Online Analysis System

- For analysis applications for drinking water and fresh water in industrial processes
- Modular sensor and electronic system:
  - up to 6 measurements in one housing
  - up to 30 analysis Sensor cubes in one büS system
- Prepared for fielbus connectivity, remote operation and maintenance

Type 8905 Online Analysis System is a modular system for monitoring all important water parameters on one platform. The Type 8905 is a multichannel multifunction unit for the Bürkert sensor cubes and electronic modules from the EDIP platform. The efficient device integration platform (EDIP) allows the high flexibility by using modularity in the hardware as well as in the software of the system.

Type 8905 is the device for continuous measurement of high priority water parameters such as:
- pH-value
- chlorine, for disinfection purposes
- conductivity, indicator for dissolved content/minerals
- ORP-value, parameter for oxidation or reduction characteristics of the water
- turbidity, indicator for undissolved content
- temperature

Modularity in hardware and software offers the high flexibility for easy installation, use and operation. It allows adding or removing electronic modules or sensor cubes without tools during uninterrupted operation (Hot Swap). The touchscreen allows on site configuration of new installed modules. When a Bürkert Communicator is connected by büS, LAN or USB there are additional functions:
- functions from a library or user defined algorithms
- interaction with actors and actuators in the treatment process via analog or binary inputs and outputs
- control functions like open and/or closed loop control

The Type 8905 is available as a compact system in one housing. For customized systems please contact your closest Bürkert sales center for configuration of the specific functionality.

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### General data

<table>
<thead>
<tr>
<th>Mounting</th>
<th>Wall mount unit, clicksystem with wall-mounting bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Materials</strong></td>
<td></td>
</tr>
<tr>
<td>Casings</td>
<td>PC (black, UV stabilized, UL94 V0)</td>
</tr>
<tr>
<td>Cover</td>
<td>PC (glass fibre reinforced, UV stabilized, UL94 V0, charcoal grey); PC (black, UV stabilized, UL94 V0); Glass</td>
</tr>
<tr>
<td>of the electronic module casing</td>
<td>PC (glass fibre reinforced, UV stabilized, UL94 V0, charcoal grey); PC (transparent)</td>
</tr>
<tr>
<td>of the sensor cube casing</td>
<td>Stainless steel / Elastomer</td>
</tr>
<tr>
<td>Studs / Cable entry plate</td>
<td>Biopolymer (EPDM seals)</td>
</tr>
<tr>
<td>Fluid connection</td>
<td>Stainless steel 304L</td>
</tr>
<tr>
<td>Wall-mounting bracket</td>
<td>Polyurethane</td>
</tr>
<tr>
<td>Self-adhesive bumpers</td>
<td></td>
</tr>
</tbody>
</table>

| Display | 780 x 460 pixels resolution |
| Data logger | Capacitive 7" Touchscreen; backlit |
| Sensor cubes | Integrated Micro SD, 2 GB; adjustable logging interval; external reading via USB or LAN port |
| Max. 6 internal sensor cubes; max. connection of 30 external sensor-cubes via büS |

| Type of medium | Water without particles; drinking water, industrial water pH 4 to 9 / > 50 µS/cm |
| Sample water temperature | 3...40°C (37...104°F) |
| Sample water pressure | Refer to the data sheet of all the used sensor-cubes and apply the most restrictive value given |
| Sample water flow range | > sum of the min. flow quantity of each installed cube (e.g.: 1 chlorine sensor cube, 1 pH sensor cube, 1 ORP sensor cube, flow rate > 6 + 6 + 6 = 18 l/h) |
| Weight | approx. 8 kg (if equipped with 1 x 100...240 V AC power supply module + 1 x HMIU module + 5 sensor cubes), up to 12 kg (if totally equipped) |

* when a chlorine sensor cube is present within the system; pH value is restricted to pH 5 to 9
** only when a chlorine sensor cube is present within the system
Electrical data

Operating voltage
("SUPPLY")
100...240 V AC 50/60Hz or
20...30 V DC
limited energy source (in accordance to UL
61010-1, paragraph 9.4) or Class 2 source (in
accordance to standards 1310/1585 and 60950-1)

Power consumption
Max. 96 VA

Environment conditions and standards

Ambient temperature
Operation
0...+40°C (-4...104°F)
Storage
-20...+70°C (-4...140°F) (without sensor cube)
Relative humidity
< 95%, without condensation
Height above sea level
max. 2000 m

Protection class
IP65 with closed and tight casings

Standard and directives
EMC
EN 61000-6-4
Approvals
UL-Recognized for
US and Canada
UL pending

Construction

Electronic module casing

The main parts of the electronic module casing are described below:
The device is always equipped with the following electronic modules:
• HMIU (Human Machine Interface Unit) incl. USB slot and Ethernet
• 7” Touchscreen incl. USB Slot
• Option: PSU Mains supply 100...240 V AC
• 2 x büS Connector

There are 7 slots (5 Slots with Option PSU) integrated for future modules:
• WiFi/UMTS Communication Module
• Input / Output Modules
• Fieldbus Connection Modules

Depending on the configuration of the device and for a complete de-
scription and for the technical data related to the electronic modules,
refer to the data sheets of each electronic modules.

