# PFDO-700 Dissolved Oxygen Online Analyzer

## Measurement Principle

PFDO-700 Dissolved Oxygen analyzer adopts fluorescence method to measure dissolved oxygen. The cap of the sensor is coated with a luminescent material. Blue light from an LED illuminates the luminescent chemical. The luminescent chemical instantly becomes excited and releases red light. The time and intensity of red light are inversely proportional to the concentration of oxygen molecules, So the concentration of oxygen molecules is calculated.



## Features

- The sensor adopts new type of oxygen sensitive membrane, with NTC temperature compensated function, whose measurement result has good repeatability and stability.
- Won't produce oxygen consumption when measuring and no requirement of flow rate and stirring.
- Breakthrough fluorescence technology, without membrane and the electrolyte and almost not need maintenance.
- Built-in self-diagnosis function to ensure the accuracy of data. Plug-and-play sensor, quick and easy installation.
- Factory calibration, not need calibration for a year and can carry out field calibration.
- Digital sensor, high anti-jamming capacity and far transmission distance.
- Standard digital signal output, can achieve integration and networking with other equipment without controller.

## Applications

- DO online monitoring of different technological processes such as regulating reservoir, biochemical pool and effluent of sewage treatment plant.
- DO online monitoring of water plant, surface water, industrial process water and aquaculture and etc.

## Technical Specifications

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| **Measurement range** | DO：0-20 mg/L or 0-200% saturation；Temperature：0-45℃ |
| **Measurement Accuracy** | DO:±3% or ±0.3 mg/L, whichever is greater ;Temperature：±0.5℃ |
| **Resolution** | 0.01mg/L |
| **Repeatability** | ±0.3mg/L |
| **Pressure range** | ≤0.3Mpa |
| **Calibration** | Air automated calibration, sample calibration |
| **Main material** | Body：SUS316L（fresh water）,Titanium alloy（Ocean marine）;<br>Cover：PPS+ glass fiber；Cable：PUR |
| **Power supply** | AC：85-500VAC; DC：9-36VDC |
| **Output** | 3-way 4-20mA |
| **Relay** | Three-way relays, programmed response parameter and response value. |
| **Communication protocol** | MODBUS RS485 |
| **Storage & Measuring temp** | -15-60℃,0-45℃（Non-freezing） |
| **Dimensions** | Sensor：Dia49.5mm*L 251.3mm,Transmitter：145*125*162mm(L*W*H) |
| **Weight** | Sensor:1.4KG；Transmitter:1.35KG |
| **Protective rate** | Sensor:IP68/NEMA6P；Transmitter:IP66/ NEMA4X |
| **Cable length** | Standard:10m, the maximum may be extended to 100m |



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