INSTALLATION GUIDE
USER MANUAL

Lima Connect

Version 1.25 and up

Version 1.25 dated **2025-09**

List-Magnetik
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Lima Connect

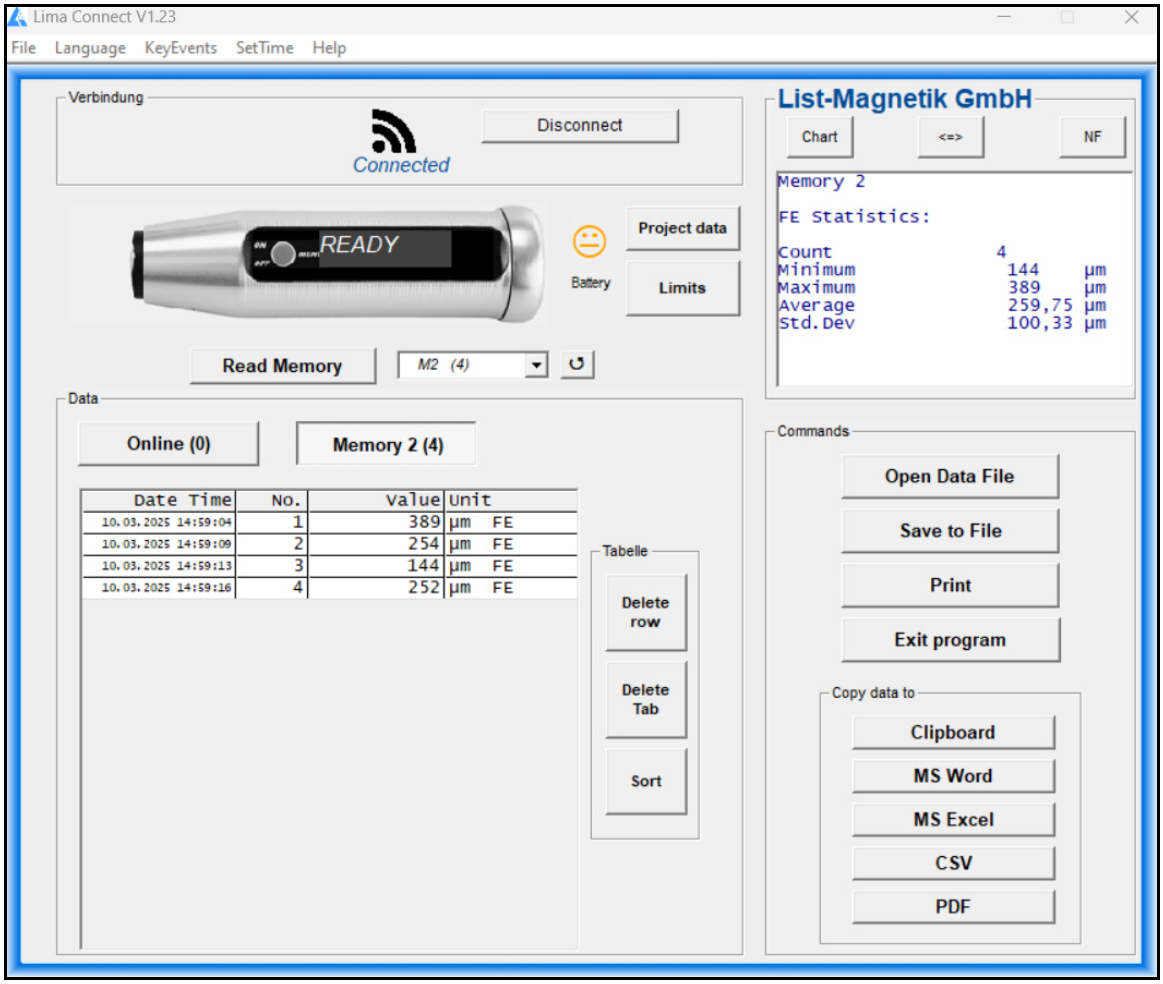
1. LIMA CONNECT APPLICATION

The free **Lima Connect** application for transferring data to a PC can be downloaded from **https://www.list-magnetik.com/en/lima-connect**.

With Lima Connect you can measure online, read out the device memory, print the results or transfer them to subsequent applications such as Microsoft Word and Microsoft Excel.

Lima Connect works with the measuring devices from List-Magnetik Dipl.-Ing. Heinrich List GmbH. As of March 2025, these are the TOP-CHECK Dual/Ferro and MEGA-CHECK DX coating thickness gauges, the MP-80 V2, MP-810 and MP-4000 magnetic field gauges, the FLUX-CHECK 250 fluxmeter, the FerroPro compact permeability gauge and the FERRITE-CHECK 140/240 ferrite content gauges.

Once the connection is established, the surface is optically adjusted by detecting the device.



Sample view of connection with TOP-CHECK Coating Thickness Meter

The closer you hold the measuring device to the PC or an external Bluetooth adapter, the better the stability of the connection.

If you have connection problems, please reduce the distance to 30 cm.

2. PREPARING BLUETOOTH CONNECTION

Does your PC / laptop have a built-in Bluetooth interface?
Is it activated ?

Does your PC / laptop not have a built-in Bluetooth interface?
Have you connected and installed an external Bluetooth adapter ?

3. INSTALLING THE APPLICATION

The installation package is called „Lima_Connect_Vxx_Setup.exe" xx = version number) and available for download at
https://www.list-magnetik.com/en/lima-connect.

If your firewall or virus scanner prevents or disallows an installation, you can ignore these warnings. The installation packages are free from viruses and advertisements, they are only distributed via our homepage.

The default paths used during installation are Windows 10/11

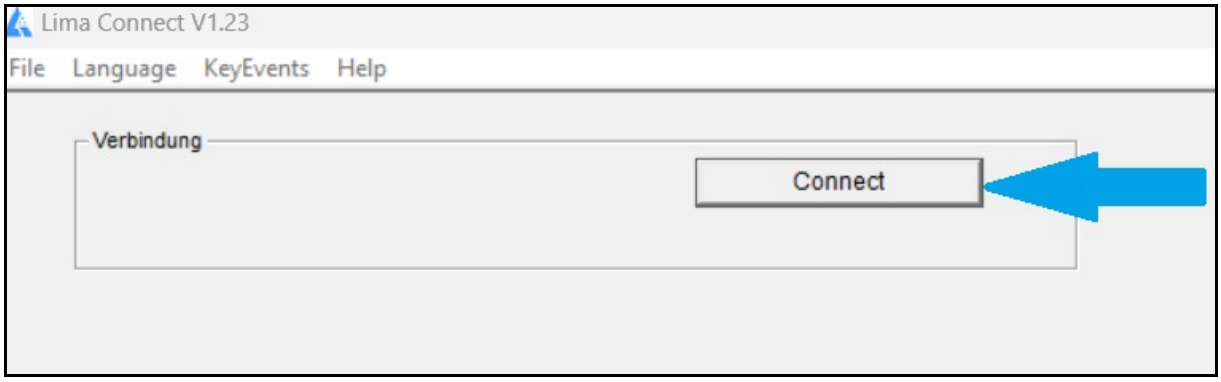
C:\Program Files (x86)\Lima Connect
Constant program components

C:\ProgramData\Lima Connect
C:\<Users>\<>\AppData\Local\VirtualStore\ProgramData\Lima Connect
User-used and modified configuration data (language, limits, project data), the specification of the label of the project data, and this manual

