

AQUASENSO®



2 channel

Continuous measurement

Continuous regulation

pH

Conductivity

Redox

Chlorine / Chlorinedioxid

Close the loop - dosing at the control circuit

The precise interaction of sensors, controllers and dosing pumps plays an important role particularly in the area of chemical dosing.

sera offers optimally matching products in this area:

- the AQUASENSO® series of sera Sensors delivers measurement & control in water analysis
- the sera dosing pump ensures the precise addition of chemical at all times
- the sera AQUASENSO® controller analyses and compares the nominal value with the indicated value and regulates the performance accordingly

Enclosed these three products close the loop of measurement, dosing and control. The modules are used in the water analysis in a wide field of applications such as drinking water,

swimming pool water, sewage and waste water treatment, process chemistry and beverage industry. Therefore the applications are tailored to the individual application.

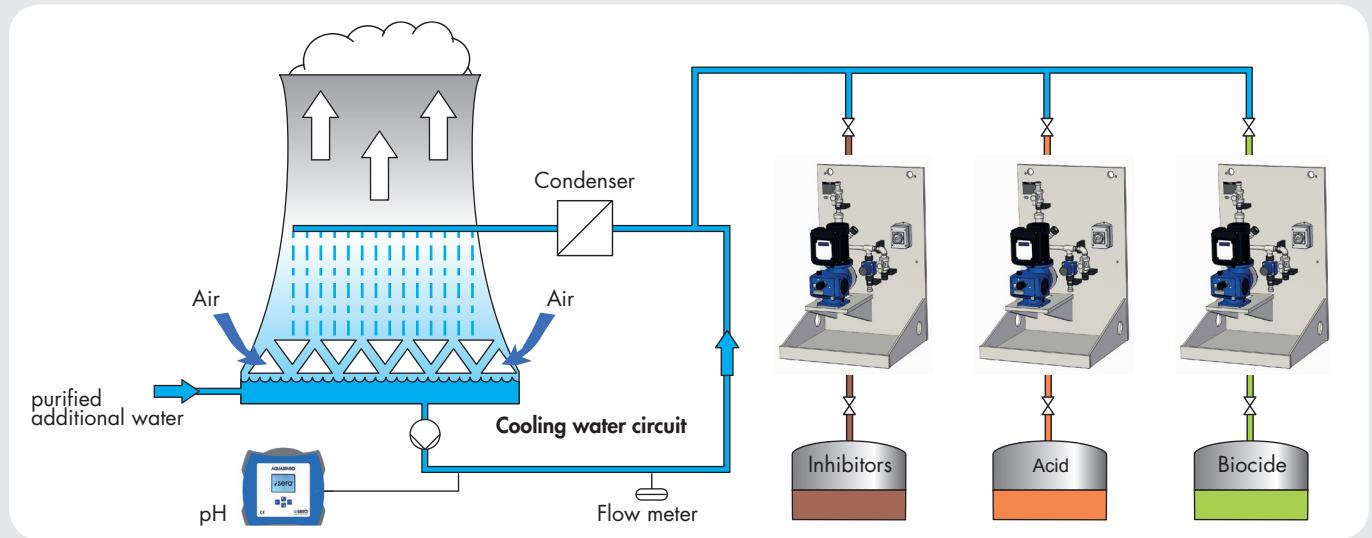
The sensors of the series AQUASENSO® identify themselves by a high level of availability for detection of analysis parameters.

The following measurement parameters are available for the analysis of:

