OPTISENS AAS 1000

Technical Datasheet

Sensors for free chlorine, chlorine dioxide, ozone, hydrogen peroxide

- Low maintenance
- Automatic sensor cleaning (ASR)
- Membrane free, gel filled

KROHNE

Low maintenance sensors for measurement and control in disinfection processes

The membrane free, potentiostatic **OPTISENS AAS 1000** sensors for measuring free chlorine, chlorine dioxide, ozone and hydrogen peroxide are characterized by a robust design and extremely low maintenance requirements.
In combination with the **OPTISENS 050** converter and the patented **Automatic sensor cleaning (ASR)** the **OPTISENS AAS 1000** offers outstanding performance and an optimal cost of ownership.

Highlights

- Suitable for connection to the OPTISENS 050 converter
- Patented Automatic sensor cleaning (ASR)
- Membrane free
- Double gold (or platinum) electrodes
- Standardised single rod design with integrated counter electrode
- Low maintenance gel filling
- Virtually flow independent above 30l/h

Industries

- Drinking water industry
- Waste water industry
- Process industry
- Food and Beverages

Applications

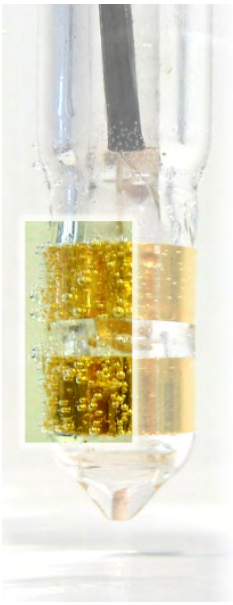
- Disinfection of drinking water and process water
- Product disinfection
- Monitoring of limit values

Options and variants

The potentiostatic sensor

The gel filled, potentiostatic **OPTISENS AAS 1000** sensor with integrated counter electrode is available in two variants:

- OPTISENS AAS 1000 CL with double gold electrodes for measurement of free chlorine, chlorine dioxide and ozone
- OPTISENS AAS 1000 H2O2 with double platinum electrodes for measurement of hydrogen peroxide



Automatic sensor cleaning (ASR)

The potentiostatic **OPTISENS AAS 1000** sensors can be equipped with the patented **Automatic sensor cleaning (ASR)**.
An electrochemical process causes outgassing on the measuring electrodes, which can dissolve even tough coatings such as lime deposits. The **ASR** considerably increases the life span of the AAS 1000 sensors, achieving high measuring stability with extremely low maintenance requirements.

OPTISENS 1000 assemblies

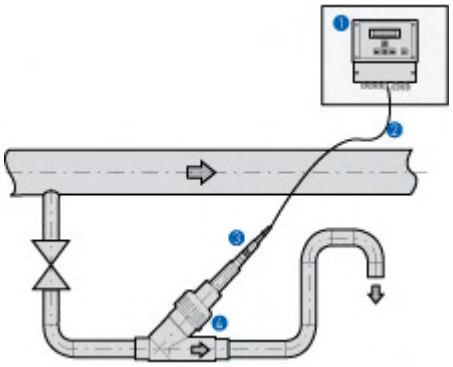
Usually the **OPTISENS AAS 1000** sensors are installed in the **OPTISENS AAM 1050** measuring systems.
For individual installations, KROHNE offers the following flow through assembly:

- OPTISENS MAA 1000 Flow-Through Holder AAS 1000 CL (DN 25)

Installation of OPTISENS AAS 1000 sensors

Measuring system AAM 1050

Individual installation with AAC 050



1 AAC 050 W Converter
2 AAW 1000 Sensor cable
3 AAS 1000 Sensor
4 MAA 1000 Flow assembly

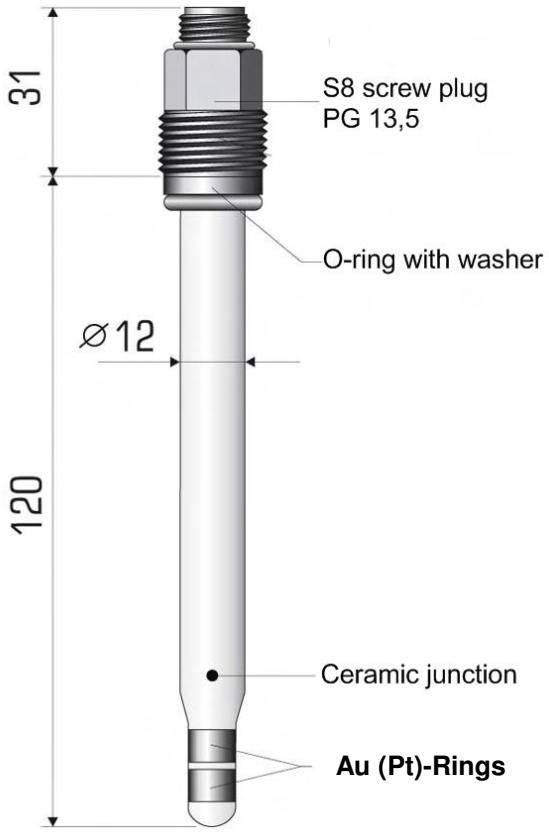
Please note! A minimum flow of 30 l/h is required.
Further information about the installation requirements can be found in the operating manuals **OPTISENS AAM 1050** or **OPTISENS AAC 050**.

Technical data

	AAS 1000 CL	AAS 1000 H202
Measuring principle	Potentiostatic with double gold electrodes	Potentiostatic with double platinum electrodes
Measuring Parameters	Free chlorine (Cl); Chlorine dioxide (ClO_2); Ozone (O_3)	Hydrogen peroxide (H_2O_2)
Measuring range	- Free chlorine: 0…20 mg/l* - Chlorine dioxide: 0…4 mg/l; - Ozone: 0…4 mg/l	- Hydrogen peroxide: 0…100 mg/l
Design	Glass sensor 12mm / 0.47" shaft diameter; length 120 mm / 4.72"	Glass sensor 12mm / 0.47" shaft diameter; length 120 mm / 4.72"
Process connection	PG 13,5	PG 13,5
Operating conditions		
Temperature range	-5…70°C / 23...158°F	-5…70°C / 23…158°F
Max. operating pressure	16 bar / 232 psi	16 bar / 232 psi
Min. flow rate	> 30 l/h	> 30 l/h
Materials		
Sensor shaft	Glass	Glass
Measuring electrodes	Gold	Platinum
Reference electrode	Ag/Ag/Tepox-Gel	Ag/Ag/Tepox-Gel
Diaphragm	Ceramic	Ceramic
Gasket	EPDM	EPDM
Electrical connection	M12 screw connection	M12 screw connection
Cable	AAW 1000	AAW 1000
Cable design	Shielded cable with M12 connector and core end sleeves	Shielded cable with M12 connector and core end sleeves
Length	5 m 10 m	5 m 10 m
Optional:	AAW 1000 ASR cable for connection of automatic sensor cleaning (ASR) to the AAC 050 converter	AAW 1000 ASR cable for connection of automatic sensor cleaning (ASR) to the AAC 050 converter

*The measuring range of the converter for free chlorine is usually 0...4 mg/l only

Dimensions


31
S8 screw plug
PG 13,5
O-ring with washer
⌀12
120
Ceramic junction
Au (Pt)-Rings