bürkert
FLUID CONTROL SYSTEMS

Type MS03

Conductivity sensor cube

Operating Instructions

MAN 1000239758 EN Version: D Status: RL (released | freigegeben) printed: 16.01.2025

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Operating Instructions 1409/0_EU-ML 00566498 Original EN

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1 ABOUT THE OPERATING INSTRUCTIONS

The Operating Instructions describe the entire life cycle of the product. Please keep the Operating Instructions in a safe place, accessible to all users and any new owners.

The Operating Instructions contain important safety information.

Failure to comply with these instructions can lead to hazardous situations.

▸ The Operating Instructions must be read and understood.

1.1 Symbols used

DANGER

Warns against an imminent danger.

▸ Failure to observe this warning can result in death or in serious injury.

WARNING

Warns against a potentially dangerous situation.

▸ Failure to observe this warning can result in serious injury or even death.

ATTENTION

Warns against a possible risk.

▸ Failure to observe this warning can result in substantial or minor injuries.

NOTE

Warns against material damage.

▪ Failure to observe this warning may result in damage to the product or system.

Indicates additional information, advice or important recommendations.

Refers to information contained in the Operating Instructions or in other documents.

▸ Indicates an instruction to be carried out to avoid a danger, a warning or a possible risk.

→ Indicates a procedure to be carried out.

» Indicates the result of a specific instruction.

1.2 Definition of the word "product"

The word "product" used within these Operating Instructions always refers to the conductivity sensor cube type MS03.

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1.3 Definition of the word "system"

The word "system" used within these Operating Instructions always refers to the Online Analysis System type 8905.

1.4 Definition of the word "büS"

The word "büS" used within these Operating Instructions always refers to the fieldbus developped by Bürkert.

2 INTENDED USE

Use of this product that does not comply with the instructions could present risks to people, nearby installations and the environment.

- The product is intended solely for the measurement of the conductivity of the water within a 8905 system.
- This product must be protected against electromagnetic interference, ultraviolet rays and, when installed outdoors, the effects of climatic conditions.
- This product must be used in compliance with the characteristics and commissioning and use conditions specified in the contractual documents and in the Operating Instructions.
- Requirements for the safe and proper operation of the product are proper transport, storage and installation, as well as careful operation and maintenance.
- Only use the product as intended.
- Observe any existing restraints when the product is exported.

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3 BASIC SAFETY INFORMATION

This safety information does not take into account:

- any contingencies or occurrences that may arise during assembly, use and maintenance of the product.
- the local safety regulations that the operator must ensure the staff in charge of installation and maintenance observe.

Various dangerous situations.

To avoid injury take care:

- to prevent any unintentional power supply switch-on.
- to carry out the installation and maintenance work by qualified and skilled staff with the appropriate tools.
- to use the product only if in perfect working order and in compliance with the instructions provided in these Operating Instructions.
- to observe the general technical rules during the planning and use of the product.
- not to use this product in explosive atmospheres.
- not to use this product in an environment incompatible with the materials from which it is made.
- not to make any external or internal modifications to the product.

NOTE

Elements / Components sensitive to electrostatic discharges

- This product contains electronic components sensitive to electrostatic discharges. They may be damaged if they are touched by an electrostatically charged person or object. In the worst case scenario, these components are instantly destroyed or go out of order as soon as they are activated.
- To minimise or even avoid all damage due to an electrostatic discharge, take all the precautions described in the EN 61340-5-1 norm.
- Also ensure that you do not touch any of the live electrical components.

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4 GENERAL INFORMATION

4.1 Contact

To contact the manufacturer of the product use following address:

Bürkert SAS

Rue du Giessen

BP 21

F-67220 TRIEMBACH-AU-VAL

The addresses of our international branches can be found on the Internet at: www.burkert.com

4.2 Warranty conditions

The condition governing the legal warranty is the conforming use of the product in observance of the operating conditions specified in these Operating Instructions.

4.3 Informations on the internet

You can find the Operating Instructions and technical data sheets regarding the type MS03 at: www.burkert.com

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5 DESCRIPTION

The conductivity sensor cube is used in the system type 8905.

The electrical and fluid connections are made via the connection panel of the system type 8905.

