DrägerSensor® XXS H_2S
DrägerSensor® XXS E H_2S

Order no. 68 10 883
68 12 213

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 7000	no	yes	3 years	> 5 years	no
Dräger Pac 7000 5Y	no	yes	5 years	> 5 years	no
Dräger X-am 5000	no	yes	3/5 years	> 5 years	no
Dräger X-am 5600	no	yes	3/5 years	> 5 years	no
Dräger X-am 8000	no	yes	3/5 years	> 5 years	no

MARKET SEGMENTS

Waste disposal, petrochemical, fertilizer production, sewage, mining and tunneling, shipping, inorganic chemicals, steel, pulp and paper, organic chemicals, oil and gas, hazmat, biogas.

TECHNICAL SPECIFICATIONS

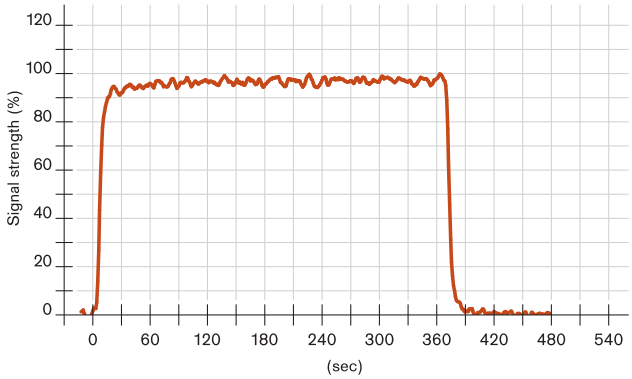
Detection limit:	2 ppm
Resolution:	1 ppm
Measurement range:	0 to 200 ppm H_2S (hydrogen sulfide)
Response time:	≤ 15 seconds (T_{90})
Measurement accuracy	
Sensitivity:	≤ ± 2% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 1 ppm/year
Sensitivity:	≤ ± 3% of measured value/year
Warm-up time:	≤ 5 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:	No effect
Sensitivity:	≤ ± 5% of measured value
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.03% of measured value/% RH
Test gas:	approx. 5 to 180 ppm H_2S

*Sudden temperature or humidity changes lead to dynamic effects (fluctuations). These dynamic effects decrease within 2 to 3 minutes.

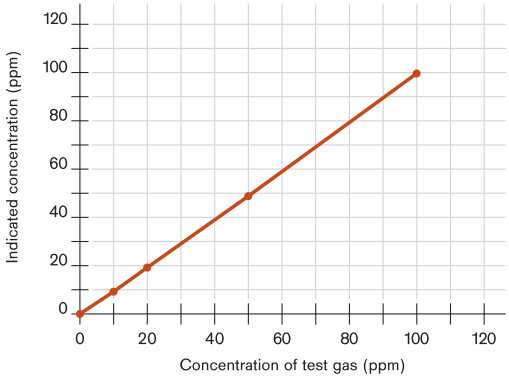
SPECIAL CHARACTERISTICS

This sensor's advantages include fast response times and excellent linearity. At concentrations up to 20 ppm, sulfur dioxide has hardly any effect on hydrogen sulfide readings. This enables the selective measurement of the gas concentration using the DrägerSensor® XXS SO_2 (with integrated selective filter) together with the DrägerSensor® XXS H_2S in a device such as a Dräger X-am 5000 or X-am 5600

Sensor reaction to H_2S at 20 °C/68 °F
Flow = 0.5 l/min, with 10 ppm H_2S



Linearity of H_2S sensor
calibrated with 20 ppm H_2S



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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 H_2S. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS H_2S

Gas/vapor	Chem. symbol	Concentration	Display in ppm H_2S
Acetylene	C_2H_2	100 ppm	No effect
Ammonia	NH_3	200 ppm	No effect
Carbon dioxide	CO_2	5 Vol.-%	No effect
Carbon monoxide	CO	500 ppm	No effect
Chlorine	Cl_2	10 ppm	≤ 2(–)
Dimethyl disulfide	CH_3SSCH_3	20 ppm	≤ 5
Dimethylsulfide	$(CH_3)_2S$	20 ppm	≤ 5
Ethanol	C_2H_5OH	250 ppm	no effect
Ethyl mercaptan	C_2H_5SH	20 ppm	≤ 12
Hydrogen	H_2	2 Vol.-%	≤ 18
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Methane	CH_4	5 Vol.-%	No effect
Methyl mercaptan	CH_3SH	20 ppm	≤ 15
Nitrogen dioxide	NO_2	20 ppm	≤ 5(–)

(–) Indicates negative deviation

RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS H_2S

Gas/vapor	Chem. symbol	Concentration	Display in ppm H_2S
Nitrogen monoxide	NO	30 ppm	No effect
Propane	C_3H_8	1 Vol.-%	No effect
sec-Butyl mercaptan	$C_4H_{10}S$	20 ppm	≤ 5
Sulphur dioxide	SO_2	20 ppm	≤ 2
tert- Butyl mercaptan	$(CH_3)_3CSH$	20 ppm	≤ 6
Tetrahydrothiophene	C_4H_8S	20 ppm	≤ 3

RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS E H_2S

Gas/vapor	Chem. symbol	Concentration	Display in ppm H_2S
Acetylene	C_2H_2	100 ppm	no effect
Ammonia	NH_3	200 ppm	no effect
Carbon dioxide	CO_2	5 Vol.-%	no effect
Carbon monoxide	CO	500 ppm	no effect
Chlorine	Cl_2	10 ppm	≤2(–)
Ethanol	C_2H_5OH	250 ppm	no effect
Hydrogen	H_2	0.1 Vol.-%	no effect
Hydrogen chloride	HCl	40 ppm	no effect
Hydrogen cyanide	HCN	50 ppm	no effect
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Methane	CH_4	5 Vol.-%	no effect
Nitrogen dioxide	NO_2	20 ppm	≤5(–)
Nitrogen monoxide	NO	30 ppm	no effect
Propane	C_3H_8	1 Vol.-%	no effect
Sulphur dioxide	SO_2	20 ppm	≤ 2

(–) Indicates negative deviation