



SDO-S Dissolved Oxygen Sensor

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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-S 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.

The compact sensor is primarily intended for use in the new TW eCHEM module of the TW Master Series. Each TW eCHEM module provides slots for two electrochemical sensors of your choice, enabling flexible and application-specific combinations depending on requirements.

The SDO-S sensor can also be connected to the **LoLA** Lab Controller using a SEPIA USB, allowing for easy handling and intuitive operation, for example during calibration procedures.

The system portfolio is further complemented by a SEPIA 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-S

Measurement technology	Light source	LED	
	Detector	Photodiode + filter	
Measurement principle		Luminescence	
Parameters		Oxygen concentration [mg/L], oxygen saturation [%], sensor temperature [°C]	
Standard applied		DIN ISO 17289:2104, Water quality - Determination of dissolved oxygen - Optical sensor method	
Measurement range		0 – 20 mg/L, 0 – 200 %, valid calibration range 0 – 130 %	
Measuring accuracy		Dissolved oxygen 0.1 mg/L, temperature 0.3 °C	
Resolution		< 0.01 mg/L, < 0.1 %	
Response time		< 40 s in water at 25 °C from 100 % to 0 %	
Warm-up time		Approx. 10 s	
Temperature compensation		Yes	
Smallest measurement interval		1 s	
Interface		digital, SEPIA	
Power consumption		20 mW	
Connection		3.5 mm jack plug, 4-pin (TRRS)	
Housing material		PET with silicone membrane	
Dimensions (L x Ø)		55 x 19 mm	~2.2 x 0.7"
Volume / filling volume		15 mL	
Weight		18 g	0.04 lbs

Operating conditions

Sample temperature	0 ... + 55 °C*, +2 ... + 40 °C for specified measurement accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
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Ambient temperature	0 ... + 55 °C, +2 ... + 40 °C for specified measuring accuracy	~ +32 to +131 °F* ~ +36 to +104 °F
Storage conditions	Rel. humidity: 0 to 95 % non-condensing	
Max. pressure	30 bar	~ 435 psi
Incoming flow velocity	none	
Degree of protection	IP68	
Operating altitude, max.	2000 m	6562 ft

*No ice crystals in the sample water

System compatibility	SEPIA compatible
Warranty	1 year (EU & USA 2 years) on electronics; wearing parts are excluded from warranty