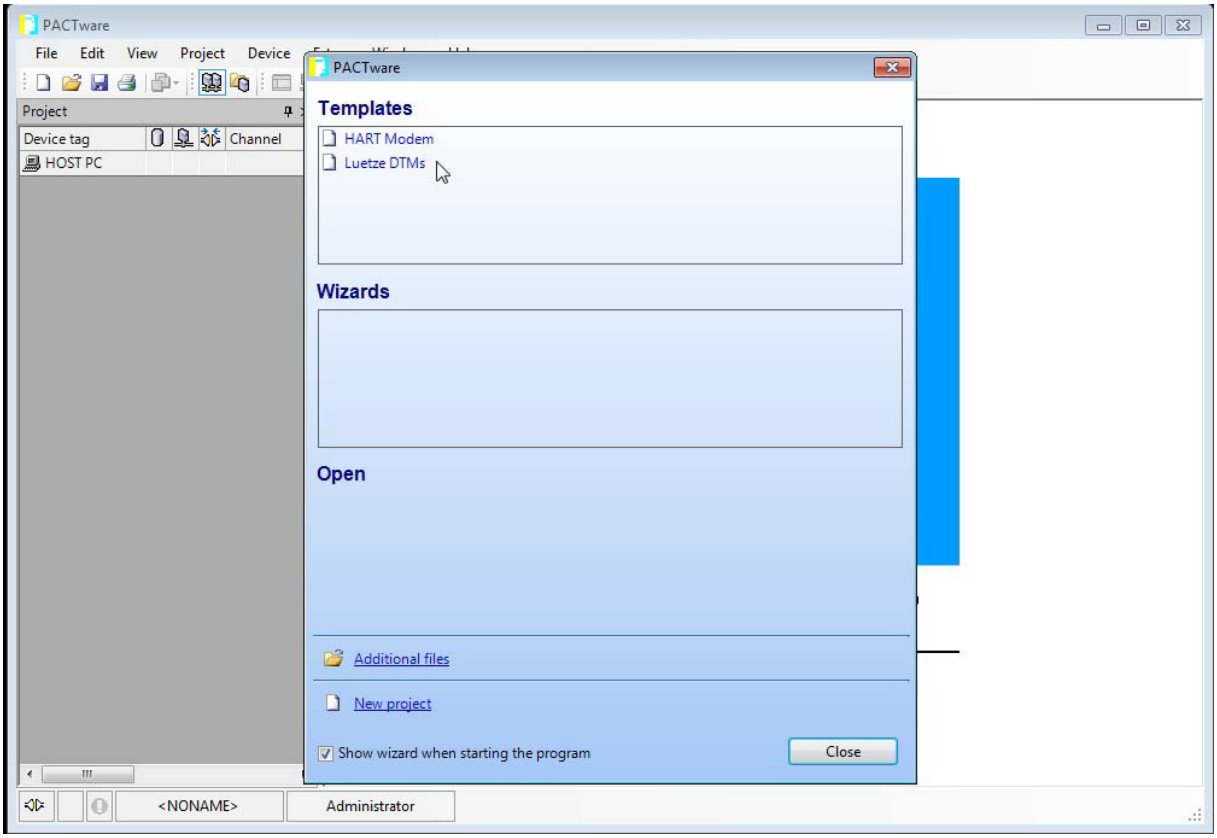
3. Select ***Show wizard*** and confirm with ***OK***.

   Then restart the program.

