



西安朗特工业科技有限公司

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# Dissolved Oxygen Sensor for Aquaculture

## User Manual

**Model: LT-105A**





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## I. Summary

Lt105a series of special fluorescent dissolved oxygen sensors for aquaculture are specially designed for the aquaculture market, without oxygen consumption, flow rate limitation, electrolyte, maintenance and calibration, strong anti-interference ability and excellent stability. Built in temperature sensor, automatic temperature compensation. RS485 output, no controller is needed.

## II. Characteristic

1. Digital sensor, RS485 output, supporting MODBUS
2. No film, no electrolyte, no interference, no frequent calibration
3. No oxygen consumption, no flow rate limit
4. It is specially designed for the breeding market and has a super high cost performance

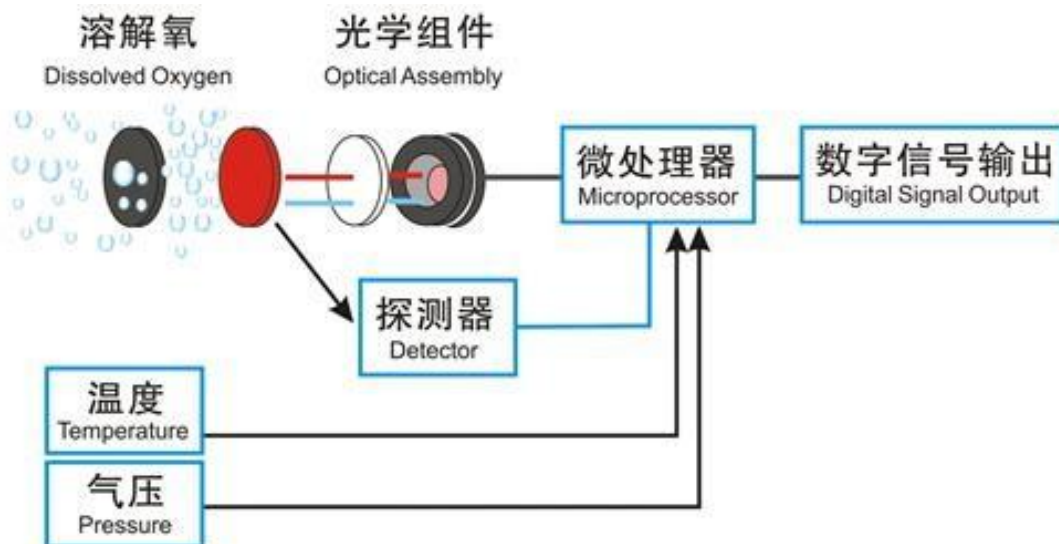
## III. Measurement principle:

The fluorescence dissolved oxygen sensor is based on the quenching principle of specific substance to active fluorescence in physics. The blue light from a light-emitting diode (LED) irradiates the fluorescent substance on the inner surface of the fluorescent cap, and the fluorescent substance on the inner surface is excited to emit red light. By detecting the phase difference between the red light and the blue light, and comparing with the internal calibration value, the concentration of oxygen molecule is calculated, and the final value is automatically compensated by temperature and air pressure.

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## IV. Technical parameter

Range:	0 ~ 20mg / L or 0 ~ 200% saturation
Accuracy	0.03
Response time	40 s
Sensor drift	< 3% per year
Temperature sensor	NTC
Temperature range:	0 ~ 50 °C
Temperature accuracy	±0.5 °C
Protection grade:	IP68
Maximum operating pressure	6 bar
Sensor interface supports	RS-485 and Modbus Protocol
Assembly	M22 * 1.5mm
Power supply information:	DC 6 ~ 12V, current < 50mA
Sensor size	Φ23 * 188.3
Probe cable length	< 10m (default), customizable