



## Information about this operating manual

This operating manual is designed to enable you to use the HumiSenseWare effectively and it must be easily accessible to users at all times. All users are required to carefully read and make sure that they have understood this operating manual before using the HumiSenseWare.

All of the information and instructions provided in this operating manual have been compiled on the basis of the current standards and regulations, the state of the art, and the extensive expertise and experience of Schaller Messtechnik GmbH.

Schaller Messtechnik GmbH does not accept any liability for damage associated with the following, which also voids the warranty:

- Non-observance of this operating manual
- Improper use
- Inadequately qualified users

We, as the manufacturer, do not accept any liability for any incorrect measurements and associated consequential damage.

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# 1. System requirements

The HumiSenseWare needs the following system requirements:

	Requirements
Operating system	Windows 7 SP1 Windows 10 (>1607) Windows Server 2008 R2 Windows Server 2012 R2 Windows Server 2016
Installed software	.NET runtime 4.6.2
Hard disk space	min. 500MB free (including runtime)
Screen resolution	recommended min.: 1024 x 768 limited use: 800 x 600

## 2. Installation

**To do so:** The runtime and the HumiSenseWare installers have to be on your computer or on a USB-Stick plugged into your computer.

### 2.1 Operating system older than Win 10

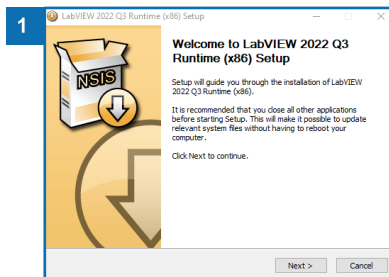
If the operating system is older than Microsoft Windows 10 the ".NET runtime 4.6.2" needs to be installed before.

#### 2.1.1 Installing the .NET runtime 4.6.2

1. Navigate to the directory where the .NET runtime installer is located.
  - » The runtime .NET runtime installer is called "ndp48-x86-x64-allos-enu.exe".
2. Execute the .NET runtime installer.
3. Follow the instructions of the installation wizard.
4. After the successful installation, close the installation wizard with **Finish**.
  - » Now you can install the runtime.

## 2.2 Installing runtime

1. Navigate to the directory where the runtime installer is located.
  - » The runtime installer is called "lvrxxxx-x86.nsis.exe".
2. Execute the runtime installer.
3. Follow the instructions of the installation wizard (figure 1).
4. After the successful installation, close the installation wizard with **Finish**.
  - » Now you can install the HumiSenseWare software.



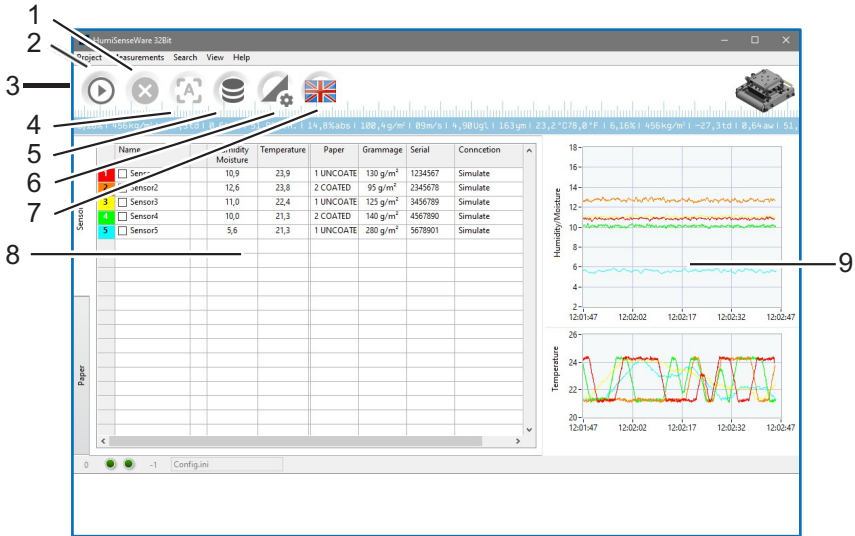
## 2.3 Installing HumiSenseWare

**To do so:** The runtime has to be installed on your computer.

1. Navigate to the directory where the HumiSenseWare installer is located.
  - » The HumiSenseWare installer is called "HumiSenseWare-xxxxxxx-xxxx.exe".
2. Execute the HumiSenseWare installer.
3. Follow the instructions of the installation wizard (figure 2).
4. After the successful installation, close the installation wizard with **Finish**.
  - » HumiSenseWare should now be installed on your computer.



