



Chlorine (Cl₂) or chlorine dioxide (ClO₂) Sensor Cube

- Fully compatible with büS systems and a wide range of further analysis sensor cubes
- Optional pH compensated chlorine measurement
- Modular sensor cube for hot swap (exchange during operation)
- Minimal sample water flow needed
- MEMS technology sensor

Type MS02 can be combined with...



Type 8905
Online Analysis
System



Type 8920
Communicator

The device is selectable to measure chlorine or chlorine dioxide in water. It is used within the Online Analysis System Type 8905 by being plugged into a spare fluidic backplane slot.

The sensor cube contains a high precision membrane covered amperometric sensor, based on microelectromechanical systems technology (MEMS). The measurement signal shows the Cl₂ or ClO₂ content within the sample water. The chlorine measurement reflects either the available chlorine HOCl or, if coupled with a MS01 pH sensor cube for pH compensation, the free chlorine.

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 is included in the list of büS members and further adaptations to customer requirements can be made.

General data		
Compatibility	with Online Analysis System Type 8905 (see corresponding data sheet)	
Materials Housing / Lever / Seal	PPE+PS / PC / EPDM	
Electrical connection	Spring contacts in the fluidic backplane of the Type 8905	
Fluidic connection	Via pinch valve in the fluidic backplane of the Type 8905	
Chlorine/chlorine dioxide sensor	Membrane covered PT-cell - amperometric 3 electrodes measurement	
Temperature sensor	Pt1000 Class B, no contact with the water sample	
Chlorine/chlorine dioxide measurement	Cl₂	ClO₂
Measuring range	01...5 ppm	0.005...5 ppm
Sensitivity	-11 nA/ppm (at pH 5); -8 nA/ppm (at pH 7)	-4 nA/ppm
pH compensation	Yes, with MS01 sensor cube	No
Sensor resolution	0.01 ppm	0.001 ppm
Measurement deviation ¹⁾	±0.03 ppm or ±5 % of the M.V.*	±0.005 ppm or ±3 % of the M.V.*(the greater applies)
Linearity	±0.02 ppm of the M.V.*	±0.01 ppm or ±3 % of the M.V.*(the greater applies)
Repeatability	±0.02 ppm of the M.V.*	±0.01 ppm or ±3 % of the M.V.*(the greater applies)
Response time (t90)	<30 s	<30 s
Temperature measurement	0...+50 °C (+32...+122 °F)	
Maintenance	12 months nominal, depending on the water quality	
Type of medium pH value / Conductivity	Water without particles: drinking water, industrial water pH 5...pH 9 / >50 µs/cm	
Sample water temperature	+3...+40 °C (+37...+104 °F)	
Sample water pressure	PN3	
Sample water flow range	>6 l/h	

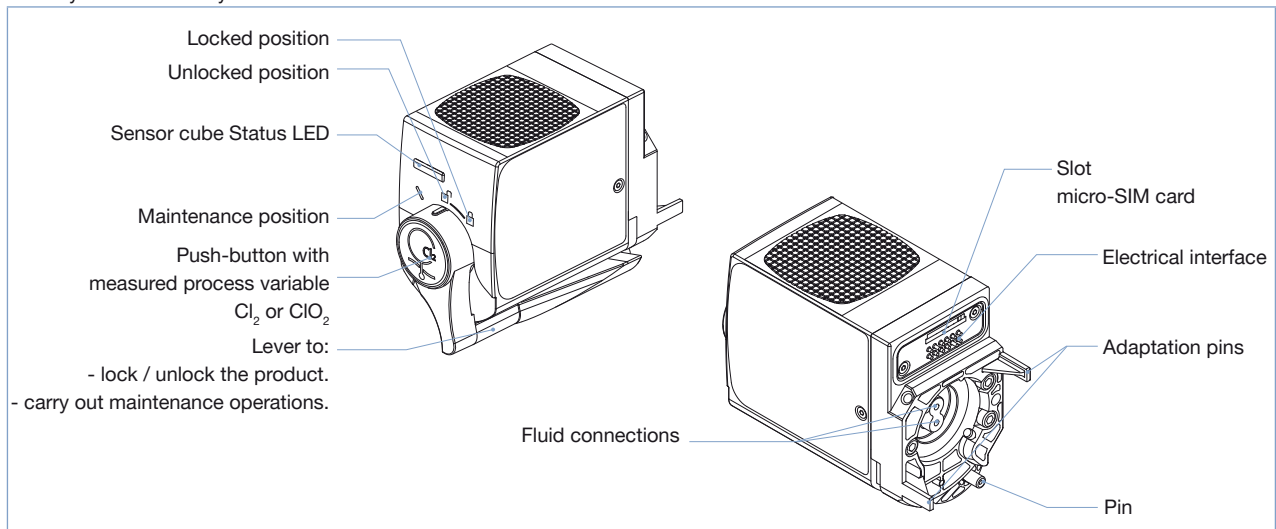
¹⁾ = "measurement bias" as defined in the standard JCGM 200:2012

* M.V.= measured value

Environment	
Ambient temperature	
Operating	+3...+40 °C (+37...+104 °F)
Storage (only never used sensor cube)	-10...+60 °C (+14...+140 °F)
Relative humidity	<90 %, without condensation
Height above sea level	max. 2000 m
Electrical data	
Operating voltage	24 V DC through the backplane of the system Type 8095 via bÜS
Power consumption	0.8 VA
Internal communication	through bÜS (Bürkert bus)
External communication by status LED	According to NAMUR NE 107
Standards, directives and certifications	
Protection class (acc. to IEC/ EN 60529)	IP65, when plugged in the fluidic backplane IP20, as standalone product
Standard and directives CC	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)

