Oxygen Analyzer

General information about ADWQ-5016FO Fluorescence Method Oxygen Analyzer:

Product Description:

- ✓ Series ADWQ-5016FO fluorescence method dissolved oxygen analyzer, is the product which is specially designed for the water environment monitoring and sewage treatment.
- ✓ It adopts the advanced fluorescence quenching principle and accurate phrase detection technology and innovative packaging process, which makes its reliability and service life leading the rival product greatly.
- ✓ Its unique characteristics of long-term low drift and maintenance-free make the product surpass and take the place of traditional membrane electrode completely.

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Product Characteristics:

- No need to replace solid electrode or film/ electrolyte
- No flow speed/ agitation requirement
- More higher resolution and measurement accuracy
- Stable measurement, no drift
- It will not be poisoning because of sulfide.
- The service life of the sensor can be above two years.
- It is not affected by the thermal disturbance.
- It is not affected by the ion (H2S,CO2,NH3,SO4,Cl-,Cl2,etc) cross Interference
- It is install-and-use, without calibration.
- Basic maintenance-free
- English menu and simple key operation
- 4~20mA isolation current output, optional field Bus interface
- Optional 4 alarms, 1 cleaning relay output
- With data record function

Typical Application:

Water environment detection:
1-river, lake ,sea, fishery, etc.
2-IV Principle Introduction
3-Fluorescence Dissolved Oxygen Analyzer is based on the principle of the activity of specific substances physics fluorescence quench to develop.The fluorescent substance on the front end of the sensor is a special ruthenium metal compound.
4-The fluorescent substance covers under the polyester foil which allows the gas molecule to pass through.The polyester foil is coated with a layer of black light insulation material to avoid the interference of the other fluorescent substances in the sunlight and water.
5-The fluorescent substance is isolated with the red and blue light source and the photosensitive element in the watertight 316L stainless steel shell by the sapphire optical window.
6-The modulated blue light shines the fluorescent substance to make it activate and emit red light.The oxygen molecule can take the energy away (quench effect), so the time and the intensitythat activates the red light are inversely proportional to the concentration of the oxygen molecule.
7-We take the red light source which synchronizes the and blue light as a reference, measure the phase difference between the activated red light and the reference light and compare with the internal calibration.
8-Thereby,the concentration oxygen molecule can becalculated.After the linearization and temperature compensation, the final oxygen concentration value can be output.

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Technical specification of the device:

- Measurement range:DO: 0 ~20 mg / l or 0~ 20ppm,Air saturation: 0-120%
- Resolution:± 0.01mg / l
- Measurement Accuracy: ± 0.2mg / l or ± 1% FS
- Response time: Less than 6 0 seconds （T90）
- Temperature sensor: detection range:0 - 50 ℃/ Resolution:± 0.1 ℃/
- Accuracy: ± 0.5 ℃
- Operating temperature: 0 ~50 ℃
- Ambient temperature: - 10~55 ℃
- Pressure Grade: 0 .5MPa
- Salinity range: 40ppt (highest)
- Chemical adaptability: methanol and ethanol safety, avoid other organic Solvents
- Calibration:Single-point or two-point calibration, using oxygen-free water and air, respectively. Factory has calibrated, so it generally needs no calibration.
- Anti-interference: not interfered with the following substances : H2S, CO2, NH3, SO4, Cl-,CLO2, MeOH, EtOH, etc.
- measurement foil: Polyester embedded ruthenium metal phosphors
- Light blocking layer: Teflon
- Foil lifetime: 3 years (10 seconds measurement interval) Avoid direct sunlight
- Sensor shell: 316L
- Connection type: 3/4'' NPT
- Size: Φ41 × 140mm
- Weight: 1300g(10 meters cable)
- Power supply: 5VDC, provided by the transmitter.
- Sensor cable: standard 10 meters

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