

Datasheet
Dissolved Oxygen Sensor
DO7012 / 7010



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Dissolved Oxygen Sensor DO7012 / 7010

Dissolved Oxygen Sensor Measured by Fluorescence Method. The top of the sensor is covered with a layer of fluorescent material. When the blue light emitted by the sensor irradiates the fluorescent material, the fluorescent material is excited to emit red light. Since oxygen molecules can take away energy (quenching effect), the time and intensity of the excited red light are inversely proportional to the concentration of oxygen molecules, and the concentration of dissolved oxygen in water can be obtained by calculation.

Applications

- Sewage treatment plant conditioning tank
- Biochemical pool
- Water works
- Surface water
- Aquaculture

Features

- Optical type dissolved oxygen sensor, an intelligent online chemical analyzer.
- Various installation methods



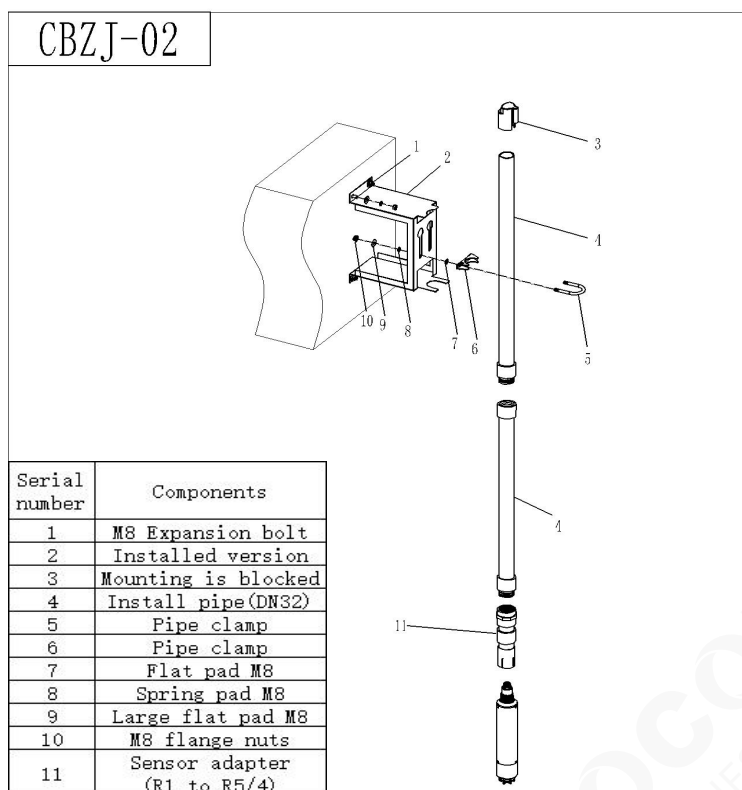
Dissolved Oxygen Sensor

| DO7012 Parameters | |
|------------------------|--|
| Measuring range | Dissolved oxygen: (0~20)mg/L or 0~200% saturation Temperature: (0~45)°C with automatic temperature compensation |
| Measurement accuracy | Dissolved oxygen: ±3% of the measured value or ±0.3 mg/L, choose the greater one. Temperature: ±0.5°C |
| Repeatability | ±0.3mg/L |
| Resolution | 0.01mg/L |
| Pressure range | ≤0.3Mpa |
| Sensor material | Body: Stainless Steel 316L (normal version), Titanium alloy (sea water version) Covers: PPS+glass fiber Cable: PUR |
| Power supply | (9~28)VDC |
| Communication protocol | MODBUS RS485 |
| Storage temperature | (-15~60)°C |
| Operating temperature | (0~45)°C (No freezing) |
| Weight | 1.4kg |
| Ingress protection | IP68/NEMA6P |
| Cable length | 10m(Standard),extendable to 100m(Optional) |

| DO7010 Parameters | |
|-----------------------|--|
| Measuring range | Dissolved oxygen: (0~20)mg/L or 0~200% saturation (Range can be customized) Temperature: (0~45)°C |
| Display accuracy | Measured value ±3%. Temperature: ±0.5°C |
| Dimension | Diameter 49.5mm*Length 251.3mm |
| Calibration | Air calibration |
| Pressure range | ≤0.3Mpa |
| Material | Body: Stainless Steel 316L (normal version), Titanium alloy (sea water version) Covers: PPS+glass fiber O-ring: Fluoroelastomer Cable:PVC |
| Power supply | 12VDC |
| Output | MODBUS RS485 |
| Storage temperature | (-15~60)°C |
| Operating temperature | (0~45)°C (No freezing) |
| Weight | 1.4kg |
| Ingress protection | IP68 |
| Cable length | 10m(Standard),extendable to 100m |