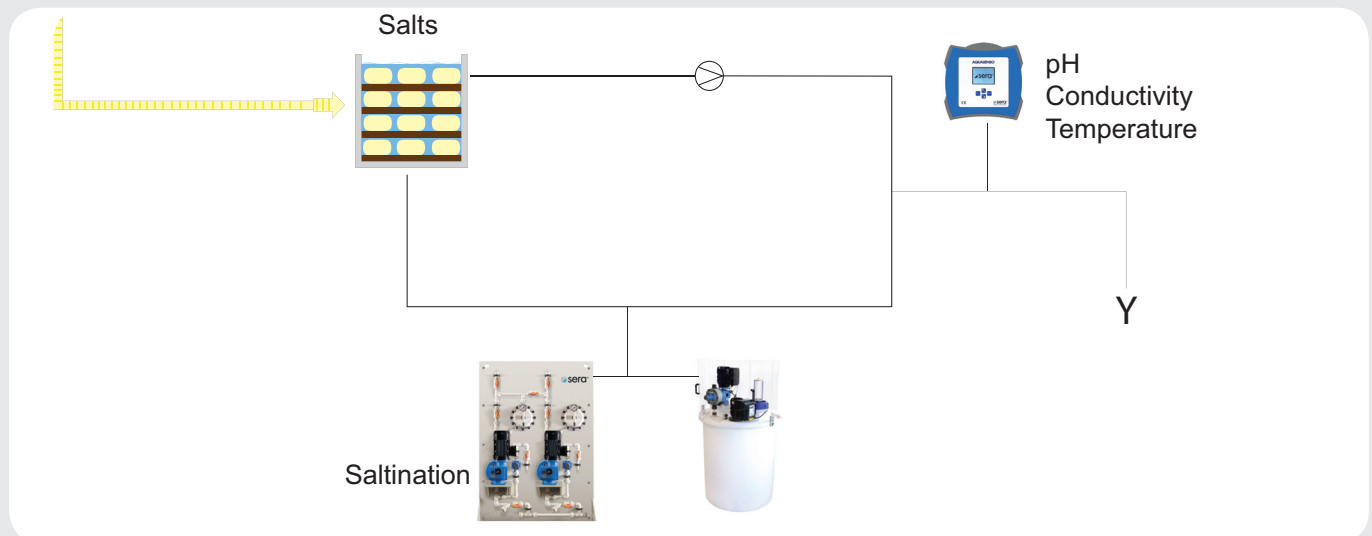
- pH
- Redox
- Conductivity
- Chlorine
- Chlorinedioxid
- Temperature



