

T9010Zn

Online Automatic Zinc Water Quality Monitor

Product Description:

Industries such as electroplating, chemical processing, textile dyeing, battery manufacturing, and metal fabrication generate zinc-containing wastewater. Excessive zinc is harmful to human health and may even pose carcinogenic risks. Furthermore, using zinc-contaminated wastewater for agricultural irrigation severely impairs crop growth, particularly wheat. Excess zinc deactivates enzymes in soil, weakens microbial biological functions, and ultimately impacts human health through the food chain.



Product Principle:

This product employs spectrophotometric colorimetry for determination. After mixing the water sample with the conditioning agent, zinc in all forms is converted into zinc ions. In an alkaline environment and in the presence of a sensitizer, these zinc ions react with an indicator to form a colored complex. The analyzer detects this color change and converts it

into a zinc value for output. The amount of colored complex formed corresponds to the zinc content.

Technical Specifications:

SN	Specification Name	Technical Specifications
1	Test Method	Zinc Reagent Colorimetric Method
2	Measurement Range	0–30 mg/L (segmented measurement, expandable)
3	Detection limit	≤ 0.02
4	Resolution	0.001
5	Accuracy	$\pm 10\%$
6	Repeatability	$\leq 5\%$
7	Zero drift	$\pm 5\%$
8	Range drift	$\pm 5\%$
9	Measurement Cycle	Minimum test cycle: 30 minutes, configurable
10	Sampling Cycle	Time interval (adjustable), hourly, or trigger measurement mode, configurable
11	Calibration Cycle	Auto-calibration (adjustable from 1 to 99 days), manual calibration can be set based on actual water samples.
12	Maintenance Cycle	Maintenance intervals exceed one month, with each session lasting approximately 5 minutes.
13	Human-Machine Operation	Touchscreen Display and Command Input
14	Self-Diagnostic Protection	The instrument performs self-diagnostics during operation and retains data after abnormalities or power loss. Following abnormal resets or power restoration, it automatically purges residual reagents and resumes normal operation.
15	Data Storage	5-Year Data Storage
16	One-Button Maintenance	Automatically drains old reagents and cleans tubing; replaces new reagents, performs automatic calibration and verification; optional automatic cleaning of digestion cells and metering tubes with cleaning solution.
17	Quick Debugging	Achieve unattended, uninterrupted operation with automatic generation of debugging reports, greatly enhancing user convenience and reducing labor costs.

18	Input Interface	switching value
19	Output Interface	1 channel RS232 output, 1 channel RS485 output, 1 channel 4–20 mA output
20	Operating Environment	Indoor operation, recommended temperature range: 5 – 28°C, humidity $\leq 90\%$ (non-condensing)
21	Power Supply	AC220 $\pm 10\%$ V
22	Frequency	50 ± 0.5 Hz
23	Power	≤ 150 W (excluding sampling pump)
24	Dimensions	1,470 mm (H) $\times$ 500 mm (W) $\times$ 400 mm (D)