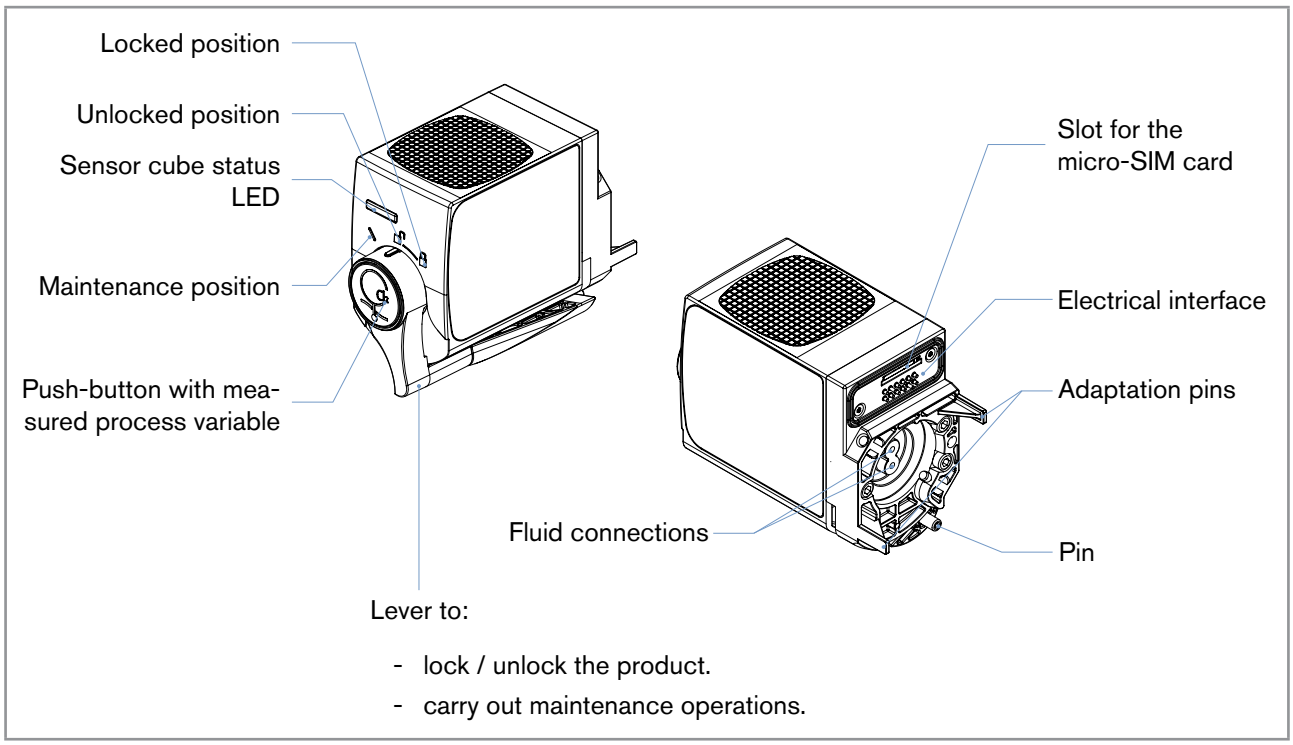

Fig. 1: Description of the product

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6 TECHNICAL DATA

6.1 Conditions of use

Ambient temperature	0 to +40 °C
Air humidity	< 90 %, without condensation
Protection rating acc. to EN 60529	▪ IP65, when plugged in the backplane ▪ IP20, as standalone product
Max. height above sea level	2000 m

6.2 Conformity to standards and directives

The product conforms to the CE directives of the system type 8905, only when the product type MS03 is plugged in the system type 8905.

6.3 Materials the product is made of

Part	Material
Housing	PPE+PS
Seal	EPDM
Lever	PC

6.4 Fluid data

▪ Type of fluid ▪ pH value	▪ Water, without particles: drinking water, industrial water ▪ pH 4 to 9
Minimal flow rate	3 l/h; recommended 6 l/h
Water sample pressure	PN6
Water sample temperature	0 to +40 °C, not freezing

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6.5 Measurement data

Conductivity measurement	
▪ Measuring range	▪ 50 µS/cm to 1000 µS/cm
▪ Measurement deviation ("measurement bias", as defined in the standard JCGM 200:2012)	▪ ±2% of the measured value
▪ Linearity	▪ ±0.2% of the full scale
▪ Repeatability	▪ ±0.2% of the full scale
▪ Response time (t90)	▪ < 5 s
▪ Measurement sensor	▪ system with two graphite electrodes, C=1
Temperature measurement for compensation	
▪ Measuring range	▪ 0 to 50 °C
▪ Measurement sensor	▪ Pt1000 Class B, no contact with the water sample
Maintenance interval of the external reference electrode	12 months, nominal, depending on the water quality

6.6 Electrical data

Operating voltage	24 V DC through the backplane of the system type 8905
Power consumption	0.8 VA

6.7 Communication

Internal communication	through büS
External communication by status LED	according to NAMUR NE 107

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7 INSTALLATION

7.1 Safety instructions

NOTE

Risk of damage to the product due to non-conforming installation.

- The electrical and fluidic installations can only be carried out by qualified and skilled staff with the appropriate tools.
- Respect the installation instructions for the system.

NOTE

Risk of damage to the product due to the power supply

- Shut down and isolate the electrical power source before carrying out work on the system.

