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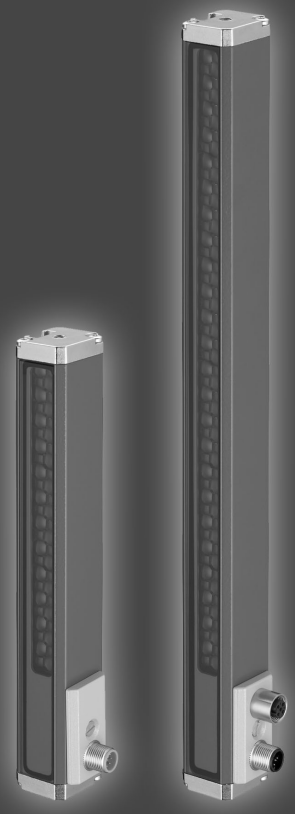
OGS 600 GUI

Manual for the Optical Guidance GUI



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We reserve the right to make technical changes

Original operating instructions

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1 About this document

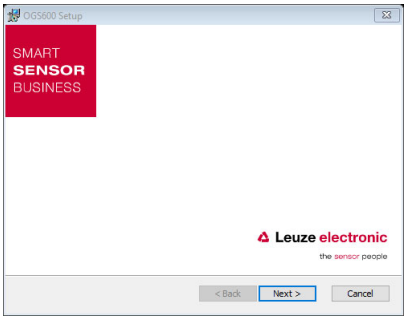
1.1 Terms and abbreviations

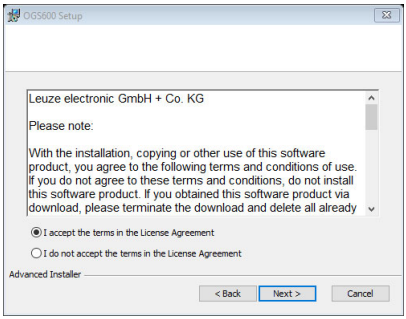
DTM	**D**evice **T**ype **M**anager
EMC	Electromagnetic compatibility
EN	European standard
FDT	**F**ield **D**evice **T**ool
FE	Functional earth
GUI	**G**raphical **U**ser **I**nterface
IO or **I/O**	**I**nput/**O**utput
OGS	**O**ptical **G**uidance **S**ensor
PD	Process data
R	Read
RW	**R**ead/**W**rite
PLC	Programmable Logic Control
W	Write

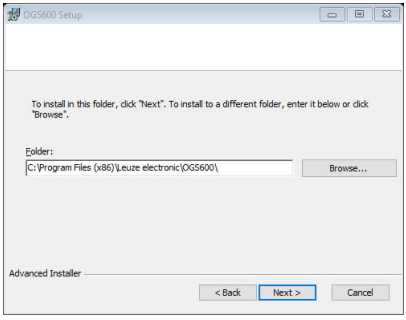
Table 1.1: Terms and abbreviations

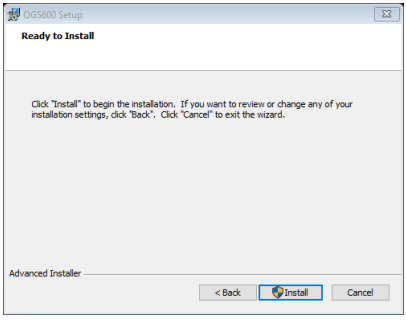
2 Installation

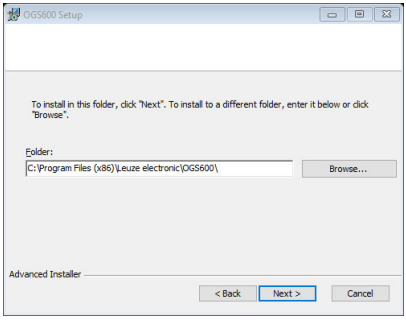
Extract file SW_Setup_OGS600.zip and start Setup_OGS600.exe.







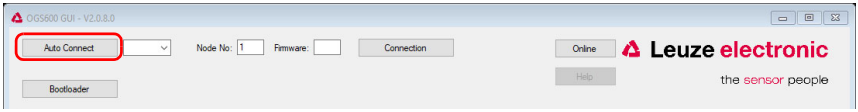




Start

2.1 Establishing connection with the sensor

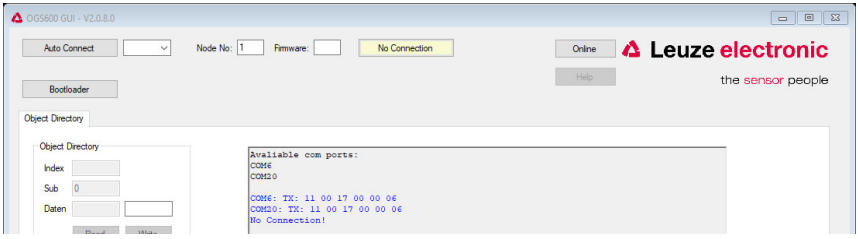
Using "Auto Connect," all existing COM interfaces are opened and an attempt is made to establish a connection with the sensor.



