

Dissolved O₂ & Oxygen Content Measuring Instruments Optical Luminescence Sensor



- Measures the oxygen content in Liquids and Gases
- Fast response and highly precise.
- Optical principle, without membrane or electrolyte
- Inline and compact with local display
- Analogue and digital In-/Outputs, optional Profibus
- Long run stable, low response time
- Easy Maintenance, hygienic Construction, CIP-capable
- Stand-alone operation or networkable I/O features
- Owner selectable alarm points facility.



OXYTRANS

Technical Data:

Measuring range (liquid phase):	I) 1 ppb – 2 ppm or II) 30 ppb – 35 ppm
Accuracy (liquid phase):	I) +/- 1 ppb or II) +/- 30 ppb
Measuring range (gas phase):	I) 0 – 4,2 %O ₂ or II) 0 – 50 %O ₂
Accuracy (gas phase):	I) +/- 0,002 %O ₂ or II) +/- 0,03 %O ₂
Response time:	T90 < 10s
Temperature comp.:	PT100
Temperature range, Medium:	Measurement: -5°C to 55°C High temp. option: to 98°C Resistance: max. 130 °C
Pressure range:	Max. 12 bar
Material in contact with medium:	Stainless steel 1.4404, 316L Silicone (FDA), PTFE (FDA)
Process Connections:	- DN65 Varivent®, comp. to Inline housings DN40-150 - DIN, ANSI, Clam, Ingold others on request
Inputs:	- 2x digital (24 VDC)
Outputs:	- 3x digital (24 VDC) - 2x analog (4-20 mA)
Optional:	Profibus DP Polish to 0.5µm Ra
Enclosure rating:	IP 65
Power supply:	24 VDC
Includes 'Centec Viewer' PC software	

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The **O₂-transmitter Oxytrans TR series** continuously and accurately measure the content of oxygen in liquids and gases. The sensor is especially designed for breweries and other O₂ critical applications, e.g. power plants or bioreactors. The optical principle of measurement is based on the effect of dynamic luminescence quenching by molecular oxygen. The indicator layer on the glass installed in the measuring head is illuminated with a blue-green-light. With this, the indicator molecules are transferred into an excited state and emit a red light; this is detected by the internal detector. If oxygen is in the medium, this luminescence effect is reduced by energy transfer to the oxygen molecules. After the collision with the indicator molecule the oxygen molecule is transferred from its ground state (triplet state) to its excited singlet state. As a result, the indicator molecule does not emit luminescence and the measurable luminescence signal decreases in proportion to the oxygen concentration. This decrease is the basis for the oxygen calculation. The O₂-concentration can be displayed in different units like ppb, ppm, %oxygen, etc

Low Maintenance, Stable, CIPable and Highly Reliable.

