



# <sup>TM</sup> **DE DYNAMIC** Process Equipment

**Dissolved Oxygen Optical Sensor**  
**FermSense DO-O**

## Dissolved Oxygen Sensor – Optical, Sterilizable

### FermSense DO-O



The Optical sensor combines an optical sensor type PSt7 and electro-optical module in one probe. The sensor has a maximum measurement range of 0 - 100 % O<sub>2</sub>, and a detection limit of 0.03 % O<sub>2</sub> / 20 ppb. The wide range sensor is ideally suited for application in the biotech sector. They are directly connected to the control unit and have a standard PG 13.5 stainless steel thread for easy integration at the measurement site. As a digital interface these probes use RS485 Modbus RTU. The trace range sensor has a measurement range of 0 to 5% or 0 to 2 mg/l with 0.5 ppb resolution.

#### Applications

- Fermenters
- Bioreactor

#### Features

- Maximum measurement range of 0 - 100 % O<sub>2</sub>, detection limit 0.03 % O<sub>2</sub>, Trace range: 0 to 5% (0.5 ppb)
- Ideal for O<sub>2</sub> monitoring in the biotech sector
- Stands SIP (recommended: + 121 °C, 30 min) & CIP (2 % NaOH, + 80 °C)
- Simple integration due to standard PG 13.5 thread

### Specification:

FermSense DO-O : Optical Dissolved Oxygen Sensor			
Application		Bio-pharmaceutical, Life Science & Fermentation	
Type		Wide Range	Trace Range
		Optical sensor and electro-optical module in one probe	
Output		RS-485 MODBUS RTU	
Cable Connector		VP8	
O <sub>2</sub> Range	Concentration	0.0 to 22.5 mg/l (45.0 mg/l Max)	0 to 2 mg/l (4.5 mg/l Max)
	Saturation	0 to 50% (100% Max)	0 to 5% (10% Max)
	Minimum	0.015 mg/l (20 ppb)	0.5 ppb
Steam Sterilizable		Recommended: + 121 °C, 30 min	
Temperature Sensor		NTC	
Process Range	Temperature	0 to 90 °C Max ( 0 to 50 °C Optimal)	
	Pressure	12 Bar	
Response Time		< 30 s	
Dimensions	Surface	Ra < 0.4 µm (N5)	
	Diameter	12 mm	
	Length	120, 225mm	
	Connector	PG13.5	

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#### SmartDip 450M

SmartDip 450M is a pneumatically operated retractable electrode housing with long immersion length and isolation ball valve. This unique model can fit 120mm long sensor.