The following window opens once a connection has been successfully established:

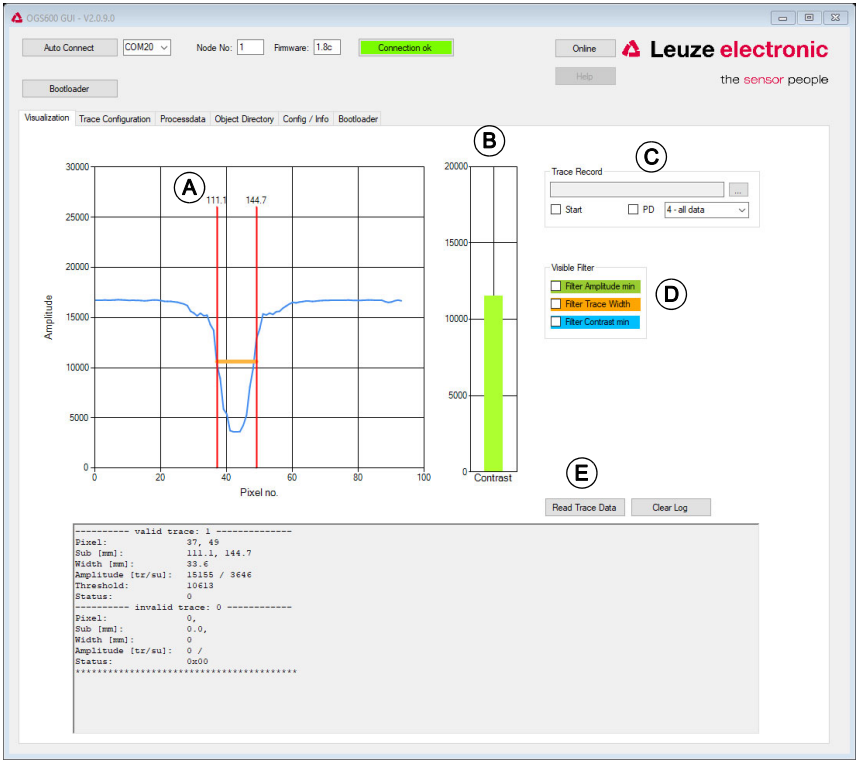
A Com interface
B Firmware
C Connection indicator

If no sensor is present:



2.2 Visualization

Once a connection has been successfully established, the "Visualization" window is active.



A Sensor data + edge positions: The data above the red lines indicates the position of the edge in [mm].
B Contrast: Unit LSB
C Recording of traces
D Display filter
E Read trace information

Read trace information

```
---------- valid trace: 1 ---------------
Pixel:                37, 49
Sub [mm]:             111.1, 144.7
Width [mm]:           33.6
Amplitude [tr/su]:    15155 / 3646
Threshold:            10613
Status:               0
---------- invalid trace: 0 -------------
Pixel:                0,
Sub [mm]:             0.0,
Width [mm]:           0
Amplitude [tr/su]:    0 /
Status:               0x00
*****************************************
```

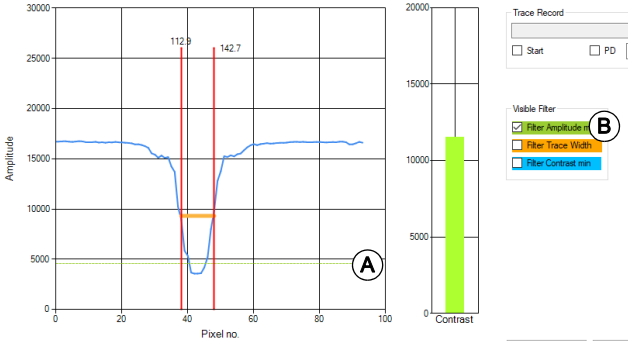
Valid traces
Pixel position
Sub-pixels in mm
Trace width in mm
Amplitude (trace / environment)
Status
Invalid traces
Pixel position
Sub-pixels in mm
Trace width in mm
Amplitude (trace / environment)
Status

2.2.1 Displaying filters

Selecting the field only activates the display of the filter in the visualization window.

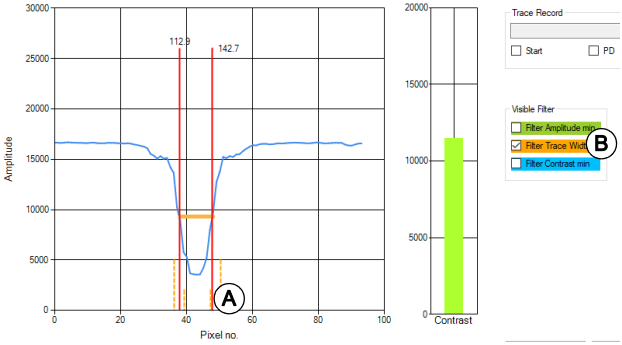
The filter in the optical guidance sensor must be activated in the "Filter" field in the "TraceConfiguration" tab.

