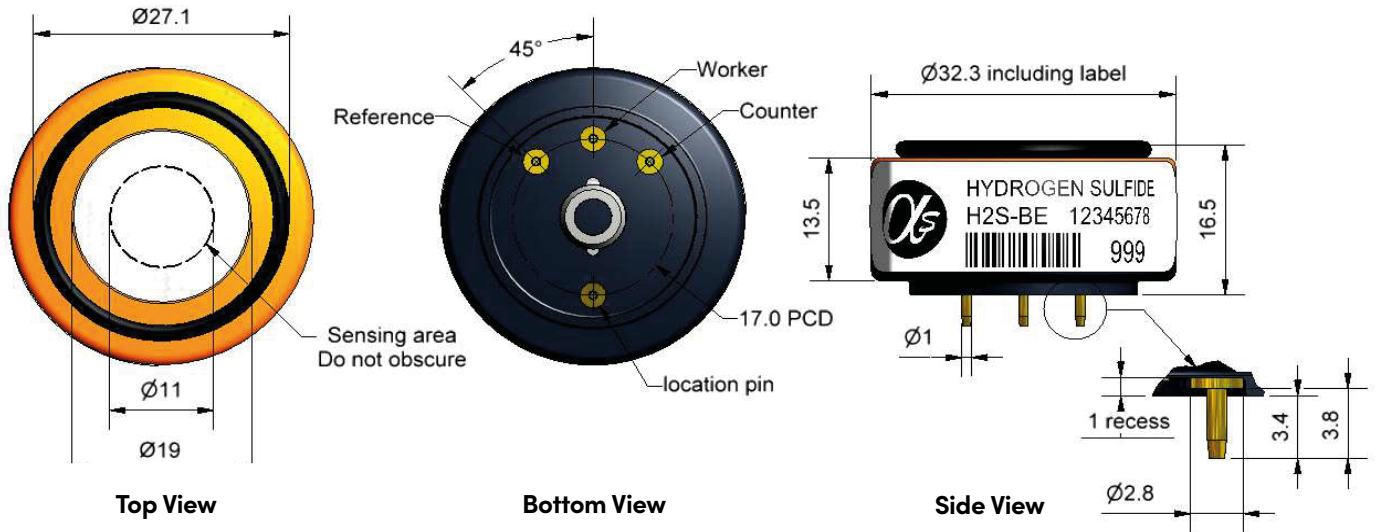


H2S-BE Hydrogen Sulfide Sensor – High Concentration



Dimensions are in millimetres (± 0.1 mm).

| Performance | | | |
|---------------|---|--|-----------|
| Sensitivity | nA/ppm in 200ppm H ₂ S | | 80 to 140 |
| Response time | t ₉₀ (s) from zero to 200ppm H ₂ S | | < 50 |
| Zero current | ppm equivalent in zero air | | < ± 3 |
| Resolution | RMS noise (ppm equivalent) | | < 0.5 |
| Range | ppm H ₂ S limit of performance warranty | | 2,000 |
| Linearity | ppm error at 2000ppm, linear at zero and 400ppm | | < 30 |
| Overgas limit | H ₂ S maximum ppm for stable response to gas pulse | | 10,000 |

| Lifetime | | | |
|-------------------|---|--|--------|
| Zero drift | ppm equivalent change/year in lab air | | < 0.25 |
| Sensitivity drift | % change/year in lab air, monthly test | | < 3 |
| Operating life | months until 80% original signal (24-month warranted) | | > 24 |

| Environmental | | | |
|---------------------|---|--|------------|
| Sensitivity @ -20°C | % (output @ -20°C/output @ 20°C) @ 200ppm | | 83 to 92 |
| Sensitivity @ 50°C | % (output @ 50°C/output @ 20°C) @ 200ppm | | 102 to 112 |
| Zero @ -20°C | ppm equivalent change from 20°C | | < ± 4 |
| Zero @ 50°C | ppm equivalent change from 20°C | | < ± 4 |

| Cross-sensitivity | | | | |
|---|-------------------------|-------------------------------|--|--------|
| NO ₂ sensitivity | % measured gas @ 10ppm | NO ₂ | | < -25 |
| Cl ₂ sensitivity | % measured gas @ 10ppm | Cl ₂ | | < -12 |
| NO sensitivity | % measured gas @ 50ppm | NO | | < 10 |
| SO ₂ sensitivity | % measured gas @ 20ppm | SO ₂ | | < 20 |
| CO sensitivity | % measured gas @ 400ppm | CO | | < 4 |
| H ₂ sensitivity | % measured gas @ 400ppm | H ₂ | | < 0.2 |
| C ₂ H ₄ sensitivity | % measured gas @ 400ppm | C ₂ H ₄ | | < 0.25 |
| NH ₃ sensitivity | % measured gas @ 20ppm | NH ₃ | | < 0.1 |

