

pH Sensor Cube



Type MS01 can be combined with...



Type 8905
Online Analysis
System



Type 8920
Communicator

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

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

The pH value is the most common parameter in water analysis. The pH sensor cube contains the ISFET measuring cell, based on microelectromechanical systems technology (MEMS) to measure the pH value. An Ag/AgCl 3-mol KCl/I electrode is used as reference.

The electrical and fluidic connections are made via the connection panel of the system. The sensor cube communicates 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
pH sensor	ISFET
Temperature sensor	Pt1000 Class B
pH measurement Measuring range Sensor resolution Measurement deviation** Linearity Repeatability Response time (t90)	pH 4...pH 9* pH 0.02 ±pH 0.1 ±pH 0.05 ±pH 0.05 < 10 s
Temperature measurement	0...+50 °C (+32...+122 °F)
Electrolyte (reference electrode)	3 mol KCl
Maintenance	12 months nominal, depending on the water quality
Type of medium	Water without particles: drinking water, industrial water pH 4...pH 9*
Sample water temperature	+3...+40 °C (+37...+104 °F)
Sample water pressure	PN3
Sample water flow range	> 6 l/h
Electrical data	
Operating voltage	24 V DC through the backplane of the system Type 8905 via büS
Power consumption	0.8 VA
Internal communication	through büS (Bürkert bus)
External communication by status LED	According to NAMUR NE 107

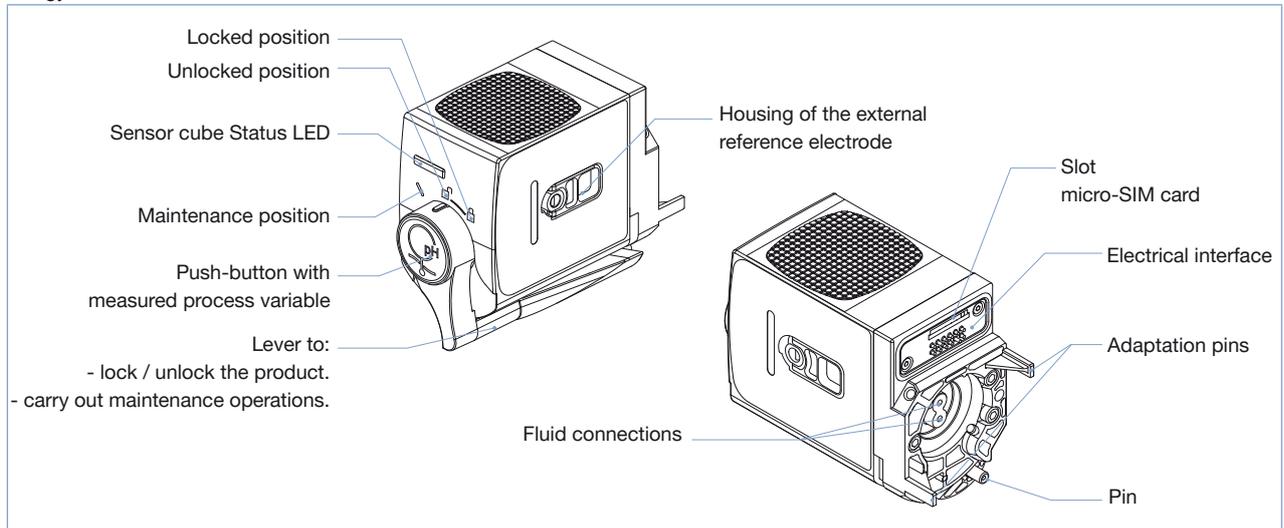
* Further measuring ranges on request

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

Environment	
Ambient temperature	
Operating	0...+40 °C (+32...+104 °F)
Storage (only never used sensor cube)	-10...+60 °C (+14...+140 °F) without the reference electrode +3...+40 °C (+37...+104 °F) with the reference electrode
Relative humidity	<90 %, without condensation
Height above sea level	max. 2000 m
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 C€	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)

