DATA SHEET

Type 8905
Encased in a housing

Online water analysis system

- Continuous analysis of drinking water and industrial process water
- Based on the modular Bürkert cube and backplane technology
- Fieldbus connection for versatile industrial communication
- Fieldbus connection for versatile industrial communication, data exchange via mobile gateway
- Extremely low-maintenance and long service life thanks to MEMS technology

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

Type 8906
Online water analysis system

Type MS01
pH Sensor Cube

Type MS02
Chlorine (Cl2) or chlorine dioxide (ClO2) sensor cube

Type MS03
Conductivity sensor cube

Type MS04
Oxidation reduction potential (ORP) sensor cube

Type MS05
Turbidity sensor cube

Type MS06
Flow injection analysis (FIA) sensor cube for iron content

Type MZ30
Reagent unit

Type MS08
SAC 254 sensor

Type description

The Type 8905 online water analysis is a compact and modular system for monitoring all important water parameters on one platform. It is a multi-channel measuring system for Bürkert sensor cubes, based on the compact housing. Variants without housing are also available (field system).

The following water parameter measurements are possible with the Type 8905 modular system: pH, chlorine, chlorine dioxide, conductivity, redox potential (ORP), turbidity, temperature and iron. These sensors can be used in a compact system or as field units. Further, almost limitless configurations in control cabinets, and according to customer wishes, can be achieved with the Type 8906 online water analysis system.

The compact water analysis system enables simple installation and start-up, as well as operation and maintenance.

Thanks to the Bürkert backplane system, individual cubes can be removed for maintenance without tools, while the remaining sensors continue to measure. This enables the highest system availability with maximum user friendliness.
The system is operated using an integrated 7" touch display or the Bürkert Communicator. In addition to the display and storage of analysis parameters, further functions are possible, for example: programming simple control and regulation algorithms using the software function f(x), intervening in the process via analogue and digital inputs and outputs, carrying out sensor calibrations.

Contact our experts and design your Type 8905 online water analysis system together.

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

© Christian Bürkert GmbH & Co. KG, Subject to alteration

Visit product website

Table of contents

1. General technical data 3

2. Approvals and conformities 4

2.1. Conformity 4
2.2. Standards 4

3. Materials 4

3.1. Bürkert resistApp 4
3.2. Material specifications 5

4. Dimensions 5

5. Product design and assembly 6

5.1. Product assembly 6
Housing for the electric modules 6
Housing for the sensor cubes 7
Mechanical interfaces of the sensor cubes 8

6. Product accessories 8

7. Ordering information 9

7.1. Bürkert eShop 9
7.2. Recommendation regarding product selection 9
7.3. Bürkert product filter 9
7.4. Ordering chart 9
7.5. Ordering chart accessories 10

