HYDROTECHNIK

HYDROlink6 Advanced

Operating Manual

HYDROTECHNIK

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About this manual

Operation

Software description

About this manual

This chapter will provide you with basic information about this manual.

Scope of application

This manual applies to software packages with the name HYDROlink6 Advanced, produced by HYDROTECHNIK GmbH, Limburg, Germany. The manual applies only to software with the version number indicated on the title page of this manual.

If you do not have the manual that matches your software, please contact us. We will be happy to make it available to you. Please visit the HYDROTECHNIK homepage.

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Purpose of the manual

This manual assists the user in his daily work with the software. It contains information about the windows, dialogs, commands, and buttons of the software and explains specific procedures and operational steps. For information that extends beyond the content of this manual, we will be happy to offer you customer-specific trainings. Please contact customer service or your local dealer or representative for more information.

Please contact our sales department or your local HYDROTECHNIK partner for additional information.

Previous knowledge

This manual assumes that you have previous experience in working with the Windows operating system and its operating elements, e.g. drop-down menus, buttons, etc. Windows menu items and dialog windows such as **Save as...** and their operating elements are not described in this manual.

Structure of notes

The notes used in the manual and their meaning are explained in the following.

Note
This note informs you about possibly dangerous situations that can occur due to an operating error/inappropriate behaviour. If these situations are not avoided, damage to the machine or the surroundings can be the result.

This note will provide you with tips to make your work easier. This note will also provide you with further details about the working process.

Abbreviations used

The following abbreviations are used in this manual.

approx.	approximately
CAN	Controller Area Network
CPU	Central Processing Unit
e.g.	for example
ISDS	Intelligent Sensor Detection System
LAN	Local Area Network
max.	maximum
min.	minimum
PC	Personal Computer
PGN	Parameter group number
SA	Source address
SPN	Signal number
tab	tabulator
USB	Universal Serial Bus

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Symbols used

The following symbols are used in this manual.

➔	Beginning of a series of operations
1, 2, ...	Steps within an operating sequence
■	End of a series of operations
⇨	Cross-reference to a different part of this manual or to a different document.
(**A**)	Reference to the element indicated by letters in a figure
Button	**Blue boldface** indicates switches, controls, sliders, buttons and terms from the software.
Ctrl + c	**Red boldface** indicates keys on the keyboard. If keys should be pressed simultaneously, this is specified with a plus sign (+).
Path specification > dialog	Path specification, how to reach the dialog/function described.
BASE	Indicates information that is only valid if one of the following measurement instruments is connected: • MultiHandy 2020 • MultiHandy 2025 • MultiHandy 3020 • MultiSystem 4010
MultiBox	Indicates information that is only valid if one of the following measurement instruments is connected: • MultiBox 3060 • MultiBox 3061 • MultiBox 3065

Operation

This chapter explains how to operate the software properly.

Introduction

HYDROlink6 Advanced is software from HYDROTECHNIK.

Functional description

HYDROlink6 Advanced enables you to operate HYDROTECHNIK instruments that are connected to the PC.

HYDROlink6 Advanced provides you with the following functions:

- Display current measured values of selected channels
- Min./max. Display measured values of selected channels
- Display measurements stored on the instrument
- Record/save measurements
- Export measurement as graphic (PNG, JPG, BMP, GIF)
- Print out a measurement protocol or save as a PDF file
- Display measurements saved on the PC, export or create a protocol from them.
- Manage and configure several instruments
- Combine several instruments

You can change the display of the measured values and measurements. You can adapt the layout of the protocol.

You can operate the HYDROlink6 Advanced using the mouse, your voice or the touch screen.

Program editions

HYDROlink6 Advanced is available in three editions:

- **BASE**
- **ADVANCED**
- **PROFESSIONAL**

This manual describes the **ADVANCED** edition.

If a **MultiBox** or a **MultiControl 8050** is connected, then the **ADVANCED** edition is enabled automatically.

The functions of the **ADVANCED** edition are available for instruments from the **MultiSystem 5060** upwards and **MultiBox**. If you connect other instruments, only the functions of the **BASE** edition will be available since these instruments cannot be operated remotely.

System requirements

Please heed the following system requirements.

Operating system   Microsoft Windows 7 or higher.

We recommend the 64-bit version.

.NET Framework   .NET Framework 4.5 or higher.

The installation routine from HYDROlink6 Advanced checks for the presence and the version of the .NET Framework. If necessary, the .NET Framework will be installed or updated automatically.

PDF viewer   Adobe Reader or comparable reader program.

Hardware   At least the same system requirements for Microsoft Windows 7.

Recommended hardware:

- Processor: Intel i3 multi-core processor with 2.5 Ghz or comparable processor
- Memory: 4 GB
- Printer
- Multi-touch screen is supported

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Supported instruments   HYDROlink6 Advanced supports the following HYDROTECHNIK instruments:

- MultiHandy 2020 (only **BASE** functionality)
- MultiHandy 2025 (only **BASE** functionality)
- MultiHandy 3020 (only **BASE** functionality)
- MultiSystem 4010 (only **BASE** functionality)
- MultiSystem 5060
- MultiSystem 5060 *Plus*
- MultiSystem 8050
- MultiControl 8050
- MultiBox 3060
- MultiBox 3061
- MultiBox 3065

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Installation
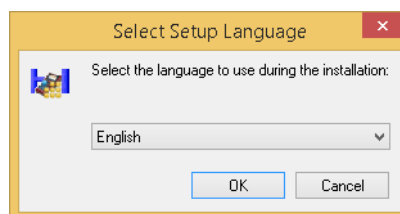
A set-up wizard will assist you during the installation of HYDROlink6 Advanced.

➔ **How to install HYDROlink6 Advanced**

1 Disconnect all HYDROTECHNIK instruments from the PC.

2 Save and close all applications.

3 Execute the installation file and confirm the Windows security queries.

4 Select the set-up language.

5 Follow the instructions in the set-up wizard.

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Setting up HYDROlink6 Advanced

You can start and set up HYDROlink6 Advanced after the installation has been completed.
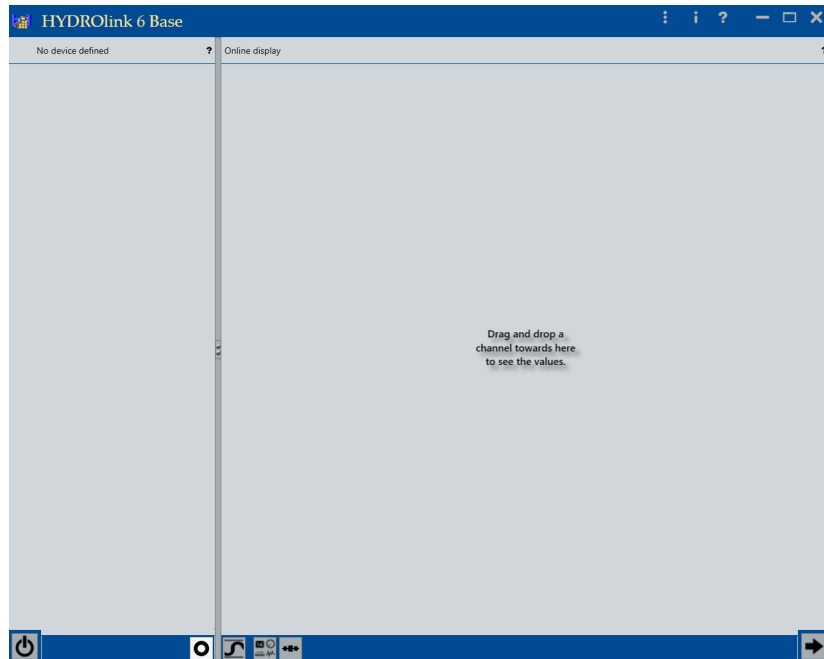
Picture: HYDROlink6 Advanced

You can adapt HYDROlink6 Advanced to your needs.

All settings are made on the **Settings** dialog and described in chapter **Software description**.

⇨ **Speech control** on page 167

You should always specify the following settings:

- **User interface language**
- **Default directories for measurements and measurement configurations**
- **Protocol layout**

➔ **How to open and close the Settings dialog**

1 Double-click the HYDROlink6 icon on your desktop to start HYDROlink6 Advanced.

2 Click the **Open Settings dialog** button.

The Settings dialog is displayed.

ⓘ All changes and input are immediately adopted by HYDROlink6 Advanced. Saving the settings is not necessary.
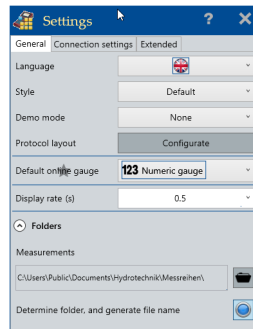A new language will be used the next time the application is started.

3 Click the **Close** button to close the Settings dialog.

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User interface language HYDROlink6 Advanced takes over the language of the operating system as its default setting. If HYDROlink6 Advanced does not have this language, HYDROlink6 Advanced will be installed with the English user interface.

You can change the user interface language on the **Settings** dialog on the **General** tab.

➔ **How to specify the user interface language**

1 Click the button next to the **Language** entry.

The list of available languages is displayed.

Language	🇬🇧 ∨
Style	🇩🇪
Demo mode	🇬🇧
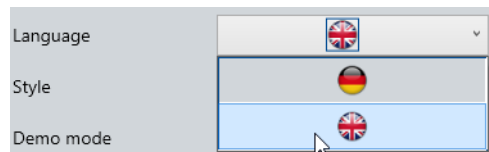
2 Click the desired language symbol.

3 Close the **Settings** dialog.

4 Close HYDROlink6 Advanced.

5 Restart HYDROlink6 Advanced.

HYDROlink6 Advanced starts in the new language.

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Default directories for measurements and measurement configurations

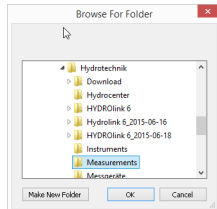During installation, HYDROlink6 Advanced creates a default directory for measurements and measurement configurations.

You can change the default directory and specify that HYDROlink6 Advanced saves new measurements in the default directory automatically.

➜ **How to specify the default directory for measurements**

1 Click the ⬛ button in the **Directories** area.

The Windows **Browse folder** dialog is displayed.

2 Mark the desired folder or create a new folder.

3 Click **OK**.

4 To have HYDROlink6 Advanced save new measurements automatically, without asking, click the ⬛ button. The time stamp is used as file name.

■

You specify the default directory for measurement configurations analogously. This setting is also in the **Directories** area.

Protocol layout

You can change the layout of the protocol on the **Protocol layout** dialog.

On the **Settings** dialog, click the **Configure** button next to the **Protocol layout** entry to open the **Protocol layout** dialog .

⇨ **Configuring the layout of the protocol** on page 74.

Licensing HYDROlink6 Advanced

After installation, the BASE edition is available. The ADVANCED and PROFESSIONAL editions must be licensed.

Licensing is done in four steps:

1. Purchase desired edition
2. Request license
3. Receive license
4. Activate license

When you purchase HYDROlink6, you decide which edition you want. With the purchase you receive a serial number for the selected edition. After you have installed HYDROlink6, you request a license.

➔ **How to request a license**
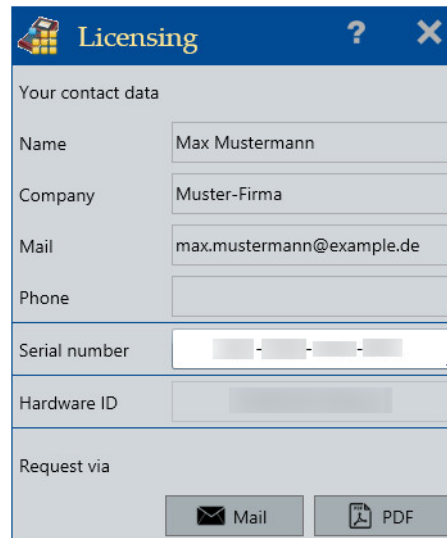
1 Click the **Open info dialog** button.

2 Select **License request**.

The **Licensing** dialog is displayed.

3   Enter the required data.

In the serial number there are no **O**s, only the number (**0**).

4   Click the **Mail** or **PDF** button.

If you have selected **Mail**, the license request will be sent via e-mail with the configured default e-mail program.

If you have selected **PDF**, print out the PDF and send it to HYDROTECHNIK by mail or fax.

⇨ **Manufacturer** on page 2

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After you have requested a license via e-mail or PDF, you will receive an e-mail with the license file attached. You can use this license file to activate the license.

➡ **How to activate a license**

1   Click the **Open info dialog** button.

2   Select **Activate license**.

The Windows dialog **Open** is displayed.

3   Select the license file that you received via e-mail.

The license is activated.

■
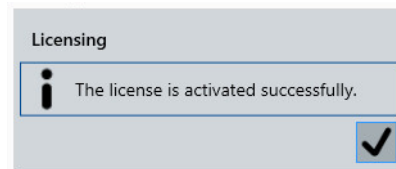
Overview

Get an overview of various use cases and the user interface in order to use HYDROlink6 Advanced as well as possible.

Flow of various application cases

There are three application cases for HYDROlink6 Advanced.

- **Using the online display and recording online measurements**
- **Displaying measurements without connected device**
- **Managing, configuring, and using several configurations for a device**
- **Coupling several devices, performing measurements, and managing, configuring, and using their device settings**

There is a typical sequence of activities for each application case.

Using the online display and recording online measurements

The online display shows the current measured values of the connected device.

You can record these measured values directly in the software as online measurements.

```
┌─────────────────────────────────────┐
│   Connecting a measuring instrument   │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│          Loading workspace            │
│     from the measuring instrument     │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│        Adjusting the workspace:       │
└─────────────────────────────────────┘

        ┌──► Selecting and configuring channels

        ┌──► Configuring memory parameters

                    ▼
┌─────────────────────────────────────┐
│       Configuring online display      │
└─────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────┐
│         Recording measurements        │
└─────────────────────────────────────┘
```
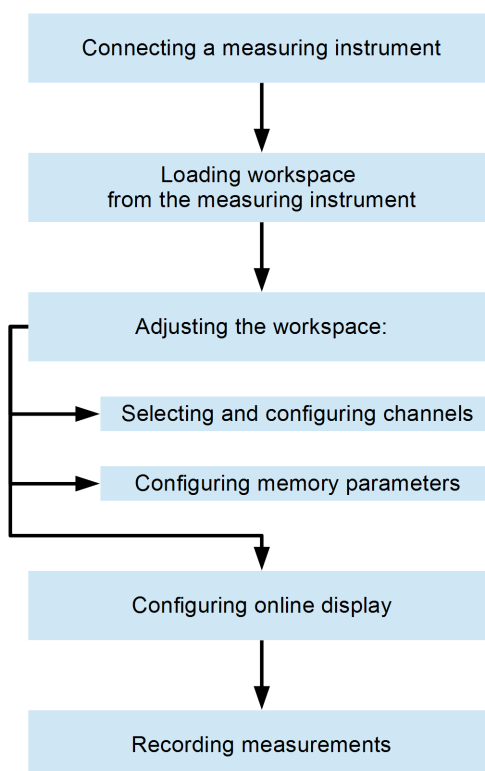
Picture: Using the online display and recording online measurements

The recording of online measurements is done in the following 3 stages:

1. Save the measurements on the device (generally in storage space 200).
2. Copy the measurements to the memory card in the device.
3. Transfer the measurements to HYDROlink6 Advanced.

See also:

⇨ **Using the online display** on page 47
⇨ **Recording a measurement** on page 63

Displaying measurements without connected device

If you have saved individual measurements on your computer, the software can also display measurements without a connected device.
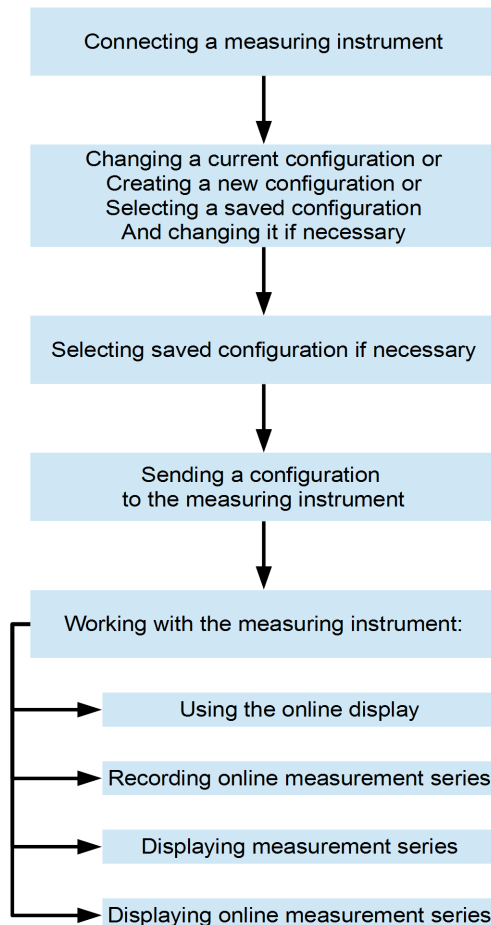
```
┌─────────────────────────────────────┐
│   Calling up display measurements    │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│        Opening measurements          │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│  Configuring display measurements    │
└─────────────────────────────────────┘
```
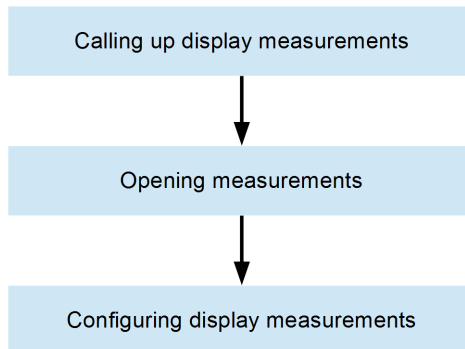
Picture: *Displaying measurements without connected device*

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Managing, configuring, and using several configurations for a device

With the software, you can create and edit different configurations for a device, and if necessary transmit these to the device.
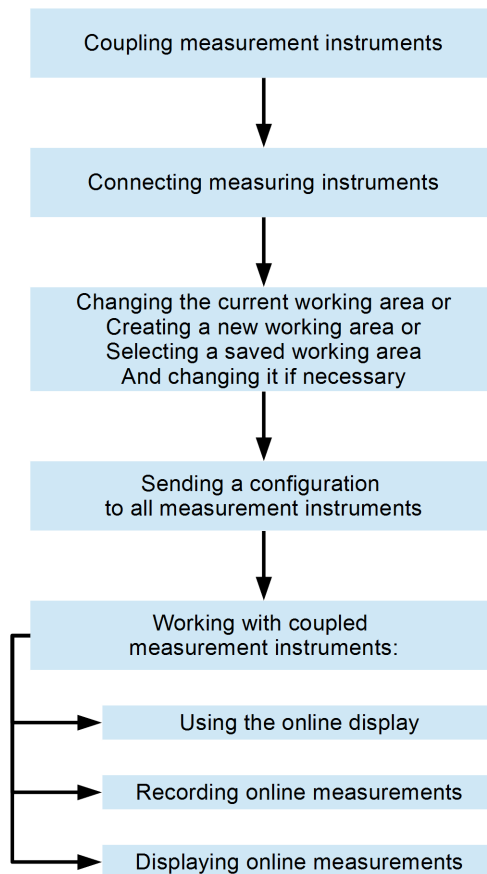
Connecting a measuring instrument

↓

Changing a current configuration or
Creating a new configuration or
Selecting a saved configuration
And changing it if necessary

↓

Selecting saved configuration if necessary

↓

Sending a configuration
to the measuring instrument

↓

Working with the measuring instrument:

→ Using the online display

→ Recording online measurement series

→ Displaying measurement series

→ Displaying online measurement series

Picture: Managing, configuring, and using several configurations for a device

Coupling several devices, performing measurements, and managing, configuring, and using their device settings

The software enables you to couple several devices easily and thus to multiply the number of available measurement channels. Coupling devices is also possible without the software. However, the software simplifies the configuration of several devices and allows you to record measurements from all devices as one measurement series without any detours.

```
┌─────────────────────────────────────┐
│   Coupling measurement instruments   │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Connecting measuring instruments   │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Changing the current working area or│
│   Creating a new working area or     │
│   Selecting a saved working area     │
│   And changing it if necessary       │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Sending a configuration            │
│   to all measurement instruments     │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Working with coupled               │
│   measurement instruments:           │
└─────────────────────────────────────┘
        │
        ├──────▶┌──────────────────────────┐
        │       │  Using the online display │
        │       └──────────────────────────┘
        │
        ├──────▶┌──────────────────────────────┐
        │       │ Recording online measurements │
        │       └──────────────────────────────┘
        │
        └──────▶┌──────────────────────────────┐
                │ Displaying online measurements │
                └──────────────────────────────┘
```

Picture: *Coupling several devices, performing measurements, and managing, configuring, and using their device settings*

⇨ **Coupling several instruments**

User interface
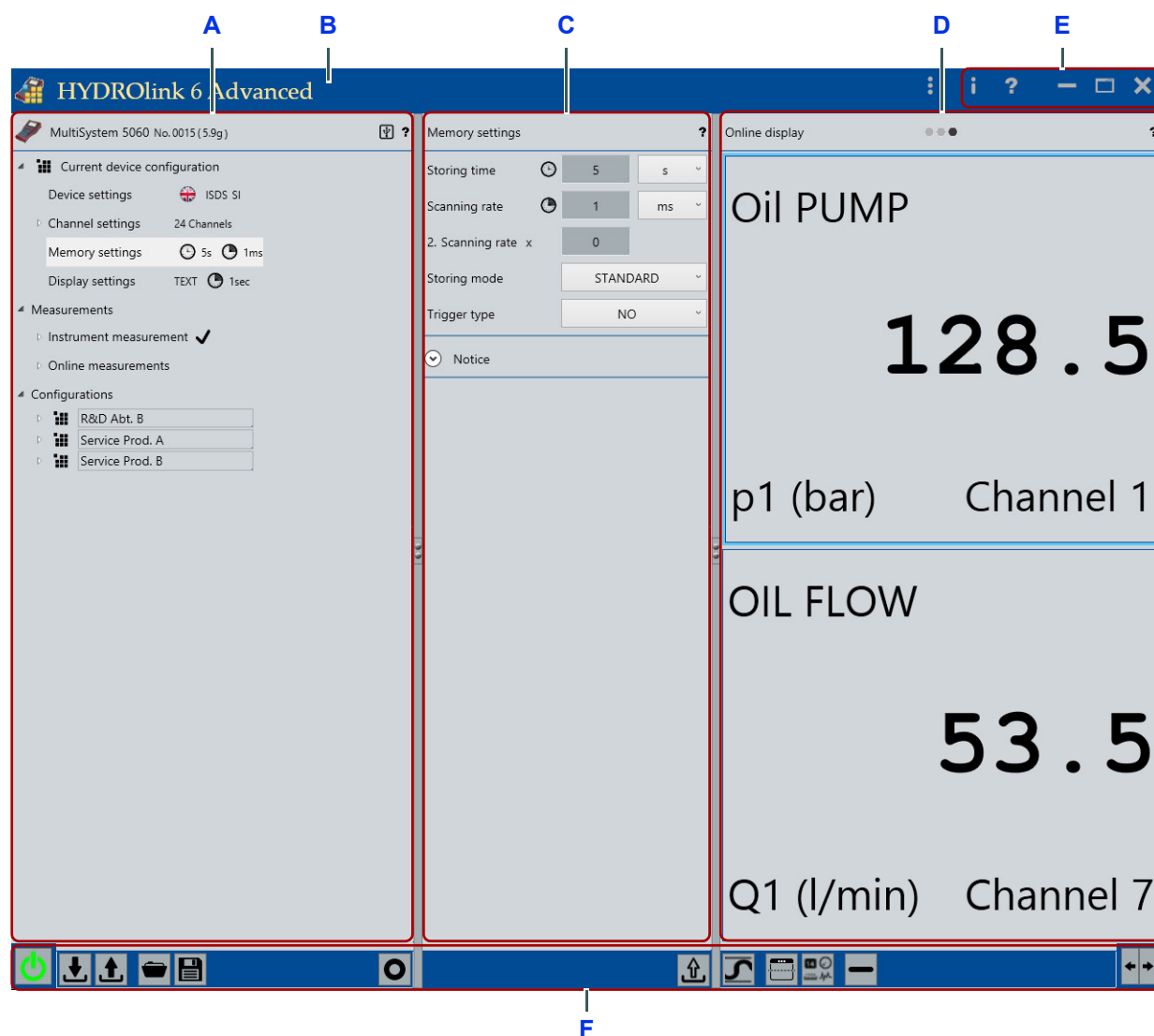
A Device explorer	**D** Viewer
B Speech control	**E** Information and configuration bar
C Detail area (optionally appears in the device explorer)	**F** Toolbar

Picture: *HYDROlink6 Advanced Program window with online display*

HYDROlink6 Advanced is divided into three main areas:

The left side is the device explorer (**A**) and shows information about connected instruments in a hierarchical structure. If no instrument is connected, the most recently displayed information will be shown.

