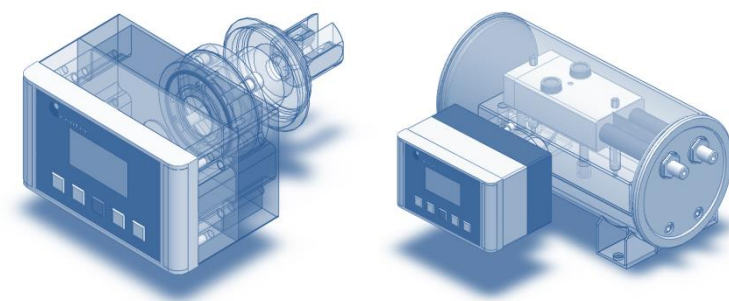


## The Centec Group

Centec is a privately owned group of companies. With a focus on the processing industries, we are rapidly growing in the major world markets. We have a global sales and service structure, with our own subsidiaries and a network of qualified distributors. Our international operations include mechanical, electrical and process automation engineering, with skid manufacture and pipework fabrication; as well as our own switch cabinet production. This infrastructure allows efficient logistics, short lead times and strict adherence to delivery deadlines. The quality of our products is excellent, so is the price-performance ratio.



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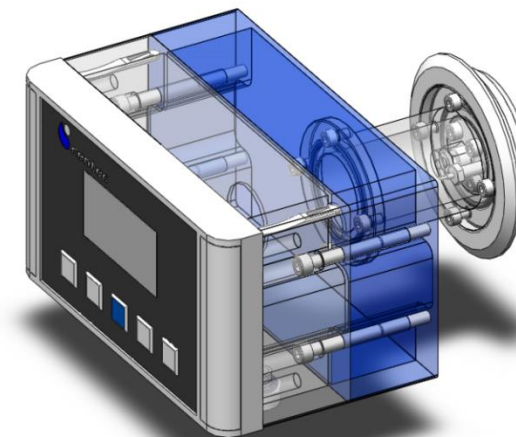
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# OXYTRANS

**O<sub>2</sub> Measurement  
in Pure Gases  
such as CO<sub>2</sub> and N<sub>2</sub>**

**Application Report**



Automated  
process skids  
and high precision  
sensors from a  
single source.  
**Centec.**

# OXYTRANS

## Application and Measurement Principle

In breweries and other beverage and food companies carbon dioxide (CO<sub>2</sub>) and/or nitrogen (N<sub>2</sub>) are used for manufacturing. In order to avoid O<sub>2</sub> pick-up from such gases, the O<sub>2</sub> content in CO<sub>2</sub> and/or N<sub>2</sub> needs to be measured with highest precision. Excess O<sub>2</sub> in the product can result in a significantly reduced shelf life. Typical applications in food and beverage industries include the determination of oxygen in CO<sub>2</sub> recovered from fermentation.

An indicator layer on a small glass component (“optical window”) installed in the measuring head is illuminated with blue-green-light. When the indicator molecules absorb the incident light they are promoted to a higher energy state. After a certain time they convert back to their ground state during which a detectable red light is emitted. If O<sub>2</sub> is present the energy is transferred from the indicator molecules to the oxygen. By detecting the red light, OXYTRANS determines the O<sub>2</sub> content with highest precision.



**OXYTRANS TR**  
Transmitter Version



**OXYTRANS M**  
Portable Version

- Available as Transmitter and Portable Version with Local Display
- Highly Precise and Fast Measurement of O<sub>2</sub> in Liquids and Gases
- Optical Technology without Membrane and Electrolyte
- Short Response Time and Excellent Long-Term Stability
- Hygienic Execution and Full CIP Capability
- Easy Maintainable within a Few Minutes
- Outstanding Price-Performance-Ratio

Technical Data	OXYTRANS TR	OXYTRANS M
<b>Liquid Phase</b>	I) 1 ppb - 2 ppm or II) 30 ppb - 50 ppm	I) 1 ppb - 2 ppm or II) 30 ppb - 50 ppm
<b>Liquid Phase</b>	I) ± 1 ppb or II) ± 30 ppb	I) ± 1 ppb or II) ± 30 ppb
<b>Gas Phase</b>	I) 0 - 4,2 % O <sub>2</sub> or II) 0 - 50 % O <sub>2</sub>	I) 0 - 4,2 % O <sub>2</sub> or II) 0 - 50 % O <sub>2</sub>
<b>Gas Phase</b>	I) ± 0,002 % O <sub>2</sub> II) ± 0,03 % O <sub>2</sub>	I) ± 0,002 % O <sub>2</sub> II) ± 0,03 % O <sub>2</sub>
Response Time	t <sub>90</sub> ≤ 10 s	t <sub>90</sub> ≤ 10 s
Pressure of Operation	max. 12 bar	max. 12 bar
Temperature of Operation	- 5 - + 55 °C (option: + 98 °C) resistance: max. + 130 °C	- 5 - + 55 °C (option: + 98 °C) resistance: max. + 130 °C
Temperature Compensation	Pt100	Pt100
Material	1.4404/AISI 316L, silicone (FDA), PTFE (FDA) compatible to Varivent©	1.4404/AISI 316L, silicone (FDA), PTFE (FDA)
Connections	Inline-Housings DN40 - DN150; DIN; ANSI; others on request	hoses of 6 mm diameter
Interface (OXYTRANS TR)	input: 3 x digital (24 VDC) output: 3 x digital (24 VDC) & 2 x analog (4 - 20 mA)	manual and automatic with a logging time of 5 to 600 seconds; approx. 5.000 measurement values; PC software and USB-interface
Datalogging (OXYTRANS M)		
Profibus DP	option	-
Enclosure Rating	IP65	IP65
Power Supply	24 VDC	battery, rechargeable
Weight	-	1,65 kg