Amplitude minimum filter



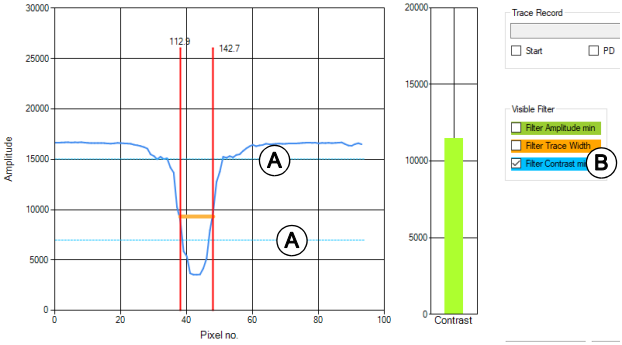
A Minimum trace amplitude
B Activation

"Trace width" filter



A Min./max. trace width
B Activation

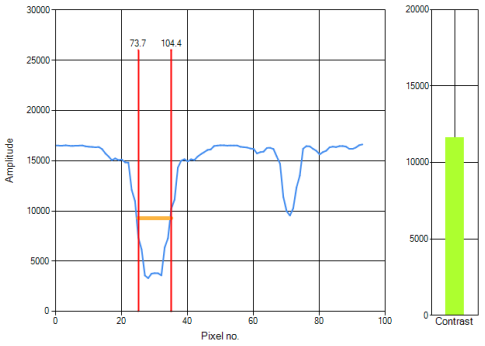
Contrast minimum filter



A Minimum contrast
B Activation

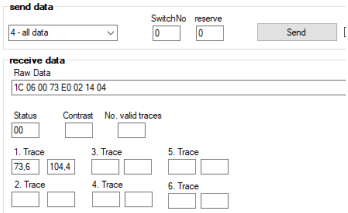
2.2.2 Process data and visualization

Trace width filter on



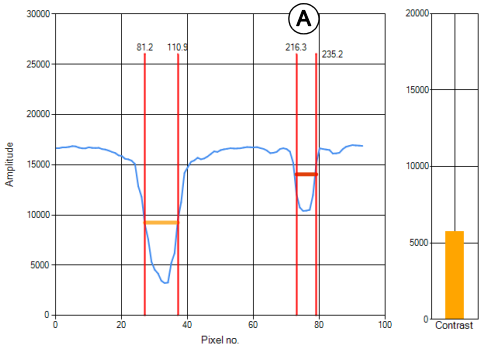

```
---------- valid trace: 1 -------------
Pixel:                  35, 35
Sub [mm]:               73.6, 104.4
Width [mm]:             30.8
Amplitude [tr/su]:      14937 / 3342
Threshold:              9289
Status:                 0
---------- invalid trace: 1 ------------
Pixel:                  69, 74
Sub [mm]:               204.3, 220.2
Width [mm]:             15.9
Amplitude [tr/su]:      15709 / 9530
Status:                 0x04
****************************************
```

Process data



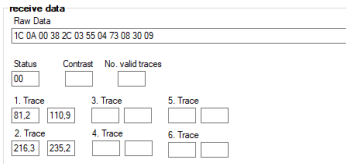
Trace width filter off

With deactivated trace width filter **A**, the trace is displayed.



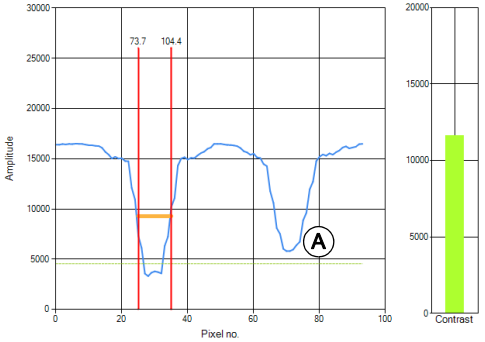

```
---------- valid trace: 2 -------------
Pixel:                  27, 37          73, 79
Sub [mm]:               81.2, 110.9     216.3, 235.3
Width [mm]:             29.7            19.0
Amplitude [tr/su]:      15401 / 3237    16166 /  10388
Threshold:              9243            14044
Status:                 0
---------- invalid trace: 0 ------------
Pixel:                  0,
Sub [mm]:               0.0,
Width [mm]:             0
Amplitude [tr/su]:      0 /
Status:                 0x00
****************************************
```

Process data



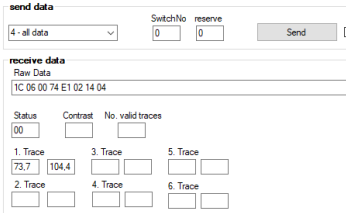
Amplitude filter on

If the amplitude **A** of the trace is greater than the minimum, the trace is not output.



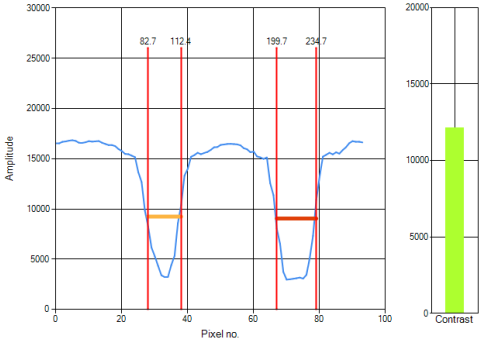

```
---------- valid trace: 1 -------------
Pixel:                  25, 35
Sub [mm]:               73.6, 104.4
Width [mm]:             30.8
Amplitude [tr/su]:      14937 / 3342
Threshold:              9289
Status:                 0
---------- invalid trace: 1 ------------
Pixel:                  69, 74
Sub [mm]:               204.3, 220.2
Width [mm]:             15.9
Amplitude [tr/su]:      15709 / 9530
Status:                 0x04
****************************************
```