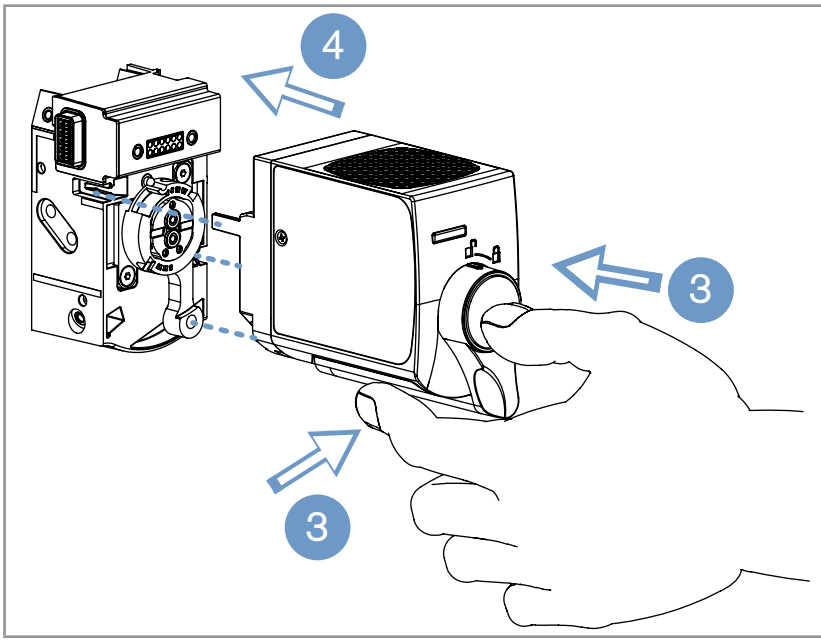
NOTE

Risk of damage to the product due to the environment

- Protect the product against electromagnetic interference, ultraviolet rays and, when installed outdoors, the effects of the climatic conditions.

7.2 Mounting the product on the backplane

The product is plugged in the backplane of the system Type 8905.



1. Dry the surface of the backplane that will be in contact with the product.
2. Dry the surface of the product.
3. While the push-button is pushed, turn the bayonet lever to the right, on the unlocked position, ☐. Do not push the lever to the maintenance position.
4. Insert the two adaptation pins in their holes and then plug the product in the backplane.
5. While the push-button is pushed, turn the bayonet lever to the left, on the locked position, 🔒.

Fig. 2: Mounting a product on the backplane of the system

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8 ADJUSTMENT AND OPERATION

8.1 Safety instructions

NOTE

Risk of damage to the product due to non-conforming adjustment.

- The operators in charge of adjustment must have read and understood the contents of these Operating Instructions.
- The operators in charge of adjustment must have read and understood the contents of the Operating Instructions of the display software type ME21 and/or the contents of the Operating Instructions of the Bürkert Communicator software type 8920 and/or the Operating Instructions of the controller module type ME25.
- In particular, observe the safety recommendations and intended use.
- The product/installation must only be adjusted by suitably trained staff.

NOTE

Risk of damage to the product due to non-conforming commissioning.

- Before commissioning, make sure that the staff in charge have read and fully understood the contents of these Operating Instructions.
- In particular, observe the safety recommendations and intended use.
- The product / the installation must only be commissioned by suitably trained staff.

NOTE

Risk of damage to the product due to non-conforming operation.

- The operators in charge of operation must have read and understood the contents of these Operating Instructions.
- In particular, observe the safety recommendations and intended use.
- The product/installation must only be operated by suitably trained staff.

8.2 How to adjust the product

The adjustment of the product can be made:

- either with the display of the system type 8905. The display of the system is managed by the software type ME21. See chap. 8.4.
- or with a PC and the Bürkert Communicator software type 8920. To get general information about the software type 8920, refer to the Operating Instructions of the type 8920.

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8.3 Adjustments that must be done

Do the adjustments:

- after the product has been installed in the system.
- after the fluidic and electrical installations have been made on the system.
- after the tightness of the system has been checked.
- after the system has operated for a polarization time of 12 hours.
- Before commissioning the product/system for the first time and for the correct operation of the product and of the system, calibrate the cell constant of the conductivity sensor. Refer to chap. 8.10.1.
- Calibrate the product every three months.

8.4 General information on the display software type ME21

These Operating Instructions explain the adjustments that are specific to the product type MS03.

→ To get general information about the display software type ME21, refer to the Operating Instructions of the type ME21 that is on the CD delivered with the system.

The Operating Instructions of the display software type ME21:

- give general information on the software, such as: description of the user interface, structure of the menus, description of the possible views ("Device" view for example), description of the navigation buttons...
- explain how to make the general adjustments such as: the display language, the locating of the product...
- explain how to configure and customize the "Desktop" views with values or graphs.
- give general information on the error messages and the operating of the system status light.

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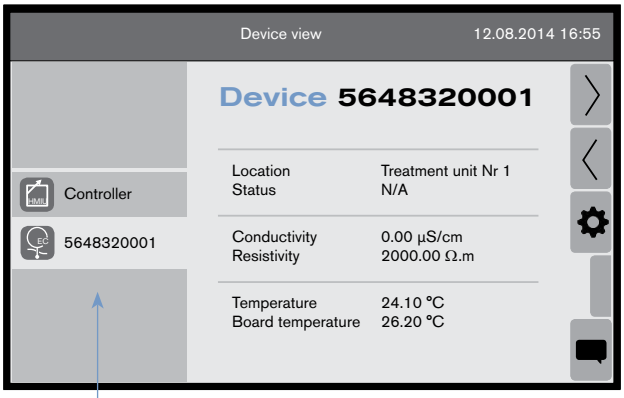
8.5 "Device" view of the product

The "Device" view shows some of the measurement data related to the product.

→ If the display shows a "Desktop" view, tap  to access the "Device" view.

→ To display the "Device" view of the product, select the product in the list of devices on the left of the display.