## 2.4 Overview of the HumiSenseWare window



No	Name
1	Stop measurement with selected sensor
2	Start measurement with selected sensor
3	Menu bar
4	Adjust for MF-P-HTD
5	Measured values database
6	General settings
7	Language selection German and English
8	Sensor table
9	Measured value diagram (live trend)

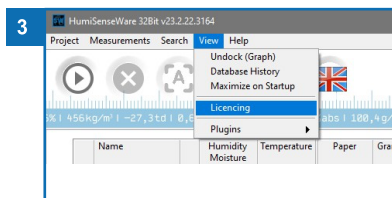
## 2.5 Licencing

**To do so:** The HumiSenseWare software is already installed and running on the desired computer.

In the software HumiSenseWare different modules can be licensed. For more information please contact our sales department.

At the first start of the software, a demo license is created, which is valid for one day. This can be extended at any time or converted into a full license.

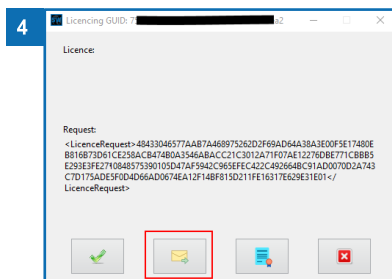
1. To perform the licencing, start the HumiSenseWare software on the target computer and select the menu item "View" > "Licencing" (Figure 3).



2. Click on the e-mail button (Figure 4). The Windows standard e-mail program should then open automatically - the license request can be sent.

- » If it is not possible to send an e-mail on the target computer, please click on the license button - then the license request can be sent.

- » You can then paste it e.g. in the Windows text editor, and save it in a textfile. Please send this textfile to [HumiSenseWare@humimeter.com](mailto:HumiSenseWare@humimeter.com).



3. Now we can do the licencing for you.
4. You will then receive an e-mail from us with the license. This text snippet looks something like this:

```
<licence>FA12345689567D89742AAEE03FC8197E20BF6AE1119365DA787CE4F  
BEBF6454E5F73ACC8EC247D945BB</licence>
```

---

Please copy this text snippet via the clipboard into the license window.

If, no e-mail is possible on the target computer, then follow the instructions below:

- » License text snippet <licence>..... </licence> from e-mail to text file via editor
- » Copy text file to USB stick
- » Open text file with editor on target computer
- » Open license window in HumiSenseWare
- » Copy text snippet to clipboard
- » The license window recognizes the license in the clipboard and will be inserted automatically
- » Click on the OK button (green check mark)

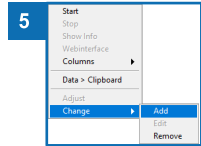
Ready!

### 3. Setting up



#### 3.1 Adding a sensor

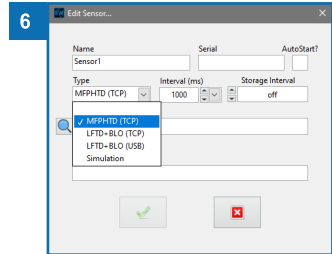
To do so: The runtime and HumiSenseWare must have been installed.

1. Right-click on the sensor table.
2. Select the option "Change" and then "Add" (figure 5).



- » The "Edit Sensor" window will now open (figure 6) and you are able to add a sensor.
- » Here you can enter your sensor-configuration (see 3.1.1 The fields of the "Edit Sensor" window).

3. Save the sensor by pressing .
4. Cancel adding a new sensor by pressing .



##### 3.1.1 The fields of the "Edit Sensor" window

Field	Description
Name	Is the name of the sensor that will be shown and is set automatically but it can be changed
Autostart?	Enables the automatic start of a measurement when HumiSenseWare is started
Type	see 3.1.2 Sensor types
Interval (ms)	Sets the measurement readout-interval of the sensor  Predefined intervals which can be selected from a dropdown-list or a custom interval can be entered
Database Interval	Sets the database storage interval for the sensor
Address	Sets the sensor address: IP / hostname / COM-Port
TwinCAT ADS	Only for setting up a Beckhoff TwinCAT ADS communication

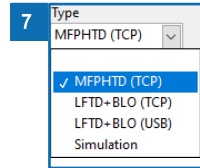
### 3.1.2 Sensor types

#### Simulation


Simulates a real sensor with randomised moisture and temperature values.

