

pH Sensor Cube



Type MS01 can be combined with...



Type 8905

Online Analysis System



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 an ISFET, based on Microelectromechanical systems technology (MEMS) to measure the pH value.

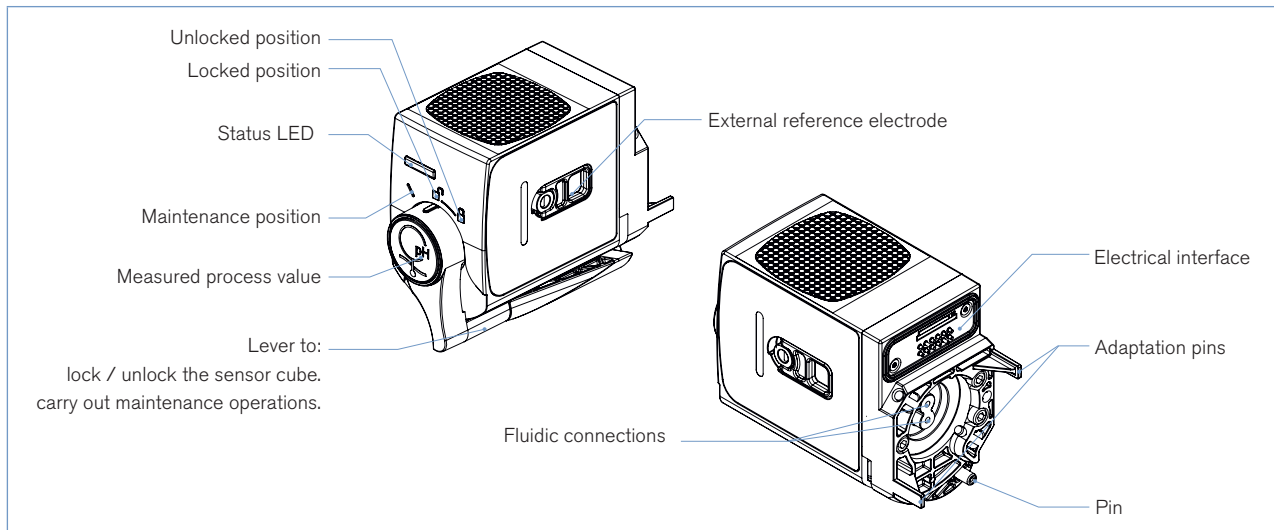
The electrical and fluidic connections are made via the connection panel of the system. The sensor cube is communicating via büS, so the configuration is fully automatic. When plugging into a system you will find the sensor in the list of büS members for further customized adjustments.

General data		
Compatibility	with Online Analysis System Type 8905 (see corresponding data sheet)	
Materials	Housing, plug / Lever / Seal PPO / PC / EPDM	
Electrical connection	Plugging/unplugging into backplane of the Type 8905	
Fluidic connection	Plugging/unplugging into backplane of the Type 8905	
pH sensor	ISFET	
Temperature sensor	PT1000 Class B, no contact with sample water	
pH measurement	Measuring range Sensor resolution Measurement deviation ("measurement bias" as defined in the standard JCGM 200:2012) Linearity Repeatability Response time (t90)	pH 4 to 9 pH 0.02 \pm pH 0.1 \pm pH 0.05 \pm pH 0.05 < 10 s
Temperature measurement	0 to 50°C (32 to 122°F)	
Electrolyte	3 mol KCL gel	
Maintenance duration	12 months (external reference electrode) depending on applications	
Type of medium	Drinking water, industrial water	
Sample water temperature	0 to 40°C (32 to 104°F), not freezing	
Sample water pressure	PN 6	
Sample water flow range	> 10 L/h	
Environment		
Ambient temperature	Operating Storage	0 to +40°C (-4 to 104°F) -20 to +60°C (-4 to 140°F), only for purged cube
Relative humidity	< 90%, without condensation	
Max. height above sea level	max. 2000 m	

Electrical data	
Operating voltage	24 V DC through backplane via büS
Power consumption	0.8 VA
Communication	büS
Status LED	Green for activation process, white for working process and red for error acc. to NAMUR NE 107
Standards, directives and approvals	
Protection class	IP65 acc. to EN 60529
Standard and directives	
EMC	EN 61000-6-3 EN 61000-6-2
Approvals	CE, UL pending

