Hydrogen Chloride

Sensoric HCl 3E 30

Rev. 11/2011

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 5266439

Sensoric HCl 3E 30

FEATURES

Amperometric 3 electrode sensor cell
Short warm up time
Good zero stability
Fast response
1:1 cross interference to HBr

TYPICAL APPLICATIONS

TLV-Monitoring
Leak detection
Pharmaceutical industry

PART NUMBER INFORMATION

MINI	1139-034-30009
SENSORIC CLASSIC	1139-034-30069
CTL 4 series adaptation	1139-034-30049
CTL 7 series adaptation	1139-034-30079

www.citytech.com

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 5266439

Sensoric HCl 3E 30

TECHNICAL SPECIFICATIONS

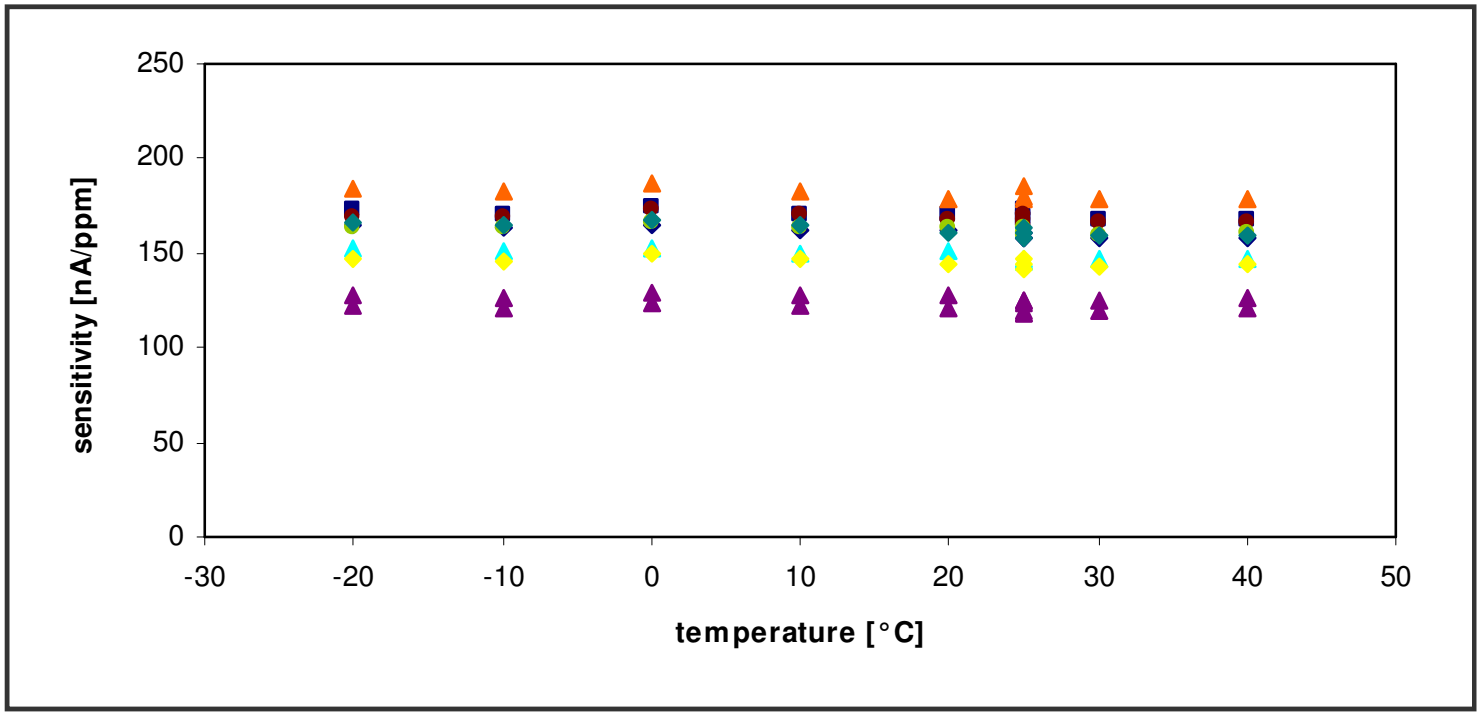
Measuring Range	0–30 ppm
Sensitivity Range	140 nA/ppm ± 60 nA/ ppm
Zero Current at 20 °C	< ± 100 nA
Resolution at 20 °C	< 0.7 ppm
Bias Potential	200 mV
Linearity	< 5% full scale
Response Time at 20 °C	
t50	< 30 s calculated from 4 min. exposure time
t90	< 70 s calculated from 4 min. exposure time
Long Term Sensitivity Drift	< 3% per month
Operation Conditions	
Temperature Range	-20 °C to +40 °C
Humidity Range	15–95% r.H., non–condensing
Effect of Humidity	high humidity causes HCl absorption
Sensor Life Expectancy	> 24 months
Warranty	12 months

