iotronic
ELEKTROGERÄTEBAU GMBH

AQUACON GH05/GH10/GH20

Process analyzers for total water hardness

The AQUACON GH process titrators are developed for the measurement total hardness in boiler water, cooling water or potable water. Measurement principle is a complexometric titration of the water hardness with a special combination reagent which includes a buffer solution, the titrant solution and a hardness specific indicator. A photodetection system determines the titration end point (color change from red to blue). The result is displayed on the touchscreen as ppm $CaCO_3$. Main applications for the analyzer are the survey and monitoring of water treatment plants and the analysis of drinking water.

The analyzer consists of a control unit with touchscreen and an analysis unit with measuring chamber, valve, dosing pump (incl. stepper motor) and all required tube connections. The control unit includes a microprocessor which controls the automatic measurement incl. sampling, rinsing, titration 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 ranges:

Aquacon GH05: 4 – 70 ppm $CaCO_3$

Aquacon GH10: 30 – 350 ppm $CaCO_3$

Aquacon GH20: 50 – 900 ppm $CaCO_3$

⇒ Easy operation via touchscreen

⇒ Adjustable limit value and alarm value

⇒ Programmable analog output (0/4-20 mA)

⇒ External start/stop of an analysis possible

⇒ No external calibration required.

⇒ 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 GH05	(4 – 70 ppm))	Order No. 693 2764 01
AQUACON GH10	(30 – 350 ppm)	Order No. 693 2765 01
AQUACON GH20	50 – 900 ppm)	Order No. 693 2766 01
Option Cleaning pump		Order No. 125 0012 01
Reagent GH-B2500 (for GH05)	(500 ml)	Order No. 101 2764 01
Reagent GH-B3000 (for GH10, GH20)	(500 ml)	Order No. 101 2765 01

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Technical Data

Current output	0/4 - 20 mA, max. load 500 ohm
Display	240 x 128 dots, touchscreen
Relay	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	Total Hardness		
Description	Microprocessor-controlled analyzer for the determination of hardness in water		
Typical Applications	Monitoring and control of water treatment, water blending and potable water plants		
Analysis Method	Complexiometric titration of the total hardness using a combined reagent, comprising titer and hardness indicator		
Type	GH05	GH10	GH20
Measuring Range	4-70 ppm	30-350 ppm	50-900 ppm
Resolution	0,7 ppm	7 ppm	10 ppm
Accuracy	5 % of end value		
Reproducibility	3 % of end value		
Zero-point Stability	automatic adjustment		
Number of Samples	1		
Sample			
Operating Pressure	0,1 - 10 bar		
Temperature	5 - 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 - 10, Fe < 3 ppm, Cu < 0,2 ppm, CO_3^{2-} < 10 mmol/L		
Drain	pressure free into open drain		
Reagents			
Number	1, (optional 2)		
Storage Temp.	5 – 20 °C		
Usage/analysis	hardness dependent		
Reagent volume	500 ml		
Suitable for	hardness dependent		
Analysis			
Cycle (approx.)	13 min., incl. rinsing		
Sample interval	1 – 99 min or external start/stop		
Optional	2^{nd} pump (for cleaning solution)		