

Engineering Specification

MPX

Dual Input Controller

The MPX is the latest addition to the HF scientific controller line. This new dual channel controller will monitor and control up to 2 parameters simultaneously. pH, ORP, Conductivity, and flow are supported and we added two new input options; ISE and 4-20mA support.

Two Inputs

Now with two channels the MPX offers inputs on both channels for pH, ORP, conductivity, and ISE, with flow available on channel one. Channel two can also accept a 4-20mA input which can work with any sensor outputting a 4-20mA signal.

Five Relays

The MPX provides control of external devices using its five 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. All relays can be activated by temperature or flow totalizer reading as well. The fifth relay can be common for multiple parameters.

Analog Outputs

The MPX provides three isolated, independent and scalable 4-20 mA outputs.

All 4-20 mA outputs can be configured for PID control and can be set for process or temperature.

Zero Cards

The MPX comes equipped with all components and can be set up in 10 minutes. There are no extra costs, i.e. buying boards for different sensors, or buying components to achieve NEMA 4X.

Enclosure

The MPX is packaged in a rugged NEMA 4X polycarbonate enclosure making it ideally suited for indoor and outdoor 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 MPX features a backlit LCD display can be seen from a distance. The keypad allows easy input too 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 settled down. Calibration of pH can be with 1, 2, or 3 points. Calibration of conductivity can take as many as 16 points so acids and bases can be measured through their conductivity.



Features

- pH, ORP, conductivity and DOX parameters available on both channels
- Input channel 2 can accept a 4-20mA sensor allowing for any number of parameters
- Flexible and easy calibration, including multi-point calibration for conductivity
- 1 point calibration for pH allowing for grab samples.
- Five control/alarm relays with temperature or flow totalizer control option
- Three 4-20mA output with range scaling and PID Control
- Temperature or flow totalizer output
- Universal mounting hardware for surface, and panel.
- Highly visible large backlit LCD display

Applications

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

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Technical Data

Call customer service if you need assistance with technical details.

Probe Parameters

Sensor	DPHX	DOX	ORPX
Temperature Elements	Pt: 1000 RTD	Pt: 1000 RTD	Pt: 1000 RTD
Sensor Input	-600 to 600 mV	Modbus	-999 to 999 mV
Process Measurement Range	0 – 12 pH	0-60 ppm	-999 to 999 mV
Temperature Measurement Range	-20–70°C	-5–50°C	-20 to 120 0C
Temperature Compensation	Automatic, manual or none	Automatic	n/a
Calibration Modes	1, 2 or 3 points	1 or 2 points	1 point
	Automatic (4,7,10)	Automatic (100%sat, 0 % sat)	Single point. Manual
	Manual (User defined Values)		

Outputs

Analog	Three 4-20 mA outputs Optically isolated. (Max Load - 800 Ω) Scalable 4-20mA with PID (Process or Temperature)
Relays	2 SPDT 8A @ 120 VAC or 30 VDC (resistive) 4A @ 120 VAC or 30 VDC (inductive) 3 SPST 5A @ 250 VAC or 30 VDC (resistive load) 2A @ 250 VAC or 30 VDC (inductive load)
Relay Modes	Rising / Falling / Range. Options: Relay Delay, Cycle, Overfeed Timer, Override All relays can be triggered by process temperature or flow totalizer.

Ratings

Electrical	TUV SUD (safety)
Max. Power Input	0.3 A @ 115 VAC or 20 W
Temperature	-20 to 70°C
Humidity	0 to 90% Relative Humidity, non-condensing

Physical

Mounting	Wall mount, panel mount with kit provided, 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
Ingress Protection	NEMA 4X
Panel Cut-out	5.4" x 5.4" (138 x 138 mm) full DIN



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