

**DrägerSensor® XXS PH<sub>3</sub> 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
Dräger X-am 8000	no	yes	1 year	> 3 years	no

**MARKET SEGMENTS**

Inorganic chemicals, industry, fumigation.

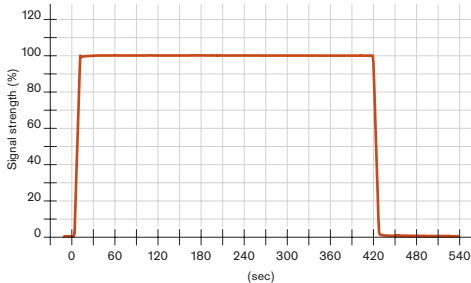
**TECHNICAL SPECIFICATIONS**

<b>Detection limit:</b>	2 ppm
<b>Resolution:</b>	1 ppm
<b>Measurement range:</b>	0 to 2,000 ppm PH <sub>3</sub> (phosphine)
<b>Response time:</b>	≤ 10 seconds (t <sub>90</sub> )
<b>Precision</b>	
Sensitivity:	≤ ± 2% of measured value
<b>Long-term drift, at 20°C (68°F)</b>	
Zero point:	≤ ± 2 ppm/year
Sensitivity:	≤ ± 2% of measured value/month
<b>Warm-up time:</b>	≤ 15 minutes
<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:	No effect
Sensitivity:	≤ ± 5% of measured value
<b>Influence of humidity</b>	
Zero point:	No effect
Sensitivity:	≤ ± 0.05% of measured value/% RH
<b>Test gas:</b>	approx. 4 to 1,800 ppm PH <sub>3</sub>

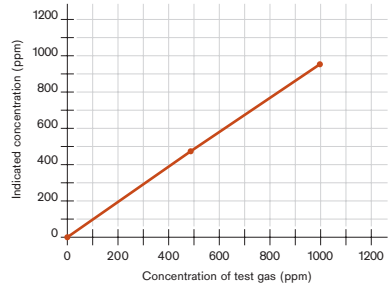
## SPECIAL CHARACTERISTICS

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<sub>3</sub> HC at 20 °C/68 °F  
Flow = 0.5 l/min, with 1.050 ppm PH<sub>3</sub>



Linearity of PH<sub>3</sub> HC sensor  
calibrated with 15 ppm PH<sub>3</sub>



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 PH<sub>3</sub>. To be sure, please check if gas mixtures are present.

## RELEVANT CROSS-SENSITIVITIES

Gas/vapor	Chem. symbol	Concentration	Display in ppm PH <sub>3</sub>
Acetylene	C <sub>2</sub> H <sub>2</sub>	100 ppm	No effect
Ammonia	NH <sub>3</sub>	50 ppm	No effect
Arsine	AsH <sub>3</sub>	5 ppm	≤ 5
Carbon dioxide	CO <sub>2</sub>	10 Vol.-%	No effect
Carbon monoxide	CO	200 ppm	No effect
Chlorine	Cl <sub>2</sub>	10 ppm	No effect
Diborane	B <sub>2</sub> H <sub>6</sub>	5 ppm	≤ 3
Ethanol	C <sub>2</sub> H <sub>5</sub> OH	250 ppm	No effect
Hydrogen	H <sub>2</sub>	1,000 ppm	No effect
Hydrogen chloride	HCl	20 ppm	No effect
Hydrogen cyanide	HCN	60 ppm	≤ 5
Hydrogen sulfide	H <sub>2</sub> S	20 ppm	≤ 20
Isobutylene	(CH <sub>3</sub> ) <sub>2</sub> CCH <sub>2</sub>	100 ppm	No effect
Methane	CH <sub>4</sub>	0.9 Vol.-%	No effect
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 5 (-)
Nitrogen monoxide	NO	20 ppm	No effect
Ozone	O <sub>3</sub>	0.5 ppm	No effect
Sulfur dioxide	SO <sub>2</sub>	10 ppm	No effect
Silane	SiH <sub>4</sub>	5 ppm	≤ 5

(-) Indicates negative deviation