# PH3 1 zero H2 Satellix

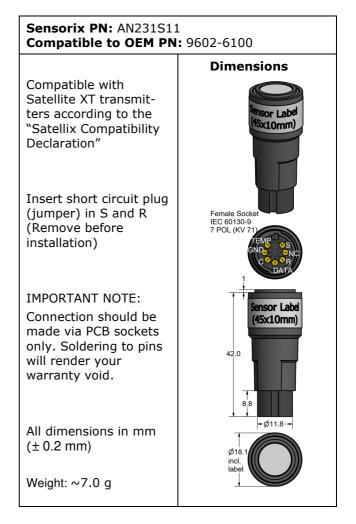
Electrochemical Gas Sensor for Phosphine



3-electrode sensor with EPROM for industrial safety applications in the presence of H2 Class leading stability | Highly selective | Fast response | Very stable baseline

Performance Characteristics / PSDS		
Measurement Range	0 – 1 ppm	
Maximum Range	10 ppm	
Sensitivity	600 ± 200 nA/ppm	
Response Time (T <sub>90</sub> )	≤ 60 s at 2 min gas exposure	
Baseline (in clean air)	< ± 10 nA	
Baseline (in clean air) (at midpoint sensitivity)	< ± 0.02 ppm	
Lower Detectable Limit (LDL)	0.03 ppm	
Alarm 1	0.1 ppm	
Linearity	< 5% of full scale	
Repeatability	< 2%	
Product Safety Datasheet (PSDS)	organic gel electrolyte	

<b>Operating Conditions</b>	
Temperature Range	-20°C to +40°C
Humidity Range	15% to 90% r.h. non-condensing
Pressure Range	800 – 1200 hPa
Bias Voltage	no
Sensor warm-up time (of sensors with short circuit plug)	5 s
Recommended Orientation	sensor front pointing downwards or sidewards



Lifetime	
Long Term Output Drift	< 5% per month
Expected Operating Life	> 18 months in air
Recommended Storage conditions	5 – 20°C in sealed container

Performance and lifetime data are based on conditions at 20°C, 40 ... 60 % r.h. and ambient pressure.

### SAFETY NOTE

This sensor is designed to be used in safety critical applications. The sensor is compatible with the selftest functionality of the Satellite XT Gas Detector Transmitter. In addition to this electrical diagnostic, Sensorix recommends that the function of the sensor is confirmed by exposure to a suitable test gas (bump check) regularly according to national and local regulations. Failure to carry out such tests may jeopardize the safety of people and property.

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Cross Sensitivity & Filter		
Gas concentration	Reading after 5 min	
Ammonia 20 ppm	0 ppm	
Arsine 1 ppm	0.8 ppm	
Carbon Dioxide 5000 ppm	0 ppm	
Carbon Monoxide 100 ppm	0 ppm	
Hydrocarbons (saturated) 1%	0 ppm	
Hydrogen 3000 ppm	0 ppm	
Hydrogen 50%	0 ppm	
Hydrogen Chloride 5 ppm	0.1 ppm*	
Hydrogen Cyanide 5 ppm	1 ppm	
Hydrogen Fluoride 5 ppm	0 ppm	
Hydrogen Sulfide 20 ppm	0 ppm*	
Isopropanol 600 ppm	0 ppm	
Silane 5 ppm	0 ppm	
Sulphur Dioxide 2 ppm	0 ppm*	
Chemical Filter	Yes	

\* Cross sensitivity depends upon filter status and will increase when filter is depleted.

Signals below LDL as well as negative readings will be displayed as zero.

### IMPORTANT NOTE:

Interference factors may differ from sensor to sensor, with changing ambient conditions and with lifetime. It is not advisable to calibrate with interference gases. This table does not claim to be complete. The sensor may also be sensitive to other gases.



### **Temperature performance**

Temperature dependence is compensated with microprocessor.

### Poisoning

Sensorix cells are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapors is avoided, both during storage, fitting into instruments, and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted.

#### Recycling

At the end of the product's life, do not dispose of any electronic sensor, component, or instrument in the domestic waste, but contact the vendor or Sensorix for disposal instructions. Sensorix will take back sensors for professional recycling.

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Characteristics on this data sheet outline the performance of newly supplied sensors.