Rev. 11/2011

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 5266439

Sensoric HCl 3E 30

Temperature dependence of output signal:

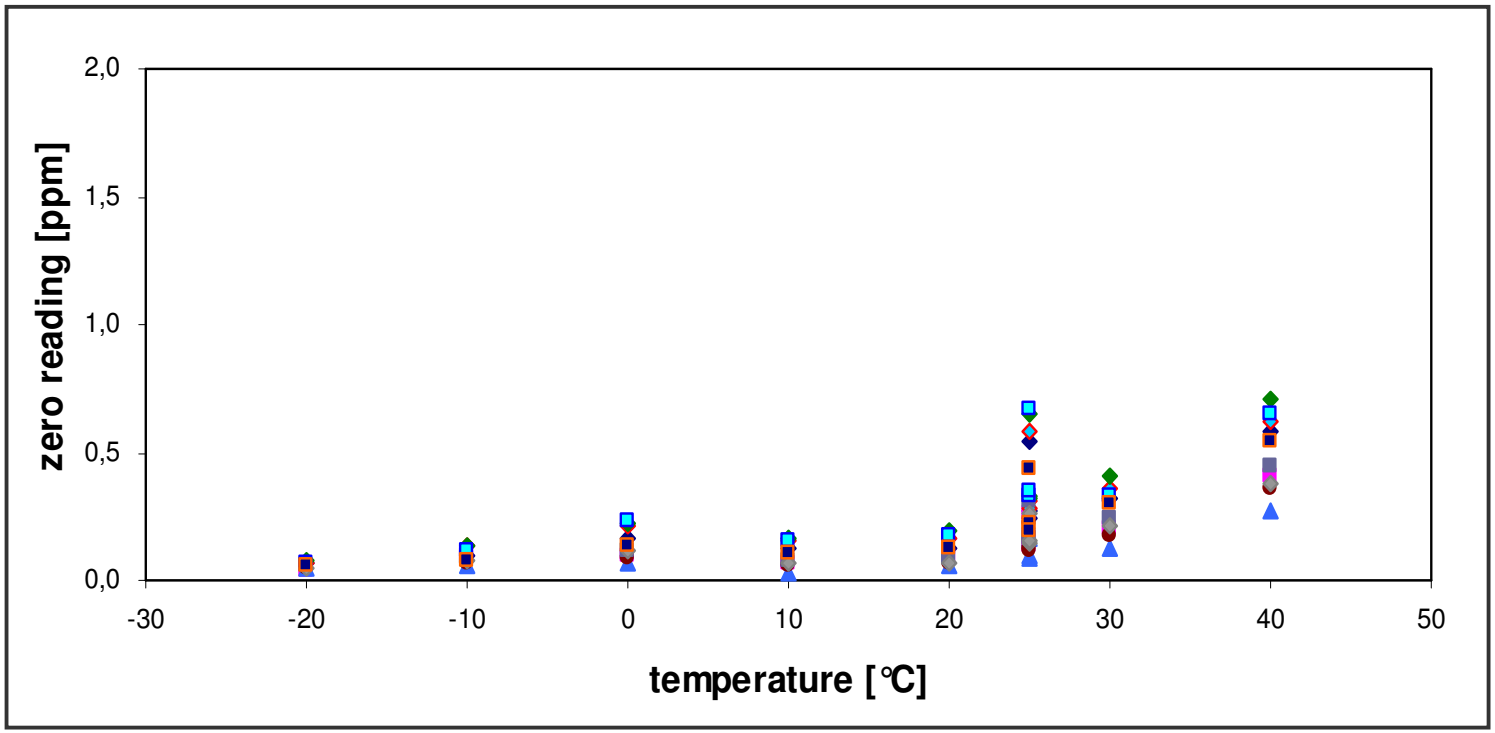


www.citytech.com

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 5266439

Sensoric HCl 3E 30

Temperature dependence of zero reading:



www.citytech.com

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 5266439

Sensoric HCl 3E 30

CROSS SENSITIVITIES AT 20°C

Gas	Concentration	Reading [ppm]
Alcohols	1000 ppm	0
Ammonia	100 ppm	0
Arsine	0.2 ppm	0.7
Carbon Dioxide	5000 ppm	0
Carbon Monoxide	100 ppm	0
Chlorine	5 ppm	<±0.1
Hydrocarbons	% range	0
Hydrogen	10000 ppm	0
Hydrogen Cyanide	20 ppm	7
Hydrogen Sulfide	20 ppm	60
Nitric Oxide	100 ppm	45
Nitrogen	100 %	0
Nitrogen Dioxide	10 ppm	<±0.5
Phosphine	0.1 ppm	0.3
Sulfur Dioxide	20 ppm	8

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

www.citytech.com

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 5266439

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.

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 5266439