

DrägerSensor® XXS HCN PC

Order no. 68 13 165

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life
Dräger Pac 7000	no	yes	1 year	> 1.5 years
Dräger X-am 5000	no	yes	1 year	> 1.5 years
Dräger X-am 5600	no	yes	1 year	> 1.5 years
Dräger X-am 8000	no	yes	1 year	> 1.5 years

Selective filter

B2X (6812424) – replaceable.

Cross sensitivities to hydrogen sulfide (H₂S) and sulfur dioxide (SO₂) are eliminated.

The filter's service life can be calculated as follows: 1,000 ppm x hours of contaminant gas. Example: Given constant concentration of 10 ppm H₂S will be: Service life = 1,000 ppm x hours / 10 ppm = 100 hours.

Due to the change of sensitivity, a calibration is necessary after installation. The measurement value response time increases after the installation of the filter.

MARKET SEGMENTS

Metal processing, mining, fumigation and pest control, chemical warfare agent (blood agents).

TECHNICAL SPECIFICATIONS

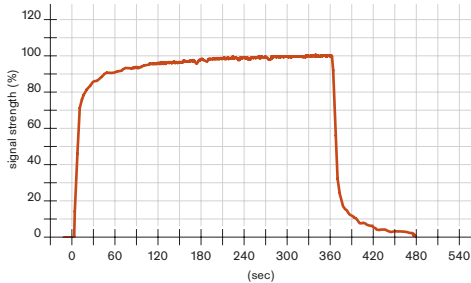
Detection limit:	3 ppm
Resolution:	0.5 ppm
Measurement range:	0 to 50 ppm HCN (hydrogen cyanide)
Response time:	≤ 10 seconds (t ₅₀)
Precision	
Sensitivity:	≤ ± 5% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 3 ppm/year
Sensitivity:	≤ ± 2% of measured value/month
Warm-up time:	≤ 15 minutes
Ambient conditions	
Temperature:	(–20 to 50)°C (–4 to 122)°F
Humidity:	(10 to 90)% RH
Pressure:	(700 to 1,300) hPa
Influence of temperature	
Zero point:	≤ ± 3 ppm
Sensitivity:	≤ ± 5% of measured value
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.1% of measured value/% RH
Test gas:	approx. 7 to 45 ppm HCN

*with limited temperature range: 0 to 40°C dry test gas

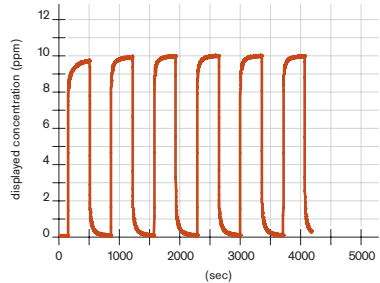
SPECIAL CHARACTERISTICS

This sensor's extremely quick response time and excellent repeatability provides a fast and reliable warning against Prussic acid (hydrogen cyanide).

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



reproducibility of HCN PC sensors
purged with 10 ppm HCN



D-16442-2009

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

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm HCN
Acetylene	C_2H_2	100 ppm	≤ 10
Ammonia	NH_3	50 ppm	No effect
Carbon dioxide	CO_2	10 Vol.-%	No effect
Carbon monoxide	CO	200 ppm	No effect
Chlorine	Cl_2	1 ppm	2 (-)
Ethanol	C_2H_5OH	250 ppm	No effect
Hydrogen	H_2	0.5 Vol.-%	≤ 3
Hydrogen chloride	HCl	20 ppm	≤ 1
Hydrogen sulfide	H_2S	1 ppm	≤ 3
Isobutylene	$(CH_3)_2CCH_2$	100 ppm	No effect
Methane	CH_4	1 Vol.-%	No effect
Nitrogen dioxide	NO_2	1 ppm	≤ 1 (-)
Nitrogen monoxide	NO	20 ppm	No effect
Ozone	O_3	0.5 ppm	No effect
Phosphine	PH_3	0.1 ppm	≤ 1
Sulfur dioxide	SO_2	1 ppm	≤ 2

(-) Indicates negative deviation