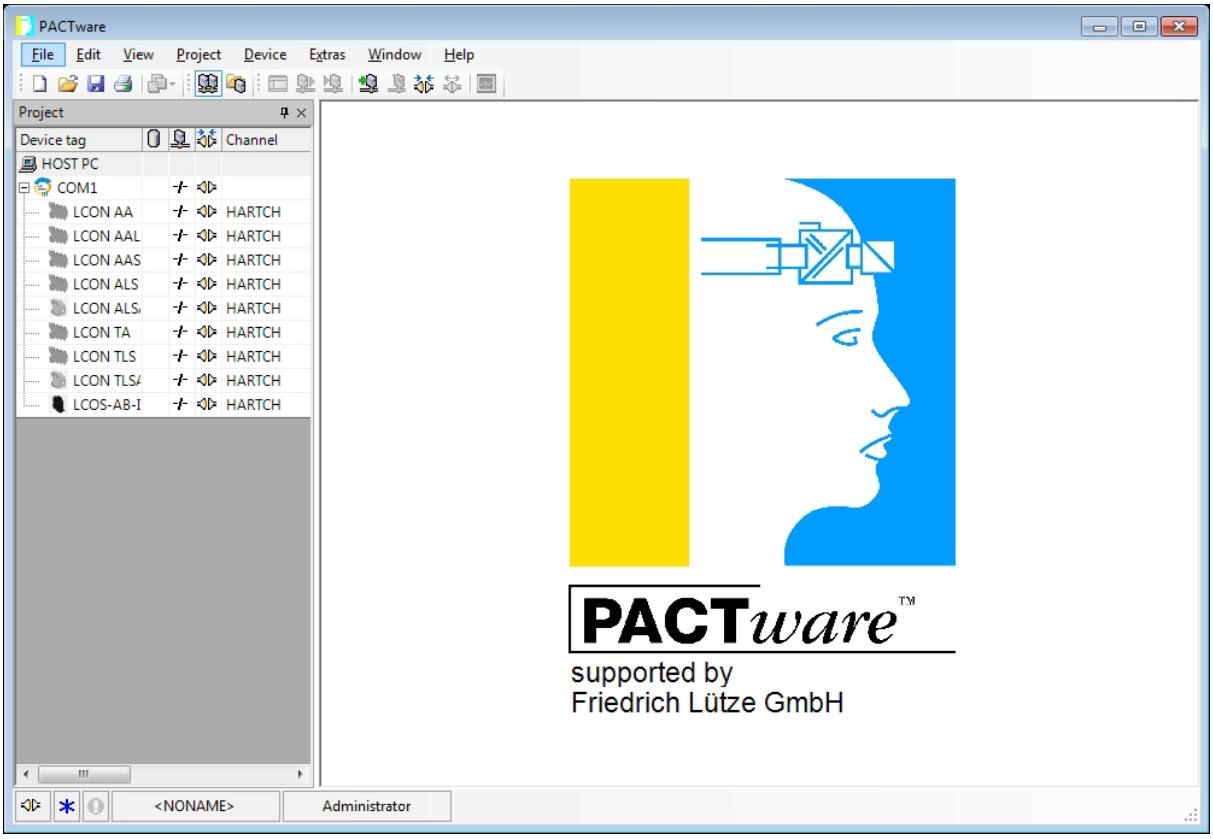


4. In future, the wizard window will be displayed every time the program is started.

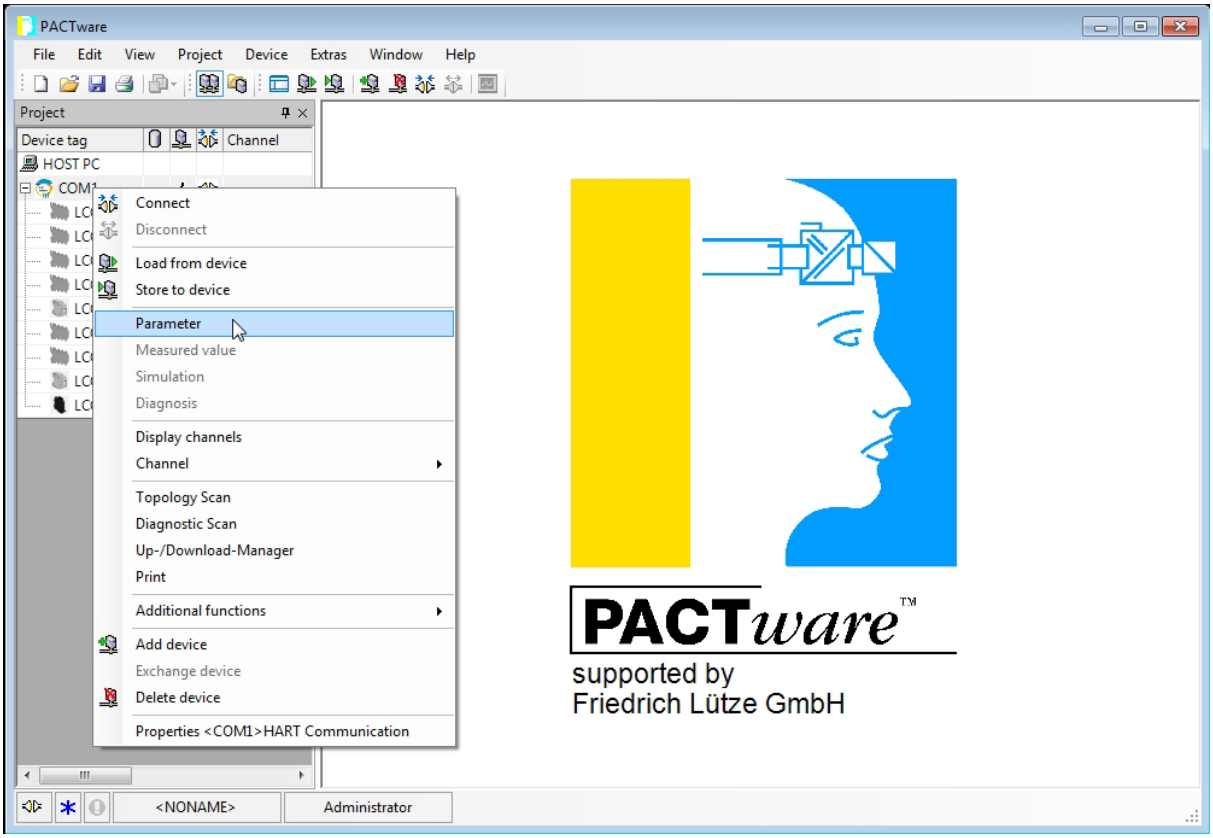
   Now select “Lütze DTMs”.



