



## Description

The AM-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 (AM-2250 only)

The AM-2250 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 AM-2250 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 terms are there for advanced control.

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

### Zero Cards

The AM-2250 comes complete. There are no extra costs associated with buying boards for different sensors, or buying components to achieve NEMA 4X.

### Enclosure

The AM-2250 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 and DIN-rail (AM-2250TX only) mounting kits are available.

### One Big Display

The AM-2250 features a backlit LCD display can be seen from a distance. The keypad allows easy entry of menu items and numeric values. The AM-2250TX 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

**AM-2250TX: 24V loop powered transmitter:**

- pH, ORP, conductivity & flow parameters available
- Highly visible large 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, panel and pipe mounting
- Compatible with AquaMetrix models 60-series differential pH/ORP sensors, 500-series combination style pH/OR sensors, AS/AM-series conductivity sensors, and most pulsed flow sensors

**AM-2250: 120/240VAC controller bringing additional functionality:**

- Second 4-20 mA output with range scaling and temperature or flow totalizer output option
- Three control/alarm relays with temperature or flow totalizer output option
- Backlit LCD display

## 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

# AM-2250 Controller and AM-2250TX Transmitter for pH, ORP, Conductivity, Flow

## Technical Data

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 μS/cm (Depending on the cell constant)	0 to 999 in any units
Measurement Range (Temperature)	-20 to 150 °C	-20 to 150 °C	-20 to 150 °C	Flow Totalizer 0 to 999 in any units
Temperature Compensation	Automatic -20 to 150 °C	Display temperature	Automatic or Manual -20 to 150 °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	AM-2250: two 4-20 mA outputs Scalable 4-20mA with PID (Process) Scalable 4-20mA (Process or Temperature) Optically isolated. Max Load - 800 Ω		AM-2250TX: one 4-20 mA output Scalable 4-20mA with PID (Process) Optically isolated. Max Load - 800 Ω	
Digital	RS485 for diagnostic use only			
Relays	AM-2250: 3 Dry contact relay 10A @ 120/240 VAC or 8A @ 30 VDC (Resistive Load) 5A @ 120/240 VAC or 4A @30 VDC (Inductive load)		AM-2250 TX: None	
Relay Modes	AM-2250: Rising/Falling/In Range. Cycle On/Off Options: Relay Delay, Overfeed Timer, Override One relay can be triggered by temperature or flow totalizer.		AM-2250TX: n/a	
Ratings				
Ingress Protection	NEMA 4X			
Electrical	ETL (US and Canada) and CE compliant and pending			
Max. Power Input	AM-2250: 0.2 A @ 115 VAC or 15 W		AM2250TX: 20 mA @ 24 VDC	
Temperature	-20 to 70 °C			
Humidity	0 to 90% Relative Humidity, non-condensing			
Physical				
Mounting	Wall mount, panel mount with kit provided. DIN rail (AM-2250TX only) and pipe mount with optional kit			
Dimensions	Front cover: 5.5"x5.5" (14 cm x 14 cm). Depth: 5" (13 cm)			
Power	AM-2250: 120/240 VAC, 50 or 60 Hz		AM-2250TX: 16-32 VDC (24VDC nominal)	
Weight	2 lbs			
Protection	NEMA 4X			
Panel Cut-out	5.4" x 5.4" (138 x 138 mm)			