

AQUACON SIO2-01

Process analyzer for silicic acid (SiO₂) with touchscreen

The AQUACON SIO2-01 process photometer is specially developed for the measurement of very low SiO₂ concentrations in water. Measurement principle is the photometric determination of dissolved silicic acid after forming of a reduced β-silico-molybdo-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 SiO₂
- ⇒ 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 relais, 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 ²
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 ₂) 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 ₂ following the formation of the reduced β-molybdosilicic acid complex
Type	SIO2-01
Measuring Range	1 - 100 ppb SiO ₂
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 ₄ ³⁻ , NH ₃ < 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