

DrägerSensor® XS EC PH<sub>3</sub> HC

Order no. 68 09 535

Used in	Plug & Play	Replaceable	Guaranty	Expected sensor life	Selective filter
Dräger X-am 7000	yes	yes	1 year	3 years	–

MARKET SEGMENTS

Inorganic chemicals, industry, fumigation, pre entry measurements.

TECHNICAL SPECIFICATIONS

Detection limit:	2 ppm
Resolution:	1 ppm
Measurement range:	0 to 1,000 ppm PH <sub>3</sub> (phosphine)
Response time:	≤ 10 seconds (t <sub>90</sub> )
Precision	
Sensitivity:	≤ ± 3% of measured value
Long-term drift, at 20°C (68°F)	
Zero point:	≤ ± 1 ppm/month
Sensitivity:	≤ ± 3% of measured value/month
Warm-up time:	≤ 15 minutes
Ambient conditions	
Temperature:	(–40 to 50)°C (–40 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 1,000 ppm PH <sub>3</sub>

## SPECIAL CHARACTERISTICS

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

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 phosphine. 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>
Acetone	CH <sub>3</sub> COCH <sub>3</sub>	1.25 Vol. %	No effect
Ammonia	NH <sub>3</sub>	50 ppm	No effect
Arsine	AsH <sub>3</sub>	5 ppm	≤ 4
Carbon dioxide	CO <sub>2</sub>	10 Vol. %	No effect
Carbon monoxide	CO	300 ppm	No effect
Chlorine	Cl <sub>2</sub>	5 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
Ethene	C <sub>2</sub> H <sub>4</sub>	200 ppm	No effect
Germanium tetrahydride	GeH <sub>4</sub>	5 ppm	≤ 5
Hydrogen	H <sub>2</sub>	1,000 ppm	No effect
Hydrogen chloride	HCl	20 ppm	No effect
Hydrogen cyanide	HCN	25 ppm	≤ 2
Hydrogen selenide	H <sub>2</sub> Se	5 ppm	≤ 2
Hydrogen sulfide	H <sub>2</sub> S	20 ppm	≤ 20
i-propanol	(CH <sub>3</sub> )CHOH	1 Vol. %	No effect
Methane	CH <sub>4</sub>	4 Vol. %	No effect
Methanol	CH <sub>3</sub> OH	200 ppm	No effect
Nitrogen dioxide	NO <sub>2</sub>	20 ppm	≤ 5 <sup>(-)</sup>
Nitrogen monoxide	NO	20 ppm	No effect
Silane	SiH <sub>4</sub>	5 ppm	≤ 5
Sulfur dioxide	SO <sub>2</sub>	10 ppm	≤ 2
Toluene	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	1 Vol. %	No effect
Trimethylboron	B(CH <sub>3</sub> ) <sub>3</sub>	1 ppm	No effect