⇨ **Device explorer** on page 81.

The detail area is in the middle (**C**). This area is displayed if you select menu elements in the device explorer for which you can change settings.

⇨ **Detail area** on page 100

The right side (**D**) is the viewer. The viewer displays the **Online display**, the **Instrument display**, or the **Measurement display**. The online display displays current measurement values of the connected device. The **Instrument display** simulates the display on the device display and also displays current measurement values. The **Measurement display** shows the saved measurements as line diagram. You can open measurements from the instrument or the PC.

The size of the three areas, device explorer, detail area, and viewer, can be changed and they can be separated from one another using the sliding bars. You can use the handles to adjust the width of the areas.

Use the **Changing** button to change among the **Online display**, the **Instrument display**, and the **Measurement display**.

⇨ **Using the online display** on page 47
⇨ **Using the instrument display** on page 54
⇨ **Using the measurement display** on page 56

You can open the help with the **?** or **F1** buttons. The help is context-sensitive. This means that the help is opened in the part of the software description that is relevant for the current part of the user interface.

⇨ **Software description** on page 78

The toolbar (**F**) is located under the device explorer, the online display, and the measurement display. Different tools are offered for the **Online display**, the **Instrument display**, and the **Measurement display**.

The information and configuration bar (**E**) is located in the upper right.

You can open the info menu here in addition to the Windows standard buttons.

- **Help**
    ⇨ **Software description** on page 78
- **About**
- **License request**
    ⇨ **Licensing HYDROlink6 Advanced** on page 18
    ⇨ **Licensing dialog** on page 158
- **License activation**

To change these, you can open the **Settings**.

⇨ **Speech control** on page 167.

You can operate certain functions of HYDROlink6 Advanced using speech control. Speech control must be activated in the **Settings**. When activated, the symbol 🎤 will be displayed in the title bar (**B**).

⇨ **Speech control** on page 167.

Start help

HYDROlink6 Advanced will show you information about many of the buttons the first time you use them. The information provides a brief description of the button. This will help you learn how to use HYDROlink6 Advanced.
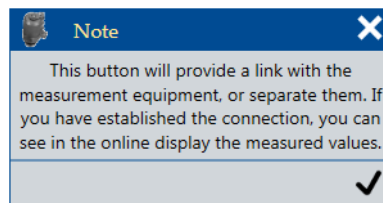
Picture: Note about the start help

Click the check mark to close the information window. Only then will HYDROlink6 Advanced execute your command. The next time you click the same button HYDROlink6 Advanced will no longer show the starting tip and it will execute your command directly.

If you would like HYDROlink6 Advanced to show you the starting tip again, activate the starting tips in the **Settings**.

⇨ **Extended tab** on page 151.

Touch operation

HYDROlink6 Advanced supports touch-capable devices, for example, tablets. You can use familiar gestures from tablet interfaces. For simplicity's sake, this

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manual only describes the operation using a mouse. Touch gestures are only described in certain situations.

Tooltips

HYDROlink6 Advanced will show you tooltips at many locations, for example, if you hover the mouse pointer over **Online measurements**. When using touch operation, leave your finger on the corresponding point for approx. one second.
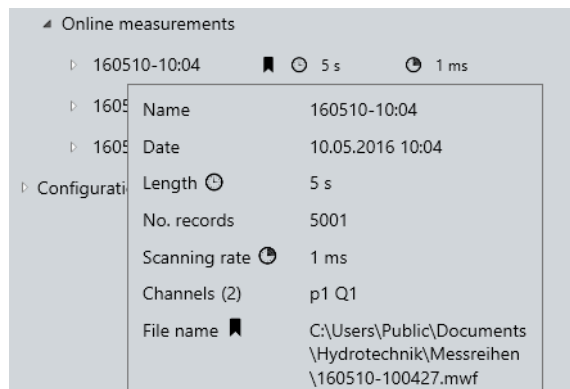
Picture: Tooltip

Connecting an instrument

You must physically connect an instrument to the PC and connect it to HYDROlink6 Advanced to allow HYDROlink6 Advanced to access the instrument.

➔ **How to connect your instrument to HYDROlink6 Advanced**

1 Connect the instrument to the PC.

The operating instructions for the instrument will explain how to connect the instrument to the PC.

2 Switch the instrument on.

Wait until the instrument has switched on and Windows detects it as a device.

3 Open HYDROlink6 Advanced.

4 Click the **Connecting** button.

When the instrument is connected to HYDROlink6 Advanced the **Connecting** button icon is green.

MultiSystem 5060 No. 0015 (5.9e)

■
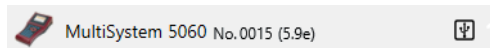
After you have connected the instrument, you must next load the workspace of the instrument or send a workspace to the instrument.

⇨ **Transferring and changing a workspace** on page 33

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Connection error   If HYDROlink6 Advanced is unable to detect any instrument, no connection can be established.

HYDROlink6 Advanced displays the **Connection error** dialog. The **Connecting** button symbol is red.
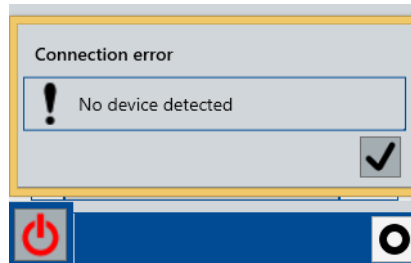
Check whether the instrument is correctly connected to the PC and switched on.

Unsupported instrument   HYDROlink6 Advanced checks the model of the instrument.

If the model is not supported by HYDROlink6 Advanced, an error message will be displayed. You cannot use the instrument with HYDROlink6 Advanced. You may require different software. Please contact HYDROTECHNIK for more information.

⇨ **Supported instruments** on page 12.
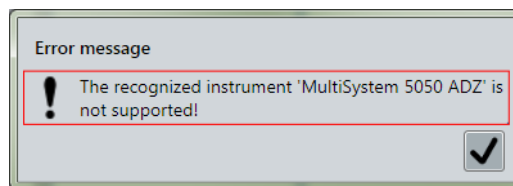
Firmware version information   HYDROlink6 Advanced checks the firmware version of the instrument.

Information will be displayed if the firmware version is not compatible with HYDROlink6 Advanced. Depending on the situation, HYDROlink6 Advanced may be able to work with the instrument, however, in a limited way.
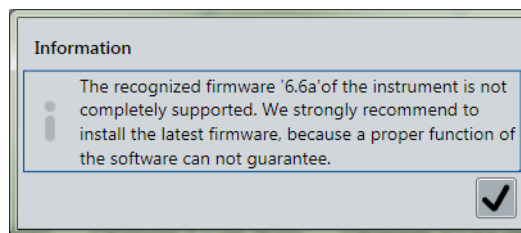
Click the check mark to close the information. In the device information, the symbol ⚠ indicates that the firmware version is not fully supported by HYDROlink6 Advanced.

Perform a firmware update on your instrument.

Multiple instruments   If you have connected more than one instrument to your PC, HYDROlink6 Advanced displays the device selection dialog.
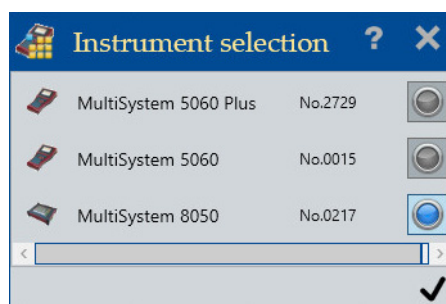
If you want to use only one instrument, deselect the others and click the ✓ button.

You can also combine several instruments and thus increase the number of available channels.

⇨ **Coupling several instruments** on page 65

Transferring and changing a workspace

To use the online display, the instrument display or the measurement display, you must first transfer the workspace from or to the instrument.

Workspace refers to the totality of all settings.

You can change the instruments settings in the software and then transfer them to the instrument.

You have the following options:

* **Load workspace from the instrument**
* **Changing the workspace**
* **Sending a workspace to the instrument**
* **Managing settings**

Load workspace from the instrument

After you have connected an instrument, the workspace is loaded automatically from the instrument.

So that a changed workspace becomes effective, you must send the workspace to the instrument. If you would like to discard a changed workspace, you can re-load the workspace from the instrument.

Click the **Load workspace from instrument** button.

After you have loaded the workspace from the instrument, you can change the workspace again, use the online display or record measurements.

Changing the workspace

You can change the workspace for the connected instrument that you have loaded from the instrument or from a file in the software.

You have loaded the workspace from the instrument or you have loaded a workspace from a HYDROlink configuration file.

⇨ **Load workspace from the instrument** on page 33

⇨ **How to save the workspace as file** on page 46

The following instructions are just an example. You can read which settings you can change where in the detail in the **Software description**. In the software, you can also use the context-sensitive help with the **F1** key to learn more about individual dialogs.

➜ **How to configure a channel for the online display, for example**

1   Connect the instrument.

   ⇨ **Connecting an instrument** on page 30

   The workspace is loaded from the instrument.

2   Expand the **Current device configuration** menu.

3   Expand the **Channel settings** menu.

4   Highlight the desired channel.

   The channel settings are displayed in the detail area.
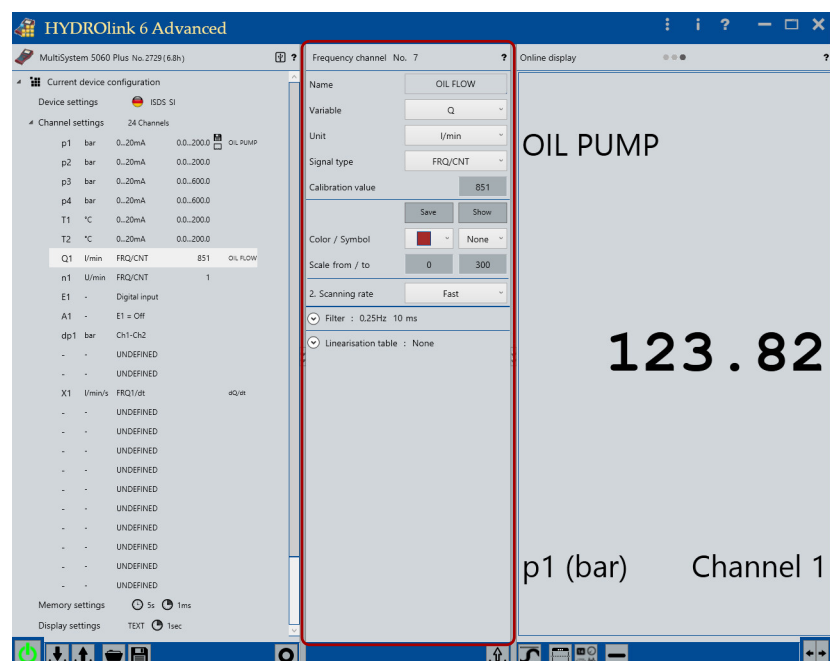
5 Click the **Save** and **Show** buttons, for example.

The channel is shown in the online display.
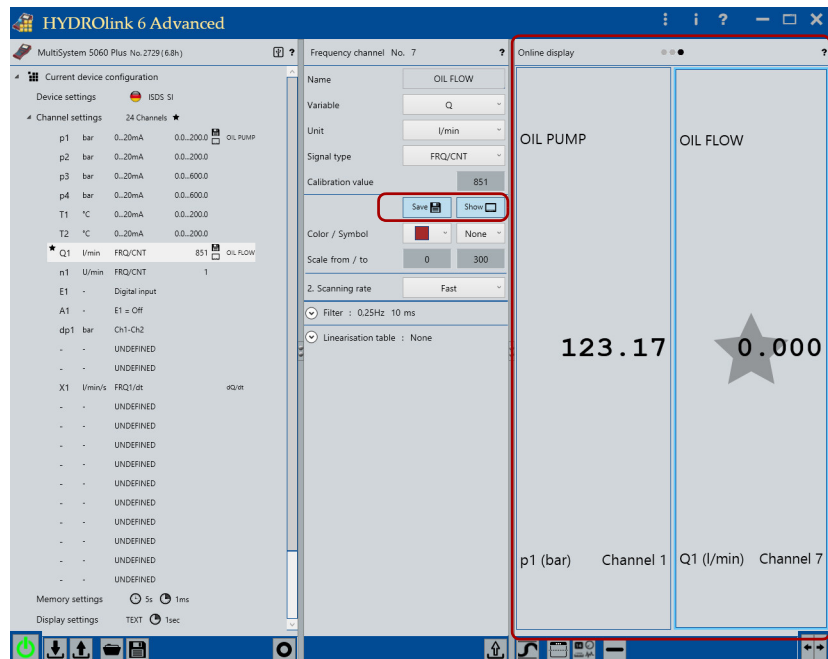
6 If necessary, change other settings.

7 Settings that you have changed are marked with an asterisk.

8 To transfer the changes to the instrument, click the **Send workspace to the instrument** button.

The changed workspace is transferred.

■
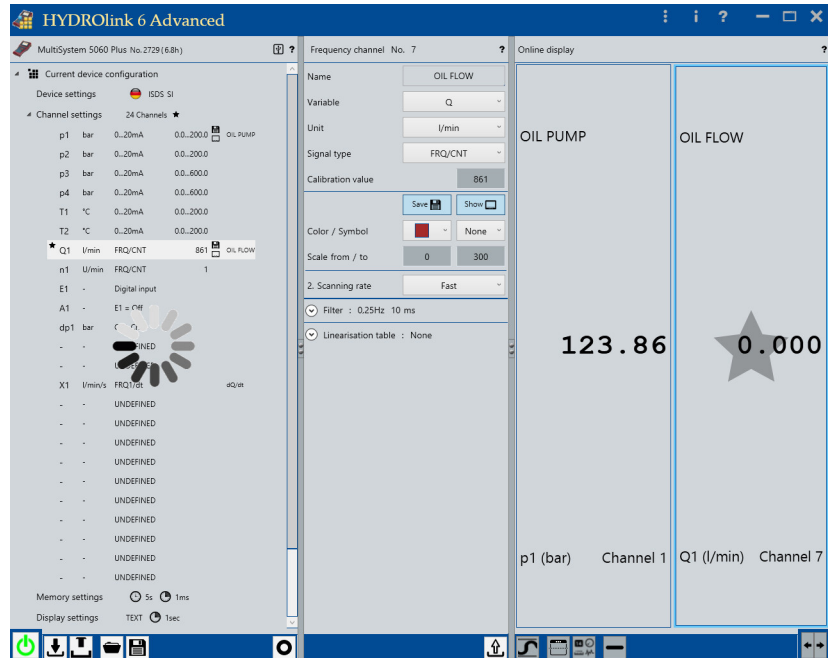
⇨ **Software description** on page 78

Sending a workspace to the instrument

To use a changed workspace for the instrument, send the workspace to the instrument.

You have connected an instrument.
⇨ **Connecting an instrument** on page 30

You have changed the workspace or you have loaded and changed a workspace.

Settings that you have changed are marked with an asterisk.
⇨ **Load workspace from the instrument** on page 33
⇨ **How to save the workspace as file** on page 46
⇨ **Changing the workspace** on page 34

Click the **Send workspace to instrument** button.

This sends all configurations to the instrument.
⇨ **About workspace and configurations** on page 39
⇨ **Working with configurations** on page 41
⇨ **Managing a workspace** on page 46

Sending individual settings to the instrument

Instead of sending the workspace to the instrument, you can send individual settings to the instrument, e.g. only the device settings or only the channel settings of a channel.

You have connected an instrument.
⇨ **Connecting an instrument** on page 30

You have changed the workspace or you have loaded and changed a workspace.

★ Settings that you have changed are marked with an asterisk.

⇨ **Load workspace from the instrument** on page 33

⇨ **How to save the workspace as file** on page 46

⇨ **Changing the workspace** on page 34

Click the **Send these settings to instrument** button in the detail area.
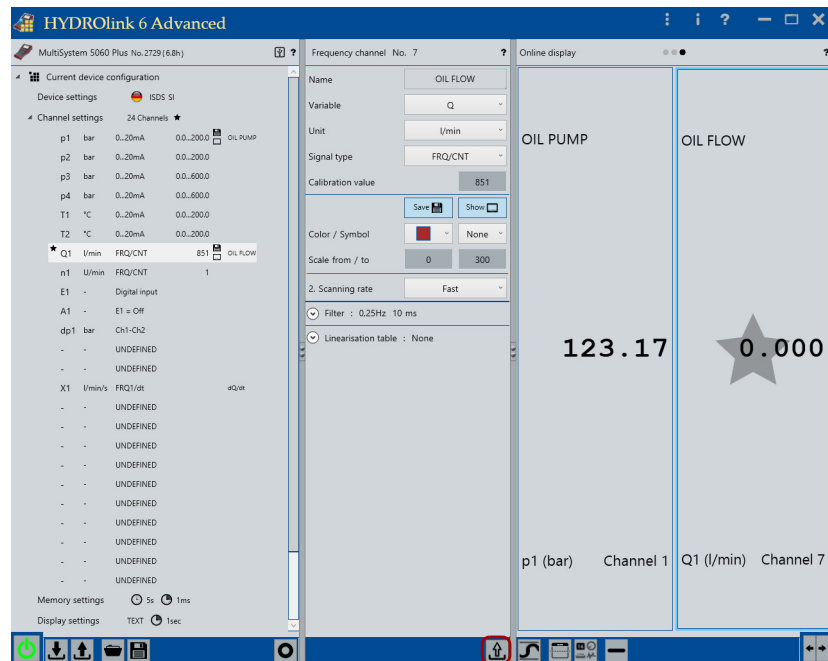
The successful sending is confirmed with a check mark.

Managing settings

The software enables you to configure several instruments of the same and different types easily and flexibly for the same or different purposes.

About workspace and configurations

You can manage two different types of settings:

- **Configurations**
- **Workspace**
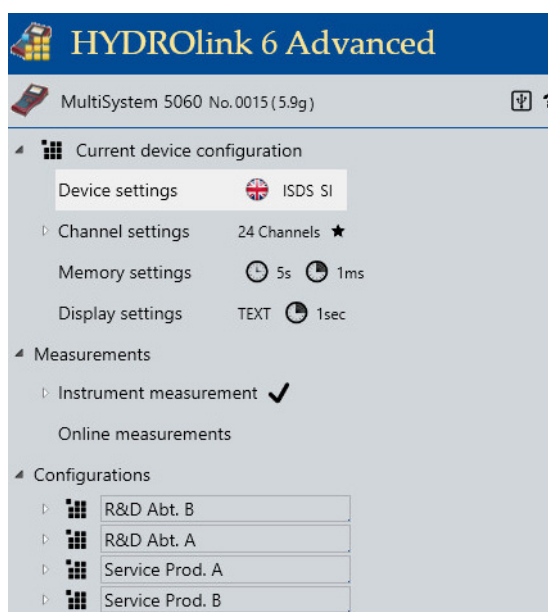
Configurations

Configurations include everything that is displayed under **Current device configuration**:

- **Device settings**
- **Channel settings**
- **Memory settings**
- **Display settings**

A configuration in the software is identical to a project on the instrument.

A configuration on the **Configuration** menu is displayed analogously to the **Current device settings** menu in the explorer. You can edit the settings on the **Configuration** just as you can on the **Current device configuration** menu.

Configurations are saved as PRJ files.

Workspace

The workspace includes everything that is displayed in the entire device explorer:

- **Current device settings**
- **Measurements**
- **Configurations**

The workspace also includes the online measurement series as link to the MWF files.

All configurations that you also save individually and can send to the instrument are also part of the workspace. If you load the workspace from the instrument, all projects of the instrument are displayed on the **Configuration** menu.

You can save a maximum of 10 configurations per workspace at the same time on an instrument. To save 20 or 30 configurations, you can create several workspaces.

Workspace files are saved in XHTC files.

Working with configurations

With configurations, you can configure instruments of the same type for different purposes.

Creating several configurations

You always create a new configuration from a current device configuration. After that, you can rename the configurations and change settings in them.

Adjusting configurations

You can create different configurations for different purposes, e.g. one for each department in the R&D and for different products for the customer service.

Transferring configurations to several instruments

Insofar as the same instrument type (e.g. MultiSystem 5060 Plus) is used, you can transfer these different configurations to different instruments. Naturally you can also transfer the same configurations to different instruments of the same type.

Working with workspaces

With workspaces, you can manage settings for different types of instruments.

For example, you could manage five MultiSystem 5060 and eight MultiControl 8050 for a total of five purposes. Then you could create a workspace for each instrument type and one configuration for each purpose within each workspace.

⇨ **Managing a workspace** on page 46

Managing configurations

With configurations, you can configure instruments of the same type for different purposes.

Configurations in the software are called projects on the instruments.

⇨ **Working with configurations** on page 41

You have the following options:

- **How to send the selected configuration to the instrument**
- **How to create a new configuration**
- **How to delete a configuration**
- **How to overwrite a configuration**
- **How to save the selected configuration as file**

ENG

➡ **How to send the selected configuration to the instrument**

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Expand the **Configuration** menu.

The list of existing configurations is displayed.

3 Perform one of the following steps:

- Change a configuration.
- Create a new configuration.
- Overwrite a configuration.
- Load a configuration from a file.

4 Mark the affected configuration.

5 Click the **Send selected configuration to the instrument** button.

The new configuration is available as project on the instrument.

■

➡ **How to create a new configuration**

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Mark the **Current device configuration** and drag the icon to the **Configuration** menu. Confirm the dialog.

The new configuration is displayed on the **Configuration** menu.

3 To rename the configuration, mark the name of the configuration.

4 To transfer the changes to the instrument, click the **Send selected configuration to the instrument** button.

The new configuration is available as project on the instrument.

■

➔ **How to delete a configuration**

1 Mark the desired configuration.

2 Click the **Delete selected configuration** and confirm the dialog.

∎

➔ **How to overwrite a configuration**

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Expand the **Configuration** menu.

The list of existing configurations is displayed.

3 Mark the **Current device configuration** and drag the icon to the icon of the configuration that you would like to overwrite. Confirm the dialog.

The new configuration is displayed on the **Configuration** menu.

4 To rename the configuration, mark the name of the configuration.

5 To transfer the changes to the instrument, click the **Send selected configuration to the instrument** button.

The new configuration is available as project on the instrument.

∎

➔ **How to save the selected configuration as file**

ℹ Saving configurations as file is only possible for the following instruments:
- MultiSystem 5060
- MultiSystem 5060 Plus

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Expand the **Configuration** menu.

The list of existing configurations is displayed.

3 Mark the desired configuration.

4 Click the **Select selected configuration as file** button.

The Windows dialog **Save as** is displayed.

5 Save the file in the desired folder.

■

➔ **How to load a configuration from a file**

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Mark the **Configuration** menu.

3 Click the **Load configuration from a file** button.

The Windows dialog **Open** is displayed.

4 Select the desired file (*.prj).

The new configuration is displayed on the **Configuration** menu.

5 To transfer the changes to the instrument, click the **Send selected configuration to the instrument** button.

The new configuration is available as project on the instrument.

■

Managing a workspace

With workspaces, you can manage settings for different types of instruments.

⇨ **Working with workspaces** on page 42

You have the following options:

- **How to save the workspace as file**
- **How to load a workspace from a file**

➜ **How to save the workspace as file**

1 Click the **Save workspace as file** button.

The Windows dialog **Save as** is displayed.

