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DrägerSensor® XXS PH_3 HC

Order no. 68 12 020

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

MARKET SEGMENTS

Inorganic chemicals, industry, fumigation.

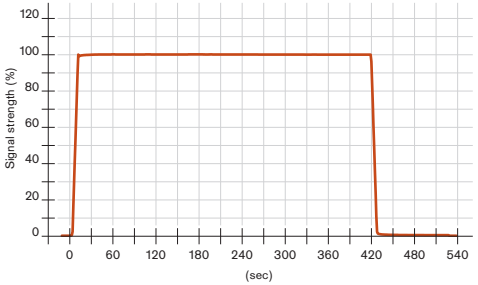
TECHNICAL SPECIFICATIONS

Detection limit:	2 ppm
Resolution:	1 ppm
Measurement range:	0 to 2,000 ppm PH_3 (phosphine)
Response time:	≤ 10 seconds (T_{90})
Measurement accuracy	
Sensitivity:	≤ ± 2% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 2 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:	No effect
Sensitivity:	≤ ± 5% of measured value
Influence of humidity	
Zero point:	No effect
Sensitivity:	≤ ± 0.05% of measured value/% RH
Test gas:	approx. 4 to 1,800 ppm PH_3

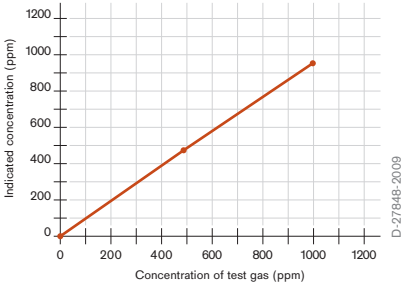
SPECIAL CHARACTERISTICS

This sensor demonstrates excellent linearity across the whole measurement range even if calibrated in the lower reaches of that range, and it also provides a stable reading even at high concentrations over long periods of time.

Sensor reaction to PH_3 HC at 20 °C/68 °F
Flow = 0.5 l/min, with 1.050 ppm PH_3



Linearity of PH_3 HC sensor
calibrated with 15 ppm PH_3



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The values shown in the following table are standard and apply to new sensors. The values maybe fluctuate by ± 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
Ammonia	NH_3	50 ppm	No effect
Arsine	AsH_3	5 ppm	≤ 5
Carbon dioxide	CO_2	10 Vol.-%	No effect
Carbon monoxide	CO	200 ppm	No effect
Chlorine	Cl_2	10 ppm	No effect
Diborane	B_2H_6	5 ppm	≤ 3
Ethanol	C_2H_5OH	250 ppm	No effect
Ethine	C_2H_2	100 ppm	No effect
Hydrogen	H_2	1,000 ppm	No effect
Hydrogen chloride	HCl	20 ppm	No effect
Hydrogen cyanide	HCN	60 ppm	≤ 5
Hydrogen sulfide	H_2S	20 ppm	≤ 20
Isobutylene	$(CH_3)_2CCH_2$	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	No effect
Silane	SiH_4	5 ppm	≤ 5

(–) Indicates negative deviation

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