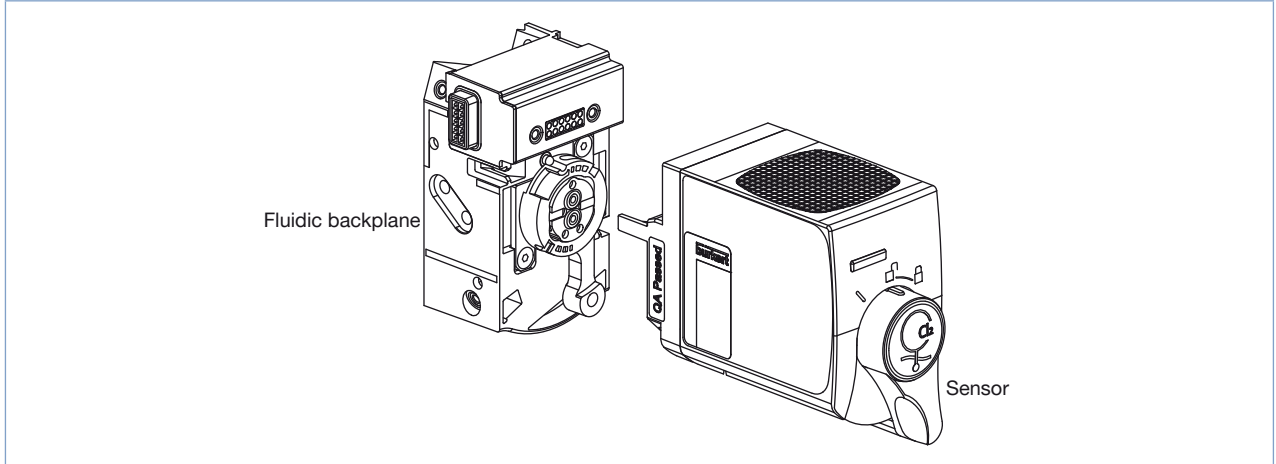
Design and principle of operation

The sensor cube gets the sample water through the fluidic backplane, in which it is plugged in. The measurement is an amperometric 3-electrode system covered by a membrane.

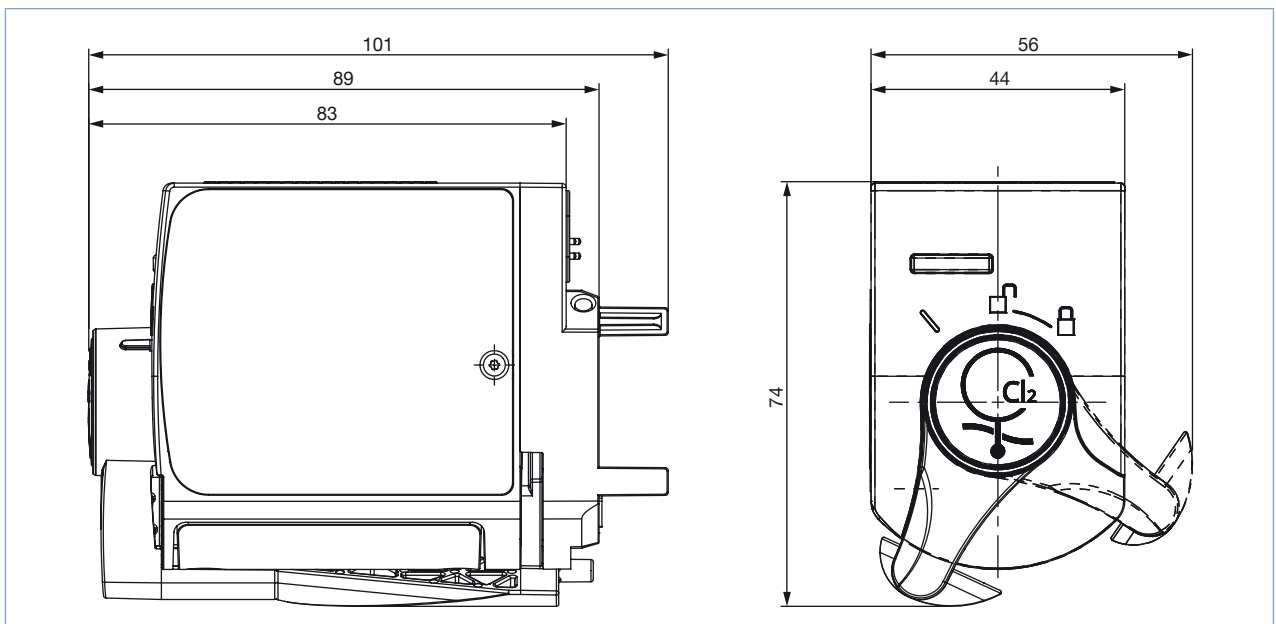


Installation into the Online Analysis System Type 8905

To operate a chlorine/chlorine dioxide sensor cube it is necessary that a spare fluidic backplane is available. It can be installed in a compact system Type 8905 or in a customized version.



Dimensions [mm]



Ordering information and chart - chlorine/chlorine dioxide sensor cube

The chlorine/chlorine dioxide sensor cube must be operated within a system.

Please refer to the order information for Online Analysis System Type 8905 [More info.](#) or contact your Bürkert representative.

Description	Article no.
Chlorine (Cl ₂) sensor cube	567631 
Chlorine dioxyde (ClO ₂) sensor cube	567722 

Ordering chart - accessories and spare parts

Description	Article no.
Photometer MD100, measuring range 0.01...6 ppm	566393 
DPD- 1 reagent (100 Tablets)	566394 



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In case of special application conditions,
please consult for advice.

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