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

1. General technical data

Product properties	
Material	
Make sure the device materials are compatible with the fluid you are using. Further information can be found in chapter "3.1. Bürkert resistApp" on page 4.	
Further information on the materials can be found in chapter "3.2. Material specifications" on page 5.	
Non wetted parts	
Cover	• Of the electronic module housing: PC (glass fibre reinforced, UV stabilized, UL94 V0, anthracite grey), PC (black, UV stabilized, UL94 V0) and glass • Of the sensor cube housing: PC (glass fibre reinforced, UV stabilized, UL94 V0, anthracite grey) and PC (transparent)
Housing	PC (black, UV stabilized, UL94 V0)
Stud	Stainless steel
Cable entry plate	Elastomer
Wall-mounting bracket	Stainless steel
Self-adhesive spacer	Polyurethane
Wetted parts	
Fluid connection	Biopolymer (EPDM seals)
Display	• 780 × 460 pixels resolution • Capacitive 7" Touchscreen, backlit
Dimensions	Further information can be found in chapter "4. Dimensions" on page 5.
Weight	• Approx. 8 kg (if equipped with 1 × 100...240 V AC power supply module + 1 x HMIU module + 5 sensor cubes) • Up to 12 kg (if totally equipped)
Data logger	Integrated Micro SD, 2 GB; adjustable logging interval; external reading via USB or LAN port
Electrical data	
Operating voltage ("SUPPLY")	• 100...240 V AC 50/60 Hz – current consumption at 100 V AC: 0.8 A – current consumption at 240 V AC: 0.8 A – Integrated protective fuse: a slow blow 2 A fuse. The fuse cannot be replaced and is integrated in the power supply. or • 20...30 V DC, ± 10 % tolerance, filtered and regulated connection to main supply: permanent (through external SELV and LPS power supply)
Power consumption	Max. 96 VA
Medium data	
Fluid	Water without particles: drinking water, industrial water
Fluid pH range [1)]	pH 4...pH 9
Fluid conductivity	• > 50 µS/cm if there is no pH sensor cube • > 100 µS/cm if there is one pH sensor cube
Temperature of the fluid sample	+ 3 °C...+ 40 °C (+ 37 °F...+ 104 °F)
Pressure of the fluid sample	See data sheets of the sensor cubes and accessories, use the lowest pressure
Flow rate of the fluid sample	Min. flow rate: 6 l/h per installed sensor module, so with e.g. 3 sensor modules the min. flow rate is 6 + 6 + 6 = 18 l/h due to parallel installation.
Product connections	
Sensor cube	• Max. 6 internal sensor cubes, max. 2 measurement water • Max. connection of 30 external sensor cubes via Bürkert-Systembus (büS) • Max. büS length 100 m (without T-connections)
Approvals and conformities	
Directives	
CE directive	Further information on the CE directive can be found in chapter "2.2. Standards" on page 4.

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

Environment and installation	
Installation	Wall mount unit, click system with wall-mounting bracket
Ambient temperature	• Operation: 0 °C...+ 40 °C (- 4 °F...+ 104 °F) • Storage: - 20 °C...+ 70 °C (- 4 °F...+ 140 °F) (without sensor cube)
Relative air humidity	< 95 %, without condensation
Height above sea level	Max. 2000 m
Operating condition	Continuous
Equipment mobility	Fixed
Application area	Indoor
Degree of protection according to IEC/EN 60529	IP65 with closed and tight housings
Installation category	• With an AC switched-mode power supply: category II, according to UL/EN 61010-1 • With a direct DC power supply: Category I, according to UL/EN 61010-1
Pollution degree	Degree 2, according to UL/EN 61010-1 with closed and tight housings

1.) If a chlorine sensor cube is integrated into the system, the pH value is limited to 5...pH 9.

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

2. Approvals and conformities

2.1. Conformity

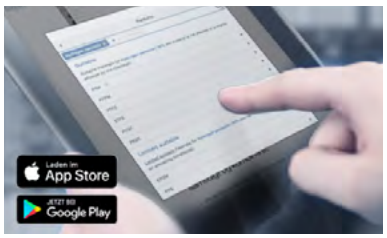
In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.2. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

