

# 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

<b>Detection limit:</b>	0.02 ppm
<b>Resolution:</b>	0.01 ppm
<b>Measurement range:</b>	0 to 5 ppm N <sub>2</sub> H <sub>4</sub> (hydrazine) 0 to 5 ppm CH <sub>3</sub> NH-NH <sub>2</sub> (methyl hydrazine) 0 to 5 ppm (CH <sub>3</sub> ) <sub>2</sub> N-NH <sub>2</sub> (dimethylhydrazine)
<b>Response time:</b>	≤ 180 seconds (T <sub>90</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	≤ ± 5% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 0.01 ppm/month
Sensitivity:	≤ ± 5% of measured value/month
<b>Warm-up time:</b>	≤ 1 hour
<b>Ambient conditions</b>	
Temperature:	(–20 to 50)°C (–4 to 122)°F
Humidity:	(15 to 95)% 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>	0.1 to 3 ppm N <sub>2</sub> H <sub>4</sub> , CH <sub>3</sub> NH-NH <sub>2</sub> , (CH <sub>3</sub> ) <sub>2</sub> N-NH <sub>2</sub>

## SPECIAL CHARACTERISTICS

This sensor is used exclusively in the Dräger X-am 5100 for monitoring concentrations of hydrazine ( $\text{N}_2\text{H}_4$ ), methyl hydrazine ( $\text{CH}_3\text{NH-NH}_2$ ), and dimethylhydrazine ( $(\text{CH}_3)_2\text{N-NH}_2$ ).

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

## RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm $\text{N}_2\text{H}_4$
Acetone	$\text{CH}_3\text{COCH}_3$	1,000 ppm	No effect
Ammonia	$\text{NH}_3$	250 ppm	$\leq 2.5$
Carbon dioxide	$\text{CO}_2$	100 Vol. %	No effect
Carbon monoxide	$\text{CO}$	1,000 ppm	No effect
Chlorine	$\text{Cl}_2$	10 ppm	$\leq 0.1^{(-)}$
Ethanol	$\text{C}_2\text{H}_5\text{OH}$	130 ppm	No effect
Ethene	$\text{C}_2\text{H}_4$	20 ppm	No effect
Hydrogen	$\text{H}_2$	1,000 ppm	No effect
Hydrogen sulfide	$\text{H}_2\text{S}$	20 ppm	$\leq 0.25$
i-propanol	$(\text{CH}_3)_2\text{CHOH}$	1,000 ppm	No effect
Methane	$\text{CH}_4$	3 Vol. %	No effect
Nitrogen dioxide	$\text{NO}_2$	20 ppm	$\leq 0,05$
Nitrogen monoxide	$\text{NO}$	25 ppm	$\leq 0.05$
Propane	$\text{C}_3\text{H}_8$	1.5 Vol. %	No effect
Sulfur dioxide	$\text{SO}_2$	10 ppm	No effect

(-) Indicates negative deviation