5. The following project window with the Lütze units appears. Click with the right mouse button on the COM interface.

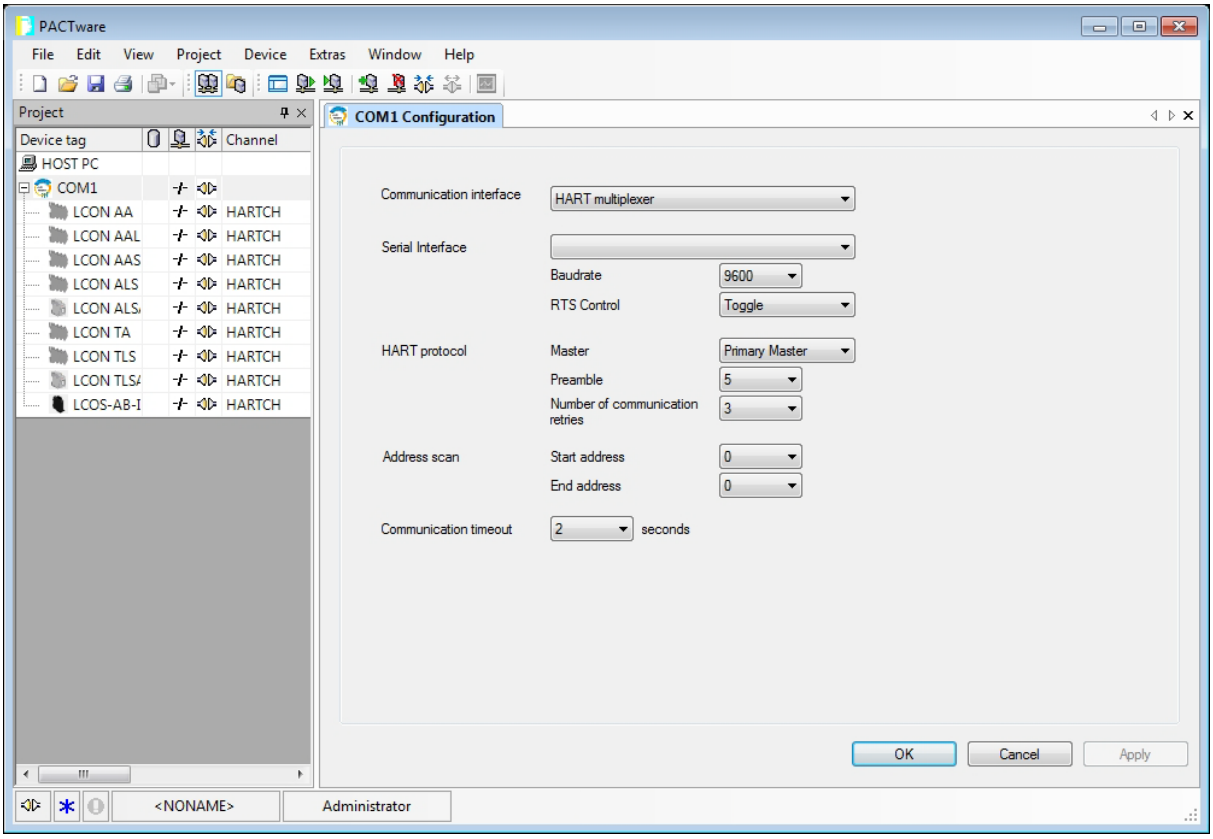


6. Then select ***Parameter***.

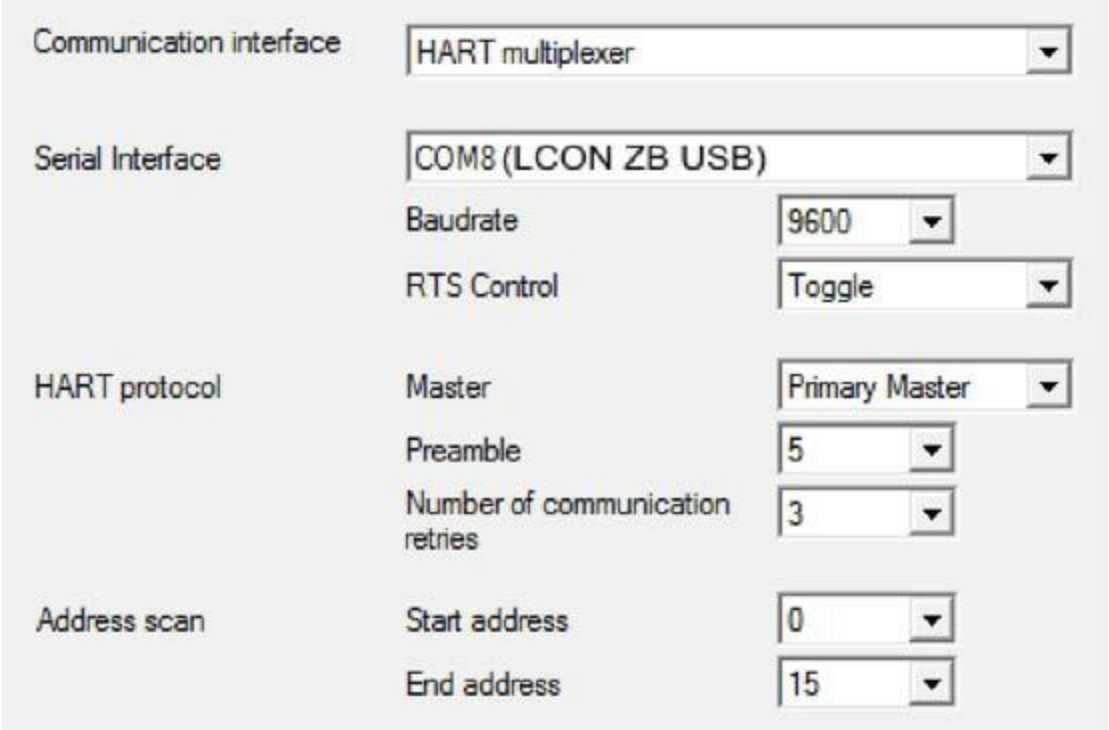


7. The following window appears. Select the corresponding COM port to which you have connected the USB service cable for parameterization.

