

# DrägerSensor® XXS O<sub>2</sub> / H<sub>2</sub>S LC

Order no. 68 14 137

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5000	no	yes	2 years	> 3 years	no
Dräger X-am 5600	no	yes	2 years	> 3 years	no
Dräger X-am 8000	no	yes	2 years	> 3 years	no

## MARKET SEGMENTS

Gas suppliers, waste disposal, petrochemical industry, sewage, mining and tunneling, shipping, inorganic chemicals, steel, organic chemicals, oil and as

## TECHNICAL SPECIFICATIONS

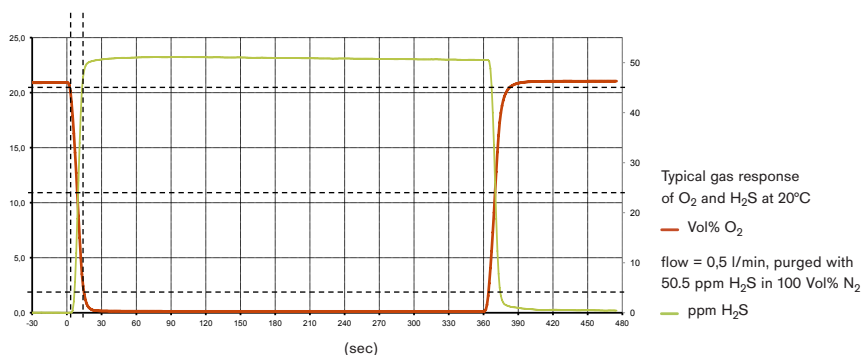
<b>Detection limit:</b>	0.1 Vol.-% O <sub>2</sub> , 0.4 ppm H <sub>2</sub> S
<b>Resolution:</b>	0.1 Vol.-% O <sub>2</sub> , 0.1 ppm H <sub>2</sub> S
<b>Measurement range:</b>	0 to 25 Vol.-% O <sub>2</sub> (oxygen), 0 to 100 ppm H <sub>2</sub> S (hydrogen sulfide)
<b>Response time:</b>	O <sub>2</sub> : ≤ 15 seconds, H <sub>2</sub> S: ≤ 20 seconds (T <sub>90</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	O <sub>2</sub> : ≤ ± 1 % of measured value, H <sub>2</sub> S: ≤ ± 5 % of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	O <sub>2</sub> : ≤ ± 0.5 Vol.-% /year, H <sub>2</sub> S: ≤ ± 0.2 ppm/year
Sensitivity:	O <sub>2</sub> : ≤ ± 1 % of measured value/year, H <sub>2</sub> S: ≤ ± 5 % of measured value/year
<b>Warm-up time:</b>	O <sub>2</sub> : ≤ 15 minutes, H <sub>2</sub> S: ≤ 10 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:	O <sub>2</sub> : ≤ ± 0.2 Vol.-% H <sub>2</sub> S: No effect
Sensitivity:	O <sub>2</sub> : ≤ ± 2 % of measured value H <sub>2</sub> S: ≤ ± 5 % of measured value
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	O <sub>2</sub> : ≤ ± 0.1 % of measured value/%r.h. H <sub>2</sub> S: ≤ ± 0.1 % of measured value/ %r.h.
<b>Test gas:</b>	approx. 12 to 20 Vol.-% O <sub>2</sub> approx. 5 to 90 ppm H <sub>2</sub> S

## SPECIAL CHARACTERISTICS

DrägerSensor® XXS oxygen sensors are lead-free, thus complying with Directive 2002/95/EC (RoHS). The prominent feature of this sensor is the simultaneous measurement of % by vol. oxygen and ppm hydrogen sulfide in **one** sensor.



*Northside Sales, Co.*  
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The values shown in the following table are standard and apply to new sensors. The values maybe 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  $O_2$ . To be sure, please check if gas mixtures are present.

## RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS $O_2$ / $H_2S$ LC

Gas/vapor	Chem. symbol	Concentration	Display in Vol.-% $O_2$	Display in ppm $H_2S$
Acetylene	$C_2H_2$	0,5 Vol.-%	$\leq 0,3^{(-)}$	$\leq 10$
Ammonia	$NH_3$	100 ppm	No effect	No effect
Carbon dioxide	$CO_2$	10 Vol.-%	$\leq 0,4^{(-)}$	No effect
Carbon monoxide	CO	500 ppm	No effect	$\leq 2$
Chlorine	$Cl_2$	10 ppm	No effect	$\leq 2^{(-)}$
Dimethyl disulfide	$CH_3SSCH_3$	20 ppm	No effect	$\leq 11$
Dimethyl sulfide	$(CH_3)_2S$	20 ppm	No effect	$\leq 5$
Ethane	$C_2H_6$	1,0 Vol.-%	$\leq 0,2^{(-)}$	No effect
Ethanol	$C_2H_5OH$	250 ppm	No effect	No effect
Ethene	$C_2H_4$	1000 ppm	No effect	$\leq 10$
Ethyl mercaptan	$C_2H_5SH$	20 ppm	No effect	$\leq 13$
Hydrogen	$H_2$	1,5 Vol.-%	$\leq 2,5^{(-)}$	$\leq 5$
Hydrogen chloride	HCl	40 ppm	No effect	No effect
Hydrogen cyanide	HCN	50 ppm	No effect	No effect
Hydrogen sulfide	$H_2S$	100 ppm	No effect	100
Isobutylene	i- $C_4H_8$	100 ppm	No effect	No effect
Methane	$CH_4$	5 Vol.-%	No effect	No effect
Methyl mercaptan	$CH_3SH$	20 ppm	No effect	$\leq 16$
Nitrogen dioxide	$NO_2$	20 ppm	No effect	$\leq 4^{(-)}$
Nitrogen monoxide	NO	30 ppm	No effect	No effect
Propane	$C_3H_8$	1 Vol.-%	No effect	No effect
sec-Butyl mercaptan	$C_4H_{10}S$	20 ppm	No effect	$\leq 7$
Sulfur dioxide	$SO_2$	20 ppm	No effect	$\leq 3$
tert-Butyl mercaptan	$(CH_3)_3CSH$	20 ppm	No effect	$\leq 9$
Tetrahydrothiophene	$C_4H_8S$	50 ppm	No effect	$\leq 5$

(-) Indicates negative deviation