2 Save the file in the desired folder.

Organize workspace files with folders and file names such that you can assign the workspace files clearly to the instrument types.

■

➜ **How to load a workspace from a file**

1 Make sure that the desired workspace is compatible with the desired instrument.

Organize workspace files with folders and file names such that you can assign the workspace files clearly to the instrument types.

2 Click the **Load workspace from a file** button.

The Windows dialog **Open** is displayed.

3 Select the desired file (*.xhtc).

4 Click the **Send selected configuration to the instrument** button.

The current configuration and saved configurations are transferred to the instrument.

5 Click the **Send workspace to instrument** button.

The current workspace is transferred to the instrument.

■

Using the online display

If you connect an instrument with HYDROlink6 Advanced, you can use the online display.

The online display shows the current measured values of the selected channels.
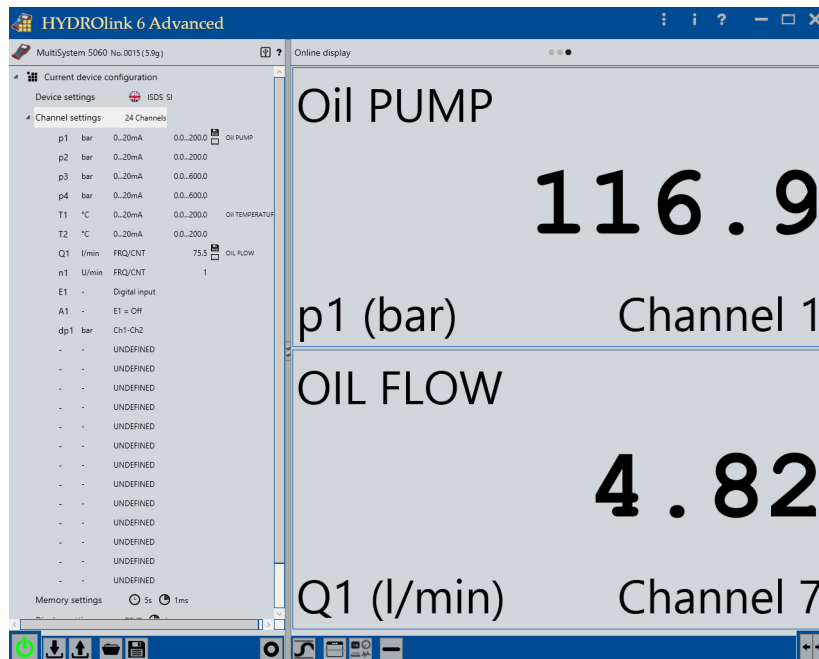
Picture: Online display with two channels

In the device explorer under **Channel settings**, the icon ⬜ indicates that a channel is selected for the online display.

BASE With measuring instruments of the *MultiHandy* product family, all available channels are always displayed. With *MultiHandy 2020* and *MultiHandy 2025* devices, special channels are also displayed if they are available.

Use the **Changing** button to change among the **Online display**, the **Instrument display**, and the **Measurement display**.

⇨ **Using the instrument display** on page 54

⇨ **Using the measurement display** on page 56

Selecting, arranging, and deleting channels

On instruments that have more than 3 channel displays, you can specify which channels are displayed.

You have connected an instrument.

⇨ **Connecting an instrument** on page 30

The online connection is displayed in the title bar of the viewer with an animation.

Selecting a channel for the online display

Drag a channel from the **Channel settings** of the device explorer into the **Online display**.
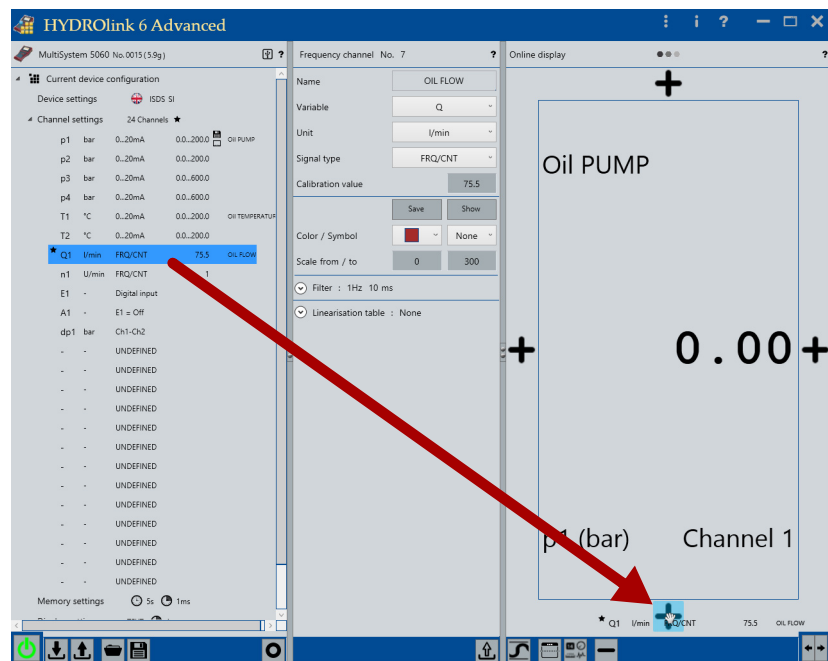
Picture: *Dragging a channel into the online display*

➔ **How to position a channel next to an existing channel display**

1   Drag the channel into the **Online display**.

You can position the channel wherever **+** symbols are displayed.

Drag & drop also works on a touch screen for this step.

2   Drag & drop the channel onto the **+** symbol.

■

➔ **How to replace an existing channel display**

1 Drag the channel onto a channel in the **Online display**.

The channel display changes colour to dark blue.

2 Let go of the channel to replace the channel display.

■

Arranging channels in the online display

Swap the positions of the displayed channels using drag & drop.
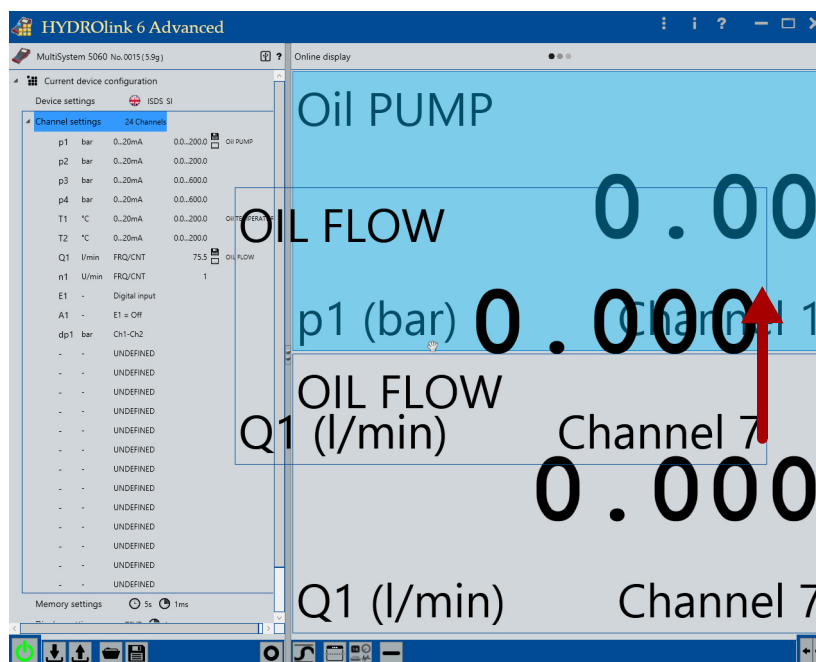
Picture: Swapping channels in the online display

You can swap the position of channels in the **Online display**:

➔ **How to swap the position of channels in the channel display**

1 Drag the channel onto a channel in the **Online display**.

1 Drag the channel onto a different channel in the **Online display**.

The channel display changes colour to dark blue.

2 Let go of the channel.

The positions of the two channels are swapped in the **Online display**.

■

Deleting channels from the online display

Delete the channels from the **Online display** with the **Delete** button.

BASE Not possible with measuring instruments from the *MultiHandy* product family.
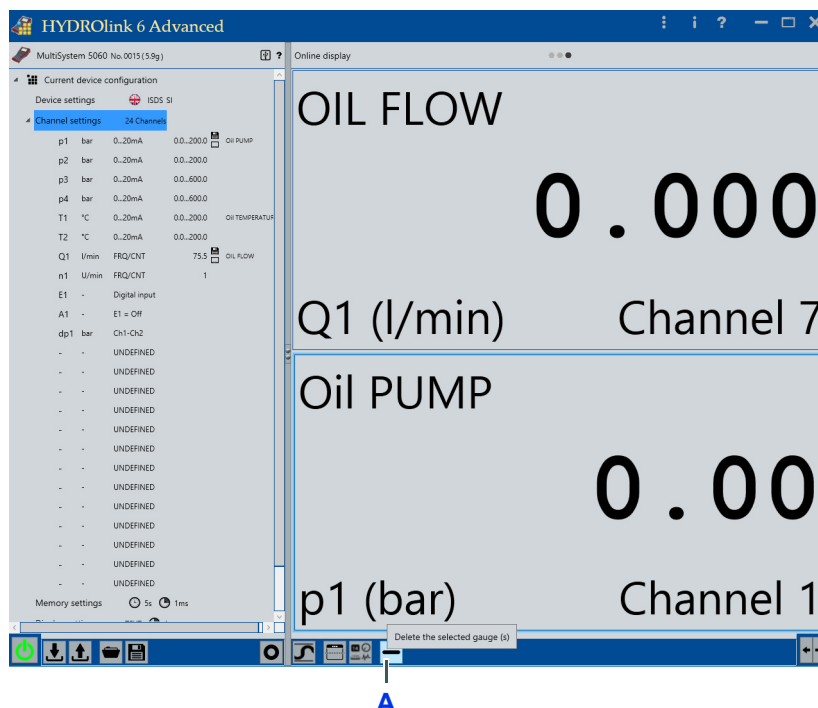
A **Delete** button

Picture: Deleting a channel from the online display

➔ **How to delete a channel from the online display:**

1 Highlight the desired channels in the **Online display**.

   Highlighted channels have a blue border.

2 Click the **Delete** button (**A**) to delete all highlighted channels from the **Online display**.

■

⇨ **Configuring a channel**

⇨ **Min/Max values**

⇨ **Changing and scaling the display style**

⇨ **Transferring and changing a workspace**

Configuring a channel

You configure a channel as shown in **Changing the workspace**.

⇨ **Changing the workspace** on page 34

Which channel settings you can configure depends on your instrument.

⇨ **Documentation of the instrument**

In the software, you can also use the context-sensitive help with the F1 key to learn more about individual dialogs.

ENG

Min/Max values

You can switch the **Online display** of the min/max values on or off.
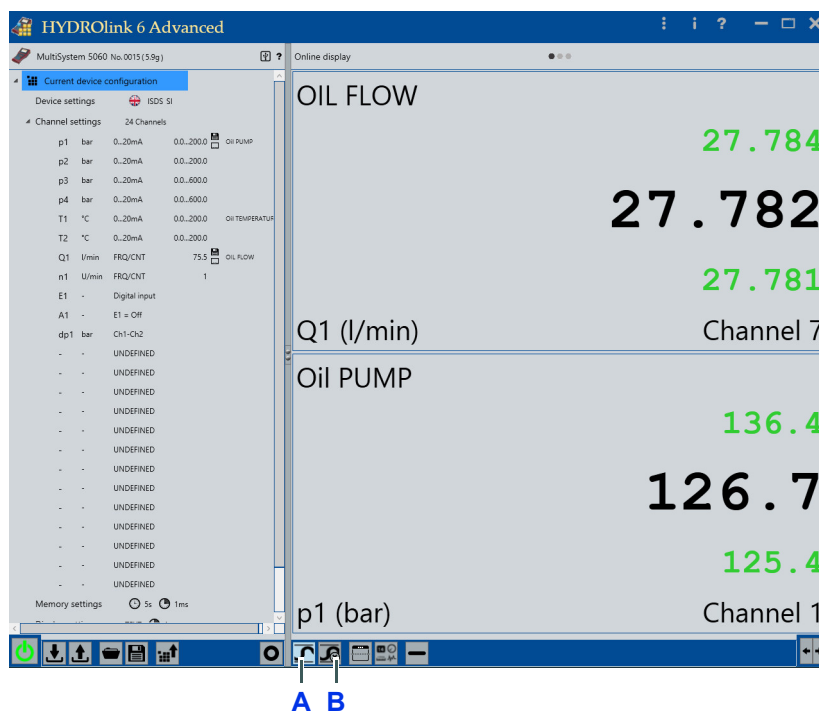
| **A** | **Min/Max** button | **B** | **Delete min/max values** button |

Picture: *Min/Max values*

➜ **How to switch the max/min values on**

1 Click the **Min/Max** button (**A**).

The min/max values are displayed.

2 Click the **Min/Max** button (**A**) to switch off the min/max values again.

■

➜ **How to delete the current min/max values**

1 Click the **Delete min/max values** button (**B**).

The current min/max values are deleted.

■

Changing and scaling the display style

You can change the display style for every channel display.
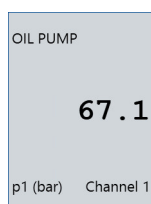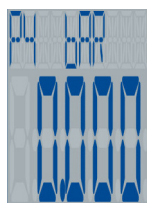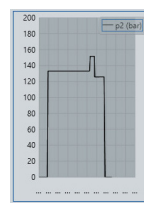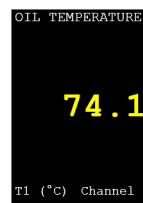
| Numeric gauge | Radial gauge | Segment gauge | Linear gauge | Line diagram | Instrument display |

Picture: *Display style of the online display*

If a channel is added to the **Online display**, the default display style will be used for the channel view.

⇨ **Speech control** on page 167

➜ **How to change the display style**

1 Highlight the desired channels in the **Online display**.

Highlighted channels have a blue border.

2 Click the **Display style** button.

The list of display styles is displayed.

★ **123** Numeric gauge

Dial gauge

123 Digital gauge

Bargraph indicator

Chart

123 Classic gauge

■
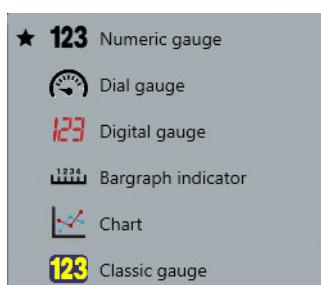
For the radial gauge, linear gauge, and line diagram display styles, you can scale the display.

⇨ **Scale pl dialog** on page 162

For the listed display style, you can also display a line diagram in the online display.

➜ **How to display a line diagram in the online display**

1 Click the **Change appearance of the online display** button.

2 Select from the following possibilities:

• **Only instruments**

• **Split of instrument display and line diagram**

• **Only line diagram**

You change the appearance of the line and the scaling of the axes in the channel settings in the detail area.

■

Using the instrument display

Just like in the online display, the selected channels are displayed in the instrument display. Here the display of the instrument is simulated.
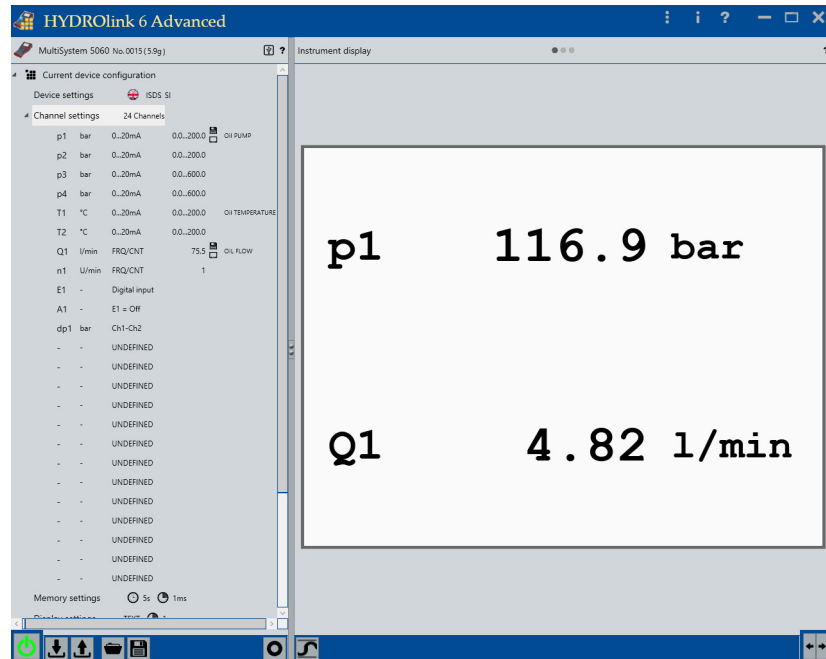
Picture: Instrument display with two channels

The instrument display is not offered if instruments are coupled to one another.

Use the **Changing** button to change among the **Online display**, the **Instrument display**, and the **Measurement display**.

⇨ **Using the online display** on page 47

⇨ **Using the measurement display** on page 56

➜ **How to use the instrument display**

1   Configure the display of the instrument on the instrument itself.

2   Connect the instrument.

   ⇨ **Connecting an instrument**

3   Transfer and change the settings.

   ⇨ **Transferring and changing a workspace**

4   Click the **Changing** button until the instrument display is shown.

5   To display min/max values or not display them, click the **Switch display of min/max values on or off** button.

■

Using the measurement display

You can save measurements from the connected instrument on the PC and display them in the **Measurement display**. You can open measurements that have been saved on your PC without an instrument being connected to HYDROlink6 Advanced. Measurements that you have recorded with the online display are listed under **Online measurements**.
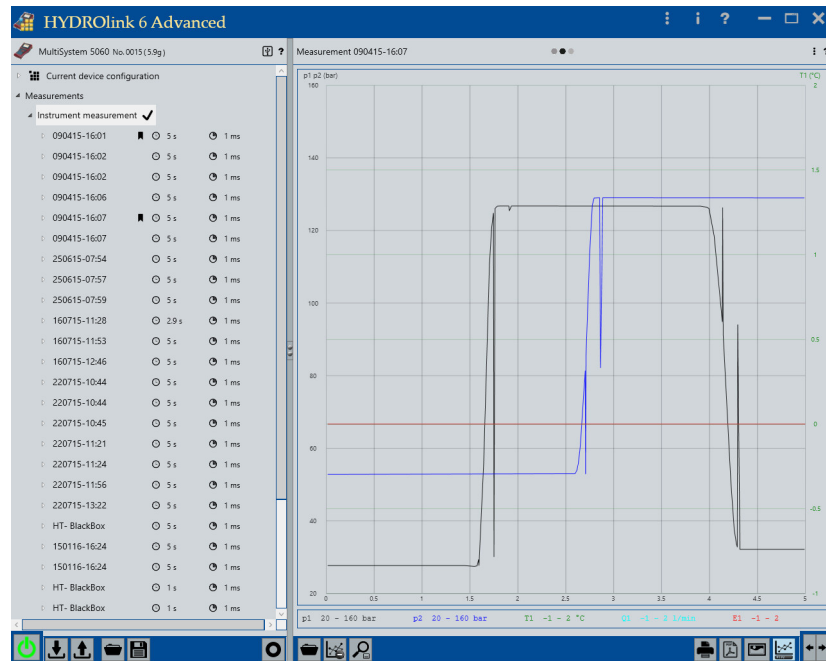
Measurements are saved as MWF files.

In the device explorer under **Instrument measurements** or **Online measurements**, the symbol ▌ indicates that a measurement has already been saved to the PC. You can display this measurement without having the instrument connected to HYDROlink6 Advanced.

Measurements are shown as line diagram.

The horizontal axis is the time axis. The two vertical axes represent one channel each. Channels with the same unit are summarised on one axis.

Use the **Changing** button to change among the **Online display**, the **Instrument display**, and the **Measurement display**.

⇨ **Using the online display** on page 47

⇨ **Using the instrument display** on page 54

Displaying measurements

You can import measurements from the instrument or open saved measurements.

Saving and displaying measurements from the instrument

Drag a measurement from the **Instrument measurements** of the device explorer into the **Measurement display**.
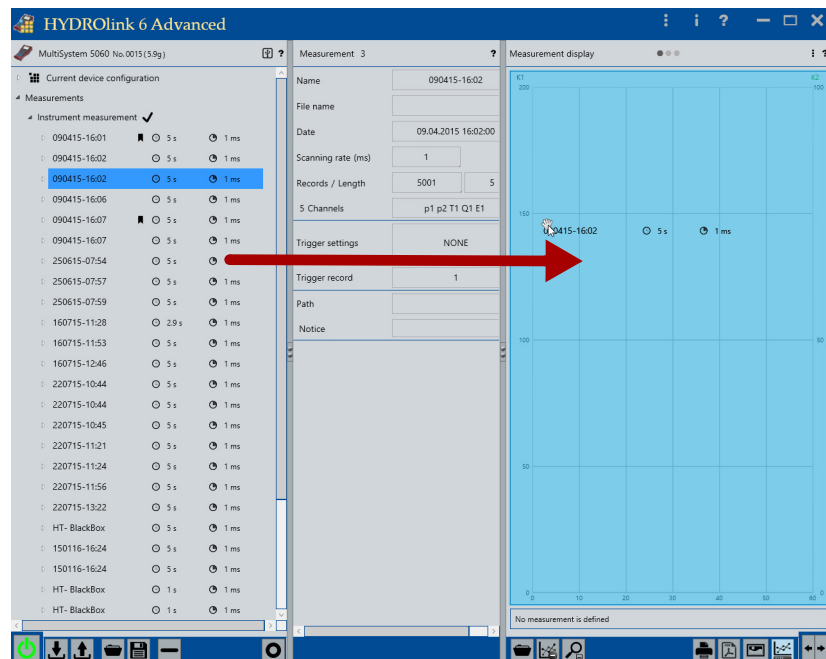
Picture: Saving and displaying measurements from the instrument

➔ **How to save and display a measurement**

1 Click the **Synchronize measurements in the list with instrument measurements** button.

The instrument measurements are synchronized.

2 Drag a measurement into the **Measurement display**.

3 If automatic saving is not specified in the **Settings**, the Windows **Save as** dialog will be displayed.

⇨ **Directories** on page 148

Select the destination and enter a file name. Click **Save**.

ENG
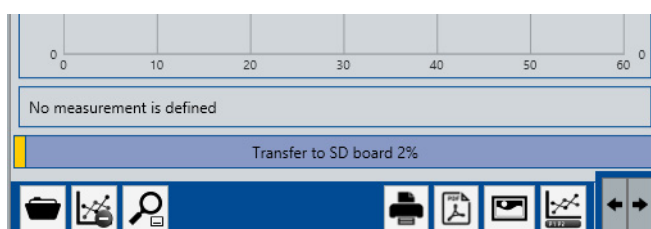
4 The measurement is saved on the PC and then displayed in the **Measurement display**.

∎

➔ **How to open a saved measurement**

1 Click the **Search** button in the measurement display.

The Windows **Open** dialog is displayed.

2 Navigate to the desired measurement and open the measurement.
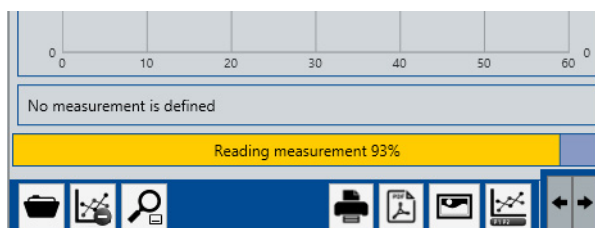
3 The measurement is displayed in the **Measurement display**.

∎

Changing the measurement display

You can change the position of the legend, zoom the measurement or clear the **Measurement display**.

Changing the display

To change the display, click the **Open settings dialog** button.

On this **Settings** dialog you can change the display of lines and axes.

