4H CiTiceL®

Hydrogen Sulfide (H_2S) Gas Sensor
Part Number: AC200-800

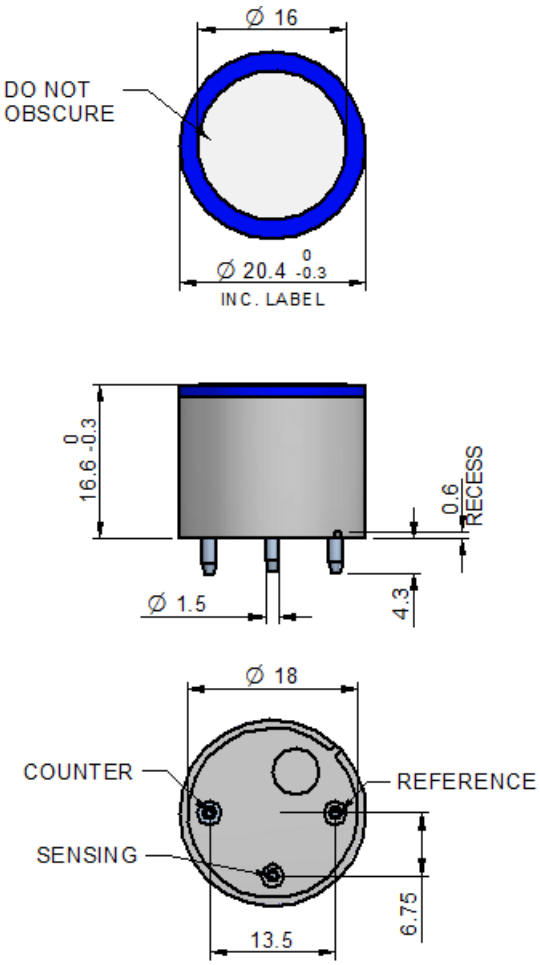
Key Features & Benefits:

- **Industry leading reliability**
- **Improved performance variability**

Technical Specifications

MEASUREMENT	
Operating Principle	3-electrode electrochemical
Measurement Range	0-100 ppm
Maximum Overload	500 ppm
Resolution (Electronics dependent)	0.1 ppm
Filter	None
Sensitivity	1.20 ± 0.25 µA/ppm
Response Time (T_{90})	< 30 seconds
Baseline Offset (clean air)	-0.02 to +0.2 ppm equivalent
Zero Shift (+20°C to +40°C)	< 0.1 ppm equivalent
Repeatability	< 2% of signal
Linearity	Linear
ELECTRICAL	
Recommended Load Resistor	10 Ω
Bias Voltage	Not required
MECHANICAL	
Housing Material	ABS
Weight	5g (approx.)
Orientation	Any
ENVIRONMENTAL	
Typical Applications	Portable life safety
Operating Temperature Range	-40°C to +50°C
Operating Pressure Range	1 atm ± 10%
Operating Humidity Range	15% to 90% RH non-condensing
LIFETIME	
Long Term Output Drift	< 2% signal drift / month
Recommended Storage Temp	0 to 20°C
Expected Operating Life	2 years in air
Storage Life	6 months in sealed container
Standard Warranty	24 months from date of despatch (This amounts to a variation of condition 6 of our standard terms and conditions which otherwise apply)

Product 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.

All performance data is based on conditions at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. For sensor performance data under other conditions, refer to Operating Principles OP08 or contact City Technology.

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Poisoning

CiTiceLs are designed for operation in a wide range of environments and harsh 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 with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the CiTiceL as the solvent may cause crazing of the plastic.

Cross Sensitivity Table

Whilst CiTiceLs are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various other gases. The table below is not exclusive and other gases not included in the table may still cause a sensor to react.

Gas	Concentration Used (ppm)	4H (ppm H_2S)
Carbon Monoxide, CO	300	< 6
Sulfur Dioxide, SO_2	5	≈ 0.5
Nitric Oxide, NO	35	< 0.4
Hydrogen, H_2	10,000	< 5
Nitrogen Dioxide, NO_2	5	-1

The cross sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas and do not form part of the product specification. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted.

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 jeopardize the safety of people and property.

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