3. Materials

3.1. Bürkert resistApp

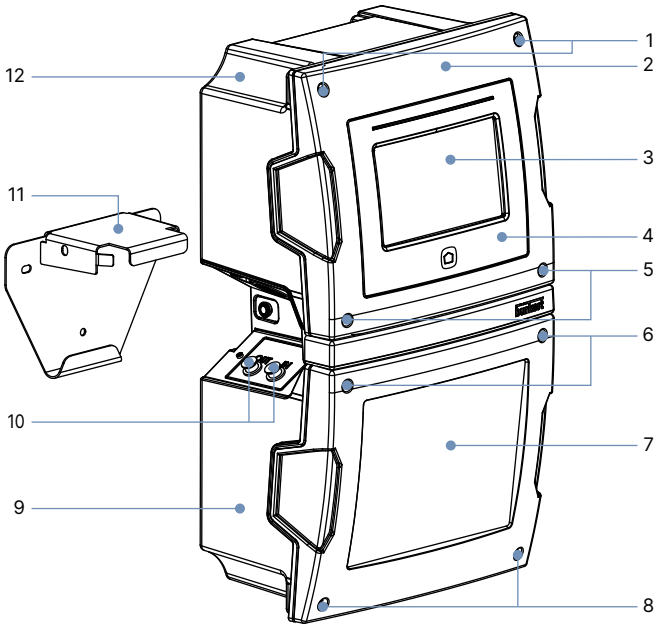


Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

Start chemical resistance check

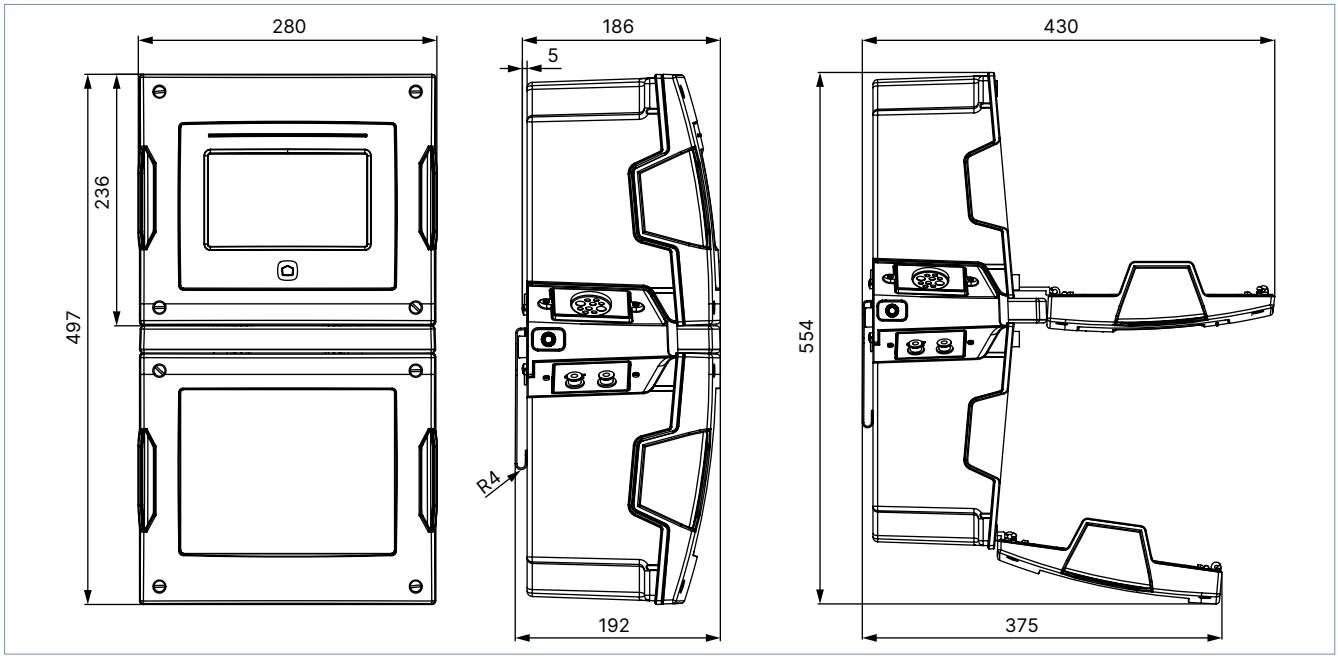
3.2. Material specifications



No.	Material
1	Stainless steel
2	PC, glass fibre reinforced, anthracite grey
3	Glass
4	PC, black
5	Stainless steel
6	Stainless steel
7	PC, transparent
8	Stainless steel
9	PC, black
10	Bio polymer, EPDM
11	Stainless steel
12	PC, black

4. Dimensions

Note:
Dimensions in mm, unless otherwise stated



DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

5. Product design and assembly

5.1. Product assembly

Housing for the electric modules

The device is **always** equipped with the following electronic modules:

