DrägerSensor® XXS H_2S HC

Order no. 68 12 015

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5000	no	yes	1 year	> 3 years	no
Dräger X-am 5600	no	yes	1 year	> 3 years	no
Dräger X-am 8000	no	yes	1 year	> 3 years	no

MARKET SEGMENTS

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

TECHNICAL SPECIFICATIONS

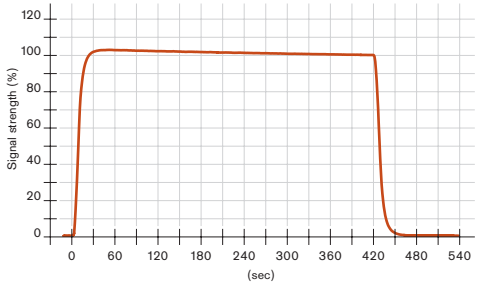
Detection limit:	4 ppm
Resolution:	2 ppm
Measurement range:	0 to 1,000 ppm H_2S (hydrogen sulfide)
Response time:	≤ 15 seconds (t_{90})
Precision	
Sensitivity:	≤ ± 2% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 2 ppm/year
Sensitivity:	≤ ± 1% of measured value/month
Warm-up time:	≤ 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. 40 to 900 ppm H_2S

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

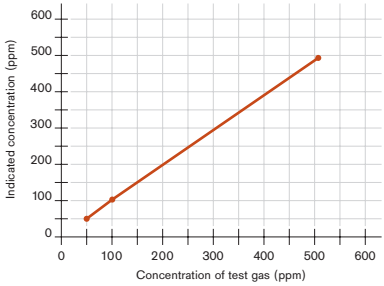
SPECIAL CHARACTERISTICS

Because of its excellent linearity, this sensor can be calibrated in its lower measurement range using a hydrogen sulfide test gas without compromising on accuracy in its upper measurement range. It also offers a fast response time and good selectivity.

Sensor reaction to H_2S HC at 20 °C/68 °F
Flow = 0.5 l/min, with 50 ppm H_2S



Linearity of H_2S HC sensor
calibrated with 50 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

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 disulfide	CS_2	50 ppm	No effect
Carbon monoxide	CO	500 ppm	No effect
Chlorine	Cl_2	10 ppm	No effect
Ethanol	C_2H_5OH	250 ppm	No effect
Ethene	C_2H_4	1000 ppm	≤ 10
Hydrogen	H_2	0.1 Vol.-%	No effect
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Hydrogen phosphide	PH_3	5 ppm	≤ 4
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
Sulfur dioxide	SO_2	20 ppm	≤ 2

(–) Indicates negative deviation