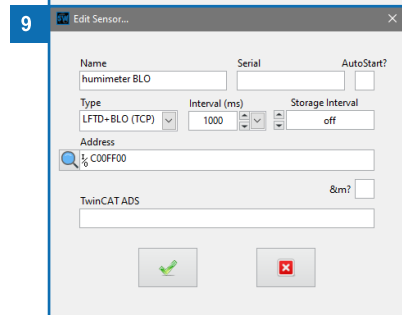
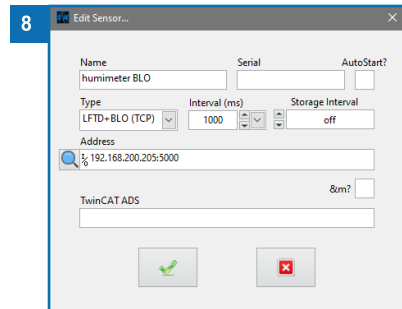
#### Real sensor

One of the different sensor types compatible with the HumiSenseWare (Figure 7).



## 3.2 Example: setting up a "humimeter BLO" sensor

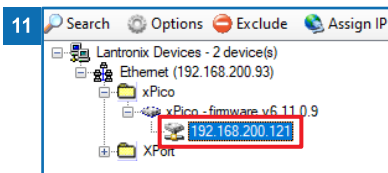
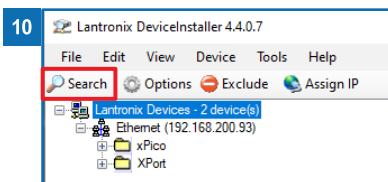
1. Right-click on the sensor table.
2. Select the option "Change" and then "Add".
  - » The "Edit Sensor" window will now open.
  - » For information on the different fields of the "Edit Sensor" window, see section [3.1.1 The fields of the "Edit Sensor" window](#).
3. If needed, enter a custom name for the new sensor.
  - » To easily identify the sensor, we chose "humimeter BLO".
4. Select the sensor type "LFTD + BLO (TCP)" for the humimeter BLO.
5. Enter the IP address (figure 8) or hostname (figure 9) of the humimeter BLO sensor in your network or use the network search with the magnifying glass icon.
  - » See [3.3 Example: setting up a humimeter MF-P-HTD sensor](#) for how to find the IP address or [3.2.2 Finding the hostname of your sensor](#) for how to find the hostname of your sensor.
6. Save the sensor by pressing .



### 3.2.1 Setting up the Lantronix module

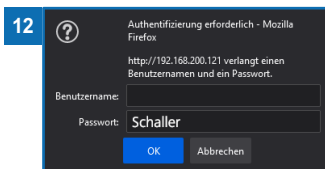
#### Finding the IP address of the Lantronix module

1. Install the "Lantronix DeviceInstaller" software on your computer.
  - » The software is located on the provided USB stick under "Lantronix/DeviceInstaller/[exe]" and is called "DeviceInstaller.exe".
2. Now start the device and connect it to your network.
3. Next, open the DeviceInstaller from Lantronix.
4. Search for xPico devices in your network using the button "Search" (figure 10).
5. Click on the xPico module and read out the IP address (figure 11).
  - » **To ensure that the module gets the same IP address every time it is restarted, reserve this IP address in your DHCP server.**
  - » If this is not possible, you can also assign a fixed IP address in the module itself.



#### Assigning a fixed IP address in the Lantronix module

1. Open the determined IP address in your browser. See [Finding the IP address of the Lantronix module](#).
  - » Your browser will display an authentication window.
2. Leave the user name blank and enter "Schaller" as password (figure 12).

