DrägerSensor® XS EC Hydrazine

Order no. 68 09 190

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5100	no	yes	1 year	> 1 year	–

MARKET SEGMENTS

Rocket fuel, aircraft fuel (e.g. F-16), fuel for emergency power generators, for electrochemical power generation in secondary cells or in alkaline fuel cells, especially in space travel, submarines, and other military equipment.

TECHNICAL SPECIFICATIONS

Detection limit:	0.02 ppm
Resolution:	0.01 ppm
Measurement range:	0 to 5 ppm N_2H_4 (hydrazine)
	0 to 5 ppm $CH_3NH\text{-}NH_2$ (methyl hydrazine)
	0 to 5 ppm $(CH_3)_2N\text{-}NH_2$ (dimethylhydrazine)
Response time:	≤ 180 seconds (T_{90})
Measurement accuracy	
Sensitivity:	≤ ± 5% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 0.01 ppm/month
Sensitivity:	≤ ± 5% of measured value/month
Warm-up time:	≤ 1 hour
Ambient conditions	
Temperature:	(–20 to 50)°C (–4 to 122)°F
Humidity:	(15 to 95)% 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:	0.1 to 3 ppm N_2H_4, $CH_3NH\text{-}NH_2$, $(CH_3)_2N\text{-}NH_2$

SPECIAL CHARACTERISTICS

This sensor is used exclusively in the Dräger X-am 5100 for monitoring concentrations of hydrazine (N_2H_4), methyl hydrazine ($CH_3NH\text{-}NH_2$), and dimethylhydrazine ($(CH_3)_2N\text{-}NH_2$).

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 hydrazine. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm N_2H_4
Acetone	CH_3COCH_3	1,000 ppm	No effect
Ammonia	NH_3	250 ppm	≤ 2.5
Carbon dioxide	CO_2	100 Vol. %	No effect
Carbon monoxide	CO	1,000 ppm	No effect
Chlorine	Cl_2	10 ppm	≤ 0.1(–)
Ethanol	C_2H_5OH	130 ppm	No effect
Ethene	C_2H_4	20 ppm	No effect
Hydrogen	H_2	1,000 ppm	No effect
Hydrogen sulfide	H_2S	20 ppm	≤ 0.25
i-propanol	$(CH_3)_2CHOH$	1,000 ppm	No effect
Methane	CH_4	3 Vol. %	No effect
Nitrogen dioxide	NO_2	20 ppm	≤ 0,05
Nitrogen monoxide	NO	25 ppm	≤ 0.05
Propane	C_3H_8	1.5 Vol. %	No effect
Sulfur dioxide	SO_2	10 ppm	No effect

(–) Indicates negative deviation