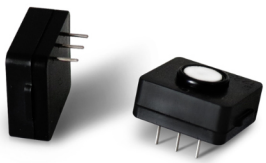
SGX SENSORTECH

An Amphenol Company



PS1-O2-25%

PS4-O2-25%

Oxygen 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

SGX SENSORTECH
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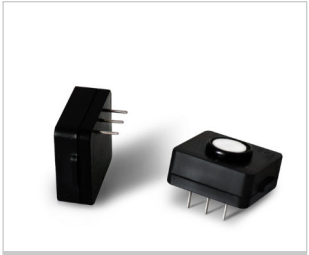
Technical Specifications



PS1-O2-25%

PS4-O2-25%

Performance

Sensitivity	0.2 ± 0.03 n A / ppm
Measurement Range	0 – 25 %vol
Zero Current	40-60 µA
Maximum Overload	30 %vol
Response Time	T50 < 5s, T90 < 10s
Lower Detectable Limit (LDL)	≤ 0.5 %vol
Resolution (16Bit ADC)	0.01 %vol

Environmental Details

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

Lifetime Details

Long-Term Drift	< 1 %/month
Expected Lifetime	> 5 years
Zero Drift in Clean Air	< 0.2 %vol
Storage conditions	0-20°C
Storage Life	12 months
Warranty	12 months

Operation

Operating Principle	Amperometric, 3-electrode
Bias Voltage	-400 to -600 mV
Recommended Load Resistor	220 Ω
Warm Up Time	< 15 min

Housing

Housing Material	PPO
Weight	PS1-O2-25% < 0.7g PS4-O2-25% < 6g

Features

- Response time typically 4s
- Small size
- Wide temperature range
- Capillary sensor
- Lead free
- Low power consumption
- 400-600 mV bias voltage

HANDLE WITH CARE

RoHS compliant 2002/95/EC

Key applications

- Medical
- Industrial
- Combustion Control
- Food Industry
- General Gas Detection

Important Notes

- All performance is based on conditions at 20°C, 50% RH and 1 atm, flow rate>150qcm/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.

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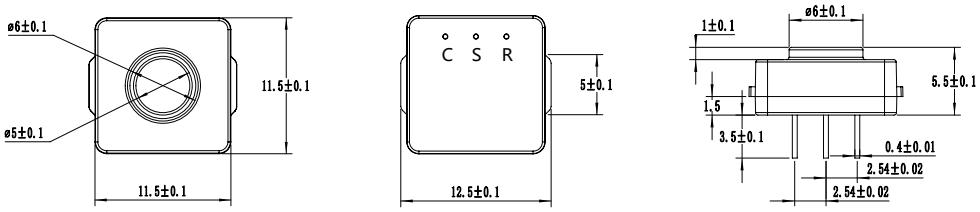
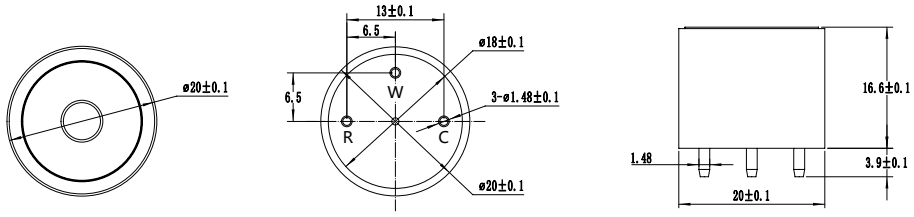
Dimensions



PS1-O2-25%



PS4-O2-25%

Cross Sensitivity

Gas	Formula	Test Concentration	Sensor Reading
Ammonia	NH_3	20ppm	0ppm
Carbon Dioxide	CO_2	5000ppm	0ppm
Carbon Monoxide	CO	50ppm	0ppm
Chlorine	CL_2	1ppm	0ppm
Hydrocarbons (unsaturated)	/	1%vol	0ppm
Hydrogen Cyanide	HCN	10ppm	0ppm
Hydrogen	H_2	100ppm	0ppm
Isopropanol	C_3H_8O	1000ppm	0ppm
Nitric Oxide	NO	25ppm	0ppm
Nitrogen Dioxide	NO_2	10ppm	0ppm
Ozone	O_3	0.5ppm	0ppm
Sulphur Dioxide	SO_2	20ppm	0ppm

Note:
1) The above interference factors may vary due to different sensors and service life, please refer to the actual test results.
2) This table is not complete for all cross gases, other gas please contact with us.

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Temperature Curve