DrägerSensor® XXS O_2/H_2S 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

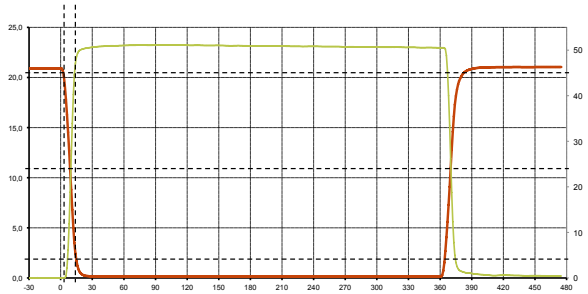
Gas suppliers, waste disposal, petrochemical industry, sewage, mining and tunneling, shipping, inorganic chemicals, steel, organic chemicals, oil and as

TECHNICAL SPECIFICATIONS

Detection limit:	0.1 Vol.-% O_2, 0.4 ppm H_2S
Resolution:	0.1 Vol.-% O_2, 0.1 ppm H_2S
Measurement range:	0 to 25 Vol.-% O_2 (oxygen), 0 to 100 ppm H_2S (hydrogen sulfide)
Response time:	O2: ≤ 15 seconds, H_2S: ≤ 20 seconds (t_{90})
Precision	
Sensitivity:	O_2: ≤ ± 1 % of measured value, H_2S: ≤ ± 5 % of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	O_2: ≤ ± 0.5 Vol.-% /year, H_2S: ≤ ± 0.2 ppm/year
Sensitivity:	O_2: ≤ ± 1 % of measured value/year, H_2S: ≤ ± 5 % of measured value/ year
Warm-up time:	O_2: ≤ 15 minutes, H_2S: ≤ 10 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:	O_2 : ≤ ± 0.2 Vol.-% H_2S: No effect
Sensitivity:	O_2 : ≤ ± 2 % of measured value H_2S: ≤± 5% of measured value
Influence of humidity	
Zero point:	No effect
Sensitivity:	O_2 : ≤ ± 0.1 % of measured value/%r.h. H_2S: ≤ ± 0.1 % of measured value/ %r.h.
Test gas:	approx. 12 to 20 Vol.-% O_2 approx. 5 to 90 ppm H_2S

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.



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 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.-%	≤ 0,3(–)	≤ 10
Ammonia	NH_3	100 ppm	No effect	No effect
Carbon dioxide	CO_2	10 Vol.-%	≤ 0,4(–)	No effect
Gas	chem.symbol	Conc.	display O2	display H2S
Carbon disulfide	CS_2	50 ppm	n.a.	No effect
Carbon monoxide	CO	500 ppm	No effect	≤ 2
Chlorine	Cl_2	10 ppm	No effect	≤ 2(–)
Dimethyl disulfide	CH_3SSCH_3	20 ppm	No effect	≤ 11
Dimethyl sulfide	$(CH_3)_2S$	20 ppm	No effect	≤ 5
Ethane	C_2H_6	1,0 Vol.-%	≤ 0,2(–)	No effect
Ethanol	C_2H_5OH	250 ppm	No effect	No effect
Ethene	C_2H_4	1000 ppm	No effect	≤ 10
Ethyl mercaptan	C_2H_5SH	20 ppm	No effect	≤ 13
Helium	He	20 Vol.-%	≤ 3*	n.a.
Hydrogen	H_2	1,5 Vol.-%	≤ 2,5(–)	≤ 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	≤ 16
Nitrogen dioxide	NO_2	20 ppm	No effect	≤ 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	≤ 7
Sulfur dioxide	SO_2	20 ppm	No effect	≤ 3
tert-Butyl mercaptan	$(CH_3)_3CSH$	20 ppm	No effect	≤ 9
Tetrahydrothiophene	C_4H_8S	50 ppm	No effect	≤ 5

(–) Indicates negative deviation

* non-linear false positive dispaly value