The following data can be read from the "Device" view of the product:

- the devices that are connected on the büS with their "Unique device name". By default, the "Unique device name" is built up with two numbers: the order code of the product (for example 564832, for the conductivity sensor cube) and the series number (0001, for example).
- where the product is geographically located.
- the measured value of the conductivity of the water sample.
- the measured value of the resistivity of the water sample.
- the measured value of the temperature of the water sample.
- the measured value of the temperature of the internal measurement board.

Table 1: "Device" view of the product

→ To display the "Function" view of the product, tap  .

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8.6 "Function" view of the product

The "Function" view shows the functions available for a product and, for each function, the main data related to each function.

To display the "Function" view of the product:

1. select the product in the list of devices, on the left of the display,
2. tap  .

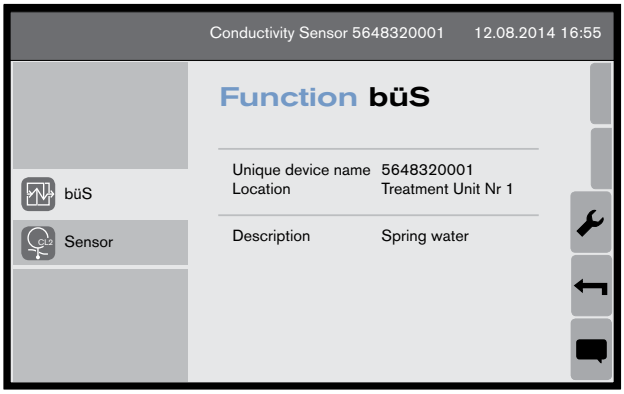
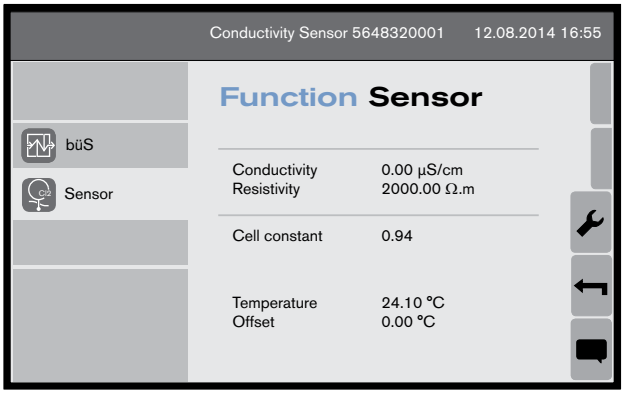
	**"Function" view of the büS** → To display the "Function" view of the büS the product is connected to, select "büS" in the list of devices on the left of the display. → Tap  to access the "Parameter" view. See chap. 8.7.
	**"Function" view of the sensor** → To display the "Function" view of the sensor, select "Sensor" in the list of devices on the left of the display. → Tap  to access the "Parameter" view. See chap. 8.8.

Table 2: "Function" view of the product

8.7 Detailed views of the büS function

Table 3: "Parameter" view of the "büS" function

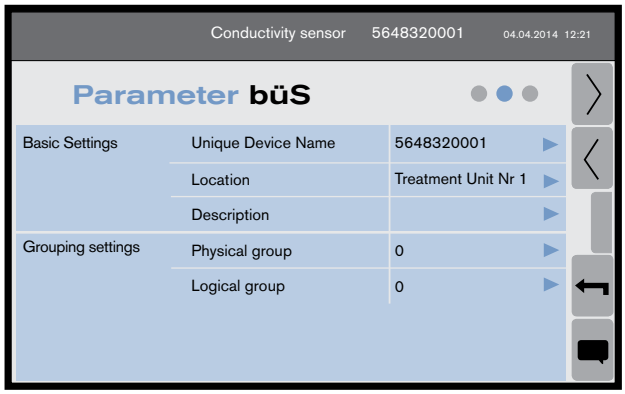
	**"Parameter" detailed view of the büS** To set the user-specific data for the identification of the device on the büS: ▪ Unique Device Name of the product. → Make sure you choose a unique name for the product because the büS must recognize the product. → Make sure you choose a unique name that is self explanatory to identify the product because, if the unique name is changed, all the settings made on the büS must be changed. ▪ Description ▪ Location ▪ Grouping setting

Table 4: "Diagnosis" view of the "büS" function

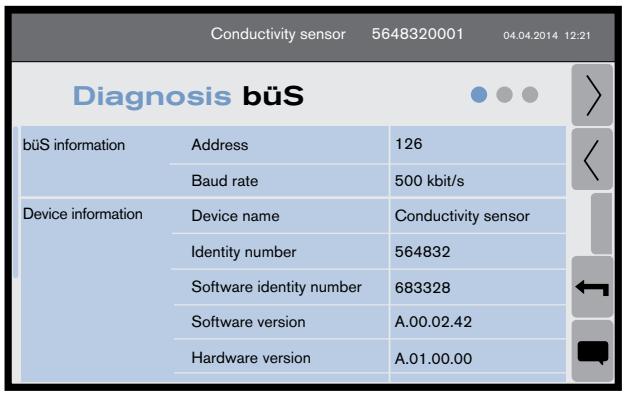
	**"Diagnosis" detailed view of the büS** To read some büS data and device data: ▪ Address and baud rate ▪ Device name and device order code (Identity number) ▪ Software and hardware information ▪ Information relating to the TFT ▪ Device driver information No changes by user are possible.

