

IQ SensorNet FDO[®]

OPTICAL DISSOLVED OXYGEN SENSOR



The FDO's lower energy green light excitation technology extends the sensor cap lifetime.

Accurate dissolved oxygen monitoring for optimal performance

The **FDO** is an optical, luminescent-based DO sensor for YSI's IQ SensorNet system that continuously monitors dissolved oxygen in water. The FDO is a reliable, long-term solution that can help optimize aeration control and lower energy costs. Minimize sensor maintenance and maximize accuracy with a calibration-free design, smart sensor cap, and angled measurement.



Calibration-Free

Microchip technology stores the factory calibration, which is automatically recognized when the sensor cap is replaced.



No Drift

The measurement and reference path are identical, eliminating drift over the lifetime of the sensor.



Hassle-Free Maintenance

Simply replace the sensor cap, no tools or solutions required.



Innovative Design

Angled sensor cap deflects air bubbles from the face of the sensor, mitigating false high DO readings.



a xylem brand

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SPEC SHEET XA00253-01-ENG

FDO Sensor Options

Sensor options are available for salt water applications, Class I, Div 2 hazardous locations, and faster response times.

FDO 700 IQ

Optical dissolved oxygen

FDO 701 IQ

Fast response optical dissolved oxygen

FDO 70x IQ SW

Salt water optical dissolved oxygen

FDO 70x IQ H

Class I, Division 2 optical dissolved oxygen (certified for use in hazardous locations)



The FDO sensor is easy to maintain and no user calibration is required.

FDO[®] General Specifications

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|---------------------------------------|--|
| Calibration Capability | Yes; not required, factory calibrated |
| Interferences | None; non-sensitive to hydrogen sulfide, chlorine, ionogenic substances |
| Minimum Flow Rate | None; no flow requirement |
| Response Time at 25 °C (77 °F) | FDO 700 IQ x - T90 = <150 seconds; T95 = <200 seconds FDO 701 IQ x - T90 = <60 seconds; T95 = <80 seconds |
| Signal Output | Digital |
| Lightning Protection | Yes |
| Power Consumption | 0.7 watts |
| Maximum Pressure | 10 bars (145 psi) with sensor connection cable |
| Electrical Connections | 2-wire shield cable with quick sensor connection |
| Conformance/Certifications | EN 61326, Class B, FCC Class A; intended for indispensable operation, CE, cETLus UL 61010-1, CAN/CSA C22.2 #61010.1 FDO 70x IQ H: Conforms to ANSI/ISA-12.12.01, CAN/CSA C22.2 #213 for the following location rating - Class 1 Division 2, Groups A, B, C, D, T6; Class 1 Zone 2, Group IIC T6 (must be used with the IQ SensorNet cable and MIQ/BB2 barrier box) |
| Temperature Conditions | FDO 700 IQ x - Operating Temperature: 23 to 122 °F (-5 to 50 °C); Storage Temperature: 14 to 122 °F (-10 to 50 °C) FDO 701 IQ x - Operating Temperature: 23 to 104 °F (-5 to 40 °C); Storage Temperature: 14 to 104 °F (-10 to 40 °C) |
| Material | Housing: FDO 70x IQ & 70x IQ H - VA steel 1.4571; FDO 70x IQ SW - POM (Polyoxmethylene) Sensor Cap and Locking Cap: POM, PVS, silicone, PMMA |
| Protection Class | IP-68; waterproof |
| Dimensions | 15.75 L x 1.57 D in (400 L x 40 D mm) FDO 70x IQ SW: 15.75 L x 2.34 D in (400 L x 59.5 D mm) |
| Weight | 1.98 lbs (900 g) FDO 70x IQ SW: 3.31 lbs (1,500 g) |
| Warranty | 2-year warranty for sensor and SC-FDO 700 sensor cap; 6-month warranty for SC-FDO 701 sensor cap |

FDO[®] Optical Dissolved Oxygen Technical Specifications

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|------------------------------------|---|
| Dissolved Oxygen Range | Concentration: 0 to 20.00 mg/L Saturation: 0 to 200.0% |
| Dissolved Oxygen Resolution | Concentration: 0.01 mg/L Saturation: 0.1% |
| Temperature Sensor | Measurement: 23 to 122 °F (-5 to 50 °C) Compensation: 23 to 122 °F (-5 to 50 °C) Accuracy: ± 0.5 K Resolution: 0.1 K |

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