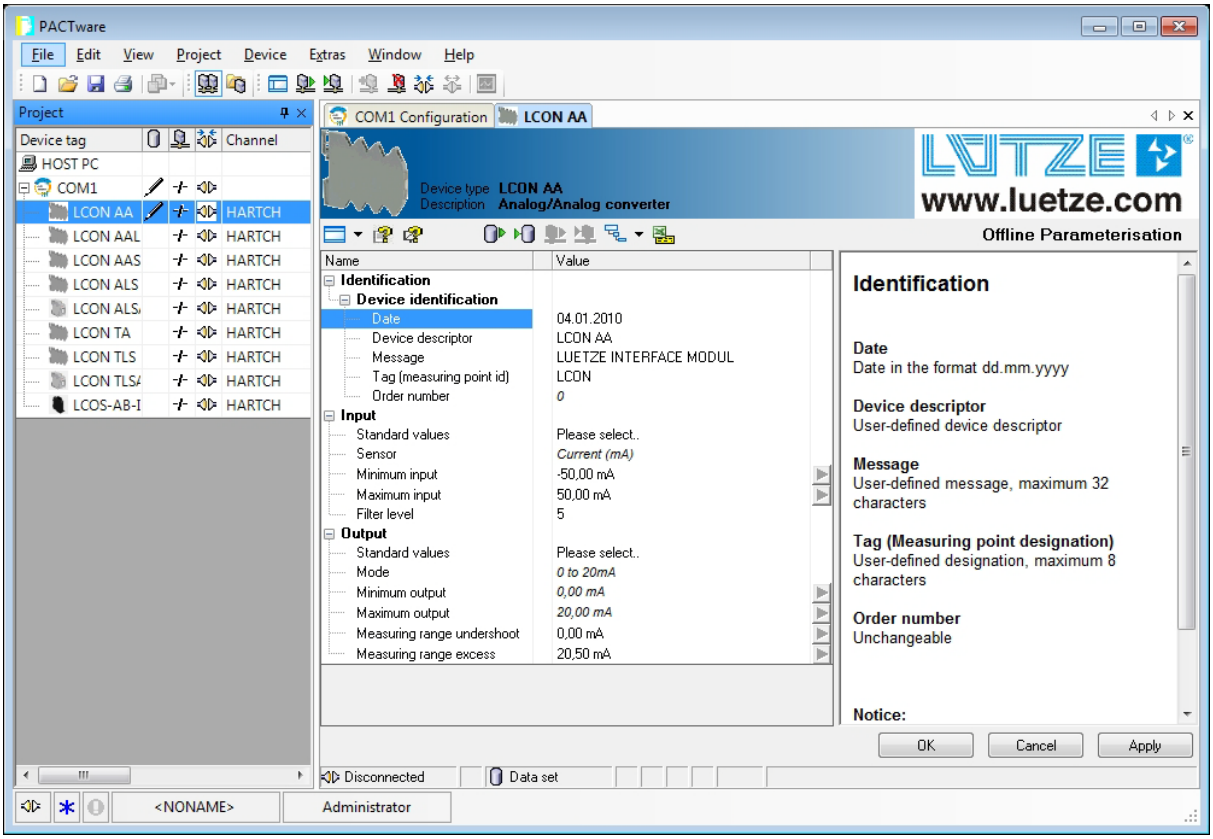
   Then confirm with OK.



8. Change the settings as follows:



9. The Lütze devices can now be selected and parameterized.

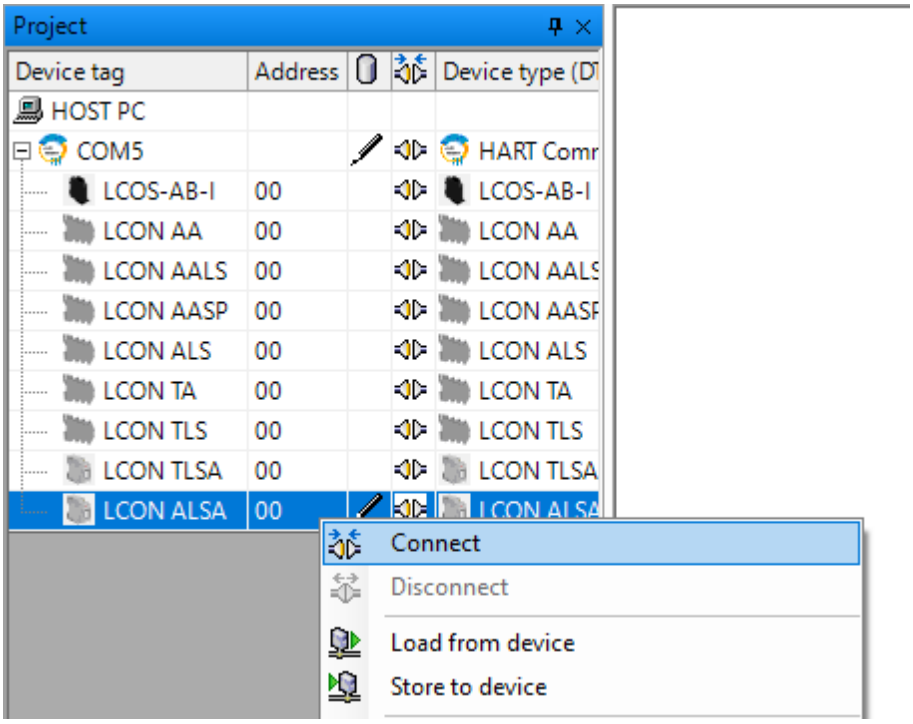


6.2 Online/offline parameterization

Parameterization of the units is possible in online and offline mode. In online mode, the respective unit is connected. In offline mode the data is written to a database and saved. If a module is connected and the connection between HOST PC and transducer is established, the data can be transferred from the database to the unit.

