DrägerSensor® XXS $COCl_2$

Order no. 68 12 005

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5000	no	yes	0.5 years	> 1 year at below 25°C	no
Dräger X-am 5600	no	yes	0.5 years	> 6 months at 35°C	

MARKTSEGMENTE

Manufacture of plastics, chemical industry, insecticides production, dyes, military

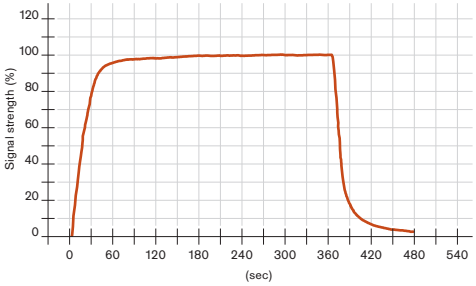
TECHNISCHE DATEN

Detection limit:	0,01 ppm
Resolution:	0,01 ppm
Measurement range:	0 bis 10 ppm $COCl_2$ (Phosgene)
Response time:	≤ 20 seconds (T_{20})
Measurement accuracy	
Sensitivity:	≤ ± 5% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 0,01 ppm/year
Sensitivity:	≤ ± 1% of measured value/month
Warm-up time:	≤ 1 hour
Ambient conditions	
Temperature:	(-20 to 35) °C (-4 to 99) °F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1300) hPa
Influence of temperature	
Zero point:	no effect
Sensitivity:	≤ ± 0.2% of measured value/K
Influence of humidity	
Zero point:	no effect
Sensitivity:	≤ ± 0.05% of measured value/RH
Test gas:	$COCl_2$ test gas between 3.8 to 9 ppm (not in Dräger's portfolio)

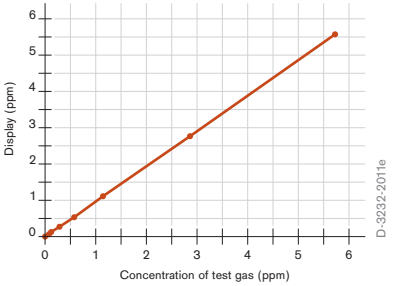
SPECIAL CHARACTERISTICS

This sensor's advantages include a very low detection limit, excellent linearity and high signal stability.

Sensor reaction at 20 °C
Flow = 0.5 l/min, 0.115 ppm $COCl_2$



Linearity of $COCl_2$ Sensors
calibrated with 0.28 ppm $COCl_2$



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 $COCl_2$. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. Symbol	Concentration	Reading in ppm $COCl_2$
Ammonia	NH_3	20 ppm	No effect
Carbon dioxide	CO_2	1,5 Vol.-%	No effect
Carbon monoxide	CO	1000 ppm	No effect
Chlorine	Cl_2	0,5 ppm	≤ 0.2
Ethanol	C_2H_5OH	260 ppm	No effect
Ethine	C_2H_2	20 ppm	No effect
Hydrogen	H_2	8000 ppm	No effect
Hydrogen chloride	HCl	0,5 ppm	≤ 0.7
Hydrogen fluoride	HF	0,4 ppm	≤ 0.1 ppm
Hydrogen peroxide	H_2O_2	1 ppm	No effect
Hydrogen sulfide	H_2S	1 ppm	≤ 1[1)]
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Nitrogen dioxide	NO_2	1 ppm	≤ 0.1(–)
Nitrogen monoxide	NO	30 ppm	No effect
Ozone	O_3	0,3 ppm	≤ 0.05(–)
Phosphine	PH_3	0,5 ppm	≤ 0.1 ppm
Propanol	C_3H_7OH	500 ppm	No effect
Sulfur dioxide	SO_2	2 ppm	No effect

(–) Indicates negative deviation

1) Permanent exposure to H2S can result in a reduction of sensitivity.