TBM 50

Electrochemical Gas Sensor for *tert*-Butyl Mercaptan

sensors made in germany

3-electrode sensor for industrial safety applications e.g. gas odorization

Class leading stability | Highly selective | Fast response | Very stable baseline

Performance Characteristics	
Measurement Range	0 - 50 mg/m³
Sensitivity	7 ± 3 nA/mg/m³
Response Time (T_{90})	≤ 90 s * at 4 min gas exposure
Baseline (in clean air)	< ± 4 nA
Baseline (in clean air)	< ± 0.5 mg/m³ **
Linearity	< 5% of full scale
Repeatability	< 2 %

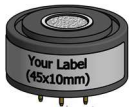
* typically <60 s

** at midpoint sensitivity

Operating Conditions	
Temperature Range	-10°C to +40°C
Humidity Range	15% to 90% r.h. non-condensing
Pressure Range	800 – 1200 hPa
Recommended Load Resistor	0 Ohm
Bias Voltage	0 V
Recommended Orientation	sensor front pointing downwards or sidewards

Lifetime	
Long Term Output Drift	< 10% per 6 months
Expected Operating Life	> 18 months in air
Recommended Storage conditions	5-20°C in sealed container
Warranty	12 months from date of dispatch

Performance and lifetime data are based on conditions at 20°C, 50% r.h. and ambient pressure.

Available Formats	
Name Part Number Weight	**Drawing**
4S AN201400 ~4.6 g	
7S AN201700 ~6.9 g	
Mini AN201000 ~2.4 g	
Classic 4 pin AN201C00 ~3.1 g	
Classic 8 pin compatible AN201B00 ~3.1 g	
Other customer specific formats upon request	

IMPORTANT NOTE:
Connection should be made via PCB sockets only.
Soldering to pins will render your warranty void.

Intrinsic Safety Data	
Maximum o/c Voltage	< 1.3 V
Maximum s/c Current	< 1.0 A

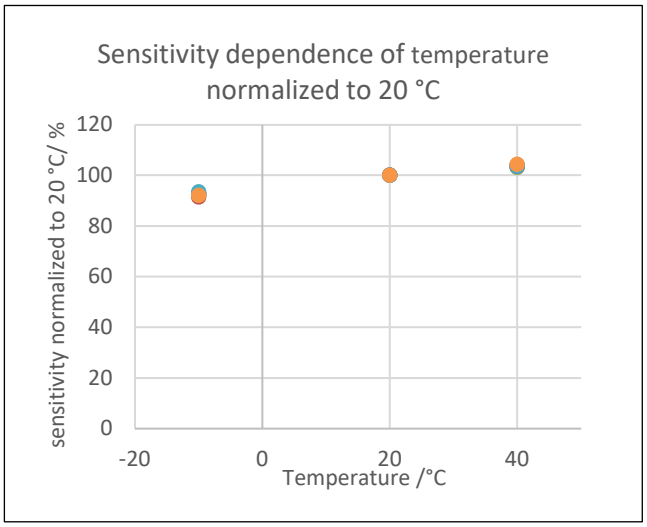
SAFETY NOTE
This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

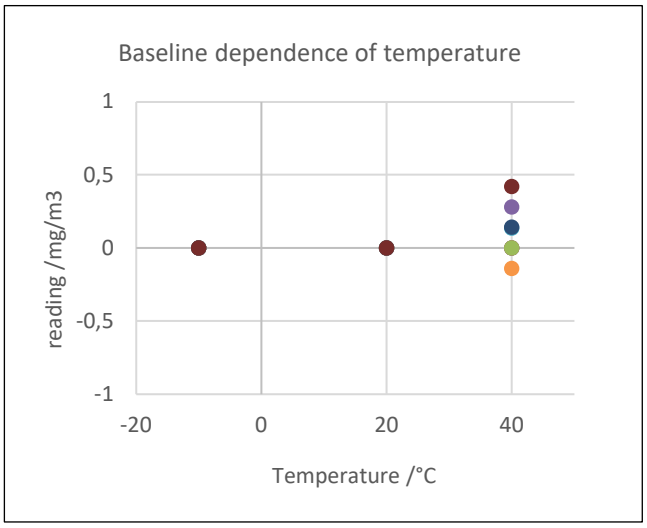
TBM 50

Electrochemical Gas Sensor for *tert*-Butyl Mercaptan

sensors made in germany

Temperature performance





Temperature Coefficients		
Temperature	Sensitivity	Zero Current
-10 °C	92.6 %	0.0 mg/m³
20 °C	100.0 %	0.0 mg/m³
40 °C	103.9 %	0.1 mg/m³

Temperature data are taken from a typical batch

Cross Sensitivity & Filter	
Gas concentration	Reading after 5 min
CH_4 100 Vol%	0 mg/m³
N_2 100 Vol%	0 mg/m³
CO_2 5000 ppm	0 mg/m³
H_2 1 Vol%	0 mg/m³
CO 100 ppm	0 mg/m³
Tetrahydrothiophene 15 mg/m³	0 mg/m³
Triethylene glycol	0 mg/m³
Hydrocarbons % range	0 mg/m³
H_2S 20 ppm	0 mg/m³ (Filter*)
Filter Capacity	~200 ppm x h H_2S

Signals below baseline are stated as 0

* Cross sensitivity depends upon filter status and will increase when filter is depleted.

