

# DrägerSensor® XXS CO DrägerSensor® XXS E CO

Order no. 68 10 882  
68 12 212

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life
Dräger Pac 3500	no	yes	3 years	> 5 years
Dräger Pac 5500	no	yes	3 years	> 5 years
Dräger Pac 7000	no	yes	3 years	> 5 years
Dräger Pac 7000 5Y	no	yes	5 years	> 5 years
Dräger X-am 2500	no	yes	3 years	> 5 years
Dräger X-am 5000	no	yes	3/5 years	> 5 years
Dräger X-am 5600	no	yes	3/5 years	> 5 years

## Selective filter

Internal selective filter.

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

Waste disposal industry, metal processing, petrochemical, fertilizer production, mining and tunneling, shipping, inorganic chemicals, steel, organic chemicals, oil and gas, measuring dangerous substances, biogas.

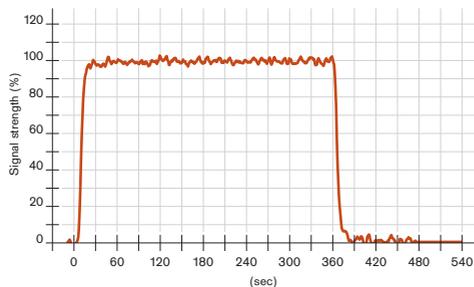
## TECHNICAL SPECIFICATIONS

<b>Detection limit:</b>	6 ppm
<b>Resolution:</b>	2 ppm
<b>Measurement range:</b>	0 to 2,000 ppm CO (carbon monoxide)
<b>Response time:</b>	≤ 15 seconds (T <sub>90</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	≤ ± 2% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 2 ppm/year
Sensitivity:	≤ ± 3% of measured value/year
<b>Warm-up time:</b>	≤ 5 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:	≤ ± 5 ppm
Sensitivity:	≤ ± 0.3% of measured value/K
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.02% of measured value/% RH
<b>Test gas:</b>	approx. 20 to 1800 ppm CO

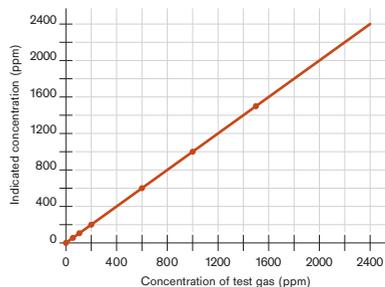
## SPECIAL CHARACTERISTICS

In addition to an outstanding linearity and a quick response time, these CO sensors are highly selective. An internal selective filter, which is fitted to the sensor as standard, filters out most associated gases such as alcohol and acid gases H<sub>2</sub>S, SO<sub>2</sub>.

Sensor reaction to CO at 20 °C/68 °F  
Flow = 0.5 l/min, with 30 ppm CO



Linearity of CO sensor  
calibrated with 50 ppm CO



D-27841-2009

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

## RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS CO

Gas/vapor	Chem. symbol	Concentration	Display in ppm CO
Ammonia	NH <sub>3</sub>	100 ppm	No effect
Carbon dioxide	CO <sub>2</sub>	30 Vol.-%	≤ 2
Chlorine	Cl <sub>2</sub>	20 ppm	No effect
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Ethine	C <sub>2</sub> H <sub>2</sub>	100 ppm	≤ 200
Hydrogen	H <sub>2</sub>	0.1 Vol.-%	≤ 350
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Hydrogen sulfide	H <sub>2</sub> S	30 ppm	No effect
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	No effect
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	No effect
Nitrogen monoxide	NO	30 ppm	≤ 5
Methane	CH <sub>4</sub>	5 Vol.-%	No effect
Propane	C <sub>3</sub> H <sub>8</sub>	1 Vol.-%	No effect
Sulfur dioxide	SO <sub>2</sub>	25 ppm	No effect

**RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS E CO**

<b>Gas/vapor</b>	<b>Chem. symbol</b>	<b>Concentration</b>	<b>Display in ppm CO</b>
Ammonia	NH <sub>3</sub>	100 ppm	No effect
Carbon dioxide	CO <sub>2</sub>	30 Vol.-%	≤ 2
Chlorine	Cl <sub>2</sub>	20 ppm	No effect
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Ethine	C <sub>2</sub> H <sub>2</sub>	100 ppm	≤ 200
Hydrogen	H <sub>2</sub>	0.1 Vol.-%	≤ 350
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Hydrogen sulfide	H <sub>2</sub> S	30 ppm	No effect
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	No effect
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	No effect
Nitrogen monoxide	NO	30 ppm	≤ 5
Methane	CH <sub>4</sub>	5 Vol.-%	No effect
Propane	C <sub>3</sub> H <sub>8</sub>	1 Vol.-%	No effect
Sulfur dioxide	SO <sub>2</sub>	25 ppm	No effect



D-10161-2009

DrägerSensor® XXS CO