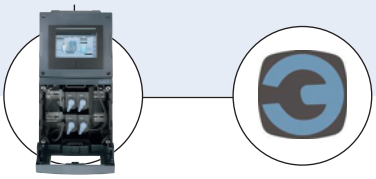
Turbidity Sensor Cube

- Fully compatible with büS systems and a wide range of further analysis sensor cubes
- Optical sensor according to DIN EN ISO 7027, 90° scattered infrared light
- Modular sensor cube for hot swap (exchange during operation)
- Minimal sample water flow needed

Type MS05 can be combined with...



Type 8905 Online Analysis System

Communicator

The device is a turbidity measurement sensor. It is used within the Online Analysis System Type 8905 by being plugged into a spare fluidic backplane slot. The device contains an optical sensor following DIN EN ISO 7027.

The turbidity of water needs to be analysed continuously as indicator for unwanted undissolved content in the water. Measurement prior and post filtration indicates the effect of filtration and may help to optimise the filter backwash process. In the best case it can lead to water and energy savings.

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 plugged 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	PPE+PS / PC / EPDM
Cuvette / Valve	Glass / Silicone
Electrical connection	Plugging/unplugging into backplane of the Type 8905
Fluidic connection	Plugging/unplugging into backplane of the Type 8905
Turbidity sensor	Light scattering, replaceable cuvette, DIN EN ISO 7027; IR LED
Turbidity measurement	
Measuring range	0 - 40 FNU
Resolution	+/- 0,0006 FNU
Measurement deviation[1]	0,02 FNU or 2% of measured value, which ever is greater
Linearity	±2% of full scale
Repeatability	±1% of full scale
Response time (t90)	Depends on data filter (by default 16 samples = 2 s)
Maintenance (cuvette)	min. 3 months, depending on the water quality
Type of medium	Water without particles: drinking water, industrial water
pH value	pH 4 to 9
Sample water temperature	3 to 40°C *(37 to 104°F)*
Sample water pressure	PN 6
Sample water flow range	> 3 l/h; recommended 6 l/h
Sample water filter[2]	> 100 µm

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

[2] a prefilter might affect the measured values of other sensor cubes on the same backplane.

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

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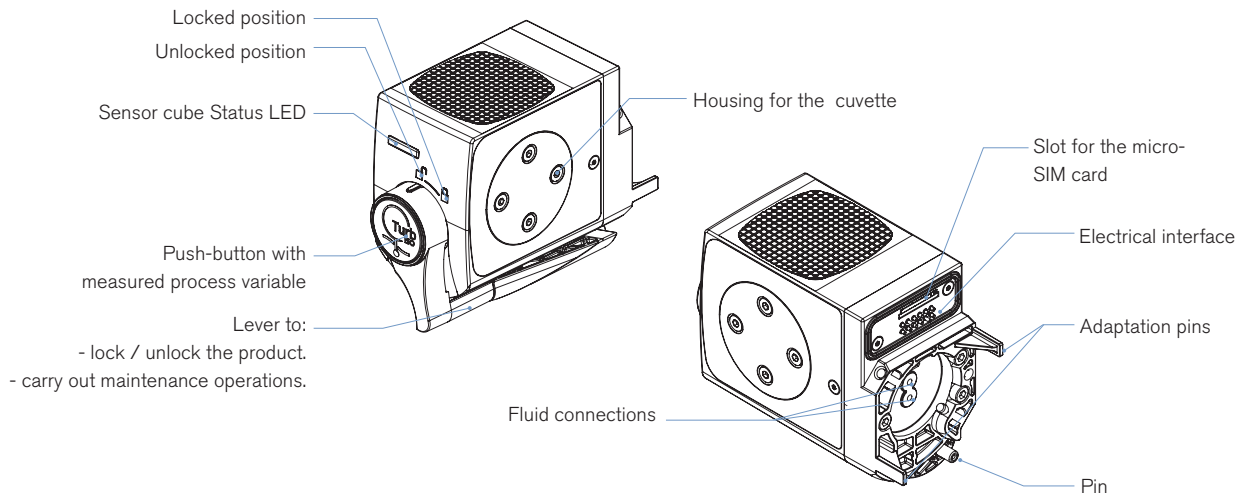
Electrical data	
Operating voltage	24 V DC through the backplane of the system Type 8095 via büS
Power consumption	0.8 VA
Internal communication	through büS (Bürkert bus)
External communication by status LED	According to NAMUR NE 107

Standards, directives and approvals	
Protection class acc. to EN 60529	IP65, when plugged in the fluidic backplane IP20, as standalone product
Standard and directives	
EMC	EN 61000-6-3 EN 61000-6-2
Approvals	CE, UL pending