Process data



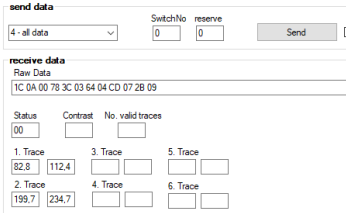
A Amplitude of the trace

2 valid traces




```
---------- valid trace: 2 -------------
Pixel:                  28, 38          67, 79
Sub [mm]:               82.8, 112.3     199.7, 234.7
Width [mm]:             29.5            35.0
Amplitude [tr/su]:      15360 / 3275    15227 /  2940
Threshold:              9243            9047
Status:                 0
---------- invalid trace: 0 ------------
Pixel:                  0,
Sub [mm]:               0.0,
Width [mm]:             0
Amplitude [tr/su]:      0 /
Status:                 0x00
****************************************
```

Process data

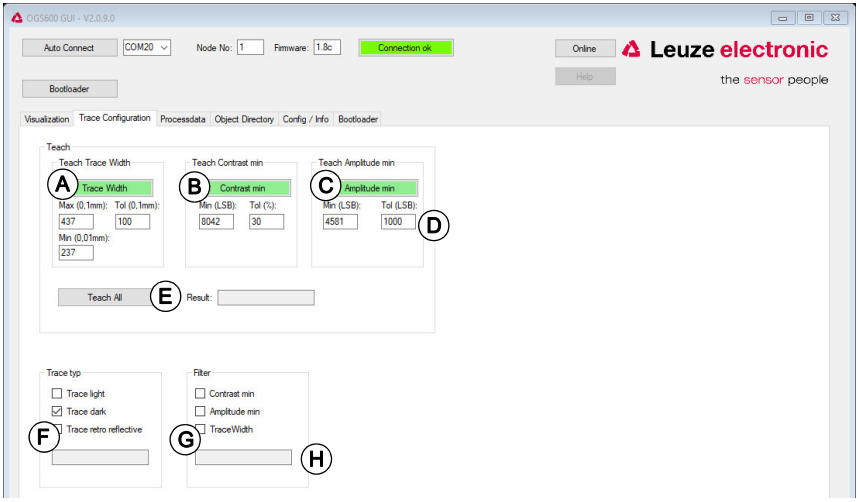


2.3 Trace configuration

Each time the tab is selected, the corresponding values are read from the sensor.

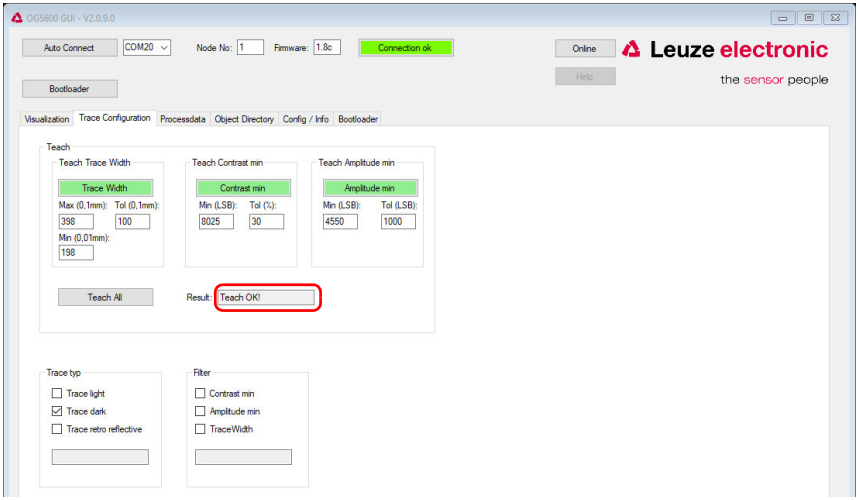
Teach:

The parameters in the text fields **D** can be changed manually.
The manual change in the text field is written to the sensor by pressing the enter button.
The data is read out by changing the tab.



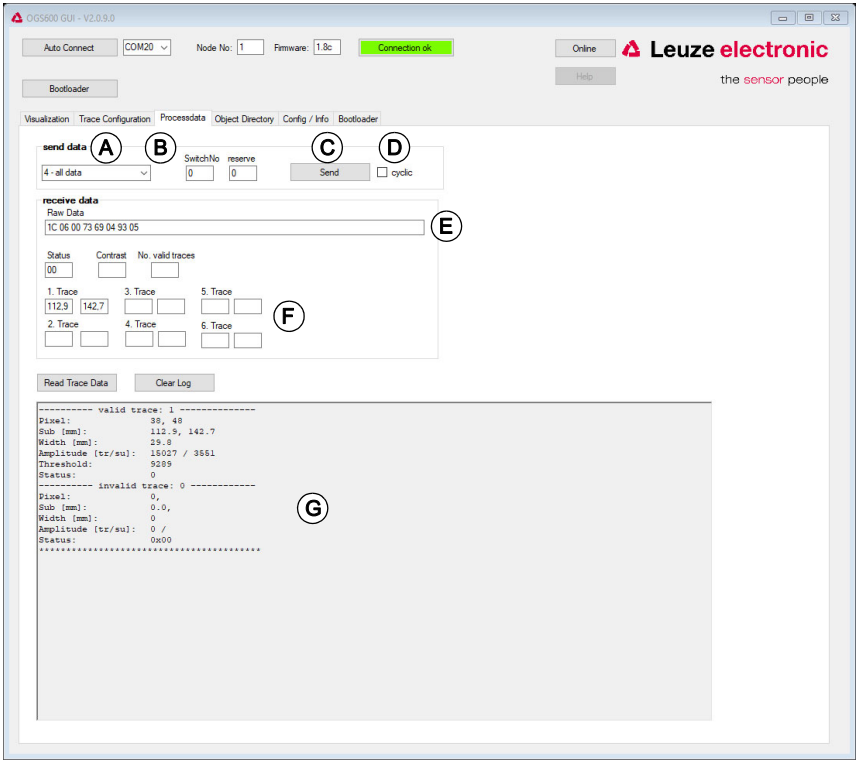
A "Trace width" filter
B Contrast minimum filter
C Amplitude minimum filter
D Teach parameters (see manual)
E Teach all filters
F Trace type
G Switch filter in sensor on/off
H Result of the setting

