

# 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.

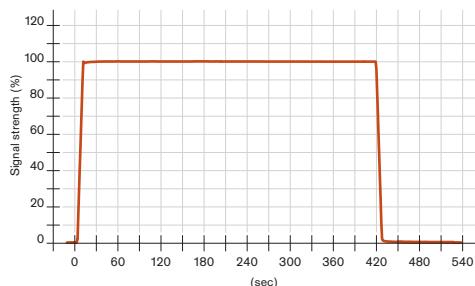
## TECHNICAL SPECIFICATIONS

Detection limit:	2 ppm
Resolution:	1 ppm
Measurement range:	0 to 2,000 ppm PH <sub>3</sub> (phosphine)
Response time:	≤ 10 seconds (T <sub>90</sub> )
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 <sub>3</sub>

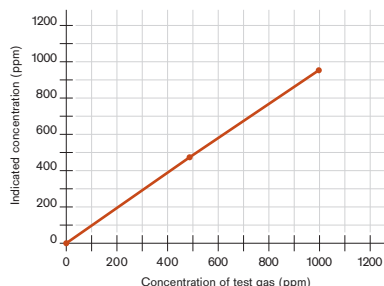
## SPECIAL CHARACTERISTICS

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>



D-27848-2009

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 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	$\leq 5$
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	$\leq 3$
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	$\leq 5$
Hydrogen sulfide	H <sub>2</sub> S	20 ppm	$\leq 20$
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	$\leq 5$ (-)
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	$\leq 5$

(-) Indicates negative deviation