DrägerSensor® XS EC H_2S HC

Order no. 68 09 180

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 7000	yes	yes	1 year	> 3 years	–

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:	5 ppm
Resolution:	1 ppm
Measurement range:	0 to 1,000 ppm H_2S (hydrogen sulfide)
Response time:	≤ 20 seconds (t_{90})
Precision	
Sensitivity:	≤ ± 5% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 3 ppm/month
Sensitivity:	≤ ± 3% of measured value/month
Warm-up time:	≤ 12 hours
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:	≤ ± 5 ppm
Sensitivity:	≤ ± 5% of measured value
Influence of humidity	
Zero point:	≤ ± 0.1 ppm/% RH
Sensitivity:	≤ ± 0.1% of measured value/% RH
Test gas:	20 to 1,000 ppm H_2S test gas

*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.

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
Acetone	CH_3COCH_3	1,000 ppm	≤ 4
Acetylene	C_2H_2	0.6 Vol. %	≤ 10
Ammonia	NH_3	500 ppm	No effect
Benzene	C_6H_6	0.6 Vol. %	No effect
Carbon dioxide	CO_2	1.5 Vol. %	No effect
Carbon disulfide	CS_2	15 ppm	No effect
Carbon monoxide	CO	125 ppm	≤ 3
Chlorine	Cl_2	8 ppm	≤ 2(–)
Ethanol	C_2H_5OH	200 ppm	≤ 2
Ethanethiol	C_2H_5SH	10 ppm	≤ 5
Ethene	C_2H_4	1,000 ppm	≤ 10
Gasoline	–	0.55 Vol. %	No effect
Hexane	C_6H_{14}	0.6 Vol. %	No effect
Hydrogen	H_2	0.1 Vol. %	≤ 10
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 ppm	No effect
Methane	CH_4	5 Vol. %	No effect
Methanol	CH_3OH	500 ppm	≤ 20
Nitrogen dioxide	NO_2	20 ppm	No effect
Nitrogen monoxide	NO	20 ppm	≤ 10
Octane	C_8H_{18}	0.4 Vol. %	No effect
Phosgene	$COCl_2$	50 ppm	No effect
Phosphine	PH_3	5 ppm	≤ 5
Propane	C_3H_8	1 Vol. %	No effect
Propene	C_3H_6	0.5 Vol. %	No effect
Sulfur dioxide	SO_2	20 ppm	≤ 4
Tetrahydrothiophene	C_4H_8S	10 ppm	≤ 2
Toluene	$C_6H_5CH_3$	0.6 Vol. %	No effect
Xylol	$C_6H_4(CH_3)_2$	0.5 Vol. %	≤ 4

(–) Indicates negative deviation