# Tetrahydrothiophene

**Sensoric THT 3E 50** 



### **Sensoric THT 3E 50**

#### **FEATURES**

Amperometric 3 electrode sensor cell Fast response High reliability Good long term stability

#### **TYPICAL APPLICATIONS**

Monitoring of odorants in natural gas applications

#### PART NUMBER INFORMATION

| SENSORIC CLASSIC        | 2345-034-11069 |
|-------------------------|----------------|
| CTL 4 series adaptation | 2345-034-14049 |
| CTL 7 series adaptation | 2345-034-17079 |



### **Sensoric THT 3E 50**

#### **TECHNICAL SPECIFICATIONS**

Measuring Range 0–50 mg/m3

Sensitivity Range 140 nA/ mg/m $3 \pm 50$  nA/ mg/m3

Zero Current at  $20\,^{\circ}$ C  $< \pm 200\,$  nA Resolution at  $20\,^{\circ}$ C  $< 1.5\,$  mg/m3  $+150\,$  mV Linearity < 5% full scale

Response Time at 20 ℃

t50 < 10 s calculated from 2 min. exposure time (at 33 Ohm) t90 < 30 s calculated from 2 min. exposure time (at 33 Ohm)

Long Term Sensitivity Drift < 10% per 6 months

Operation Conditions

Temperature Range -10 °C to +40 °C

Humidity Range 15–90% r.H., non–condensing

Effect of Humidity no effect

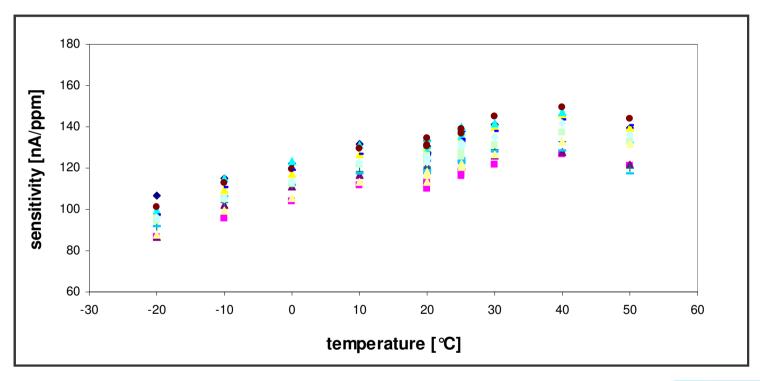
Sensor Life Expectancy > 18 months Warranty 12 months

**Note**: 1 ppm = 3,66 mg/m3



### **Sensoric THT 3E 50**

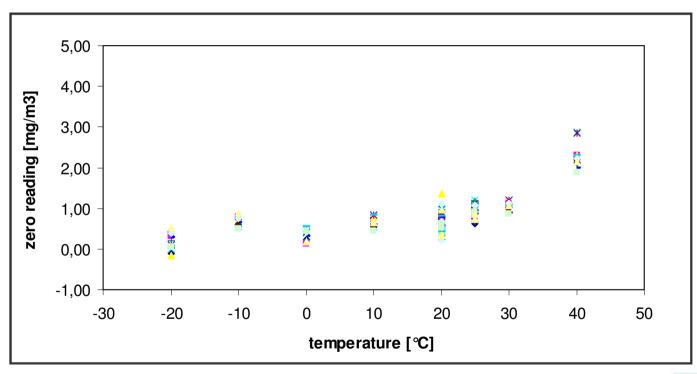
#### **OUTPUT vs. TEMPERATURE:**





### **Sensoric THT 3E 50**

#### **ZERO READING vs. TEMPERATURE:**





### **Sensoric THT 3E 50**

#### CROSS SENSITIVITIES AT 20 °C

| Gas                  | Concentration | Reading [mg/m3] |
|----------------------|---------------|-----------------|
| Carbon Dioxide       | 5000 ppm      | 0               |
| Carbon Monoxide      | 100 ppm       | 2               |
| Carbon Oxide Sulfide | 1 %           | 10              |
| Ethylene             | 1 %           | yes; n/d        |
| Hydrocarbons         | % range       | 0               |
| Hydrogen             | 1 %           | 0               |
| Hydrogen Sulfide     | 20 ppm        | 01)             |
| Isopropanol          | 200 ppm       | 400             |
| Methane              | 100 %         | 0               |
| Nitrogen             | 100 %         | 0               |
| TertButylmercaptane  | 10 mg/m3      | 10              |

<sup>1)</sup> 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 adviseable 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 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 <a href="www.citytech.com">www.citytech.com</a> under the heading 'Support' -> 'Product Safety Datasheets'

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