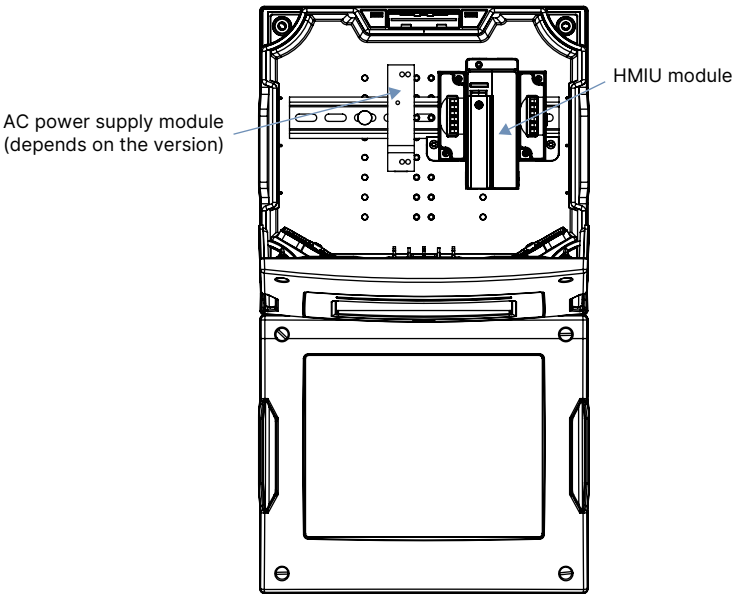
- HMIU (Human Machine Interface Unit) including USB slot and Ethernet connection
- 7" touchscreen including USB slot
- Option: PSU mains supply 100...240 V AC
- 2 x büS connector

A total of 7 slots (5 for 230 V/115 V AC variant) are available for electronic modules:

- Digital and analogue inputs and outputs
- Fieldbus gateway

The main housing parts for the electric modules are shown in the following drawing.
Depending on the configuration of the device and for a complete description and for the technical data related to the electronic modules, refer to the data sheets of each electronic modules.

See **data sheet Type ME2X** ▶ for more information.

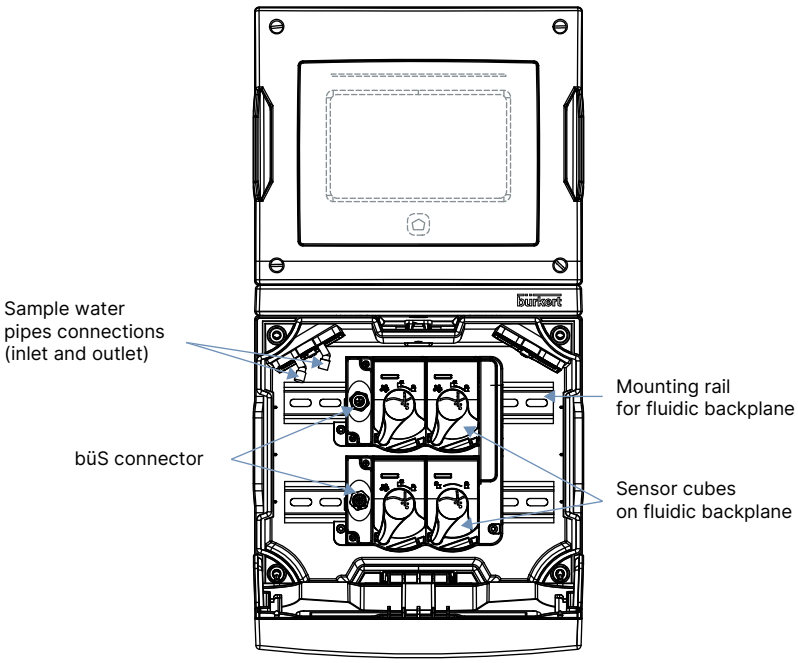


DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

Housing for the sensor cubes

The device can contain one to six sensor cubes. The main housing parts for the sensor cubes are shown in the following drawing. Depending on the configuration of the device and for a complete description and for the technical data related to the sensor cubes, refer to the data sheets of each sensor cubes (see following table).