⇨ **Settings dialog (Display of Measurement display)** on page 160

Changing the position of the legend

Change the position of the legend using the **Legend** button.
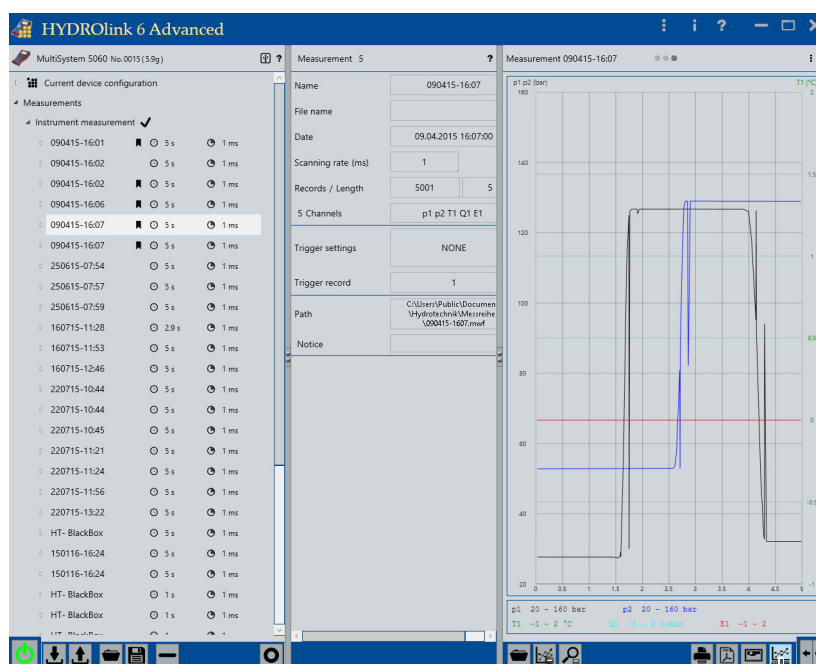
A Legend button

Picture: Changing the position of the legend

The legend can be displayed at the following positions:
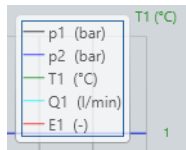
- Top right
- Below the line diagram
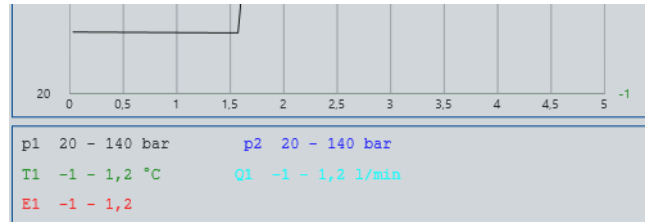
Changing the axis labelling

Click the axis labelling to change it.
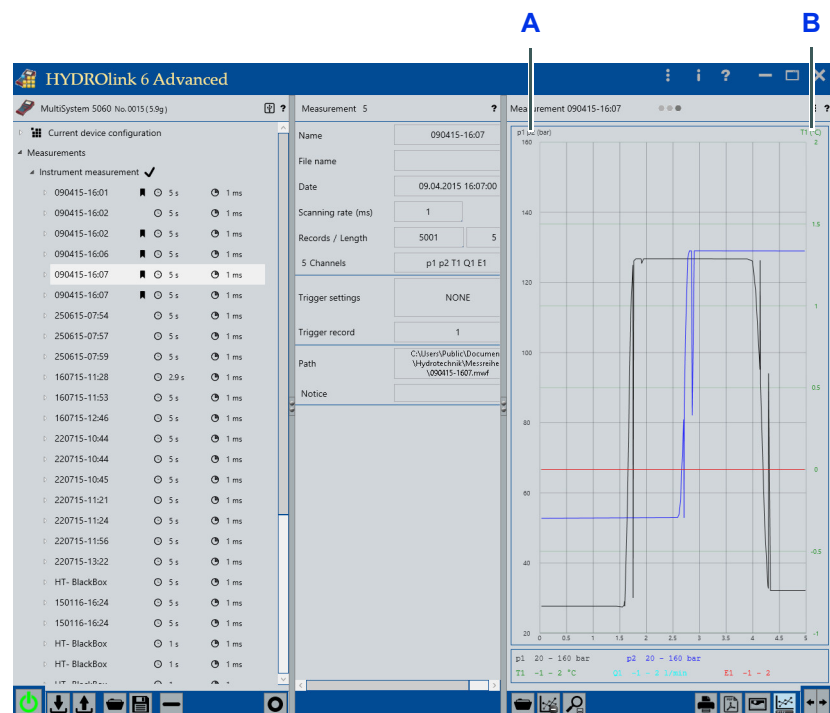
A Left axis labelling   **B** Right axis labelling

Picture: *Changing the axis labelling*

Enlarging the line diagram

You can enlarge the line diagram of the **Measurement display**.
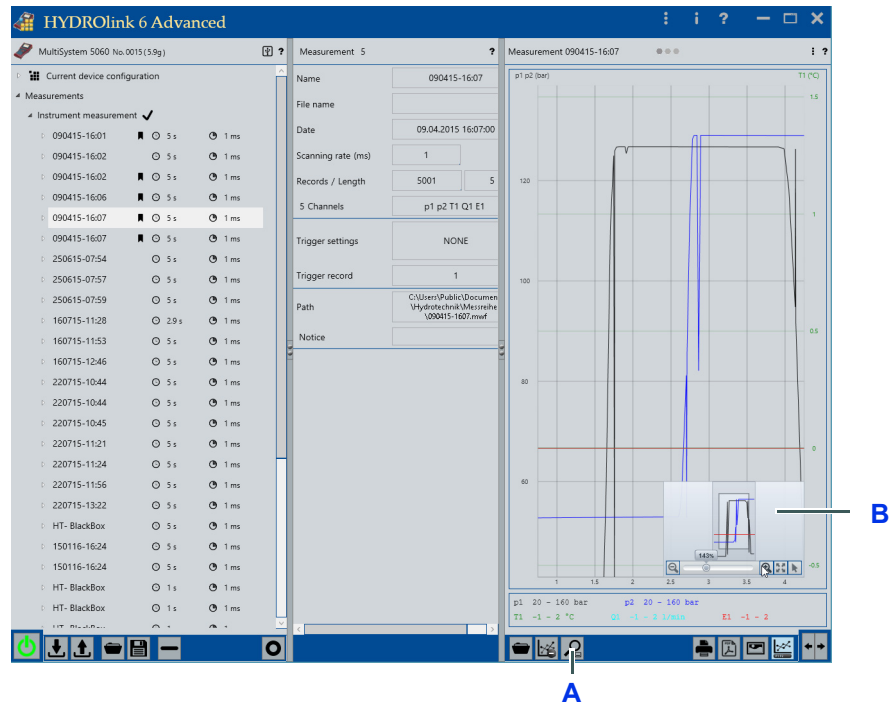
A **Zoom** button   B **Zoom menu**

Picture: *Enlarging the line diagram*

The line diagram can be zoomed in the following ways:

- Hover the mouse over the line diagram and scroll with the mouse scroll wheel.
- Drag a box around the area you want to zoom.
- Use the **Zoom** button to overlay the **Zoom menu**.

  Hover the mouse over the **Zoom menu** and click a button.
- For touch operation:

  Use the normal gestures (example: spread your fingers) to zoom in on a line diagram.
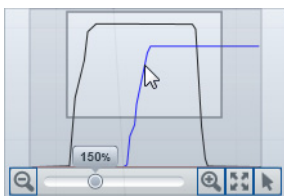
To change the position of the section, grab the section in the **Zoom** menu and move it.

Click the **Reset zoom** button to display the line diagram in the original size.

Clearing the Measurement display

Clear the **Measurement display** with the **Clear** button.
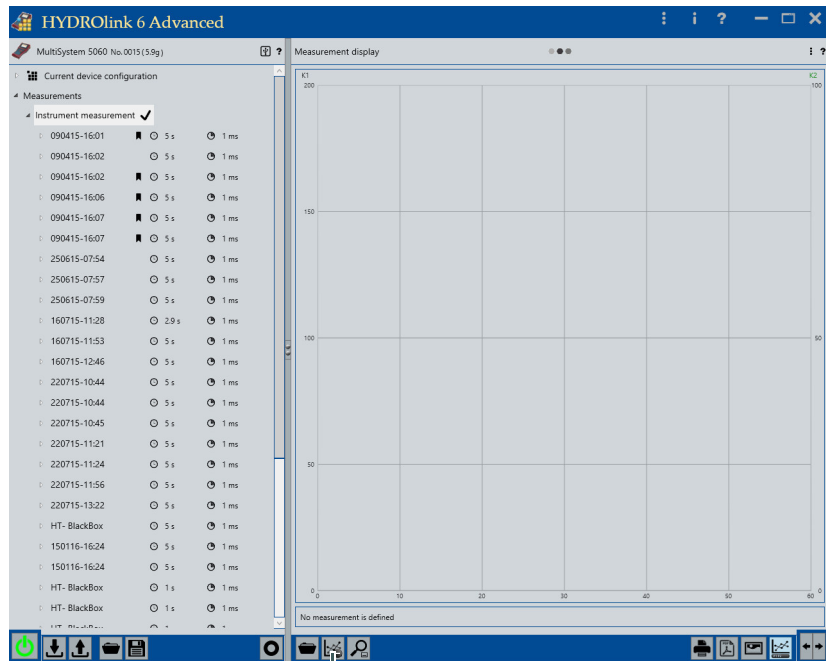
A   Clear button

Picture: Clearing the Measurement display

Recording a measurement

You can record measurements from the connected instrument with HYDROlink6 Advanced. The instrument must be connected to HYDROlink6 Advanced for this.

Only the channels are recorded that are marked in the channel settings with the 💾 symbol.

ENG

In the **ADVANCED** edition, the measurements are recorded directly from the instrument and only then transmitted to the HYDROlink6 Advanced. This procedure offers the advantage as compared to the **BASE** edition that the full scanning rate of the instrument is available. When recording measurements in the **BASE** edition, the recording is not done on the instrument, but on the computer. Therefore, the scanning rate for the **BASE** edition is limited by the type of connection to the computer (e.g. USB connection).

The recorded measurement is saved as a MWF file on an available hard drive on the PC. Depending on the setting, HYDROlink6 Advanced will automatically save the measurement or you must specify the file name and destination manually. If HYDROlink6 Advanced saves the measurement automatically, the file name will be created from the current date and time of day.

⇨ **Default directories for measurements and measurement configurations** on page 17

You have configured the storage settings for recording the measurements.

⇨ **Memory settings** on page 87

➜ **How to record a measurement**

1 Connect the instrument.

⇨ **Connecting an instrument** on page 30

The workspace is loaded from the instrument.

2 Specify the channels you want to record.
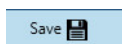
Select these channels for the **Online display** and then select **Save** in the channel settings.

⇨ **Selecting, arranging, and deleting channels** on page 48

3 To transfer the changes to the instrument, click the **Send all settings to the instrument** button.

4 Click the **Recording** button.

5 If automatic saving is not specified in the **Settings**, the Windows **Save as** dialog will be displayed.

⇨ **Directories** on page 148

Select the destination and enter a file name. Select **Save**.

The measurements are recorded.
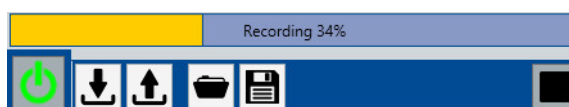
After the measurements have been recorded, the measurements are marked in green under **Online measurements**.

■
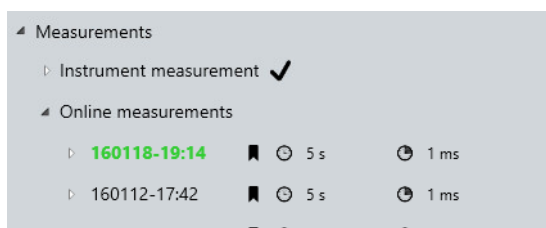
⇨ **Displaying measurements** on page 57

Coupling several instruments

You can also combine several instruments and thus increase the number of available channels.

About coupling instruments

You can couple only instruments of the MultiSystem 5060 and MultiSystem/ MultiControl 8050 device families with one another.

For the coupling, a trigger cable is required in order to synchronize measurements from different instruments. Here the instruments are informed about the occurrence of the trigger event. The synchronization error between the instruments is less than 1 ms.

If you are working without a trigger cable, the synchronization is handled by the software. Here, synchronization errors up to 50 ms may occur. This depends on the number of instruments connected, PC computing power and utilization of the CPU.

⇨ **Operating instructions for your instruments**

⇨ **Recording a measurement** on page 63

The instrument with the smallest serial number must be selected and is automatically defined as the master. All other instruments are defined as slaves.

Master and slave The master determines the appearance and behavior of all instruments. When sending the settings to the instrument, the device settings, memory settings, and display settings of the master are transferred to all instruments, insofar as they are compatible with one another.

You configure the channel settings for each instrument separately.

These dependencies are reflected in the display in the device explorer. Displayed are the device settings, memory settings, and display settings of the master and the channel settings of all instruments.

The **Measurements** menu displays only online measurements and no instrument measurements for the connected instruments.

Display of combined instruments

On the title bar of the explorer, master and slaves are depicted and numbered sequentially.
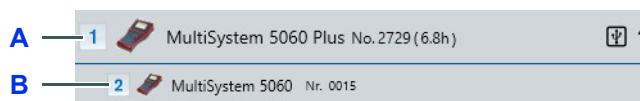
A   Instrument no. 1 (master)
B   Instrument no. 2 (slave)

Picture: *Title bar with two combined instruments*

The channels of the different instruments are differentiated from one another in color.
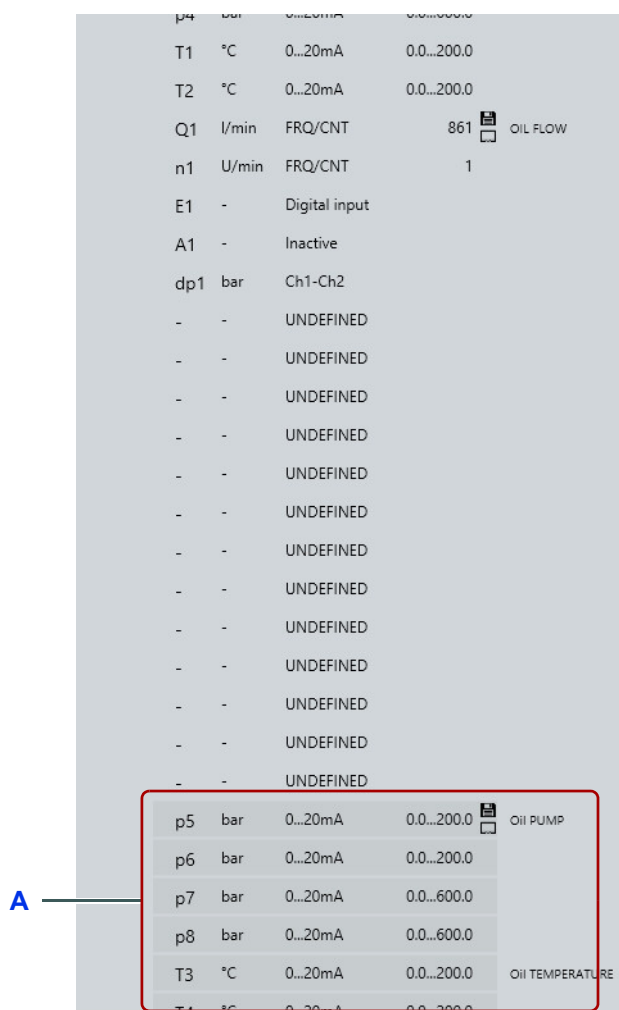
A   Channels instrument no. 2 depicted in color

Picture: *Channels of different instruments in the device explorer*

The numbering from the title bar is also used for the online display.
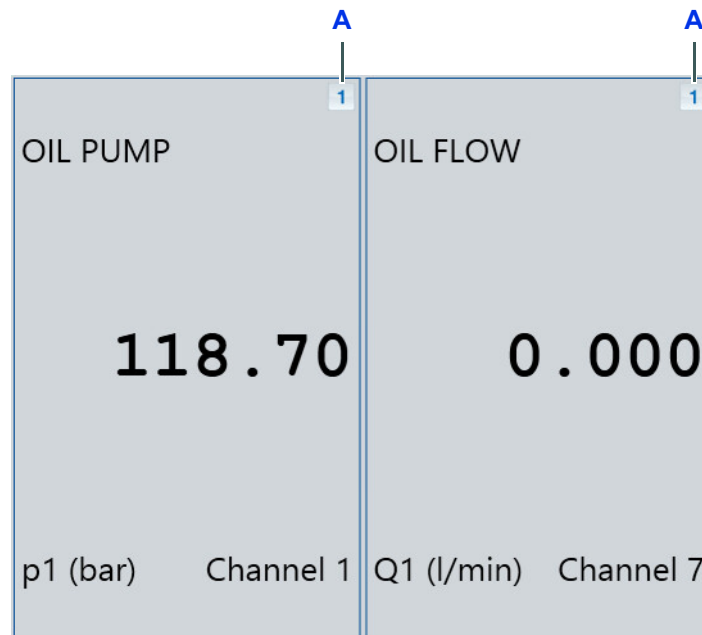
A   Numbering of the instruments

Picture: Online display with two channels of different instruments

Coupling several instruments

You have connected all instruments. To couple them, the instruments must be connected via USB.

⇨ **Connecting an instrument** on page 30

➜ **How to couple several instruments**

1 Click the **Connect to instrument** button.

If several instruments are detected, the **Device selection** dialog is displayed.

2 From the **Device selection** dialog, select all instruments that you would like to use.
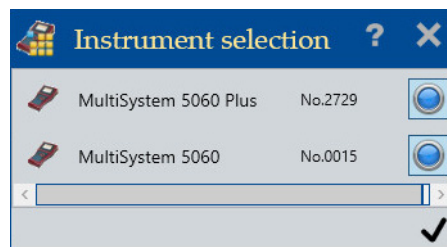
The settings are loaded from the instruments.

3 Expand the desired menus in the device explorer, e.g. **Current device configuration > Channel settings**.

4 Change the settings as you wish.

5 To transfer the changes to the instrument, click the **Send all settings to instrument** button.

The device settings, memory settings, and display settings are transferred to all instruments. The channel settings are only transferred to the relevant instruments.

∎

You now have the following possibilities with the combined instruments:

⇨ **Using the online display** on page 47
⇨ **Recording a measurement** on page 63

Use CAN database

If a special channel of the instrument should be used for the recording of a CAN message, a quick parameterization of the channel can be done by using a CAD database.

⇨ **Manufacturer** on page 2

You have the following options:

- **How to select a channel from the CAN database**
- **How to search in the CAN database**

➔ **How to select a channel from the CAN database**
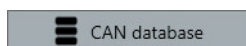
CAN database

1   Select *Device explorer > Channel settings > Click special channel (with CAN bus connection) > Detail area > Calculation type > CAN database*.

The **CAN database** window opens.

2   Click the **Open CAN database** button.

The Windows **Open** dialog is displayed.

3   Select the desired CAN database.

The CAN database is loaded.

In the **Message** area, either the CANopen sensors or the parameter group number (PGN) of the standard SAE J1939 is displayed.

4   Select the desired message in the **Message** area.

In the **Signal** area, the channels of CANopen sensors or the signal number (SPN) according to the standard SAE J1939 are displayed.

5   In the **Signal** area, select the desired sensor specification.

6   Click the **Apply selected signal specifications to the channel settings** button.

■

➔ **How to search in the CAN database**
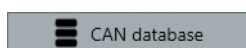
CAN database

1   Select *Device explorer > Channel settings > Click special channel (with CAN bus connection) > Detail area > Calculation type > CAN database*.

The **CAN database** window opens.

2   Click the **Open CAN database** button.

The Windows **Open** dialog is displayed.

3   Select the desired CAN database.
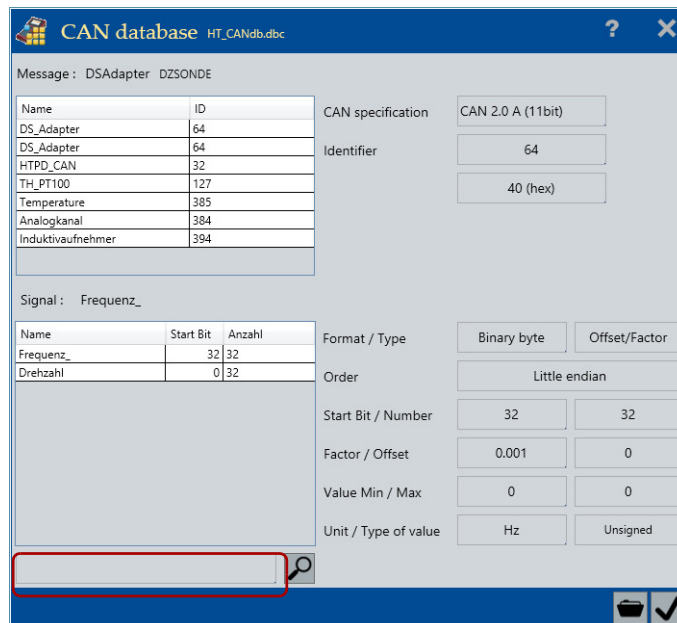
The CAN database is loaded.

4 Enter a search term in the search field. Capital and lower-case letters are ignored.

The following fields will be searched:

- Name of the message
- Comment about the message
- Decimal identifier of the message
- Hexadecimal identifier of the message
- Name of the signal
- Comment about the signal

5 Click the **Search** button.

The message and the signal of the first hit are marked.

6 Click the **Search** button to display the next hit.

∎

➪ **CAN database dialog** on page 164

Protocol
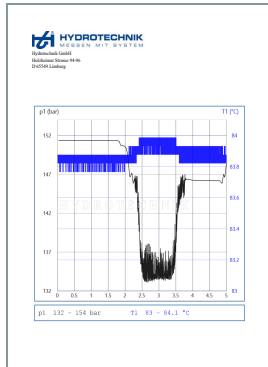
You can print out the protocol of a measurement or save it as a PDF file.

Use the protocol to document your activity or the condition of the inspected system.

The protocol consists of up to 5 areas:

1. Company logo
2. Company name
3. Line diagram

   Corresponds to the diagram display in the Measurement display.

4. Measurement information
5. Additional text (e.g. name of the inspector, inspection date)
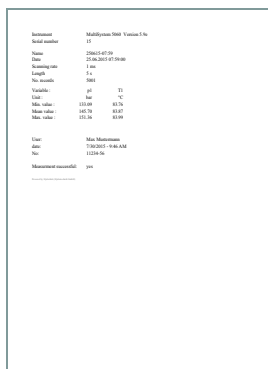
Generating a protocol

A printer is required to print a protocol. If no printer is available, you can save the protocol as a PDF file for printing later.

➔ **How to print a protocol**

1   Open the measurement that you would like to generate a protocol for.

⇨ **Saving and displaying measurements from the instrument** on page 57

2   Click the **Print** button.

3   If the free text input is activated in the settings, the **Free text input** dialog will be displayed.

Change or add to the text.

4   Click the ✔ button.

The Windows **WindowPrintPreview** dialog is displayed.
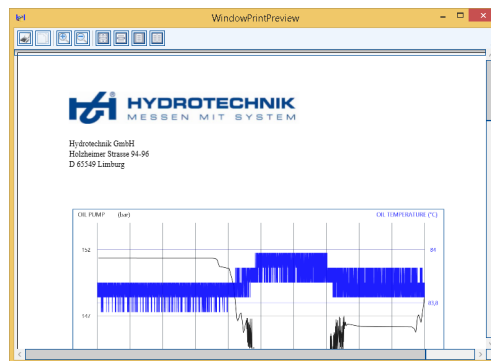
5   Click the **Print** button.

The protocol is printed.

■

➜ **How to save a protocol as a PDF file**

1 Open the measurement that you would like to generate a protocol for.

⇨ **Saving and displaying measurements from the instrument** on page 57

2 Click the **Save as PDF** button.

3 If the free text input is activated in the settings, the **Free text input** dialog will be displayed.

⇨ **Configuring the layout of the protocol** on page 74.

Change or add to the text.

4 Click the ✓ button.

The Windows **Save as** dialog is displayed.

5 Select the destination and enter a file name. Click the **Save** button.

The protocol is created as a PDF file and then displayed in the PDF viewer.

