DrägerSensor® XXS CO HC

Order no. 68 12 010

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life
Dräger X-am 5000	no	yes	1 year	> 3 years
Dräger X-am 5600	no	yes	1 year	> 3 years
Dräger X-am 8000	no	yes	1 year	> 3 years

Selective filter

Internal selective filter.

Cross sensitivities to alcohol and acid gases (H_2S, SO_2) are eliminated.

The filter's service life can be calculated as follows: 5,000 ppm x hours of contaminant gas. Example: Given constant concentration of 10 ppm H_2S will be: Service life = 5,000 ppm x hours/10 ppm = 500 hours.

MARKET SEGMENTS

Waste disposal industry, metal processing, petrochemical, fertilizer production, mining and tunneling (in particular monitoring high CO concentrations during rescue operations), shipping, inorganic chemicals, biogas, hazmat, steel industry, oil and gas, organic chemicals.

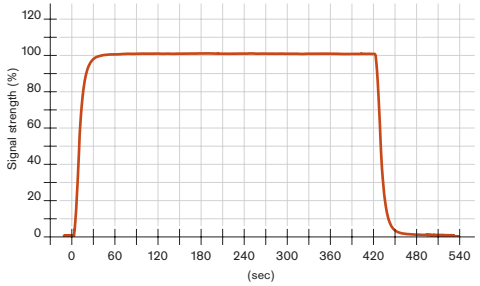
TECHNICAL SPECIFICATIONS

Detection limit:	10 ppm
Resolution:	5 ppm
Measurement range:	0 to 10,000 ppm CO (carbon monoxide)
Response time:	≤ 25 seconds (t_{90})
Precision	
Sensitivity:	≤ ± 2% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 5 ppm/year
Sensitivity:	≤ ± 1% of measured value/month
Warm-up time:	≤ 5 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:	No effect
Sensitivity:	≤ ± 0.3% of measured value/K
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.02% of measured value/% RH
Test gas:	approx. 100 to 9,000 ppm CO

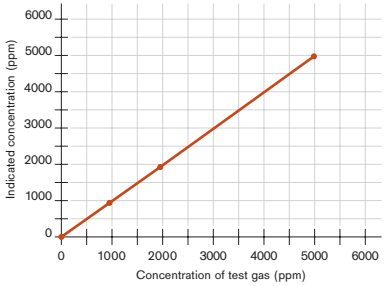
SPECIAL CHARACTERISTICS

This sensor demonstrates excellent linearity across the whole measurement range even if calibrated in the lower reaches of that range, and it also provides a stable reading even at high concentrations over long periods of time.

Typical Sensor reaction to CO HC at 20 °C/68 °F
Flow = 0.5 l/min, with 5.000 ppm CO



Linearity of CO HC sensor
calibrated with 100 ppm CO



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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 CO. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm CO
Acetylene	C_2H_2	100 ppm	≤ 200
Ammonia	NH_3	100 ppm	No effect
Carbon dioxide	CO_2	30 Vol.-%	No effect
Chlorine	Cl_2	20 ppm	No effect
Ethanol	C_2H_5OH	250 ppm	No effect
Hydrogen	H_2	0.1 Vol.-%	≤ 350
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Hydrogen sulfide	H_2S	30 ppm	No effect
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Nitrogen dioxide	NO_2	20 ppm	No effect
Nitrogen monoxide	NO	30 ppm	≤ 5
Methane	CH_4	5 Vol.-%	No effect
Propane	C_3H_8	1 Vol.-%	No effect
Sulfur dioxide	SO_2	25 ppm	No effect