

Operating instructions



Configuration software Almemo® Connect

Version 1.7
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Operating instructions

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Introduction

Welcome

Welcome to Almemo®Connect, your solution for fast and precise configuration of ALMEMO® measuring devices.

This software was developed to make the configuration and management of measuring devices simple, efficient and flexible.

What can you do with this software?

- **Easy configuration:** Adjust the parameters of your measuring devices to perform accurate and reliable measurements.
- **Monitor measured values:** You can check and evaluate the measured values of your connected devices online.
- **Data import and analysis:** You can load and view the measured values from the device memory. The files are saved on your computer in CSV format and can then also be used in other software applications.

Tips for a successful start

- This software only works with ALMEMO® devices from version 6 (V6) onwards.
- Make sure that the firmware of your measuring devices is up to date.
- If you encounter any problems, you will find useful tips and solutions in the “Troubleshooting” section.

Getting started

System requirements

Operating system:

- Windows 10 or higher

Hard drive space:

- 150 MB of available storage space

Interfaces:

- USB 2.0 or higher or serial interface (RS-232) depending on the connection cable of the measuring device
- Ethernet connection for network-based measuring devices

Additional software:

- Current browser with JavaScript support

Administrator rights are required to install the software, as the “Device Server” and “Bridge” components are installed as services. This ensures smooth and continuous operation via the browser.

Installation

1. Start the installation

Double-click on the file `Setup_AlmemoConnect_x.x.x.exe` and follow the instructions on the screen.

2. Remove existing version

If you already have an older version installed, it must be uninstalled before installation. The installation wizard will ask you to confirm this in the first dialog box. Your previous settings will be retained.

3. Change the language of the installation wizard

You can change the language of the wizard by clicking on the flag in the upper left corner.

4. Customize installation

- If you do not want to install the software in the default path, click “**Settings**” during installation to change the installation path.
- Under “**Settings**” you can also specify which shortcuts (e.g., on the desktop or in the Start menu) should be created.

First start

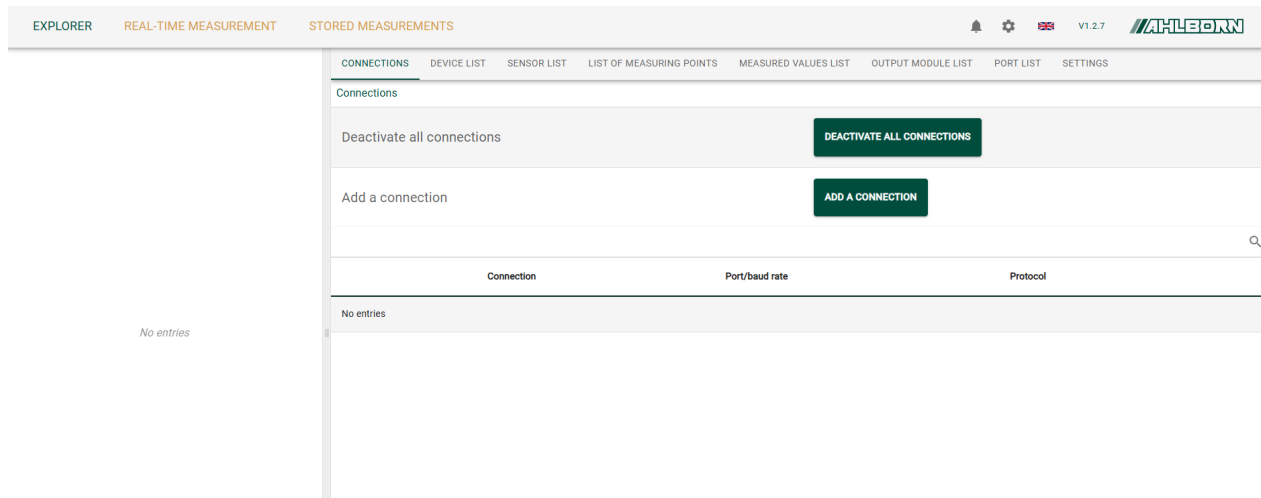
Starting the software:

After installation, you can start **ALMEMO® Connect** as follows:

- **Via the desktop shortcut:** Double-click the **ALMEMO® Connect** icon on your desktop, if it was created during installation.
- **Via the start menu or search function:**
 - **Windows 10:** Click on the Windows logo in the lower left corner, search for “AlmemoConnect” in the “Ahlborn” folder and select the entry.
 - **Windows 11:** Click on the Windows icon in the taskbar or press the **Windows key**, enter “AlmemoConnect” and select the application from the search results.