■
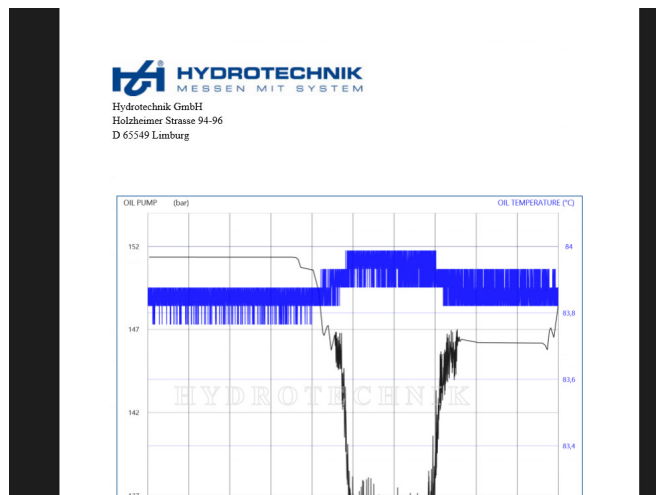
Configuring the layout of the protocol

You should configure the layout of the protocol when setting up HYDROlink6 Advanced.

The buttons **Show example** shows or hides a preview for the **Line diagram** and **Measurement information** areas.

➔ **How to configure the layout of the protocol**

1 Open the **Settings**.

⇨ **How to open and close the Settings dialog** on page 15

2 In the **General** tab next to the entry **Protocol layout**, click the **Configure** button.

The **Protocol layout** dialog is displayed.
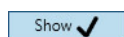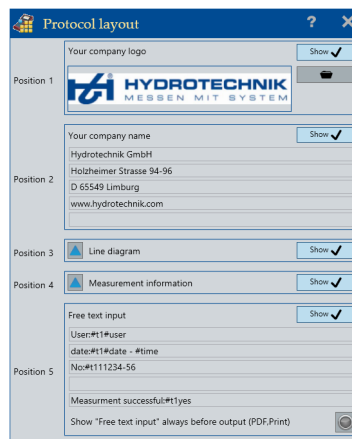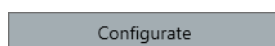
3 Click the **Show** button to show or hide an area in the protocol.

If an area in the protocol is displayed, then the button is identified with ✔.

4 If you want to change the order of the areas in the protocol:

Swap the positions of the areas using drag & drop.
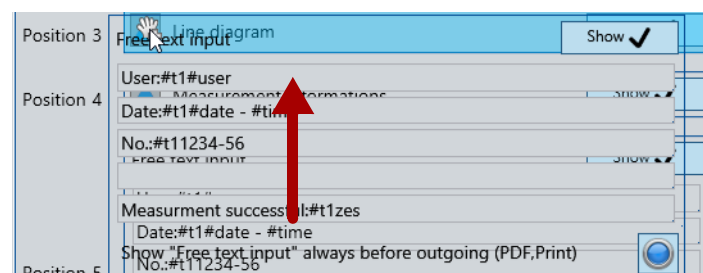
5 If you want to display your company logo in the protocol:

In the **Your company logo** area, click the **Open** button.

The Windows **Open** dialog is displayed.
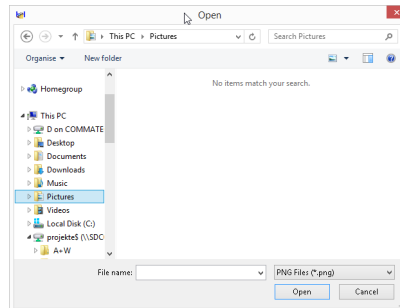
Navigate to the graphics file with your company logo and open the file.

You can use graphics files with the formats PNG or JPG only. The graphic is adapted and centred in the area.

6 If you want to display your company name and address on the protocol:

In the **Your company name** area, click in the text field and enter the desired text.

ENG

7 If you want to display the **Line diagram** and the **Measurement information** in the protocol:

Click the **Show example** button to display an example.
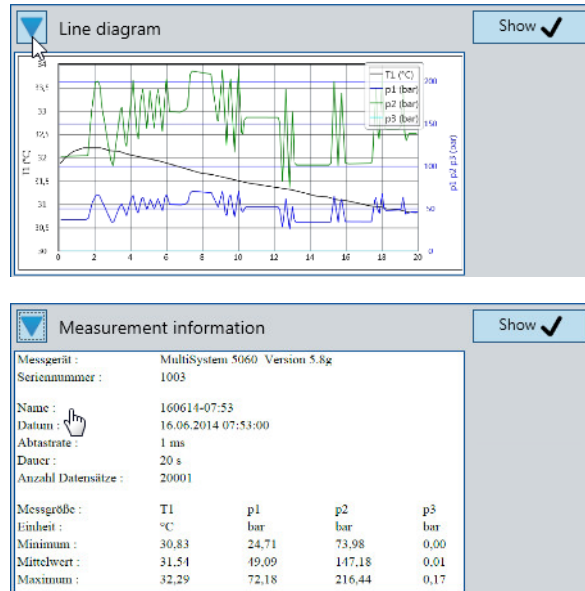
Click the **Show example** button again to hide the example.

8 If you want to display an additional text in the protocol:

In the **Free text input** area, click in the text field and enter the desired text.

You can use the following variables:

- **#user** (Windows name of the logged in user)
- **#date** (current date)
- **#time** (current time)
- **#t1** (tab for aligning the texts. Only one tab is supported)

9 If you want the **Free text input** dialog to be displayed before every protocol generation:

Activate the button next to the entry **Display "free text entry" in front of each output (PDF, print)**.

If the button is deactivated, no dialog for free text input will be shown when the protocol is generated.

10 Close the **Protocol layout** dialog.

11 Close the **Settings** dialog.

ENG

∎

Software description

This chapter describes the program window, the dialogs, and elements of the software.

Program window
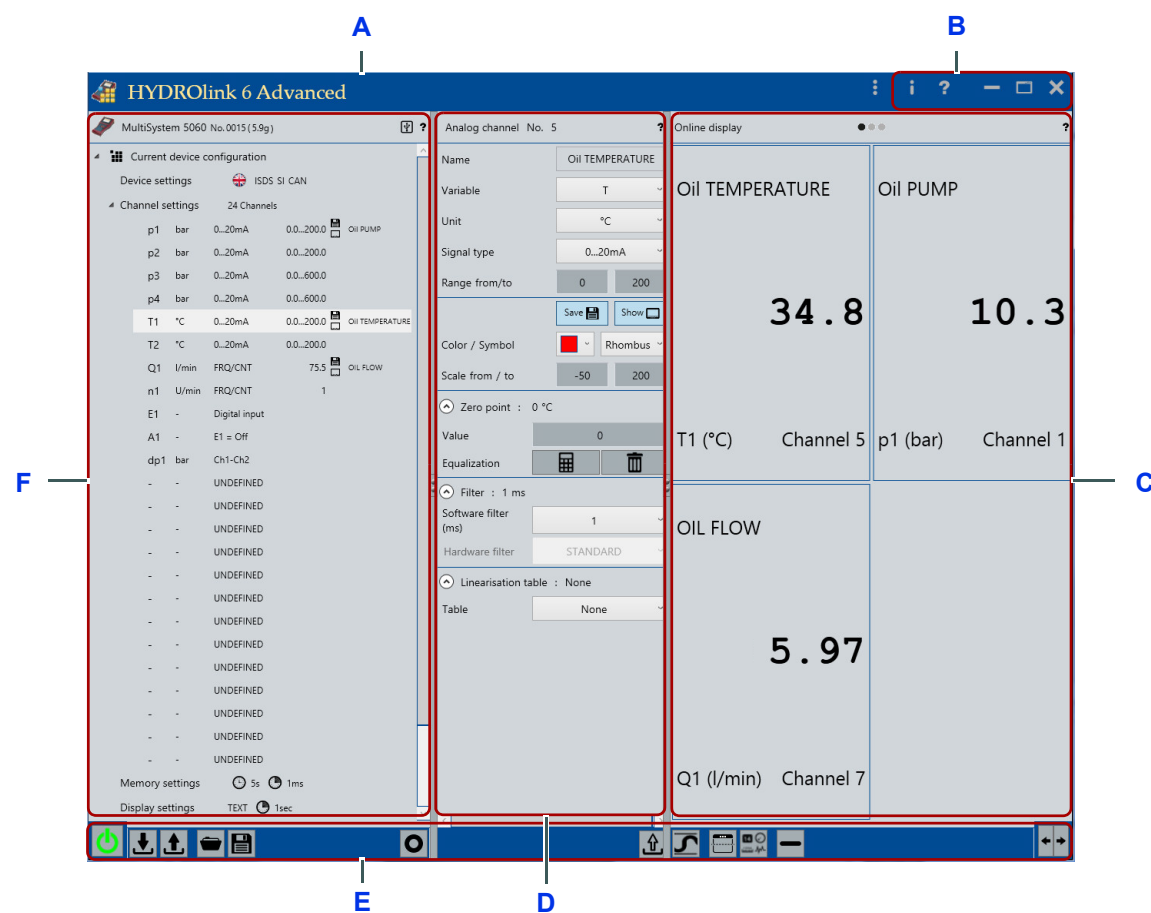
A Speech control	**C** Viewer	**E** Toolbar
B Information and configuration bar	**D** Detail area	**F** Device explorer

Picture: *Program window*

The program window consists of the following areas:

- Information and configuration bar
- Device explorer
- Detail area
- Viewer with **Online display**, **Instrument display**, or **Measurement display**
- Toolbar

Information and configuration bar

Display and edit application-specific functions.

⇨ **Information and configuration bar** on page 80

Device explorer

Display and navigate device information.

⇨ **Device explorer** on page 81

Detail area

Display and edit selected elements in the device explorer.

⇨ **Detail area** on page 100

Viewer

Display current measured values of selected channels. Display measurements as line diagram.

Change display type (**Online display** - **Instrument display** - **Measurement display**).

⇨ **Viewer** on page 127

Toolbar

Provide buttons, e.g. Connect to measurement instrument, Record measurements.

Toolbar for device explorer.

⇨ **Toolbar** on page 94

Toolbar for detail area.

⇨ **Toolbar** on page 126

Toolbar for online display.

⇨ **Toolbar** on page 132

Toolbar for device display.

⇨ **Toolbar** on page 138

Toolbar for measurement display.

⇨ **Toolbar** on page 143

Size ratio of the window sections
You can change the size ratio of the window sections by moving the vertical separation bar.
Use the ⦙ button to reveal or hide the device explorer.

Information and configuration bar

| HYDROlink 6 Advanced | ⋮ i − □ ✕ |

With the buttons on the info and configuration bar, you can display and edit application-specific functions.

Opening the Settings dialog

Opens the **Settings** dialog.

- **General tab** (e.g. language, layout of the report)
- **Connection settings tab**
- **Extended tab**
- ⇨ **Settings dialog (global)** on page 146

Opening the information dialog

Opens a list with submenus:

- **Show help**
- **About** (Product information)
- **License request**
  - ⇨ **Licensing HYDROlink6 Advanced** on page 18
  - ⇨ **Licensing dialog** on page 158
- **License activation**

Minimize

Minimizes the application

Maximize

Switches to full screen and back again

Close

Closes the application

Speech command ENDING

Speech control

Displays active speech control

⇨ **Speech control** on page 167

Device explorer

A   Title bar
B   Measuring instrument
C   Toolbar

Picture: Device explorer

The device explorer shows information about the connected measuring instrument. If no measuring instrument is connected, the information from the last connected instrument will be shown.

The device explorer consists of the following areas:

• **Title bar**

• **Measuring instrument**

• **Toolbar**

If you click parameters or measurements in the device explorer, these are displayed in the detail area.

⇨ **Detail area** on page 100

If you change parameters in the detail area, the changed element is marked in the device explorer with the symbol ✹.

A tooltip displays the changes.

As soon as you have sent the changed configuration to the measurement instrument, the symbol ✹ disappears.

Use the ⫶ button to reveal or hide the device explorer.

Title bar Display information about the measurement instrument.

⇨ **Title bar** on page 83

Measuring instrument Display measurement instrument settings.

The measurement instrument area consists of the following areas:

- **Current device configuration**
  Display and edit current parameters.

  ⇨ **Current device configuration** on page 85

- **Measurements**
  Display measurements recorded.

  ⇨ **Measurements** on page 88

- **Configurations**
  Display and edit configuration files.

  ⇨ **Configurations** on page 93

 BASE The measurement instrument area consists of the 2 areas **Configurations** and **Measurements**.

⇨ Documentation HYDROlink6 Base

 MultiBox The **Configurations** area is not available.

Toolbar Provides buttons for the device explorer.

⇨ **Toolbar** on page 94

ENG

Title bar

The title bar of the device explorer displays the device information.

The following device information is shown for the connected instrument:

- Instrument icon
- Instrument name (e.g. MultiSystem 5060 Plus)
- Instrument serial number (example: 2729)
- Instrument firmware version number (example: 6.8h)
- Warning symbol
- Connection type symbol
- Help symbol

Symbols The following symbols can be displayed.

Warning

The warning symbol indicates that the instrument firmware is not fully supported by HYDROlink6 Advanced.

You can use the instrument, however, its functionality may only be limited when used with HYDROlink6 Advanced. You should perform a firmware update.

ENG

Connection type   A connection symbol indicates that an instrument is connected with HYDROlink6 Advanced.

The following symbols indicate the connection type.

USB
- MultiHandy 2025
- MultiHandy 3020
- MultiSystem 4010
- MultiSystem 5060
- MultiSystem 5060 *Plus*
- MultiSystem 8050
- MultiControl 8050
- MultiBox 3060
- MultiBox 3061
- MultiBox 3065

LAN (TCP/IP network)
- MultiSystem 5060 (with additional options)
- MultiSystem 5060 *Plus* (with additional options)
- MultiSystem 8050 (with additional options)
- MultiControl 8050 (with additional options)
- MultiBox 3065

Bluetooth
- MultiSystem 5060 *Plus* (with additional options)

RS232
- MultiHandy 2020
- MultiSystem 4010
- MultiSystem 5060
- MultiSystem 5060 *Plus*
- MultiSystem 8050
- MultiControl 8050

Help

With this symbol, you can call up help for the device explorer.

Current device configuration
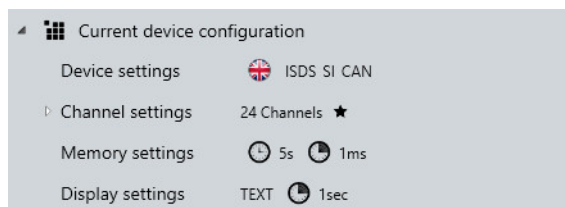
The **Current device configuration** element consists of the following elements:

- **Device settings**
- **Channel settings**
- **Memory settings**
- **Display settings**

Device settings

The **Device settings** element displays settings for the measurement instrument.

If you click **Device settings**, the detail area opens.

⇨ **Device settings** on page 102

Channel settings

ENG

The **Channel settings** element displays the available channels of the instrument.

One sensor can be connected to a channel. This also includes CAN channels.

Special channels are displayed if these are supported by the instrument and set up.

| ⊐ p1 | bar | 0...20mA | 0,0...600,0 | 🖫 | OIL PUMP |
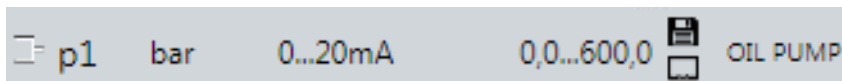
The following channel settings are shown for the connected sensor:

- Measured value (example: p1)
- Unit (example: bar)
- Signal type (example: 0-20 mA)
- Measurement range or calibration value (example: 0.0-200.0)
- Symbols
- Name (example: OIL PUMP)

  The name of the channel is only displayed if it is configured in the instrument.

The following symbols can be displayed.

Symbol	Meaning
🖫	Channel is active for the recording
⬚	Channel is active for the online display
★	The settings for the channel have been changed. The settings must be synchronized with the instrument.
⊐	Channel with connected ISDS sensor

You can expand and collapse the **Channel settings** element with the arrow keys ▷ and ◢.

If you click **Channel settings**, the detail area opens.

⇨ **Channel settings** on page 104

If you drag a channel into the **Online display** using the mouse, the current channel value will be shown in the **Online display**.

BASE No detail area for channel settings.

Display of a tooltip for each channel with detailed description of the settings.

Variable	p1 OIL PUMP
Unit	bar
No.	1
Signal type	0-20 mA
Range	0/200
Save	On
Show	On

ENG
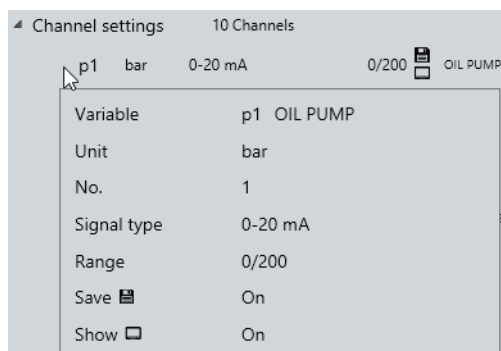
MH2020 and MH2025 In addition, it is possible to display special channels.

⇨ Documentation of the instrument

Memory settings

Device explorer > Current device configuration > Memory settings

Memory settings   5s   1ms

The **Memory settings** area displays the memory time and scanning rate.

If you click **Memory settings**, the detail area opens.

⇨ **Memory settings** on page 119

The following symbols can be displayed.

Symbol	Meaning
	Length of the measurement
	Scanning rate

Display settings

Device explorer > Current device configuration > Display settings

Display settings   TEXT   🕐 1sec
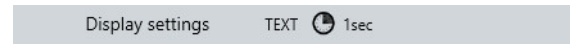
The **Display settings** element indicates the type of display and the display devices.

If you click **Display settings**, the detail area opens.

The following symbols can be displayed.

Symbol	Meaning
🕐	Scanning rate

MultiBox The **Display settings** area is not available.

Measurements

Device explorer > Measurements

▲ Measurements
  ▷ Instrument measurement 🗐
  ▷ Online measurements
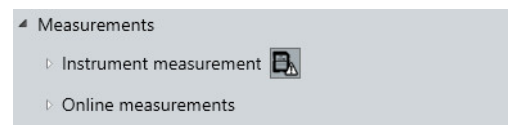
The **Measurements** element consists of the following elements:

• **Instrument measurement**

• **Online measurements**

Instrument measurement

Device explorer > Measurements > Instrument measurements
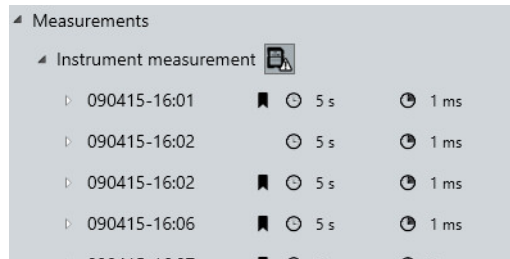
The **Instrument measurement** area shows all measurements stored in the instrument.

If you drag an instrument measurement into the **Measurement display** using the mouse, the measurement is transferred from the instrument and saved to the PC and shown in the Measurement display.

The following information is shown for each instrument measurement:

- Name of the measurement (example: 290715-15:43)
- ▌ shows that one instrument measurement is already saved on the computer.

  This measurement is also available offline and can be displayed without an instrument being connected.
- 🕐 Shows the length of the instrument measurement (example: 5 s)
- 🕐 Shows the scanning rate used (example: 1 ms)

Synchronize the measurements in the list with the instrument measurements

With the **Synchronize the measurements in the list with the instrument measurements** button, you can update the list of **Instrument measurements**.

The **Synchronize the measurements in the list with the instrument measurements** button is only active if an instrument is connected.

During the updating, there is also a check whether an instrument measurement was already downloaded.

The successful update is indicated with ✅.

If you have set *Info and configuration bar > Settings > Advanced > Synchro-nize measurements automatically*, the measurements are updated automatically after the connection is established. The **Synchronize the measurements in the list with the instrument measurements** button is not available.

BASE Updating is done automatically if an instrument is detected. The **Synchronize the measurements in the list with the instrument measurements** button is not available.

Channel settings of an instrument measurement

If you click the arrow symbol ▷, the channel settings for this instrument measurement will be shown. Only the channel settings of the recorded channel are shown.

◢ 090415-16:01		▮ ⊙ 5 s	⊕ 1 ms
p1	bar	0-20 mA	0/200
p2	bar	0-20 mA	0/200
T1	°C	0-20 mA	0/200
Q1	l/min	NO DIRECTION	75.5
E1	-	IN	-

The following channel settings are shown for the recorded channel:

- Variable (example: p1, p2, T1)
- Unit (example: bar, °C)
- Signal type (example: 0-20 mA)
- Value range or parameters (example: 0/200 bar)

Tooltip

A tooltip will be displayed if you hover the mouse pointer over an instrument measurement or with touch operation, if you hold your finger on the instrument measurement for a second.

▷ 090415-16:01	▮ ⊙ 5 s	⊕ 1 ms
Name	090415-16:01	
Date	09.04.2015 16:01	
Length ⊙	5 s	
No. records	5001	
Scanning rate ⊕	1 ms	
Channels (5)	p1 p2 T1 Q1 E1	
File name ▮	C:\Users\Public\Documents \Hydrotechnik\Messreihen \090415-1601.mwf	

The tooltip shows the following information:

- **Name** (example: 090415-16:01)
- **Date** (example: 09.04.2015 16:01)
- **Length** 🕐 (example: 5 s)
- **No. records** (example: 5001)
- **Scanning rate** 🕐 (example: 1 ms)
- **Channels** (number) and channel name (example: (4) p1 p2 T1 Q1)
- **File name** 🔖 and path are only shown if the measurement is stored on the PC.

    This measurement is also available offline and can be displayed without an instrument being connected.

The following symbols can be displayed.

Symbol	Meaning
🕐	Length of the measurement
🕐	Scanning rate
🔖	Measurement has been downloaded by the instrument. Measurement is available offline.
⚠	An error occurred when loading the measurement. Details are displayed in the tooltip. Measurement does not contain any data records.

Online measurements

Device explorer > Measurements > Online measurements

The **Online measurements** element displays all measurements that have been recorded online with the current configuration.

Online measurements belong to a work area. If you load a configuration with the online measurements, only these online measurements are displayed.

The newest online measurements are shown first in the list. Online measurements that were generated during the current session are displayed in green.

Up to 200 measurements can be displayed. If there are more measurements, the oldest measurements are no longer displayed. The old measurements are not deleted from the system.

The following symbols can be displayed.

Symbol	Meaning
	Length of the measurement
	Scanning rate
	Always displayed for online measurements. If the symbol is not displayed, then there has been an error with the file.
	An error occurred when loading the measurement. Details are displayed in the tooltip. Measurement does not contain any data records or measurement is missing.

Configurations

Device explorer > Configurations
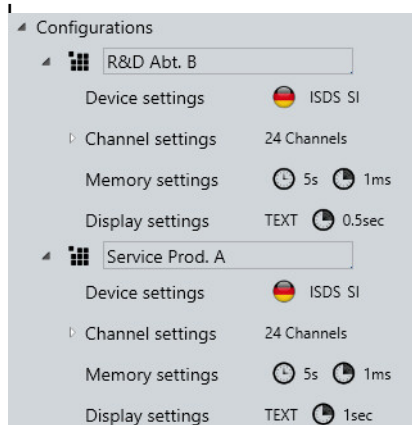
The **Configurations** element displays all other configurations saved in addition to the current device configuration.

The individual configurations in the **Configurations** element are displayed and edited analogously to the **Current device configuration** element.

⇨ **Device settings** on page 102

⇨ **Channel settings** on page 104

⇨ **Memory settings** on page 119

⇨ **Display settings** on page 121

The **Configurations** element can be expanded and collapsed using the arrow symbols ▷ and ◢.

> **Configuration**
> A configuration in the software is identical to a project on the instrument.

MultiBox No **Configurations** element.

Toolbar

Use the toolbar to connect your instrument with HYDROlink6 Advanced.

You can also use the toolbar to start the recording of measurements.

Depending on which elements are active in the device explorer, the **Toolbar** area includes the following buttons.

