

Automatic Online PH Monitor

YK-PH611



The fully automatic online pH monitor and control system is an intelligent analytical control device that integrates high-precision pH measurement with automatic micro-addition liquid adjustment. The system employs a high-stability pH composite electrode as its core detection component, coupled with a high-precision micro-injection pump, to achieve continuous monitoring of solution pH, precise sample addition, and closed-loop regulation. This enables the measured system's pH to be rapidly and stably maintained at the target set value.

The device supports multi-pump collaborative control and multi-channel independent operation, and can be widely applied in laboratory analysis, online process control, chemical solution preparation, biopharmaceuticals, environmental water treatment, and other fields.

I. Precise · Stable · Constant Target Value

The core advantage of this system is the coordinated control of pH precision and sample addition accuracy.



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- The use of low-impedance high-precision pH composite electrodes ensures rapid response and minimal drift, guaranteeing the authenticity and reliability of pH data acquisition.
- Based on real-time pH measurement results, the system automatically calculates the required acid or alkali dosage.
- Perform small-step, controllable sample addition using a microinjection pump to avoid over-pumping.
- **Establish closed-loop control logic to maintain pH levels within the target range**

Even under conditions of strong solution buffering, intense reactions, or complex operating conditions, stable regulation and precise control can still be achieved.

II. Fully Automated Liquid Filling Control

The device employs a high-precision micro-injection pump as the liquid delivery actuator:

- Supports free selection of various syringe and dispensing valve specifications
- Single or multiple pumps can operate independently or in series for coordinated operation.
- Both the liquid addition rate and volume can be precisely controlled through programming.
- The fluid only contacts the syringe and tubing to avoid cross-contamination.

The system automatically adjusts the liquid addition strategy based on the pH deviation, achieving dual control effects of rapid response and precise correction.

III. Easy Operation · Intelligent Control

- 8-inch touch display with integrated industrial design
- Chinese interface, set values and real-time measurement values are displayed synchronously
- Free upper and lower limits, automatic response when exceeded
- Supports both static detection and online continuous monitoring modes

Users only need to set the target pH to achieve a complete control process of automatic monitoring → automatic sample addition → automatic stabilization.

IV. Data Management and System Integration

- Supports multiple communication methods, including ASCII, custom protocols, and Modbus
- Compatible with systems such as LIMS and MES
- Measurement data and liquid addition records can be uploaded in real time or stored locally.
- Supports formula storage, remote invocation, and batch management

It can meet the requirements of laboratory data traceability and industrial process informatization.



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V. Specification data

Items	parameter
pH measuring range	0 ~ 14
pH certainty of measurement	±0.01
Response time	≤ 1 s
Temperature compensation	Automatic temperature compensation
Upper and lower limit settings	Custom settings
Alert feature	Fluid deficit & beyond limits
Applicable temperature of electrode	0 ~ 135 °C
Standard buffer powder	4.01 / 6.86 / 9.18
Volume accuracy	Error ≤ 1%
Sample volume	1 / 1.25 / 2.5 / 5 / 10 / 25 / 50 mL
Pipeline material	high borosilicate glass, PTFE
Export Data	Yes
Print	Yes
Data storage	Yes
Connect function	RS232, USB, WiFi, Bluetooth
Screen Help Text	Yes
System language	Chinese / English
Display/User Interface	8-inch color touch display
Power source type	110v-220v 50Hz/60Hz
Outline dimension	Length x Width x Height: 280 x 470 x 1650 mm
Weight	40kg