DrägerSensor® XXS O_2/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_2S, SO_2) 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_2S will be: Service life = 25,000 ppm x hours / 10 ppm = 2,500 hours.

MARKET SEGMENTS

Gas suppliers, waste management, petrochemical industry, sewage, mining and tunneling, shipping, inorganic chemistry, steel industry, organic chemistry, oil & gas

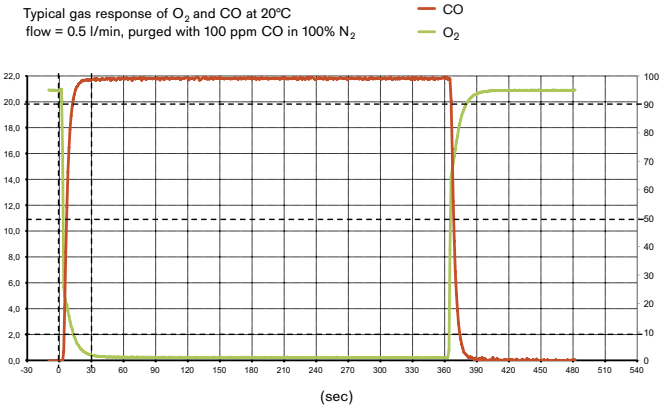
TECHNICAL SPECIFICATIONS

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})
Precision	
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: ≤ 15 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.

Typical gas response of O_2 and CO at 20°C
flow = 0.5 l/min, purged with 100 ppm CO in 100% N_2



The values shown in the following table are standard and apply to new sensors. The values maybe fluctuate by ± 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_2. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS O_2 /CO LC

Gas/vapor	Chem. symbol	Concentration	Display in Vol. % O_2	Display in ppm CO with selective filter
Acetylene	C_2H_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_2H_6	1 Vol.-%	≤ 0.2(–)	No effect
Ethanol	C_2H_5OH	250 ppm	No effect	No effect
Ethene	C_2H_4	2 Vol.-%	≤ 2(–)	≤ 250
Helium	He	20 Vol.-%	≤ 3*	n.a.
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_2S	100 ppm	No effect	No effect
Isobutylene	i-C_4H_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_3H_8	2 Vol.-%	No effect	No effect
Sufur dioxide	SO_2	20 ppm	No effect	No effect

(–) Indicates negative deviation

* non-linear false positive dispaly value