

Product Data Sheet

Mercaptane

Sensoric TBM 2E 50

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FEATURES

Amperometric 2 electrode sensor cell
High selectivity
High reliability
Good long term stability

TYPICAL APPLICATIONS

Monitoring of odorants in natural gas applications

PART NUMBER INFORMATION

SENSORIC CLASSIC	2441-021-03069
CTL 4 series adaptation	2441-021-04049
CTL 7 series adaptation	2441-021-07079

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TECHNICAL SPECIFICATIONS

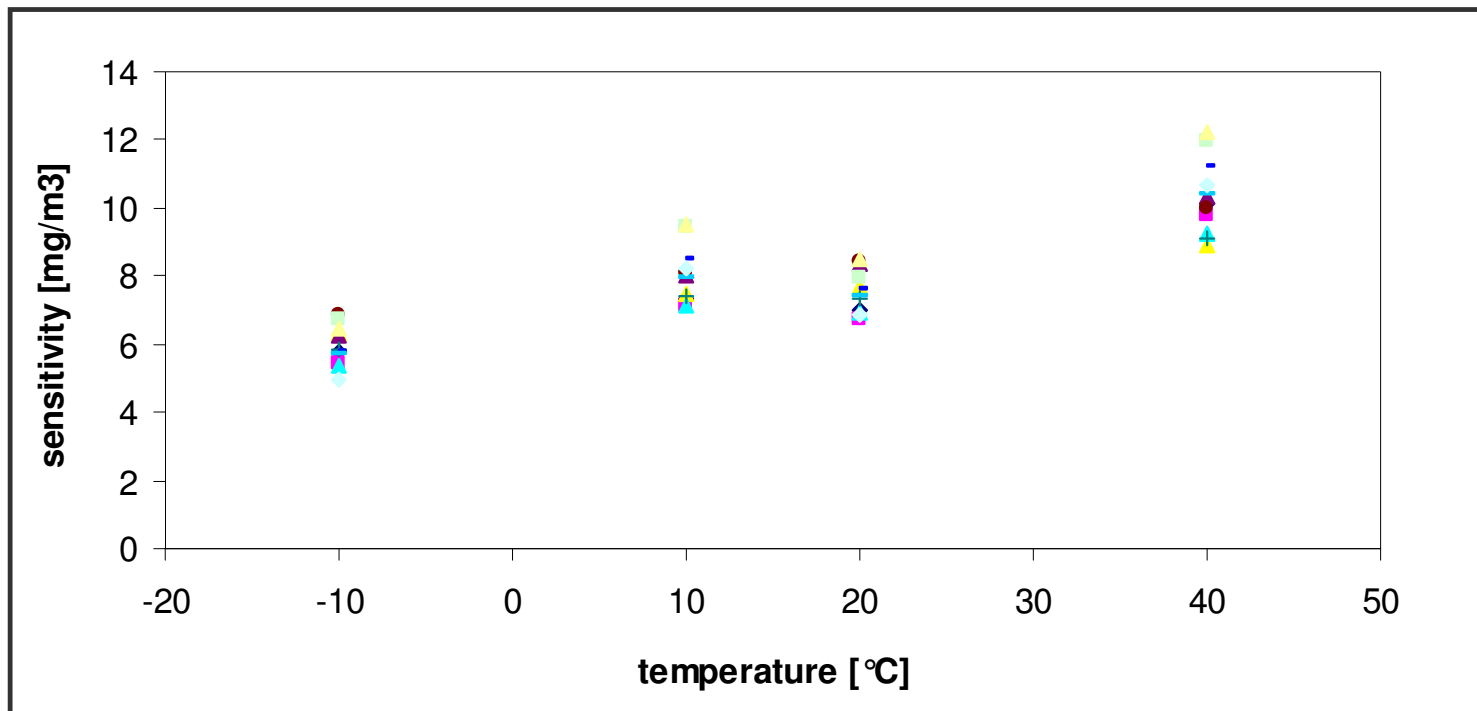
Measuring Range	0–50 mg/m ³ / 0-14 ppm
Sensitivity Range	3-8 nA/ mg/m ³ / ; 15-40 nA/ mg/m ³ / Ethyl-SH (estimated)
Zero Current at 20 °C	< ± 4 nA
Resolution at 20 °C	< 0.5 mg/m ³ /
Bias Potential	not required
Linearity	< 5% full scale
Response Time at 20 °C	
t50	< 40 s calculated from 4 min. exposure time
t90	< 90 s calculated from 4 min. exposure time
Long Term Sensitivity Drift	< 10% per 10 month
Operation Conditions	
Temperature Range	-10 °C to +40 °C
Humidity Range	10–95% r.H., non–condensing
Effect of Humidity	no effect
Sensor Life Expectancy	> 12 months
Warranty	9 months