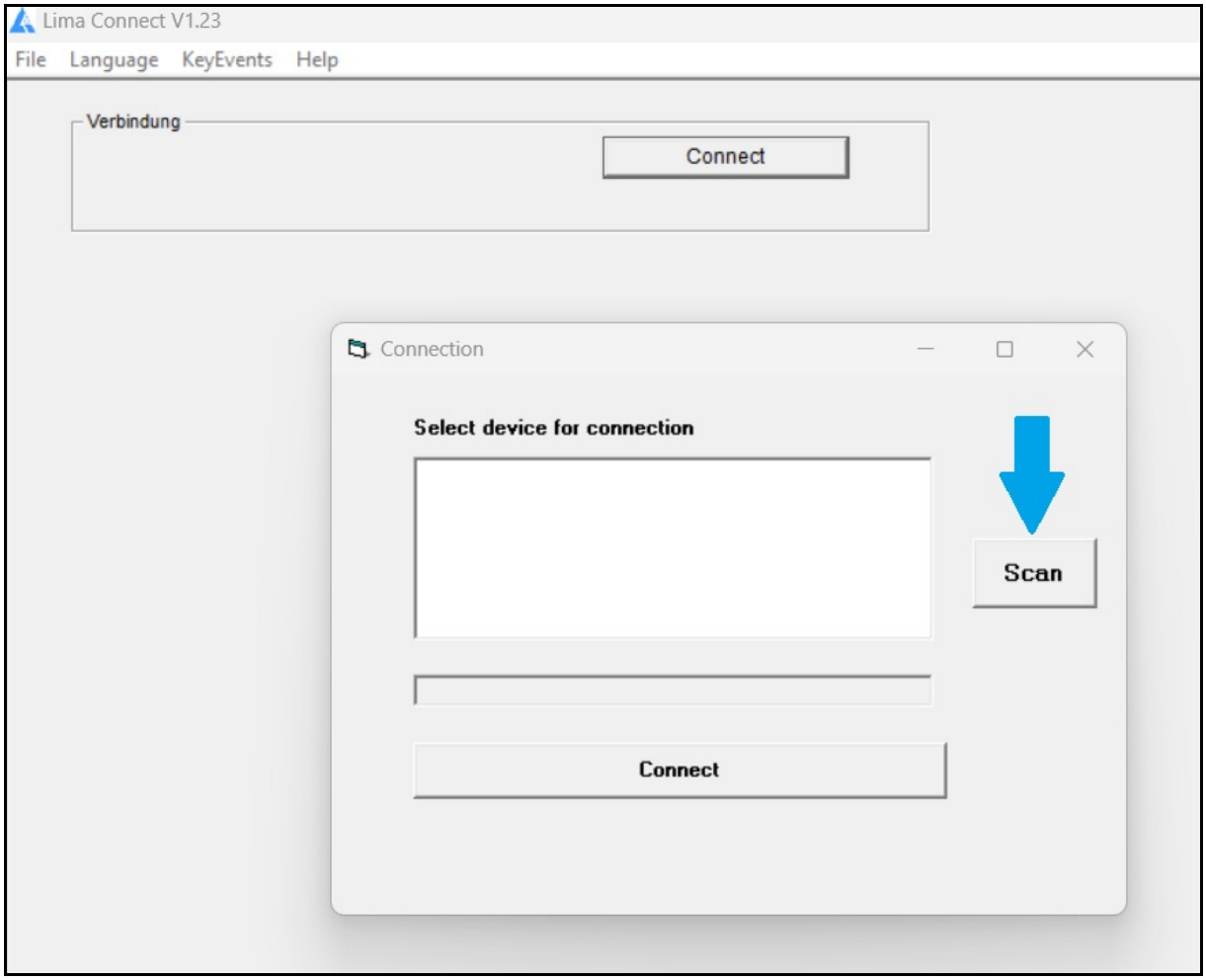
C:\<Users>\<>\AppData\Roaming\Lima Connect
User created measurement series

4. FUNCTIONS

STEP 1: CONNECT

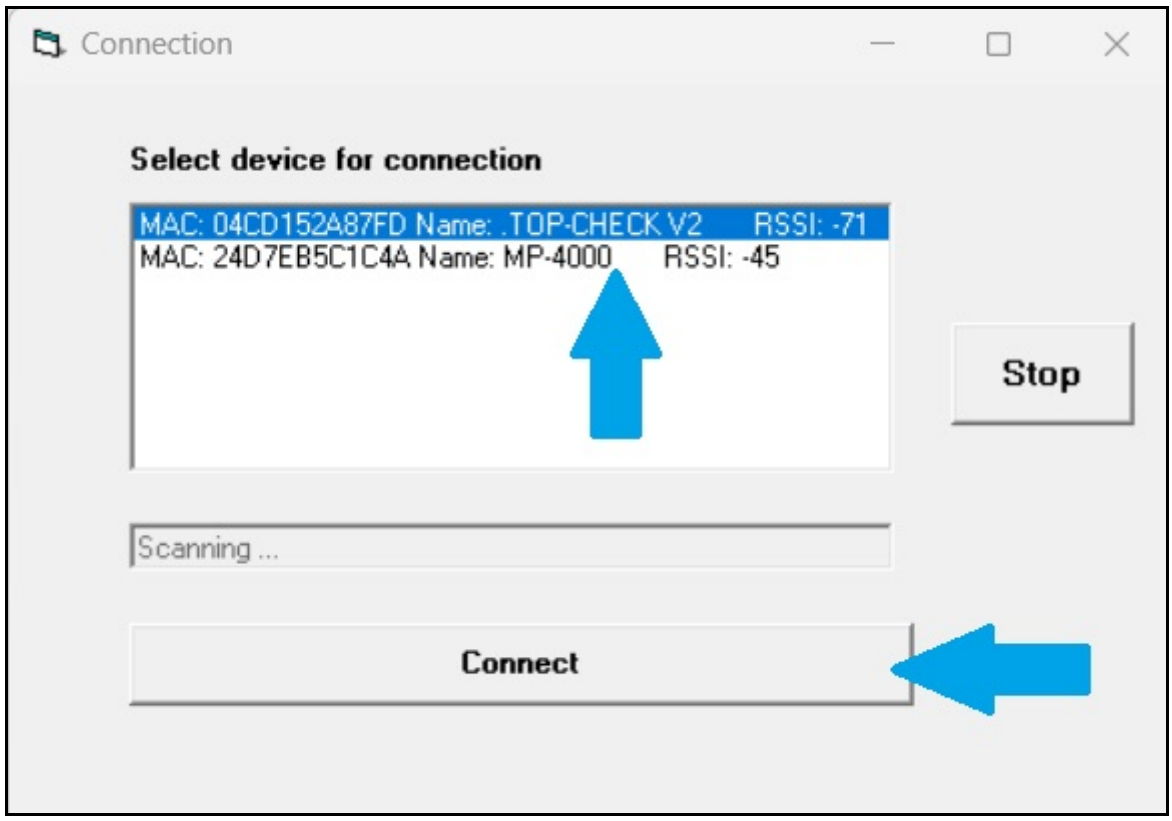


To select your device, the connection window will open.



