



## SDO-L Dissolved Oxygen

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### SDO-L Dissolved Oxygen Sensor

SEPIA immersion sensors provide precise, modular and digital water analysis in any situation - in the laboratory, in the field, mobile and directly in the process of waterworks or sewage treatment plants. They offer maximum flexibility for water management, wastewater treatment, environmental laboratories, industrial processes and aquaculture and combine all measurement tasks in a single, modular, expandable system.

The SDO-L oxygen sensor from the **SEPIA series** uses luminescence-based, optical measurement technology to determine the dissolved oxygen content in water. The internal temperature compensation increases the accuracy of the measurements.

As an immersion sensor in the **SEPIA series**, the SDO-L was specially developed for use with the TriOS multiparameter probe **FALCON**. Digital communication ensures safety and interference-free signal transmission from the sensor to the controller.

Thanks to the modular design of the SEPIA sensors, the SDO-L can be easily calibrated under laboratory conditions using the TriOS Lab Controller **LoLA**.

The system portfolio is also supplemented by a TriOS Modbus handpiece, which transmits the measured values of individual sensors directly to any Modbus-compatible device or controller.

### Advantages

- Digital, modern and ergonomic design
- Calibrate in the lab - use in the field
- High accuracy and reliability
- Cost-efficient due to modular design
- USB-C and Modbus for seamless integration
- Comparable results in the lab and in the field

### Applications for

- Water suppliers
- Drinking water monitoring
- Sewage treatment plants
- Environmental laboratories
- Industrial applications
- Aquaculture

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## SDO-L

<b>Measurement principle</b>	<b>Light source</b>	LED	
	<b>Detector</b>	Photodiode + filter	
<b>Measurement principle</b>		Luminescence	
<b>Parameters</b>		Oxygen concentration [mg/L], oxygen saturation [%], sensor temperature [°C]	
<b>Standard applied</b>		DIN ISO 17289:2104, Water quality - Determination of dissolved oxygen - Optical sensor method	
<b>Measurement range</b>		0 - 20 mg/L, 0 - 200 %, valid calibration range 0 -130 %	
<b>Measuring accuracy</b>		Dissolved oxygen 0.1 mg/L	
		Temperature 0.3 °C	
<b>Resolution</b>		< 0.01 mg/L, < 0.1 %	
<b>Response time</b>		< 40 s in water at 25 °C from 100 % to 0 %	
<b>Warm-up time</b>		approx. 10 s	
<b>Temperature compensation</b>		yes	
<b>Smallest measurement interval</b>		1 s	
<b>Interface</b>		digital, SEPIA	
<b>Power supply</b>		SEPIA	
<b>Power consumption</b>		20 mW	
<b>Connection</b>		3.5 mm jack plug, 4-pin (TRRS)	
<b>Housing material</b>		PET with silicone membrane	
<b>Dimensions (L x Ø)</b>		112 x 19 mm	~ 4.4 x 0.7"
<b>Volume / filling volume</b>		tbd	
<b>Weight</b>		36 g	0.08 lbs

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## Operating conditions

<b>Sample temperature:</b>	0 ... + 55 °C*, +2 ... + 40 °C for specified measurement accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
<b>Ambient temperature</b>	0 ... + 55 °C, +2 ... + 40 °C for specified measuring accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
<b>Storage temperature</b>	-20...+80 °C	~ -4 to +176 °F
<b>Rel. humidity</b>	0 to 95 %, non-condensing	
<b>Transportation conditions</b>	as storage conditions	
<b>Max. Pressure</b>	30 bar	~ 435 psi
<b>Incoming flow velocity</b>	0.1...3 m/s	
<b>Degree of protection</b>	IP68	
<b>Operating altitude, max.</b>	2000 m	6562 ft

\*no ice crystals in the sample water

<b>Maintenance effort</b>	< 0.5 h / month typical
<b>System compatibility</b>	SEPIA compatible
<b>Warranty</b>	1 year ( EU & USA 2 years ) on electronics; wearing parts are excluded from the warranty