Button	Function
	Establish or disconnect connection to the instrument.
	Load the workspace of the instrument.
	Send the workspace of the instrument.
	Load a workspace. Opens the Windows **Open** dialog. Only possible if no instrument is connected.
	Save the workspace as file. Opens the Windows **Save as** dialog.
	Send the selected configuration to the instrument.
	Save the selected configuration. Opens the Windows **Save as** dialog. Only possible with MultiSystem 5060 and MultiSystem 5060 Plus.
	Delete the active element in the device explorer.
	Start saving on the instrument.
	End saving on the instrument.
	Trigger the online measurement. Only with appropriate configuration of the memory parameters.

Connecting

Establishes the connection to the instrument or disconnects it. HYDROlink6 automatically detects the type of connection (USB, RS232 or LAN).

The button and connection can have the following states:

Connect to instrument

Establishes connection to the instrument.

There is no connection.

Speech command CONNECT

- Symbol colour - black
- Symbol turns every five seconds
- Tooltip: Connect to instrument

> Connect to instrument
>
> 🎙 Connecting
>
> 🎙 Cut

Cut
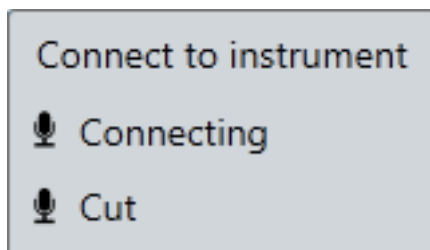
Disconnects the connection to the instrument.

There is a connection.

Speech command CUT

- Symbol colour - green
- Symbol does not turn
- Tooltip: Connected USB

> Connected USB
>
> 🎙 Connecting
>
> 🎙 Cut
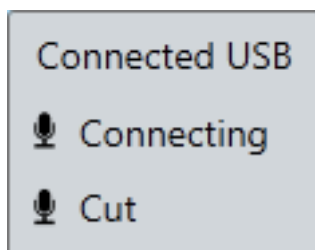
No instrument was detected

Attempts to establish a connection to the instrument again.

A connection failed.

Speech command CONNECT

- Symbol colour - red
- Symbol does not turn
- Tooltip: Information about the connection error is displayed (example: No instrument was detected)

```
No device detected
🎤 Connecting
🎤 Cut
```
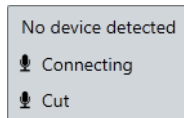
Click the button again to cancel

HYDROlink6 attempts to establish a connection to the instrument again.

If you click this button, the attempt to establish a connection is cancelled.

Load workspace from instrument

Loads the workspace from the instrument.

The button is only active if an instrument is connected.

Send configuration to instrument

Sends the workspace to the instrument.

The button is only active if an instrument is connected.

Load workspace from file

Opens the Windows **Open** dialog.

You can load a saved workspace.

The button is **not** active if an instrument is connected.

Save workspace as file

Saves the current workspace as file.

Delete

The function of the button depends on which element is marked in the device explorer.

The following functions are possible for the button.

Marked element	Function of the Delete button
Configurations	Deletes all configurations from the device explorer.
	If an instrument is connected, the projects on the instrument are also deleted.
Configuration	Deletes the selected configuration from the device explorer.
	If an instrument is connected, the project on the instrument is also deleted.
Instrument measurement	Deletes the selected instrument measurement from the device explorer and from the instrument.
	You can only delete the selected instrument measurement if an instrument is connected and if the instrument measurement list in the device explorer has been updated.
	Only the instrument measurement is deleted. Downloaded measurements are not deleted from the PC.
Online measurements	Deletes all online measurements from the device explorer.
	Moves the files of the online measurements to the Windows Recycling Bin.
Online measurements	Deletes the selected online measurements from the device explorer.
	Moves the files of the selected online measurement to the Windows Recycling Bin.

Send selected configuration to instrument

Sends the current configuration or the selected configuration to the instrument.

The successful sending is indicated with ✔.

The button is only displayed if a configuration was selected and an instrument is connected.

Save selected configuration as file

Saves the selected configuration as file on the PC.

The Windows **Save as** dialog opens.

Begin recording

Starts the recording of a measurement.

Speech command RECORD

The button is only active if an instrument is connected.

If on the **Settings** dialog **Assign folder and file name automatically** is selected, the recording starts immediately.

If automatic saving is not specified in the **Settings**, the Windows **Save as** dialog opens. You must specify a destination and can change the file name.
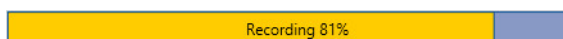
⇨ **Settings dialog (global)** on page 146

⇨ **Recording a measurement** on page 63

The instrument's memory parameters are used for the recording.

Record   Only the channels that are activated for recording will be recorded. The channels are indicated with the symbol 💾 in the channel settings.

Recording 81%

A progress bar displays the progress of the recording and the elapsed time of the recording.

Transfer to instrument's SD card   When storage on the instrument is complete, the data is transferred to the instrument's SD card.

Transfer to SD board 72%
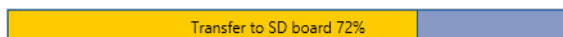
A progress bar indicates the progress of the transfer to the SD card.

Transfer to PC When the transfer of the data to the SD card is complete, the measurements are transferred to the PC.
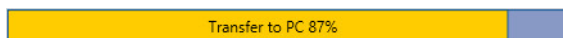
Transfer to PC 87%

A progress bar indicates the progress of the transfer to the PC.

When the measurements have been transferred to the PC, a new entry appears in *Device explorer > Measurements > Online measurements*.

> **Length of the recording**
> HYDROlink6 Advanced records the measurements on the instrument and transfers the online measurements to the PC after this.
> Therefore, the length of the recording with HYDROlink6 Advanced is limited by the instrument.
> • So that the scanning rate is available in full resolution, you must specify the length of the recording in *Memory settings > Storing time*.

BASE Online recording of measurement data starts. The measurements are transferred directly to the PC. A progress bar displays the progress of the recording and the elapsed time of the recording.

Trigger

Triggers the online measurement.

Memory settings > Trigger type must be **Button**.

The button is only visible if an online recording is active.

Stop recording

Stops the online recording or the active storage of data.

Speech command STOP

The button is only visible if an online recording is active.

Detail area
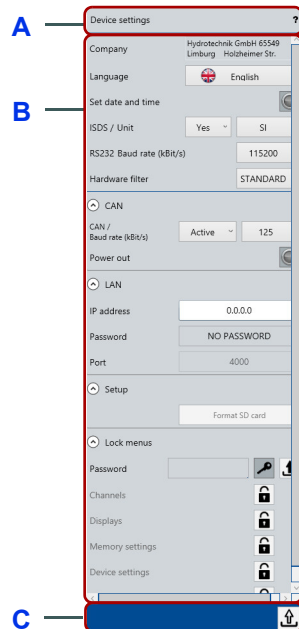
A Title bar
B Details
C Toolbar

Picture: Detail area

The detail area is the dialog for editing the fields.

If you click one of the following elements in the device explorer, the detail area opens with the appropriate fields:

*   **Device settings**
*   **Channel settings** > *Select channel*
*   **Memory settings**
*   **Display settings**
*   **Instrument measurement** > *Select measurement*
*   **Online measurements** > *Select measurement*

If no measuring instrument is connected, the fields of the last connected instrument will be shown.

Use the ⬚ button to show or hide the detail area.

If you change fields, the display changes simultaneously.

The detail area consists of the following areas:

- **Title bar**
- **Details**
- **Toolbar**

Title bar Display selected element

⇨ **Title bar** on page 101

Details Display fields

Different fields are displayed depending on the element that has been selected in the device explorer:

- Device settings

  ⇨ **Device settings** on page 102

- Specific channels

  ⇨ **Channel settings** on page 104

- Memory settings

  ⇨ **Memory settings** on page 119

- Display settings

  ⇨ **Display settings** on page 121

- Specific device settings

  ⇨ **Instrument measurement** on page 124

- Specific online measurements

  ⇨ **Online measurements** on page 125

Toolbar Display buttons

⇨ **Toolbar** on page 126

Title bar

Device explorer > Select element (parameter or channel/measurements) > Detail area > Title bar

Device settings   ?

In the title bar area, the selected parameter or the selected measurement is displays.

Device settings

Device explorer > Current device configuration or configuration > Device settings > Detail area > Details
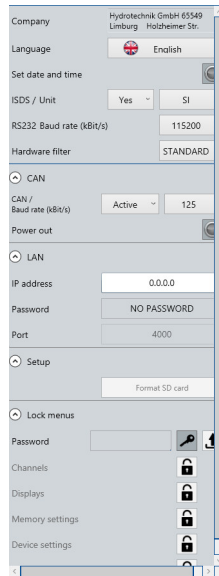
If in the device explorer you click **Device settings**, the detail area opens with the following parameters.

- **Company**
- **Language**
- **Set date and time**
- **ISDS / Unit**
- **RS232 Baud rate (kBit/s):**
- **Hardware filter**
- **CAN**
- **LAN**
- **Printer**
- **Setup**
- **Lock menus**

The parameters depend on the instrument connected and they can vary.

For the description of the parameters, see the instrument's documentation.

⇨ Documentation of the instrument

ENG

Only the parameters are described below that differ from the instrument.

`MultiBox` **Language**, **Set date and time**, **RS232 Baud rate**, and **Hardware filter** are not supported.

Set date and time

If the **Set date and time** option is selected, when sending the device parameters the time and date of the PC are set in the device.

CAN

The CAN settings are only displayed if the device supports CAN.

`MultiBox` CAN is not supported.

LAN

The LAN settings are only displayed if the device supports LAN.

Locking menus

If you enter the password and confirm with the 🔑 button, all 🔒 buttons are activated. Is only displayed if the function is supported by the connected device.

You can enter a new password. The tooltip displays the password in plain text.

You can lock or unlock menus.

If you click the button, the settings, including password, are sent to the device.

`MultiBox` **Lock menus** is not supported.

Advanced options

For `MultiBox`, **MS8050** and **MC8050** there are also **Advanced options** available.

If you select **Datalogger**, the device works as datalogger.

Channel settings

Device explorer > Channel settings > Click channel > Detail area > Details

Name	Oil TEMPERATURE
Variable	T
Unit	°C
Signal type	0...20mA
Range from/to	0	600

	Save 💾	Show ☐
Color / Symbol	🟩	Rhombus
Scale from / to	-50	200
2. Scanning rate	Fast

Zero point : 0 °C
| Value | 0 |
| Equalization | 🔢 | 🗑 |

Filter : 1 ms
| Software filter (ms) | 1 |
| Hardware filter | STANDARD |

Linearisation table : None
| Table | None |

If in the device explorer you click **Channel settings**, the detail area opens with parameters. The parameters displayed depend on the selected channel:

- All channels
  - ⇨ **All channels** on page 105
- Analog channel
  - ⇨ **Analog channel** on page 106
- Frequency channel
  - ⇨ **Frequency channel** on page 108
- Digital input
  - ⇨ **Digital input** on page 109
- Digital output
  - ⇨ **Digital output** on page 110
- Analog output
  - ⇨ **Analog output** on page 111
- Special channel
  - ⇨ **Special channel for calculations** on page 112
- Special channel with CAN bus connection
  - ⇨ **Special channel for CAN messages** on page 115

For the description of the parameters, see the instrument's documentation.

⇨ Documentation of the instrument

Only the parameters are described below that differ from the instrument.

ENG

All channels

Device explorer > Channel settings > Click channel > Detail area > Details

Name	Oil TEMPERATURE
Variable	T
Unit	°C

	Save 💾	Show ▢
Color / Symbol	🟩	Rhombus
Scale from / to	-50	200

In the detail area, the following parameters are displayed for all channels:

- **Name**
- **Variable**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**

Variable/Unit In contrast to the devices, variables and units are separated. With the selection of the **Variable**, the selection possibilities of the **Unit** also change.
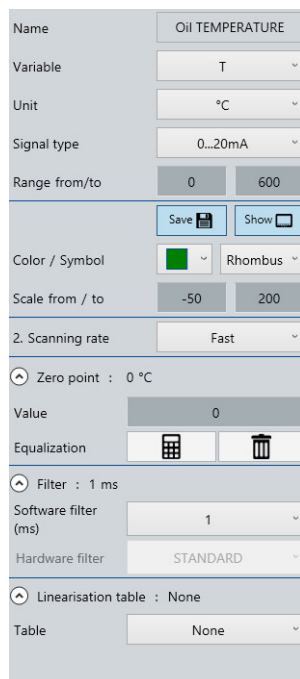
> ℹ️ **Fields in HYDROlink6 Advanced and in the device**
> Fields in HYDROlink6 Advanced are sometimes displayed on another menu on the device.
> - **Save** is on the **Memory** menu.
> - **Display**, **Color**, **Symbol**, **Scaling** are on the **Display** menu.

Analog channel

Device explorer > Channel settings > Click channel > Detail area > Details

Name	Oil TEMPERATURE
Variable	T
Unit	°C
Signal type	0...20mA
Range from/to	0 / 600
	Save / Show
Color / Symbol	🟩 / Rhombus
Scale from / to	-50 / 200
2. Scanning rate	Fast
Zero point : 0 °C	
Value	0
Equalization	
Filter : 1 ms	
Software filter (ms)	1
Hardware filter	STANDARD
Linearisation table : None	
Table	None

In the detail area, the following parameters are displayed for analog channels:

- **Name**
- **Variable**
- **Unit**
- **Signal type**
- **Range from/to**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **2. Scanning rate**

  Only displayed if *Memory parameter > 2. Scanning rate x* is greater than zero.
- **Zero point**
- **Filter**
- **Linearisation table**

Zero point   The zero point can be synchronized automatically or changed manually.

The buttons ▦ and 🗑 for the automatic synchronization are only active if a device is connected.

Filter   You can select the **Software Filter**.

If in *Device explorer > Device settings > Detail area* in the **Hardware filter** drop-down list **INDIVIDUAL** has been selected, you can select the **Hardware Filter** here.

> ℹ️ **Fields in HYDROlink6 Advanced and in the device**
> Fields in HYDROlink6 Advanced are sometimes displayed on another menu on the device.
> • **Filter** is on the **Device** menu.

MultiBox **Hardware Filter** is not supported.

Linearisation table   Select the **Linearisation table** by selecting a table in the **Table** drop-down list.

If you select a table, you must define at least one **Actual value** greater than 0. You can change the name of the table.

MultiBox **Linearisation table** is not supported.

Frequency channel

Device explorer > Channel settings > Click frequency channel > Detail area > Details

Name	OIL FLOW
Variable	Q
Unit	l/min
Signal type	FRQ/CNT
Calibration value	7
	Save / Show
Color / Symbol	None
Scale from / to	0 / 300
2. Scanning rate	Fast
Filter : 0,25Hz 10 ms	
Min. Frequency	0,25Hz
Gate time (x 10ms)	1
Linearisation table : None	
Table	None

In the detail area, the following parameters are displayed for frequency channels:

- **Name**
- **Variable**
- **Unit**
- **Signal type**
- **Calibration value**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **2. Scanning rate**

   Only displayed if *Memory parameter > 2. Scanning rate x* is greater than zero.

- **Filter**
- **Min. Frequency**
- **Gate time (x 10ms)**
- **Linearisation table**
- **Table**

Linearisation table   Select the **Linearisation table** by selecting a table in the **Table** drop-down list.

If you select a table, you must define at least one **Actual value** greater than 0. You can change the name of the table.

MultiBox **Linearisation table** is not supported.

Digital input

Device explorer > Channel settings > Click digital input > Detail area > Details

Name	
Variable	E1
	Save 💾 Show 🖵
Color / Symbol	🟦 ˅ Circle ˅
Scale from / to	0 1
2. Scanning rate	Fast ˅

In the detail area, the following parameters are displayed for digital inputs:

- **Name**
- **Variable**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **2. Scanning rate**

  Only displayed if *Memory parameter > 2. Scanning rate x* is greater than zero.

Variable   The **Variable** cannot be changed.

Digital output

Device explorer > Channel settings > Click digital output > Detail area > Details

Name	
Variable	A1
State	CHANNEL
Channel	E1
Condition	Off
Value	100
	Save / Show
Color / Symbol	▮ / Square
Scale from / to	0 / 1
2. Scanning rate	Fast

In the detail area, the following parameters are displayed for digital outputs:

- **Name**
- **Variable**
- **State**
- **Channel**
- **Condition**
- **Value**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **2. Scanning rate**

  Only displayed if *Memory parameter > 2. Scanning rate x* is greater than zero.

Value   Can only be set under the following conditions:

- In the **State** drop-down list, **CHANNEL** is selected.
- For the parameter **Channel**, no digital channel is selected.

Analog output

Device explorer > Channel settings > Click analog output > Detail area > Details

Name		
Variable		AA
	Save	Show ☐
Color / Symbol	⬛	None
Scale from / to	-20	20
Active / Type	⬤	Generator
Start value / End value (mA)	0	20
Time start ramp / Stop ramp (*10ms)	500	100
Stay time (*10ms)	100	
Cycles / Cycle delay(*10ms)	2	1000
Hold AA at stop generator	⬤	

This channel is only active for **MultiSystem 8050** devices.

In the detail area, the following parameters are displayed for analog outputs:

- **Name**
- **Variable**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **Active/type**
- **Start value/End value (mA)**
- **Time start ramp/Stop ramp (*10ms)**
- **Stay time (*10ms)**
- **Cycles/Cycle delay (*10ms)**
- **Hold AA at stop generator**

ENG

Special channel for calculations

Device explorer > Channel settings > Click special channel > Detail area > Details

In the detail area, the following parameters are displayed for special channels if the **CalculationType CAN** has **not** been selected.

- **Name**
- **Variable**
- **Unit**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **Calculation type**
- **Threshold level**
- **Gate time**

Special channels serve to combine measurement values from several channels mathematically and to create calculations from these.

You can determine the **Calculation type** in the detail area. You can select a **Calculation type** or specify a **Formula**.

Special channels can also serve as display for CAN messages or a connected multimeter.

Depending on the device, the following calculation types are possible.

MultiSystem 5060
MultiSystem 5060 *Plus*

Calculation type		Description
Subtraction	K1-K2 K3-K4 K5-K6 K7-K8	The difference between the measurement values of two channels is formed. Alignment difference 0 With the ⊞ button you can compare the channels. With the 🗑 button you can delete the calibration. The buttons are only active if an instrument is connected.
Differentia-tion	AD1/dt FRQ1/dt CALC1/dt	The 1st Derivative of measurement values is formed. Threshold level 2.000 Gate time 200 You can differentiate using the following channels: 1. Analog channel 1. Frequency channel 1. Special channel ⇨ Documentation of the instrument
Power		The hydraulic power is calculated. ⇨ Documentation of the instrument
Formula		An individual formula is entered. Formula ⇨ Documentation of the instrument
Multimeter		A multimeter that is connected to the RS232 interface is placed on a channel. Signal type ⇨ Documentation of the instrument
Viscosity		The viscosity change is compensated depending on temperature. ⇨ Documentation of the instrument

Table: Calculation types of the MultiSystem 5060 (Plus)

MultiBox 3060
MultiBox 3061
MultiBox 3065

Calculation type		Description
Subtraction	K1-K2 K1-K3 K1-K4 K2-K3 K3-K4	The difference between the measurement values of two channels is formed. Alignment difference 0 ▦ 🗑 With the ▦ button you can compare the channels. With the 🗑 button you can delete the calibration. The buttons are only active if an instrument is connected.
Power		The hydraulic power is calculated with channels 1 and 4. ⇨ Documentation of the instrument

Table: *Calculation types of the MultiBox 3060/3061/3065*

MultiSystem 8050
MultiControl 8050

Calculation type	Description
SUB ADD MUL DIV	The difference, the sum, the product or quotient of the measurement values of two channels is formed. Channel p1 ⌄ p2 ⌄ Alignment difference 0 ▦ 🗑 With the ▦ button you can compare the channels. With the 🗑 button you can delete the calibration. The buttons are only active if an instrument is connected.
DIFF	The 1st Derivative of measurement values is formed. The channel can be selected at will. Channel p1 ⌄ Threshold level 0.000 Gate time 0 ⇨ Documentation of the instrument
Formula	An individual formula is entered. Formula [ ] For the description of the accepted entries, see the instrument's documentation. ⇨ Documentation of the instrument

Table: *Calculation types of the MultiSystem 8050*

Special channel for CAN messages

Device explorer > Channel settings > Click special channel (with CAN bus connection) > Detail area > Details

ENG

In the detail area, among other things the following parameters are displayed for special channels if the **Calculation type CAN** has been selected.

- **Name**
- **Variable**
- **Unit**
- **Save / Display**
- **Color/Symbol**
- **Scale from/to**
- **Calculation type**
- **CAN specification**
- **Identifier**
- **Timeout**
- **Format**
- **Order**
- **Offset**
- **Filter**
- **Calculation type**
- **Type of value**
- **Value Offset/Factor**
- **ID Dont Care**
- **CAN open**

If you select the **Calculation type CAN**, special channels serve as input channels for the CAN messages.
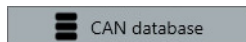
≣ CAN database

You can enter the parameters or read them from a CAN database.

⇨ **CAN database dialog** on page 164

For the description of the parameters, see the instrument's documentation.

⇨ Documentation of the instrument

For the devices **MultiSystem 5060**/**MultiSystem 5060** *Plus* and **MultiSystem 8050** the **Calculation type CAN** is distinguished by the selection possibilities for the formats.

Depending on the device, the following formats are possible.

MultiSystem 5060
MultiSystem 5060 *Plus*

In the **Format** drop-down list, you can select the following formats:

- **TEXT**
- **BINARY (BYTE)**
- **BINARY (BIT)**
- **PDO**
- **FLOAT**
- **ORIGINAL**
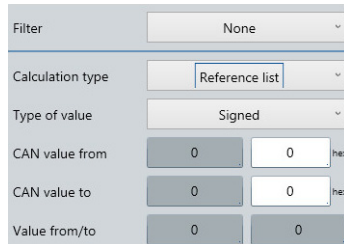
MultiSystem 8050

In the **Format** drop-down list, you can select the following formats:

- **TEXT**
- **BINARY (BYTE)**
- **CanOpen**
- **PDO**

ENG

Formats   Depending on which **Format** has been selected, the selection of the following available parameters also changes.

Order		Little endian	
Offset	No. bytes	◄ 4 ►	◄ 1 ►

Regardless of which **Format** has been selected, the parameters **Sequence** and **Offset** are displayed.

Filter		None	
Calculation type		Reference list	
Type of value		Signed	
CAN value from	0	0	hex
CAN value to	0	0	hex
Value from/to	0	0	

If **Format BINARY** have been selected, the following parameters are also displayed:

- **Filter**
- **Calculation type**
- **Type of value**
- **CAN value from (CalculationType Reference)**
- **CAN value to (CalculationType Reference)**
- **Value from/to**
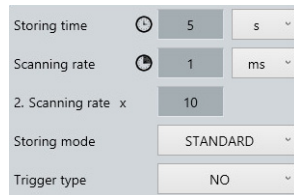
Decimal places		◄ 0 ►

If **Format PDO** have been selected, the following parameters are also displayed:

- **Decimal places**

MultiBox CAN channels are not supported.

Memory settings

Device explorer > Memory settings > Detail area > Details

Storing time	🕐 5	s ∨
Scanning rate	🕐 1	ms ∨
2. Scanning rate x	10	
Storing mode	STANDARD ∨	
Trigger type	NO ∨	

If in the device explorer you click **Memory settings**, the detail area opens with the following parameters.

- **Storing time**
- **Scanning rate**
- **2. Scanning rate x**

  Is only displayed if the function is supported by the connected device.

- **Storing mode**
- **Trigger type**

For the description of the parameters, see the instrument's documentation.

⇨ Documentation of the instrument

Only the parameters are described below that differ from the instrument.

Scanning rate

🛈 **Scanning rate**
If you select **µs** for the unit of the scanning rate, you must select a value that is ≥ 100 for the scanning rate.
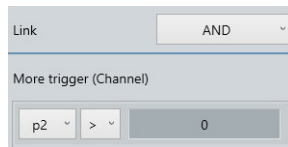If the scanning rate is < 100, the storage parameters cannot be sent to the device.

Trigger type

Depending on which trigger type has been selected, the selection of the following available parameters also changes.

