



## pH Sensor Cube

- 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

Type MS01 can be combined with...



**Type 8905**

Online Analysis System



**Communicator**

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/l electrode is used as reference.

The electrical and fluidic connections are made via the connection panel of the system. The sensor cube is communicating via büS, so the recognition at the Online Analysis System is fully automatic. When plugging into a system you will find the sensor in the list of büS members for further customized adjustments.

General data	
<b>Compatibility</b>	with Online Analysis System Type 8905 (see corresponding data sheet)
<b>Materials</b>	Housing, plug / Lever / Seal PPE+PS / PC / EPDM
<b>Electrical connection</b>	Plugging/unplugging into backplane of the Type 8905
<b>Fluidic connection</b>	Plugging/unplugging into backplane of the Type 8905
<b>pH sensor</b>	ISFET
<b>Temperature sensor</b>	Pt1000 Class B
<b>pH measurement</b>	Measuring range Sensor resolution Measurement deviation <sup>1)</sup> Linearity Repeatability Response time (t90)
	pH 4 to 9 pH 0.02 ± pH 0.1 ± pH 0.05 ± pH 0.05 < 10 s
<b>Temperature measurement</b>	0 to 50°C (32 to 122°F)
<b>Electrolyte (reference electrode)</b>	3 mol KCl
<b>Maintenance</b>	12 months nominal, depending on the water quality
<b>Type of medium</b>	Water without particles, pH 4 to 9: drinking water, industrial water
<b>Sample water temperature</b>	0 to 40°C (32 to 104°F), not freezing
<b>Sample water pressure</b>	PN 6
<b>Sample water flow range</b>	> 3 l/h; recommended 6 l/h

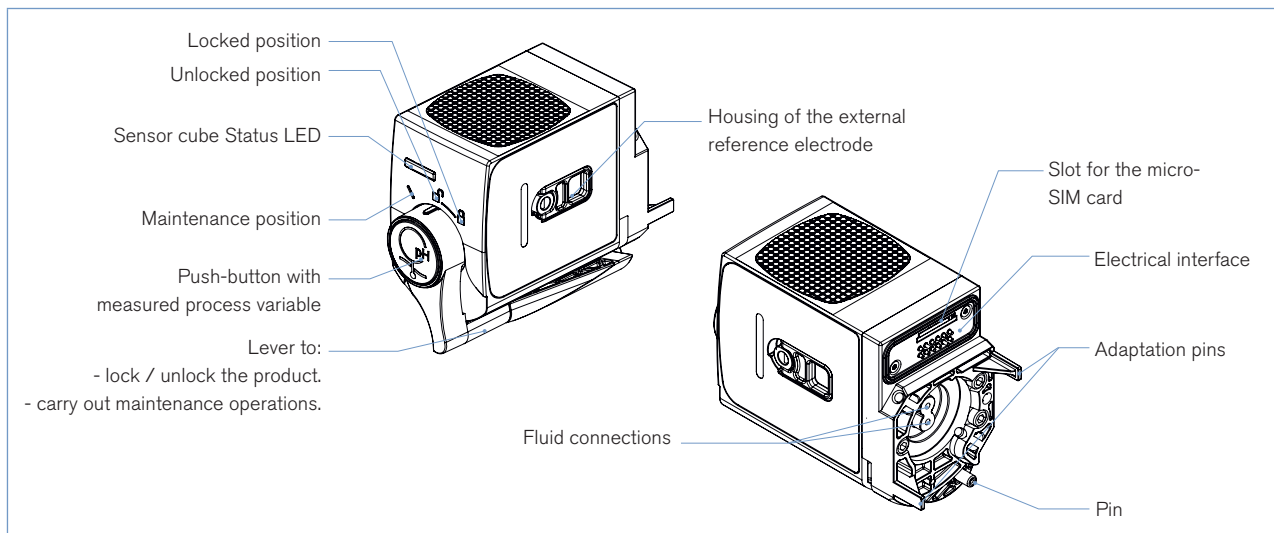
<sup>1)</sup> = "measurement bias" as defined in the standard JCGM 200:2012

Environment	
<b>Ambient temperature</b>	Operating Storage (only never used sensor cube)
	0 to +40°C (-4 to 104°F) -10 to +60°C (14 to 140°F) without the reference electrode 3 to +40°C (-37.4 to 104°F) with the reference electrode
<b>Relative humidity</b>	< 90%, without condensation
<b>Max. height above sea level</b>	max. 2000 m

Electrical data	
<b>Operating voltage</b>	24 V DC through the backplane of the system Type 8095 via büS
<b>Power consumption</b>	0.8 VA
<b>Internal communication</b>	through büS (Bürkert bus)
<b>External communication by status LED</b>	According to NAMUR NE 107
Standards, directives and approvals	
<b>Protection class</b> acc. to EN 60529	IP65, when plugged in the fluidic backplane IP20, as standalone product
<b>Standard and directives</b>	
EMC	EN 61000-6-3 EN 61000-6-2
Approvals	CE, UL pending

