

# H2S 2000

## Electrochemical Gas Sensor for Hydrogen Sulfide

3-electrode sensor for industrial safety applications e.g. biogas & landfill

Class leading stability | Highly selective | High Range

| Performance Characteristics      |                                 |
|----------------------------------|---------------------------------|
| Measurement Range                | 0 - 2000 ppm                    |
| Sensitivity                      | 60 ± 25 nA/ppm                  |
| Response Time (T <sub>90</sub> ) | ≤ 60 s<br>at 2 min gas exposure |
| Baseline (in clean air)          | < ± 250 nA                      |
| Baseline (in clean air)          | < ± 4 ppm*                      |
| Linearity                        | < 15% of full scale             |
| Repeatability                    | < 2%                            |

\* at midpoint sensitivity

| Operating Conditions      |   |
|---------------------------|---|
| Temperature Range         | -20°C to +50°C                                    |
| Humidity Range            | 15% to 90% r.h.<br>non-condensing                 |
| Pressure Range            | 800 – 1200 hPa                                    |
| Recommended Load Resistor | 10 Ohm  |
| Bias Voltage              | 0 V   |
| Recommended Orientation   | sensor front pointing<br>downwards or<br>sideways |

| Lifetime                       |                                    |
|--------------------------------|------------------------------------|
| Long Term Output Drift         | < 15% per 6 months                 |
| Expected Operating Life        | > 15 months in air                 |
| Recommended Storage conditions | 5-20°C<br>in sealed container      |
| Warranty                       | 12 months<br>from date of dispatch |

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

| Available Formats                                     |   |
|---|---|
| Name  | Drawing   |
| Part Number<br>Weight                                 |   |
| <b>4S</b><br>AN062400<br>~4.6 g                       |    |
| <b>7S</b><br>AN062700<br>~6.9 g                       |    |
| <b>Mini</b><br>AN062000<br>~2.4 g                     |    |
| <b>Classic 4 pin</b><br>AN062C00<br>~3.1 g            |   |
| <b>Classic 8 pin compatible</b><br>AN062B00<br>~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

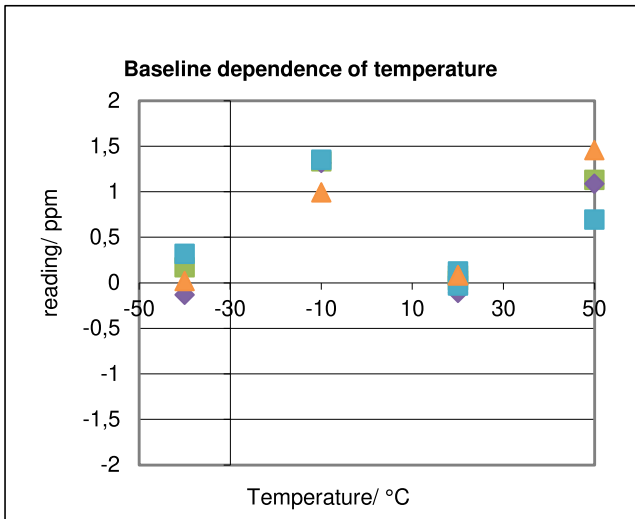
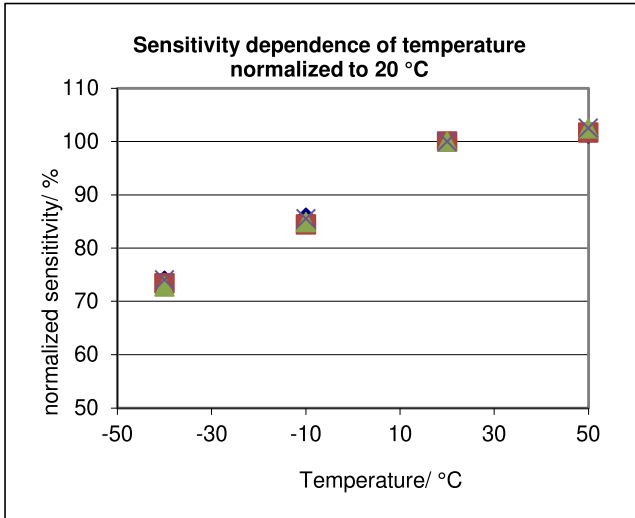
This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument.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



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### Temperature performance



| Temperature Coefficients |             |              |
|--------------------------|-------------|--------------|
| Temperature              | Sensitivity | Zero Current |
| -40 °C                   | 74 %        | 0.1 ppm      |
| -10 °C                   | 85 %        | 1.3 ppm      |
| 20 °C                    | 100 %       | 0.0 ppm      |
| 50 °C                    | 102 %       | 1.1 ppm      |

