

pH Indicator/Controller/Transmitter

Benefits :

Enhanced Accuracy:

Ensure high precision in pH measurements, essential for critical applications.

User-Friendly

Interface: Simplified operation with intuitive controls and clear display.

Consistent

Performance: Automatic temperature compensation provides reliable readings under varying conditions.

Reduced Downtime:

Quick and easy calibration minimizes interruptions in workflow.

Robust and Reliable:

Durable construction ensures long-term performance in harsh environments.

Seamless Integration:

Compatible with SCADA systems for centralized monitoring and control.

Cost Efficiency:

Low maintenance requirements and reliable performance reduce operational costs.

For quotations/ queries, contact us at
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controller

Product Overview

The Accumax Instruments pH Analyzer is a cutting-edge instrument engineered for superior accuracy and reliability in pH measurement across a broad range of applications. Designed to meet the rigorous demands of industrial and laboratory environments, this pH analyzer offers a suite of advanced features that streamline operations and ensure precise monitoring.

With its high-precision pH sensing capabilities, the Accumax pH Analyzer delivers results with an impressive accuracy of ± 0.1 pH, making it ideal for applications where precision is paramount. The device covers a comprehensive pH measurement range from 0 to 14, accommodating diverse testing needs.

Working Principle

The pH analyzer operates based on the principle of electrochemical potential difference. It consists of two primary components: a pH electrode and a reference electrode.

1. **pH Electrode:** The pH electrode, typically a glass electrode, is sensitive to hydrogen ion concentration in the solution. When immersed in the solution, it generates an electrochemical potential proportional to the hydrogen ion activity (pH) of the solution.
2. **Reference Electrode:** The reference electrode, often an Ag/AgCl or calomel electrode, provides a stable reference potential against which the pH electrode's potential is measured.
3. **Glass Bulb:** This bulb is made of a special glass membrane that is permeable to hydrogen ions (H⁺). The permeability changes based on the concentration of H⁺ ions in the solution being measured.



pH Electrode

The potential difference between the pH electrode and the reference electrode is measured by the analyzer's electronic circuitry and converted into pH units. This measurement is displayed on the device's screen. The analyzer also incorporates automatic temperature compensation to adjust the pH reading based on the solution's temperature, ensuring accuracy under varying conditions.



4-20 mA
Output



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Key Features

- **High Accuracy:** Provides precise pH measurements with an accuracy of ± 0.01 pH.
- **Wide Measurement Range:** Capable of measuring pH levels from 0 to 14.
- **Temperature Compensation:** Automatic temperature compensation for accurate readings under varying temperature conditions.
- **Digital Display:** Large, backlit LCD display for easy readability in all lighting conditions.
- **Easy Calibration:** One-touch calibration with automatic buffer recognition.
- **Durable Construction:** Rugged, waterproof housing suitable for harsh industrial environments.
- **Communication:** RS485 Modbus, 4-20mA current output communication for seamless integration with SCADA systems.

Technical Specifications

Measurement	pH/Temp.
pH Range	0-14 pH
pH Resolution	0.01 Digit
pH Accuracy	0.10 pH
I/P impedance	10^{12} Ohms
Temp range	0 to 160 C
Temperature resolution	1 Digit
Temp. Accuracy	+/- 0.5% Of F.S
Temp Compensation	Auto/ Manual
Temp Sensor I/P	Pt-100 RTD (2 wire connection)
Display	16 * 2 LCD
User Interface	4 tactile Buttons
Calibration	pH Buffer. User selectable- up to 3 calibration points
Error indication	Buffer Out of range error
	Slope error/sensor error
Relay o/p	2 relay
Control set point	Two set points (high and low)
Output	RS-485 Modbus / 4-20 mA
Connection	Terminal
Operating Environment	0-50 °C
Power Supply	85 - 300VAC 50/60Hz or 24VDC +/- 2VDC
Dimensions	96x96x85 mm
Type	Panel mount