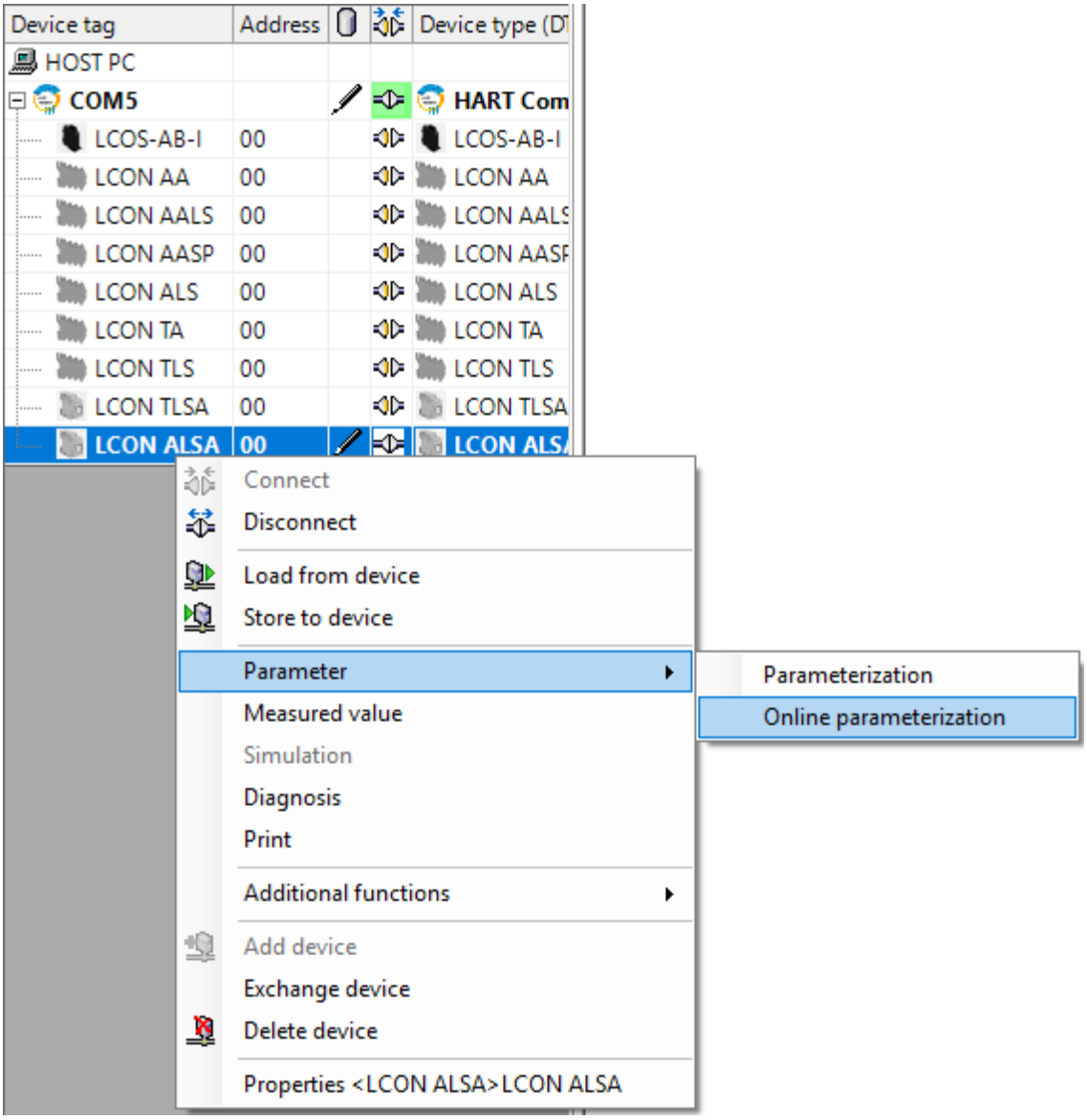
In the following, an online parameterization is shown on the basis of a Lütze Analogue/analogue/threshold switch LCON ALSA (part no.: 817022) as an example.

1. Click with the right mouse button on the device to be parameterized and select "Establish connection" from the list.



2. Click the right mouse button on the unit. Select ***Parameter*** from the main list. In the sub-tab there is a choice between *(Offline)* ***parameterization*** and ***Online parameterization*** (provided the connection to the unit has been successfully established).

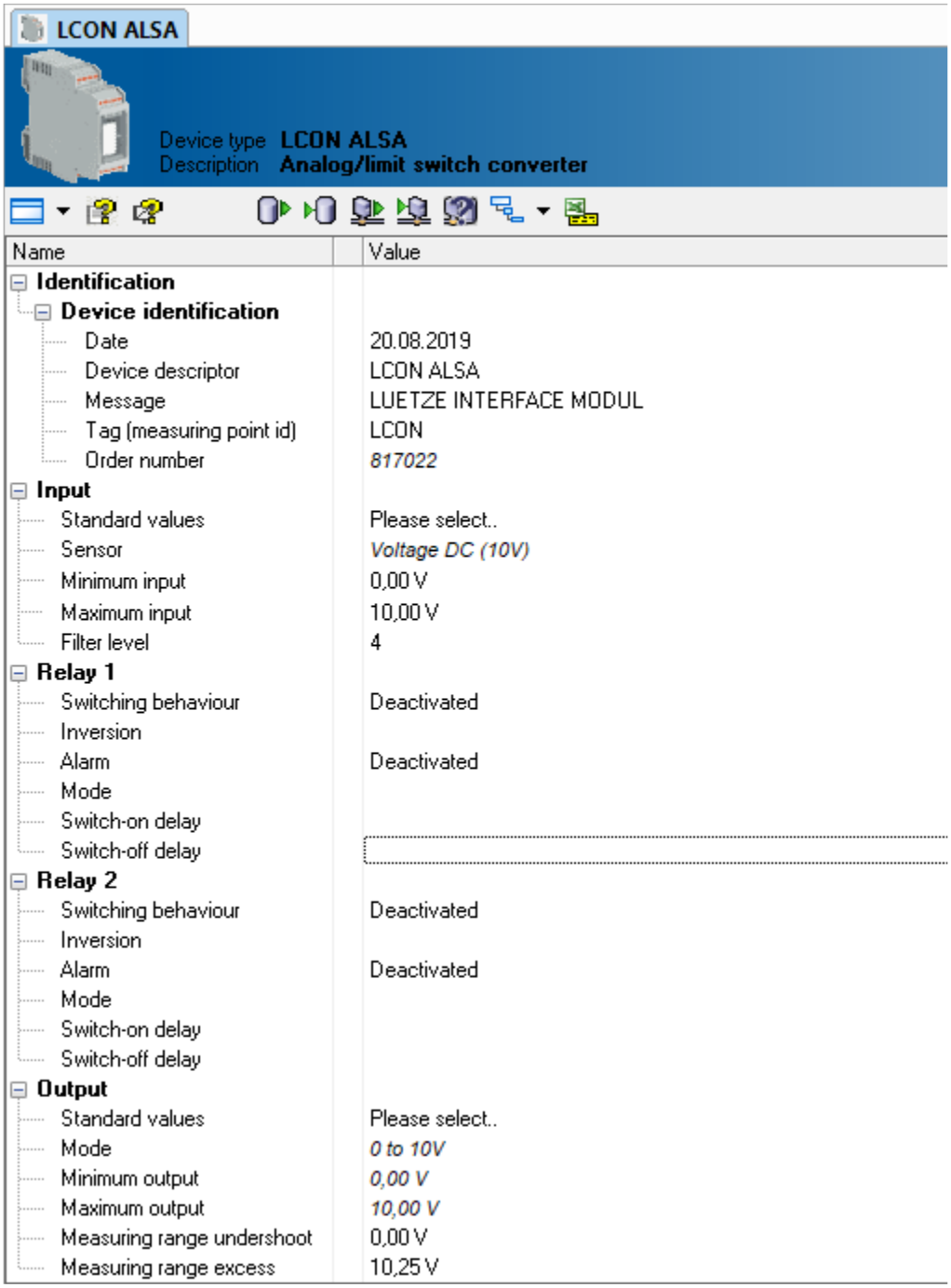
For the example described, Online parameterization is carried out.