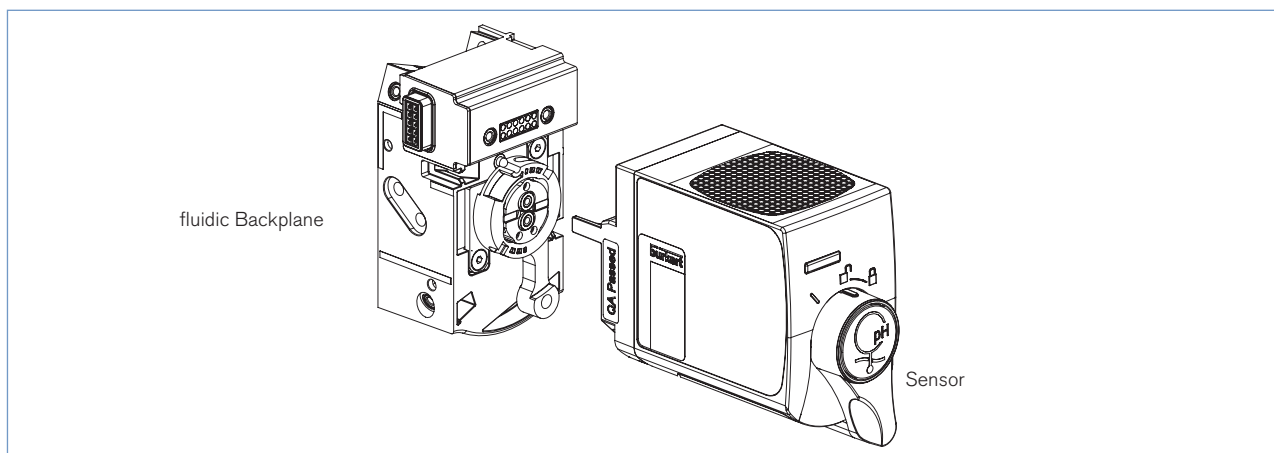
## Design and principle of operation

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.

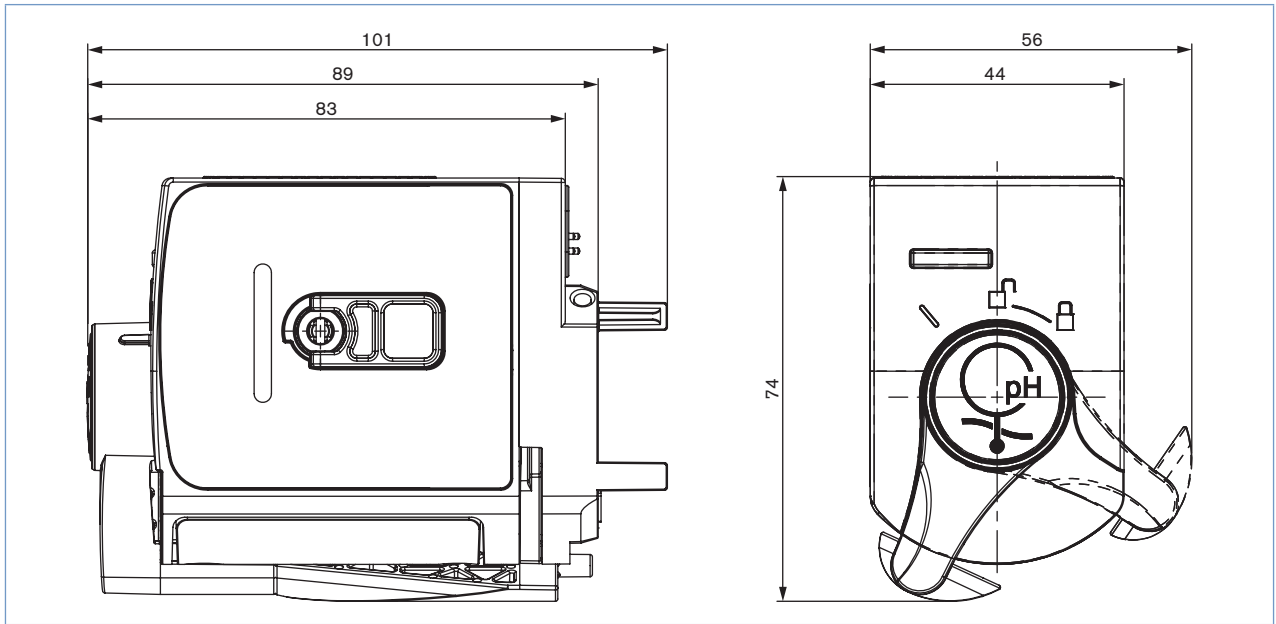


## Installation into the Online Analysis System Type 8905

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	Item no.
pH sensor cube	564 830

## Ordering chart - accessories and spare parts

Description	Item no.
Buffer solution, 500 ml, pH 5	566 031
Buffer solution, 500 ml, pH 7	418 541
Buffer solution, 500 ml, pH 8	on request
External reference electrode	566 084



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