

**DrägerSensor® XXS O<sub>2</sub> 100**

Order no. 68 12 385

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 5000	no	yes	1 year	> 3 years	no
Dräger X-am 5600	no	yes	1 year	> 3 years	no
Dräger X-am 8000	no	yes	1 year	> 3 years	no

**MARKET SEGMENTS**

Gas suppliers, oxygen cylinders (diving), submarines, nuclear power plants

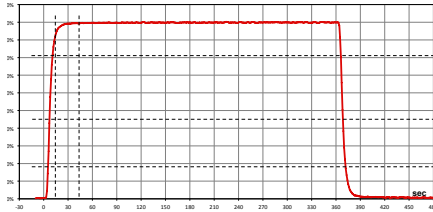
**TECHNICAL SPECIFICATIONS**

<b>Detection limit:</b>	0.5 Vol.-%
<b>Resolution:</b>	0.5 Vol.-%
<b>Measurement range:</b>	0 to 100 Vol.-% O <sub>2</sub> (oxygen)
<b>Response time:</b>	≤ 5 seconds (T <sub>90</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	≤ ± 1% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 0.5 Vol.-%/year
Sensitivity:	≤ ± 3% of measured value/year
<b>Warm-up time:</b>	≤ 15 minutes
<b>Ambient conditions</b>	
Temperature:	(0 to 45)°C (32 to 113)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,100) 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:	≤ ± 0.01% of measured value/% RH
<b>Test gas:</b>	approx. 10 to 100 Vol.-% O <sub>2</sub> in N <sub>2</sub>

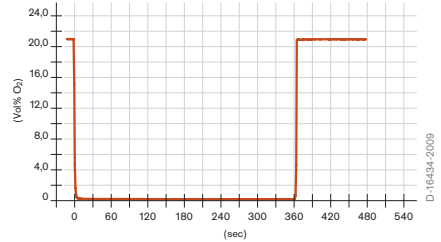
## SPECIAL CHARACTERISTICS

DrägerSensor® XXS oxygen sensors are lead-free, thus complying with Directive 2002/95/EC (RoHS). The sensor's measurement principle is based on the partial pressure measurement of oxygen. Therefore, this sensor is suitable for the oxygen monitoring during inertisation processes. The inert gas can be nitrogen, carbon dioxide, argon or helium.

Typical gas response of XXS O<sub>2</sub> 100 at 20°C  
Flow = 0.5 l/min, purged with 100% O<sub>2</sub>



Typical gas response of XXS O<sub>2</sub> 100 at 20°C  
Flow = 0.5 l/min, purged with 100% N<sub>2</sub>



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 O<sub>2</sub>. To be sure, please check if gas mixtures are present.

## RELEVANT CROSS-SENSITIVITIES DRÄGERSENSOR® XXS O<sub>2</sub> 100

Gas/vapor	Chem. symbol	Concentration	Display in Vol.-% O <sub>2</sub>
Carbon dioxide	CO <sub>2</sub>	5 vol.-%	$\leq 1^{(-)}$
Chlorine	Cl <sub>2</sub>	20 ppm	No effect
Helium	He	50 vol.-%	$\leq 1^{(-)}$
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen sulfide	H <sub>2</sub> S	100 ppm	No effect
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	No effect
Methane	CH <sub>4</sub>	10 vol.-%	No effect
Nitrogen dioxide	NO <sub>2</sub>	50 ppm	No effect
Nitrogen monoxide	NO	0.05 vol.-%	$\leq 1^{(-)}$
Propane	C <sub>3</sub> H <sub>8</sub>	2 vol.-%	No effect
Sulphur dioxide	SO <sub>2</sub>	50 ppm	No effect

(-) Indicates negative deviation