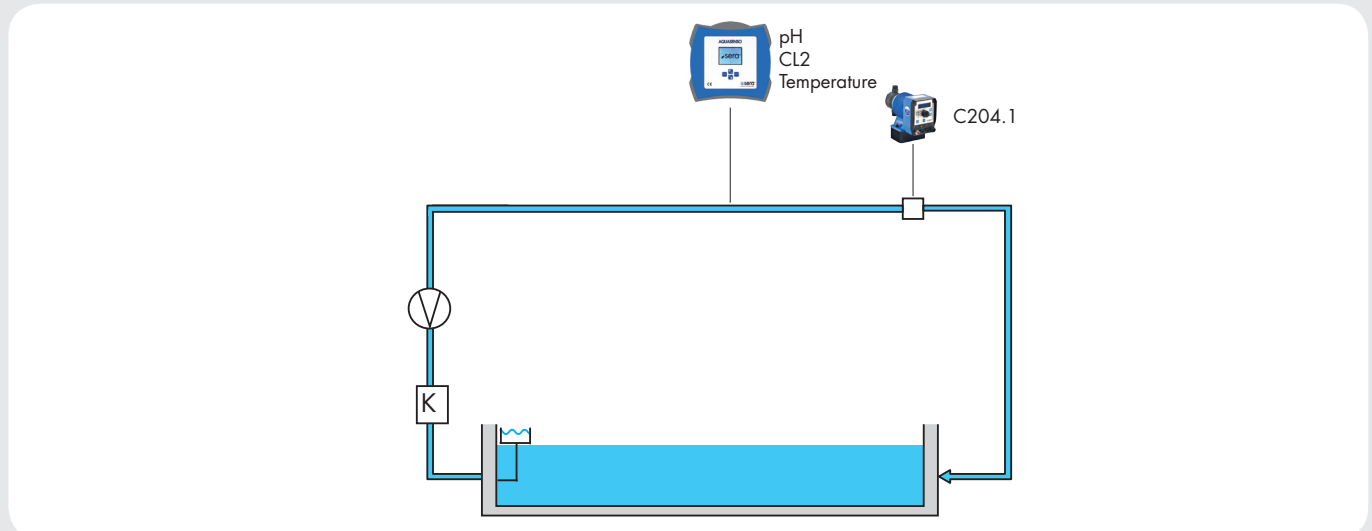
Cooling water treatment



Food

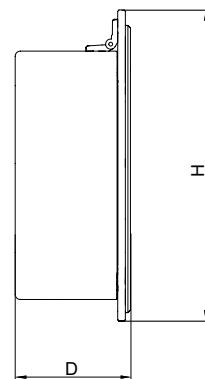
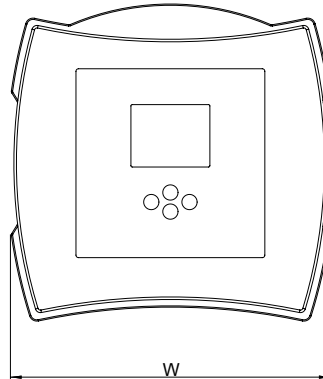


Swimming pool



Technical Data

AQUASENSO®



Type	Measuring range	Accuracy	Compensation	Control mode	Controller	Analog output	Control output
AQUASENSO®	pH: 0,00...14,00 Redox: -2000...+2000 mV Chlorine: -1000...+0 mV Conductivity: 0,1µS/cm...10mS/cm Temperature: over Pt 100	5% based on the measured range end	pH Temperature compensated, Chlorine pH compensated	P/PI/PID	2 side controller	2 x 0/4...20mA splitted, max. liability 450	1 x 2 pulse frequency outputs 2x2 Relays

Type	Alarm relay	Electric connector	Power input	Environmental temperature	Enclosure type	Material box	Metrics W x H x D
AQUASENSO®	250 V - 3 A, 700 VA contact type Changer	90-253 V, 50/60 Hz, 24 DC, 12 DC	25 VA	2...45 °C	Wall construction; IP 65	PC with flame protection equipment	250 x 250 x 95 mm

Functions:

- illuminated graphical display
- Frequency relays for the direct control of dosing pumps
- Performance relay configurable as alert, limit value, control output for pumps and solenoid valves
- 2 analogue outputs 0/4...20mA
- External release of measurement
- 5 digital inputs for measuring water fault detection, external release, warning niveau of chemicals MIN

Advantages:

- 2 channel
- Parameters of measurement: pH, Redox, conductivity, chlorine, chlorinedioxid
- Capture of several measurements simultaneously

Your benefit:

- Precise measurement of pH, chlorine and conductivity with temperature compensation & pH-compensation with Chlorine
- Reduced consumption of chemical thanks to measurement & control adapted to the process
- Adjustable Direction of control "Upward measurement" or "Downward measurement"

AQUASENSO® pH



EGA 133 I



EGA 150 I



EGA 153 I

Type	Shaft of the electrode	Length	Measuring range	Measuring Range	Diaphragm shape	Reference system	Electrical Material
EGA 133 I	Plastic	120mm	0...14pH	-5...80°C	Cylinder	Ag/AgCl	Gel, 3 mol/L KCl
EGA 150 I	Glass	120mm	0...14pH	-5...80°C	Cylinder	Ag/AgCl	Gel, 3 mol/L KCl
EGA 153 I	Glass	120mm	0...14pH	-5...80°C	Cylinder	Ag/AgCl	Gel, 3 mol/L KCl

Type	Diaphragm	System zero point	Pressure	Electrical connection	Connection	Field of Application
EGA 133 I	2 Ceramic diaphragm	pH = 7 +/-0,3	max. 6bar	S7 coaxial plug head	Thread PG13,5	Fishkeeping, Sewage treatment, Swimming pool technology
EGA 150 I	1 Ceramic diaphragm	pH = 7 +/-0,3	max. 6bar	S7 coaxial plug head	Thread PG13,5	Water, Sewage treatment, Swimming pool technology
EGA 153 I	3 Ceramic diaphragm	pH = 7 +/-0,3	max. 6bar	S7 coaxial plug head	Thread PG13,5	Water, Sewage treatment, Process measurement