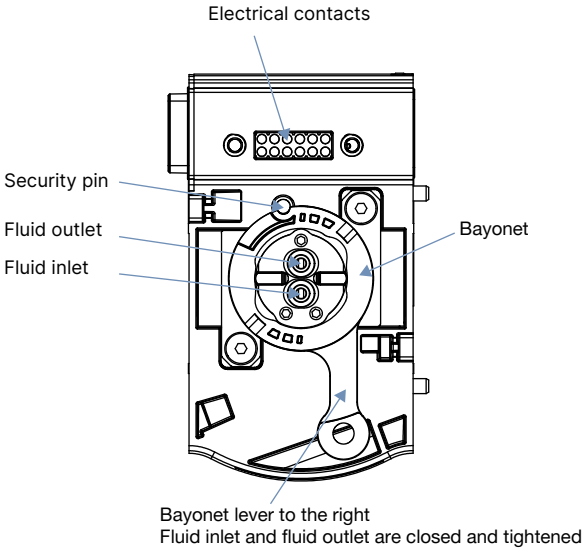
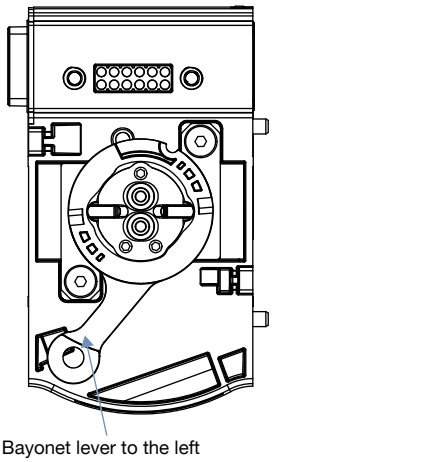


Sensor cubes	Measured physical value	Marking of the push buttons
pH sensor cube, see **data sheet Type MS01** ▸	pH and temperature	pH
Chlorine sensor cube, see **data sheet Type MS02** ▸	Chlorine, zero chlorine, chlorine dioxide and temperature	Cl_2 zero Cl_2 ClO_2
Conductivity sensor cube, see **data sheet Type MS03** ▸	Conductivity and temperature	EC
ORP sensor cube, see **data sheet Type MS04** ▸	Redox potential	ORP
Turbidity sensor cube, see **data sheet Type MS05** ▸	Turbidity (ISO)	Turb ISO
Flow injection analysis (FIA) sensor cube, see **data sheet Type MS06** ▸	Dissolved iron (Fe^{2+}/Fe^{3+})	Flow Injection Analysis Fe

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

Mechanical interfaces of the sensor cubes

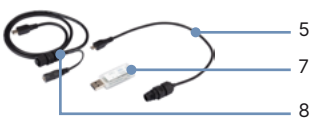
All the fluidic backplanes for the sensor cubes have the same design. Thus any sensor cube can be plugged on any mechanical interface. The backplanes are connected to each other and feed the sensor cubes parallel with the power supply, the sample water and serial büS connection.

Position of the lever	
if no sensor cube is plugged in	**if a sensor cube is plugged in**
	

6. Product accessories

Note:
To configure a device without a display, use the USB-büS interface set, Type 8923 and the Bürkert Communicator software Type 8920.

See **Software manual Type 8920** ▶ for more information.

Accessories	No.	Description
USB-büS interface set 1 	**1**	Quick-Start
	2	Power supply: 100...240 V AC/24 V DC 1 A and power supply adapters for worldwide use
	3	büS terminating resistor on büS Y-splitter
	4	5-pin M12 male connector wired on free end cable, cable length: 0.2 m
	5	büS connection cable with 5-pin M12 male connector, micro USB B plug, cable length: 0.3 m
	6	büS adapter with 5-pin M12 male connector, A-coded to 5-pin M12 male connector, A-coded
	7	büS stick (USB to büS/CANopen adapter)
	8	büS service cable with 5-pin M12 female connector, mini USB plug and circular female connector for power supply, cable length: 0.7 m
	9	Magnetic key
USB-büS interface set 2 		The Bürkert Communicator software can be downloaded from our website under the “Software” heading of **Type 8920** ▶.

