

# DrägerSensor® XXS O<sub>2</sub>

## DrägerSensor® XXS E O<sub>2</sub>

Order no. 68 10 881  
68 12 211

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 6000/6500	no	yes	3 years	> 5 years	no
Dräger X-am 2500	no	yes	3 years	> 5 years	no
Dräger X-am 2800*	no	yes	3 years	> 5 years	no
Dräger X-am 5000	no	yes	3/5 years	> 5 years	no
Dräger X-am 5600	no	yes	3/5 years	> 5 years	no
Dräger X-am 8000	no	yes	3/5 years	> 5 years	no

### MARKET SEGMENTS

Sewage, mining and tunneling, fumigation, biogas, hazmat, industrial gases.

### TECHNICAL SPECIFICATIONS

<b>Detection limit:</b>	0.1 Vol.-%
<b>Resolution:</b>	0.1 Vol.-%
<b>Measurement range:</b>	0 to 25 Vol.-% O <sub>2</sub> (oxygen)
<b>Response time:</b>	≤ 10 seconds (t <sub>90</sub> )
<b>Precision</b>	
Sensitivity:	≤ ± 1% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 0.5 Vol.-%/year
Sensitivity:	≤ ± 1% of measured value/year
<b>Warm-up time:</b>	≤ 15 minutes
<b>Ambient conditions</b>	
Temperature:	(-40 to 50)°C (-40 to 122)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,300) hPa
<b>Influence of temperature</b>	
Zero point:	≤ ± 0.2 Vol.-%
Sensitivity:	≤ ± 2% of measured value
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.1% of measured value/% RH
<b>Test gas:</b>	approx. 12 to 20 Vol.-% O <sub>2</sub> in N <sub>2</sub>

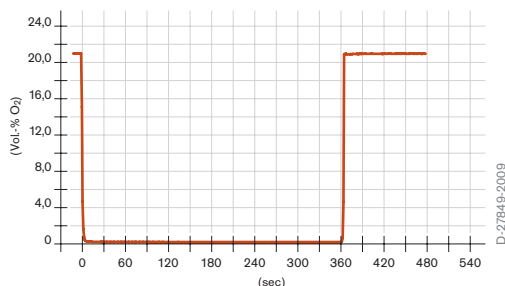
The sensor cannot be used to measure oxygen in the presence of helium. For oxygen monitoring during inerting processes, see DrägerSensor XXS O<sub>2</sub> 100 (SN 68 12 385).

\* Dräger X-am 2800 does not support the DrägerSensor XXS E O<sub>2</sub> (6812211).

## SPECIAL CHARACTERISTICS

DrägerSensor® XXS oxygen sensors are lead-free, thus complying with Directive 2002/95/EC (RoHS). Because they are non-consuming sensors, they have much longer life times than sensors that are consuming. An extremely fast response time of less than ten seconds produces a reliable warning of any lack or excess of oxygen.

Sensor reaction to O<sub>2</sub> at 20 °C/68 °F  
Flow = 0.5 l/min, with 100% N<sub>2</sub>



The values shown in the following table are standard and apply to new sensors. The values maybe 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> AND XXS E O<sub>2</sub>

Gas/vapor	Chem. symbol	Concentration	Display in Vol.-% O <sub>2</sub>
Acetylene	C <sub>2</sub> H <sub>2</sub>	1 Vol.-%	$\leq 0.5^{(-)}$
Ammonia	NH <sub>3</sub>	500 ppm	No effect
Carbon dioxide	CO <sub>2</sub>	10 Vol.-%	$\leq 0.4^{(-)}$
Carbon monoxide	CO	0.5 Vol.-%	No effect
Chlorine	Cl <sub>2</sub>	10 ppm	No effect
Ethane	C <sub>2</sub> H <sub>6</sub>	1.0 Vol.-%	$\leq 0.2^{(-)}$
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Ethene	C <sub>2</sub> H <sub>4</sub>	2 Vol.-%	$\leq 2^{(-)}$
Helium	He	20 Vol.-%	$\leq 3^*$
Hydrogen	H <sub>2</sub>	1.6 Vol.-%	$\leq 2.5^{(-)}$
Hydrogen chloride	HCl	40 ppm	No effect
Hydrogen cyanide	HCN	50 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>	20 ppm	No effect
Nitrogen monoxide	NO	30 ppm	No effect
Propane	C <sub>3</sub> H <sub>8</sub>	2 Vol.-%	No effect
Sulfur dioxide	SO <sub>2</sub>	20 ppm	No effect

(-) Indicates negative deviation

\* non-linear false positive display value