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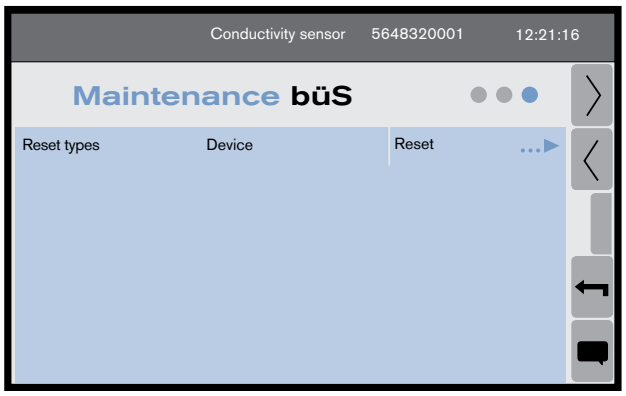
Table 5: "Maintenance" view of the "büS" function

	**"Maintenance" detailed view of the büS** Restart the product for a reset.

8.8 "Parameter" view of the sensor

→ In the "Function" view, tap to access the "Parameter" view.

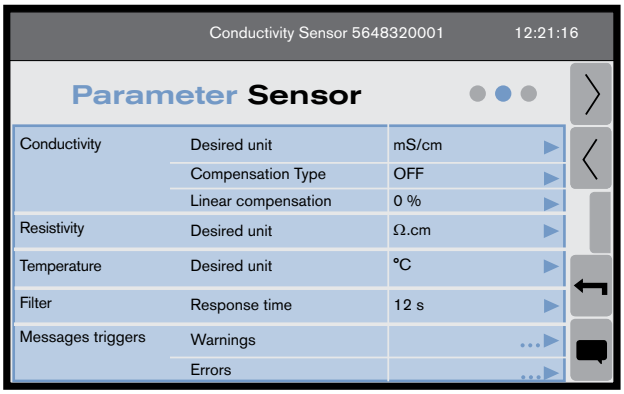
	The "Parameter" view of the sensor makes it possible: ▪ to change the units of the displayed conductivity value. ▪ to choose the type of temperature compensation to determine the conductivity of the water sample, see chap. 8.8.1. ▪ if a linear temperature compensation is chosen, to set the compensation coefficient, see chap. 8.8.1. ▪ to change the units of the resistivity measured by the conductivity cell. ▪ to change the units of the displayed temperature. ▪ to enter the value of the T10-90 response time for the measured signal. ▪ to configure the triggering of the warnings, see chap. 8.8.2. ▪ to configure the triggering of the errors, see chap. 8.8.3.

Table 6: "Parameter" view of the sensor

8.8.1 Setting the temperature compensation

To determine the correct value of the conductivity of the water sample, the temperature of the water sample should be compensated.

A linear temperature compensation may be sufficiently accurate for your process, provided the temperature of your process is always above 0 °C. Enter a compensation between 0.00 and 9.99 %/°C.

For example, the linear compensation for drinking water is about 2%/°C.
Use the following graph and equation to calculate the mean value of the compensation coefficient α according to

a temperature range ΔT and the associated conductivity range Δχ:

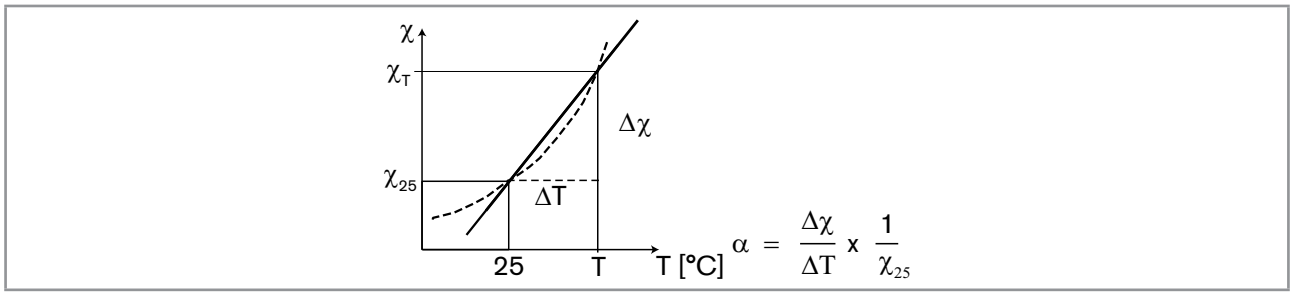


Fig. 3: Linear compensation curve of the temperature

By default, the temperature is not compensated ("Compensation Type" set to "OFF").

Procedure:

1. Tap **Conductivity Compensation Type** ▶ in the "Parameter" view of the sensor.

The temperature compensation can be:

- either linear (choose "Linear%"),
- or according to the sodium chloride law (choose "NaCl").

2. Select the type of compensation and validate.
3. If the compensation type "Linear" is chosen, tap **Conductivity Linear compensation** ▶ in the "Parameter" view of the sensor, and enter the needed compensation coefficient.
4. Validate.

8.8.2 Configuring the triggering of the warnings

The values of some process variables can be monitored to detect a problem in the process or on the sensor.

For the conductivity sensor cube, the following values can be monitored:

- the conductivity value of the water sample,
- the temperature of the water sample.