Note: 1 ppm = 3,66 mg/m³

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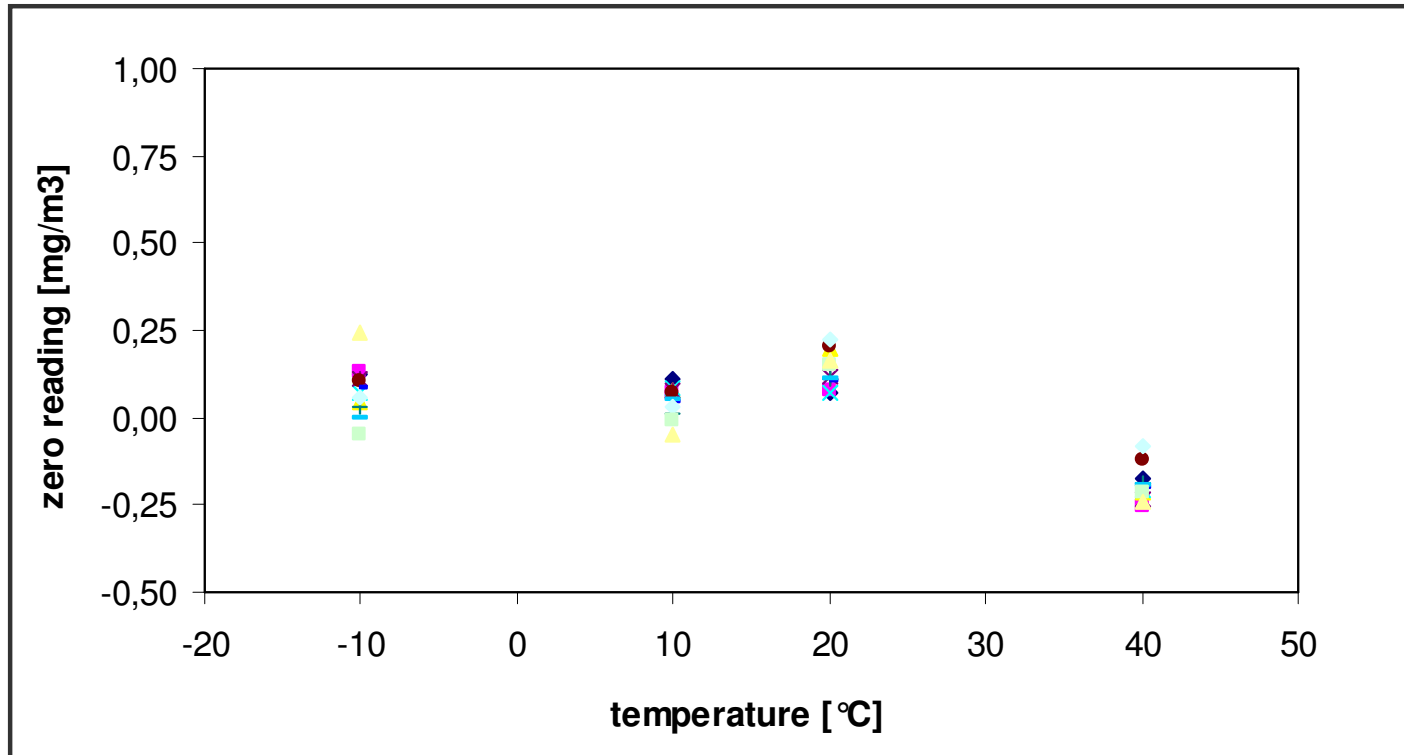
OUTPUT vs. TEMPERATURE:



