DrägerSensor® XS EC Cl_2

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

Detection limit:	0.1 ppm	
Resolution:	0.05 ppm	
Measurement range/ Relative sensitivity	0 to 20 ppm Cl_2 (chlorine)	1.00
	0 to 20 ppm F_2 (fluorine)	1.00
	0 to 20 ppm Br_2 (bromine)	1.00
	0 to 20 ppm ClO_2 (chlorine dioxide)	0.60
Response time:	≤ 30 seconds (T_{90})	
Measurement accuracy		
Zero point:	≤ ± 0.05 ppm	
Sensitivity:	≤ ± 2% of measured value	
Long-term drift, at 20°C (68°F)		
Sensitivity:	≤ ± 2% of measured value/month	
Warm-up time:	≤ 1 hour	
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:	≤ ± 0.1 ppm	
Sensitivity:	≤ ± 5% of measured value	
Influence of humidity		
Zero point:	No effect	
Sensitivity:	≤ ± 0.4% of measured value/% RH	
Test gas:	approx. 2 to 20 ppm Cl_2 or one of the other target gases: F_2, Br_2, ClO_2	

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

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm Cl_2
Ammonia	NH_3	50 ppm	≤ 0.5(–)
Carbon dioxide	CO_2	1.5 Vol. %	No effect
Carbon monoxide	CO	100 ppm	No effect
Ethene	C_2H_4	1,000 ppm	No effect
Ethine	C_2H_2	200 ppm	No effect
Hydrogen	H_2	1,000 ppm	No effect
Hydrogen cyanide	HCN	20 ppm	≤ 0.1
Hydrogen sulfide	H_2S	20 ppm	≤ 0.1(–)
i-propanol	$(CH_3)_2CHOH$	1 Vol. %	No effect
Methane	CH_4	4 Vol. %	No effect
Methanol	CH_3OH	500 ppm	≤ 0.3(–)
Nitrogen dioxide	NO_2	20 ppm	≤ 0.2
Nitrogen monoxide	NO	25 ppm	No effect
Phosphine	PH_3	10 ppm	No effect
Sulfur dioxide	SO_2	10 ppm	≤ 0.2
Tetrahydrothiophene	C_4H_8S	1,000 ppm	No effect

(–) Indicates negative deviation