Hydrogen Sulphide Sensor Specification

4HS/LM Sensor

(Standard version)

Performance Characteristics

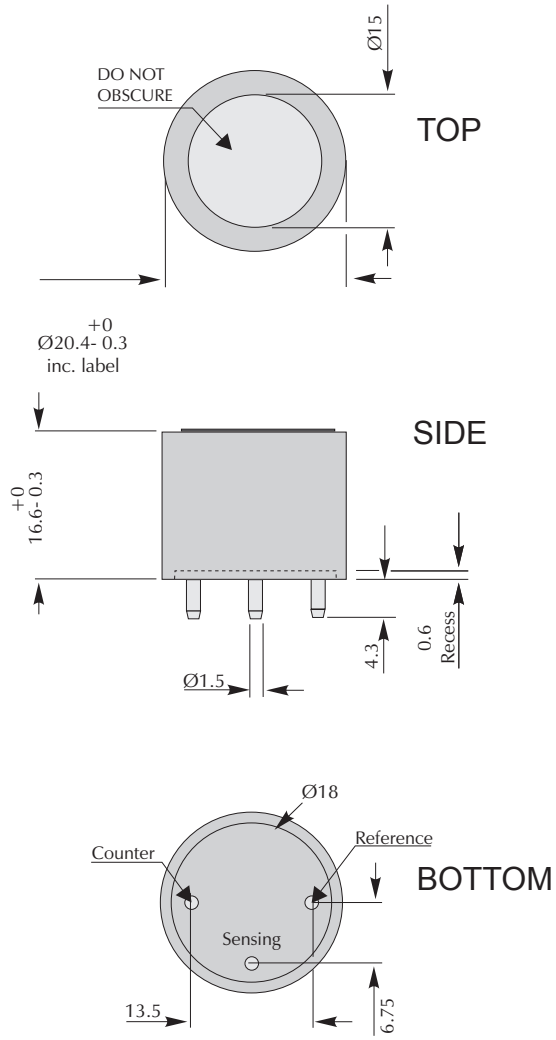
Nominal Range	0-100 ppm
Maximum Overload	500 ppm
Expected Operating Life	Two years in air
Output Signal	0.70 ± 0.15 µA/ppm
Resolution	0.1 ppm
Temperature Range	-40°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T_{90} Response Time	≤30 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-0.1 to +0.4 ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	<0.2 ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10 Ω
Bias Voltage	Not required
Repeatability	<2% of signal
Output Linearity	Linear

N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013 mBar

Physical Characteristics

Weight	5 g (approx.)
Position Sensitivity	None
Storage Life	Six months in original container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch

Outline Dimensions



All dimensions in mm
All tolerances ±0.15 mm unless othewise stated

IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

Testing: 4HS/LM Hydrogen Sulphide sensors should be tested monthly to confirm sensitivity and response time are adequate.

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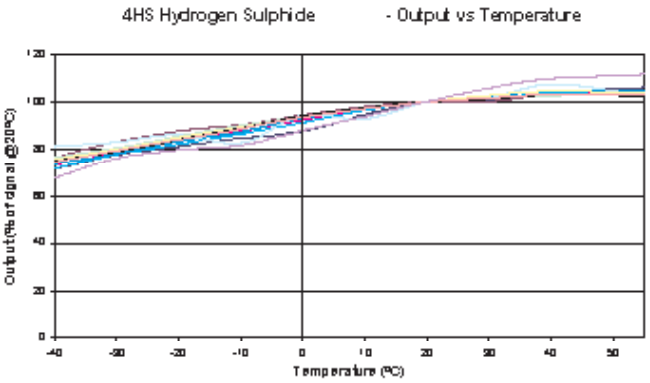

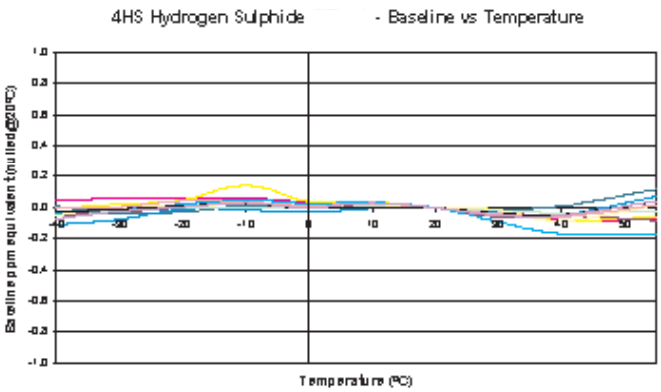

Cross-sensitivity Data

Sensors may exhibit a response to certain gases in a sample other than the target gas. 4HS/LM sensors have been tested with a number of commonly cross-interfering gases and the results are given below. The table shows the typical response to be expected from a sensor when exposed to a given test gas concentration (relevant to safety, e.g. TLV levels).

Gas	Conc.	4HS/LM	Gas	Conc.	4HS/LM
Carbon monoxide:	300ppm	≤2ppm	**Hydrogen:**	10000ppm	≤10ppm
Sulphur dioxide:	5ppm	≈1ppm	**Nitrogen dioxide:**	5ppm	≈-1ppm
Nitric oxide:	35ppm	<0.7ppm			

For details of other possible cross-interfering gases, please contact us.

Methanol Sensitivity

The 4HS/LM sensor is designed for use in applications where methanol might be present. Whilst cross sensitivity reactions on sensors are normally readily defined, the behavior of the 4HS/LM when exposed to methanol is significantly more complex, and can not be specified as above for carbon monoxide. The 4HS/LM sensor is the result of an extensive development project, which has achieved, for this application, a significant performance advantage over standard 4HS sensors.

For more detailed information about the response to methanol, please contact Technical Support.

SAFETY NOTE
This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardise the safety of people and property.