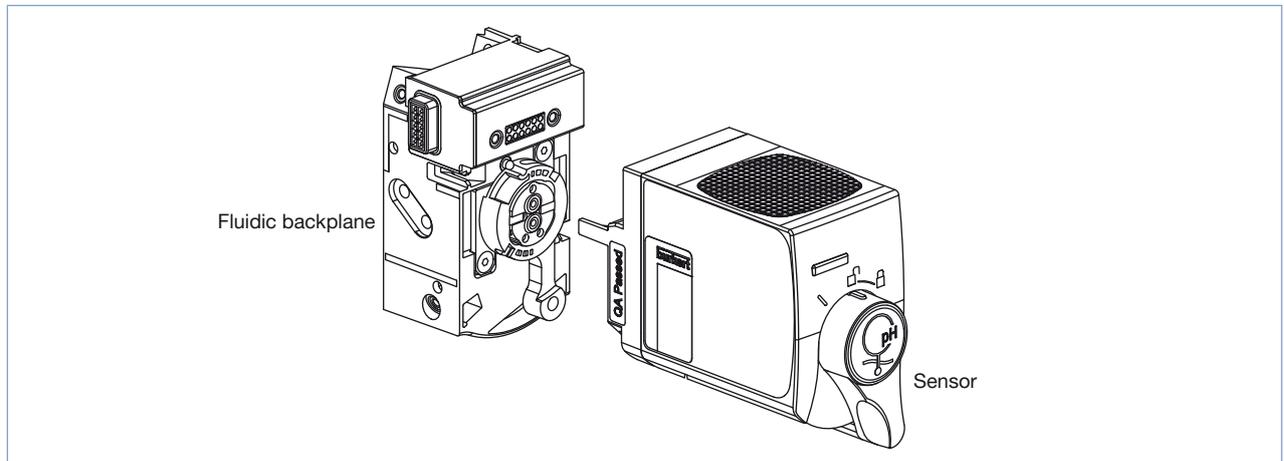
Design and principle of operation

The sensor cube gets the sample water through the fluidic backplane, in which it is plugged in. The measurement is based on an ISFET Technology.

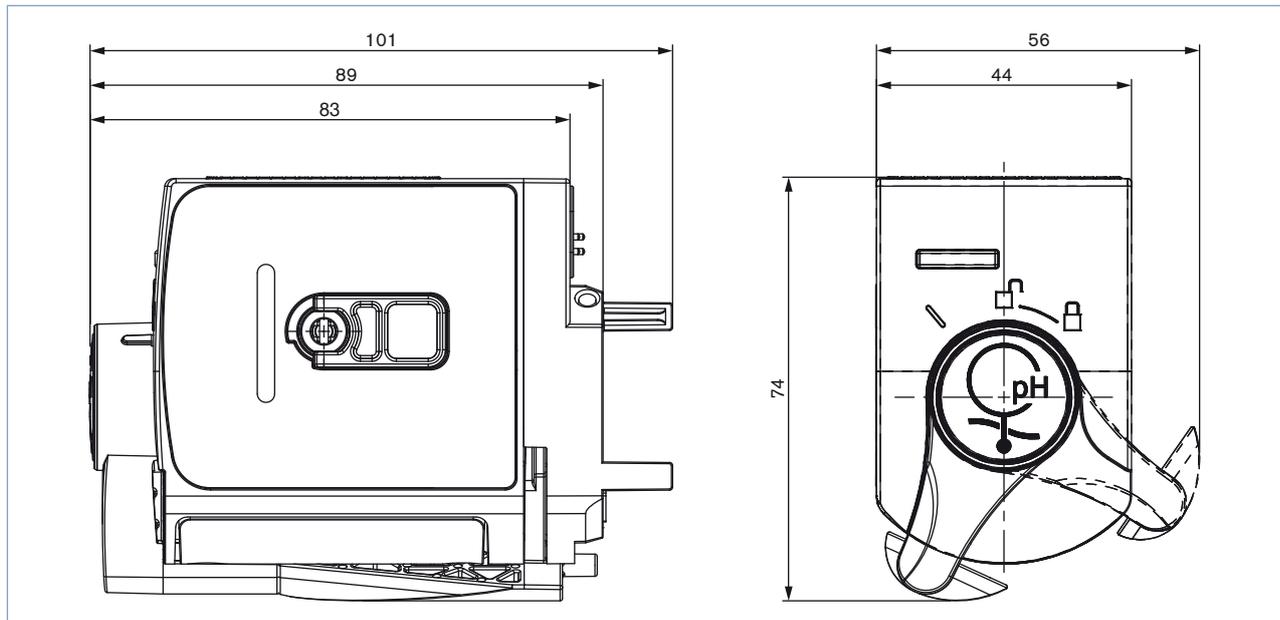


Installation into the Online Analysis System Type 8905

To operate a pH 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 - pH sensor cube

The pH 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.
pH sensor cube	567630

Ordering chart - accessories and spare parts

Description	Article no.
Buffer solution, 500 ml, pH 5	566031
Buffer solution, 500 ml, pH 7	418541
Buffer solution, 500 ml, pH 8	On request
External reference electrode	566084



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

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