Fluorine

SensoriC F2 3E 1

Rev. 09/2006

SensoriC Sensors are designed and manufactured in
Justus-von-Liebig-Str. 22, D- 53121 Bonn, Germany
Tel: ++49 (0) 228 52 66 40 **Fax**: ++49 (0) 228 5266489

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FEATURES

Amperometric 3-electrode sensor
High reliability
High resolution
Fixed organic gel electrolyte

TYPICAL APPLICATIONS

Chemical Industry, Petrochemical Industry, General Industry

PART NUMBER INFORMATION

MINI	1431-031-30009
SENSORIC CLASSIC	1431-031-30069
CTL 4 series adaptation	1431-031-30049
CTL 7 series adaptation	1431-031-30079

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TECHNICAL SPECIFICATIONS

Measuring Range	0–1 ppm
Sensitivity Range	1000 nA/ppm ± 300 nA/ ppm (negative current)
Zero Current at 20°C	< ± 20 nA
Resolution at 20°C	< 0.02 ppm
Bias Potential	0 mV
Linearity	< 5% full scale
Response Time at 20°C	
t50	< 30 s calculated from 4 min. exposure time with 1 ppm Cl_2
t90	< 80 s calculated from 4 min. exposure time with 1 ppm Cl_2
Long Term Sensitivity Drift	< 5% per month
Operation Conditions	
Temperature Range	-10°C to + 40°C
Humidity Range	15-90% r.H., non-condensing
Effect of Humidity	abrupt changes of rel. humidity will cause short term drift in zero reading
Sensor Life Expectancy	> 18 months
Warranty	12 months

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RELATIVE 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.

SensoriC is currently revising this set of data.

Based on the current experience with this sensor the temperature dependence

a) on the zero reading is < 0.1 ppm
b) on the sensitivity is < 20% of the sensitivity at 20°C

within the specified temperature range.

Please contact our Technical Support Department (tech@sensoric.de) for further details.

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CROSS SENSITIVITIES AT 20°C

Gas	Concentration	Reading [ppm]
Alcohols	1000 ppm	0
Arsine	0.2 ppm	1
Bromine		yes; n/d
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	1
Chlorine	1 ppm	1.4
Diborane	0.25 ppm	0.4
Hydrocarbons	% range	0
Hydrochloric Acid	5 ppm	0[1)]
Hydrogen	10000 ppm	0
Hydrogen Cyanide	1 ppm	-3
Hydrogen Sulfide	1 ppm	-2
Nitrogen	100 %	0
Nitrogen Dioxide	10 ppm	-19
Ozone	0.25 ppm	0.3
Phosphine	0.3 ppm	yes; n/d
Sulfur Dioxide	20 ppm	0.04

1) Short gas exposure in minute range.

Notes:
1. Interference factors may differ from sensor to sensor and with life time. It is advisable to calibrate with 1 ppm Cl_2.
2. This table does not claim to be complete. The sensor might also be sensitive to other gases.

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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