



Description

The 2250 series is built on the legacy of the Shark and 2200 controllers. Like its predecessors it is designed to be the most flexible, easy to use, and easy to see multi-parameter controller/transmitter 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 (2250 only)

The 2250 provides control of external devices using its three independent control relays. The third relay is provided to act as an alarm relay or a third process control relay. Each relay has both adjustable high and low on set-points and cycle timer, with adjustable on and off times. This feature enables tighter control of batch processes by eliminating chemical overshoot.

Analog Outputs

The 2250 provides two isolated, independent and scalable 4-20 mA outputs.

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

The 2250 TX contains one 4-20 mA output plus the option of PID control.

Zero Cards

The 2250 comes complete. There are no extra costs associated with buying boards for different sensors, or buying components to achieve NEMA 4X. A mounting kit is included for surface and panel mounting. The enclosure outline makes panel-mount cut-outs simple.

Enclosure

The 2250 is packaged in a rugged NEMA 4X polycarbonate enclosure making it ideally suited for indoor and outdoor heavy-duty applications.

One Big Display

The 2250 features a backlit LCD display can be seen from a distance. The keypad allows easy entry of menu items and numeric values. The 2250 TX features the same large display but without a backlight.

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 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.

Features

- pH, ORP, conductivity & flow parameters available.
- Highly visible back-lit LCD display.
- Flexible and easy calibration, including multi-point conductivity calibration for acids and bases.
- 2250: Two 4-20 mA outputs with range scaling. Three control relays.
- 2250TX: Loop powered with as little as 16 VDC @ 4 mA..
- PID Control.
- Universal mounting hardware provided for surface, panel and pipe mounting.
- Compatible with AquaMetrix models P/R60 differential pH/ORP sensors, 500 series combination style pH/OR sensors, MS/AM series conductivity cells, and most pulsed flow sensors.

Applications

- Industrial process control, e.g. plating, food and beverage, chemical processing, pulp & paper, mining, food and beverage
- Municipal Water and wastewater treatment
- Industrial and Municipal Waste treatment and Neutralization
- Fume Scrubbers
- HVAC, cooling towers and boilers.

2250 pH, ORP, Conductivity, Flow Controller / Analyzer

Technical Data

Probe Parameters				
	pH	ORP	Conductivity	Flow
Probe	6-Wire Differential or Combination	6-Wire Differential or Combination	Contacting.. Any cell constant between 0.01 and 50	Pulse output:, Paddle-wheel, Magnetic Flow
Temperature Elements	100, 1000 Ω RTD 300, 3000 Ω NTC	100, 1000 Ω RTD 300, 3000 Ω NTC	100, 1000 Ω RTD 300, 3000 Ω NTC	n/a
Sensor Input	-600 to +600 mV	-1999 to +1999 mV	Cond: 0 to 9999 Ω Temp: 0 to 9999 Ω	0 to 2000 Hz
Measurement Range	0 to 14 pH 0 to 100 °C	-1999 to +1999 mV	0.055 to 100,000 μS/cm (dependent on cell constant)	0 to 999 in units: l, cm³, ft³, m³, sec, min,hr
Temperature Compensation	Automatic -20 to 150 °C	n/a	Automatic or Manual -20 to 150 °C	n/a
Calibration modes	pH: Automatic or Manual Temp: Manual	ORP: Manual Temp: Manual	Cond: Mamual Cell constant input Temp: Manual	K factor input
Outputs				
Analog	2250: 2 x 4-20 mA, 1-Process, 2-Process/Temp. Optically isolated. Scalable. Max Load - 800 Ω		2250 TX: 4-20 mA (Process) Optically isolated. Scalable. Max Load - 800 Ω	
Digital	RS485 for diagnostic use only			
Relays	2250: 3 x 5 A@ 120/240 VAC or 28 VDC NO or NC		2250 TX: None	
Relay Modes	2250: Rising/Falling. Cycle On/Off Options: Relay Delay, Overfeed Timer, Override		2250 TX: n/a	
Ratings				
Ingress Protection	NEMA 4X			
Electrical	ul, cUL, and CE compliant and pending			
Max. Power Input	2250: 0.2 A @ 115 VAC or 15 W		2250 TX: 20 mA @ 24 VDC	
Temperature	-20 to 70 °C			
Humidity	0 to 90% Relative Humidity			
Physical				
Mounting	Wall mount, panel mount with kit provided. DIN Rail mount with optional kit			
Dimensions	Front cover: 5.5"x5.5" (14 cm x 14 cm). Depth: 5" (13 cm)			
Power	2250: 120/240 VAC, 50 or 60 Hz		2250 TX: 16-24 VDC	
Weight	2 lbs			
	NEMA 4X)			
Panel Cut-out	5.4 x 5.4" (138 x 138 mm/			