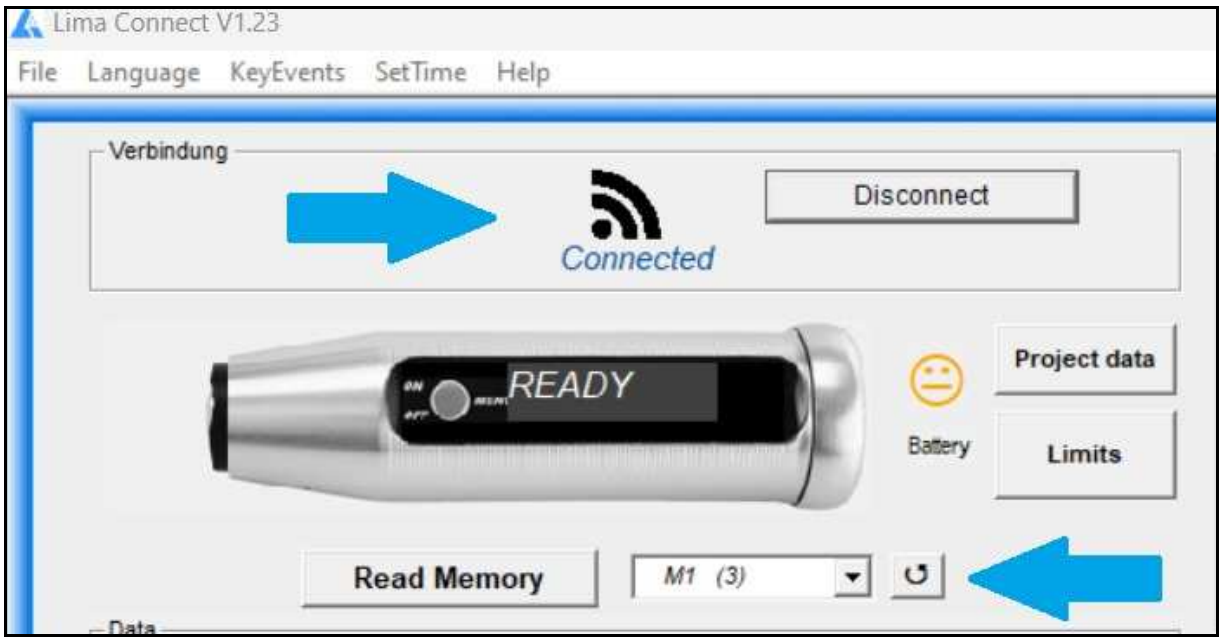
Select **Scan** to perform a search of all connected devices near your PC.

When you have detected your device, the MAC address can be found in the device under "System" in the menu, select it in the list and click **Connect** to establish a connection.



The device information is read in directly after the connection is established. The names and the fill levels of the memories are determined and made available in the selection box.

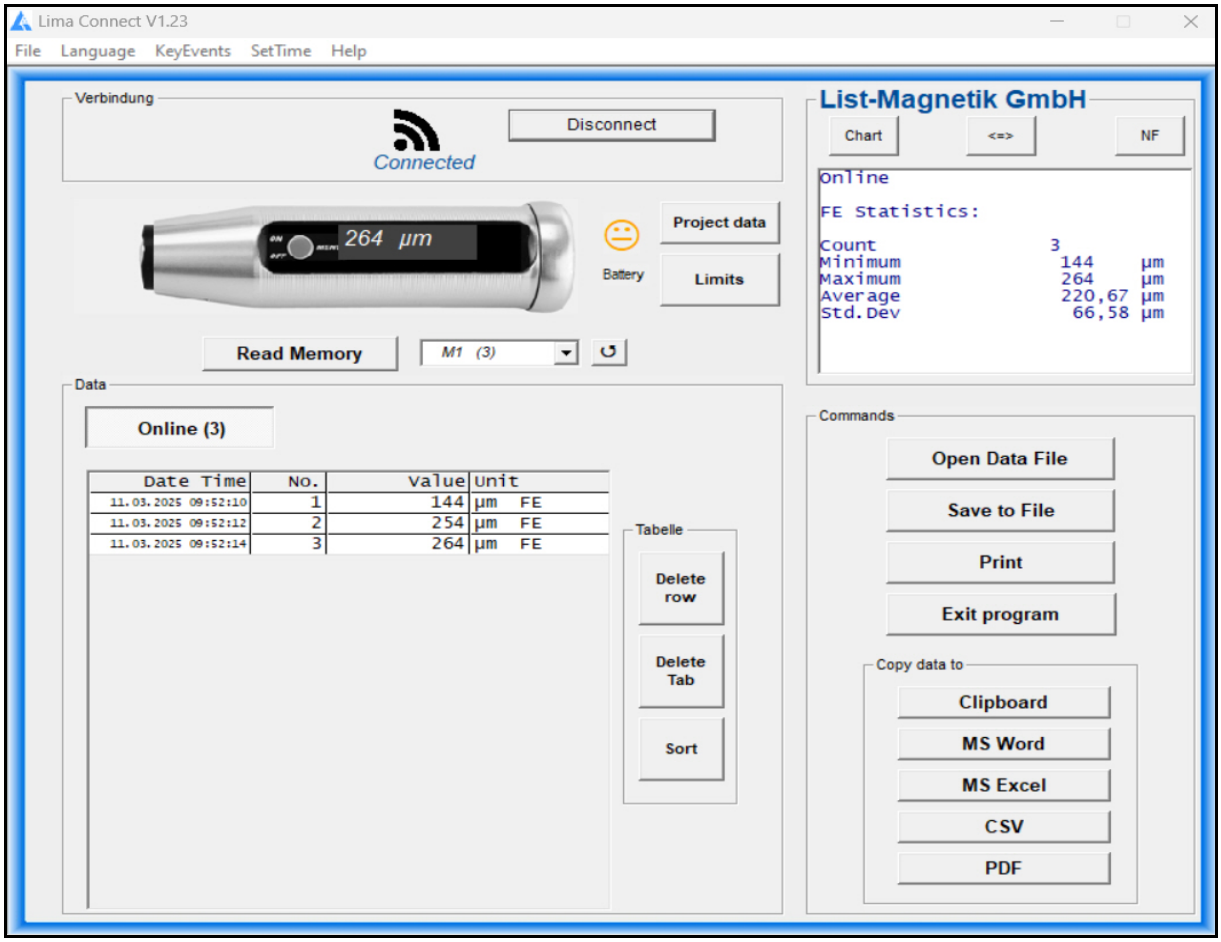
The left of the 2 buttons above the table is displayed with "Online".



MEASURING ONLINE

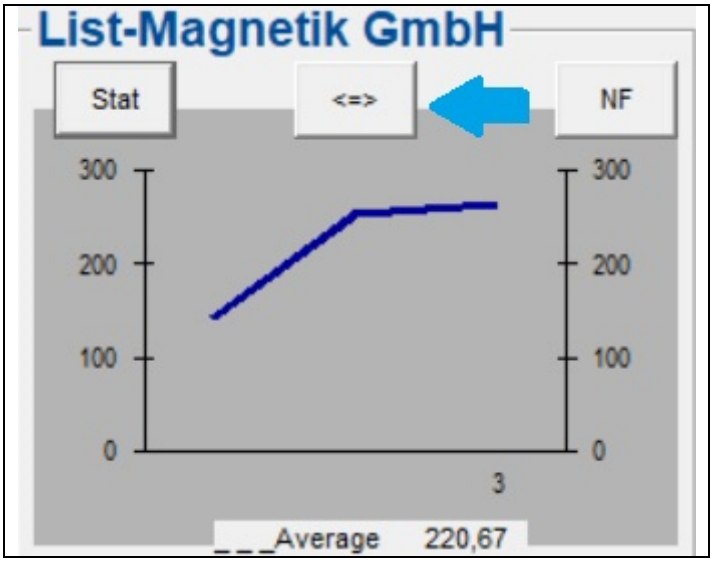
Now you can start your work.