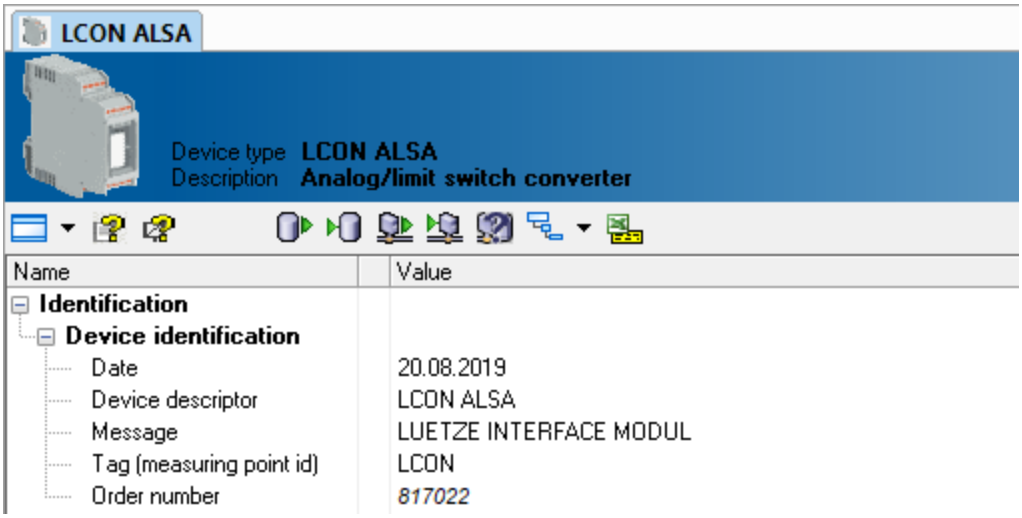
3. The main window with the parameter settings appears.

   This looks different depending on the selected unit.

   The parameter settings are divided into main categories (**bold**) and subcategories (*italics*).



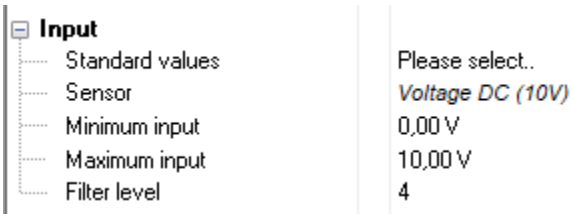
- **Identification**



- ***Device identification***:

  Information about the device used is entered here.

- ***Input***



- ***Default values***:

Numerous default values can be selected here. The default value must be suitable for your application. Basically, you can decide here whether it is a voltage or current input. Furthermore, you can decide whether it is a linear or a non-linear signal.

- ***Sensor*:**

Displays the selected default value.

- ***Min. input size:***

The "minimum input value" is selected here, which corresponds to the "minimum output value" at the output.

- ***Max. Input size***:

Here the "maximum input value" is selected, which corresponds to the "maximum output value" at the output.

- ***Filter stage:***

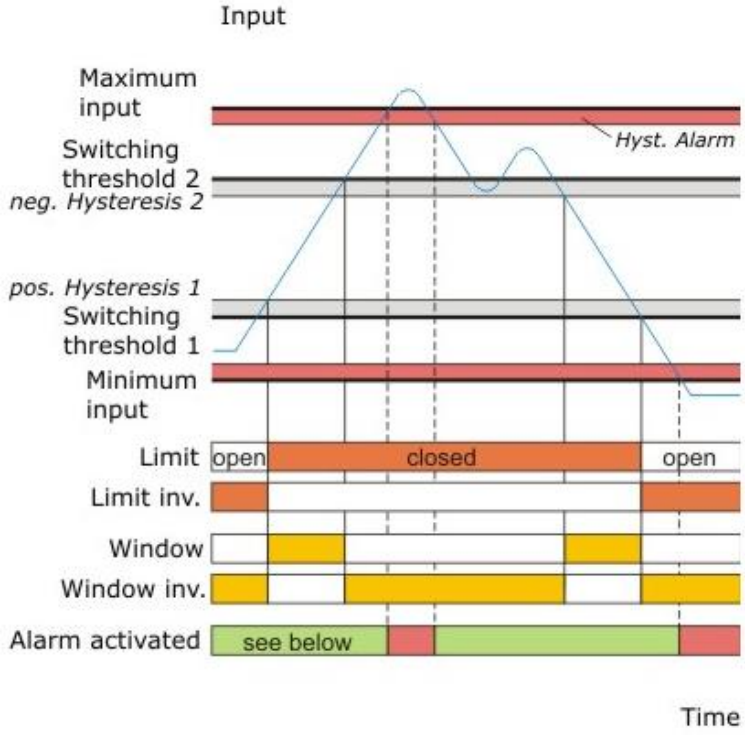
A low-pass filter is implemented to suppress interference signals. Butterworth (filter stage 2-6) or Bessel filters (filter stage 7-11) with different cut-off frequencies can be configured.

