



TecMicro – Optochemical oxygen sensor system for process control and industrial processes



Advantages

- Opto-chemical O₂ sensor system for gases and fluids (pH 1-13)
- No maintenance
- Extremely fast
- SIP- and CIP- stable
- Self-diagnostic system (sensor reports when 80% of its life has been reached)
- Sensor protection layers available
- Sensor cap replaceable
- Factory calibrated – Plug & Play
- Easy to implement into your system
- No cross-sensitivity to moisture
- No problem with smaller particles
- Extremely accurate measurement results in the trace areas
- No sensitivity to magnetic and electric fields
- Applicable in explosive environments
- Minimum life of 1 year for gases in a neutral atmosphere
- Measuring speed from 2ms
- Best performance at a competitive price
- No problem with Stop and Go



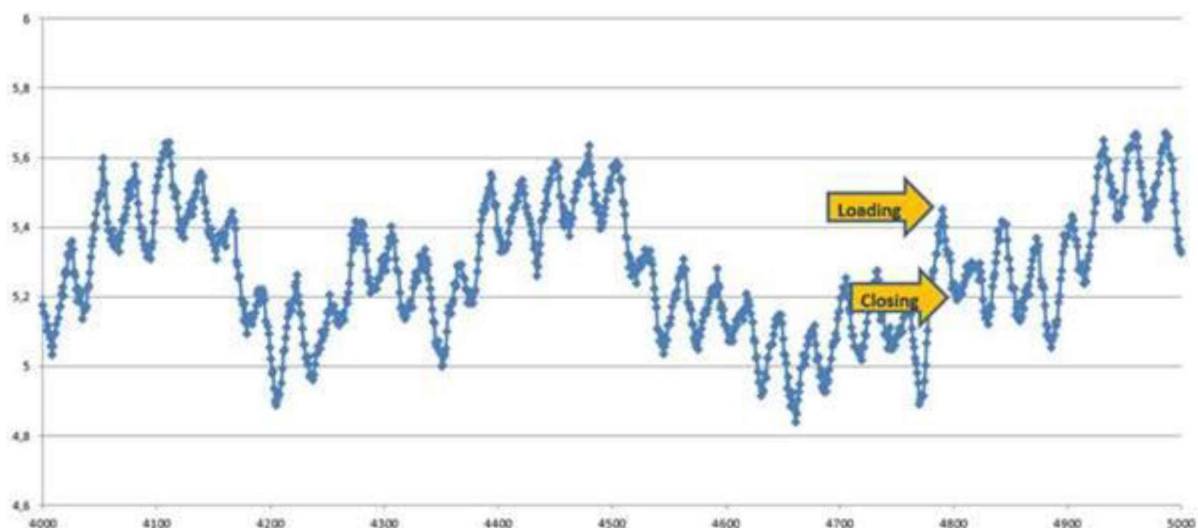
Ensuring the quality of food

Foods are packaged in large numbers in tubular bags under a protective gas atmosphere - sausages, chips, cheese, lettuce, gummi bears and many others. The packaging contains a defined protective gas atmosphere to prevent rapid deterioration.

Until now, this freedom from oxygen could only be determined by sampling, whereby the packaging is destroyed. The company TecSense introduces a **new measuring system** which measures the oxygen **content in the tubular packaging immediately before the seal** and thus enables a **complete control** of all packaging. This is achieved by an optochemical system with a 2ms measuring interval.

Your advantage:

The production runs with maximum productivity, expensive process gas is saved, defective packaging is 100% detected



The system guarantees the safety and high quality of food packaged in protective gas. For the manufacturer, it ensures the safety of the production, the verifiability of the correct packaging and the avoidance of recalls and thus of costs. For the environment and society, it offers the advantage that less food is disposed of, less packaging material and protective gas are consumed, and more sustainability is achieved.



100% Inline control of O₂ in Gas Generators directly in the tubing

We have achieved a unique solution to control continuously the O₂ content in nitrogen gas with no maintenance and approximately a third of the price of similar, much bigger sensors on the market.

Due to its small size it is the only sensor with a very simple integration, that can directly be plugged into the tubings of Nitrogen Gas generators.

Tec Micro is the smallest, fastest and most accurate O₂ sensor of this kind on the market.



Application

- Industrial processes, Petrochemical industry, Electronic industry
- Technical gases and process gases, Gas generators
- MAP-pillow bags, inline control before sealing
- Pharma industry, Biotechnology, Fermentation, Bioreactors
- Food and beverage industry –Breweries-Soft drinks, Juices
- Waste water and Fish farming





TS-System Measuring range	TecMicro Gas 0,0-22%		TecMicro Gas Trace 0-2000 ppm		TecMicro Fluid 0,0 - 10mg/L		TecMicro Fluid Trace 0-2 mg/L	
	Range	Accuracy	Range	Accuracy	Range	Accuracy	Range	Accuracy
	0-2%	± 2%	0-100ppm	± 2%	0-2 mg/L	± 2%	0-0,1 mg/L	± 2%
	2-5%	±3%	100-1000ppm	±3%	2-8 mg/L	±3%	0,1-1 mg/L	±3%
	5-22%	± 3%	1000-2000ppm	± 4%	8-10 mg/L	± 5%	1-2 mg/L	± 3%
Resolution	0,01		0,01		0,01		0,01	
Responsetime at 25°C	ca. 0,5 sec w/o protective layer 5 sec w/ protective layer		<15s		<20s		<20s	
Max. Pressure	5 bar		5bar		20 bar			
Temp. range	-10°C / +120°C		-10°C/ +120°C		-10°C/ 120°C		-10°C/ 120°C	
Min./Max Medium	Gas		Gas		Fluid		Fluid	
Power supply	24V DC/ 5V		24V DC/ 5V		24V DC/ 5V		24V DC/ 5V	
Data Interface	RS232 / USB / RS 485		RS232 / USB / RS 485		RS232 / USB / RS 485		RS232 / USB / RS 485	
Temperature compensation	yes, 4 bis 40°C		On request		yes, 4 to 40°C		On request	
Pressure compensation	On request		On request		On request		On request	
Data Output	digital/ analog		digital/ analog		digital/ analog		digital/ analog	
Cleaning	No organic solvents, 70% EtOH		No organic solvents, 70% EtOH		No organic solvents, 70% EtOH		No organic solvents, 70% EtOH	
Parts touching sample	St.1.4404/ PTFE/ Glas		St.1.4404/ PTFE/ Glas		St.1.4404/ PTFE/ Glas		St.1.4404/ PTFE/ Glas	
Connection	1/2" Union nut T Piece, TriClamp, Varivent, planar Flange		1/2" Union nut T Piece, TriClamp, Varivent, planar Flange		1/2" Union nut T Piece, TriClamp, Varivent, planar Flange		1/2" Union nut T Piece, TriClamp, Varivent, planar Flange	
Case	aluminium anodized		aluminium anodized		aluminium anodized		aluminium anodized	
Protection	IP65		IP65		IP65		IP65	
Delivery	Sensor (calibrated), 10m Wire		Sensor (calibrated), 10m Wire		Sensor (calibrated), 10m Wire		Sensor (calibrated), 10m Wire	
Guarantee	1 Year ex works Grambach		1 Year ex works Grambach		1 Year ex works Grambach		1 Year ex works Grambach	

All TecMicro variants are also as ATEX II protected available



TecMicro Order Structure

Example