For example, you can directly perform online measurements.
To do this, click on the "Online" button on the left above the measured value table.

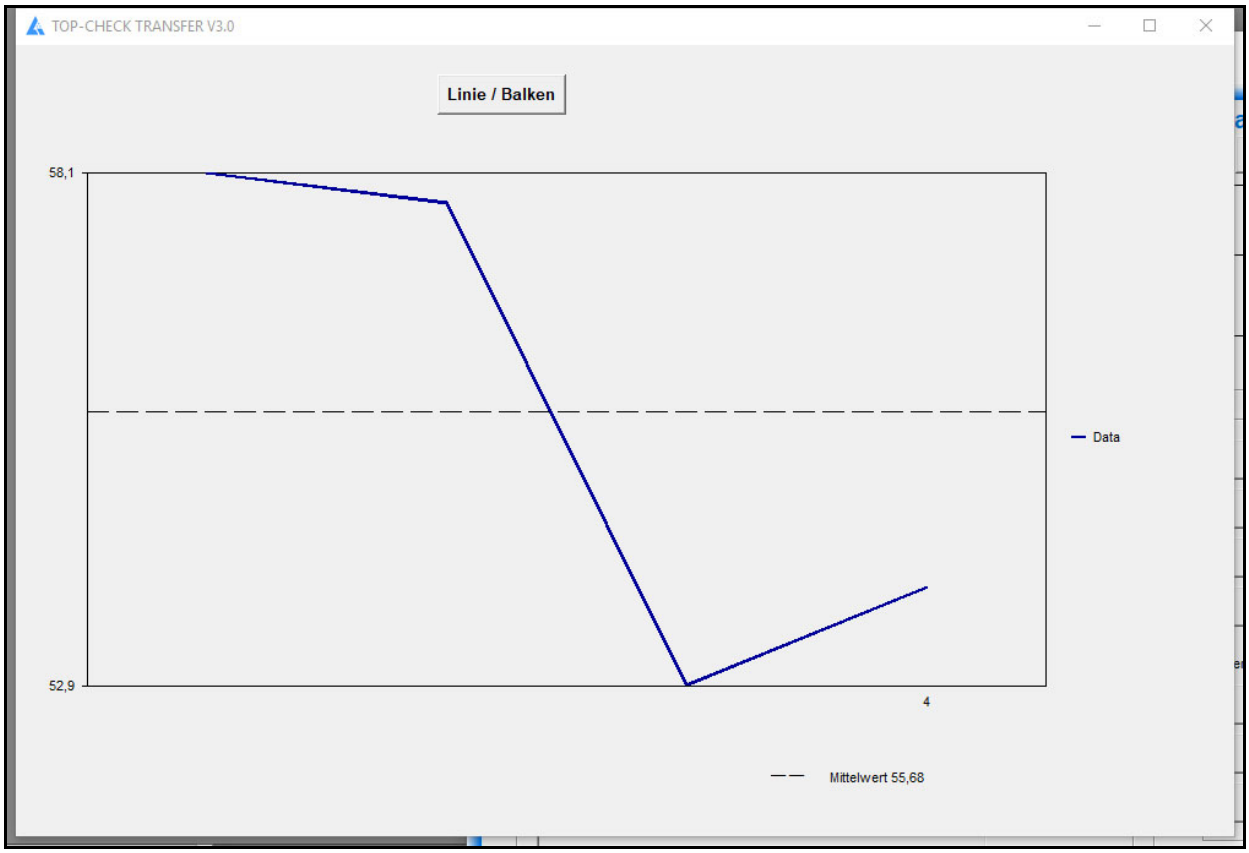


Statistical values are automatically generated from the measurements: Minimum, Maximum, Average (Mean) and Standard Deviation.
Note: The Standard Deviation is calculated with (n-1).

To toggle between the numeric statistic and a line diagram, please use the button Chart and Stat.



You can also switch to a larger view in the chart display with the button <=>. There, the representation can be selected as a line or bar chart.



Absolute values or observance of the sign

For measurements of magnetic field strength, the value may be positive (north pole) or negative (south pole), depending on the location of the probe or the magnet. For many applications, the polarity is irrelevant, only the absolute value is considered. Therefore, for the measurement with a magnetic field meter, the statistical evaluation is preset to "absolute". You can toggle between the two viewing modes using the +/- button on the right above the statistics. When colorizing the measured values due to the limits, and when transferring the data to Excel, this current setting +/- is taken into account.

READ DATA FROM DEVICE

A selection menu allows you to specify which of the device memories you want to read in.

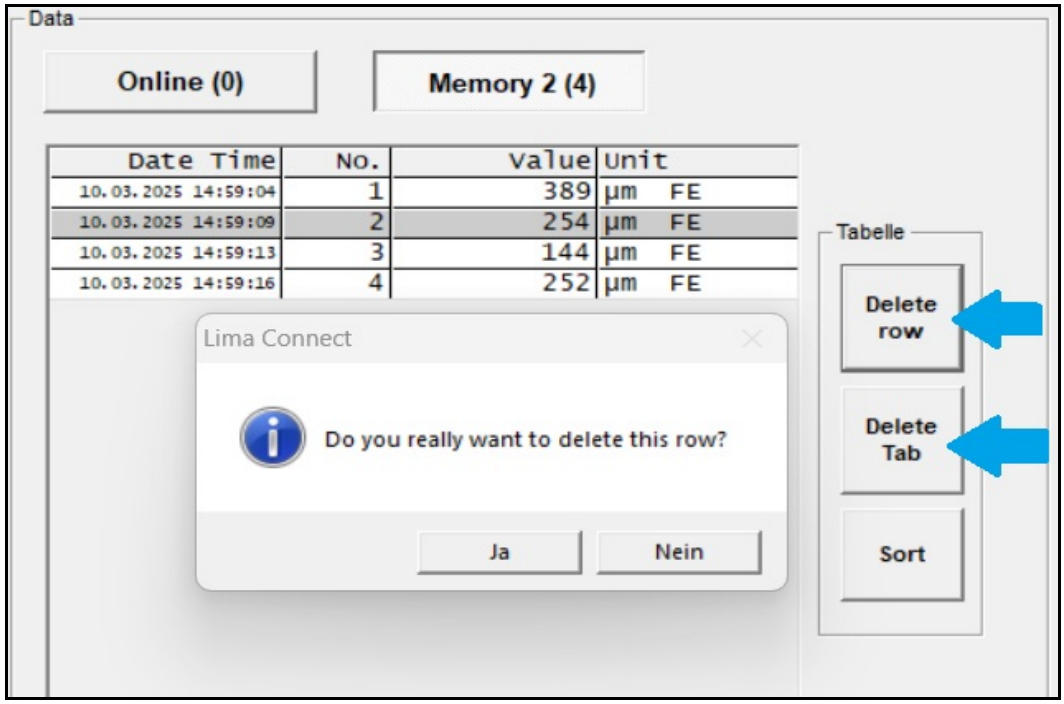
As long as the transfer is running all activities are blocked. The counter behind the title of the measurement series, counts the transferred measurements

Once the measurement series has been read, the buttons are active again and the statistical data is filled.