Adding an interface:

After starting, you will see the following view in your browser:



- Press the “Add connection” button there. A new connection entry will be created in the table.
- Then, at the end of the added table row, press the arrow to access the connection settings page.
- On the settings page, you must then choose one of the two connection types: “COM port” or “Network”. If you have connected your device via USB or a serial interface, please select “COM port”. If you have connected your computer directly to the device via Wi-Fi or if the device is connected to your network, please select “Network” here. For more information, see the chapter on [connections](#).

Get help

Produkt-Hotline

Telephone:

+49 80 24 / 30 07 - 32

E-Mail:

help@ahlborn.com

Support from customer service

Under the **Support** menu (accessible via the gear icon in the settings), you can conveniently fill out a support form. Your request will automatically be supplemented with all relevant software information so that we can process your request quickly and efficiently.

Operation

Explorer

You can manage the connected devices via the **“Explorer”** menu item. A list of the connected devices is displayed on the left-hand side in a **tree structure**, including their sensors and measuring points.

In addition, a **submenu bar** is available that offers various overview tables and setting options. If the **“Explorer”** menu item is selected, it is highlighted in green.

If no other menu was selected before switching to Explorer, the **“Connections”** menu is active by default. Otherwise, the last menu used is displayed.

	Connection	Port/baud rate	Protocol	
☒	C1.0	192.168.6.201	10001	ALMEMO® 470.V8 ▾ »
☒	C2.0	192.168.6.71	80	ALMEMO® 500 ▾ »
☒	C3.0	COM4	115200	ALMEMO® V6.V7 ▾ »

Navigation tree

The **navigation tree** provides an overview of the configured interfaces and the devices connected to them, their sensors and measurement channels. Clicking on an entry in the tree takes you directly to the corresponding submenu with the associated setting options.

To improve the overview, the entries in the tree can be **expanded or collapsed**.

In addition, **warning messages** are displayed in the tree using an exclamation mark icon . Move the mouse pointer over the **exclamation mark icon** to display the reason for the warning.

Connections

Under the “**Connections**” menu item, you will find an overview of the connections set up to your measuring devices. If you are not opening the menu for the first time, the last connection configuration page you used may be displayed. To return to the overview, either select “**Connections**” in the **breadcrumb bar** or click on the “**Connections**” menu item again.

You can create multiple connection configurations and control them individually by activating or deactivating the **check mark** in the first table column. It is possible to activate multiple connections at the same time. In this case, all devices of the active connections are read and displayed.

Please note that connections are processed sequentially. If many connections are activated at the same time, the processing and display speed may slow down accordingly.

Important note:

Important note: The **connections remain active** even if you **close the web browser**. If you want to use the connections in other software, they must first be deactivated or deleted. To do this, use the “**Deactivate all connections**” button to trigger automatic deactivation of all connections. Please note that this process may take some time, especially if not all data has been completely imported yet.

Connection settings

Clicking on the **arrow** in the last column of the connection list takes you to the corresponding settings page.

Once you have added a new connection, you will see the **connection type** selection in the first line and a button to delete this connection in the second line. In the first step, select the desired connection type.

Possible settings

- **Connection type**
 - **COM port:** Select this option if the device is connected via USB or a serial interface.
 - **Network:** Select this option if you are connected directly to the device via a Wi-Fi module or if the device is located in your network.
- **Protocol**
 - **ALMEMO® 470, V8:** For the latest generation of devices (V8) and the ALMEMO® 470.
 - **ALMEMO® 500:** This setting is required for the ALMEMO® 500.
 - **ALMEMO® V6, V7:** For older devices, such as ALMEMO® 2690-8, ALMEMO® 710 or ALMEMO® 510, use this setting.

