



HMC200 SERIES MULTI-PARAMETER CONTROLLER

KEY FEATURES

- pH, ORP, conductivity & flow parameters available
- Highly visible large backlit LCD display
- Flexible and easy calibration, including multi-point conductivity calibration for acids and bases
- 4-20mA process output with range scaling and PID Control
- Universal mounting hardware for surface and panel mounting
- Compatible with Hayward HMC differential pH/ORP sensors, 500-series combination style pH/ORP sensors, HMC200 Series conductivity sensors, and most pulsed flow sensors
- Two 4-20 mA output, with range scaling and temperature or flow totalizer option
- Three control/alarm relays with temperature or flow totalizer output option

APPLICATIONS

- Municipal water and wastewater treatment
- Industrial and municipal waste treatment and Neutralization
- Industrial process control, e.g. plating, food and beverage, chemical processing, pulp & paper, mining, food and beverage
- Fume scrubbers
- Aquariums and Aquaculture
- HVAC, cooling towers and boilers

PRODUCT DESCRIPTION

The HMC200 series is designed to be the most flexible, easy to use, and easy to see multi-parameter controller on the market.

Four Parameters

Select the parameter you wish to measure from the easy-to-use LCD menu on the inside front cover. Choose Conductivity, pH, ORP or Flow. The user interface was designed under the principle that the user should not need to read the manual.

Three Relays

The HMC200 provides control of external devices using its three independent control and alarm relays. Each relay has adjustable high, low, and in range set-points, cycle timer with adjustable on and off times. This feature enables tighter control of batch processes by eliminating chemical overshoot. Third relay can be activated by temperature or flow totalizer reading as well.

Analog Outputs

The HMC200 provides two isolated, independent and scalable 4-20 mA outputs.

One 4-20 mA output can be configured for PID control. Most users will only use proportional control but the integral and derivative functions are there for advanced control.

The HMC200 contains one 4-20 mA output plus the option of PID control.

Zero Cards

The HMC200 comes complete. There are no extra costs associated with buying boards for different sensors, or buying components to achieve NEMA 4X.

Enclosure

The HMC200 is packaged in a rugged NEMA 4X polycarbonate enclosure making it ideally suited for indoor and outdoor heavy-duty applications. A mounting kit is included for surface and panel mounting. The enclosure outline makes panel-mount cutouts simple. Pipe mounting kits are available.

One Big Display

The HMC200 features a large LCD display that can be seen from a distance. The keypad allows easy entry of menu items and numeric values.

Calibration

No other controller offers the same combination of flexibility and ease for calibration. The process value is visible during calibration so the user knows when it has stabilized. Calibration of pH can be with 2 or 3 points. Calibration of conductivity can take as many as 16 points so acids and bases can be measured through their conductivity.

All Calibration data is stored.

HMC200 Series Multi-Parameter Controller

pH, ORP, Conductivity, Flow

TECHNICAL INFORMATION

PROBE PARAMETERS

	pH	ORP	Conductivity	Flow
Sensor	6-Wire Differential or Combination	6-Wire Differential or Combination	4-Wire contacting: Any cell constant between 0.01 and 100	Pulse output: Paddle-wheel, Magmeter
Temperature Elements	100, 1000 Ω RTD 300, 3000 Ω NTC or none	100, 1000 Ω RTD 300, 3000 Ω NTC or none	100, 1000 Ω RTD 300, 3000 Ω NTC	n/a
Sensor Input	-600 to +600 mV	-999 to +999 mV	0 to 9999 Ω	0 to 2000 Hz
Measurement Range (Process)	0 to 14 pH	-999 to +999 mV	0.055 to 500,000 $\mu\text{S}/\text{cm}$ (Depending on the cell constant)	0 to 999 in any units
Measurement Range (Temperature)	-20 to 150 $^{\circ}\text{C}$	-20 to 150 $^{\circ}\text{C}$	-20 to 150 $^{\circ}\text{C}$	Flow Totalizer 0 to 999 in any units
Temperature Compensation	Automatic -20 to 150 $^{\circ}\text{C}$	Display temperature	Automatic or Manual -20 to 150 $^{\circ}\text{C}$	Display Flow Totalizer
Calibration Modes	pH: Automatic or Manual 2 or 3 points	ORP: Manual 1 point	Up to 16 points	K factor input

OUTPUTS

Analog	Two 4-20 mA outputs Scalable 4-20mA with PID (Process) Scalable 4-20mA (Process or Temperature) Optically isolated. Max Load - 800 Ω
Digital	RS485 for diagnostic use only
Relays	3 Dry contact relay 10A @ 120/240 VAC or 8A @ 30 VDC (Resistive Load) 5A @ 120/240 VAC or 4A @ 30 VDC (Inductive Load)
Relay Modes	Rising/Falling/In Range. Cycle On/Off Options: Relay Delay, Cycle, Overfeed Timer, Override One relay can be triggered by temperature or flow totalizer.

RATINGS

Ingress Protection	NEMA 4X
Electrical	ETL (US and Canada) and CE compliant and pending
Max. Power Input	0.2 A @ 115 VAC or 15 W
Temperature	-20 to 70 $^{\circ}\text{C}$
Humidity	0 to 90% Relative Humidity, non-condensing

PHYSICAL

Mounting	Wall mount, panel mount with kit provided and pipe mount with optional kit.
Dimensions	Front cover: 5.5" x 5.5" (14 cm x 14 cm). Depth: 5" (13 cm)
Power	120/240 VAC, 50 or 60 Hz
Weight	2 lbs
Protection	NEMA 4X
Panel Cut-out	5.4" x 5.4" (138 x 138 mm)



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