

DrägerSensor® XXS O₂ / CO LC

Order no. 68 13 275

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life
Dräger Pac 8500	no	yes	2 years	> 3 years
Dräger X-am 5000	no	yes	2 years	> 3 years
Dräger X-am 5600	no	yes	2 years	> 3 years
Dräger X-am 8000	no	yes	2 years	> 3 years

Selective filter

Internal selective filter for CO.

Cross sensitivities to alcohol and acid gases (H₂S, SO₂) are eliminated.

The filter's service life can be calculated as follows: 25,000 ppm x hours of contaminant gas. Example: Given constant concentration of 10 ppm H₂S will be: Service life = 25,000 ppm x hours / 10 ppm = 2,500 hours.

MARKET SEGMENTS

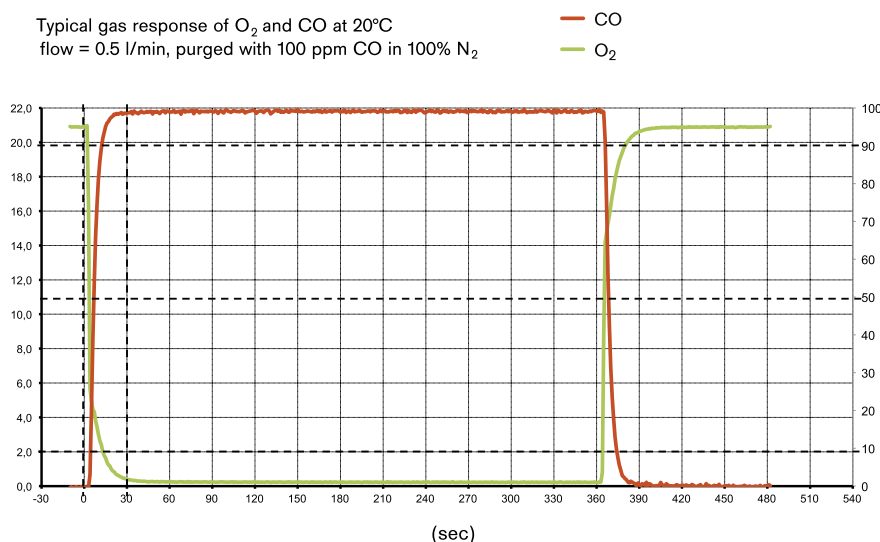
Gas suppliers, oxygen cylinders (diving), submarines, nuclear power plants

TECHNICAL SPECIFICATIONS

Detection limit:	0.1 Vol.-% O ₂ , 1 ppm CO
Resolution:	0.1 Vol.-% O ₂ , 1 ppm CO
Measurement range:	0 to 25 Vol.-% O ₂ (oxygen), 0 to 2000 ppm CO
Response time:	≤ 15 seconds (T ₉₀)
Measurement accuracy	
Sensitivity:	O ₂ : ≤ ± 1 % of measured value, CO: ≤ ± 2 % of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	O ₂ : ≤ ± 0.5 Vol.-% /year, CO: ≤ ± 2 ppm/year
Sensitivity:	O ₂ : ≤ ± 1 % of measured value/year, CO: ≤ ± 3 % of measured value/year
Warm-up time:	O ₂ : ≤ 15 minutes, CO: ≤ 30 minutes
Ambient conditions	
Temperature:	(-40 to 50)°C (-40 to 122)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,300) hPa
Influence of temperature	
Zero point:	O ₂ : ≤ ± 0.2 Vol.-% CO: ≤ ± 5 ppm
Sensitivity:	O ₂ : ≤ ± 2 % of measured value CO: ≤ ± 0.3 % of measured value/K
Influence of humidity	
Zero point:	No effect
Sensitivity:	O ₂ : ≤ ± 0.1 % of measured value/%r.h. CO: ≤ ± 0.02 % of measured value/%r.h.
Test gas:	approx. 12 to 20 Vol.-% O ₂ 20 to 1800 ppm CO

SPECIAL CHARACTERISTICS

DrägerSensor® XXS oxygen sensors are lead-free, thus complying with Directive 2002/95/EC (RoHS). Because they are non-consuming sensors, they have much longer life times than sensors that are consuming. An extremely fast response time of less than ten seconds produces a reliable warning of any lack or excess of oxygen. The prominent feature of this sensor is the simultaneous measurement of % by vol. oxygen and ppm carbon monoxide in **one** sensor.



The values shown in the following table are standard and apply to new sensors. The values may fluctuate by $\pm 30\%$. The sensor may also be sensitive to additional gases (for more information, please contact Dräger). Gas mixtures may be displayed as the sum of all components. Gases with a negative cross sensitivity may displace an existing concentration of O₂. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS O₂ /CO LC

Gas/vapor	Chem. symbol	Concentration	Display in ppm O ₂	Display in ppm CO with selektive filter
Acetylene	C ₂ H ₂	1 Vol.-%	≤ 0.5 ⁽⁻⁾	≤ 200
Ammonia	NH ₃	100 ppm	No effect	No effect
Carbon dioxide	CO ₂	10 Vol.-%	≤ 0.4 ⁽⁻⁾	≤ 2
Carbon monoxide	CO	0.2 Vol.-%	No effect	2000
Chlorine	Cl ₂	20 ppm	No effect	No effect
Ethane	C ₂ H ₆	1 Vol.-%	≤ 0.2 ⁽⁻⁾	No effect
Ethanol	C ₂ H ₅ OH	250 ppm	No effect	No effect
Ethene	C ₂ H ₄	2 Vol.-%	≤ 2 ⁽⁻⁾	≤ 250
Hydrogen	H ₂	1.6 Vol.-%	≤ 2.5 ⁽⁻⁾	≤ 200
Hydrogen chloride	HCl	40 ppm	No effect	No effect
Hydrogen cyanide	HCN	50 ppm	No effect	No effect
Hydrogen sulfide	H ₂ S	100 ppm	No effect	No effect
Isobutylene	i-C ₄ H ₈	100 ppm	No effect	No effect
Methane	CH ₄	10 Vol.-%	No effect	No effect
Nitrogen dioxide	NO ₂	20 ppm	No effect	No effect
Nitrogen monoxide	NO	30 ppm	No effect	≤ 5
Propane	C ₃ H ₈	2 Vol.-%	No effect	No effect
Sufur dioxide	SO ₂	20 ppm	No effect	No effect

(-) Indicates negative deviation