Connection type COM port

- **COM port:** Select the correct interface number.
- **Baud rate:** Set the correct transmission rate.
- **Device address or address range:** If “**ALMEMO® V6, V7**” is set as the protocol, you must enter the address of the device here. It is also possible to network several devices. Make sure that the **device addresses** are assigned **consecutively** and without gaps. If several devices are connected to the same interface, enter an **address range** (from-to) here.

Connection type Network

- **IP address:** Enter the IP address of the device. If the address was assigned via DHCP, you can view

it on the device display. Alternatively, you can find it in the connection list of your network router.

- **TCP port:** The default port number for our interface cables or devices is **10001**. For the ALMEMO® 500, use **80**.
-

Apply settings

- This button appears as soon as you have made changes to the settings. Click **Apply settings** to save the changes. Only then will the new settings take effect.
-

Delete connection

- This button allows you to permanently delete the connection. Please note that this action **cannot be undone**.

Device list

Under the menu item “Device list” you will find a list of all connected devices with the most important information for identifying the devices.

Device settings

Clicking on the **arrow** in the last column of the connection list takes you to the respective settings page of the connected device. The available settings options depend on the respective device.

For devices with **protocol version V8**, the menu structure is read directly from the device and therefore corresponds to the menu navigation that you also see on the device display.

Please refer to your device's **operating instructions** for detailed information on the available settings.

Sensor list

Under the menu item “**Sensor list**” you will find a list of all sensors connected to the devices with the most important information for identifying the individual sensors.

Sensor settings

Clicking on the **arrow** in the last column of the sensor list takes you to the corresponding settings page for the sensor. The available settings depend on the respective device and the capabilities of the sensor.

For devices with **protocol version V8**, the menu structure of the sensors is read directly from the device, so that it corresponds to the menu navigation that you also see on the device display. In the sensor settings, you also have the option of accessing the settings for the **measurement channels**.

For detailed information on the possible settings, please consult the **operating instructions** for your device and the sensor.

Measuring points list

Under the menu item “**Measuring points list**” you will find a list of the measuring channels of all sensors connected to the devices with the most important information for identifying the individual measuring channels.

Channel settings

Clicking on the **arrow** in the last column of the measuring points list takes you to the corresponding settings page for the measuring channel. The available settings depend on the respective device and the capabilities of the sensor.

For devices with **protocol version V8**, the menu structure for the measurement channel is read directly from the device, so that it corresponds to the menu navigation that you also see on the device display.

For detailed information on the possible settings, please consult the **operating instructions** for your device and the sensor.

Measurement value list

Under the menu item “**Measurement value list**” you will find a list of all measurement channels of the sensors connected to the devices as well as their current measurement values.

In the **header** of the table, you can specify for three columns whether the **measured value**, **minimum value**, **maximum value** or **average value** should be displayed. If you select **maximum value**, **minimum value** or **average value**, you have the option of resetting either the individual value or **all values** using the corresponding selection.

Output module list

Under the menu item “**Output module list**” you will find a list of all output modules connected to the devices.

Output module settings

Clicking on the **arrow** in the last column of the output module list takes you to the respective settings page for the module, provided that settings are available. The setting options depend on the respective device and the functions of the output module.

For **relay trigger modules**, you also have the option of accessing the **settings for the output ports**.

For devices with **protocol version V8**, the menu structure of the output modules is read directly from the device, so that it corresponds to the menu navigation that you also see on the device display.

For detailed information on the available settings, please consult the **operating instructions** for your device and the output module.

Port list

Under the menu item “**Port list**” you will find a list of all output ports of the output modules connected to the devices.

Output port settings

Clicking on the **arrow** in the last column of the output module list takes you to the respective settings page for the port. The setting options depend on the respective device and the functions of the output module.

