T9016 Model
Nitrate Nitrogen Water Quality Online Automatic Monitoring Instrument

Product overview：

Online Nitrate Nitrogen Analyzer

The nitrate nitrogen online monitor uses spectrophotometry for detection. This instrument is mainly used for monitoring surface water, groundwater, industrial wastewater, etc.

This analyzer can operate automatically and continuously without human intervention for a long period of time based on on-site settings. It is widely applicable to industrial wastewater from pollution sources and industrial process wastewater, etc. According to the complexity of the on-site testing conditions, corresponding pre-treatment systems can be selected to ensure the reliability of the testing process and the accuracy of the test results, fully meeting the on-site needs of different occasions.

Measurement Principle：

After mixing the water sample with a masking agent, nitrate nitrogen present in forms such as free ammonia or ammonium ions reacts with a potassium persulfate chromogenic reagent under alkaline conditions and

in the presence of a sensitizer to form a colored complex. The analyzer detects this color change, converts it into a nitrate nitrogen value, and outputs the result. The amount of colored complex generated corresponds to the nitrate nitrogen concentration.

Technical specification：

	Specification Name	Technical Specification Parameters
1	Testing Method	Potassium Persulfate Spectrophotometry
2	Measuring Range	0-100 mg/L (segmented measurement, expandable)
3	Accuracy	Measurement range of 20% standard solution: no more than ±10%
		Measurement range of 50% standard solution: no more than ±8%
		Measurement range of 80% standard solution: no more than ±5%
4	Lower Limit of Quantification	≤0.2mg/L
5	Repeatability	≤2%
6	24-hour Low Concentration Drift	≤0.05mg/L
7	24-hour High Concentration Drift	≤1%
8	Measurement Cycle	Less than 50 minutes, the dissolution time can be set
9	Measurement Mode	Time interval (adjustable), hourly or trigger measurement mode, can be set
10	Calibration Mode	Automatic calibration (adjustable from 1 to 99 days), and manual calibration can be set based on actual water samples.
11	Maintenance Interval	The maintenance interval is more than 1 month, and each time it lasts approximately 5 minutes.
12	Human-Machine Interface	Touchscreen display and command input
13	Self-check & Protection	Self-diagnosis of operational status; data retention during abnormal conditions or power loss.

		Automatic purging of residual reactants and resumption of operation after abnormal reset or power restoration.
14	Data Storage	Data storage capacity: 5 years.
15	One-touch Maintenance	Automated functions: draining of old reagent & cleaning of pipelines; automatic calibration and verification after reagent replacement; optional automatic cleaning of digestion vessel and metering tubes with cleaning solution.
16	Quick debugging	Realize unmanned operation, continuous operation, and automatic generation of debugging reports, which greatly facilitates users and reduces labor costs.
17	Input interface	Digital Input/Output (Switch)
18	Output interface	1 RS232 output, 1 RS485 output, 1 4-20mA output
19	Working environment	For indoor work, the recommended temperature range is 5 to 28 degrees Celsius, and the humidity should be no more than 90% (without condensation).
20	Power supply	AC220±10%V
21	Frequency	50±0.5Hz
22	Power	≤ 150 W, without sampling pump
23	Inches	Height: 520 mm, Width: 370 mm, Depth: 265 mm