# PCM200-TFe Total Iron Water Quality Online Automatic Monitor

## Principle




O-phenanthroline spectrophotometry. The high-valent iron ions in the water sample are reduced to ferrous ions by hydroxylamine hydrochloride. The ferrous ions react with o-phenanthroline to form a stable orange-red complex in a solution between pH 3 and 9. The absorbance is detected at a specific wavelength, and the iron concentration in the water sample is calculated.

## Features

- The ten-way valve with sapphire valve core has high wear resistance, strong acid and alkali resistance, organic solvent resistance, long service life and high stability;
- A specially designed reference method is adopted, and slight displacement and slight pollution of the digestion pool will not affect the measurement value;
- It has the function of waste liquid separation to achieve separate discharge of high-concentration reaction waste liquid and low-concentration cleaning waste liquid;
- It has a dynamic dilution function, which can automatically adjust the dilution multiple according to the range set on site;
- It has built-in spike recovery, blank test, standard sample verification, zero point verification, span verification parallel sample test and other quality control functions, and can realize automatic, manual, remote and other ways to start the quality control function;
- It has the function of automatic fault diagnosis and abnormal information upload and recording, such as component failure, over-range alarm, over-standard alarm, reagent shortage alarm and other information;
- It has overheating protection: the heating temperature is too high, and the heater is automatically powered off;
- After abnormal reset and power failure, the instrument automatically discharges the residual reactants in the instrument and automatically returns to the initial working state. It has a power-on alarm function. When the power is turned on again after a power outage, the instrument will generate an alarm message;
- It has the function of recording the process log of the analytical instrument, the measurement data, and the alarm information storage. Based on the calculation of recording data once an hour, it can be stored for more than 5 years, and the data can be quickly exported to a USB flash drive;
- It has three levels of management authority.

## Application

- Online monitoring of iron concentration in tap water, drinking water and surface water;
- Online monitoring of iron concentration in municipal sewage inlet and outlet, pollution source discharge outlet and industrial wastewater outlet.



Whatsapp/Wechat/MOB: +86 13799958343
Email: chixiujin@probest.cn
Skype: edmund_chi
Web:www.probesti.com

## Technical Specification

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|---|---|
| **Range** | 0-20mg/L (customizable) |
| **Indication error** | ≤±5% |
| **Repeatability** | ≤2% |
| **Resolution** | 0.0001 mg/L (Decimal places can be set from 2 to 4 digits) |
| **Display** | 7 inch display |
| **Measurement mode** | Continuous mode, periodic mode (1h-30d adjustable), fixed-point mode, controlled mode, manual mode optional |
| **Calibration mode** | Manual calibration and automatic calibration modes |
| **Maintenance cycle** | Usually once a month |
| **Power supply** | 220VAC±10%,50HZ±10% |
| **Output** | 4-20mA output |
| **Communication method** | MODBUS RS-232/RS-485 |
| **Environmental conditions** | Indoor temperature with adjustable temperature, recommended temperature: +5-40℃; humidity ⩽85% (no condensation) |
| **Dimensions** | 302*271*462mm (L*W*H) |



Whatsapp/Wechat/MOB: +86 13799958343
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Skype: edmund_chi
Web:www.probesti.com