For devices with **protocol version V8**, the menu structure of the output modules is read directly from the device, so that it corresponds to the menu navigation that you also see on the device display.

For detailed information on the available settings, please consult the **operating instructions** for your device and the output module.

Settings

Unter dem Menüpunkt "**Einstellungen**" finden Sie Konfigurationsmöglichkeiten für den Bereich **Explorer**. Derzeit steht hier nur der Punkt **Optionsfreischaltungen** zur Verfügung.

Option activations

In this area, you can activate paid extensions. Information about available extensions can be found on our **website** or in our **advertising campaigns**.

- **Serial number:** Here you will see a serial number that identifies your version of **AlmemoConnect** and your computer hardware. Use this serial number to request activation of the desired option from us. We will then send you an **activation code**.
- **Activation code:** Enter the activation code you received from us in this field to activate the corresponding option.

Real-time measurement

Here you can create **custom measurement displays** (dashboards) to display or check the desired measurements from your measuring devices.

- To create a new measurement display, press the "New Dashboard" button. Give the measurement display a **name**. Here you also have the option of inserting a copy of a measurement display from another **ALMEMO®Connect**.
- A **large plus icon** appears on the new dashboard, which you can use to add your first measurement display.
- Click on the plus symbol to configure the display. You will be prompted to give this measurement display a **name** and can then select the desired **measuring points** from a list of all available measurements.
- Check the desired measuring points and select whether they should be displayed on the left or right **Y-axis**.

Measurement display settings



Three-dot icon – Settings / Delete

You can use the three dots to access the settings for the measured value display or to clear the measurement display



View table

Displays the measured values in tabular form.



View line graph

Displays the measured values in a line graph.



View individual measurement value

Displays a selected measured value individually.



Set display size

Changes the size of the display.



Move measurement display

Allows you to change the position of the display.

Measurement value detail view

When you click on a line graph measurement on the dashboard, you can switch to the detailed view of the measurement. There you will see a table and a line graph.

Update interval and status display

- **Update interval:** Specify the interval at which newly arrived measured values are transferred to the display.
- **Status display:** In addition to the update interval, the *play* and *pause* icons indicate whether the measured values are currently being updated.
Note: When the line graph is zoomed, the status automatically switches to *pause*.

Display



Arrow icons – Move graphic

The line graph can be moved using the arrow symbols.



Plus / Minus – Zoom

Use plus and minus to zoom in or out of the graph.



Fullview

Click on the full view icon to return to the full view of the graphic. This will automatically restart the update interval.



Download

You can use the download icon to download a CSV file containing the current data.



Gear – Settings

Use the gear icon to configure additional display options:

- In the left field, specify by what percentage the display should be enlarged or reduced each time you click “Plus” or “Minus.”
- In the right field, define by what percentage the display should be shifted each time you press the arrow keys.
- Enable “Show data points” to display measurement values as points along the line.

Stored measurement

In the first step, you will see a **table** with the measurements loaded from the devices. You can delete individual or all measurements by **checking** the box in the column with the trash can icon and then making the appropriate selection in the column header.

By clicking on the arrow in the last column, you can switch to the **view** of the respective measurement.

Here you have the option of displaying the measured values either in **tabular form** or as a **line graph**.

Operating the line graph



Select data points

Select which measuring points you want to display in the graph.



Move graphic

You can use the arrow symbols to move the line graph display.



Zoom

Use the plus and minus symbols to zoom in or out of the graphic.



Restore full view

The full view icon returns you to the full view of the graphic. The update interval is automatically restarted.



Download data

You can download a CSV file containing the current data using the download icon.

Alarm list



The **number next to the bell icon** indicates how many messages have been received from the connected measuring devices or processing software.

Clicking on the **bell icon** displays the message list, with the **most recent message** appearing at the top. You can mark a message as read by clicking on it. Alternatively, you can mark all messages as read at once by clicking on the **check mark icon**.

You have the option of displaying either **all messages** or only **unread messages**. In addition, you can delete the entire list of messages.

Settings



You can access the software **settings** by clicking on the **gear icon**.