Trigger type	Parameter
NONE	No additional parameters
CHANNEL	You can only use true channels, not special channels. **MultiBox** 2 additional channels are supported.
BUTTON	The storage is started with a button on the device. **MultiBox** The **Trigger type BUTTON** is not supported.
TIMER	The storage is started at the specified time. **MultiBox**, **MultiSystem 8050** and **MultiControl 8050**: The **Trigger type TIMER** is not supported.

Table: Trigger types
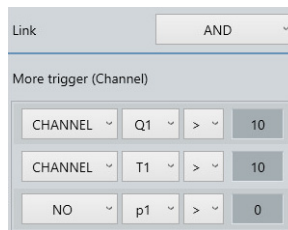
Trigger link

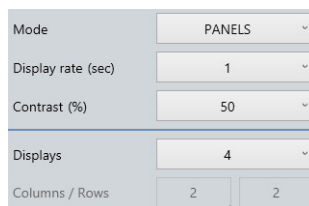If you have selected a trigger type, you can link it with another channel as 2nd trigger.

MultiBox 2 additional channels can be linked as triggers with the 1st trigger. The next channel is only active if the previous channel has been selected.

Display settings

Device explorer > Display settings > Detail area > Details

If in the device explorer you click **Display settings**, the detail area opens with the following parameters.

- **Mode**
- **Display rate (sec)**
- **Contrast (%)**
- **Displays**
- **Columns/Rows**

  Only for **MultiSystem 5060 Plus** and **MultiSystem 8050**

- **Rotation (°)**

  Only for **MultiSystem 8050**

If you select **Mode graphic y=(fx)** , the parameter **X axis** opens. You can specify the channel that is created on the X-axis.

Depending on the device, the following parameters are displayed in the detail area.

MultiSystem 5060

In the **Mode** drop-down list, you can select the following parameters:

- **TEXT**
- **GRAPHIC y=f(t)**
- **GRAPHIC y=f(x)**

MultiSystem 5060 *Plus*

In the **Mode** drop-down list, you can select the following parameters:

- **TEXT**
- **GRAPHIC y=f(t)**
- **GRAPHIC y=f(x)**
- **Displays**

In the **Displays** drop-down list, you can select the number of displays.

MultiSystem 8050

Mode	TEXT
Display rate (sec)	1
Contrast (%)	100
Rotation (°)	0
Displays	30
Columns / Rows	6 — 5
Position	Automatic

In the **Mode** drop-down list, you can select the following parameters:

- **TEXT**
- **GRAPHIC y=f(t)**
- **GRAPHIC y=f(x)**

> ℹ The **Mode TEXT** on the **MultiSystem 8050** corresponds to the **Mode DIS-PLAY** on the **MultiSystem 5060** *Plus*.

In the **Displays** drop-down list, you can select the number of displays.

If from the **Position** drop-down list you select **Manual**, you can shift the individual elements in the device display with drag & drop.

MultiBox **Display parameters** are not supported.

Instrument measurement

Device explorer > Measurements > Instrument measurement > Select measurement > Detail area > Details

Name	290715-15:43
File name	
Date	29.07.2015 15:43:00
Scanning rate (ms)	100
Records / Length	51	5.1
4 Channels	p1 p2 T1 Q1
Trigger settings	TASTE
Trigger record	1
Path	

If in the device explorer you click a measurement, the detail area opens with the following parameters.

- **Name**
- **File name**
- **Date**
- **Scanning rate (ms)**
- **Records/Length**
- **Channels**
- **Trigger settings**
- **Trigger record**
- **Path**

Online measurements

Device explorer > Measurements > Online measurements > Select measurement > Detail area > Details

Name	160504-15:27	
File name	160504-152748	
Date	04.05.2016 15:27:48	
Instrument / No.	MultiSystem 5060 Plus	2729
Scanning rate (ms)	1	
Records / Length	5001	5
5 Channels	p1 p2 T1 Q1 E1	
Trigger settings		
Trigger record	0	
Path	C:\Users\Public\Documents\Hydrotechnik\Messreihen\160504-152748.mwf	

If in the device explorer you click an online measurement, the detail area opens with the following parameters.

- **Name**
- **File name**
- **Date**
- **Instrument/No.**
- **Scanning rate (ms)**
- **Records/Length**
- **Channels**
- **Trigger settings**
- **Trigger record**
- **Path**

Toolbar

Use the toolbar of the detail area to send the settings of the detail area to the device.

ENG

Send these settings to device

Sends the settings in the current detail area to the device.

The button is only active if a device is connected and the parameters have been read out.

This setting was sent successfully to the device

The successful sending of the settings to the device is indicated by this symbol.

Viewer
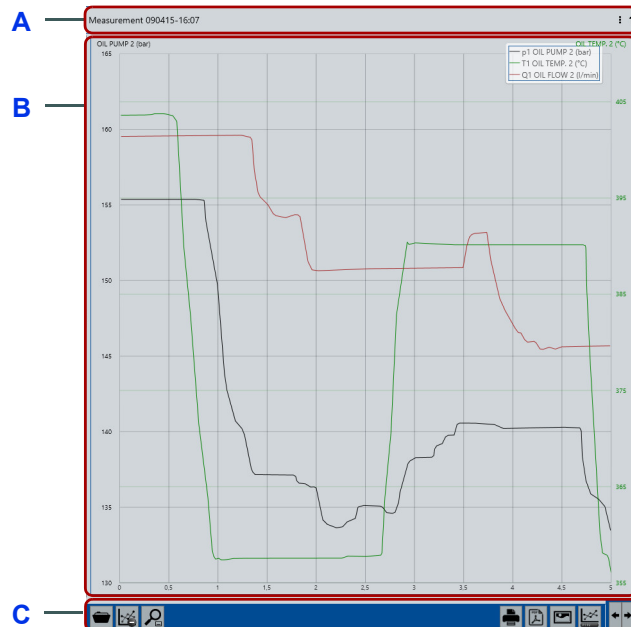
A Title bar
B Display
C Toolbar

Picture: Viewer

The Viewer shows the measured values of the selected channels or recorded measurements.

The viewer can be switched between the following views:

Online measurements

Instrument measurement

Measurement display

The viewer consists of the following areas:

- **Title bar**
- **Display**
- **Toolbar**

Title bar   Display information about the display type or measurements.

ENG

Display   With the ← → button you can switch between the following view types:

- Online display
  ⇨ **Online display** on page 129
- Instrument display
  ⇨ **Instrument display** on page 136
- Measurement display
  ⇨ **Measurement display** on page 139

Toolbar   Provides buttons for the viewer.

Buttons of the online display
⇨ **Toolbar** on page 132

Buttons of the device display
⇨ **Toolbar** on page 138

Buttons of the measurement display
⇨ **Toolbar** on page 143

Online display

The **Online display** displays the channels of the connected instrument.

The channels are displayed that have been selected: Select *Device explorer > Instrument > Channel settings > Select channel > Details >* **On the instrument Display**.

If the setting of a channel has been changed, this is indicated by an asterisk next to the channel in the device explorer and in the channel display.
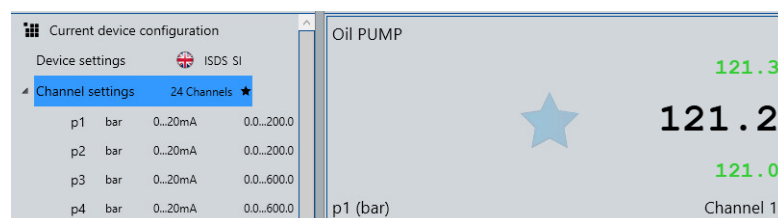
The settings must be synchronized with the instrument.

You can use the ◄► button to switch between **Online display**, **Instrument display**, and **Measurement display**.

⇨ *Using the online display* on page 47

⇨ *Using the instrument display* on page 54

⇨ *Using the measurement display* on page 56.

ENG

Title bar

The following symbols can be displayed.

Help

Opens the help.

Online values are being received

Indicates that measurement values are being received from instrument.

During the loading and sending of parameters and measurements, no measurements are recorded.

Configuring online display

*Viewer > **Switch the display type** button > Online display*

You can configure the online display as follows:

- **Displaying channels**
- **Adding/deleting channels**
- **Arranging channels**
- **Changing the display**

For the devices **MultiHandy 2020, MultiHandy 2025** and **MultiHandy 3020** all channels are displayed automatically.

Displaying channels	The channels are displayed for which the channel parameter **On the device Display** is selected.
Adding/deleting channels	You can add or remove channels for the online display.

Channels can be dragged into the online display from the device explorer using drag & drop.

⇨ **Selecting a channel for the online display** on page 48

> 🛈 **Drag & drop function**
> The drag & drop function is not possible for devices in the *MultiHandy* product family.

Channels can be removed from the online display using the ▬ button.

⇨ **Deleting channels from the online display** *on page 50*

Arranging channels	You can arrange the channels as you wish.

You can drag channels to any place with the mouse.

⇨ **Arranging channels in the online display** on page 49

Changing the display	With the buttons on the toolbar, you can change the appearance of the display or the display style.

⇨ **Toolbar** on page 132

Toolbar

*Viewer > **Switch the display type** button > Online display > Toolbar*

To apply the functions on the toolbar to a specific channel, mark the channel by clicking it with the mouse.

> ℹ **Marked channels**
> Highlighted channels have a blue border.

The toolbar contains the following buttons:

Switch display of min/max values on or off

Switches the Min/Max display on or off.

Speech command MINMAX

Delete current min/max values

Deletes the current min/max values.

Only visible if the min/max view is switched on.

Change appearance of online display

Changes the appearance of the **Online display**.

You can specify the appearance of the **Online display** as follows:

• **Only instruments**
• **Split of instrument display and line diagram**

   In addition to the instruments, a line diagram with all online channels is displayed.

• **Only line diagram**
⇨ **Line diagram** on page 135

Change display style of selected channels

Opens the selection dialog on which you can change the display style of the selected channel.

★ **123** Numeric gauge
 Dial gauge
 123 Digital gauge
 Bargraph indicator
 Chart
 123 Classic gauge
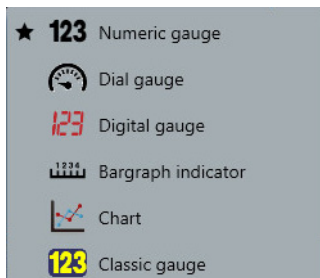
⇨ **Display style** on page 134

Delete marked display instruments

Removes the highlighted channel from the display.

The button is not shown for instruments from the product family *MultiHandy*.

Clear measurement display

Clears the line diagram.

Only visible if a line diagram is displayed in the online display.

Zoom tool

Activates the zoom tool.

Cancel or continue updating of line diagram display

Stops the line diagram or lets it continue.
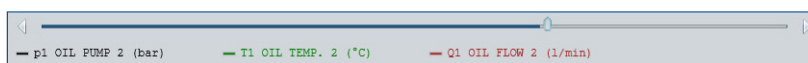
— p1 OIL PUMP 2 (bar)   — T1 OIL TEMP. 2 (°C)   — Q1 OIL FLOW 2 (1/min)

If you stop the line diagram, you can display various areas with the slider. You can also display details with the zoom tool.

Only visible if a line diagram is displayed in the **Online display**.

Change display type
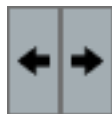
Switches between **Online display**, **Instrument display**, and **Measurement display**.

Speech command SWITCH

MultiBox No **Instrument display**.

BASE No **Instrument display**.

Display style

A variety of display styles are available for the channel display.
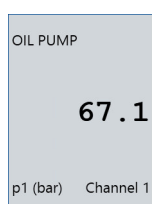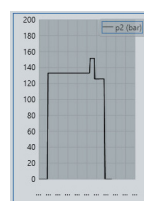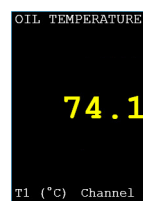
| Numeric gauge | Radial gauge | Segment gauge | Linear gauge | Line diagram | Measuring instrument display |

If a channel is added to the **Online display**, the standard display style will be used for the channel view.

The standard display style is indicated by an asterisk ★.

With the ⊞ button you can change the display style for marked channel displays.

⇨ *Changing and scaling the display style* on page 52

Radial gauge   Scaling possible.

⇨ **Scale pl dialog** on page 162

Linear gauge   Scaling possible.

⇨ **Scale pl dialog** on page 162

Line diagram   You can change the appearance of the lines and the scaling of the axes under *Device explorer > Channel settings > Select channel > Details > **Color / Symbol***.

The last 60 seconds are always displayed.

Scaling possible.

⇨ **Scale pl dialog** on page 162

Line diagram

*Viewer > **Switch display type** button > Online display > Change appearance of the online display*

In the **Online display** you can display a line diagram below the channel display or switch the **Online display** entirely to the line diagram.

The line diagram displays all online channels. You can change the appearance of the lines and the scaling of the axes under *Device explorer > Channel settings > Select channel > Details >* **Color / Symbol**.

The last 60 seconds are always displayed. You can stop the line diagram or let it continue.
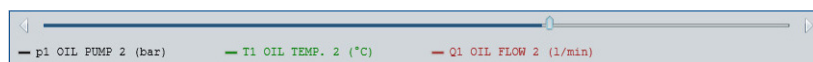
If you stop the line diagram, you can display various areas with the slider. You can also display details with the zoom tool.

The observation period is at least 1200 data records. Thus the period depends on the display rate set. At 1 second, it is 20 minutes, at 0.1 seconds it is at least 2 minutes.

Instrument display

ENG

```
p1          25.7 bar


T1         132.4 °C


Q1          0.445 l/min
```
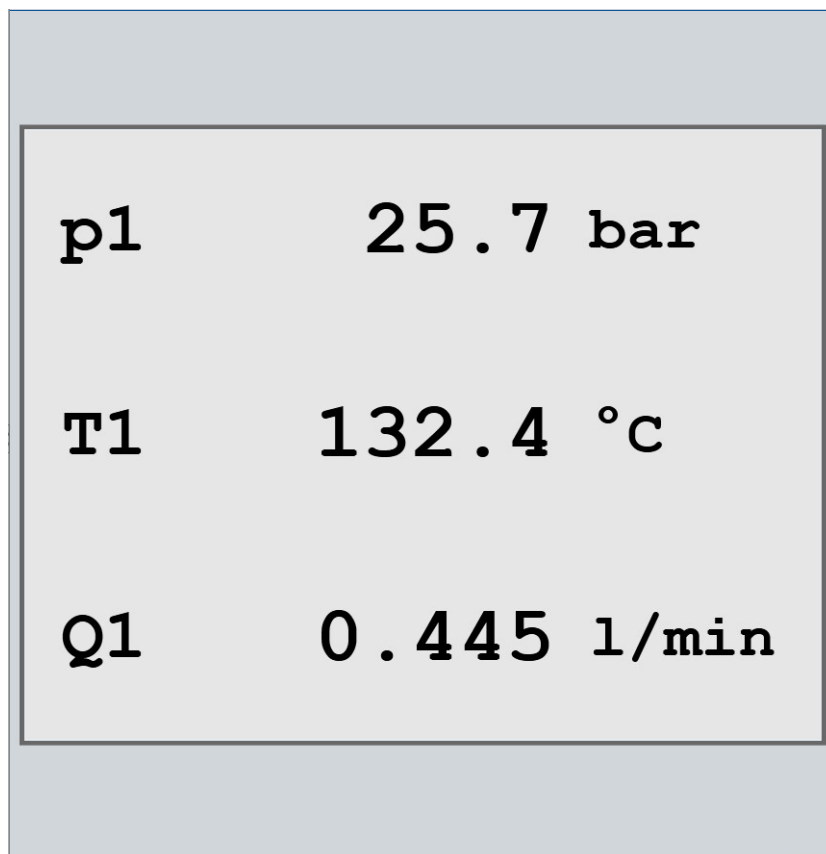
The **Instrument display** simulates the device's display.

If an instrument is connected, the measurement values can be displayed.

The channels are displayed that have been selected. Select *Device explorer > Instrument > Channel settings > Select channel > Details >* **In instrument Display**.

You can use the ◄► button to switch between **Online display**, **Instrument display**, and **Measurement display**.

ENG

If measurement devices are coupled with one another, no device display is possible.

`MultiBox` No instrument display.

`BASE` No instrument display.

Title bar

The following symbols can be displayed.

Help

Opens the help.

Receiving online values

Indicates that measurement values are being received from instrument.

During the loading and sending of parameters and measurements, no measurements are recorded.

Configuring instrument display

You can change the display type of the instrument display under *Current device configuration > Display settings >* **Mode**.

The configuration options depend on the device connected.

⇨ Documentation of the instrument

Toolbar

*Viewer > **Switch the display type** button > Instrument display >
Toolbar*

The toolbar contains the following buttons:

Switch display of min/max values on or off

Switches the Min/Max display on or off.

Speech command MINMAX

Delete current min/max values

Deletes the current min/max values.

Only visible if the min/max view is switched on.

Change display type
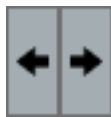
Switches between **Online display**, **Instrument display**, and **Measurement display**.

Speech command SWITCH

MultiBox No instrument display.

BASE No instrument display.

Measurement display
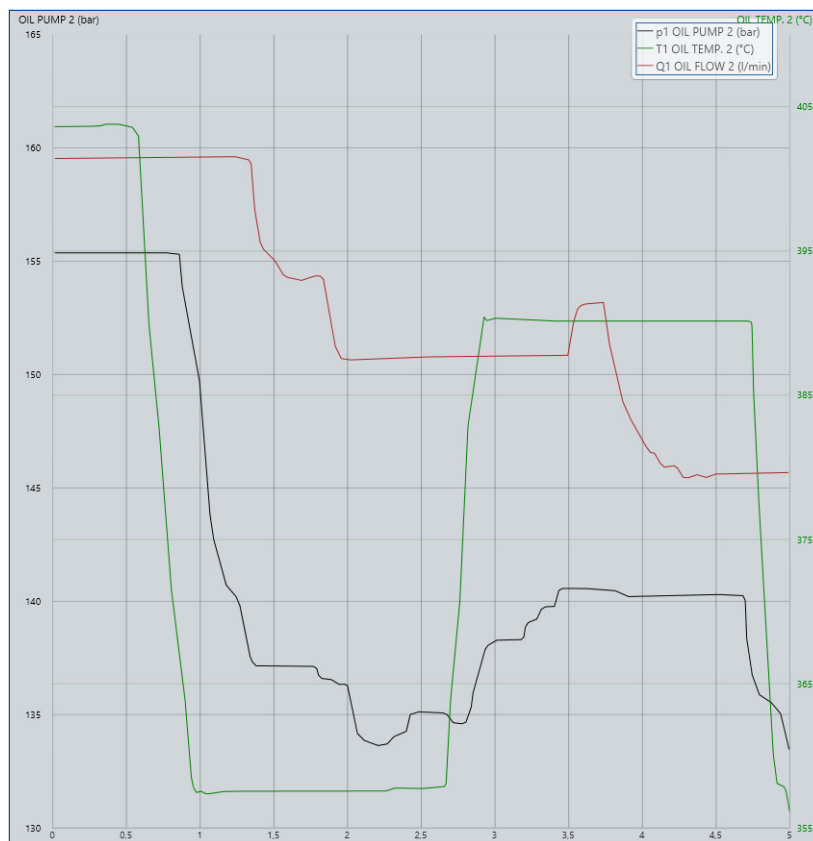
The **Measurement display** displays measurements (MWF files) as line diagrams.

Devices or online measurement series can be displayed.

Device measurements can be displayed if a device is connected or if the measurement is marked with a flag ▉ .

⇨ **Saving and displaying measurements from the instrument** on page 57

Any measurements (MWF files) can be opened for display.

⇨ **How to open a saved measurement** on page 58

The measurement name is displayed in the title bar. A tooltip displays details about the measurement.

You can use the ◄► button to switch between **Online display**, **Instrument display**, and **Measurement display**.

⇨ *Using the online display* on page 47

⇨ *Using the instrument display* on page 54

⇨ *Using the measurement display* on page 56.

Title bar

Displays the name of the measurement.

The following symbols can be displayed.

Help

Opens the help.

Open Settings dialog

Opens the **Settings** dialog.

⇨ **Settings dialog (Display of Measurement display)** on page 160

Receiving online values

Indicates that measurement values are being received from instrument.

During the loading and sending of parameters and measurements, no measurements are recorded.

Tooltip A tooltip will be displayed if you hover the mouse pointer over measurement name or, with touch operation, if you hold your finger on the measurement name for a second.

Instrument	MultiSystem 5060 Plus	No.
Name	090915-13:29	
Date	09.09.2015 13:29	
Length 🕐	5 s	
No. records	5001	
Scanning rate 🕐	1 ms	
Channels (5)	p1 p2 T1 Q1 E1	
File name 🔖	C:\Users\Public\Documents \Hydrotechnik\Messreihen \090915-1329.mwf	

The tooltip displays the following parameters:

- **Device**
- **Name**
- **Date**
- **Length**
- **No. records**
- **Scanning rate**
- **Channels**
- **File name**

The following symbols can be displayed in the tooltip.

⇨ **Tooltip** on page 90

Configuring Measurement display

The measured values are shown as a line diagram.

The horizontal axis corresponds to the time. The vertical axis corresponds to the variable. The measured values are shown as lines. The different channels are indicated by different colours.
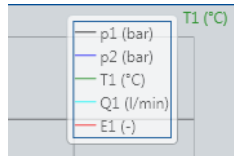
The legend shows which channel is shown with which colour in the diagram. The legend can be in the upper right or below the diagram.

⇨ *Changing the position of the legend* on page 59

The left and right axis show the value scale for the channels. Channels with the same unit are summarised on one axis and thus scaled equally.

You can configure the measurement display.

⇨ **Changing the display** on page 59
⇨ **Changing the position of the legend** on page 59
⇨ **Changing the axis labelling** on page 60
⇨ **Enlarging the line diagram** on page 61
⇨ **Clearing the Measurement display** on page 62

Toolbar

*Viewer > **Switch the display type** button > Measurement display > Toolbar*

The toolbar contains the following buttons:

Search for other measurement data (MWF)

Shows the Windows **Open** dialog.

Opens a measurement from a data carrier (hard drive of the PC, USB stick). Measurements must have the MWF file format.

Clear measurement display

Clears the line diagram or measurement display.

Open or close zoom tool

Shows or hides the zoom menu.

The zoom menu is displayed at the bottom right.

⇨ **Enlarging the line diagram** on page 61

⇨ **Zoom menu** on page 145

Print line diagram

Prints the protocol of the current measurement.

If the free text input is activated in the settings, the **Free text input** dialog will be displayed first.

⇨ *Generating a protocol on page 72*

⇨ *Protocol layout dialog on page 153*

⇨ *Free text input dialog on page 157*

A preview of the protocol will be shown in the Windows **WindowPrintPreview** dialog before printing.

Speech command PRINT

ENG

Save line diagram as a PDF file

Saves the protocol as a PDF file.

If the free text input is activated in the settings, the **Free text input** dialog will be displayed first.

⇨ *Generating a protocol on page 72*

⇨ *Protocol layout dialog on page 153*

⇨ *Free text input dialog on page 157*

The Windows **Save as** dialog is displayed. The protocol is opened after saving.

Speech command Dɪsᴘʟᴀʏ

Save line diagram as an image file

Saves the line diagram as an image file.

The Windows **Save as** dialog is displayed.

The following file formats are possible:

- PNG
- JPG
- BMP
- GIF

Speech command Gʀᴀᴘʜɪᴄ

Shift position of the legend down or to the right

Changes the position of the legend.

Possible positions:

- Top right
- Bottom

Change display type

Switches between **Online display**, **Instrument display**, and **Measurement display**.

Speech command Sᴡɪᴛᴄʜ

MultiBox No instrument display.

BASE No instrument display.

Zoom menu

The zoom menu is shown or hidden with the **Open or close zoom tool** button.

