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# SGX-4H2S

### Industrial Hydrogen Sulfide Sensor

(Application : Portable Gas Detectors)

#### **PERFORMANCE**

| PERFURIMANUE                     |                     |  |
|----------------------------------|---------------------|--|
| Range                            | 0 – 100 ppm         |  |
| Output Signal                    | 700 ± 250nA/ppm     |  |
| Zero Shift (-40°C to +50°C)      | < ±2 ppm equivalent |  |
| Linearity                        | Linear              |  |
| Response time (T <sub>90</sub> ) | <30 s               |  |
| Maximum Overload                 | 500 ppm             |  |
| Long-term output drift           | <15% per annum      |  |
| Recommended Load<br>Resistor     | 10 ohms             |  |
| Warranty                         | 2 years             |  |
| Bias                             | No Bias             |  |

#### **OPERATING CONDITIONS**

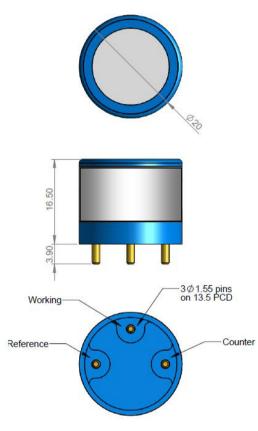
| Temperature Range               | -30°C to +50°C                          |
|---------------------------------|---|
| Operating Humidity              | 15 – 90% RH<br>(non-condensing)         |
| Pressure range                  | 800 to 1200 mbar                        |
| Operating Circuit               | See Application Note 2                  |
| Recommended Storage Temperature | 0°C to 20°C                             |
| Storage life                    | 6 months in original packing (0 – 25°C) |

#### **INTRINSIC SAFETY DATA**

| Maximum at 2000 ppm | 0.3 mA |
|---------------------|--------|
| Maximum o/c Voltage | 1.3 V  |
| Maximum s/c Current | <1.0 A |

#### **PRODUCT DIMENSIONS**

All dimensions in mm All tolerances ±0.15 mm Pin Diameter = 1.50mm



#### **IMPORTANT NOTES**

- All performance is based on conditions at 20°C, 50% RH and 1 atm, using SGX recommended circuitry.
- Sensor performance is temperature dependant. Please see graph on page 2.
- 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.
- This device is designed to be RoHS compliant.

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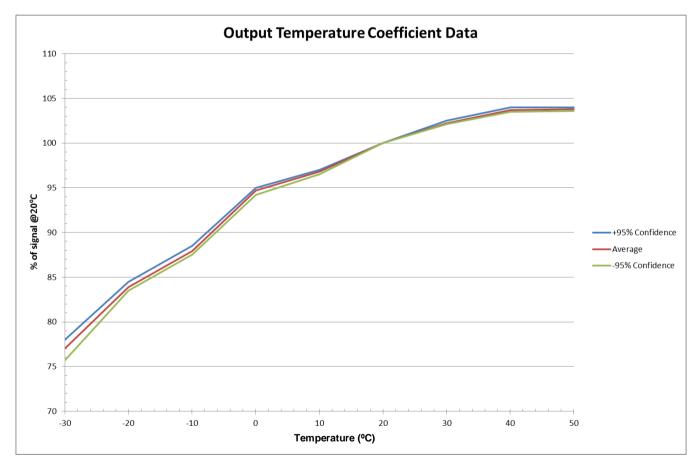




#### **CROSS-SENSITIVITY DATA**

| Gas                                       | Test Concentration (ppm) | Displayed Readings as H2S (ppm) |
|---|--------------------------|---------------------------------|
| Carbon Monoxide (CO)                      | 100 ppm                  | <2 ppm                          |
| Sulfur Dioxide (SO <sub>2</sub> )         | 20 ppm                   | 0 ppm                           |
| Nitrogen Dioxide (NO <sub>2</sub> )       | 5 ppm                    | <0.5 ppm                        |
| Nitric Oxide (NO)                         | 50 ppm                   | <0.5 ppm                        |
| Ammonia (NH <sub>3</sub> )                | 50 ppm                   | 0 ppm                           |
| Chlorine (Cl <sub>2</sub> )               | 15 ppm                   | 0 ppm                           |
| Ethylene (C <sub>2</sub> H <sub>4</sub> ) | 100 ppm                  | 0 ppm                           |
| Carbon Dioxide (CO <sub>2</sub> )         | 5000 ppm                 | 0 ppm                           |

**Note:** This table is for reference only. Calibration should be carried out with the actual gas at a known concentration.



#### **POISONING**

SGX sensors are designed to operate in a wide range of harsh environments and conditions. However it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments and operation. When using sensors on printed circuit boards (PCB's), degreasing agents should be used prior to the sensor being fitted.

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