Chlorine

Cl2 3E 50

Rev. 04/2012

CI2 3E 50

FEATURES

Amperometric 3 electrode sensor cell
Low susceptibility to abrupt changes of humidity
High dynamic range
0 voltage biased operation

TYPICAL APPLICATIONS

Portable & fixed point applications
TLV monitoring
Water treatment plants, swimming pools, chemical industry

PART NUMBER INFORMATION

MINI	0441-032-30009
4 series adaptation	0441-032-30049
7 series adaptation	0441-032-30079

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TECHNICAL SPECIFICATIONS

Measuring Range	0-50 ppm; typically: 0–5 ppm
Sensitivity Range	450 nA/ppm ± 200 nA/ppm (negative current)
Zero Current at 20°C	< ± 20 nA
Resolution at 20°C	< 0.05 ppm
Bias Potential	0 mV
Linearity	< 5% full scale
Response Time at 20°C	
t50	<20 s calculated from 2 min. exposure time *
t90	<60 s calculated from 2 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	no effect on zero current
Sensor Life Expectancy	> 24 months in air
Warranty	12 months

*t50 = 10 s and t90 = 30 s if sensors are exposed to at least 1 ppm Chlorine for at least 2 min

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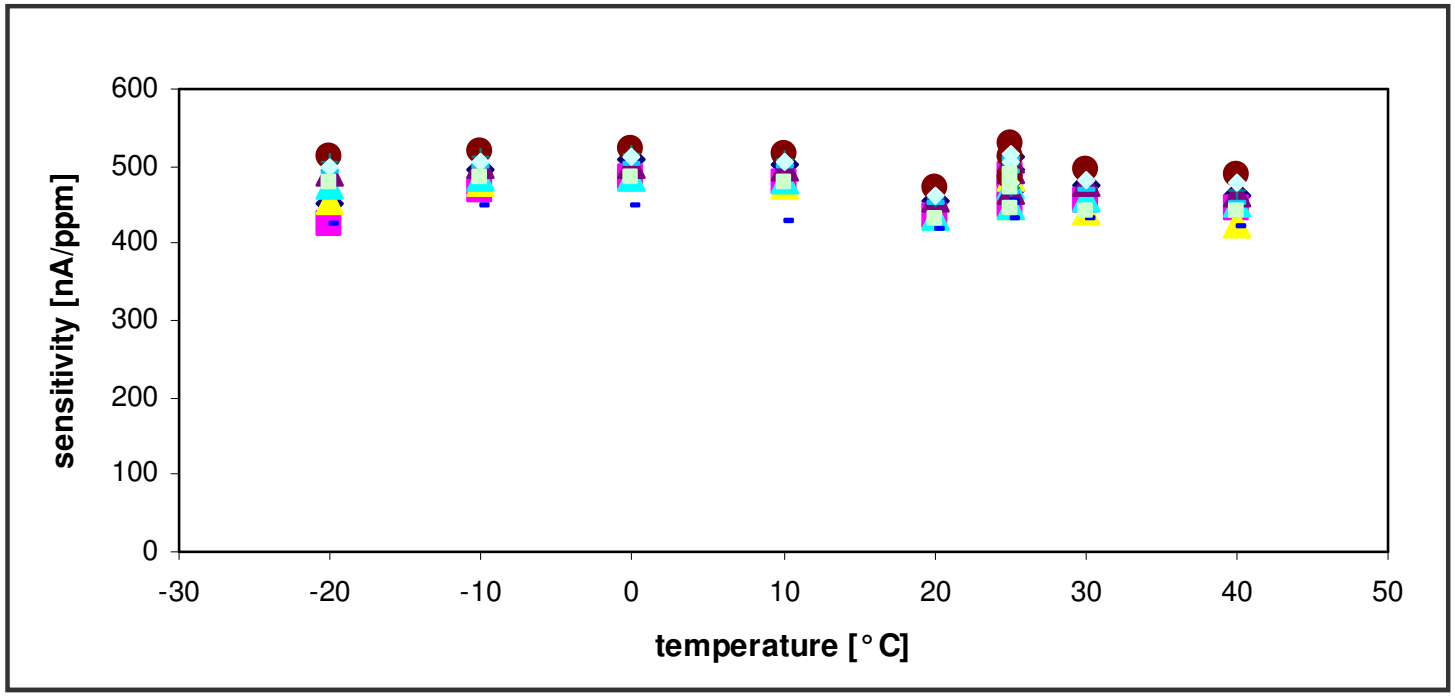
OUTPUT vs. TEMPERATURE:



