bürkert
FLUID CONTROL SYSTEMS

Conductivity sensor cube

- Fully compatible with büS systems and a wide range of further analysis sensor cubes
- Resistive 2-electrode sensor
- Modular sensor cube for hot swap (exchange during operation)
- Minimal sample water flow needed

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

Type 8905 ▸
Online water analysis system

Type 8906 ▸
Online water analysis system

Type MZ15 ▸
Manual calibration and cleaning module

Type ME61 ▸
EDIP process display

Type ME43 ▸
Fieldbus gateway

Type ME63 ▸
Industrial Ethernet gateway, IP65/ IP67/ IP69k

Type ME44 ▸
I/O module, IP 20

Type ME66 ▸
büS distribution box, IP65/ IP67/ IP69k

Type description

The device is a conductivity measurement sensor. It is used within the online water analysis system Type 8905 by being plugged into a spare fluidic backplane slot.

The conductivity of water follows in general the content of dissolved substances in the water. Not only the absolute value at each moment is an indicator for the continuity of the water quality, but quick changes in the conductivity may indicate unwanted change in the water. A rising or falling value can also be used as an indicator for process feedback in specific treatment steps.

The electrical and fluidic connections are made via the connection panel of the system. The sensor cube is communicating with the system via büS, allowing fully automatic login to the online water analysis system. If the sensor is plugged into the system, it automatically logs on to the büS and can be parameterised according to customer requirements.

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Visit product website ▸

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1. General technical data

Product properties	
Material	
Make sure the device materials are compatible with the fluid you are using. Further information can be found in chapter "3.1. Bürkert resistApp" on page 4.	
Housing	PPE+PS
Lever	Zamak, painted
Seal	EPDM
Compatibility	With online water analysis system Type 8905 (the electrical and fluidic contact is made via backplane system.) Further information can be found in the data sheet of the online water analysis system, see **data sheet Type 8905** ▶.
Dimensions	Further information can be found in chapter "4. Dimensions" on page 5.
Measuring element	• Conductivity sensor: Graphite 2-electrode system, C = 1 • Temperature sensor: Pt1000 Class B, contact with the water sample
Measuring range	50 µS/cm...5000 µS/cm (measurement up to 10 mS/cm possible at limited measurement deviation)
Maintenance	12 months nominal, depending on the water quality
Performance data	
Conductivity measurement	
Measurement compensation	Temperature compensated
Measurement deviation	± 2 % of measured value
Measuring range resolution	0.01 µS/cm
Linearity	± 0.2 % of full scale
Repeatability	± 0.2 % of full scale
Response time (t_{90})	< 5 s
Temperature measurement	
Measuring range	0...+ 50 °C (+ 32...+ 122 °F)
Measuring range resolution	0.01 °C (0.018 °F)
Electrical data	
Operating voltage	24 V DC through the backplane of the system Type 8905 via büS
Power consumption	0.8 VA
Medium data	
Fluid	Water without particles: drinking water, industrial water
Fluid pH range	pH 4...pH 9
Temperature of the fluid sample	+ 3...+ 40 °C (+ 37...+ 104 °F)
Pressure of the fluid sample	PN 3
Flow rate of the fluid sample	> 6 l/h
Product connections	
Process connection	Via pinch valve in the fluidic backplane of the Type 8905 Further information can be found in the data sheet of the online water analysis system, see **data sheet Type 8905** ▶.
Electrical connection	Spring contacts in the fluidic backplane of the Type 8905, which is connected to a büS System Further information can be found in the data sheet of the online water analysis system, see **data sheet Type 8905** ▶.
Data transfer	
Internal communication	Through büS (Bürkert system bus, CANopen protocol)
External communication by status LED	According to NAMUR NE 107
Approvals and conformities	
Directives	
CE directive	Further information on the CE directive can be found in chapter "2.2. Standards" on page 4.

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Environment and installation	
Ambient temperature	• Operation: 0...+ 40 °C (+ 32...+ 104 °F) • Storage and transport: - 10...+ 60 °C (+ 14...+ 140 °F), for empty/purged sensor cube
Relative air humidity	≤ 90 %, without condensation
Height above sea level	Max. 2000 m
Operating condition	Continuous
Equipment mobility	Fixed
Application range	Indoor and outdoor Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions.
Degree of protection according to IEC/ EN 60529	• IP65, when plugged in the fluidic backplane • IP20, as standalone product
Installation category	Category I according to UL/EN 61010-1
Pollution degree	Degree 2 according to UL/EN 61010-1

2. Approvals and conformities

2.1. Conformity

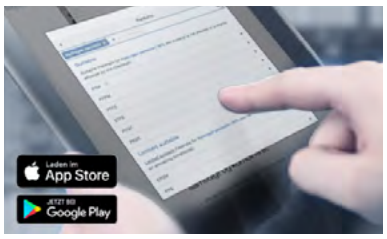
In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.2. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