DELETE TAB, DELETE ROWS

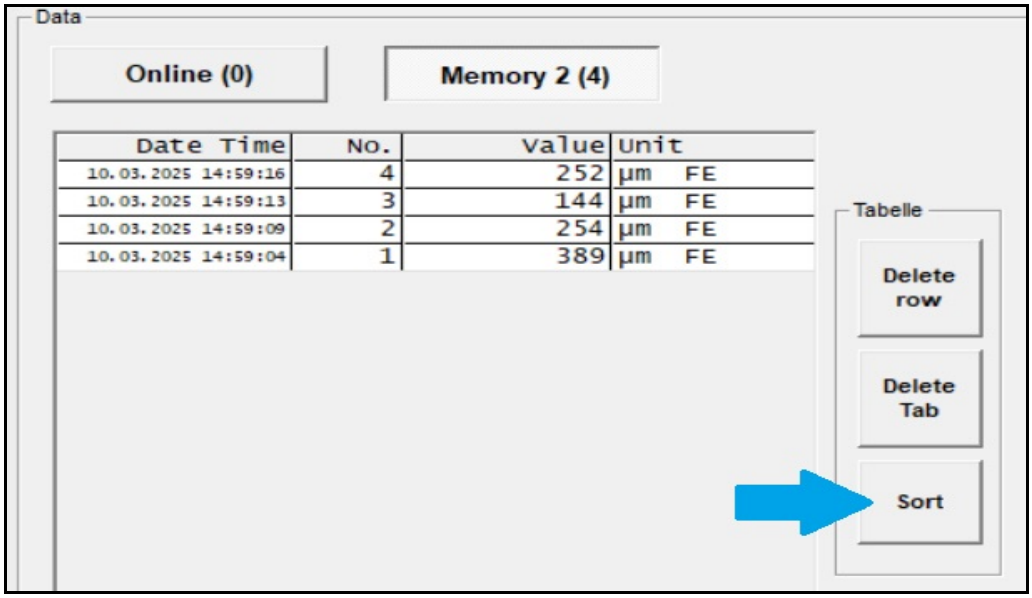
The table of measured values can either be completely deleted or individual lines can be displayed. The statistics will be automatically corrected afterwards.

Note:
The data in the device will not be deleted.
By reading again from the device, the deleted values are added again.



SORT TABLE

The tables with the measured values can be sorted in descending order from the last to the first one.



PROJECT DATA

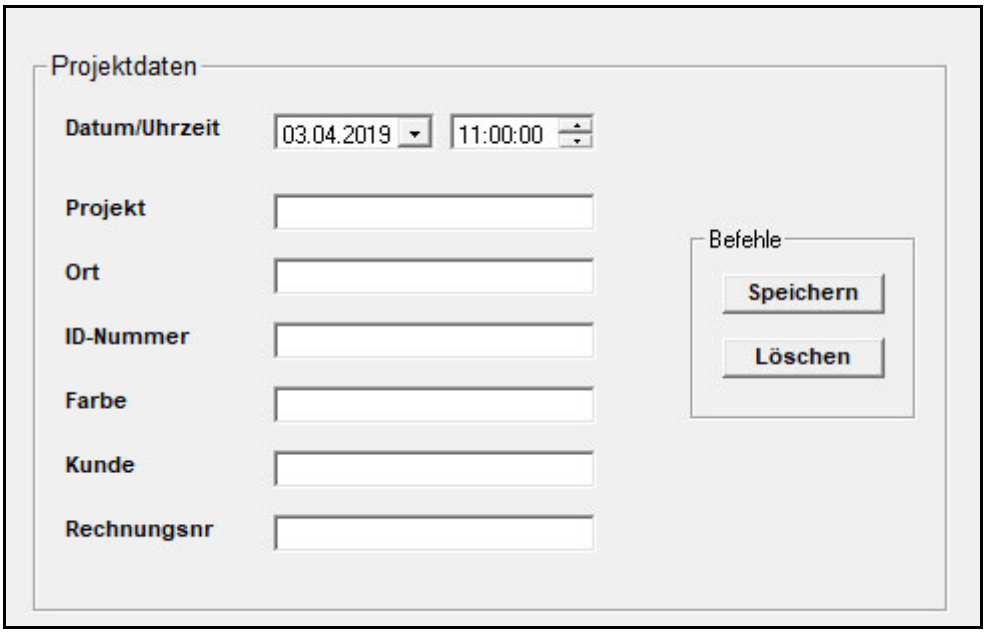
Lima Connect allows you to edit project data for a measurement series. This project data will then be provided during printing, when transferring to Microsoft Word or Microsoft Excel, so that you can document the series of measurements.

You have a date / time information and 6 free text fields as project data available.

The free text fields can be defined by the user. In the configuration file "Projekt.ini" on the user data directory („C:\Users\<Your Name>\AppData\Local\List-Magnetik\XXX TRANSFER"), you can define 6 fixed terms in German and English for yourself.

Example:

```
Projekt;Project;
Ort;Location;
ID-Nummer;ID No.;
Farbe;Color;
Kunde;Customer;
Rechnungsnr;Invoice No.;
```



LIMITS, 80/20 RULE

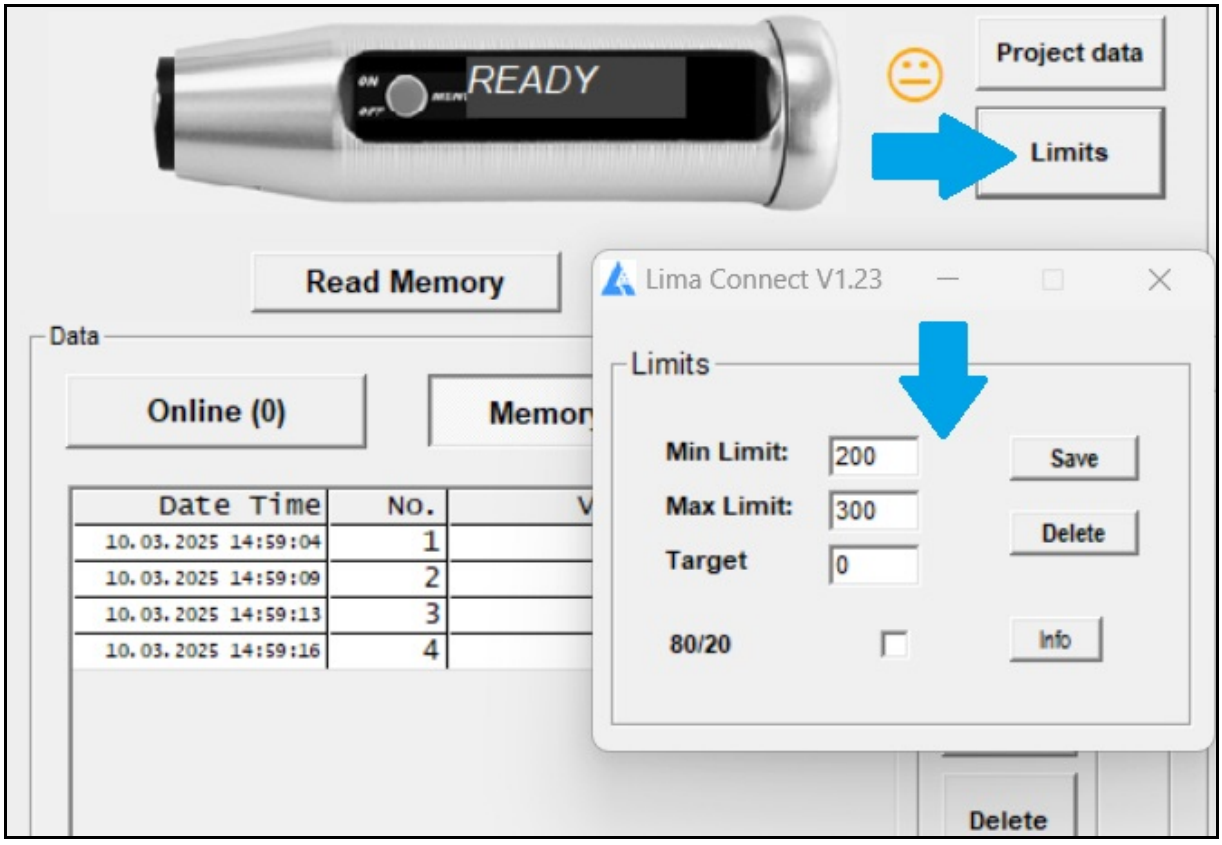
With limit values, an evaluation of your measured values after falling below or above a corridor is possible. If you have specified limit values, the measured values are highlighted in green (= in the corridor) or red (= outside). In addition, a target can be preset. The limits and the target are displayed in the charts (line or bar).