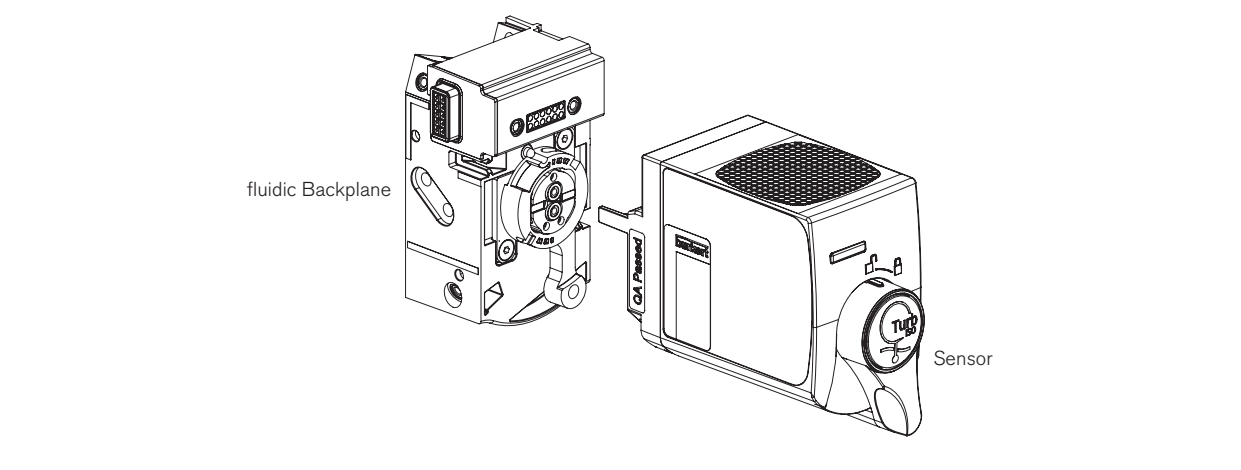
Design and principle of operation

The sensor cube gets the sample water through the fluidic backplane, in which it is plugged in. The measurement is based on the detection of scattered IR-light in an arrangement of 90° to the incident beam. The sample is flowing through a glass cuvette.



Installation into the Online Analysis System Type 8905

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



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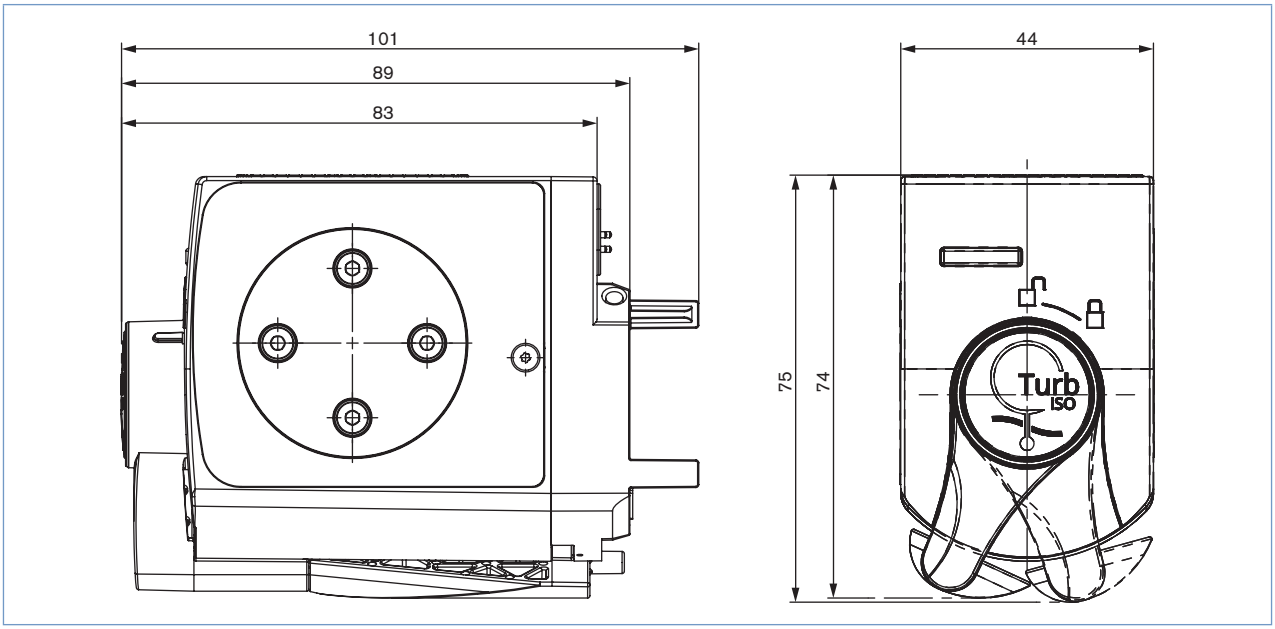
Dimensions [mm]



Ordering information and chart - Turbidity sensor cube

The turbidity 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.
Turbidity sensor cube - DIN EN ISO 7027	566 791

Ordering chart - accessories and spare parts

Description	Item no.
Cuvette with cover and 3 seals	566 085

To find your nearest Bürkert facility, click on the orange box → www.burkert.com

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