Temperature data are taken from a typical batch

| Cross Sensitivity & Filter |                     |
|----------------------------|---------------------|
| Gas concentration          | Reading after 5 min |
| CO <sub>2</sub> 60 Vol%    | 0                   |
| CH <sub>4</sub> 50 Vol%    | 0                   |
| H <sub>2</sub> 2 Vol%      | 150 ppm             |
| Isopropyl Alcohol 1 Vol%   | 0                   |
| NH <sub>3</sub> 1000 ppm   | 0                   |
| Chemical Filter            | None                |

Signals below baseline are stated as 0

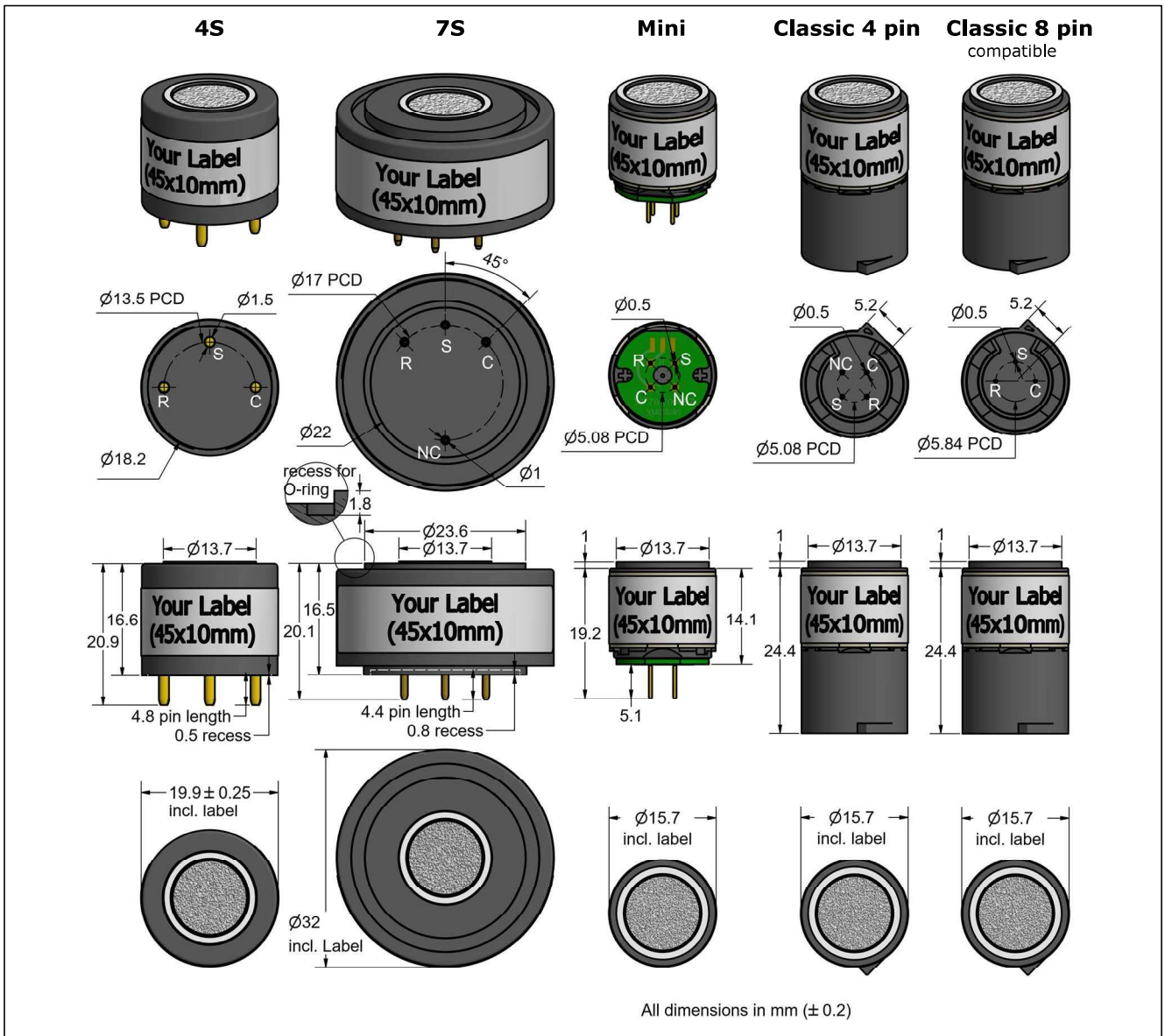
Whilst Sensorix cells are designed to be highly specific to the gas they are intended to measure, they will still respond to some degree to various other gases. The table above is not exclusive and other gases not included in the table may still cause a sensor to react. The cross-sensitivity values quoted 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.



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## 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.

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.