Only for Coating Thickness Meters (TOP-CHECK, MEGA-CHECK):

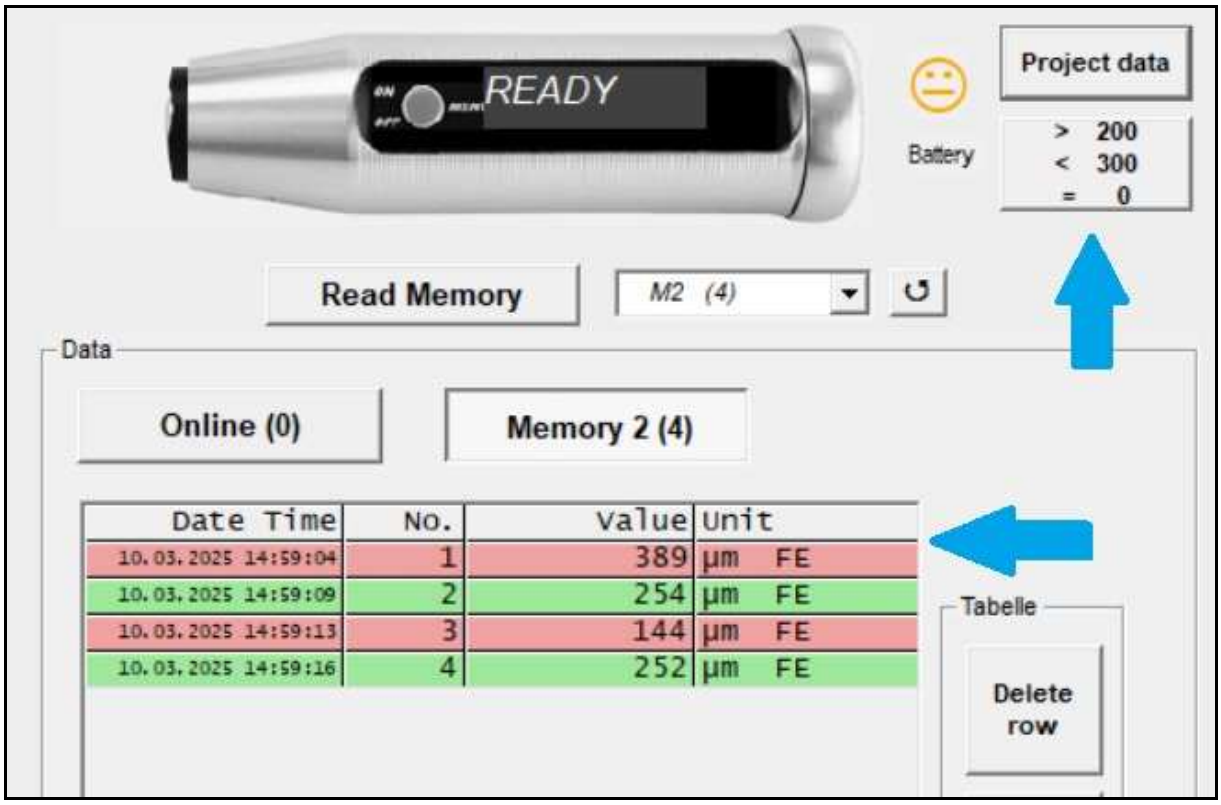
The implementation of the **80/20 rule according to ISO 19840** for the corrosion protection of steel structures by coating systems can be switched on and off separately. If the 80/20 rule is applied, the minimum limit is automatically set to 80% of the setpoint.

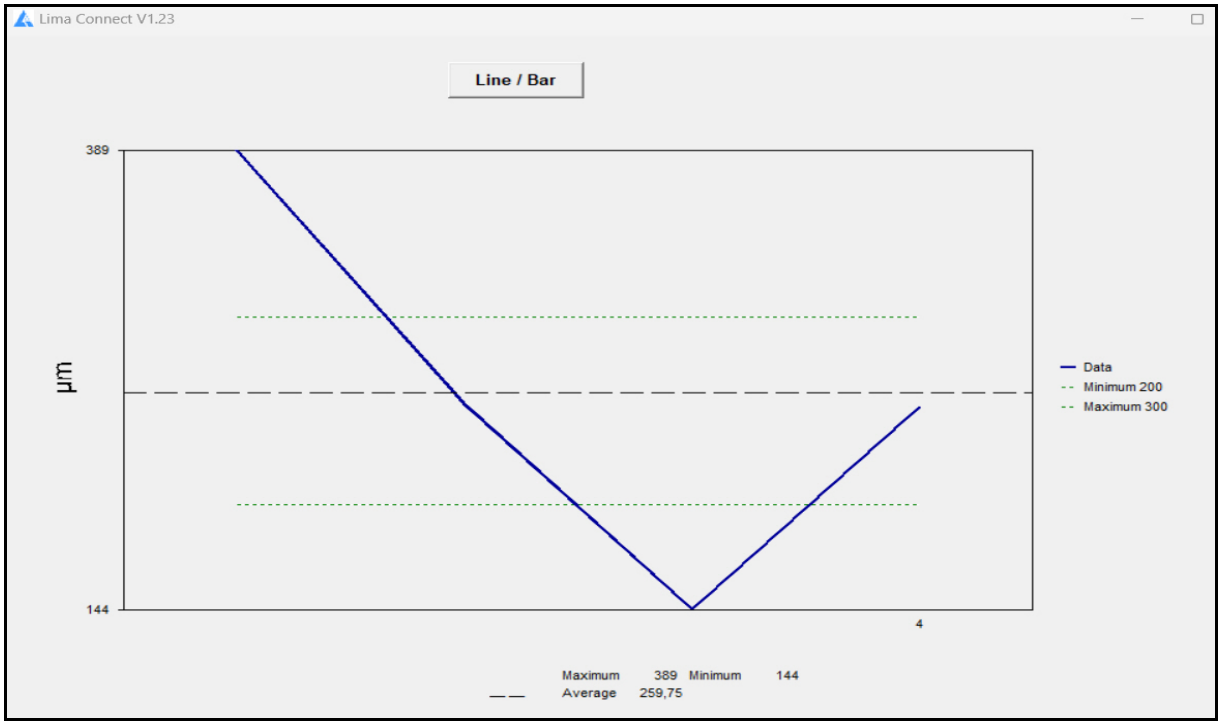
As a result, the color orange is then used for measured values in the corridor between the minimum limit (80%) and the target value (100%). An evaluation is carried out in the statistics window. The series of measurements is "OK" if (every single point must be fulfilled)

- No measured value is above the max limit
- No measured value is below the min limit
- The mean value of the measured values is not below the target value
- Only a maximum of 20% of the measured values are below the target value (orange cases)



Example from TOP-CHECK TRANSFER: Input of min limit = 200, max limit = 300.





