

# DrägerSensor® XXS Ozone

Order no. 68 11 540

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 8000	no	yes	1 year	> 2 years	no
Dräger X-am 5000	no	yes	1 year	> 2 years	no
Dräger X-am 5600	no	yes	1 year	> 2 years	no
Dräger X-am 8000	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

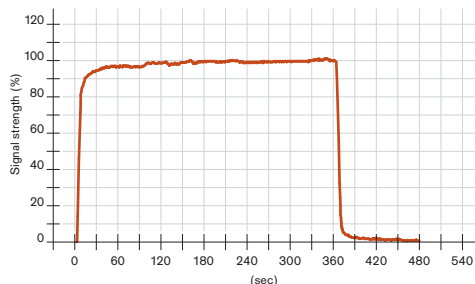
Detection limit:	0,02 ppm
Resolution:	0,01 ppm
Measurement range:	0 to 10 ppm O <sub>3</sub> (Ozon)
Response time:	≤ 10 seconds (T <sub>50</sub> )
Measurement accuracy	
Sensitivity:	≤ ± 3 % of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 0.02 ppm/year
Sensitivity:	≤ ± 2 % of measured value/month
Warm-up time:	≤ 120 minutes
Ambient conditions	
Temperature:	(-20 to 50) °C (-4 to 122) °F
Humidity:*	(10 to 90) % 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 <sub>3</sub> 5 ppm NO <sub>2</sub> The calibration and function test can be conducted both with the target gas O <sub>3</sub> , as well as with the replacement test gas NO <sub>2</sub> . Surrogate calibration with NO <sub>2</sub> can lead to an additional measuring error of up to ± 10 %. When conducting a function test with 5 ppm NO <sub>2</sub> an indication of 2.2 ± 0.8 ppm O <sub>3</sub> is expected.

\*A use or storage over a longer period below the specified relative humidity may cause a change of sensor sensitivity due to dehydration. This effect is reversible once the relative humidity increases. Please consider the storage conditions stated on the packaging or in the instruction for use.

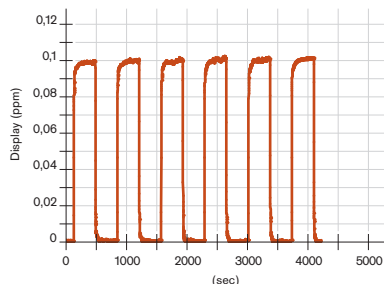
## SPECIAL CHARACTERISTICS

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 O<sub>3</sub> at 20 °C  
Flow = 0.5 l/min, 0.1 ppm O<sub>3</sub>



Reproducibility of O<sub>3</sub> sensors  
purged with 0.1 ppm O<sub>3</sub>  
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
Acetylene	C <sub>2</sub> H <sub>2</sub>	100 ppm	no effect
Ammonia	NH <sub>3</sub>	30 ppm	no effect
Arsine	AsH <sub>3</sub>	0,5 ppm	no effect
Carbon dioxide	CO <sub>2</sub>	5 Vol.-%	no effect
Carbon monoxide	CO	2000 ppm	no effect
Chlorine	Cl <sub>2</sub>	1 ppm	≤ 0.8
Chlorine dioxide	ClO <sub>2</sub>	1 ppm	≤ 0.8
Ethane	C <sub>3</sub> H <sub>6</sub>	0,1 Vol.-%	no effect
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	no effect
Hydrazine	N <sub>2</sub> H <sub>4</sub>	1 ppm	no effect
Hydrogen	H <sub>2</sub>	0,1 Vol.-%	no effect
Hydrogen chloride	HCl	40 ppm	no effect
Hydrogen cyanide	HCN	50 ppm	no effect
Hydrogen sulfide	H <sub>2</sub> S	1 ppm	≤ 0.02 (-)
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	≤ 0.04
Methane	CH <sub>4</sub>	5 Vol.-%	no effect
Nitrogen dioxide	NO <sub>2</sub>	1 ppm	≤ 0.5
Nitrogen monoxide	NO	30 ppm	no effect
Phosphine	PH <sub>3</sub>	0,5 ppm	no effect
Propane	C <sub>3</sub> H <sub>8</sub>	1 Vol.-%	no effect
Sulfur dioxide	SO <sub>2</sub>	1 ppm	≤ 0.06 (-)

(-) Indicates negative deviation