



## 100% Inline control of residual oxygen in tubular bag packs during the packaging process

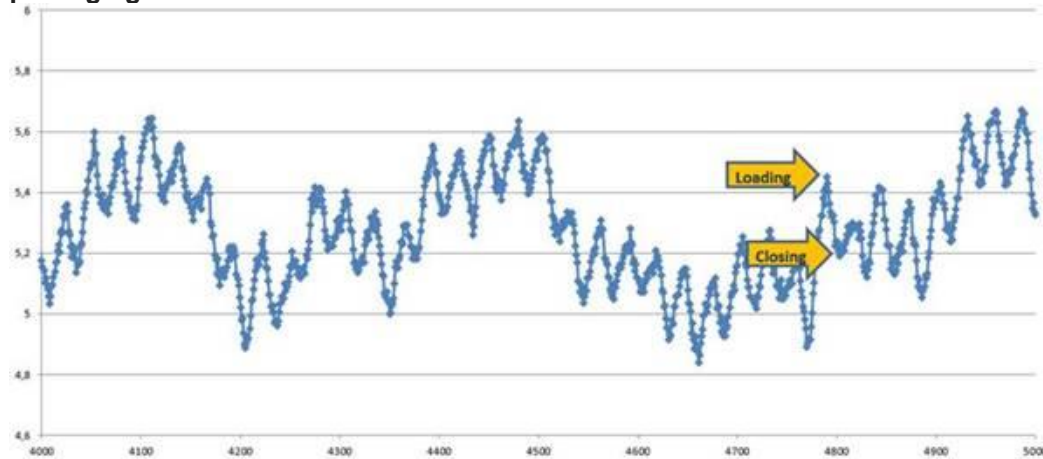
### Ensuring the quality of food

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**



*On the y-axis the oxygen value is displayed and on the x-axis the time. Out of the measurement you directly see the loading and sealing/closing of each bag. This confirms, that it is possible to measure the content of each bag.*

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.

1. High-Precision - Long-term stable measurement O<sub>2</sub>
2. Can be installed directly on the bag seal
3. Minimum maintenance, max. 1 time / year
4. Small size - 12mm diameter 60 mm length
5. Digital and optional analogue data output

All sensors work according to the principle of phase fluorometry or the measurement of the fluorescence lifetime, for which TecSense has several patents for the exclusive right to use. An internal quality control system is established to guarantee the constant high quality and is since 2013 ISO 9001 certified.

We have managed to position our sensors worldwide and have had remarkable success especially providing OEM solutions to several renown companies.

## Performance Data- Gas / Fluids

### Gas:

Range trace:	Accuracy
Total range: 0–2000ppm (0– 0,2%)	
• 0– 500 ppm	± 5 ppm
• 500– 1000 ppm	± 10 ppm
• 1000– 2000 ppm	± 50 ppm

### Range medium:

Range medium:	Accuracy
Total range: 0 –20.000ppm (0–2%)	
• 0– 1000 ppm	± 20 ppm
• 1000– 5000 ppm	± 50 ppm
• 5000– 20.000 ppm	± 200 ppm

### Range standard:

Range standard:	Accuracy
Total range: 0 –220.000ppm (0–22%)	
• 0– 50.000 ppm	± 500 ppm
• 50.000–220.000 ppm	± 1000 ppm

### Range high:

Range high:	Accuracy
Total range: 0- 100 %	
• 0– 10 %	± 0,3 %
• 10– 50 %	± 2 %
• 50– 100 %	± 5 %

### Fluids:

Range trace:	Accuracy
Total range: 0–2000ppb	
• 0– 2000 ppb	± 3 % FSc

### Range medium:

Range medium:	Accuracy
Total range: 0 – 2mg/L	
• 0– 2mg/L	± 2 % FSc

### Range standard:

Range standard:	Accuracy
Total range: 0 – 10 mg/L	
• 0– 10 mg/L	± 2 % FSc

### Range high:

Range high:	Accuracy
Total range: 0 – 40 mg/L	
• 0– 20 mg/L	± 3 % FSc
• 20– 40mg/L	± 5 % FSc