Settings

Device server

The software consists of two components: a **display section** and the **device server**, which handles communication with the measuring devices and processes their data.

- **IP address:** If the device server is installed on the same computer (default), use **127.0.0.1**. Otherwise, enter the IP address of the computer on which the device server is running.
- **Port:** The default setting is **10000**. If the device server is running on another computer and **port forwarding** is required, enter the corresponding port here.

Real-time measurement

- **Maximum buffer size:** Here you can specify the maximum number of measured values to be displayed in the real-time measurement display. Once this limit is reached, the **oldest measured values** are overwritten.

Stored measurements

- **Maximum file size:** Reading the stored measurement values from the devices can result in very large files. Depending on the **computing power**, problems may arise when displaying this data. Here you can specify the maximum size of a measurement file. If the number of measurement values exceeds this size, the measurement values are distributed across **several files**.
- **Directory:** Here you specify the **storage location** for the measurement files.

Support

If you encounter a problem with the software, you can create an **email** to our support team here. Please include your **name** and a brief **description of the problem**. The software will automatically create an email with the **log files** attached, which you can send to us via your email program.

Language selection

By clicking on the **flag icon**, you can activate one of the available **translations** of the software.

Notes

This chapter contains useful **information** that will help you make the best use of the software when dealing with the specific **characteristics of the devices**.

V8 and ALMEMO® 470 devices

These devices work with our latest, technically improved **V8 interface protocol**. All device settings are transmitted directly from the devices to the software online. This eliminates the need for translations and special queries, allowing **the device functions** to be **used optimally**. The **menu structure** in the software corresponds to the menu navigation that you see on the **device display**.

ALMEMO® 500 device

The ALMEMO® 500 protocol does **not yet support the transfer of settings**. The menu structure in the software has therefore been based as far as possible on the menu navigation of the **tablet operating app**. Further information can be found in the chapter "[ALMEMO® 500 device](#)".

V6 and V7 devices

The protocol for the V6 and V7 devices was originally developed for **manual operation via a terminal**. In order to be able to make all settings in this software, the **menu structure** must therefore be **translated**.

- **Important:** A measurement started in the device is stopped when connected to this software, as otherwise no configuration data can be retrieved.

For additional information, please refer to the chapter "[Devices V6 and V7](#)".

V5 devices

These devices are **no longer supported** by this software.

ALMEMO® 500 device

Avoid "hot plugging". If you want to disconnect/connect a connector, proceed as follows:

- Deactivate the interface.
- Switch off the device before plugging in or unplugging a connector.
- Plug in or unplug the connector.
- Switch the device back on and reactivate the interface.

Real-time measurement

To display measured values in the **real-time measurement** menu with an ALMEMO® 500 device, proceed as follows:

1. **Start measurement in the device:**
 - Open the main device entry (A500) in **Explorer** and open the **Device Settings** menu.
 - Navigate to the **Data Logger** submenu to set the speed for generating the measured values.
 - Then switch to the **Memory** submenu. There you can start the measurement with the button in the "**Start/stop measurement**" line, if it is not already active.
2. **Display of measured values:**
 - After starting the measurement, the measured values of the selected channels automatically appear in the **real-time measurement** menu.

Stored measurements

To view measurements in the **Stored Measurements** menu, the data must first be downloaded from the device. Follow these steps:

1. **Prepare to export the measurement:**
 - Open the main device entry (*ALMEMO® 500*) in **Explorer** and open the **Device Settings** menu.
 - Navigate to the **Memory - Manage Measurements** menu.
 - Select the desired measurement in the “**Export Measurements**” line and start the export.
2. **Select export mode:**
 - In the following query, select the “**Local export**” mode.
 - You can track the progress of the export in the **bottom line**.
3. **Download data:**
 - Once the export is complete, go to the **Export** menu.
 - Download the exported data there.
4. **Data display in the software:**
 - After successful download, the measurement files are automatically displayed in the **Saved Measurements** menu.