Following a successful teach, all taught filters are displayed in green and the respective values are current.



2.4 Process data

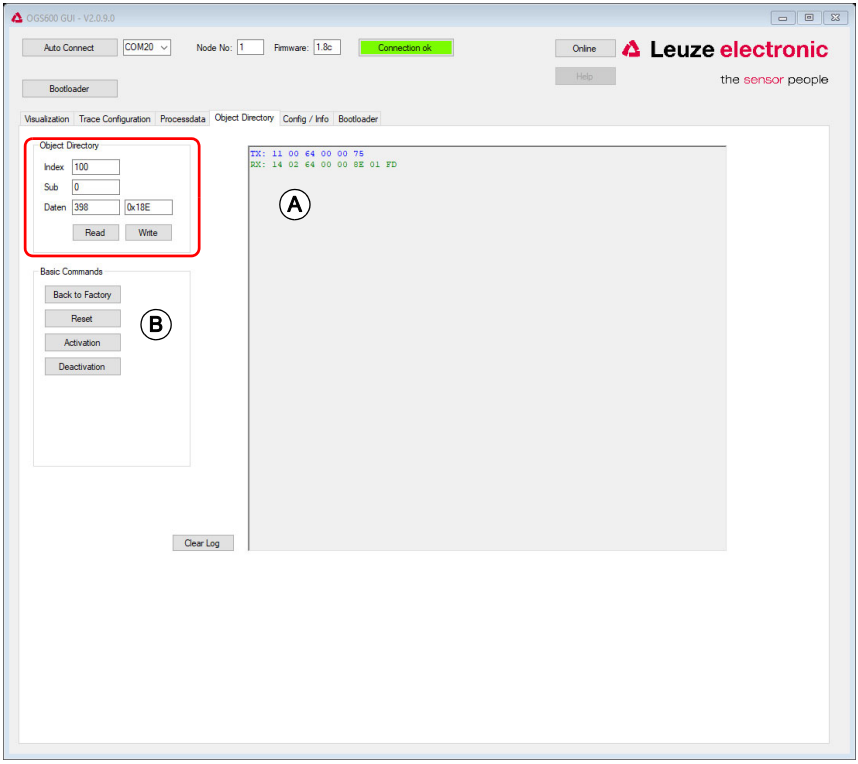
The various process data can be read here.



A PD type
B Switch (0: no switch, >0: trace for switch)
C One time query
D Cyclical query (200 ms)
E Raw data of the PD response from the sensor
F Individual data
G Trace information as in the "Visualization" tab

2.5 Object index

The complete object directory can be read here.

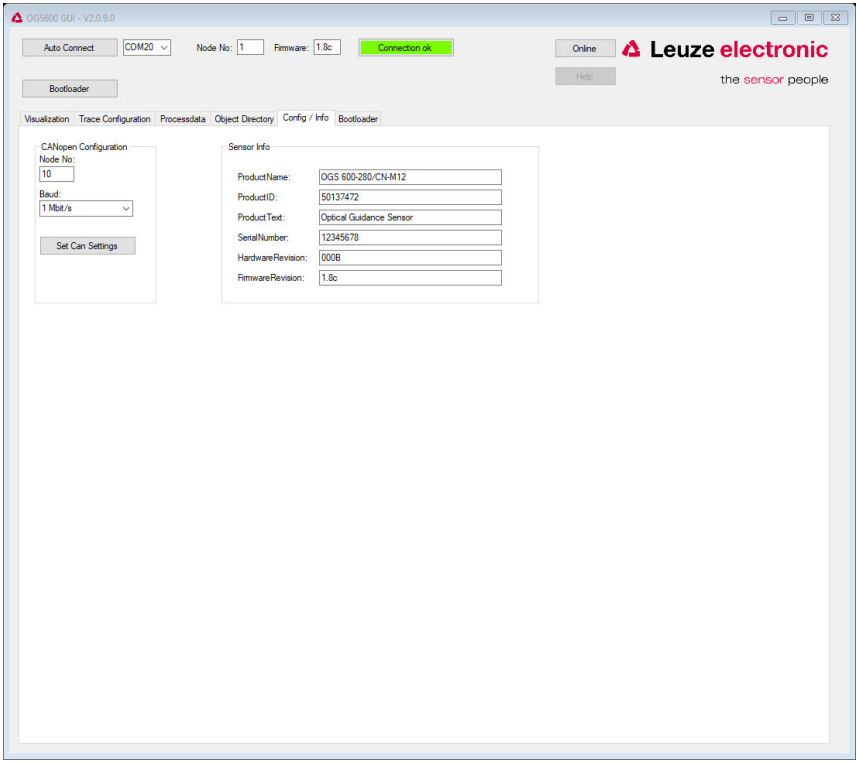


A Raw data telegram
B Commands (index 2)

2.6 Configuration / sensor information

Read CanOpen configuration and sensor information.

