

DrägerSensor® XXS Ozone

Order no. 68 11 540

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5000	no	yes	1 year	> 2 years	no
Dräger X-am 5600	no	yes	1 year	> 2 years	no

MARKET SEGMENTS

Ozone generator manufacturer, coal-fired power plants, water treatment (drinking and industrial water), food and beverage industry, swimming pools, pulp and paper industry, pharmaceutical and cosmetics industry

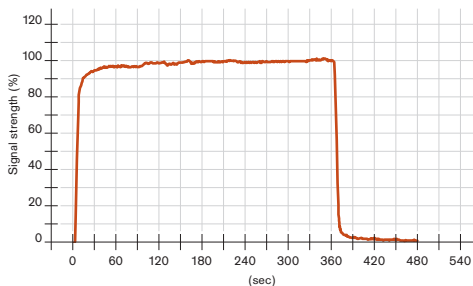
TECHNICAL SPECIFICATIONS

Detection limit:	0,02 ppm
Resolution:	0,01 ppm
Measurement range:	0 to 10 ppm O ₃ (Ozon)
Response time:	≤ 10 seconds (T ₅₀)
Measurement accuracy	
Sensitivity:	≤ ± 3 % of measured value
Long-term drift, at 20°C (68°F)/ 50 % RH	
Zero point:	≤ ± 0.02 ppm/year
Sensitivity:	≤ ± 2 % of measured value/month
Warm-up time:	≤ 120 minutes
Ambient conditions	
Temperature:	(-20 to 50) °C (-4 to 122) °F
Humidity:	(15 to 80) % RH
Pressure:	(700 to 1300) hPa
Influence of temperature	
Zero point:	No effect
Sensitivity:	≤ ± 0.5 % of measured value/K
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.1 % of measured value/% RH
Test gas:	approx. 0.5 to 9 ppm O ₃ 5 ppm NO ₂
	The calibration and function test can be conducted both with the target gas O ₃ , as well as with the replacement test gas NO ₂ . Surrogate calibration with NO ₂ can lead to an additional measuring error of up to ± 30 %. When conducting a function test with 5 ppm NO ₂ an indication of 2.8 ± 0.8 ppm O ₃ is expected.

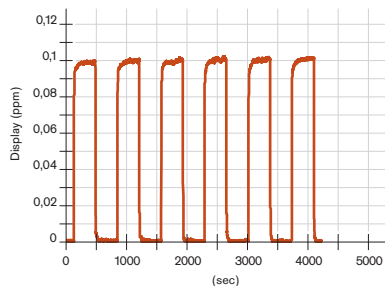
SPECIAL CHARACTERISTICS

A fast response time and excellent repeatability are just two examples of this sensor's special characteristics. With a detection limit of 0.02 ppm and a resolution of 0.01 ppm, it is also optimally suited for limit value monitoring.

Sensor reaction to O₃ at 20 °C
Flow = 0.5 l/min, 0.1 ppm O₃



Reproducibility of O₃ sensors
purged with 0.1 ppm O₃
average of five sensors



D-3235-2011e

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

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm Ozone
Ammonia	NH ₃	30 ppm	no effect
Arsine	AsH ₃	0,5 ppm	no effect
Carbon dioxide	CO ₂	5 Vol.-%	no effect
Carbon monoxide	CO	2000 ppm	no effect
Chlorine	Cl ₂	1 ppm	≤ 0.8
Chlorine dioxide	ClO ₂	1 ppm	≤ 0.8
Ethane	C ₃ H ₆	0,1 Vol.-%	no effect
Ethanol	C ₂ H ₅ OH	250 ppm	no effect
Ethine	C ₂ H ₂	100 ppm	no effect
Hydrazine	N ₂ H ₄	1 ppm	no effect
Hydrogen	H ₂	0,1 Vol.-%	no effect
Hydrogen chloride	HCl	40 ppm	no effect
Hydrogen cyanide	HCN	50 ppm	no effect
Hydrogen sulfide	H ₂ S	1 ppm	≤ 0.02 (-)
Isobutylene	(CH ₃) ₂ CCH ₂	100 ppm	≤ 0.04
Methane	CH ₄	5 Vol.-%	no effect
Nitrogen dioxide	NO ₂	1 ppm	≈ 0.55
Nitrogen monoxide	NO	30 ppm	no effect
Phosphine	PH ₃	0,5 ppm	no effect
Propane	C ₃ H ₈	1 Vol.-%	no effect
Sulfur dioxide	SO ₂	1 ppm	≤ 0.06 (-)

(-) Indicates negative deviation