

# DrägerSensor® XXS Cl<sub>2</sub>

Order no. 68 10 890

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 7000	no	yes	1 year	> 2 years	no
Dräger X-am 5000	no	yes	1 year	> 2 years	no
Dräger X-am 5000	no	yes	1 year	> 2 years	no

## MARKET SEGMENTS

Food and beverage, inorganic chemicals, manufacture of plastics, measuring dangerous substances, pulp and paper, power generation, sewage plants, water treatment.

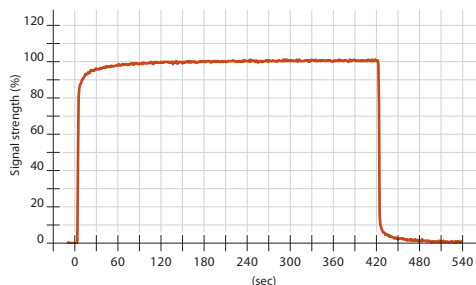
## TECHNICAL SPECIFICATIONS

Detection limit:	0.05 ppm	
Resolution:	0.05 ppm	
Measurement range/ relative sensitivity	0 to 20 ppm Cl <sub>2</sub> (chlorine)	1.00
	0 to 20 ppm F <sub>2</sub> (fluorine)	1.00
	0 to 20 ppm Br <sub>2</sub> (bromine)	1.00
	0 to 20 ppm ClO <sub>2</sub> (chlorine dioxide)	0.60
Response time:	≤ 30 seconds (T <sub>90</sub> )	
Measurement accuracy		
Sensitivity:	≤ ± 2% of measured value	
Long-term drift, at 20°C (68°F)		
Zero point:	≤ ± 0.2 ppm/year	
Sensitivity:	≤ ± 2% of measured value/month	
Warm-up time:	≤ 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:	≤ ± 0.05 ppm	
Sensitivity:	≤ ± 5% of measured value	
Influence of humidity		
Zero point:	No effect	
Sensitivity:	≤ ± 0.4% of measured value/% RH	
Test gas:	approx. 1 to 18 ppm Cl <sub>2</sub>	

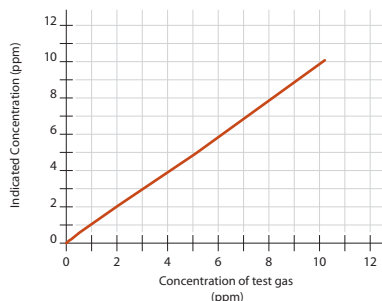
## SPECIAL CHARACTERISTICS

This sensor is suitable for monitoring concentrations of chlorine, bromine, fluorine, and chlorine dioxide in the ambient air. These sensors' advantages include excellent linearity and fast response times.

Sensor reaction  $\text{Cl}_2$  at 20 °C/68°F  
Flow = 0.5 l/min, with 0,5 ppm  $\text{Cl}_2$



Linearity of  $\text{Cl}_2$  Sensors  
calibrated with 10.2 ppm  $\text{Cl}_2$



D-27838-2009

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

## RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm $\text{Cl}_2$
Ammonia	$\text{NH}_3$	50 ppm	No effect
Carbon dioxide	$\text{CO}_2$	10 Vol.-%	No effect
Carbon monoxide	$\text{CO}$	1,000 ppm	No effect
Ethanol	$\text{C}_2\text{H}_5\text{OH}$	250 ppm	No effect
Ethine	$\text{C}_2\text{H}_2$	100 ppm	No effect
Hydrogen	$\text{H}_2$	1,000 ppm	No effect
Hydrogen chloride	$\text{HCl}$	20 ppm	$\leq 0.6$
Hydrogen cyanide	$\text{HCN}$	60 ppm	No effect
Hydrogen sulfide	$\text{H}_2\text{S}$	10 ppm	$\leq 0.6$ (-)
Isobutylene	$(\text{CH}_3)_2\text{CCH}_2$	100 ppm	No effect
Methane	$\text{CH}_4$	0.9 Vol.-%	No effect
Nitrogen dioxide	$\text{NO}_2$	10 ppm	No effect
Nitrogen monoxide	$\text{NO}$	20 ppm	No effect
Ozone	$\text{O}_3$	1 ppm	No effect
Phosphine	$\text{PH}_3$	1 ppm	No effect
Sulfur dioxide	$\text{SO}_2$	10 ppm	$\leq 1$ (-)

(-) Indicates negative deviation