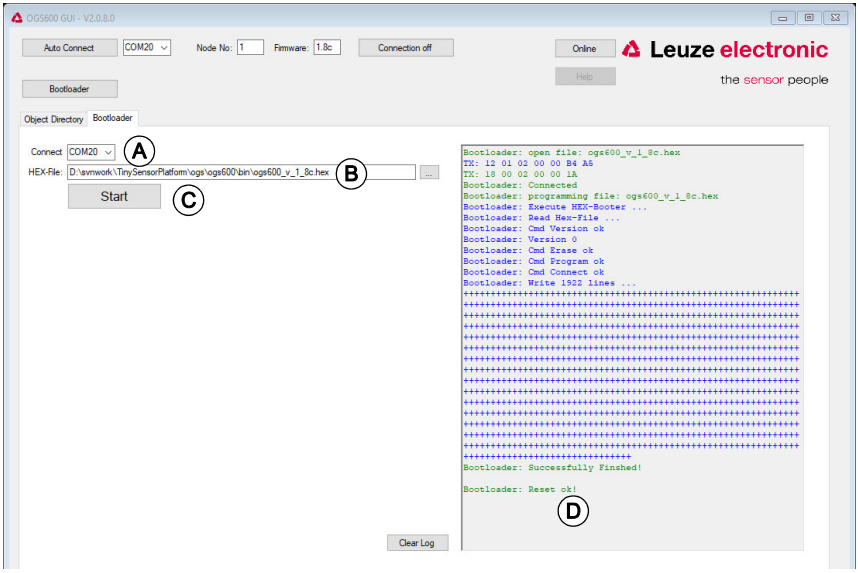
Each time the tab is selected, the corresponding values are read from the sensor.



2.7 Bootloader

Update firmware.

Select the corresponding interface (only needs to be performed if no Auto Connect was previously completed).



A Select interface
B Load hex file
C Start the update
D Log window

A reset is performed following a successful update.

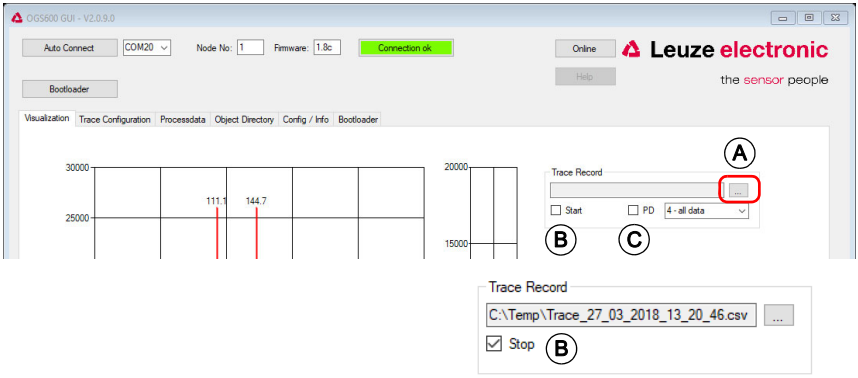
```
Bootloader: Successfully Finshed!

Bootloader: Reset ok!
```

The OGS 600 GUI must then be reconnected using Auto Connect.

2.8 Recording trace data

The trace data can be recorded.



A Select path
B Start / stop recording
C Also record PD data

The file name is selected automatically: Trace_<Date_Time>.csv

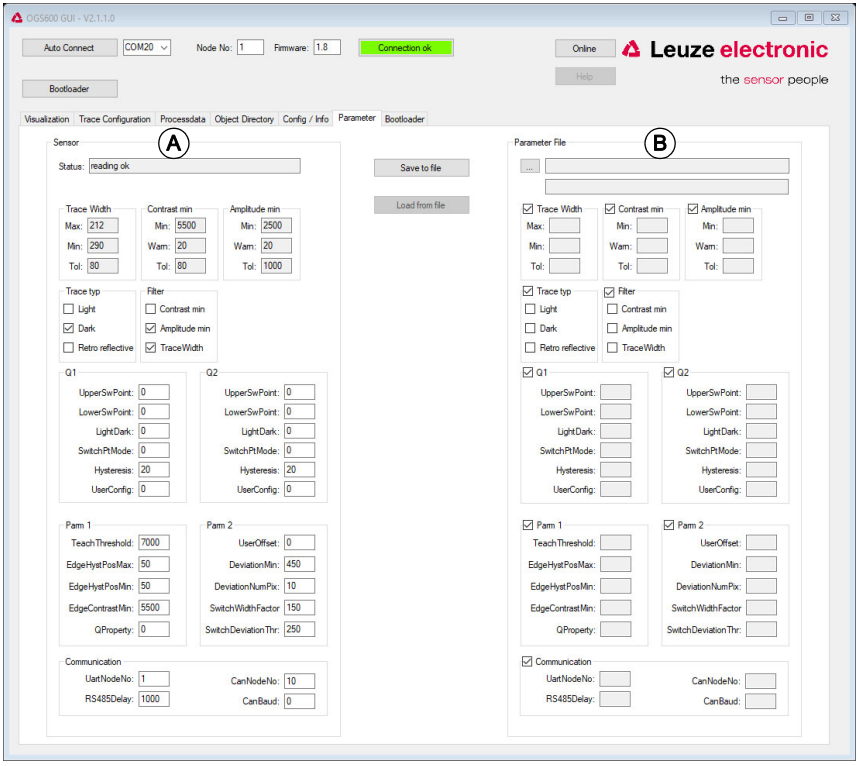
The CSV file is structured as follows:

