

Hydrogen Fluoride (HF) Gas Sensor Patent: US 6423209 B1



Product Data Sheet

Key Features & Benefits:

- Class leading stability
- Low zero drift
- Highly sensitive
- Highly selective for acid gases

Technical Specifications

MEASUREMENT

Operating Principle Measurement Range		3-electrode electrochemical 0-10 ppm
	Filter	None
	Sensitivity	300 ± 100 nA/ppm (negative signal)
Response Time (T ₉₀)		< 90 s calculated from 3 min exposure time
	e Offset (clean air)	< ±30 nA
	Repeatability	< 10% of full scale
	Linearity	< 10% of full scale

ELECTRICAL

Recommended Load Resistor
Bias Voltage
Resolution
(Electronics dependent)None
Not required
< 150 ppb</th>

MECHANICAL

Housing Material	ABS
Recommended Orientation	2.3 g (Mini)
	3.3 g (Classic)
	2.8 g (Smart)
	4.6 g (4 Series)
	6.9 g (7 Series)
Recommended Orientation	sensor front pointing
	downwards or sidewards

ENVIRONMENTAL

Typical ApplicationsTLV-monitoring, leakage detection,
Portable & fixed point applicationsOperating Temperature Range
Operating Pressure Range
Operating Humidity Range-20°C to +40°C
Atmospheric ± 10%15% to 90% r.h. non-condensing

INTRINSIC SAFETY DATA

Maximum at 10ppm0.4 μAMaximum o/c Voltage< 500 mV</th>Maximum s/c Current500 μA

LIFETIME

Long Term Output Drift< 10% per 6 months</th>Expected Operating Life> 18 months in airStorage Life8 weeks in sealed containerStandard Warranty12 months from date of despatch

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Available in:



Part Numbers

HF	Part Number
Mini	1336-932-30009
Classic	1336-932-30069
Smart (8 pin socket)	1336-932-32259
4-Series	1336-932-30049
7-Series	1336-932-30079
Transmitter	1336-932-30659

Orders should be placed through Sensoric Gas Sensors in Bonn.

IMPORTANT NOTE:

Connection should be made via PCB sockets only. Soldering to pins will render your warranty void.

All performance data is based on conditions at 20°C, 50% r.h. and ambient pressure using Sensoric recommended circuitry. For information on sensor performance under other conditions contact Sensoric.



The Right Sensor Can Save A Life



Product Data Sheet



*) Projection 0.6 - 1.25mm depending on gastype

**) Projection up to 0.4mm for 4 Series

***) Projection up to 0,55mm for 7 Series

Please contact sales_europe@citytech.com for detailed information.

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Poisoning

Sensoric cells 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 Sensoric cells as the solvent may cause crazing of the plastic.

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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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.

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