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ZERO READING vs. TEMPERATURE:



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CROSS SENSITIVITIES AT 20 °C

Gas	Concentration	Reading [mg/m3]
Alcohols	1000 ppm	0
Carbon Dioxide	1000 ppm	0
Carbon Monoxide	290 ppm	0
Hydrocarbons	% range	0
Hydrogen	1 %	0
Hydrogen Sulfide	20 ppm	0 ¹⁾
Isopropanol	200 ppm	0
Methane	100 %	0
Nitrogen	100 %	0
Nitrogen Dioxide	10 ppm	-80
Sulfur Dioxide	20 ppm	0 ¹⁾

1) With inboard filter; to remove TLV levels of interfering gases; continuous high level exposure may reduce the efficiency of the filter material.

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.

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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.

甲硫醇传感器 0-10 ppm

性能表征

产品型号	CLE-3611-400
量程	10 ppm
最大荷载	20 ppm
灵敏度	$0.70 \pm 0.15 \mu\text{A/ppm}$
基线 (20 °C)	$< \pm 0.2 \mu\text{A}$
基线漂移 (-20 to 50 °C)	相当于 0 to 0.6 ppm
分辨率	0.1 ppm
响应时间 (T90)	≤ 35 秒
线性度	线性
长期稳定性	$< 2\%$ 信号值/月

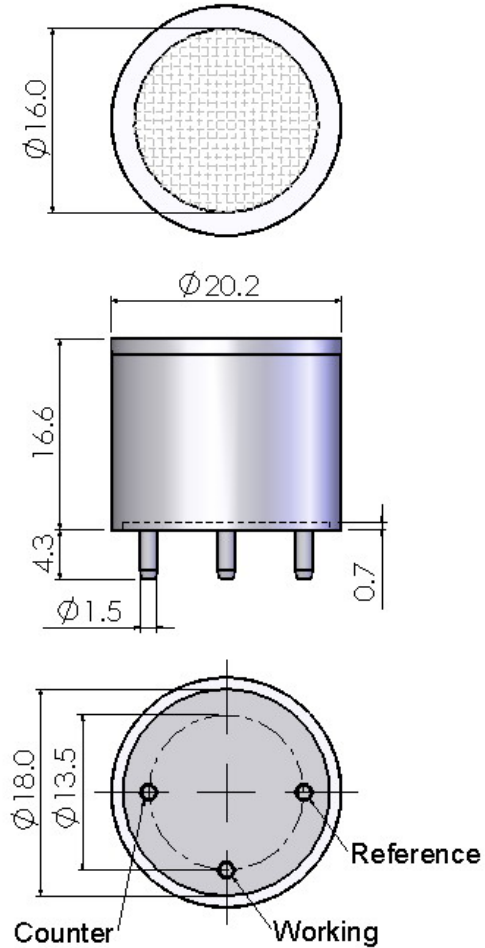
工作条件

工作温度	-20°C to 50°C
工作湿度	15 ~ 90%RH (无冷凝)
工作压力	90 to 110 kPa
偏压	0 mV
储存时间	6 个月 (专用包装盒中)
储存温度	0°C to 20°C
使用寿命	空气中 2 年
质保期	交货后 12 个月

