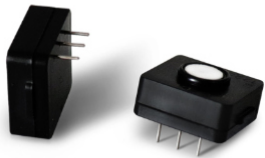




SGX

SENSORTECH

An Amphenol Company



PS1-VOC-1000



PS4-VOC-1000

VOC sensor Datasheet

SGX Solid Polymer Electrolyte Gas Sensors

The SGX series of PS1 and PS4 Electrochemical gas sensors are using a revolutionary 'Solid Polymer Electrolyte' technology that is based on the principle of catalytic reaction. The target gas to be measured generates a very small current, proportional to the gas concentration. Our technology offers a stable, high quality and cost-effective manufacturing process. The SGX solid polymer electrolyte gas sensors are available in a very small size, are highly sensitive, do not use power and have very low cross sensitivity from other gases.



Quality, Safety, Responsibility

Technical Specifications

Performance

| | |
|------------------------------|-------------------------|
| Sensitivity | 55 ± 15 nA / ppm |
| Measurement Range | 0 – 1000ppm |
| Zero Current | ± 100 nA |
| Maximum Overload | 2000 ppm |
| Response Time | T50 < 10s, T90 < 30s |
| Repeatability | 1% |
| Lower Detectable Limit (LDL) | < 1 ppm |
| Linear Range | 1000 ppm |
| Resolution (16Bit ADC) | 0.1ppm |

Environmental Details

| | |
|--------------------------|-----------------|
| Temperature Range | -40°C to +55°C |
| Pressure Range | 800 to 1200 hPA |
| Operating Humidity Range | 15-95% RH |
| Storage Temperature | 0 to 20°C |

Lifetime Details

| | |
|-------------------------|------------------|
| Long-Term Drift | < 1 %/month |
| Expected Lifetime | > 3 years in air |
| Zero Drift in Clean Air | < 2 ppm |
| Storage conditions | 0-20 °C |
| Storage Life | 12 months |
| Warranty | 12 months |

Operation

| | |
|---------------------------|------------------------------|
| Operating Principle | Amperometric, 3-electrode |
| Bias Voltage | 0 mV |
| Recommended Load Resistor | 100 Ω |
| Warm Up Time | < 60 s |

Housing

| | |
|------------------|--|
| Housing Material | PPO |
| Weight | PS1-VOC-1000 < 0.7g PS4-VOC-1000 < 6g |



Features

- Small size
- High sensitivity
- Wide temperature range
- Fast response time
- No electrolyte leakage
- Low cost at large volumes
- Individually calibrated (including test report)



Key applications

- General Gas Detection
- Consumer Market
- VOC Gas Detection
- Mobile Phone Nose
- Indoor & Outdoor Air Quality
- Low Power Nose

Important Notes

- All performance is based on conditions at 20°C, 50% RH and 1 atm, flow rate > 150 qcm/min, using SGX recommended circuitry.
- Sensor performance is temperature dependant; please contact SGX for temperature performance other than 20°C.
- Do not solder to the connector pins as this may damage the sensor and thereby invalidate the warranty.
- Details on recommended connector pins can be found in the Frequently Asked Questions within the Gas Sensor section of the SGX website.