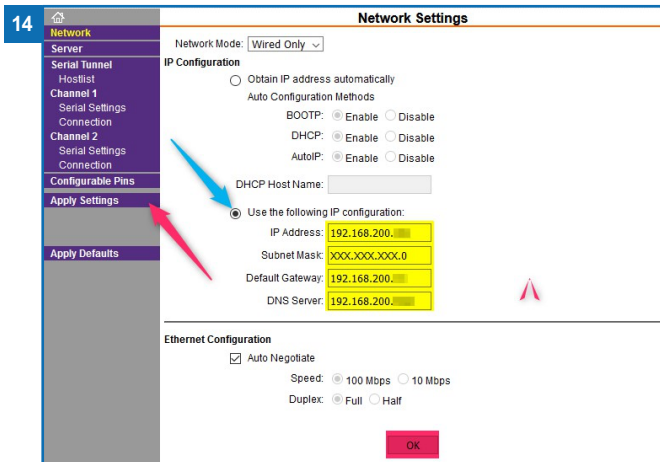


- The start window appears:



- Under the tab "Network" you can access the network settings and assign a static IP address.

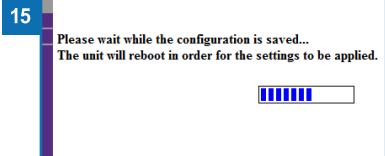
- Enter your network settings.



- Click "OK" to save the changes and "Apply Settings" to apply the changes to the module.

- The device will restart after applying the changes.

- After the device is rebooted, you can use it with the IP address set!

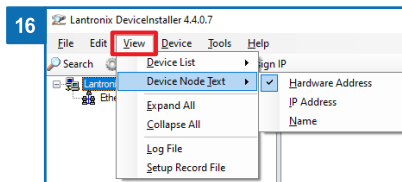


### 3.2.2 Finding the hostname of your sensor

**To do so:** A working DHCP/DNS sever in your network.

1. The hostname of the module is related to the last 6 digits of the mac-address of the sensor.
  - » E.g.: xPico of humimeter BLO: MAC-address 00:80:A3:00:FF:00 results in the hostname C00FF00
  - » **Using this function enables the use of the device with changing IP addresses and no configuration changes to either the device or the DHCP server.**
2. You can find the MAC address and hostname of your sensor under [6. Additional sensor information](#),
3. or you can use the "Lantronix DeviceInstaller".
  - » See [3.2.1 Setting up the Lantronix module](#) on how to install the "Lantronix DeviceInstaller".



4. Open the DeviceInstaller.
5. Select the option "View", "Device Node Text" and then "Hardware Address" (figure 16).

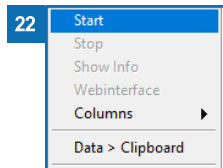
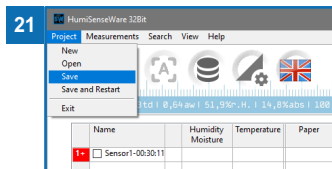
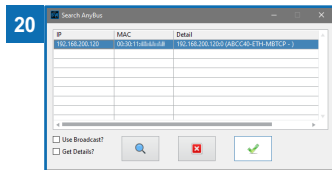
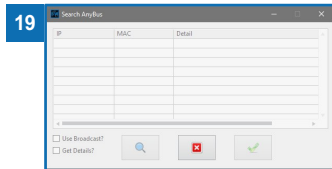
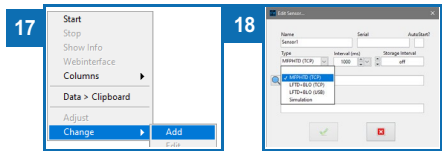


- » This will change so the DeviceInstaller shows the devices MAC address instead of its IP address.
6. Now search for xPico devices in your network using the button "Search".
  7. Click on the xPico module and read out the MAC address.

### 3.3 Example: setting up a humimeter MF-P-HTD sensor

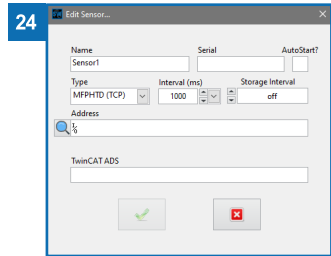
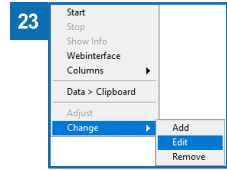
#### 3.3.1 Adding a Sensor

1. Right-click on the sensor table.
2. Select the "Change" option and then "Add" (Figure 17).
3. Select the MFPTHDT (TCP) sensor (Figure 18).
4. Now click on the "magnifying glass" (network search)
  - » Now the sensor search is running (Figure 19).
  - » The sensor has been found (Figure 20).
5. Select the sensor and confirm it with  (Figure 20).
6. Save the sensor under the Project tab (Figure 21).
7. There are two ways how to start the Sensor measurement:
  - » With the button .
  - » Or with a right click on the sensor in the sensor table and then select "Start" (Figure 22).
8. The sensor measurement has now started.