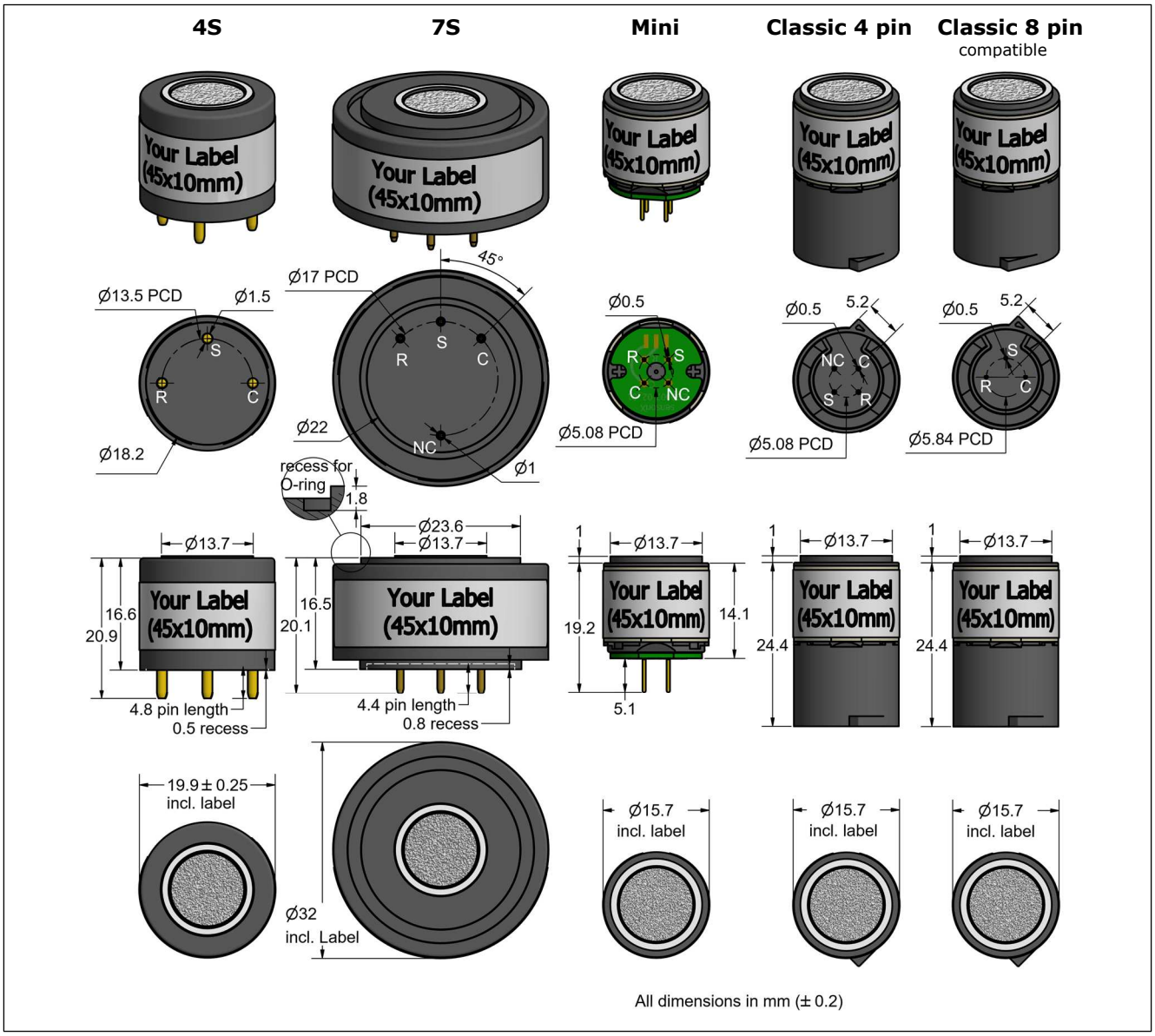
Whilst Sensorix cells are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various other gases. The table above is not exclusive and other gases not included in the table may still cause a sensor to react. The cross-sensitivity values quoted are based on tests conducted on a small number of sensors. They are intended to indicate sensor response to gases other than the target gas. Sensors may behave differently with changes in ambient conditions and any batch may show significant variation from the values quoted. Therefore, interfering gases should not be used for calibration.

TBM 50

Electrochemical Gas Sensor for *tert*-Butyl Mercaptan

sensors made in germany

Product dimensions



Poisoning

Sensorix cells are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapors is avoided, both during storage, fitting into instruments, and operation. When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted.

Recycling

At the end of the product's life, do not dispose of any electronic sensor, component or instrument in the domestic waste, but contact the instrument manufacturer or Sensorix for disposal instructions. Sensorix will take back sensors for professional recycling.

Sensorix GmbH | www.sensorix.com | sales@sensorix.com | +49 228 763741-0