



# **ORP Sensor Cube**

- Fully compatible with büS systems and a wide range of further analysis sensor cubes
- Modular sensor cube for hot swap (exchange during operation)
- Minimal sample water flow needed
- Available in 2 versions: standard and with drinking water approval (ACS)



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

#### Can be combined with



Type 8905Online Analysis System



Type 8920 Bürkert Communicator

#### **Type description**

The device is an ORP measurement sensor. It is used within the Online Analysis System Type 8905 by being plugged into a spare fluidic backplane slot.

ORP value is one of the most important water parameters – it is an indicator for the activity of the disinfectant, with no measure of the applied dose but with measure of the remaining residual.

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 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.

The Sensor-Cube is available in 2 versions. The standard version provides protection against biological growth at the reference electrode and is recommended for applications with no or very low chlorine in the water. The drinking water version is without anti-fouling equipment and is mainly required in applications with drinking water approval.



# Table of contents

1.	Gen	neral technical data	3
2.	Mat	terials	4
	2.1.	Chemical Resistance Chart – Bürkert resistApp	4
3.	Dim	iensions	4
4.	Product installation		
	4.1.	Installation notes	5
5.	Product design and assembly		5
	5.1.	Product features	5
6.	. Ordering information		6
	6.1.	Bürkert eShop – Easy ordering and guick delivery	6
	6.2.	Bürkert product filter	6
	6.3.	Ordering chart	6
	6.4.	Ordering chart accessories	6



# 1. General technical data

Product properties							
Material							
Please make sure the device materials are compatible with the fluid you are using.							
Detailed information can be found in chapter "2.1. Chemical Resistance Chart - Bürkert resistApp" on page 4.							
Housing	PPE+PS						
Lever	Zamak						
Seals	EPDM						
Dimensions	Detailed information can be found in chapter "3. Dimensions" on page 4.						
ORP sensor	Platinum potentiometric 2-electrode measuring cell						
Electrolyte (reference electrode)	<ul> <li>Standard version: Ag/AgCl, 3 mol KCl with biocide for use without chlorine</li> <li>(&lt;0.2 ppm)</li> </ul>						
	Cost pprint						
Competibility	Drinking water version: Ag/AgCi, 3 mol KCi without blocke     With Opling Applying System Type 2005 (the electrical and flyidic contact is made via						
Compatibility	backplane system.) Detailed information can be found in the data sheet of the online analysis system, see data sheet Type 8905 > for more information.						
Measuring range	2000+2000 mV						
Maintenance	12 months nominal, depending on the water quality						
Performance data							
OBP measurement							
Measurement deviation	+ 10 mV						
Besponse time (t_)	<10 s						
Electrical data							
Operating voltage	24 V DC through the backplane of the system Type 8905 via büS						
Power consumption							
Media data							
Fluid	Water without particles: drinking water, industrial water						
pH range	pH 4pH 9						
Sample water	here and here a						
Temperature	13 140 °C (137 1104 °E)						
Pressure	PN3						
Flow rate	>61/b						
Process/Port connection & communication	tion						
Process connection	Via pinch valve in the fluidic backplane of the Type 8905						
	Detailed information can be found in the data sheet of t the Online Analysis System, see <b>data sheet Type 8905</b> ▶ for more information.						
Electrical connection	Spring contacts in the fluidic backplane of the Type 8905, which is connected to a büS						
	System						
	<b>Detailed information can be found in the data sheet of t the Online Analysis System, see data sheet Type 8905 </b> ▶ for more information.						
Data transfer							
Internal communication	Through büS (Bürkert bus, CANopen protocol)						
External communication by status LED	According to NAMUR NE 107						
Approvals and Certificates							
Standards							
Protection class according to IEC/	IP65, when plugged in the fluidic backplane						
EN 60529	IP20, as standalone product						
CE directives	The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable)						
Environment and installation							
Ambient temperature							
Operating	0+40 °C (+32+104 °F)						



Storage and transport	For empty/purged sensor cube		
	<ul> <li>-10+60 °C (+14+140 °F) without the reference electrode</li> </ul>		
	<ul> <li>+3+40 °C (+37+104 °F) with the reference electrode</li> </ul>		
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)		
Installation category	Category I according to UL/EN 61010-1		
Pollution degree	Degree 2 according to UL/EN 61010-1		

# 2. Materials

## 2.1. Chemical Resistance Chart – 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

# 3. Dimensions

## Note:

Dimensions in mm





# 4. Product installation

## 4.1. Installation notes

## Note:

- The sensor cube is designed for use with the online analysis system, Type 8905. The sensor cube is simply plugged into the backplane in Type 8905.
- It is also possible to mount the backplane individually on a DIN rail.

See data sheet Type 8905 ▶ Online Analysis System for more information.

#### Installation examples

Product mounted in a housing for the Online analysis system Type 8905.
ORP sensor cube Type MS04
Housing Type 8905 with display Type ME21 and controller Type ME25





# 5. Product design and assembly

## 5.1. Product features



## Product without housing

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



## 6. Ordering information

## 6.1. Bürkert eShop – Easy ordering and quick delivery



#### 6.2. Bürkert product filter



#### 6.3. Ordering chart

#### Note:

The ORP sensor cube must be operated within a system.

Please refer to the order information for Online Analysis System Type 8905, see **data sheet Type 8905** • or contact your Bürkert representative.

Description	
ORP sensor cube	
Drinking water version (without anti-fouling), ACS approval	
Standard version (with anti-fouling)	

#### 6.4. Ordering chart accessories

Description			
Buffer solution, 50 ml			
475 mV	807045 🛒		
External reference electrode			
Drinking water version (without anti-fouling), ACS approval	570699 🛒		
Drinking water version (without anti-fouling)	566084 ቛ		
Standard version (with anti-fouling)			
Replacement part set			
Measurement cell	568039 ቛ		

# Bürkert – Close to You

For up-to-date addresses please visit us at www.burkert.com



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