### 3.4 Editing a sensor

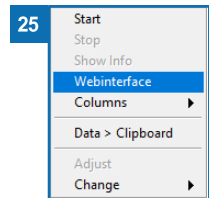
1. Left-click on the sensor so it is selected.
2. Right-click on the sensor.
3. Select the option "Change" and then "Edit" (figure 23).
4. The "Edit Sensor" window will now open (figure 24).
  - » For information on the different fields of the "Edit Sensor" window, see section 3.1.1 The fields of the "Edit Sensor" window.



### 3.5 Accessing the webinterface of a sensor (MF-P-HTD only)

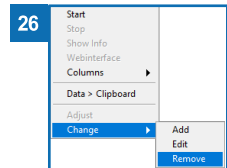
To do so: The sensor must have a webinterface.

1. Left-click on the sensor so it is selected.
2. Right-click on the sensor.
3. Select the option "Webinterface" (figure 25).
  - » The webinterface of the sensor will now be opened in your default web browser.
  - » For further information on how to configure the webinterface of your sensor, please contact Schaller Messtechnik GmbH.



### 3.6 Removing a sensor

1. Left-click on the sensor so it is selected.
2. Right-click on the sensor.
3. Select the option "Change" and then "Remove" (figure 26).
  - » The sensor will now be removed.



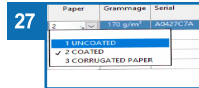
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## 3.7 Setting paper type and grammage (MF-P-HTD only)

**To do so:** A sensor must have been added to set the paper type and grammage and there is no active measurement on the sensor (see [4.3 Stopping a measurement](#)).

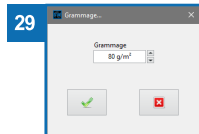
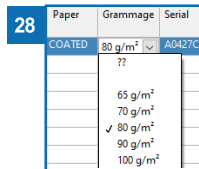
### 3.7.1 Setting the paper type

- Left-click on the "PaperType" cell of the sensor so the drop-down button is visible.
- Left-click on the "PaperType" cell again and the drop-down menu will open (figure 27).
- Select the type of the paper.



### 3.7.2 Setting the paper grammage

- Left-click on the "Grammage" cell of the sensor so the drop-down button is visible.
- Left-click on the "Grammage" cell again and the drop-down menu will open (figure 28).
  - » The drop-down menu will show all the grammage options if no paper type has been selected for the sensor.
- Select the grammage of the paper.
  - » The grammage will also be set to empty if the paper type of the sensor is set to empty.
  - » On selecting the "??" entry, you are able to enter a user defined grammage (figure 29).



## 4. Using the HumiSenseWare


### 4.1 The HumiSenseWare (Demo)

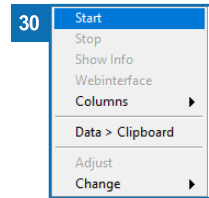
- The HumiSenseWare (Demo) is a shortcut to open the HumiSenseWare with a preconfigured config file. It comes with 5 simulated sensors to demonstrate the functionality of the HumiSenseWare.
  - » Changes to the configuration of the HumiSenseWare (Demo) can not be saved!

### 4.2 Starting a measurement

**To do so:** One or more sensors must have been added.


#### 4.2.1 Starting a measurement of one sensor

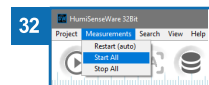
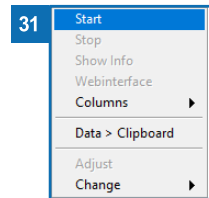
1. Left-click on the sensor so it is selected.
2. Starting it with the context menu.
  - » Right-click on the sensor.
  - » Select the option "Start" (figure 30).
3. Starting it with the "Start" button.
  - » To do so, press .
4. The measurement will be started.



