

# AQUACON SIO2-01

Process analyzer for silicic acid ( $\text{SiO}_2$ ) with touchscreen

The AQUACON SIO2-01 process photometer is specially developed for the measurement of very low  $\text{SiO}_2$  concentrations in water. Measurement principle is the photometric determination of dissolved silicic acid after forming of a reduced  $\beta$ -silicomolybdo-acid complex. Main applications for the analyzer are the monitoring of the steam quality and the control of ion exchange plants.

The analyzer consists of a control unit with touchscreen and an analysis unit with measuring chamber, valve, dosing pumps and all required tube connections. The control unit includes a microprocessor which controls the automatic measurement incl. sampling, rinsing, reagent dosing and surveillance of the photodetection system. The analysis results can be used for the monitoring and control of a supervised process.

## Your advantages:

- ⇒ Automatic measurement incl. self test and drift compensation
- ⇒ Measurement range 1 – 100 ppb  $\text{SiO}_2$
- ⇒ High resolution (0,1 ppb)
- ⇒ Easy operation via touchscreen
- ⇒ Adjustable limit value and alarm value
- ⇒ Programmable analog output (0/4-20 mA), optional with USB port for data storage
- ⇒ Adjustable break time between two analysis
- ⇒ External start/stop of an analysis possible
- ⇒ No external calibration required.
- ⇒ External plug connections (IP65 protection) (for alarm relay, limit relay, analysis relays, external start/stop, analog output 0/4-20 mA)
- ⇒ Multi range power supply (110 – 230 Volt, 50 – 60 Hz) for variable use.
- ⇒ Including 2 polycarbonate wall cabinets (for control unit and analysis unit)



## Order informations:

AQUACON SIO2-01

Reagent SI-R 1001 (250 ml)

Reagent SI-R 1003 (500 ml)

Order No. 693 2732 02

Order No. 101 2735 01

Order No. 103 2735 01

## Technical Data

Current output	0/4 - 20 mA, max. load 500 ohm
Display	240 x 128 dots, touchscreen
Relays	1 x Alarm, potential-free 230 V/50 Hz, 3A 1 x Limit, potential-free 230 V/50 Hz, 3A 1 x Analysis state, potential-free 230 V/50 Hz, 3A
External Switching	potential-free contact, 18 V DC, ca. 4 mA
Power Supply	110 - 230 V -- 50/ 60 Hz
Power Consumption	approx. 16 VA
Dimensions	640 x 315 x 190 mm (H x W x D)
Protection	IP 65 (transmitter housing)
Connections	Plugs with circular connection 1,5 mm <sup>2</sup>
Temperature	5° to 45°C, at consumption of reagents within 6 months

Since it is company policy to continuously improve its product range, we reserve the right to make changes in the product design without notification to its users.

## Specifications

Parameter	Silicic Acid
Description	Microprocessor-controlled analyzer for the determination of dissolved silicic acid (SiO <sub>2</sub> ) in water.
Typical Applications	Monitoring and control of water de-ionisation. Monitoring and control of steam-water circuit in steam-generating plants.
Analysis Method	Photometric determination of the dissolved SiO <sub>2</sub> following the formation of the reduced β-molybdosilicic acid complex
Type	SIO2-01
Measuring Range	1 - 100 ppb SiO <sub>2</sub>
Resolution	0,1 ppb
Accuracy	2 % of end value
Reproducibility	0,5 ppb
Zero-point Stability	automatic adjustment
Number of Samples	1
Sample	Operating Pressure 0,1 - 10 bar Temperature 18 - 30 °C Sample Volume 25 ml per analysis (excluding rinsing) Sample Condition clear, with particles < 0.5 g/l ; < 50 µm Chemical Demands pH 4-8, PO <sub>4</sub> <sup>3-</sup> , NH <sub>3</sub> < Si Drain pressure free into open drain
Reagents	Number 2 Storage Temp. 10 – 30°C Usage/analysis 0,3/1,2 ml Reagent volume 250/500 ml Suitable for appr. 400 analysis
Analysis	Cycle (approx.) 13 min., incl. rinsing Sample interval 1 – 99 min or external start/stop