

# 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 /5500	no	yes	3 years	> 5 years	no
Dräger Pac 6000/ 6500	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
Dräger X-am 3500/8000	no	yes	3 years	> 5 years	no

## MARKET SEGMENTS

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

## TECHNICAL SPECIFICATIONS

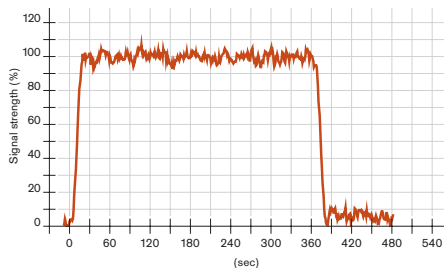
<b>Detection limit:</b>	0.4 ppm
<b>Resolution:</b>	0.1 ppm
<b>Measurement range:</b>	0 to 100 ppm H <sub>2</sub> S (hydrogen sulfide)
<b>Response time:</b>	≤ 15 seconds (t <sub>90</sub> )
<b>Precision</b>	
Sensitivity:	≤ ± 5% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 0.2 ppm/year
Sensitivity:	≤ ± 5% of measured value/year
<b>Warm-up time:</b>	≤ 5 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:	No effect
Sensitivity:	≤ ± 5% of measured value
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.1% of measured value/% RH
<b>Test gas:</b>	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.

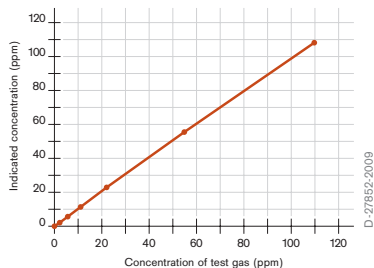
## SPECIAL CHARACTERISTICS

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



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	≤ 1
Carbon disulfide	CS <sub>2</sub>	50 ppm	No effect
Chlorine	Cl <sub>2</sub>	10 ppm	≤ 1 <sup>(-)</sup>
Dimethyl disulfide	CH <sub>3</sub> SSCH <sub>3</sub>	20 ppm	≤ 5
Dimethylsulfide	(CH <sub>3</sub> ) <sub>2</sub> S	20 ppm	≤ 5
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Ethene	C <sub>2</sub> H <sub>4</sub>	1000 ppm	≤ 10
Ethyl mercaptan	C <sub>2</sub> H <sub>5</sub> SH	20 ppm	≤ 13
Hydrogen	H <sub>2</sub>	0.1 Vol.-%	≤ 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	≤ 16 ppm
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 4 <sup>(-)</sup>
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	≤ 5
Sulphur dioxide	SO <sub>2</sub>	20 ppm	≤ 1.5
tert- Butyl mercaptan	(CH <sub>3</sub> ) <sub>3</sub> CSH	20 ppm	≤ 4
Tetrahydrothiophene	C <sub>4</sub> H <sub>8</sub> S	20 ppm	≤ 3

(-) Indicates negative deviation