#### 4.2.2 Starting a measurement of all sensors

**To do so:** No sensor must be selected.


1. Starting it with the context menu.
  - » Right-click on the sensor list.
  - » Select the option "Start" (figure 31).
2. Starting it with the "Start" button.
  - » To do so, press .
3. Starting it over the menu bar.
  - » Select the menu "Measurements".
  - » Select the option "Start All" (figure 32).
4. All measurements will be started.

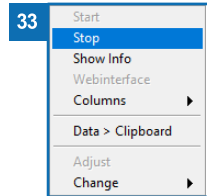


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## 4.3 Stopping a measurement


### 4.3.1 Stopping a single measurement

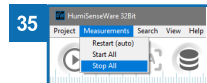
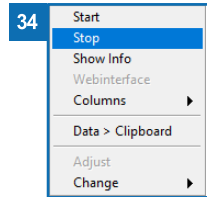
1. Left-click on the sensor so it is selected.
2. Stopping with the context menu.
  - » Right-click on the sensor.
  - » Select the option "Stop" (figure 33).
3. Stopping with the "Stop" button.
  - » To do so, press .
4. The measurement will now stop.



### 4.3.2 Stopping all measurements


To do so: No sensor has been selected.

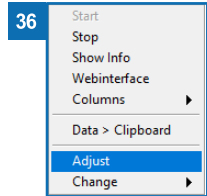
1. Stopping it with the context menu.
  - » Right-click on the sensor list.
  - » Select the option "Stop" (figure 34).
2. Stopping it with the "Stop" button.
  - » To do so, press .
3. Stopping it over the menu bar.
  - » Select the menu "Measurements".
  - » Select the option "Stop All" (figure 35).
4. All measurements will now stop.



## 4.4 Adjusting a sensor (only MF-P-HTD)

**To do so:** The measurement of the sensor is running.


1. Left-click on the sensor so it is selected.
2. Adjusting it with the context menu.
  - » Right-click on the sensor.
  - » Select the option "Adjust" (figure 36).
3. Adjusting it with the "Adjust" button.
  - » To do so, press .



## 4.5 Viewing the database history

For information on how to view the database history, see section 5. [Viewing the database history](#).

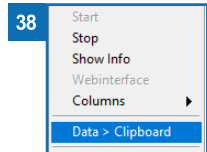
## 4.6 Changing the language

- Left-click on the  icon.
  - » A small window will open and show all the available Languages (figure 37).
- Now you can select the Language by selecting the representative flag icon.



## 4.7 Copy the current sensor table data to the clipboard

- Right-click on the sensor list.
- Select the option "Data > Clipboard" (figure 38).
- » The data of all sensors has been copied to the clipboard.

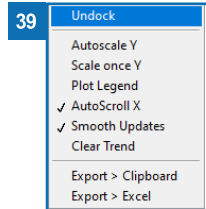


---

## 4.8 Adjusting the graph

### 4.8.1 Docking/Undocking the graph

- Right-click on the graph.
- Select the option "Undock"/"Dock" (figure 39).
  - » The graph is now docked or undocked.

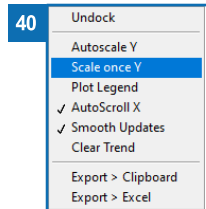


### 4.8.2 Scaling the Y-axis

The "Humidity / Moisture" and the "Temperature" graph have to be scaled separately.

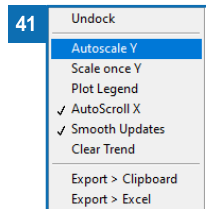
#### Manually scaling the Y-axis

- Right-click on the graph.
- Select the option "Scale once Y" (figure 40).
  - » The Y-axis has been scaled now.
  - » Manually scaling the Y-axis will disable autoscaling.



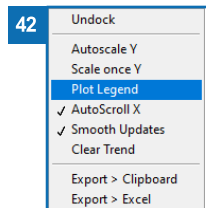
#### Enabling/Disabling autoscaling of the Y-axis

- Right-click on the graph.
- Select the option "AutoScale Y" (figure 41).
  - » This will toggle the automatic scaling of the Y-axis.
  - » Manually scaling the Y-axis will disable autoscaling.