Sensor cube casing

The main parts of the sensor cube casing are described below:
The device can contain one to six sensor cubes.
Depending on the configuration of the device and for a complete de-
scription and for the technical data related to the sensor cubes, refer
to the data sheets of each sensor cube.
• pH Sensor Cube Type MS01
• Chlorine Sensor Cube Type MS02
• Conductivity Sensor Cube Type MS03
• ORP Sensor Cube Type MS04
• Turbidity Sensor Cube Type MS05

Materials view

PC, glass fibre reinforced, charcoal grey
PC, Black
Glass
Stainless steel
Stainless steel
Bio polymer, EPDM
PC, Black
PC, transparent
PC, glass fibre reinforced, charcoal grey

Mounting rail for fluidic backplane
Sample water pipes connections (inlet and outlet)
AC Power Supply module (depends on the version)
HMIU module
Additional modules

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 and the sample water and provide the serial bus connection.

Position of the lever

If no sensor cube is plugged in

- Security pin
- Fluid inlet and fluid outlet are closed and tight
  (bayonet lever to the right)

If a sensor cube is plugged in

- Electrical contacts
- Fluid outlet
- Fluid inlet
- Bayonet lever
- Fluid inlet and fluid outlet are open
  (bayonet lever to the left)

Dimensions [mm]

- 280
- 186
- 430
- 375
- 497
- 236
- 280
- 554
- 375
- 238
- 298
- 497
- 192
### Ordering chart for Online Analysis System Type 8905

<table>
<thead>
<tr>
<th>Description</th>
<th>Operating voltage</th>
<th>MS01 sensor cube, pH</th>
<th>MS02 sensor cube, Chlorine</th>
<th>MS03 sensor cube, Conductivity</th>
<th>MS04 sensor cube, ORP</th>
<th>MS05 sensor cube, Turbidity</th>
<th>Item no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Analysis System - pH, Conductivity, Turbidity</td>
<td>24 V DC</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>566 090</td>
</tr>
<tr>
<td>Online Analysis System - pH, Chlorine, Turbidity</td>
<td>100...240 V AC</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>566 091</td>
</tr>
<tr>
<td>Online Analysis System - pH, ORP, Conductivity, Turbidity</td>
<td>24 V DC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>566 094</td>
</tr>
<tr>
<td>Online Analysis System - pH, Chlorine, ORP, Turbidity</td>
<td>100...240 V AC</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>566 095</td>
</tr>
<tr>
<td>Online Analysis System - pH, Chlorine, Conductivity, ORP, Turbidity</td>
<td>24 V DC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>566 098</td>
</tr>
<tr>
<td>Online Analysis System - pH, Chlorine, Conductivity, ORP, Turbidity</td>
<td>100...240 V AC</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>566 099</td>
</tr>
</tbody>
</table>

### Ordering chart for accessories for Type 8905

<table>
<thead>
<tr>
<th>Description</th>
<th>Item no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample water pipe 4/6 mm, 5 m</td>
<td>567 793</td>
</tr>
<tr>
<td>Sample water pipe 4/6 mm, 10 m</td>
<td>567 701</td>
</tr>
<tr>
<td>Sample water pipe 4/6 mm, 25 m</td>
<td>567 794</td>
</tr>
<tr>
<td>Strainer 100 µm</td>
<td>772 703</td>
</tr>
<tr>
<td>Pressure reducer</td>
<td>772 437</td>
</tr>
<tr>
<td>Cleaning system, 2 solutions</td>
<td>567 124</td>
</tr>
<tr>
<td>Set including the wall-mounting bracket with four self-adhesive bumpers</td>
<td>566 363</td>
</tr>
<tr>
<td>Set with a pressure reducer (including a 100 µm strainer, a sampling point and two G1/4&quot; connections), a wall-mounting bracket with nut (for the pressure reducer), a pressure gauge (for the pressure reducer) and two quick-connect couplings</td>
<td>566 319</td>
</tr>
</tbody>
</table>