AQUASENSO® Redox



EMC 133 I



EMC 173 I

Type	Shaft of the electrode	Length	Material of electrode	Measuring range	Temperature	Min. conductivity	Reference system
EMC 133 I	Plastic	120mm	Platinum disc	+/-2000mV	-5...80°C	100µS/cm	Ag/AgCl
EMC 173 I	Glass	120mm	Platinum disc	+/-2000mV	-5...80°C	50µS/cm	Ag/AgCl

Type	Electrical Material	Diaphragm	Pressure	Electrical connection	Connection	Field of application
EMC 133 I	Gel, 3 mol/L filled KCl	2 Ceramic diaphragm	max. 6bar	S7 coaxial plug head	Thread PG13,5	Fishkeeping, Sewage treatment, Swimming pool technology
EMC 173 I	Gel, 3 mol/L filled KCl	ring-shaped glass sleeve junction	max. 6bar	S7 coaxial plug head	Thread PG13,5	Drinking water, water-soluble varnish, Electroplating, Industrial water, Sewage treatment

AQUASENSO® Conductivity



LTG 1

Type	Shaft of the electrode	Length	Material of electrodes	Measuring range	Temperature	Electrical material	Diaphragm
LTG 1	Glas	120mm	Platinic, platinum plated	10µS/cm... 20mS/cm	-5...100°C	Gel, 3 mol/L KCl	ring-shaped glass sleeve junction

Type	Temperature sensor	Pressure	electrical connection	Connection	Field of application
LTG 1	PT1000	max. 6bar	VARIOPIN	Thread PG13,5	Water, Sewage treatment, Environmental- and Processing engineering

AQUASENSO® Chlorine



CS2

Type	Material	Measuring range	pH-Range	Temperature range
CS2	PVC, polycarbonate, stainless steel	0..2mg/L	4...12pH	0...45°C

Type	Flow through velocity	Pressure	Connecting	Dimensions	Field of application
CS2	recommended 30L/h	max. 0,5bar	Plug head, 4 core	d=25mm, length 220mm	Swimming pool technology, Drinking-, Cooling- and industrial water

AQUASENSO® Chlorinedioxid



CD 4

Type	Material	Measuring range	pH-Range	Temperature range
CD4	PVC, polycarbonate, stainless steel	0..2mg/L	1...11pH	0...45°C

Type	Flow through velocity	Pressure	Connecting	Dimensions	Field of application
CD4	recommended 30L/h	max. 0,5bar	Plug head, 4 core	d=25mm, length 220mm	Swimming pool technology, Drinking-, Cooling-, and Industrial water

Flow through fitting



AD 222



AD 82 CI



AD 92/20-RV

Type	Sensor port	Material	Sealant	Temperature range	Flow rate	Pressure limit	Connection
AD 222	2-4 Electrode ports/ Sensors with PG 13,5 thread	PVC	NBR	max. 60°C	max. 350 l/h	max. 6 bar	SA: hose connection DN 15 (DN 10) RV: screw connection DN 15 (DN 10) horizontal installation recommended
AD 82 CI	1 port pre-eminently for a membrane covered sensor for measurement of disinfectants with 1" shaft diameter and adjustable immersion length	PVC	-	max. 50° C	-	determined by the pressure limit of the sensor	DN 15 pipe thread port (optional) mounting pre-eminently in a vertical pipe with flow stream from down to the sensor membrane; sensor laterally up to 30° from vertical
AD 92/20-RV	1 port for insertion of a sensor with thread PG 13.5, diameter 12 mm and immersion length 120 mm	PVC	-	max. 50° C	-	up to 20° C max. 10 bars up to 40° C max. 5 bars up to 50° C max. 3.5 bars	DN 20 glue port (other pipe ports, flange ports, screw ports or hose ports are available) Mounting pre-eminently in a vertical medium pipe; sensor laterally up to 30° from vertical