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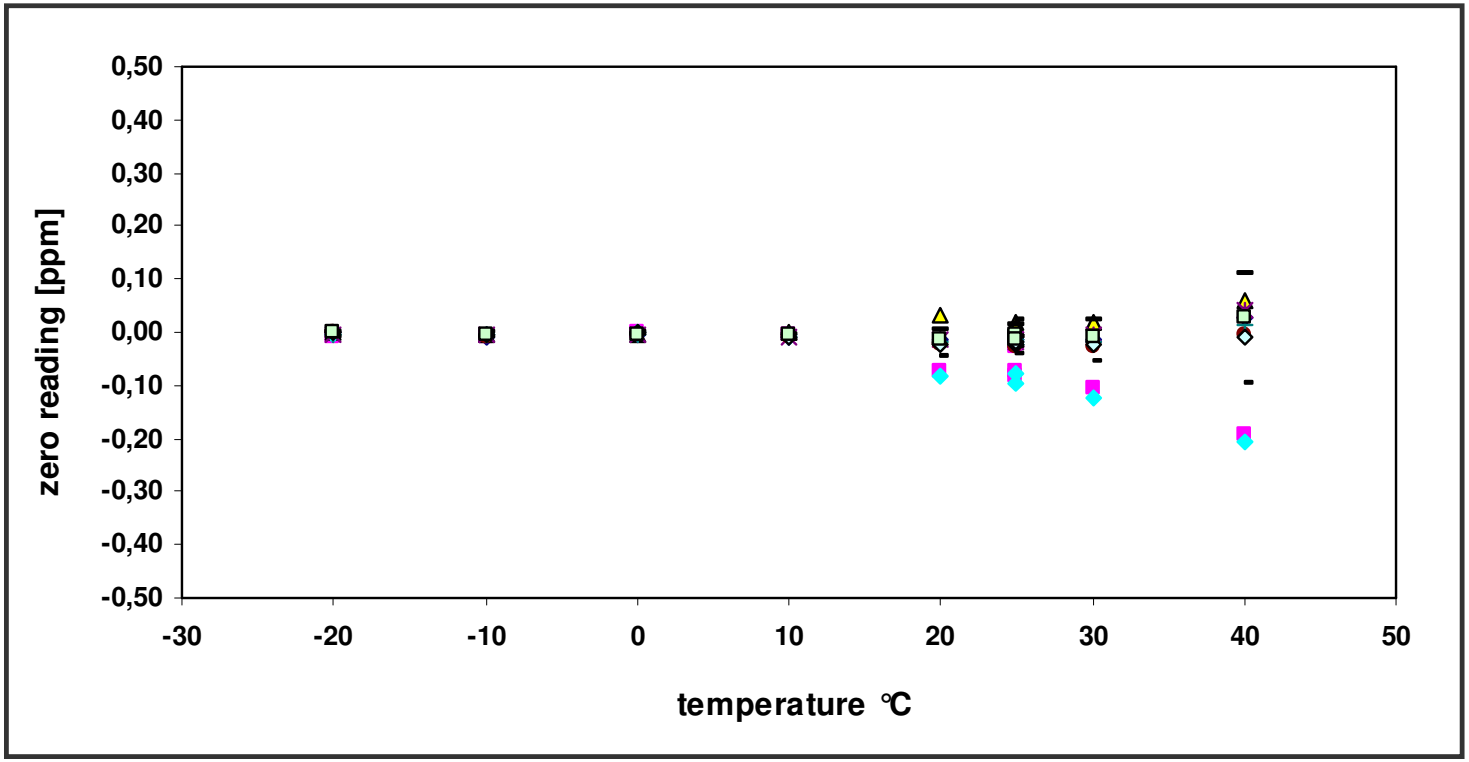
ZERO READING vs. TEMPERATURE:



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CROSS SENSITIVITIES AT 20°C

Gas	Concentration	Reading [ppm]
Ammonia	100 ppm	0
Bromine	1 ppm	1.0
Carbon Dioxide	1 %	0
Carbon Monoxide	100 ppm	0
Chlorine Dioxide	1 ppm	0.5
Fluorine	1.0 ppm	0.4
Hydrogen	3000 ppm	0
Hydrogen Sulfide	20 ppm	0[1]
Nitrogen Dioxide	10 ppm	2
Ozone	0.25 ppm	0.05
Sulfur Dioxide	20 ppm	3.5

1) Exposure to H_2S will poison the cell; further exposure to chlorine will re-activate the sensor.

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

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 this range of sensors requires complete understanding of the instructions. Before using this range, please carefully read ‘Application Notes’.

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