DrägerSensor® XXS PH₃

Order no. 68 10 886

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger Pac 7000 ¹⁾	no	yes	1 year	> 3 years	no
Dräger Pac 8000 ¹⁾	no	yes	1 year	> 3 years	no
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

¹⁾ Selection of measuring gas in Pac 7000/8000 not possible, only phosphine

MARKET SEGMENTS

Inorganic chemicals, fumigation, clearance measurements.

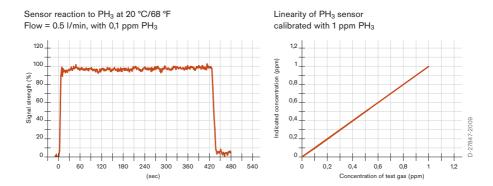
TECHNICAL SPECIFICATIONS

TECHNICAL SI ECH ICATIC				
Detection limit:	0.02 ppm			
Resolution:	0.01 ppm			
Measurement range/	0 to 20 ppm PH ₃ (phosphine)	1.00		
relative Sensitivity	0 to 20 ppm AsH ₃ (arsine)			
	0 to 20 ppm B ₂ H ₆ (diborane)	0.35		
	0 to 20 ppm SiH ₄ (silane)	0.85		
	0 to 20 ppmH ₂ Se (selenium hydrogen)*	0.50		
Response time:	≤ 10 seconds (T ₉₀)			
Measurement accuracy				
Sensitivity:	≤ ± 2% of measured value			
Long-term drift, at 20°C (68°F)				
Zero point:	≤ ± 0.05 ppm/year			
Sensitivity:	≤ ± 2% of measured value/month			
Warm-up time:	≤ 15 minutes			
Ambient conditions				
Temperature:	PH ₃ , AsH ₃ , SiH ₄ : (-20 to 50)°C (-4 to 122)°F			
	B ₂ H ₆ : (0 to 50)°C (32 to 122)°F			
Humidity:	(10 to 90)% RH			
Pressure:	(700 to 1,300) hPa			
Influence of temperature				
Zero point:	≤ ± 0.02 ppm			
Sensitivity:	≤ ± 5% of measured value			
Influence of humidity				
Zero point:	No effect			
Sensitivity:	≤ ± 0.05% of measured value/% RH			
Test gas:	approx. 0.05 to 18 ppm PH ₃			

^{*}With limited temperature range: 0 to 40°C dry test gas

SPECIAL CHARACTERISTICS

This sensor's advantages include an extreme fast response time of less than 10 seconds for 90% of the measured signal, and its excellent linearity. It is suitable for monitoring concentrations of common hydrides such as phosphine, arsine, diborane, and silane in the ambient air.



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 PH $_3$. To be sure, please check if gas mixtures are present.

RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display
			in ppm PH ₃
Acetylene	C ₂ H ₂	100 ppm	No effect
Ammonia	NH ₃	50 ppm	No effect
Carbon dioxide	CO ₂	10 Vol%	No effect
Carbon monoxide	СО	200 ppm	No effect
Chlorine	Cl ₂	10 ppm	≤ 2 (-)
Ethanol	C ₂ H ₅ OH	250 ppm	No effect
Hydrogen	H ₂	1,000 ppm	≤ 0.3
Hydrogen chloride	HCI	20 ppm	≤ 1
Hydrogen cyanide	HCN	60 ppm	≤ 5
Hydrogen sulfide	H ₂ S	20 ppm	≤ 20
Isobutylene	(CH ₃) ₂ CCH ₂	100 ppm	No effect
Methane	CH ₄	0.9 Vol%	No effect
Nitrogen dioxide	NO ₂	20 ppm	≤ 5 (-)
Nitrogen monoxide	NO	20 ppm	No effect
Ozone	O ₃	0.5 ppm	No effect
Sulfur dioxide	SO ₂	10 ppm	≤ 1

(-) Indicates negative deviation