PCM200-CODmn-BD Permanganate Index Water Quality Online Automatic Analyzer

Principle

Acidic potassium permanganate oxidation titration method. A measured amount of potassium permanganate solution and sulfuric acid solution is added to the sample mixed, and digested. The potassium permanganate oxidizes organic pollutants in the sample. Then, a measured amount of sodium oxalate solution is added to reduce the remaining potassium permanganate. Excess sodium oxalate is titrated back with potassium permanganate solution, and the titration endpoint is determined by photometric changes. Finally, the instrument automatically calculates the permanganate index value.



Features

- Adopts a ten-way valve with a sapphire valve core, featuring high wear resistance, strong resistance to acids, alkalis, and organic solvents, long service life, and high stability;
- Equipped with waste liquid separation function, separating high-concentration reaction waste liquid from low-concentration cleaning waste liquid for discharge;
- Features dynamic dilution function, automatically adjusting the dilution factor based on the range set on-site;
- Includes built-in quality control functions such as standard addition recovery, blank testing, standard sample verification, zero-point verification, span verification, and parallel sample testing, with options for automatic, manual, or remote activation of quality control functions;
- Equipped with automatic fault diagnosis and abnormal information upload and recording functions, including component failure, over-range alarms, exceedance alarms, and reagent shortage alarms;
- Features overheat protection: if the heating temperature is too high, the heater automatically shuts off;
- Upon abnormal reset or power restoration after a power outage, the instrument automatically discharges residual reactants and returns to its initial working state. It also has a power-on alarm function, generating an alarm message when powered on after a power outage;
- Includes analysis process logs, measurement data recording, and alarm information storage, with data recorded hourly, capable of storing over 5 years of data, and supports quick data export via USB drive;
- Features three-level management permissions.

Application

- Online monitoring of permanganate index in drinking water and surface water.

Technical Specification

Range	0-50 mg/L (customizable)
Indication Error	Indication Error: ≤±10% or ≤±0.2 mg/L, whichever is greater
Detection Limit	≤0.5 mg/L
Repeatability	≤5%
Zero Drift	≤±5%
Range Drift	≤±5%
Resolution	0.001 mg/L (decimal places adjustable between 2-3 digits)
Display	7-inch touchscreen
Measurement Mode	Continuous mode, periodic mode (adjustable from 1 hour to 30 days), fixed-point mode, controlled mode, manual mode optional
Calibration Mode	Manual and automatic calibration modes
Maintenance Cycle	Generally once a month
Power Supply	220VAC ±10%, 50Hz ±10%
Output	4-20mA output
Communication	MODBUS RS-232, RS-485, RJ45
Environmental Conditions	Indoor with adjustable temperature, recommended temperature +5-40° C; humidity ≤85% (non-condensing)
Dimensions	302*271*462 mm (L*W*H)