

DrägerSensor® XXS H<sub>2</sub>S LC

Order no. 68 11 525

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 3500	no	yes	3 years	> 5 years	no
Dräger Pac 5500	no	yes	3 years	> 5 years	no
Dräger Pac 7000	no	yes	3 years	> 5 years	no
Dräger X-am 2500	no	yes	3 years	> 5 years	no
Dräger X-am 5000	no	yes	3 years	> 5 years	no
Dräger X-am 5600	no	yes	3 years	> 5 years	no

MARKET SEGMENTS

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

TECHNICAL SPECIFICATIONS

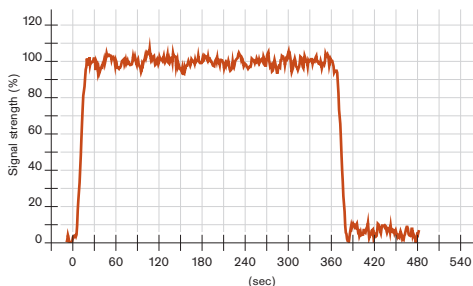
Detection limit:	0.4 ppm
Resolution:	0.1 ppm
Measurement range:	0 to 100 ppm H <sub>2</sub> S (hydrogen sulfide)
Response time:	≤ 15 seconds (T <sub>90</sub> )
Measurement accuracy	
Sensitivity:	≤ ± 5% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 0.2 ppm/year
Sensitivity:	≤ ± 5% 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:	≤ ± 0.1% of measured value/% RH
Test gas:	approx. 5 to 90 ppm H <sub>2</sub> S

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

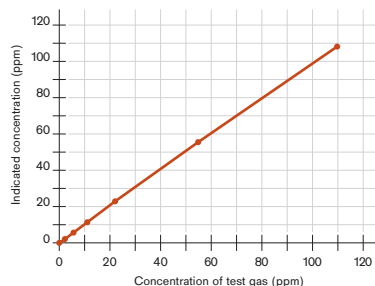
## SPECIAL CHARACTERISTICS

Combined with an excellent linearity and a fast response time, this sensor enables the selective measurement of hydrogen sulfide at below 1 ppm.

Sensor reaction to H<sub>2</sub>S at 20 °C/68 °F  
Flow = 0.5 l/min, with 0,55 ppm H<sub>2</sub>S



Linearity of H<sub>2</sub>S LC sensor  
calibrated with 22 ppm H<sub>2</sub>S



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The values shown in the following table are standard and apply to new sensors. The values may 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 H<sub>2</sub>S. To be sure, please check if gas mixtures are present.

## RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm H <sub>2</sub> S
Acetylene	C <sub>2</sub> H <sub>2</sub>	100 ppm	No effect
Ammonia	NH <sub>3</sub>	200 ppm	No effect
Carbon dioxide	CO <sub>2</sub>	5 Vol.-%	No effect
Carbon monoxide	CO	500 ppm	$\leq 1$
Chlorine	Cl <sub>2</sub>	10 ppm	$\leq 1^{(-)}$
Dimethyl disulphide	CH <sub>3</sub> SSCH <sub>3</sub>	20 ppm	$\leq 5$
Dimethylsulphide	(CH <sub>3</sub> ) <sub>2</sub> S	20 ppm	$\leq 5$
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Ethyl mercaptan	C <sub>2</sub> H <sub>5</sub> SH	20 ppm	$\leq 13$
Hydrogen	H <sub>2</sub>	0.1 Vol.-%	$\leq 0.5$
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	No effect
Methane	CH <sub>4</sub>	5 Vol.-%	No effect
Methyl mercaptan	CH <sub>3</sub> SH	20 ppm	$\leq 16$ ppm
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	$\leq 4^{(-)}$
Nitrogen monoxide	NO	30 ppm	No effect
Propane	C <sub>3</sub> H <sub>8</sub>	1 Vol.-%	No effect
sec-Butyl mercaptan	C <sub>4</sub> H <sub>10</sub> S	20 ppm	$\leq 5$
Sulphur dioxide	SO <sub>2</sub>	20 ppm	$\leq 1.5$
tert- Butyl mercaptan	(CH <sub>3</sub> ) <sub>3</sub> CSH	20 ppm	$\leq 4$
Tetrahydrothiophene	C <sub>4</sub> H <sub>8</sub> S	20 ppm	$\leq 3$

(-) Indicates negative deviation