| Key Specifications | | | |
|--------------------|---|--|-----------|
| Temperature range | °C | | -30 to 50 |
| Pressure range | kPa | | 80 to 120 |
| Humidity range | % rh continuous | | 15 to 90 |
| Storage period | months @ 3 to 20°C (stored in sealed pot) | | 6 |
| Load resistor | Ω (recommended) | | 10 to 47 |
| Weight | g | | < 13 |

Figure 1 Sensitivity Temperature Dependence

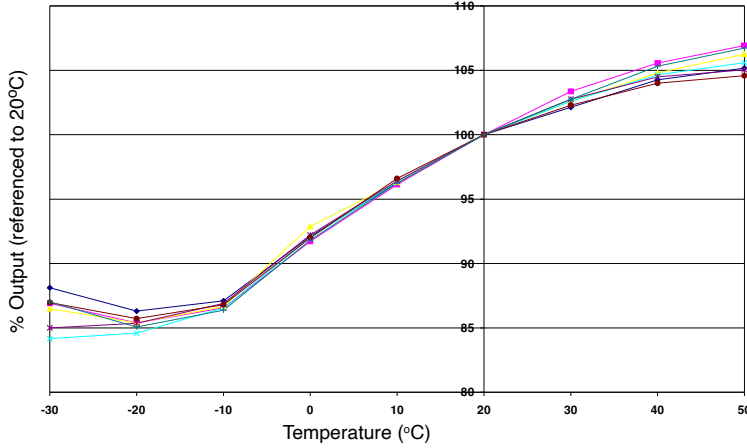


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

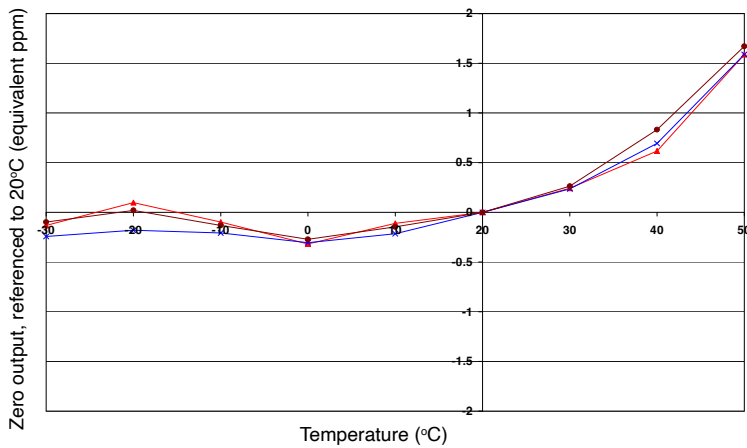
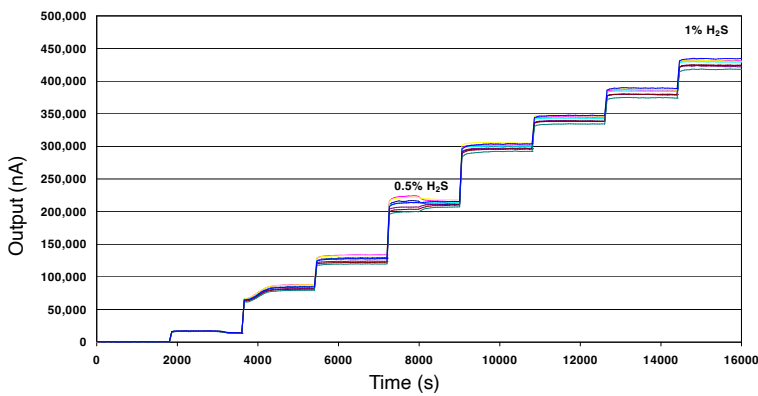


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to high concentrations



This sensor is built to withstand periodic high concentrations of H₂S and recover without changing performance.

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, Alphasense or its distributor for disposal instructions. NOTE: all sensors are tested at ambient environmental conditions unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

In the interest of continued product improvement, we reserve the right to change design features and specifications without prior notification. The data contained in this document is for guidance only. Alphasense Ltd accepts no liability for any consequential losses, injury or damage resulting from the use of this document or the information contained within. (©ALPHASENSE LTD) Doc. Ref. H2S-BE/JUN22