H2 4% Satellix

Electrochemical Gas Sensor for Hydrogen

3-electrode sensor with EPROM for industrial safety applications

Class leading stability | Highly selective | Fast response | Very stable baseline

Performance Characteristics / PSDS	
Measurement Range	0 – 4%
Maximum Range	10%
Sensitivity	1.5 ± 1 nA/ppm
Response Time (T_{90})	≤ 90 s at 3 min gas exposure
Baseline (in clean air)	< ± 100 nA
Baseline (in clean air) (at midpoint sensitivity)	< ± 100 ppm
Lower Detectable Limit (LDL)	0.05% = 500 ppm
Alarm 1	1%
Linearity	< 10% of full scale
Repeatability	< 5%
Product Safety Datasheet (PSDS)	acid electrolyte

Operating Conditions	
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

Sensorix PN: AN142S11
Compatible to OEM PN: 9602-5101

Compatible with Satellite XT transmitters according to the "Satellix Compatibility Declaration"

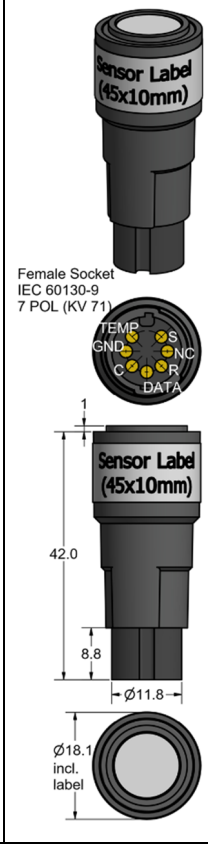
Insert short circuit plug (jumper) in S and R (Remove before installation)

IMPORTANT NOTE:
Connection should be made via PCB sockets only. Soldering to pins will render your warranty void.

All dimensions in mm (± 0.2 mm)

Weight: ~7.0 g

Dimensions



Lifetime	
Long Term Output Drift	< 10% per 6 months
Expected Operating Life	> 24 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 self-test 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 100 ppm	0%
Carbon Dioxide 5000 ppm	0%
Carbon Monoxide 100 ppm	0%
Chlorine 5 ppm	0%
Ethylene 1000 ppm	0%
Hydrocarbons (saturated) 1%	0%
Hydrogen Chloride 20 ppm	0%
Hydrogen Cyanide 10 ppm	0%
Hydrogen Fluoride 5 ppm	0%
Hydrogen Sulfide 10 ppm	0%
Isopropanol 1000 ppm	0%*
Nitric Oxide 100 ppm	0%
Nitrogen Dioxide 10 ppm	0%
Phosphine 1 ppm	0%
Sulphur Dioxide 10 ppm	0%
Chemical Filter	No

* Exposure to solvent vapors like isopropanol and other alcohols is known to change sensor performance and should be avoided.

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.

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