### 4.8.3 Showing the Plot legend

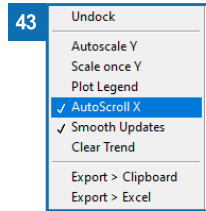
- Right-click on the graph.
- Select the option "Plot Legend" (figure 42).
  - » This will toggle if the Legend is shown.



#### 4.8.4 Enabling and disabling autoscrolling of the X-axis

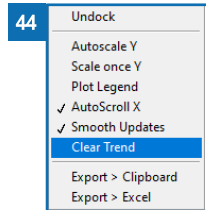
The Timeaxis (X-Axis) of the "Humidity / Moisture" and "Temperature" graph can not be scaled separately.

- Right-click on the graph.
- Select the option "AutoScroll X" (figure 43).
  - » This will toggle the automatic scrolling of the X-axis.



#### 4.8.5 Clear the graph

- Right-click on the graph.
- Select the option "Clear Trend" (figure 44).
  - » This will clear both graphs.

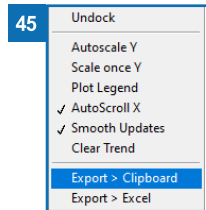


#### 4.8.6 Export graph data

**To do so:** One or more measurements have to be running.

##### Export data to clipboard

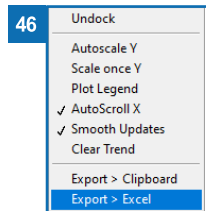
- Right-click on the graph.
- Select the option "Export > Clipboard" (figure 45).
  - » The graph data has been copied to the clipboard.



##### Export data to excel

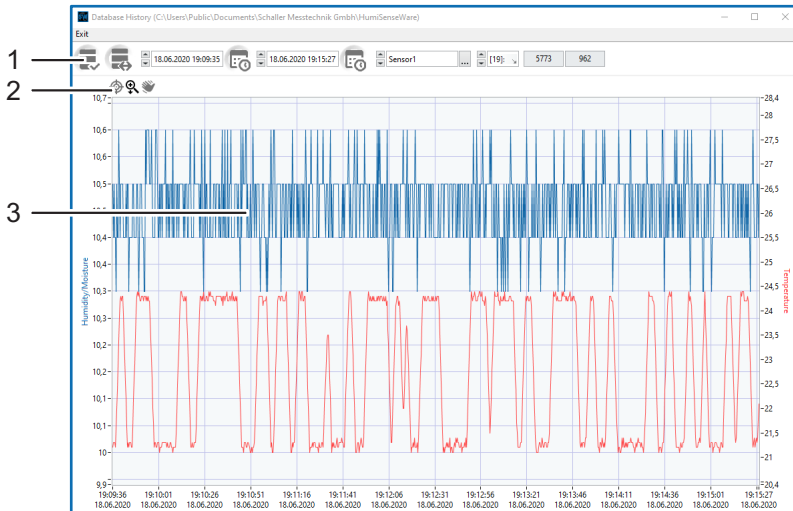
**To do so:** Microsoft Excel has to be installed.

- Right-click on the graph.
- Select the option "Export > Excel" (figure 46).
  - » A new Excel window will open with the exported data.



## 5. Viewing the database history

### 5.1 Overview over the database history window



No	Name
1	Menu ribbon
2	Graph tools
3	Measurement graph

## 5.2 Selecting a sensor

**To do so:** One or more sensors must have been added and some measurement data has been recorded.

1. Selecting it from a list of available sensors.



- Left-click on the sensor (figure 47).
- » A list of all the available sensors will open.
- Select the sensor to view the measurements of by left-clicking on it.

2. Selecting it by cycling through the available sensors.

- Left-click on the cycle buttons (figure 48) to cycle through the available sensors.

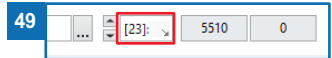


## 5.3 Selecting a measurement of a sensor

**To do so:** One or more measurements have to be completed or are currently running.

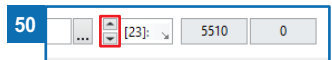
1. Selecting it from a list of available measurements.

