

HYDROGUARD HG 202

Amperometric Multi-Parameter
Controller for
Swimming Pools & Spas





HYDROGUARD HG 202

Adaptable Multi-Parameter System

The HYDROGUARD™ HG - 202 is a high-precision solution for automated monitoring and dosing of free chlorine and pH in swimming pools. The HG - 202 provides reliable measurement and control, with built-in compensation for pH and temperature. It is as simple as plug and play.

Versatile Chlorine Measurement & Control

The HG - 202 accurately disinfects the pool using a wide range of chemicals, such as calcium/sodium hypochlorite disinfectants. Its many safety features ensure smooth and secure operation.

Flexible Options

Going beyond its powerful standard features, the HG - 202's performance can be enhanced with optional measurements including a low-range turbidity sensor, flow meter and redox control.

Wireless Communication

The HG - 202 wirelessly transfers data directly to the user's computer or mobile phone, providing real-time data and alarms. Manage pool conditions – anytime, anywhere.

Proven Results

Based on HYDROGUARD™'s proven platform, the HYDROGUARD™ HG - 202 is guaranteed to reduce pool maintenance time and increase pool owner satisfaction.





Up to 5 parameters in one unit



Reliable measurement and control



Built-in compensation for pH and temperature



As simple as plug and play



automated monitoring and dosing



Intuitive user-friendly menus and procedures



Standard parameters

- ▼ Free chlorine: 0.05-10 ppm
- ▼ pH: 4-10
- ▼ Temperature: 0-100 °C

Optional parameters & featuresparameters

- ▼ Turbidity (NTU)
- ▼ Redox (ORP)
- ▼ Flow meter
- ▼ Temperature control
- ▼ Wireless communication

Mechanical

Dimensions (LxWxH) - Controller	220 x 330 x 125mm / 9.1 x 13 x 5 Inch
Dimensions (LxWxH)- mounting board	800 x 550 x 5 mm / 31.5 x 21.7 x 0.2 inch
Weight	8.5 kg (18.7 lbs)

Electrical

Power supply	100 – 240VAC 50/60Hz
Maximum power consumption	Up to 60VA
Power supply for RTC	3.6V Lithium Battery

Relays

Chlorine set point 1	110-240VAC 8A Max / 12VDC
Chlorine set point 2	110-240VAC 8A Max / 12VDC
pH (Acid)	110-240VAC 8A Max / 12VDC
Turbidity (Coagulant)	110-240VAC 8A Max / 12VDC
General Alarm	110-240VAC 8A Max / 12VDC
Temp control	110-240VAC 8A Max / 12VDC

Communication

Analog input	1 x 4/20 mA (for flow meter)
Digital input	1 (for ext. flow switch)
Analog output	up to 4 x 4/20 mA
Digital output	RS 485 (Modbus or BIWT protocol)
Cellular Modem	VIA RS-485 (BIWT protocol)

Display

2 line 24 character LCD with backlight
2 x 7 Segments Red display 3 digits

Measured parameters

Temp, pH, ORP, Turbidity, Free Chlorine, Flow rate*

Chlorine electrode

Measured Method	Amperometric
Parameter	Free Chlorine
Measuring Range (Chlorine)	0.05 - 10 ppm as Cl ₂
pH working range	4-8

Turbidity meter

Sensor	White LED Light (90° and 180°)
Measuring Range	0-20 NTU
Accuracy	4% or ±0.05 (the larger of the two)

pH electrode

Electrode	Ceramic diaphragm and gel filling
Measurement Range	4-10

ORP (redox) electrode

Sensor	Ceramic diaphragm and gel filling
Measurement range	0 to 1000 mV

Temperature probe

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

Operational requirements

Back pressure	0-0.9 bar (13 psi)
Inlet Pressure range	0.5 - 1 bar (7.25-14.5 psi)
Ambient temperature	2°C to 50°C (35.6°F to 122°F)
Sample temperature	10°C to 45°C (50°F to 113°F)
Flow rate	45 to 95 LPH (12 to 25 GPH)

Ext flow measurment (main line)

Measurement range	0-1000 m ³ /h (0-11 Mgpd)
Frequency input	Via I/O card
4-20 mA input	Via NTU card

pH (acid) relay

Control function	Proportional or On/Off
Relay function	Pulse length proportional controller Pulse frequency proportional controller
Proportional band	Yes

Chlorine relay #1

Control function	Proportional or On/Off
Characteristics	Normal/Inverted
Proportional band	Yes
Relay function	Pulse length proportional controller Pulse frequency proportional controller

Chlorine relay #2 / turbidity / temperature

Control function	On/Off
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Certifications

CE	EN 61010-1:2001 EN 61326-1
FCC	47 CFR Part 15 SUB B
UL	CAN/CSA-C22.2 No. 61010-1-12U
IP	IP55

* Flow meter (by customer) can be integrated with controller