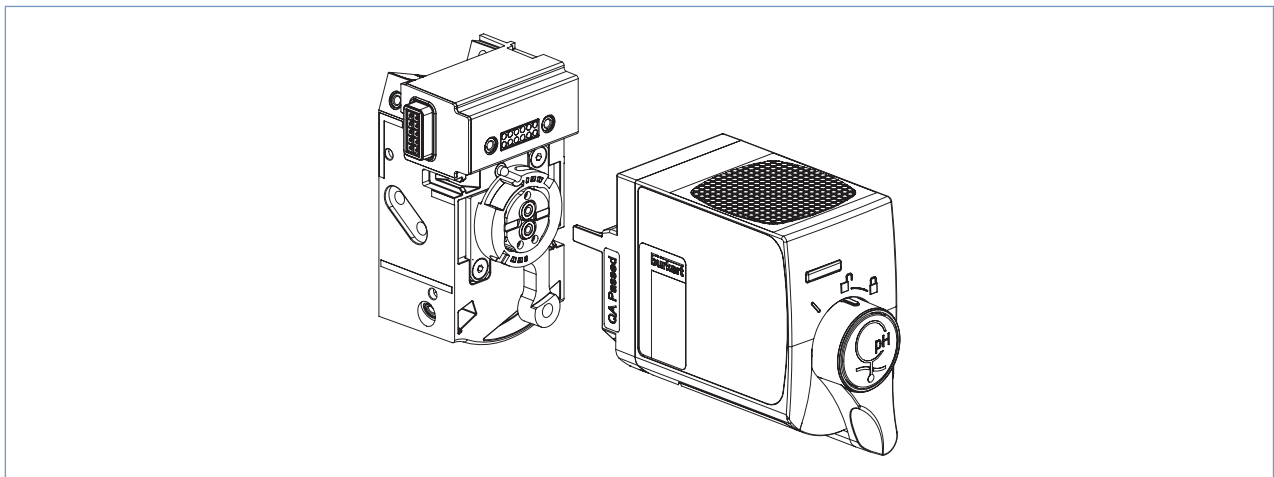
Design and principle of operation

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.

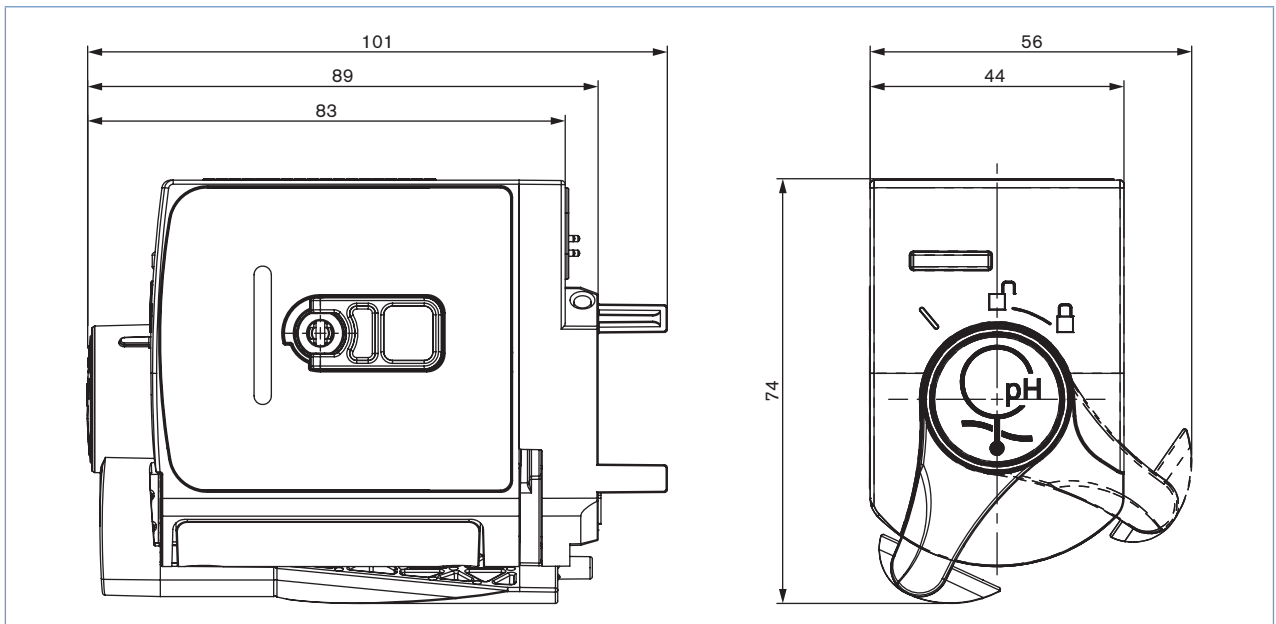


Installation into the Online Analysis System Type 8905

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 pH 4.01	418 540
Buffer solution pH 5	566 031
Buffer solution pH 7	418 541
Buffer solution pH 8	on request
Buffer solution pH 9.21	on request
External reference electrode	566 084