DrägerSensor® XXS Amine

Order no. 68 12 545

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 7000	no	yes	1 year	> 1.5 years	no
Dräger X-am 5600	no	yes	1 year	> 1.5 years	no
Dräger X-am 8000	no	yes	1 year	> 1.5 years	no

MARKET SEGMENTS

Foundries, refineries, power plants

TECHNICAL SPECIFICATIONS

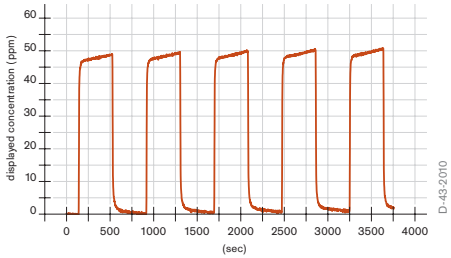
Detection limit:	2 ppm	
Resolution:	1 ppm	
Measurement range/ relative sensitivity	0 to 100 ppm CH_3NH_2 (methylamine)	0.70
	0 to 100 ppm $(CH_3)_2NH$ (dimethylamine)	0.50
	0 to 100 ppm $(CH_3)_3N$ (trimethylamine)	0.50
	0 to 100 ppm $C_2H_5NH_2$ (ethylamine)	0.70
	0 to 100 ppm $(C_2H_5)_2NH$ (diethylamine)	0.50
	0 to 100 ppm $(C_2H_5)_3N$ (triethylamine)	0.50
	NH_3 (ammonia)*	1.00
Response time:	≤ 30 seconds (t_{90})	
Precision		
Sensitivity:	≤ ± 5 % of measured value	
Long-term drift, at 20°C (68°F)		
Zero point:	≤ ± 2 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 1300) hPa	
Influence of temperature		
Zero point:	≤ ± 5 ppm	
Sensitivity:	≤ ± 5 % of measured value	
Influence of humidity		
Zero point:	≤ ± 0.1 ppm / % RH	
Sensitivity:	≤ ± 0.2 % of measured value/% RH	
Test gas:	approx. 5 to 90 ppm NH_3	

+ lead compound

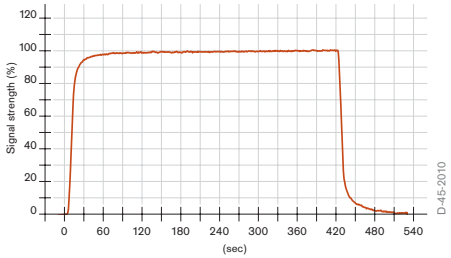
SPECIAL CHARACTERISTICS

This sensor is suitable for monitoring concentration of six different amines in ambient air. A fast response time and excellent repeatability are just two examples of this sensor's special characteristics.

Reproducibility of Amine sensors
purged with 48 ppm methyl amine average of five sensors



Typical gas response of Amine at 20 °C
flow = 0,5 l/min, purged with 48 ppm methyl amine



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 NH_3. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm NH_3
Acetone	CH_3COCH_3	1000 ppm	No effect
Acetylene	C_2H_2	200 ppm	No effect
Carbon dioxide	CO_2	1.5 Vol.-%	≤5 ppm (–)
Carbon monoxide	CO	200 ppm	No effect
Chlorine	Cl_2	10 ppm	≤20 ppm (–)
Diethanolamine	$C_4H_{11}NO_2$	10 ppm	5 ppm
Ethene	C_2H_4	1000 ppm	≤3 ppm
Ethyldimethylamine	$C4H_{11}N$	50 ppm	45 ppm
Hydrogen	H_2	1000 ppm	≤3 ppm
Hydrogen cyanide	HCN	25 ppm	≤3 ppm
Hydrogen sulfide	H_2S	20 ppm	≤50 ppm
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	≤4 ppm
Methane	CH_4	10 Vol.-%	No effect
Methanol	CH_3OH	200 ppm	≤10 ppm
Nitrogen dioxide	NO_2	20 ppm	≤10 ppm (–)
Nitrogen monoxide	NO	20 ppm	≤10 ppm
Phosphine	PH_3	5 ppm	≤8 ppm
Sulfur dioxide	SO_2	20 ppm	No effect
Tetrahydrothiophene	C_4H_8S	10 ppm	≤10 ppm

(–) Indicates negative deviation