7. Ordering information

7.1. Bürkert eShop

Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

Order online now

7.2. Recommendation regarding product selection

The Online Analysis System Type 8905 is a compact and modular system in a single housing, offering a wide range of configuration possibilities.
Thank you for your interest in our products! In order to provide you with the best possible advice, please contact your local Bürkert branch office for customised system design.

7.3. Bürkert product filter

Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements?
Use the Bürkert product filter and find suitable articles for your application quickly and easily.

Try out our product filter

7.4. Ordering chart

Note :
This table shows exemplary configurations of the online analysis system.

Description	Operating voltage	Equipment						Article no.
		MS01 sensor cube pH	MS02 sensor cube Chlorine	MS03 sensor cube Conduc-tivity	MS04 sensor cube ORP	MS05 sensor cube Turbidity	PSU: including 100...240 V AC power supply	
Online Analysis System – pH, Conductivity, Turbidity	24 V DC	1	–	1	–	1	–	On request
	100...240 V AC	1	–	1	–	1	1	
Online Analysis System – pH, Chlorine, Turbidity	24 V DC	1	1	–	–	1	–	
	100...240 V AC	1	1	–	–	1	1	
Online Analysis System – pH, ORP, Conductivity, Turbidity	24 V DC	1	–	1	1	1	–	
	100...240 V AC	1	–	1	1	1	1	
Online Analysis System – pH, Chlorine, ORP, Turbidity	24 V DC	1	1	–	1	1	–	
	100...240 V AC	1	1	–	1	1	1	
Online Analysis System – pH, Chlorine, Conductivity, ORP, Turbidity	24 V DC	1	1	1	1	1	–	
	100...240 V AC	1	1	1	1	1	1	

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026

7.5. Ordering chart accessories

Description		Article no.
Set including the wall-mounting bracket with four self-adhesive bumpers		566363
Fluidic accessories		
Sample water hose 4/6 mm	5 m	567793
	10 m	567701
	25 m	567794
Set including a pressure regulator (article no. 774322), a bourdon tube pressure gauge (0-4 bar), a holder and a nut		775799
Pressure regulator (pressure inlet: 0-10 bar, pressure outlet: 0 - 4 bar, inlet and outlet: G ¼, internal part in stainless steel)		774322
Filter housing made of plastic with NBR seal for filter element 50 µm, inlet and outlet ¼"		774292
Filter housing made of plastic with NBR seal for filter element 90 µm or 140 µm, inlet and outlet ¼"		774287
Filter element	50 µm	774293
	90 µm	774290
	140 µm	774291
Bubble trap		568492
Type MZ20 cleaning system, 2 solutions See **data sheet Type MZ20** ▶ for more information.		567124
Interface accessories		
USB-büS interface set		
USB-büS interface set 1 (Type 8923) Further information can be found in chapter "6. Product accessories" on page 8.		772426
USB-büS interface set 2 (Type 8923) Further information can be found in chapter "6. Product accessories" on page 8 .		772551
Connectors and sockets		
büS Y-distributor (M12 female connector, 5-pin to M12 male and female connectors, 5-pin)		772420
büS Y-distributor with power interrupt (M12 female connector, 5-pin to M12 male and female connectors, 5-pin)		772421
büS adapter (M12 male connector, 5-pin, A-coded to M12 male connector, 5-pin, A-coded)		772867
büS terminating resistor 120 Ω, M12 male connector, 5-pin		772424
büS terminating resistor 120 Ω, M12 female connector, 5-pin		772425
Extensions		
M12 female and male connectors, 5-pin, straight, moulded on büS cable, shielded	0.5 m	772403
	1 m	772404
	3 m	772405
	5 m	772406
	10 m	772407
	20 m	772408
Software		
Software Bürkert Communicator		Download **Type 8920** ▶

DTS 1000220828 EN Version: - Status: RL (released | freigegeben | valide) printed: 28.10.2026