

# DrägerSensor® XS EC Cl<sub>2</sub>

Order no. 68 09 165

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 7000	yes	yes	1 year	> 1.5 years	–

## MARKET SEGMENTS

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

## TECHNICAL SPECIFICATIONS

<b>Detection limit:</b>	0.1 ppm
<b>Resolution:</b>	0.05 ppm
<b>Measurement range/</b>	0 to 20 ppm Cl <sub>2</sub> (chlorine) 1.00
<b>Relative sensitivity</b>	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
<b>Response time:</b>	≤ 30 seconds (t <sub>90</sub> )
<b>Precision</b>	
Sensitivity:	≤ ± 2% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 0.2 ppm/year
Sensitivity:	≤ ± 2% of measured value/month
<b>Warm-up time:</b>	≤ 1 hour
<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:	≤ ± 0.1 ppm
Sensitivity:	≤ ± 5% of measured value
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.4% of measured value/% RH
<b>Test gas:</b>	approx. 2 to 20 ppm Cl <sub>2</sub> or one of the other target gases: F <sub>2</sub> , Br <sub>2</sub> , ClO <sub>2</sub>

## SPECIAL CHARACTERISTICS

This sensor is suitable for monitoring concentrations of chlorine, bromine, fluorine, and chlorine dioxide in the ambient air. It is sufficient to calibrate the sensor using a chlorine test gas; by doing so, all of the other target gases are then automatically calibrated.

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 Cl <sub>2</sub>
Acetylene	C <sub>2</sub> H <sub>2</sub>	200 ppm	No effect
Ammonia	NH <sub>3</sub>	50 ppm	≤ 0.5 <sup>(-)</sup>
Carbon dioxide	CO <sub>2</sub>	1.5 Vol. %	No effect
Carbon monoxide	CO	100 ppm	No effect
Ethene	C <sub>2</sub> H <sub>4</sub>	1,000 ppm	No effect
Hydrogen	H <sub>2</sub>	1,000 ppm	No effect
Hydrogen cyanide	HCN	20 ppm	≤ 0.1
Hydrogen sulfide	H <sub>2</sub> S	20 ppm	≤ 0.1 <sup>(-)</sup>
i-propanol	(CH <sub>3</sub> ) <sub>2</sub> CHOH	1 Vol. %	No effect
Methane	CH <sub>4</sub>	4 Vol. %	No effect
Methanol	CH <sub>3</sub> OH	500 ppm	≤ 0.3 <sup>(-)</sup>
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 0.2
Nitrogen monoxide	NO	25 ppm	No effect
Phosphine	PH <sub>3</sub>	10 ppm	No effect
Sulfur dioxide	SO <sub>2</sub>	10 ppm	≤ 0.2
Tetrahydrothiophene	C <sub>4</sub> H <sub>8</sub> S	1,000 ppm	No effect