The zoom menu is shown in the bottom right in the measurement diagram as transparent preview.
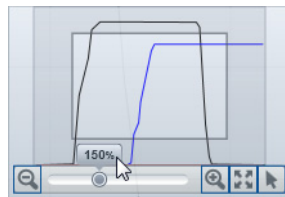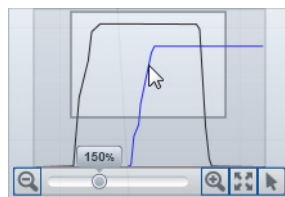

If you point to the preview of the zoom menu with the mouse, the zoom menu becomes active. You can then enlarge the measurement display with the buttons.
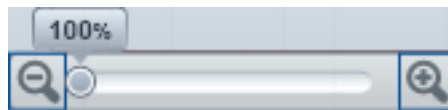
The following functions are available for zooming:

- Zoom in step by step with the ⊕ button.
- Zoom in or out continuously (slider)
- Zoom out step by step with the ⊖ button.
- Reset zoom to 100% with the ⤢ button.

You can shift the section of the zooming freely with the mouse.

Use the ▲ button to change the ratio of the zoom. By default, you select a zoom area with the mouse (touch). You can switch this off here.

Dialogs

You can make some settings on dialogs.

Settings dialog (global)

Info and configuration bar > Open settings dialog

The **Settings** dialog is opened using the **Open Settings dialog** button.

⇨ **Opening the Settings dialog** on page 80

The **Settings** dialog has three tabs.

- **General tab**
- **Connection settings tab**
- **Extended tab**

General tab

Info and configuration bar > Open settings dialog > General
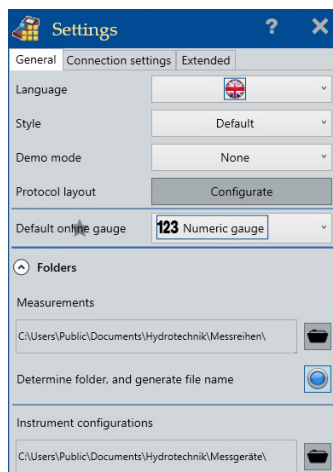
The **General** tab has the following settings:

Language Changes the user interface language.

The new language will be applied the next time the application is started.

Style Changes the user interface colors.

Demo mode Activates the demo mode.

The demo mode can be activated for different instruments and application editions. It displays the functions of other program editions (example: **ADVANCED**) and simulates a device (example: MultiSystem 5060).

The button is only active when no instrument is connected.

Protocol layout Opens the **Protocol layout** dialog.

⇨ **Protocol layout dialog** on page 153

Default online gauge Defines which display style is used as the default. This display style will be used when a channel is dragged into the online display.

The display style can be changed in the online display.

⇨ **Display style** on page 134

Directories

The directories area can be expanded and collapsed.

Measurements   Shows the current standard folder for saving measurements.

If the function **Determine folder, and generate file name** is activated, measurements will be saved to this folder. If the function is not activated, this folder is suggested as destination.

The **Search** button opens the Windows **Search folder** dialog and specifies a new default folder.

⇨ *See **Measurement display** on page 139*

Determine folder, and generate file name

Specifies the saving of measurements without asking the user.

- The default folder is used as destination.
- The file name is automatically generated from the time stamp of the measurement.

If the function is deactivated, the Windows **Save as** dialog opens and the user can freely select the destination and file name.

Device configurations   Displays the current default folder for saving measurement configurations.

This folder is suggested as storage location for measurement configurations.

The **Search** button opens the Windows **Search folder** dialog and specifies a new default folder.

Connection settings tab

Info and configuration bar > Open settings dialog > Connection settings
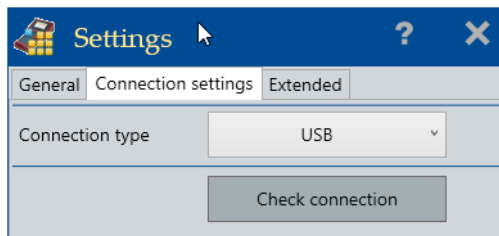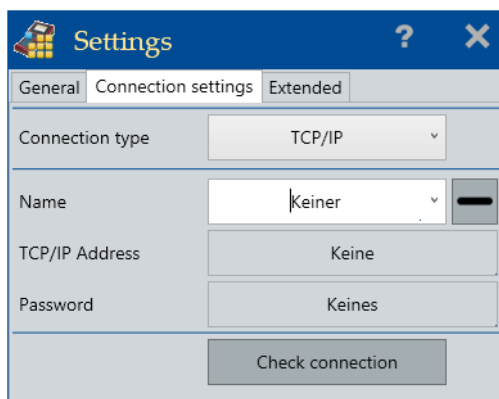
The **Connection settings** tab displays the current connection type.

USB and R323 connections are established automatically and do not have to be configured.

The **Check connection** button is inactive if there is a connection to the instrument.

TCP/IP connection

TCP/IP connections to instruments must be configured. Multiple TCP/IP connections can be created.

- **Name** Name for the TCP/IP connection. Used for differentiating between individual TCP/IP connections.
- **TCP/IP address** TCP/IP address of the instrument. Only IPv4 addressees can be used.
- **Password** The connection password.
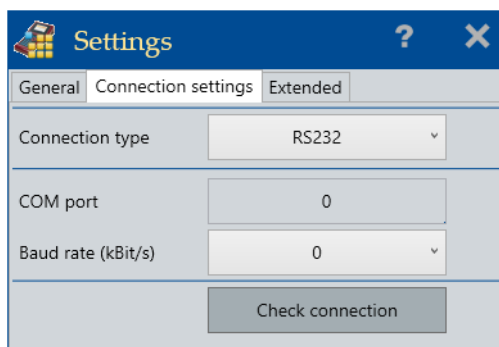
> The TCP/IP address and the password must be configured on the instrument.

Delete this LAN connection from the list

Deletes the selected TCP/IP connection from the list and from the PC.

Connection type RS232

RS232 connections to the instruments can be configured.

- **COM port** The number of the COM port on the PC.
- **Baud rate (kbit/s)** Baud rate of the connection.

Extended tab

Info and configuration bar > Open settings dialog > Extended
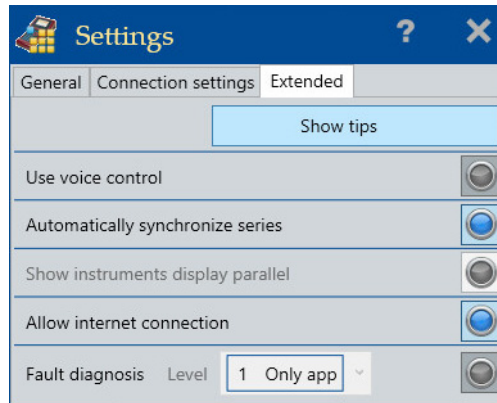
The **Extended** tab has the following settings:

Show tips   All tips of the user interface are shown again.

Use voice control

 Allows operation via speech commands.

When activated, the 🎤 symbol will be displayed in the title bar.

For the use of speech commands, the computer must have a microphone and speakers. If HYDROlink6 finds no microphone or speaker, the symbol ⚠ and a corresponding tool tip are shown.

 Speech commands are not used.

Automatically synchronize series

 After connecting a device, the device's metadata is read out automatically and displayed in the device explorer. The measurement data itself is not transferred.

This function corresponds to the 🗎 button in the device explorer.

 After connecting a device, the device's metadata is not read out automatically.

For this, you must click the 🗎 button in the device explorer.

ENG

Show instruments display parallel

The display of the device is not locked during the connection to HYDROlink6 and cannot be operated.

This option reduces the performance of HYDROlink6. Only select this option if you have a real reason for doing so.

The display of the device is not locked during the connection to HYDROlink6 and it may not be possible read it out.

Allow Internet connection

Allows a connection to the Internet.

Searches the server of HYDROTECHNIK for updates for HYDROlink6 and the connected instrument.

The PC must have an Internet connection and the firewall must allow the connection to HYDROTECHNIK.

Allows no connection to the Internet.

Fault diagnosis   Only activate if requested by HYDROTECHNIK.

Protocol layout dialog

ENG

The **Protocol layout** dialog displays settings for the layout of the protocol. These settings are used when a protocol is printed or saved as a PDF file.

⇨ **Generating a protocol** on page 72

The protocol is divided into five areas, position 1 to position 5. You can change the order of the areas using drag & drop.

⇨ **Configuring the layout of the protocol** on page 74

The **Show** button shows or hides an area in the protocol. If an area is shown, the button has a green check mark.

The button **Show example** shows or hides a preview for the **Line diagram** and **Measurement information** areas.

ENG

Your company logo

You can add a company logo to the protocol. The logo must be a graphics file with the PNG or JPG file format.

The button [📂] shows the **Open** dialog for opening a graphics file.

Your company name

You can add your company name and other text (addresses, for example) to the protocol.

A maximum of 5 lines each with 80 characters is possible.
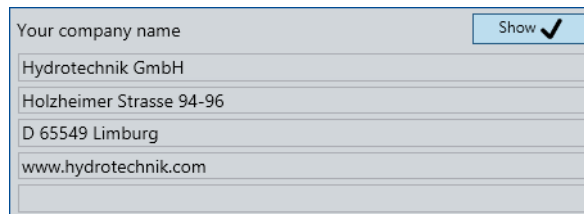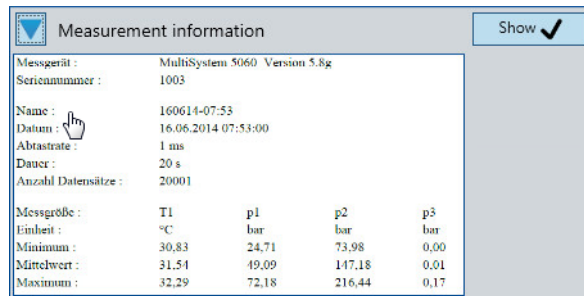
Line diagram

The line diagram of the measurement can be added to the protocol.

ENG
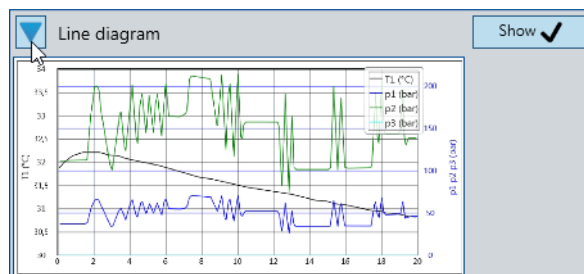
Measurement information

The measurement information can be added to the protocol.
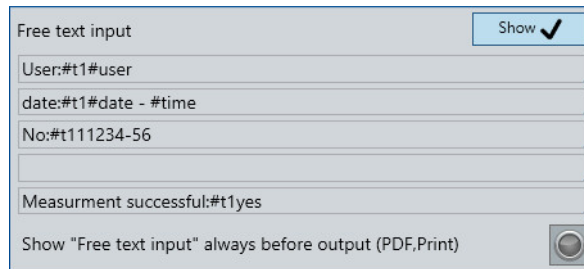
The following information is shown in the protocol:

- Instrument (model and firmware version)
- Instrument serial number
- Measurement name
- Date and time of day of the measurement
- Scanning rate
- Length
- Number of data records
- For each channel
  - Variable
  - Unit
  - Minimum
  - Average
  - Maximum

Free text input

You can add any text to the protocol.

The following variables can be used:

- **#user** (Windows name of the logged in user)
- **#date** (current date)
- **#time** (current time)
- **#t1** (tab for aligning the texts. Only one tab is supported)

A maximum of 5 lines each with 80 characters is possible.

The button specifies whether the **Free text input** can be edited before generating a protocol. If the button is active, the **Free text input** dialog opens and the text can be edited during the generation of the protocol.

⇨ **Free text input dialog** on page 157

Free text input dialog

Measurement display > Print line diagram

Measurement display > Saves the line diagram as a PDF file
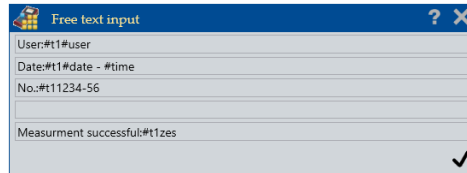
The **Free text input** dialog is shown when a protocol is generated and the free text input option is activated in the settings.
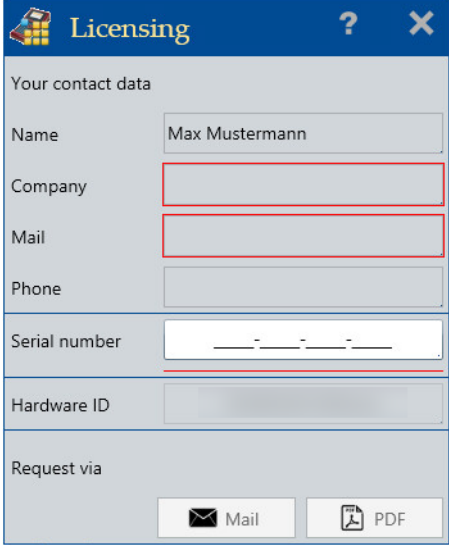
⇨ **Generating a protocol** on page 72

⇨ **Print line diagram** on page 143

⇨ **Save line diagram as a PDF file** on page 144

⇨ **Free text input** on page 156

The entered text is shown in the protocol.

A maximum of 5 lines each with 80 characters is possible.

Licensing dialog

Information and configuration bar > License request

On the **Licensing** dialog you enter the required data for requesting a license.

After installation, the **BASE** edition is available. The **ADVANCED** edition must be licensed.

Licensing is done in four steps:

1. Purchase desired edition
2. Request license
3. Receive License
4. Activate license

When you purchase HYDROlink6, you decide which edition you want. With the purchase you receive a serial number for the selected edition. After you have installed HYDROlink6, you request a license.

⇨ **Licensing HYDROlink6 Advanced** on page 18

ENG

Area for your contact data

In the **Your contact data** area, you specify your business contact data.

Name
: Displays or changes your name. The current Windows user name is proposed.

Company name
: Displays or changes your company name.

Mail
: Displays or changes your business e-mail address.

Telephone
: Displays or changes your business telephone number.

This field is optional.

Serial number area

With the purchase you receive a serial number for the selected edition **ADVANCED** .

You enter this serial number in the **Serial number** area.

The serial number alone cannot activate the license. You must first request a license.

The serial number is used together with the hardware ID to generate a unique license for your installation.

Hardware ID area

The **Hardware ID** area displays an automatically-generated, unique identification number for your system.

The hardware ID is used together with the serial number to generate a unique license for your installation.

You can enter a **License key**.

Request via area

In the **Request via** area are various ways you can send the license request to HYDROTECHNIK.

Mail   Generates the license request and opens the default e-mail program that is configured in Windows (e.g. Microsoft Outlook).

Send the automatically-generated e-mail. You will also receive the license file via e-mail.

PDF   Generates the license request and opens it in the default PDF viewer that is configured in Windows.

Print out the PDF file and send the document to HYDROTECHNIK by mail or fax. You will receive the license file via e-mail.

Settings dialog (Display of Measurement display)

Measurement display > Open settings dialog
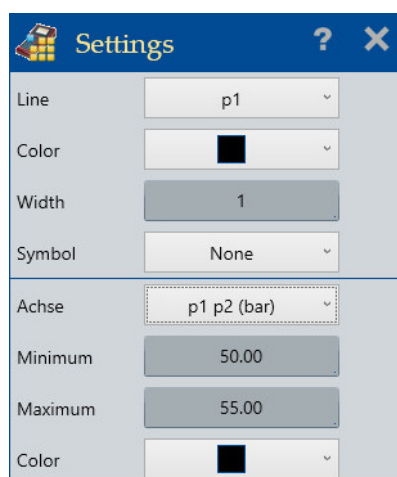
This **Settings** dialog is a different one than the one you call up from the info and configuration bar at the top right of the program window. You call up this **Settings** dialog in the **Measurement display** with the ⋮ button.

On this **Settings** dialog you can change the display of lines and axes on the **Measurement display**.

Settings for lines

On the top area of the dialog, you change the display of the lines.

Line — Displays or changes the channel whose display you edit below.

Color — Displays or changes the color of the line of the selected channel.

Width — Displays or changes the width of the line of the selected channel.

A width of zero means that no line will be displayed for this channel.

**Symbol** — Displays or changes the symbol of the line of the selected channel.

Settings for axes

On the bottom area of the dialog, you change the scaling and color of the axes.

Axis — Displays or changes the axis whose display you edit below.

Minimum — Displays or changes the lower limit value of the displayed area of the selected axis.

Maximum — Displays or changes the upper limit value of the displayed area of the selected axis.

Color — Displays or changes the color of the selected axis.

Instrument selection dialog

Connect to instrument
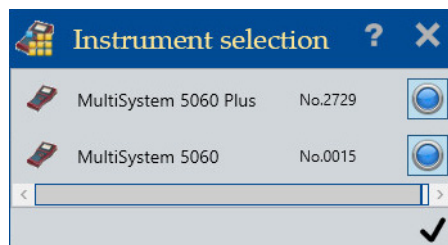
The **Instrument selection** dialog is displayed after you have connected several instruments and clicked the [⟳] button.

You can select those instruments that you would like to use combined. If you combine measurement instruments, there are more measurement channels available to you simultaneously.
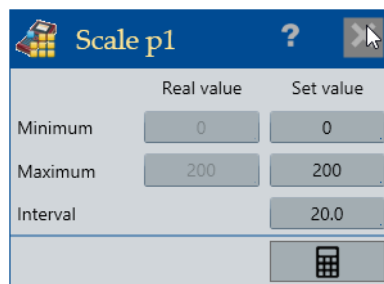
⇨ **Coupling several instruments** on page 65

Scale pl dialog

Online display > Radial display > Open settings dialog

Online display > Linear display > Open settings dialog

Online display > Line diagram > Open settings dialog

The following display styles can be scaled:

• Radial gauge

• Linear gauge

• Line diagram

If the display style of a highlighted channel display is scalable, the button for scaling will be shown in the upper right of the channel display. The button opens the **Scaling** dialog.

The dialog shows the current actual values (**Minimum**, **Maximum**)

Set values configure the scale of the channel display. Enter the desired starting value of the scale in the **Minimum** field. Specify the desired end value of the scale in the **Maximum** field.

Enter the desired value for the scale intervals in the **Interval** field.

ENG
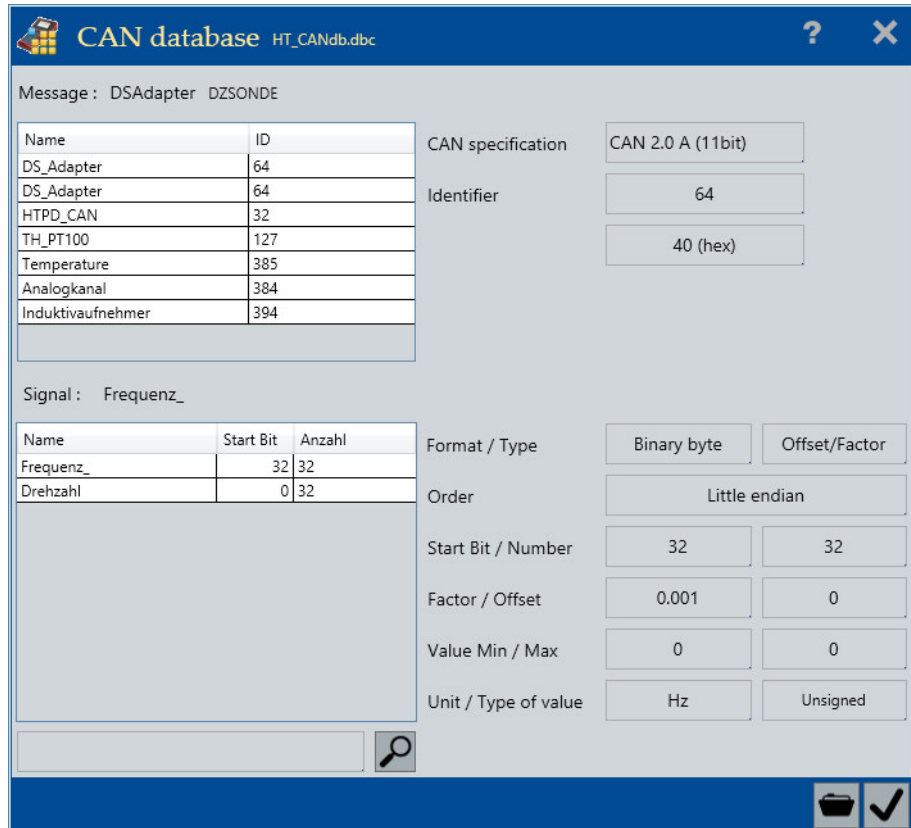
Use the Calculate button to automatically generate the fields Minimum, Maximum and Interval based on the actual values.

No calculation takes place if no measured values are sent from the instrument.

CAN database dialog

Channels that are defined as CAN channel can be configured using a CAN database. The CAN messages and their specifications for the CAN bus.are stored in the CAN database.

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Message area

The **Message** area displays the CAN messages. To the right of this, the specifications for the **Message** in question are displayed.

Name   Displays the name of the **Message** in the CAN database.

ID   Displays the identification number of the **Message** in the CAN database.

CAN specification   Indicates on which specification the selected **Message** is based.

Identifier   Displays the identifier of the **Message** on the CAN bus.

Priority   Displays the priority of the CAN message.

PGN   Displays the parameter group number of the CAN message.

SA   Displays the source address of the CAN message.

Signal area

The **Signal** area displays the sensor signals. To the right of this, the specifications for the **Signal** in question are displayed.

Name	Displays the name of the **Signal** in the CAN database.
Format	Displays the format of the selected **Signal**:

  • **Binary bit**
  • **Binary byte**

Type	Displays the type of the selected **Signal**, e.g. **Offset/Factor**.
Order	Displays the coding of the selected **Signal**, e.g. **Little endian**.
Start Bit/Start Byte	Displays the point in the signal stream at which the selected **Signal** begins.
Number	Displays the length of the CAN message as number of bits/bytes.
Factor	Displays the factor by which the binary measurement value is multiplied.
Offset	Displays the offset that is added to the binary measurement value.
Value Min/Max	Displays the lower limit value of the selected **Signal**. Arises from the **Number**, **Factor** and **Offset**.
Value Max	Displays the upper limit value of the selected signal. Arises from the **Number**, **Factor** and **Offset**.
Unit	Displays the physical unit of the selected **Signal**.
Type of value	Displays whether or not the measurement value has a leading sign.
Toolbar	The **Toolbar** area includes the following buttons.

Button	Function
🔍	Search in the database.
	You can search for names, comment or identifier (hex or decimal) of the messages or by name, comment or signals within the database.
🗀	Open the Windows **Open** dialog.
	On the Windows **Open** dialog you can open a CAN database (dbc file).
✓	Take over selected message and selected signal into the channel parameters.

⇨ **Use CAN database** on page 69

Speech control

A Speech control

Picture: *Speech control*

HYDROlink6 Advanced can be partially controlled using speech commands. For speech control, no dialogs are shown that require input using the mouse or keyboard.

The speech commands are described in this manual and are shown as follows:

SPEECH COMMAND

The language is dependent on the operating system and independent of the language set in HYDROlink6 Advanced. Thus, for example, in a German operating system only German is understood as language.

Only German and English are supported.

The speech control must be activated in the settings. If speech control is activated, the 🎤 symbol is displayed in the title bar.

So that the voice detection works, you must perform Windows language detection exercises. *Windows help > Voice detection, Windows help > Speech program.*

Speech command German	Speech command English	Symbol	Button/Function
VERBINDEN	CONNECTING		Establishes connection to the instrument
TRENNEN	CUT		Disconnects the connection to the instrument.
AUFNAHME	RECORDING		Starts the recording of a measurement The file name is assigned automatically.
STOPP	STOP		Stops the recording of a measurement. The measurement is displayed automatically.
WECHSELN	CHANGING		Switches between the display types Online display/Instrument display/Measurement display
BEENDEN	ENDING		Exits the application
DRUCKEN	PRINTING		Prints the current measurement display. Printing is direct. The **Display this dialog before each output** option is ignored.
ZEIGEN	SHOWING		Creates a PDF file The file name is generated automatically. The **Display this dialog before each output** option is ignored.
GRAFIK	PICTURE		Creates a PNG file The file name is generated automatically.
MINMAX	MINMAX		Switches the Min/Max display on or off

Table: Voice commands