Procedure:

1. Tap **Warnings** ...▶ in the "Parameter" view of the sensor.
2. Tap **Activation flags** ▶ in the "Sensor Parameter" view.
3. Select the process variables to be monitored and validate.
4. Set the minimum and/or maximum threshold values.

When the parametered threshold values are reached and the activation flag of the related process variable is selected, a warning message is generated in the "Messages List": tap  to access the "Messages List". See chap. 9.3 for the troubleshooting details.

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8.8.3 Configuring the triggering of the errors

The values of some process variables can be monitored to detect a problem in the process or on the sensor.

For the conductivity sensor cube, the following values can be monitored:

- the conductivity value of the water sample,
- the temperature of the water sample.

Procedure:

1. Tap **Errors** ...▶ in the "Parameter" view of the sensor.
2. Tap **Activation flags** ▶ in the "Sensor Parameter" view.
3. Select the process variables to be monitored and validate.
4. Set the minimum and/or maximum threshold values.

When the parametered threshold values are reached and the activation flag of the related process variable or sensor value is selected, an error message is generated in the "Messages List": tap  to access the "Messages List". See chap. 9.3 for the troubleshooting details.

8.9 "Diagnosis" view of the sensor

The "Diagnosis" view makes it possible to read the following values:

- the measured value of the conductivity value of the water sample.
- the measured value of the resistivity value of the water sample.
- the cell constant of the conductivity sensor.
- the measured value of the water sample temperature.
- the temperature offset that has been entered in the "Maintenance" view of the sensor.
- the measured value of the temperature of the measurement board.
- the time the product has already operated.
- the calibration limits of the cell constant of the conductivity sensor.

→ From the "Parameter" view of the sensor, tap  to access the "Diagnosis" view.

8.10 "Maintenance" view of the sensor

The "Maintenance" view makes it possible:

- to modify the cell constant of the conductivity sensor,
- to calibrate the product, with the calibration wizard, i.e. automatically determine the cell constant of the conductivity sensor,
- to modify the value of the temperature offset of the water sample,

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- to check the operating of the product by simulating some data,
- to read the date of the last calibration,
- to read the date of the next due calibration,
- to set the number of days between two calibrations.

→ From the "Parameter" view of the sensor, tap  to access the "Maintenance" view.

8.10.1 Calibrating the cell constant of the conductivity sensor

To measure conductivity values with as less deviation as possible you must calibrate the conductivity sensor.

This can be done:

- either by adjusting by hand the cell constant of the conductivity sensor: in the "Maintenance" view of the sensor, tap **Conductivity** **Cell constant** and enter the value of the cell constant.
- or by doing a 1 point calibration procedure to automatically determine the cell constant of the conductivity sensor. See chap. 8.10.2.

8.10.2 Doing a 1 point calibration procedure of the conductivity sensor

Danger due to the nature of the fluid

▸ Respect the regulations on accident prevention and safety relating to the use of aggressive fluids.

Do a 1 point calibration procedure to automatically adjust the value of the cell constant of the conductivity sensor.

1. Connect a peristaltic pump in the water sample inlet circuit of the system, as shown in Fig. 4. If the fluidic connections are not done correctly, the product and the system can be damaged because the pressure in the product and in the system is too high.

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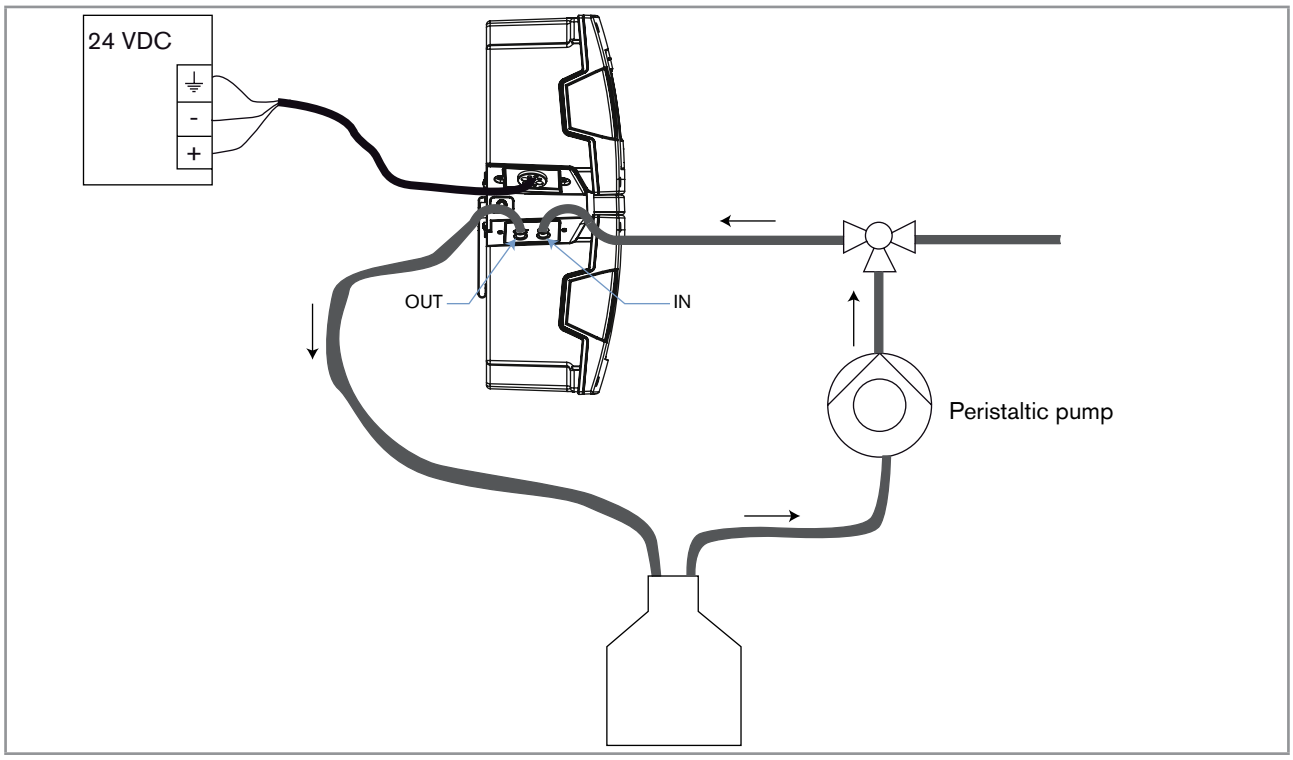