- Left-click on the selected entry (figure 49).
- » The default selected entry will be the currently running measurement or the last completed measurement if no measurement is currently running.
- » A list of all the available measurements for that sensor will open.
- Select the measurement to view by left-clicking on it.



2. Selecting it by cycling through the available measurements.


- Left-click on the cycle buttons (figure 50) to cycle through the available measurements.
- » The default selected entry will be the currently running measurement or the last completed measurement if no measurement is currently running.



---


## 5.4 Showing the measurement data

**To do so:** One or more measurements have to be completed or are currently running.

- Left-click on the icon .
- » The selected measurement (within the selected time range) will be displayed on the graph.



## 5.5 Showing all measurement data

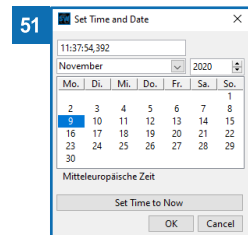
**To do so:** One or more measurements have to be completed or are currently running.

- Left-click on the icon .
- All data of the selected measurement will be displayed on the graph.

## 5.6 Selecting a time-frame of a measurement

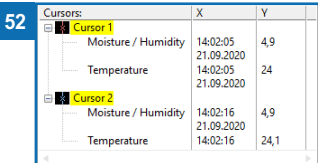
**To do so:** A measurement must have been selected.

1. Selecting it with the time and date dialogs.
  - » The start- and end-time have to be set separately.
  - Left-click on the "time and date" icon .
  - You can now set the time and date (figure 51).
  - » After changing the time you have to confirm it by pressing the "Enter" key.
  - Confirm the time and date by left-clicking the "OK" button.
2. Selecting it with the graph tools.
  - For information on how to use the graph tools, see section [5.7 Graph tools](#).
3. You can reset the graph by right-clicking on the icon .



## 5.7 Graph tools

1. You can view single measurement values .
  - Right-click on the graph.
  - Select the option "Cursor Legend".
  - » The graph will now show two cursors and a small window displaying the selected measurement values (figure 52).










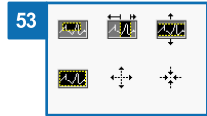
52

Cursors:	X	Y
Cursor 1		
Moisture / Humidity	14:02:05	4,9
	21.09.2020	
Temperature	14:02:05	24
	21.09.2020	
Cursor 2		
Moisture / Humidity	14:02:16	4,9
	21.09.2020	
Temperature	14:02:16	24,1


- Left-click on the "cursor legend" icon .
  - » Now you can move the cursors by dragging them over the graph to show the measuring values at different points in the graph.

2. The "magnifying glass" tool.

- Left-click on the "magnifying glass" icon .
  - » A small menu will open and you can select between six different modes (figure 53) to change how the data in the graph is displayed.
  - » To select a mode, left-click on its icon.
  - » The mouse cursor will change according to what mode is selected.
- The  mode will let you select a "window" out of the measurement data to display in more detail.
  - » The "window" can be chosen at random and only consist of a few single measurements.
  - » Left-click on the graph where you want the "window" to start and drag it to where you want it to end.
- The  mode will let you select a time-frame out of the measurement data to display in more detail.
  - » Left-click on the graph where you want the time-frame to start and drag it to where you want it to end.
- The  mode will let you select a measurement-value-frame to display in more detail.
  - » Left-click on the graph where you want the measurement value frame to start and drag it to where you want it to end.
- The  mode will overlay the moisture and temperature values.
- The  mode will let you zoom into the graph.
  - » Left-click on the graph where you want to zoom in.
- The  mode will let you zoom out of the graph.
  - » Left-click on the graph where you want to zoom out.



3. The "hand" tool.

- Left-click on the "hand" icon .
  - » Now you can move the data shown by clicking and holding the left mouse-button and dragging the graph.

---

## 5.8 Selecting a database not in the default path

1. Left-click on the "select a different path" button (figure 54).

- » An explorer window will open and show the default folder for the sensor databases.



2. Navigate to the folder where the database is located.

3. Select the database by left-clicking on it and confirm the selection by left-clicking the "OK" button.

- » For information on how to view the measurements of the selected sensor, see section [5.3 Selecting a measurement of a sensor](#).

## 6. Additional sensor information

Additional information about your sensor:











Climate  
Environment



Materials



Food



Buildings



Bioenergy



Paper / Board

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