

Hydrogen Fluoride
Sensoric HF 3E 10 SE



Product Data Sheet

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FEATURES

Amperometric 3 electrode sensor cell
Very stable zero reading
Highly sensitive
Monitors for acid gases

TYPICAL APPLICATIONS

TLV-monitoring, leakage detection
Portable & fixed point applications

PART NUMBER INFORMATION

SENSORIC CLASSIC	1336-932-11069
CTL4 series adaptation	1336-932-14049
CTL 7 series adaptation	1336-932-17079
Transmitter (0-10 ppm)	1336-932-00659

Sensoric deems the data contained herein as factual, and the opinions expressed are those of qualified experts based on the results of tests conducted. The above data can not be used as a warranty provision or representation for which Sensoric assumes legal responsibility. The data are offered solely for consideration, investigation and verification. Any use of this information is subject to federal, state and local laws and regulations.



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TECHNICAL SPECIFICATIONS

Measuring Range	0–10 ppm
Sensitivity Range	300 nA/ppm \pm 100 nA/ppm (negative signal)
Zero Current at 20 °C	\pm 30 nA
Resolution at 20 °C	<0.1 ppm
Bias Potential	0 mV
Linearity	<10% full scale
Response Time at 20 °C	
t50	< 30 s calculated from 4 min. exposure time
t90	< 90 s calculated from 4 min. exposure time
Long Term Sensitivity Drift	<10% per 6 months
Operation Conditions	
Temperature Range	-20 °C to +40 °C
Humidity Range	15–90% r.H., non–condensing
Effect of Humidity	abrupt change of r.H. might cause a zero reading transient
Sensor Life Expectancy	> 18 months
Warranty	12 months

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OUTPUT vs. TEMPERATURE:

Due to the nature of the gas the temperature dependence of the sensor as a function of the environmental temperature conditions is strongly related to the experimental conditions such as relative humidity.

SensoriC is currently revising this set of data via cross calibration with HCl.

Based on the current experience with this sensor the temperature dependence

- a) on the zero reading is < 0.5 ppm
- b) on the sensitivity is $< 20\%$ of the sensitivity at 20°C

within the specified temperature range.

Please contact our Technical Support Department (sales_europe@citytech.com) for further details.

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Cross Sensitivities at 20 °C

Gas	Concentration	Reading [ppm]
Acetic Acid	100 ppm	100
Alcohols	1000 ppm	0
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	1 ppm	0.7
Hydrocarbons	% range	0
Hydrogen	3000 ppm	< 1
Hydrogen Chloride	10 ppm	6
Sulfur Dioxide	20 ppm	16 ¹

1) Short gas exposure in minute range.

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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.

Attention

Use of the Sensoric range sensors requires complete understanding of the instructions. Before using Sensoric range sensors please carefully read 'Application Notes' which can be found at www.citytech.com under the heading 'Support' -> 'Application Notes' -> 'Sensoric'

Product Safety Data Sheets (PSDS) can be obtained at www.citytech.com under the heading 'Support' -> 'Product Safety Datasheets'

For further assistance on sensor selection and use, please contact a member of the Technical Sales team.

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