3. Materials

3.1. Bürkert resistApp



Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

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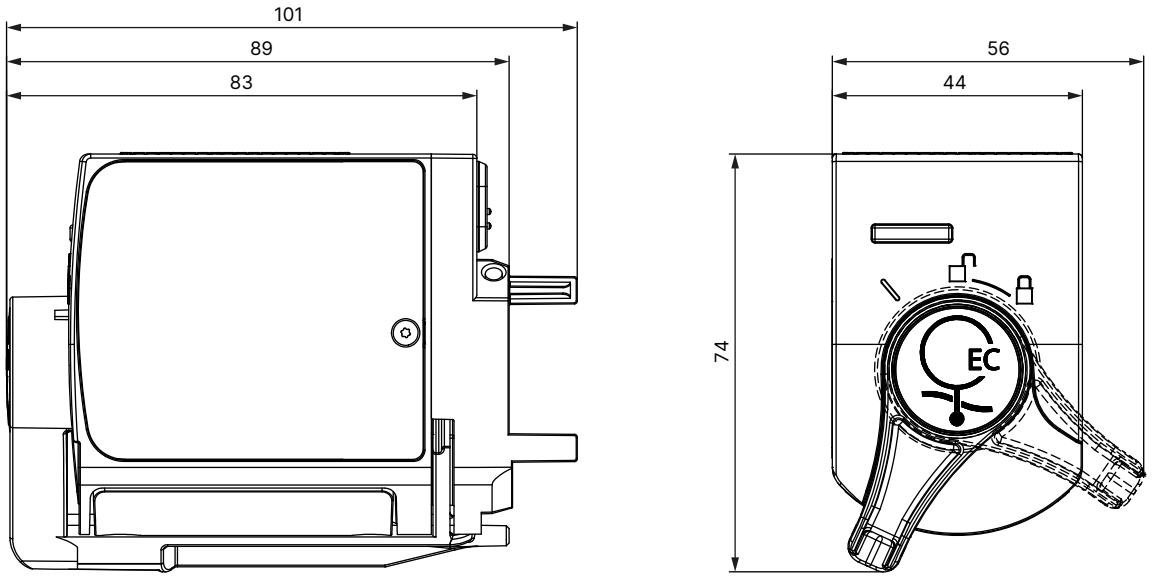
4. Dimensions

Note:
Dimensions in mm, unless otherwise stated

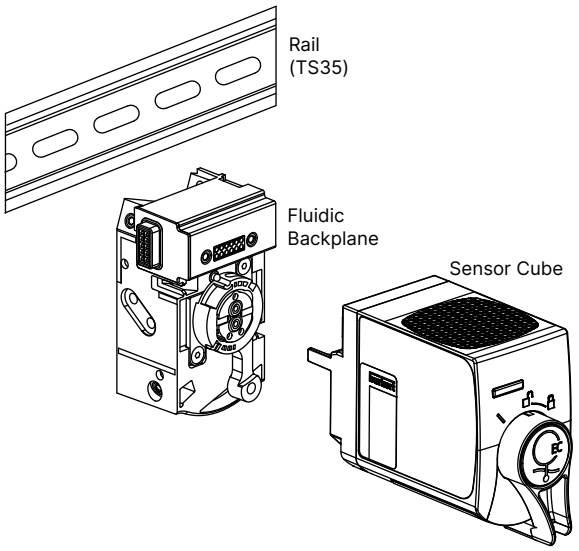


5. Product installation

5.1. Installation notes

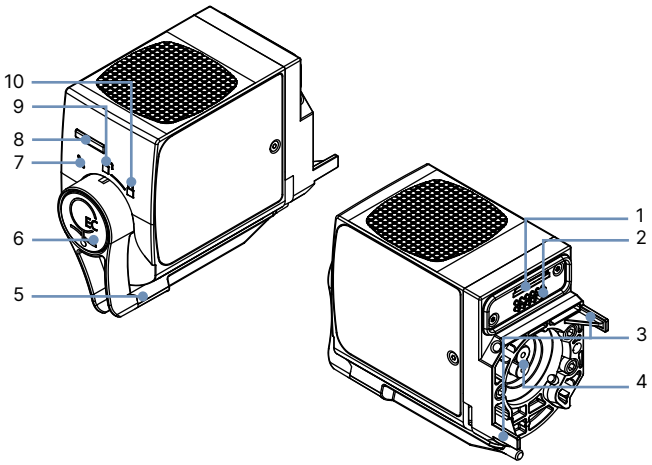
The Type MS03 sensor cube is designed for use with the Type 8905 online water analysis system. The sensor cube is mounted onto the backplane of the Type 8905, which is installed on a standard DIN rail (TS35).

See **data sheet Type 8905** ▸ online water analysis system for more information.



6. Product design and assembly

6.1. Product features



No.	Element
1	Slot micro-SIM card (for configuration data)
2	Electrical interface
3	Guide pins
4	Fluid connections
5	Lever to: • lock / unlock the product • carry out maintenance operations
6	Push button for unlocking
7	Maintenance position
8	Sensor cube Status LED
9	Unlocked position
10	Locked position

7. Ordering information

7.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

7.2. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

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7.3. Ordering chart

Note:
The conductivity sensor cube must be operated within a system.

Observe the order information for online water analysis system Type 8905, see **data sheet Type 8905** ▶ or contact your Bürkert sales office.

Description	Article no.
Conductivity sensor cube	567626

7.4. Ordering chart accessories

Description	Article no.
Calibration solution, 50 ml, conductivity standard value: 5 mS/cm (+ 25 °C)	807199

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