物理性能

重量	约 5 克
方位要求	无

Outline Dimensions

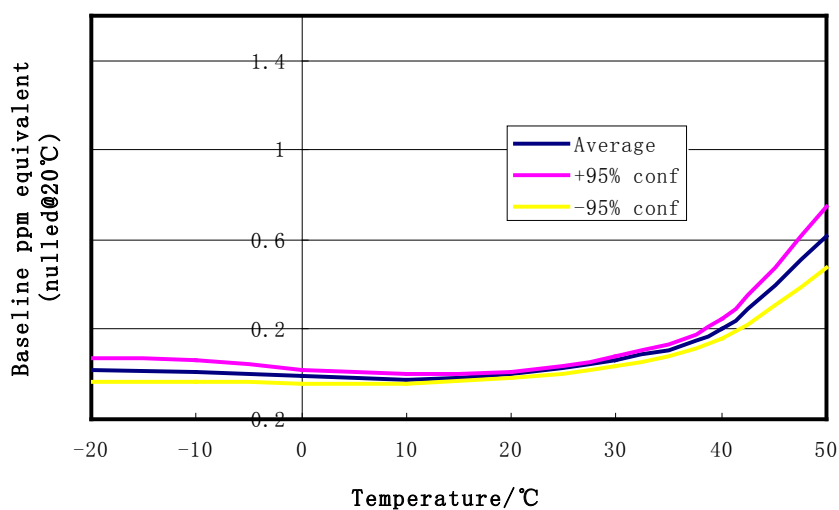


All dimensions are in millimeters.
All tolerances are $\pm 0.2\text{mm}$.

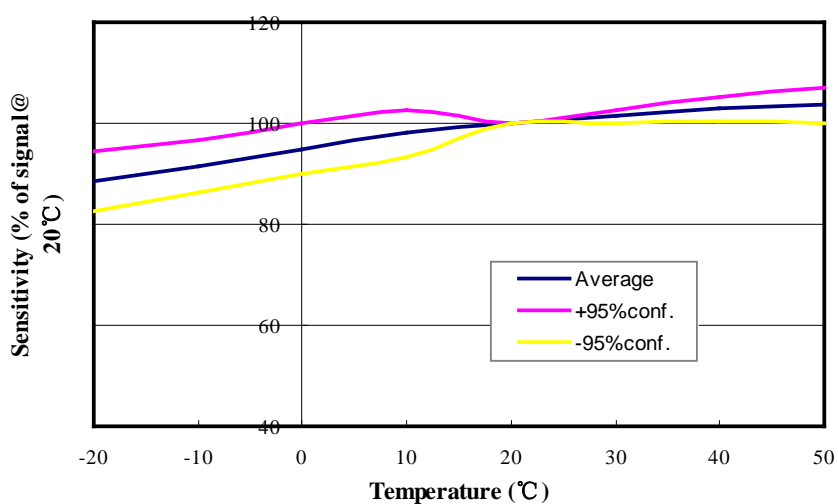
Note: 推荐使用 PCB 插座来连接传感器，焊接会损害传感器。

温度影响

Baseline drift of 4R CH₃SH sensor



4CH₃SH Sensitivity vs Temperature



交叉灵敏度

气体	浓度 (ppm)	输出信号 (相当于 ppm CH ₃ SH)
一氧化碳	100	≤0.2
硫化氢	15	33
二氧化硫	5	<2.5
一氧化氮	35	≤0.5
二氧化氮	5	<-3
氢气	20000	≤1

使用须知

1. 以上所有性能规格都是在环境条件：温度 20 °C, 相对湿度 50% RH, 一个大气压 (100 kPa 或环境压力) 下测得。
2. 推荐用目标气体进行标定。如果用交叉敏感气体进行标定, 我们不保证其标定和测量的准确度。
3. 交叉灵敏度会有 +/- 30% 的浮动, 并且可能随着传感器的生产批次不同和传感器的寿命而变化。
4. 上述交叉灵敏度包括但不限于上述气体, 该传感器有可能对其他气体有响应。