

# Digital oxygen sensor Memosens COS51E

## Memosens 2.0 amperometric oxygen sensor for the wastewater industry and utilities



More information and current pricing:

[www.de.endress.com/COS51E](http://www.de.endress.com/COS51E)

### Benefits:

- **Wide measuring range:** The amperometric measuring principle and cathode design make the sensor suitable for all wastewater applications from industrial to municipal plants.
- **High accuracy:** Thanks to its amperometric, three-electrode design, the sensor provides long-term stable measurement with low drift.
- **Increased plant availability:** Memosens technology and Liquiline transmitters enable plug & play for fast commissioning and sensor exchange.
- **Non-contact, inductive signal transmission** ensures maximum process integrity.
- **Memosens 2.0 digital technology** makes the sensor ready for predictive maintenance and IIoT services since it offers extended storage of calibration and process data.

### Specs at a glance

- **Measurement range** 0.01 to 100 mg/l 0.00 to 1000 %SAT 0 to 2000 hPa
- **Process temperature** -5 to 60 °C (20 to 140 °F)
- **Process pressure** Max. 5 bar abs (Max. 72.5 psi abs)

**Field of application:** Memosens COS51E is perfectly suited for all wastewater and utility applications including hazardous areas. The sensor is highly accurate and moisture-resistant ensuring the safety of your processes. COS51E features Memosens 2.0 digital technology. It is able to store more calibration and process data and thus provides the perfect basis for predictive maintenance and IIoT services. Designed to be low-maintenance with a long operating life, the sensor offers outstanding value for money.

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## Features and specifications

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### Oxygen

**Measuring principle**

Amperometric oxygen measurement

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**Application**

Typical applications are:

- Wastewater treatment plants: oxygen control in aeration basin, process water treatment and monitoring
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  - Water plants: status monitoring of drinking water, water quality monitoring in rivers, lakes or seas
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  - Utilities of all industries: Oxygen control in biological treatment, process water treatment and monitoring.
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**Characteristic**

Digital amperometric 3-electrode longterm-stable sensor to measure dissolved oxygen

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**Measurement range**

0.01 to 100 mg/l

0.00 to 1000 %SAT

0 to 2000 hPa

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**Measuring principle**

Measuring principle

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**Design**

Design

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**Material**

Sensor shaft: POM

Membrane cap: POM

Working electrode: Gold

Counter and reference electrode: silver/silver halide

Membrane: ETFE (COS51-TN), FEP (COS51-TF)

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## Oxygen

**Dimension**

Diameter: 40mm (1.57 inch)

Shaft length: 146 mm (5.74 inch)

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**Process temperature**

-5 to 60 °C

(20 to 140 °F)

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**Process pressure**

Max. 5 bar abs

(Max. 72.5 psi abs)

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**Temperature sensor**

NTC 30k

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**Ex certification**

With ATEX, IECEx, CSA C/US, NEPSI, JapanEx and INMETRO approval for use in Zone 0, Zone 1 and Zone 2 hazardous areas. With CSA C/US approval also in Class I Division 1 hazardous areas in the Gas Ex area. Additionally suitable for Class I Division 2.

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**Connection**

Inductive, contactless connection head with Memosens 2.0 technology

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**Ingress protection**

IP 68

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