Devices V6 and V7

Avoid “hot plugging”. If you want to disconnect/connect a connector, proceed as follows:

- Deactivate the interface.
- Switch off the device before plugging in or unplugging a connector.
- Plug in or unplug the connector.
- Switch the device back on and reactivate the interface.

Real-time measurement

When these devices are connected to the software, they cannot provide continuous or cyclical measurements. Instead, measurements are **queried manually** whenever possible.

- These measured values can be displayed in **real-time measurement**.
- **Note:** Due to the necessary data synchronization, the data cannot be queried in a fixed cycle.

Saved measurements

To view saved measurements in the “**Saved measurements**” menu, they must first be loaded from the device. Proceed as follows:

1. **Select device:**
 - Select the desired device entry in **Explorer**.
2. **Open the memory menu:**
 - Navigate to the “ **Memory**” menu.
3. **Download measurement:**

- Download the saved measurement to your computer using the **“Download”** button.

4. Select measurement (if applicable):

- For devices that can store multiple measurements, select the desired measurement in the **“Measurement name”** line before starting the download.

Multi-point adjustment

With a correction curve that includes up to 35 correction values, the measurement errors of a sensor can be precisely corrected. The correction values from a calibration certificate can be stored in the EEPROM of the connector so that the corrected measured values can be processed directly by the device and displayed on the screen.

For devices with the “KL” option, the menu item **Multi-point adjustment** is available in the sensor entry (e.g. **S1.1.0.0**), provided this is supported by the sensor. To use this function, navigate to the corresponding sensor entry in the tree and click on the **Multi-point adjustment** menu item, if available. If the menu item is not visible, check the device entry (G...) under **About the device** to see if the abbreviation “KL” is listed in the **Option** line. If this is not the case, contact your [technical advisor](#) or our [headquarters](#) in Holzkirchen to clarify the availability of this option for your device.

Quick guide

Measurement point selection: Select the channel of the connector to which the correction is to be applied.

Range limits:

- **Do not use range limits** if only the measuring range between the first and last correction values is to be taken into account. Otherwise, a measuring range exceedance will be signaled.
- **Using range limits** allows you to continue measuring uncorrected outside the corrected range up to the normal range limits.

Deactivate adjustment: Use this option to deactivate the correction, e.g. for testing purposes.

Enter correction values: Enter the **actual and target values** for the correction in the table. Please note that only the upper range limit is always marked in the last row. The actual and target values must be the same here.

Add table rows: You can add further correction points using the **Add table row** button.

Activate/deactivate correction values: Each correction value can be activated or deactivated individually using a check box.

Apply settings: Transfer the entered values to the sensor using the **Apply settings** button. The corrections will then take effect.

Troubleshooting

- **After adding a connection, no device is displayed or the interface is closed again:**
 - **ALMEMO® V6/V7 devices:** Make sure that the correct **device address** is specified in the **interface settings**.
 - **ALMEMO® 500 devices:** Check that the **port number** is correctly set to **80** in the **interface settings**.
 - Make sure that the correct **protocol** is selected in the **interface settings**.
 - Check the remaining settings, such as **COM interface** and **baud rate** or **IP address** and **port**

number and make sure that they are configured correctly.

- **After entering data, the message ‘The entry was not confirmed within the time limit’ appears:**
 - Since the settings are not immediately accepted by the software but are first sent to the **device** or **sensor**, the software waits for **confirmation** from the device or sensor. Depending on the type of connection (e.g., wireless), it may happen that the **timeout period** is insufficient or that the data packet gets stuck on the transmission path.

Solution: Wait to see if the response arrives, or repeat the entry if necessary.

- **Problems when plugging/unplugging connectors on the device:**

The information may not be updated automatically after plugging in or unplugging a connector. In particular, **ALMEMO® V6/V7** and **ALMEMO® 500 devices** may **malfunction** during “**hot plugging**”.

To avoid problems, please proceed as follows:

 - Deactivate the interface.
 - Switch off the device before plugging in or unplugging a connector.
 - Plug or unplug the connector.
 - Turn the device back on and reactivate the interface.

Contact

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