Free chlorine and chlorine dioxide sensors
AS2/ AS3

193

- **For hot sanitary water, drinkable water**
- **pH must be constant (for free chlorine)**
- **Temperature: up to 50 °C or up to 70 °C**
- **Pressure: up to 8 bar**

APPLICATIONS

Concentration measurement of free chlorine or chlorine dioxide, hot sanitary water and drinkable water.
Caution: The pH must be constant for free chlorine measurement.

TECHNICAL FEATURES

Measured parameter	AS ... CL: Free chlorine AS ... CD: Chlorine dioxide
Disinfection additives	Inorganic compounds, such as NaOCl, $Ca(OCl)_2$, gaseous chlorine, chlorine produced by electrolysis
Chlorine dioxide	Chlorite/ Chlorine; Chlorite/ Acid
Measuring system	Semi-open cell with 3 electrodes and electrolyte
Supply voltage	12 ... 30 V DC, (Load 500 to 900Ω)
Output signal	4 ... 20 mA, screw connectors x2 ($1mm^2$) No galvanic insulation
Operating temperature	AS2: 1 to 50°C; AS3: 1 to 70°C Automatic temperature compensation
Ambient temperature	From 0 to 55 °C
Operating pressure	8 bar max.
Cleaning system	Equipment RV1 (option)
Flow rate	Flow must be constant 15 l/h min. without RV1 equipment 45 to 90 l/h with RV1 equipment
pH operating range	AS ... CL: pH must be constant +/- 0.25 pH (between 5 and 9 pH) AS ... CD: between pH 1 and pH 12
Zero adjustment	Not necessary (from factory)
Slope calibration	Only 1 point necessary with BAMOPHAR 194: - Chlorine: DPD-1 - Chlorine dioxide: DPD-1 (without chlorine)
Interferences	AS ... CL: Ozone, chlorine dioxide and chlorite AS ... CD: Ozone, chlorine, chlorite are measured (less than 2% of their concentration)
Materials	AS2: PVC-U; AS3: PEEK
Dimensions	O.D. 25 mm, length 220 mm (4-20 mA)

Complete measuring system
(assembly sold separately)

EC Conformity: The instrument meets the legal requirements of the current European Directives

Equipment for automatic cleaning of electrodes: RV1 (Option)

- Recommended to optimize the measurement signal
- Direct installation on the sensor tip
- Cleaning action on small deposits (e.g. slight rust deposit)
- Electrode cleaning each 6 to 12 months (instead of each 4 to 12 weeks without RV1)
- Requires the use of DF measuring cells (See data-sheet 193-95)
- Flow-rate: 45 l / h Min.

Benefits:
- Increased sensor performance (reduced maintenance)

See diagram on page 2

Option RV1

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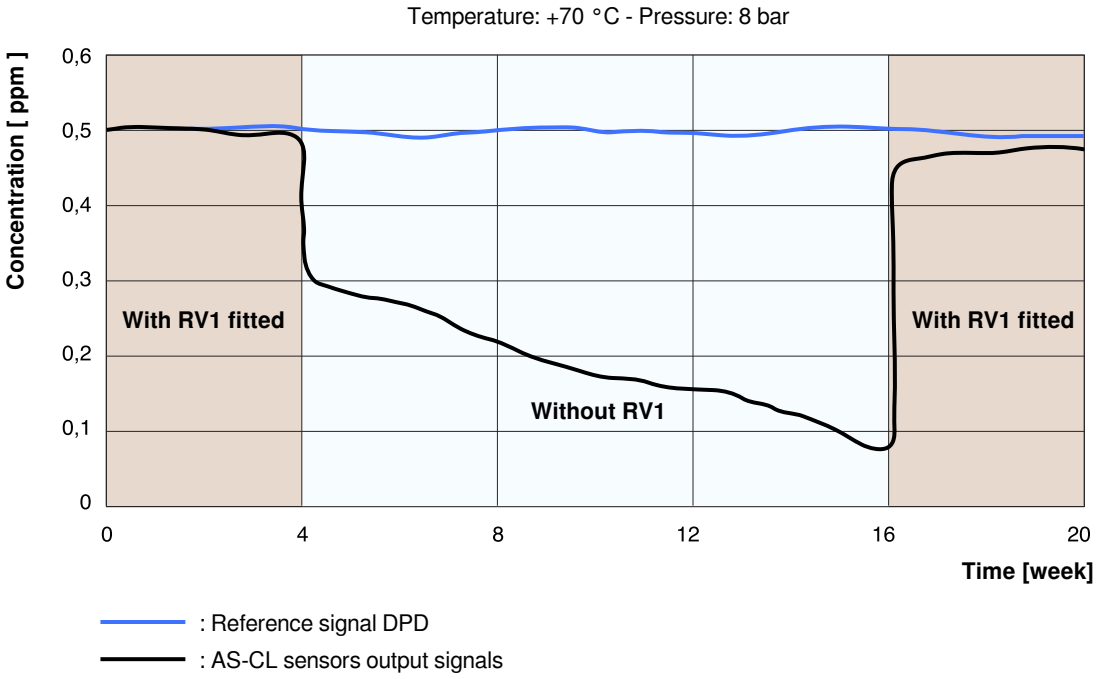
Test on AS sensor with RV1, then without and at least with RV1 system.:



Caution: The use of RV1 reduces the nominal measuring scale. (See table codes vs. references)

CODE NUMBERS AND REFERENCES

				Measuring scale mg/l		Resolution
Disinfectant	**Code**	**Reference**	**Temperature max.**	*Without RV1*	*With RV1*	**mg/l**
Free chlorine	193 223	AS2-MA1.CL	50 °C	0.003...1	0.003...0.4	0.001
	193 225	AS2-MA5.CL	50 °C	0.03...5	0.03...1.7	0.01
	193 228	AS3-MA1.CL	70 °C	0.003...1	0.003...0.4	0.001
	193 230	AS3-MA5.CL	70 °C	0.03...5	0.03...1.7	0.01
	193 232	AS3-MA10.CL	70 °C	0.03...10	0.03...4	0.01
Chlorine dioxide	193 224	AS2-MA1.CD	50 °C	0.003...1	0.003...0.5	0.001
	193 226	AS2-MA5.CD	50 °C	0.03...5	0.03...2.5	0.01
	193 229	AS3-MA1.CD	70 °C	0.003...1	0.003...0.5	0.001
	193 231	AS3-MA5.CD	70 °C	0.03...5	0.03...2.5	0.01

Each sensor is supplied with 50 ml of electrolyte and emeri paper.

Parts - Accessories:

Code	Reference	Description
193 962	EAS1/G	Electrolyte; for AS2 and AS3
193 912	RV1*	RV1 cleaning system

* Reference RV1 includes the tip, 2 bags of 3 balls and emeri paper.

RV1 cleaning system

Precautions:
Flow rate must be constant and a measuring cell with flow controller is necessary (data-sheet 193-95).
In order to install easily a complete system, we propose assemblies designed for specific applications (on request).

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