

HYDROGUARD

HG 602 Chlorine Analyzer



Water Intelligence Made Simple

Amperometric Multi-Parameter Analyzer for Water Analysis and Control

HG602 is a reliable amperometric analyzer for reagentless measurements of residual chlorine in water samples.

HG602 is a customized multi-parameter analyzer that allows choosing up to 5 different parameters in each system, as well as providing versatile chlorine measurement range for various applications.



System Highlights and Benefits

4 different chlorine electrodes available:

- ▼ Free chlorine standard range 0.05-10 ppm or
- ▼ Free chlorine low range 0.03-5 ppm or
- ▼ Free chlorine high range 5-200 ppm or
- ▼ Total chlorine standard range 0.05 - 10 ppm
- ▼ pH, Temp, ORP and Conductivity (Optional)
- ▼ Reagentless chlorine measurement
- ▼ Reliability and accuracy

Reduced Total Cost of Ownership

Customized multi-parameter analyzer

Each HG602 analyzer can measure up to 5 parameters - Chlorine, pH, Temp, ORP and Conductivity - leading to major savings and eliminating the need to purchase separate analyzers.

Versatile measurement range for various applications

HG602 analyzer can work with various residual chlorine electrodes, to allow versatile measurement range according to each application's requirements and every customer's need.

Communication and Control

HG602 analyzer includes standard RS 485 digital output and up to 6 optional analog outputs. Each analyzer includes 6 built-in relays that can be used for control or alarm.

Quick Installation

HG602 analyzer arrives fully assembled on a mounting board, and already includes pre-filtration and pressure regulator. Just connect it to feed and drain and start measuring.



Technical Specification



MEASURED PARAMETERS

Chlorine electrodes (One electrode for analyzer)	Free Chlorine standard range 0.05-10 ppm or Free Chlorine low range 0.03-5* ppm or Free Chlorine high range 5-200* ppm or Total Chlorine standard range 0.05-10 ppm
Flow Cell	Chlorine, pH, Temp, ORP
External connection	Conductivity

FREE CHLORINE (FCL) MEASUREMENT

Free Chlorine Electrode	Passive-operated Chlorine sensor with gold cathode & silver/silver chloride anode
Measuring Range	0.05-10 ppm (standard)
Accuracy	± 2 % or ± 0.01 ppm whichever is greater
Minimum Detection Limit	0.05 ppm
Resolution	0.01 ppm
Repeatability	1% span
Response time	Approx 2 min
pH operation range	4 to 8
Body material	PVC
Membrane material	PTFE

TOTAL CHLORINE (TCL) MEASUREMENT

Total Chlorine Electrode	Chlorine sensor with membrane-covered, amperometric 3-electrode system, with greatly reduced pH-dependence
Total chlorine measurement range	0.05-10 ppm
Accuracy	± 4 % or ± 0.01 ppm whichever is greater
Minimum Detection Limit	0.05 ppm
Resolution	0.01 ppm
Repeatability	1% span
Response time	Approx. 2 min
pH operation range	4 to 12
Body material	PVC-U
Membrane material	Microporous hydrophilic membrane

pH MEASUREMENT

Electrode	Ceramic diaphragm and gel filling
Measurement Range	0 to 14
Input impedance	0.5 x 1.12k Ω

ORP (REDOX) MEASUREMENT**

Sensor	Ceramic diaphragm and gel filling
Measurement range	0 to 2000 mV

TEMPERATURE MEASUREMENT

Sensor	PT-100
Measurement range	0°C to 100°C (32°F to 212°F)

FLOW MEASUREMENT (Main line)

Measurement range	0-1000 Cu.m/h (0-11 Mgpd)
Frequency input	Via I/O card
Or 4-20 mA input	Via NTU card

MECHANICAL DATA & DIMENSIONS

Dimensions (controller) (L x W x D)	340 x 220 x 120 mm (14.0" x 7.0" x 5.0")
Dimensions (Mounting board) (L x W x D)	800 x 550 x 5 mm (31.5" x 21.7" x 0.2")
Weight (approx.)	9 kg (22 lbs.)
Display	5.5" graphic monochromatic display
Cable entries	PG 9 cable Glands
Enclosure rating	IP 65 (NEMA 4 equivalent)

ANLYZER FLOW MONITORING

Flow sensor	Inductive proximity switch
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ELECTRICAL CONNECTION

Power supply	100-115 VAC, 50/60 Hz, 1.0 Amp 200-230 VAC, 50/60 Hz, 0.5 Amp
Power consumption	Approx. 60 VA
Power supply for RTC	3.6V Lithium Battery memory (CR2032)

OPERATIONAL REQUIREMENTS

Sample and drain connection	Pressurized sample inlet and gravity drain
Inlet Pressure	0.35-1 bar (5-14.5 psi)
Outlet pressure (Closed cell)	up to 0.9 bar (13 psi)
Measuring cell flow rate	35-60 l/h (9-16 gph)
Ambient temperature	2°C to 50°C (35.6°F to 122°F)
Sample temperature	1°C to 45°C (33.8°F to 113°F)

DATA OUTPUT

Digital communication	RS-485 Modbus*** or Blue I protocol
Local I/O	2 Standard 4-20 mA outputs 4 or 6 Optional 4-20 mA outputs

SECURITY

Operation password	Yes
Technician password	Yes

RELAYS ****

Cl (Chlorine) set point 1	250 VAC/DC 8 Amp max
Cl (Chlorine) set point 2	250 VAC/DC 8 Amp max
pH1	250 VAC/DC 8 Amp max
Turbidity control	250 VAC/DC 8 Amp max
Temperature control	250 VAC/DC 8 Amp max
General Alarm	250 VAC/DC 8 Amp max

CHLORINE CONTROL #1

Control function	Programmable P (Proportional) factor
Relay function	Pulse length proportional controller Pulse frequency proportional controller

CHLORINE CONTROL #2

Control function	On/Off
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pH VALUE CONTROL

Control function	Programmable P (Proportional) factor
Relay function	Pulse length proportional controller Pulse frequency proportional controller

ORP CONTROL

Control function	High alarm as chlorine override
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* Contact manufacturer for additional data on 0-5 and 5-200 ppm free chlorine electrode

** ORP measurement is available for HG602 Free Chlorine only

*** Modbus protocol is available for HG602 Free Chlorine only

**** Verify relays rating for analyzers purchased prior to 2016