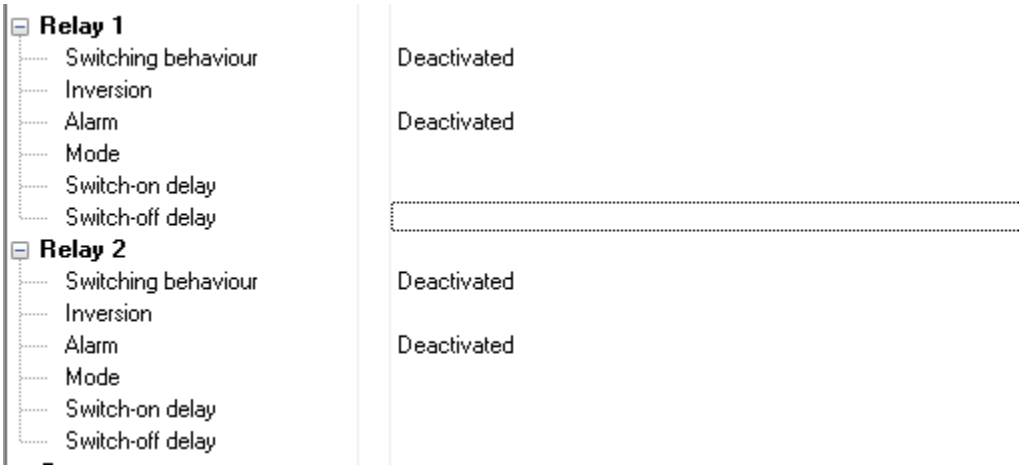
- ***Support points: (NOTE: Appears only if selected under Default Value).***

If a non-linear input signal has been selected, the input function can be linearly approximated with the help of 10 interpolation points.

All 10 interpolation points MUST be entered.

Relays 1 and Relays 2





- ***Switching behavior**:*

The available relays can be configured here

- Deactivated: The relay is never switched
- Limit value: The relay switches **from a threshold value set** (under "Switching thresholds") plus positive or negative hysteresis.
- Window: The relay switches **between two threshold values** (set under "Switching thresholds").

  plus positive or minus negative hysteresis.

- ***Tendency***:

The relay switches when the value changes within a period of time.

Tendency rising	Rise change within a time span switches the relay. Rise change and time span are adjustable.
Tendency falling	Fall change within a time span switches the relay. Fall change and time span are adjustable.
Tendency both	Rise or fall change within a time span switches the relay. Change stroke and time span are adjustable.

Example for rising tendency:

Value (tendency) = 5V and time (tendency) = 2s.

→ ***If the value increases by 5V within 2s, the relay switches.***

- ***Inversion***:

  Here you can select whether the relay is to use a normally open or a normally closed contact is to be used.

  - *Deactivated*:

    The relay is configured as a normally open contact (NO = normally open).

  - *Enabled*:

    The relay is configured as a normally closed contact (NC = normally closed).

- ***Alarm***:

  The alarm is activated when the min. input variable is undercut or the max. max. input variable is exceeded.

- ***Mode***:

  Defines the switching state of the relay (NO or NC) after an alarm has been has been triggered.

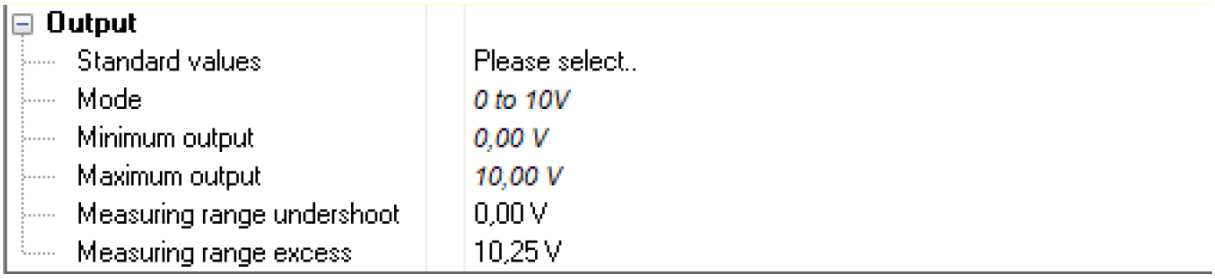
- ***Switch-on delay***:

  A switch-on delay can be configured here.

- ***Switch-off delay***:

  A switch-off delay can be configured here.

Output



- ***Default values:***

  Numerous default values can be selected here. The default value must be suitable for your application. Basically, you can decide here whether it is a voltage or current input.

- ***Mode:***

  Shows the selected default value.

- ***Min. output variable:***

  This selects the "Minimum output quantity" which corresponds to the "Minimum input quantity" at the input. Input variable" at the input.

- ***Max. Output variable:***

  Here the "Maximum output variable" is selected, which corresponds to the "Maximum input variable" at the input. input variable" at the input.

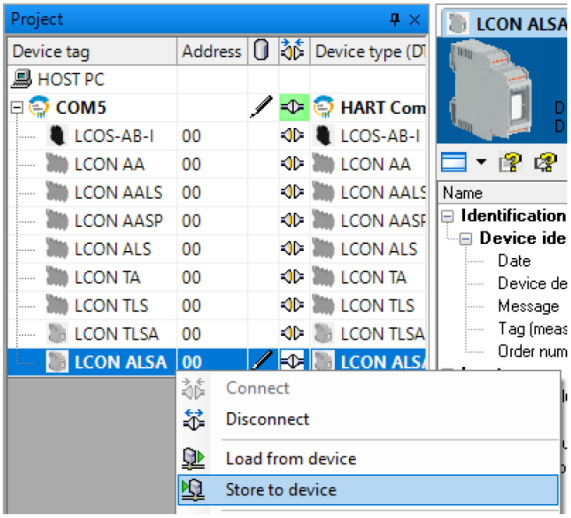
- ***Output range undercut:***

  The transducer limits the output to this value if the value "min. Output variable" has been undershot.