Fig. 4: Installation for the calibration of the product in a system type 8905

2. Make sure the direction of the flow is correct.
3. Make sure the fluidic installation for the calibration is tight.
4. Let clean water flow through the system to rinse the product.
5. Prepare a reference solution with a conductivity value as close as possible to the water sample.
6. In the "Maintenance" view of the sensor, tap **Conductivity calibration wizard 1 point** ...▶.
7. Step 1/5: let the reference solution flow through the sensor.
8. Tap ›.
9. Step 2/5: tap **Input buffer value** ▶ and enter the conductivity value of the reference solution.
10. Validate.
11. Tap ›.
12. Step 3/5: when the measurement of the conductivity value is stable, tap ›.
13. Step 4/5:

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- if the calibration has succeeded, the calculated cell constant is displayed and the date of the last calibration is updated (see chap. 8.10.5). Tap  to go to the step 5/5.
- if an error message is displayed, refer to Table 7.
- if a warning message is displayed, refer to Table 8.

14. Step 5/5: validate or cancel the calibration.

Table 7: Error message at the end of the 1 point calibration of the conductivity sensor

Displayed message	Computed calibration value out of error limits
Symbol displayed on the Unique Device Name of the product	
Possible cause	The sensor calibration has failed because the calculated cell constant value is out of the error range.
What to do?	1. Compare the calculated cell constant value with the calibration limits that can be read in the "Diagnosis" view. 2. Replace the product by a new one.

Table 8: Warning message at the end of the 1 point calibration of the conductivity sensor

Displayed message	Computed calibration value out of warning limits	
Symbol displayed on the Unique Device Name of the product		
Possible cause	The calculated cell constant is out of the warning range because:	
	▪ either a wrong solution has been used for the calibration.	▪ or the product is aging.
What to do?	1. Make sure the buffer solution used is the correct one. 2. If it is not the correct one, abort the calibration. 3. Use a correct reference solution and do the complete calibration procedure again.	→ You can choose to either validate or cancel the calibration. ▪ If you validate the calibration, the new calculated cell constant value is used to determine the conductivity value, and the last calibration date is updated. ▪ If you cancel the calibration, the current cell constant value is used to determine the conductivity value, and the last calibration date is not updated. → Plan to replace the product.

8.10.3 Adjusting the value of the temperature offset

The temperature measured by the sensor can be corrected with an offset value.

1. In the "Maintenance" view of the sensor, tap **Temperature** **Offset** and enter the value of the temperature offset, in the displayed temperature units.
2. To change the units of the temperature, go to the "Parameter" view of the sensor, tap **Temperature** **Desired unit** and choose the temperature units: the offset value of the temperature is automatically converted.

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8.10.4 Simulating some data

Check the operating (for example, make sure the warning and/or error limits are correctly set) of the product and/or process by simulating some data.

1. In the "Maintenance" view of the sensor, tap **Simulation** **Status** and choose "ON" to activate the simulation.
2. Validate.
3. To simulate a conductivity value, tap **Simulation** **Conductivity** and enter the conductivity value value to be simulated.
4. To simulate a temperature value, tap **Simulation** **Temperature** and enter the temperature value to be simulated.

8.10.5 Reading the date of the last calibration

To read the date of the last calibration that has succeeded.

→ In the "Maintenance" view of the sensor, read the date in the field **Calibration schedule** **Last calibration**.

8.10.6 Reading the date of the next due calibration

To read the date of the next calibration that must done.

→ In the "Maintenance" view of the sensor, read the date in the field **Calibration schedule** **Next calibration**.

8.10.7 Setting the time interval between two calibrations

To set the time interval, in days, between two calibrations:

1. In the "Maintenance" view of the sensor, tap **Calibration schedule** **Interval in days**.
1. Enter the number of days between two calibrations. We recommend to calibrate the product every three months.
2. Validate.

When the due calibration date is reached, a warning message is displayed in the Messages List.

