

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 sideways |

| | |
|---|---|
| Sensorix PN: AN142S11 Compatible to OEM PN: 9602-5101 | |
| <p>Compatible with Satellite XT transmitters according to the "Satellix Compatibility Declaration"</p> <p>Insert short circuit plug (jumper) in S and R (Remove before installation)</p> <p>IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to pins will render your warranty void.</p> <p>All dimensions in mm (± 0.2 mm)</p> <p>Weight: ~7.0 g</p> | <p>Dimensions</p> <p>Female Socket IEC 60130-9 7 POL (KV 71)</p> |

| 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.



H2 4% Satellix

Electrochemical Gas Sensor for Hydrogen

| 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.

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement Sensorix GmbH reserves the right to make product changes without notice. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale. The products are always subject to a program of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of Sensorix GmbH, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application.

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