- Columns A to CP: single pixel amplitudes
- Columns CR, CS: sub-pixels in mm
- Column CT: threshold + empty column
- If present, other sub-pixels and thresholds follow
- 2 empty columns
- Turning points:
  - 1st column: 0 for max turning points, 1 for min. turning point
  - 2nd column: turning point X
  - 3rd column: turning point Y

2.9 Loading/saving parameters

All existing parameters that are permanently stored in the sensor can also be saved and loaded using an XML file.

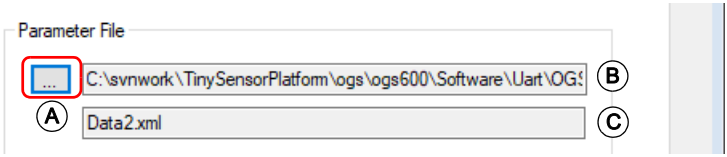
Each time the tab is selected, the corresponding values are read from the sensor.



A Data from sensor
B Data from file

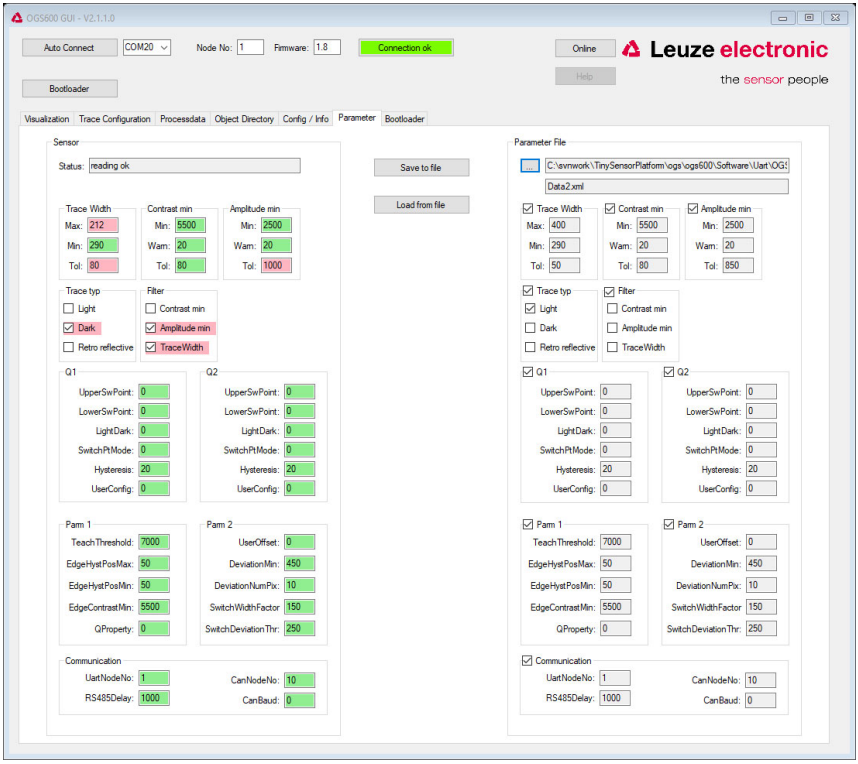
2.9.1 Loading parameters from file

Load file:



