

# DrägerSensor® XXS O<sub>2</sub> / 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 (H<sub>2</sub>S, SO<sub>2</sub>) 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 H<sub>2</sub>S will be: Service life = 25,000 ppm x hours / 10 ppm = 2,500 hours.

## MARKET SEGMENTS

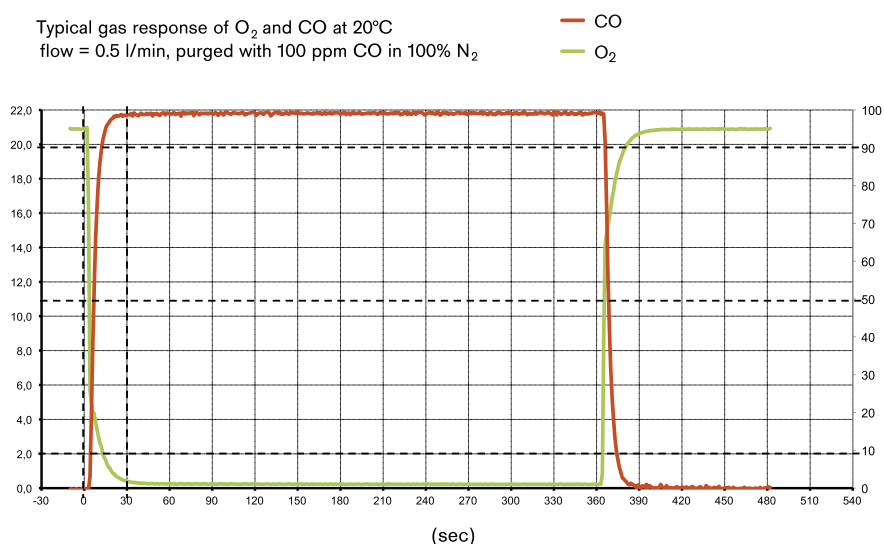
Gas suppliers, oxygen cylinders (diving), submarines, nuclear power plants

## TECHNICAL SPECIFICATIONS

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

## RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS O<sub>2</sub> /CO LC

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

(-) Indicates negative deviation