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9 MAINTENANCE AND TROUBLESHOOTING

9.1 Safety instructions

WARNING

Risk of injury due to non-conforming maintenance.

▸ Maintenance must only be carried out by qualified and skilled staff with the appropriate tools.

NOTE

Risk of damage to the product due to the power supply

- Shut down and isolate the electrical power source before carrying out work on the system.

9.2 Cleaning of the product

DANGER

Risk of injury due to the nature of the detergent.

▸ Respect the regulations on accident prevention and safety relating to the use of aggressive fluids.

The product can be cleaned with a cloth dampened with water (max. 40 °C) or with an acid detergent (with max. 5% of hydrochloric acid).

9.3 Troubleshouting if no message is displayed

Colour of the product status LED	OFF
Possible cause	The product / the system is not energized.
What to do?	1. Check the wiring. 2. Make sure the voltage supply is 24 V DC. 3. Check that the power supply source is working properly.

9.4 Troubleshooting if the status LED of the product is red or orange

If an error or a warning message has been generated by the system:

- the status light of the system is red or orange,
- the status LED of the product is red or orange,
- the symbol  or  appears on the Unique Device Name of the product, in the list of devices,
- the symbol  appears in the top left corner of the display.

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→ Tap  to access the "Messages List".

9.4.1 Message "Too high conductivity value"

Displayed message	Too high conductivity value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The conductivity value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Errors** ▶ ("Parameter" view of the sensor): ▪ the error "activation flag" for the high threshold of the conductivity value is selected, ▪ and the high threshold set for the conductivity value has been reached.
What to do?	→ Check the process.

Displayed message	Too high conductivity value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The conductivity value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Warnings** ▶ ("Parameter" view of the sensor): ▪ the warning "activation flag" for the high threshold of the conductivity value is selected, ▪ and the high threshold set for the conductivity value has been reached.
What to do?	→ Check the process.

9.4.2 Message "Too low conductivity value"

Displayed message	Too low conductivity value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The conductivity value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Errors** ▶ ("Parameter" view of the sensor): ▪ the error "activation flag" for the low threshold of the conductivity value is selected, ▪ and the low threshold set for the conductivity value has been reached.
What to do?	→ Check the process.

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Displayed message	Too low conductivity value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The conductivity value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Warnings** ▶ ("Parameter" view of the sensor): ▪ the warning "activation flag" for the low threshold of the conductivity value is selected, ▪ and the low threshold set for the conductivity value has been reached.
What to do?	→ Check the process.

9.4.3 Message "Too high temperature value"

Displayed message	Too high temperature value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The temperature value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Errors** ▶ ("Parameter" view of the sensor): ▪ the error "activation flag" for the high threshold of the water sample temperature value is selected, ▪ and the high threshold set for the water sample temperature value has been reached.
What to do?	→ Check the process.

Displayed message	Too high temperature value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The temperature value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Warnings** ▶ ("Parameter" view of the sensor): ▪ the warning "activation flag" for the high threshold of the water sample temperature value is selected, ▪ and the high threshold set for the water sample temperature value has been reached.
What to do?	→ Check the process.

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9.4.4 Message "Too low temperature value"

Displayed message	Too low temperature value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The temperature value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Errors** ▶ ("Parameter" view of the sensor): ▪ the error "activation flag" for the low threshold of the water sample temperature value is selected, ▪ and the low threshold set for the water sample temperature value has been reached.
What to do?	→ Check the process.

Displayed message	Too low temperature value
Symbol displayed on the Unique Device Name of the product	
Possible cause	The temperature value of the water sample is out of range. The message is displayed when the following settings have been made in **Messages triggers** ▶ **Warnings** ▶ ("Parameter" view of the sensor): ▪ the warning "activation flag" for the low threshold of the water sample temperature value is selected, ▪ and the low threshold set for the water sample temperature value has been reached.
What to do?	→ Check the process.

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10 SPARE PARTS AND ACCESSORIES

CAUTION

Risk of injury and/or damage caused by the use of unsuitable parts.

Incorrect accessories and unsuitable replacement parts may cause injuries and damage the product and the surrounding area.

▸ Use only original accessories and original replacement parts from Bürkert.

11 PACKAGING, TRANSPORT

NOTE

Damage due to transport

Transport may damage an insufficiently protected product.

- Transport the product in shock-resistant packaging and away from humidity and dirt.
- Do not expose the product to temperatures that may exceed the admissible storage temperature range.
- Protect the electrical interfaces using protective plugs.

12 STORAGE

NOTE

Poor storage can damage the product.

▸ To store the product:

1. Rinse the product with tap water.
2. Purge the product with air at a max. pressure of 2 bar.
3. Store the product at room temperature (about 23 °C ±10 °C).
4. Store the product in a dry place away from dust.

▸ After a storage period:

1. Plug the product in the system.
2. While the power supply of the system is OFF, let the water sample flow through the product for at least 2 hours.
3. Calibrate the product. See chap. 8.8.

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13 DISPOSAL OF THE PRODUCT

→ Dispose of the product and its packaging in an environmentally-friendly way.

NOTE

Damage to the environment caused by products contaminated by fluids.

- Keep to the existing provisions on the subject of waste disposal and environmental protection.

Note:

Comply with the national and/or local regulations which concern the area of waste disposal.

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