A Load file
B Path
C File

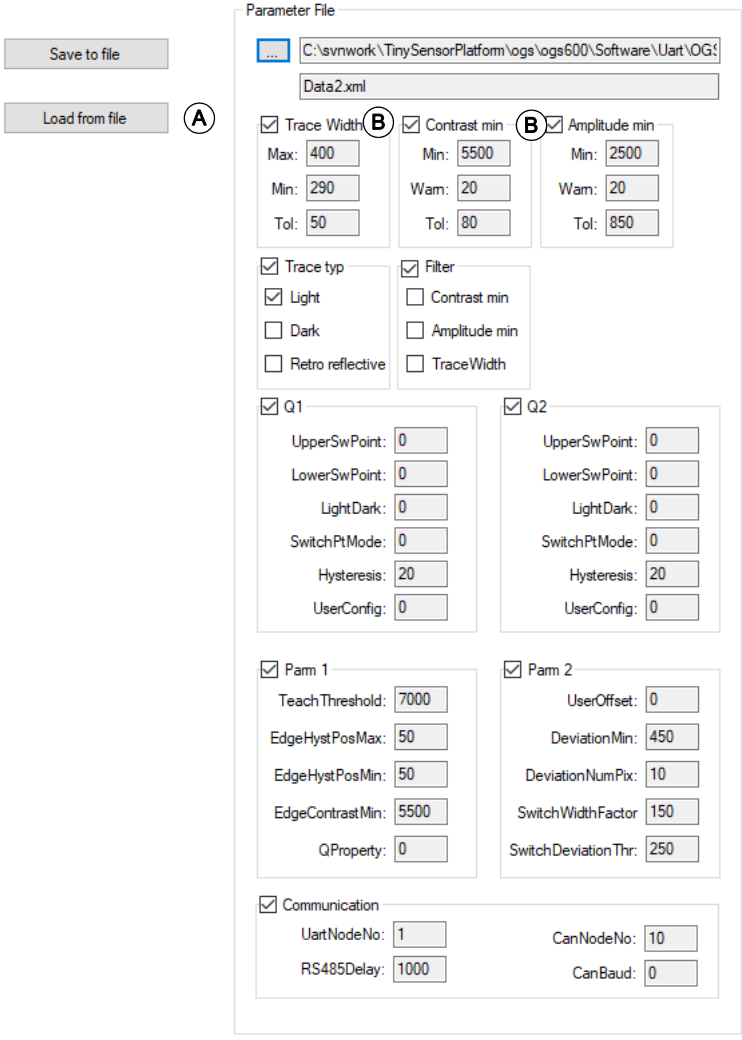
If a file is loaded, a comparison is made of all parameters on the sensor and in the file and the differences displayed in color.



Green: Parameters identical
Red: Parameters different

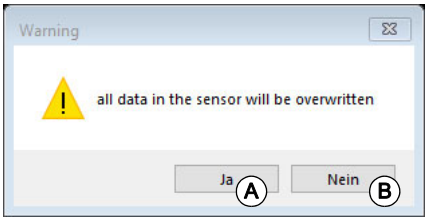
2.9.2 Loading parameters in the sensor

The individual parameter groups can be deselected. Only the selected groups are transferred. Only parameters that are different are transferred.



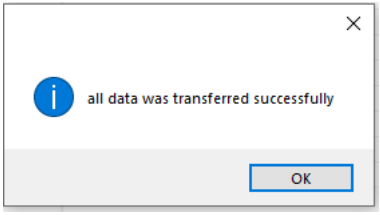
A Load parameters in sensor from file
B Selecting/deselecting parameter groups

Before loading, a note appears indicating that the selected data will be overwritten in the sensor.

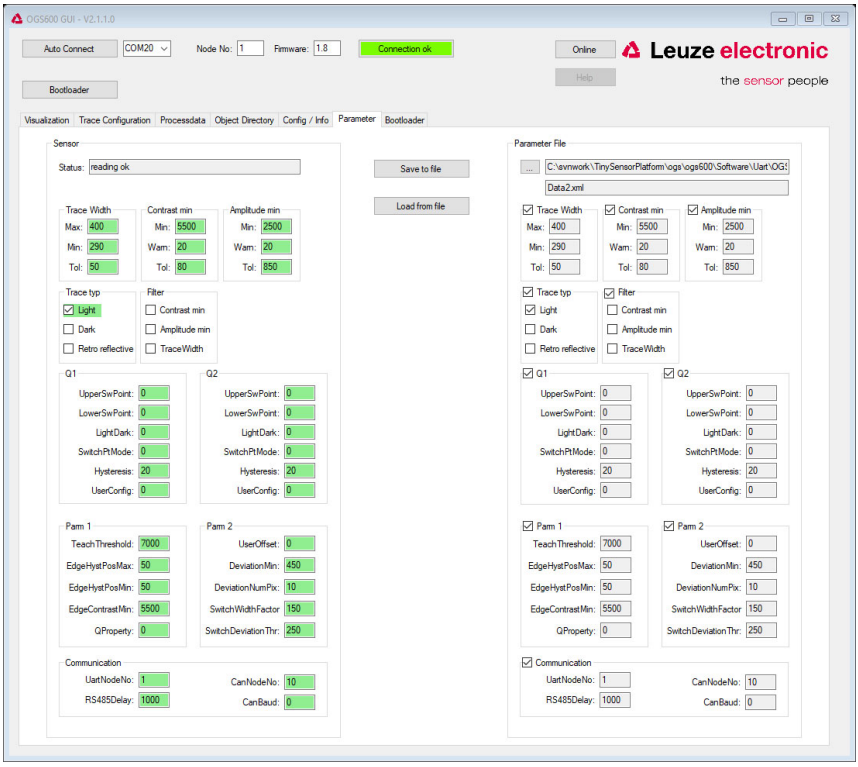


A Continue with loading
B Cancel

The result is displayed separately.

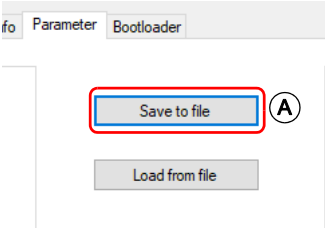


After each loading operation, the parameters are read back and compared.



2.9.3 Saving parameters in a file

All parameters can be stored as an XML file.



A Save parameters as XML file

All parameters are always stored in the XML file. Only when loading to the sensor can a selection be made.