- ***Output range exceeded:***

  The transducer limits the output to this value if the "max. output variable" value has been exceeded. Output variable" value has been exceeded.

4. Once all parameters have been entered, the data can be transferred to the device. to the device. To do this, ***right-click*** on the device and select and select ***Story to device***.



5. If you want to read out the parameterization of a transducer, click ***right-click*** on the device and select ***Read data from device***. This can also be used to check whether the parameterization written under point 7 has been saved on the device. parameterization written under point 7 has been saved on the device.

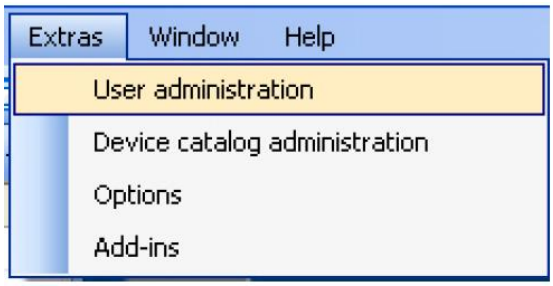
6.3 User administration

The PACTware offers the possibility of user administration.

You can define 5 different password-protected access rights.

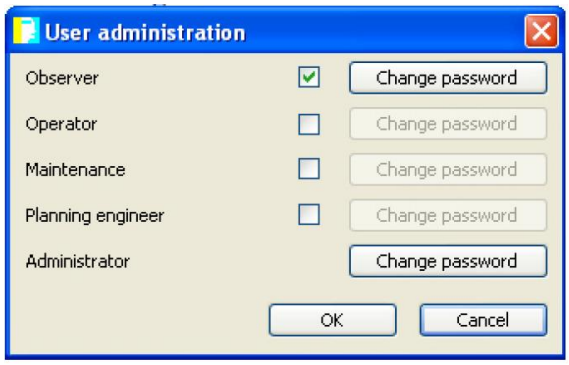
- Observer
- Operator
- Maintenance personnel
- Planning engineer
- Administrator

1. Click on ***Extras*** in the menu bar.
2. Select ***User Management*** from the menu.



The following window appears:

3. Click ***Change Password*** behind the respective user to create a password.



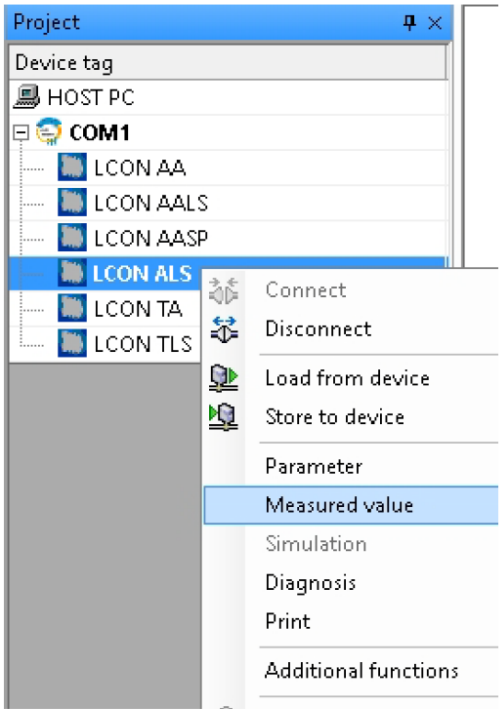
6.4 Display measured value

If the device is connected the recent measured values can be displayed.

Measured values are:

- Input signals
- Output signals
- Temperature values and
- Switching state relay 1/2.

1. Click on the particular device with the ***right mouse button***.
2. Choose ***Measured value***.



7 Troubleshooting table

Error	Possible Reasons	Actions
***Service cable LCON ZB USB is unknown*.**	**Only PACTware** was installed.	*Install the LCON HART DTM driver*
	The installation was started from the **zip file**.	*Unzip the zip file and install PACTware again*
	You are using the operating system **Windows 7**(64 bit)	*Additionally, install the **driver from Silicon Labs**.*
DTM drivers are not recognized in PACTware		*In PACTware, call up the device catalog with **F3** and select **Update device catalog**.* ***NOTICE: This is only possible for projects that are not open.***
	LCON HART DTM driver was not installed	*Extract the zip file and run the installation.*
LCON ZB USB LED does not light green	Connected to USB port 3.0	***NOTICE:*** ***Only connect the LCON ZB USB to USB 2.0 ports.***

8 Service

For general questions about the product or repair requests, please contact us:

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9 Revision history

Version	Revision	Date
00	New document (only internal use)	09/10/2012
01	Complete revision. Release of the Document according to the CONTROL (Automation template)	10/24/2012
02	Revision: Adaptations of screenshots and System requirements	05/09/2016
03	Title page and document title changed to "Application manual: LCON Parameterizable transducers, Parameterization; 2.4 Applicable documents: extended by the additionally, applicable external "Installation Guide FDT software installations"; 4.1 System requirements: Text new; The chapter 4.3 "Installation instructions FDT Software Installations", chapter 4.4 "Installation Lütze DTM driver" into an external an external "Installation Guide FDT Software Installations" and chapter 4.5 "Installation USB Driver" into an external an external "Installation Guide FDT Software Installations". This external document is valid in addition to this parameterization manual. NEW: Chapter 5.2. housing type 2 (LCON Rail Infinity) connection Previous chapter 6.1.1 Device catalog has been removed; New chapter 6.1.1 "Wizard updated and revised; Removed: Chapter 6.1.2 "DTM Linking"; Removed: Chapter 6.1.3 "HART Communication Parameterization"; Chapter 6.2 "Online/ Offline Parameterization" completely revised	06/30/2021

Subject to technical changes. This operating manual must be kept for further use!

LÜTZE TRANSPORTATION