

# DrägerSensor® XXS H<sub>2</sub>S 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

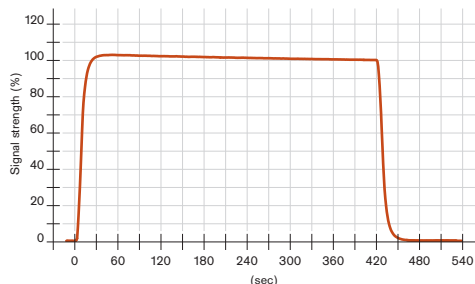
<b>Detection limit:</b>	4 ppm
<b>Resolution:</b>	2 ppm
<b>Measurement range:</b>	0 to 1,000 ppm H <sub>2</sub> S (hydrogen sulfide)
<b>Response time:</b>	≤ 15 seconds (T <sub>90</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	≤ ± 2% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 2 ppm/year
Sensitivity:	≤ ± 1% of measured value/month
<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:	≤ ± 0.03% of measured value/% RH
<b>Test gas:</b>	approx. 40 to 900 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.

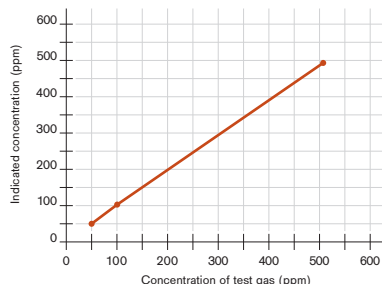
## SPECIAL CHARACTERISTICS

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<sub>2</sub>S HC at 20 °C/68 °F  
Flow = 0.5 l/min, with 505 ppm H<sub>2</sub>S



Linearity of H<sub>2</sub>S HC sensor  
calibrated with 50 ppm H<sub>2</sub>S



D-27853-2009

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	No effect
Chlorine	Cl <sub>2</sub>	10 ppm	No effect
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Hydrogen	H <sub>2</sub>	0.1 Vol.-%	No effect
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Hydrogen phosphide	PH <sub>3</sub>	5 ppm	≤ 4
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
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 5 <sup>(-)</sup>
Nitrogen monoxide	NO	30 ppm	No effect
Propane	C <sub>3</sub> H <sub>8</sub>	1 Vol.-%	No effect
Sulfur dioxide	SO <sub>2</sub>	20 ppm	≤ 2

(-) Indicates negative deviation