Representation of the limits and the target in the line chart

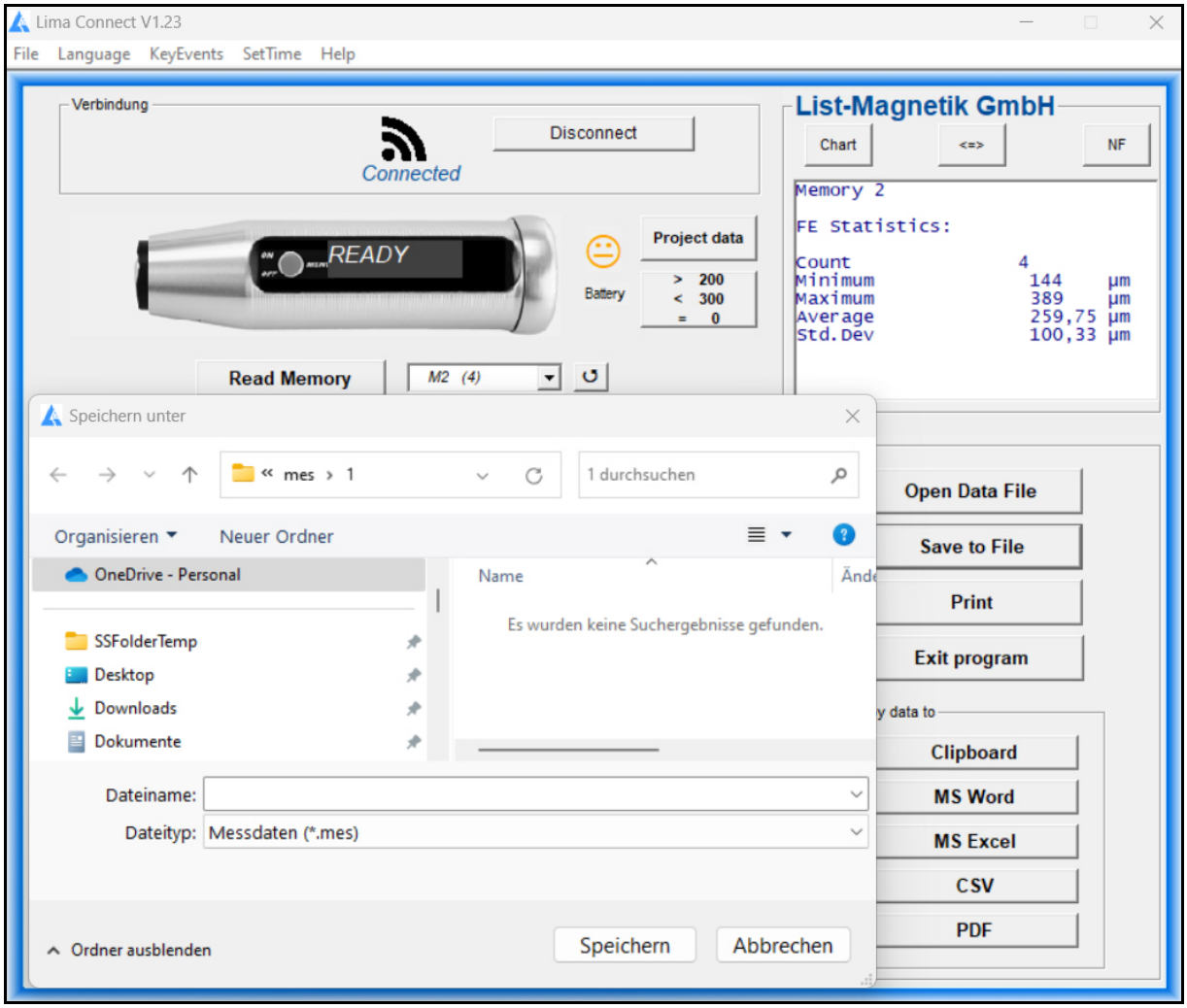
Absolute values or observance of the sign when measuring the magnetic field

When coloring the measured values based on the limits, the current setting +/- is taken into account.

OUTPUT: FILE, PRINTER, APPLICATIONS

All examples show coating thickness measuring results, and work identically for magnetic field meters and permeability meters.

The measurement series can be stored in a file.
Files of type ".mes" are readable with a text editor.



With the button "Open Data File" such a series of measurements can be read again from file, for example to print it or to transfer to Excel.

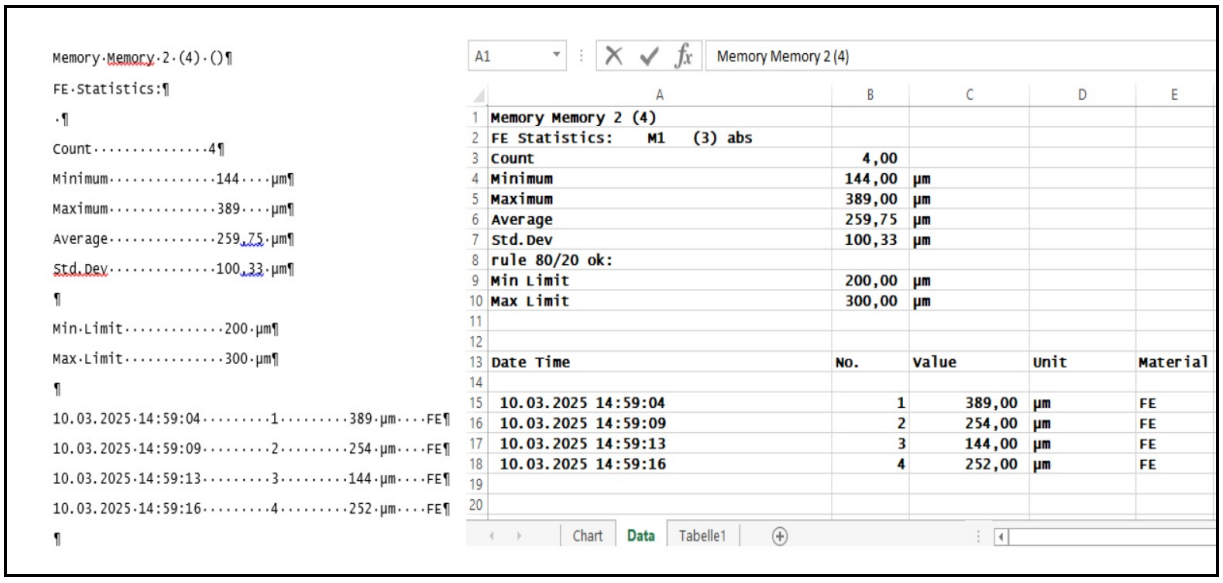
```
FE Statistics:

Count                    4
Minimum                  144      µm
Maximum                  389      µm
Average                  259,75   µm
Std.Dev                  100,33   µm


10.03.2025 14:59:04              1            389 µm      FE
10.03.2025 14:59:09              2            254 µm      FE
10.03.2025 14:59:13              3            144 µm      FE
10.03.2025 14:59:16              4            252 µm      FE
```

Example of a print output via button **Print**

Via Clipboard you can hand over the measuring series to subsequent applications.

