

## DrägerSensor® XXS OV-A

Order no. 68 11 535

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 7000	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

### MARKET SEGMENTS

Production of plastics, disinfection, paintshops, chemical industry.

### TECHNICAL SPECIFICATIONS

<b>Detection limit:</b>	1 ppm
<b>Resolution:</b>	1 ppm
<b>Measurement range/ relative sensitivity</b>	C <sub>2</sub> H <sub>4</sub> O / CO
	0 to 200 ppm C <sub>2</sub> H <sub>4</sub> O (ethylene oxide) 1.00 0.33
	0 to 100 ppm H <sub>2</sub> CCHCN (acrylonitrile) 0.15 2.20
	0 to 300 ppm (CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub> (isobutylene) 0.90 0.35
	0 to 100 ppm CH <sub>3</sub> COOC <sub>2</sub> H <sub>3</sub> (vinyl acetate) 1.10 0.30
	0 to 300 ppm C <sub>2</sub> H <sub>5</sub> OH (ethanol) 0.55 0.60
	0 to 200 ppm CH <sub>3</sub> CHO (acetaldehyde) 0.35 0.95
	0 to 200 ppm (C <sub>2</sub> H <sub>5</sub> ) <sub>2</sub> O (diethyl ether) 0.75 0.45
	0 to 100 ppm C <sub>2</sub> H <sub>2</sub> (ethine) 1.40 0.25
<b>Response time:</b>	≤ 40 seconds (T <sub>50</sub> )
<b>Measurement accuracy</b>	
Sensitivity:	≤ ± 20% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 5 ppm/year
Sensitivity:	≤ ± 3% of measured value/month
<b>Warm-up time:</b>	≤ 18 hours
<b>Ambient conditions</b>	
Temperature:	(-20 to 50)°C (-4 to 122)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,300) hPa
<b>Influence of temperature</b>	
Zero point:	(-20 to 40)°C (-4 to 104)°F = ± 2 ppm
Zero point:	(40 to 60)°C (104 to 140)°F = ± 0.5 ppm/K
Sensitivity:	≤ ± 1% of measured value/K
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.2% of measured value/% RH

## TECHNICAL SPECIFICATIONS

### Test gas:

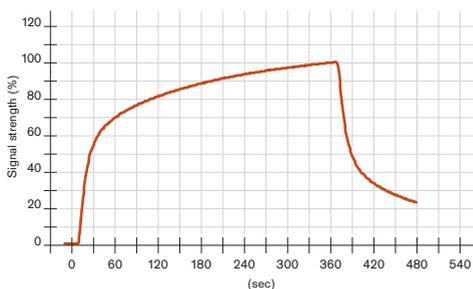
approx. 3 to 50 ppm  $C_2H_4O$

The Dräger Sensor XXS OV-A has a defined cross-sensitivity to carbon monoxide (CO). It can be calibrated with CO as a replacement for all of its target gases. This replacement calibration using CO can produce an additional measuring error of up to 20%. We recommend that devices are calibrated with the gas you intend to detect in actual operation. Calibration using the target gas is more accurate than replacement gas calibration. Using mixed gas please ensure the test gas does not contain NO,  $SO_2$  or  $H_2S$ . This causes a reading on the instrument's display due to cross sensitivities.

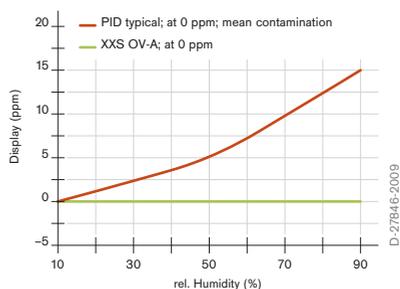
## SPECIAL CHARACTERISTICS

The DrägerSensor® XXS OV-A has the same excellent characteristics as the DrägerSensor® XXS OV, but it has also been optimized for other organic gases and vapors. Just like the DrägerSensor® XXS OV, the DrägerSensor® XXS OV-A can be calibrated with CO as a replacement, although this may produce an additional measuring error of 20%. For more accurate measurements, we recommend calibrating using the target gas – i.e. the gas that you intend to detect in actual operation.

Sensor reaction to  $C_2H_4O$  at 20 °C/68 °F  
Flow = 0.5 l/min, with 20 ppm  $C_2H_4O$



Influence of humidity on XXS OV-A sensors  
and PID sensors



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

## RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm C <sub>2</sub> H <sub>4</sub> O
1-chloro-2, 3 epoxypropane	C <sub>2</sub> H <sub>3</sub> OCH <sub>2</sub> Cl	25 ppm	≤ 10
Acetic acid	CH <sub>3</sub> COOH	100 ppm	No effect
Ammonia	NH <sub>3</sub>	100 ppm	No effect
Benzene	C <sub>6</sub> H <sub>6</sub>	2,000 ppm	No effect
Butadiene	CH <sub>2</sub> CHCHCH <sub>2</sub>	50 ppm	≤ 75
Carbon dioxide	CO <sub>2</sub>	30 Vol.-%	No effect
Carbon monoxide	CO	100 ppm	≤ 33
Chlorine	Cl <sub>2</sub>	10 ppm	No effect
Chlorobenzene	C <sub>6</sub> H <sub>5</sub> Cl	200 ppm	No effect
Dichloromethane	CH <sub>2</sub> Cl <sub>2</sub>	1,000 ppm	No effect
Dimethylformamide	HCON(CH <sub>3</sub> ) <sub>2</sub>	100 ppm	No effect
Ethene	C <sub>2</sub> H <sub>4</sub>	50 ppm	≤ 45
Ethyl acetate	CH <sub>3</sub> COOC <sub>2</sub> H <sub>5</sub>	100 ppm	No effect
Formaldehyde	HCOH	40 ppm	≤ 25
Hydrogen	H <sub>2</sub>	1,000 ppm	≤ 5
Hydrogen chloride	HCl	20 ppm	≤ 3
Hydrogen cyanide	HCN	20 ppm	≤ 8
Hydrogen sulfide	H <sub>2</sub> S	20 ppm	≤ 40
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	≤ 75
Isopropanol	(H <sub>3</sub> C) <sub>2</sub> CHOH	250 ppm	≤ 110
Methane	CH <sub>4</sub>	2 Vol.-%	No effect
Methanol	CH <sub>3</sub> OH	100 ppm	≤ 160
Methyl methacrylate	H <sub>2</sub> CC(CH <sub>3</sub> )COOCH <sub>3</sub>	60 ppm	≤ 25
Methyl isobutyl ketone	(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>2</sub> COCH <sub>3</sub>	500 ppm	No effect
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 1
Nitrogen monoxide	NO	20 ppm	≤ 15
Phosgene	COCl <sub>2</sub>	50 ppm	No effect
Propene	C <sub>3</sub> H <sub>6</sub>	50 ppm	≤ 35
Propylene oxide	C <sub>3</sub> H <sub>6</sub> O	50 ppm	≤ 45
Sulfur dioxide	SO <sub>2</sub>	20 ppm	≤ 9
Styrene	C <sub>6</sub> H <sub>5</sub> CHCH <sub>2</sub>	35 ppm	≤ 35
Tetrahydrofuran	C <sub>4</sub> H <sub>8</sub> O	60 ppm	≤ 55
Trichloroethylene	CHClCCl <sub>2</sub>	1,000 ppm	No effect
Vinyl chloride	C <sub>2</sub> H <sub>3</sub> Cl	50 ppm	≤ 40

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