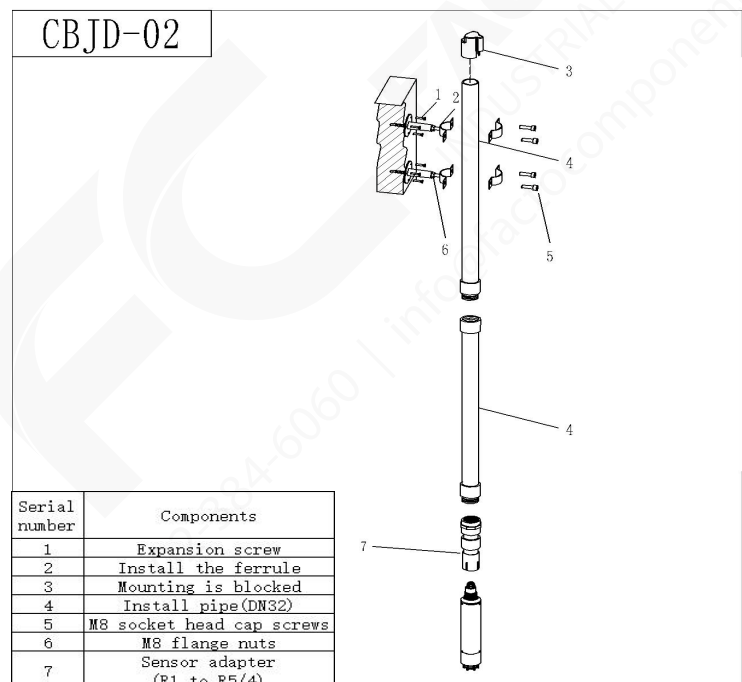
Installation

■ Quick release poolside fixed installation



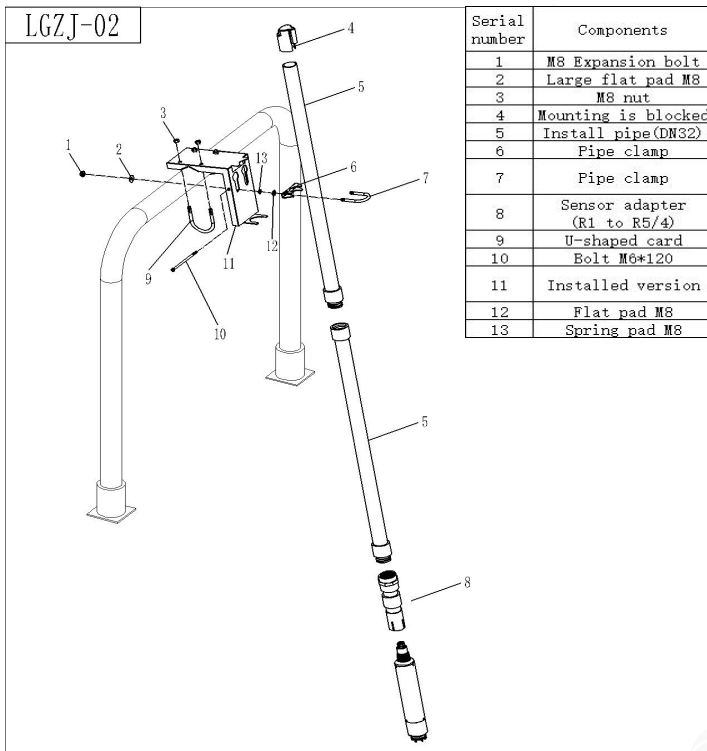
Note: No. 4 installation pipe DN32 in the picture means the inner diameter of the pipe is 32mm.

■ Railina fixed installation



Note: No. 4 installation pipe DN32 in the picture means the inner diameter of the pipe is 32mm.

■ Railing fixed installation



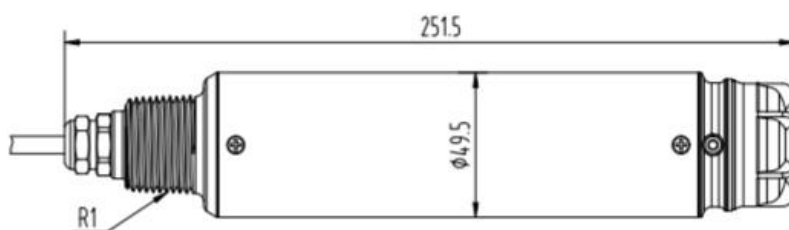
Note: No. 5 installation pipe DN32 in the picture means the inner diameter of the pipe is 32mm.

Wiring

The sensor is connected correctly according to the following wire core definitions:

| Core number | 1 | 2 | 3 | 4 | 5 |
|-------------|--------|-------|---------|---------|--------------|
| Sensor wire | Brown | Black | Blue | White | Yellow+Green |
| Signal | +12VDC | AGND | RS485 A | RS485 B | Ground wire |

Dimension



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Ordering code

| DO-7012-A-B-10-ZY-RA | | | | | | Description |
|----------------------------------|---|---|----|----|----|---|
| DO7012 / 7010 | - | - | - | | | |
| DO sensor | | | | | | Measuring range: (0-20) mg/L Temperature range: (0-45) °C Pressure resistance: 0.3MPa |
| Output | A | | | | | RS485 |
| Power Supply | | B | | | | 12VDC |
| Cable Length | | | 10 | | | 10m |
| | | | 20 | | | 20m |
| | | | 30 | | | 30m |
| | | | XX | | | Other |
| Cable Connector | | | | ZY | | Cable Connector |
| | | | | HK | | M12 Connector |
| Housing Material and Thread Type | | | | | RA | SS316L, R1 |
| | | | | | RB | Titanium, R1 |