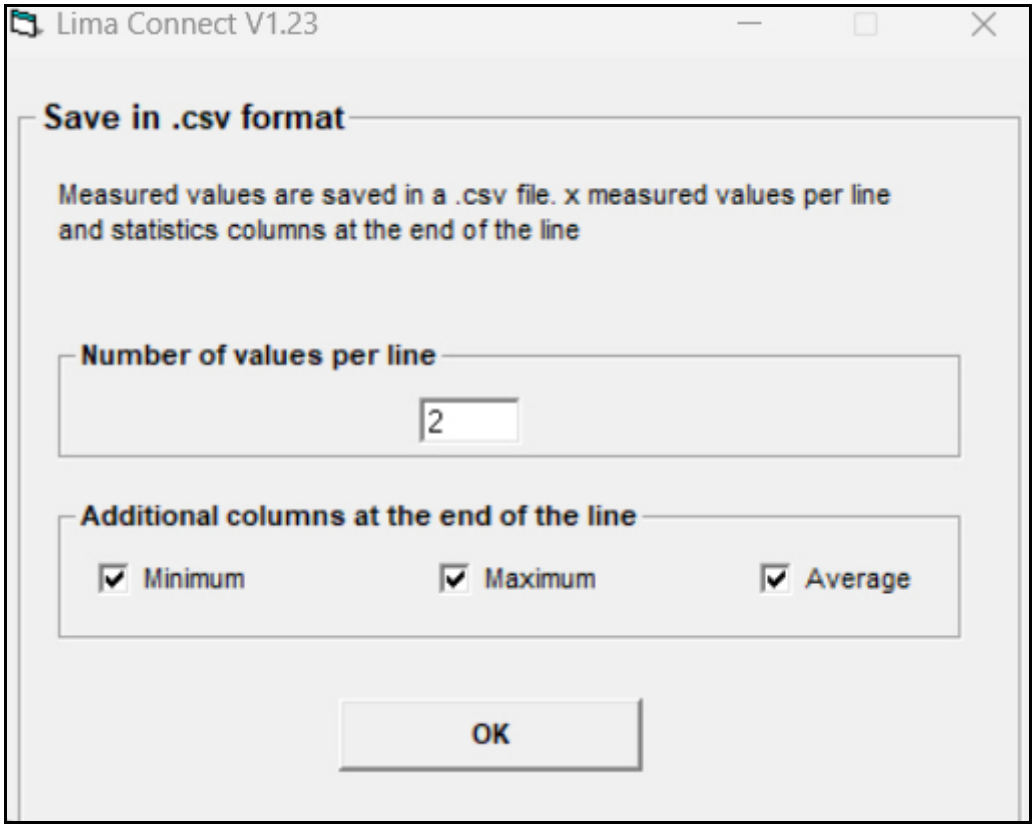
The Buttons **MS Word** and **MS Excel** only will work if the named Microsoft Office components are installed, but not with Open Office / Libre Office.

When transferring to Excel, you have the choice of outputting the data as a table or, in addition, graphically as a chart.



Absolute values or observance of the sign when measuring the magnetic field
When transferring the data to Excel, the current +/- setting is taken into account.

The **CSV** button allows you to output the memory table column by column. The column factor (up to 20) can be specified and the output of the minimum, maximum and average value for each row can be selected.



Example of a CSV file after output:

```
Memory Memory 2 (4)
Date/Time;Value1;Value2;Mininum;Maximum;Average;
 10.03.2025 14:59:04;        389;        254;        254;        389;     321,50;
 10.03.2025 14:59:13;        144;        252;        144;        252;     198,00;
```

OPEN DATA FILE

With then "Open Data File" button you can read in a saved data file again.

LANGUAGE AND HELP

The language can be switched between German and English in the upper menu bar.

In the Help menu, the manual can be opened in PDF format.

Under "Info" your device data (type, firmware version, MAC address) are visible.

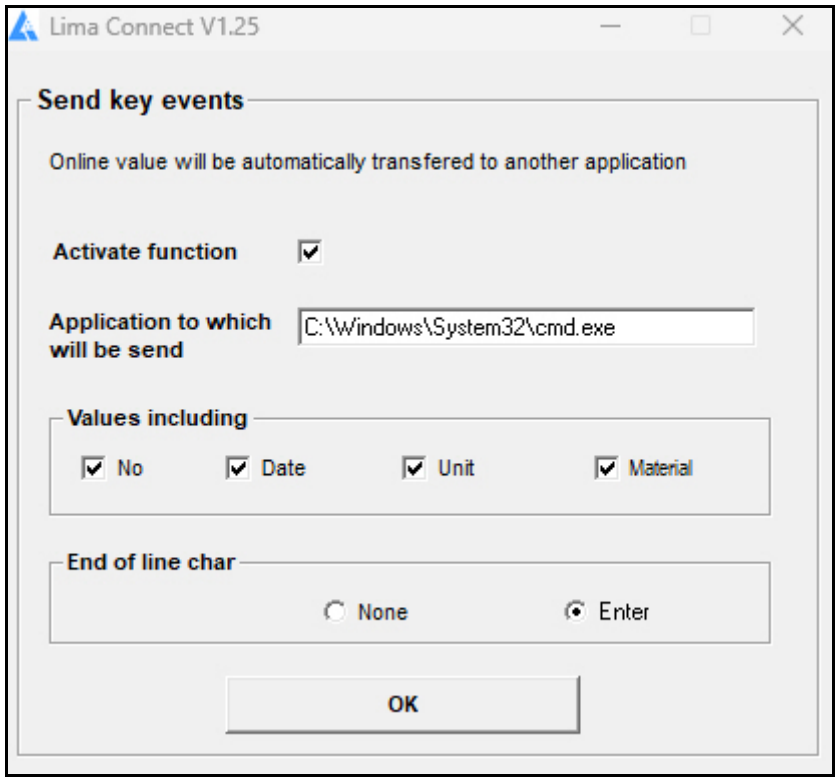
KEY EVENTS

REAL TIME DATA TRANSFER TO THIRD PARTY APPLICATIONS

The “Keyboard Events” function allows additional output to be sent to another application in real time for online measurement. This could be a CAQ system, for example. However, you can also test the function using the Windows command line (cmd.exe).

Note, as of 09/2025: There are problems with the Windows text editor (notepad.exe), so please do not use it for testing.

To activate the function, select the "Keyboard Events" tab in the header. An input window appears.



If you activate the function (by ticking the box), you must also select an application that is to receive the online data. To do this, look for the "EXE", the executable program on your PC.

When outputting, you can transfer the number of the measured value, the measurement date, the measuring unit and the base material (FE / NF). Make your choice by ticking the appropriate box. You can also select whether the entry is limited by the end of a line or not.

Important: The third party application to which the data is transferred is started at the beginning with Lima Connect. It shouldn't be started before.