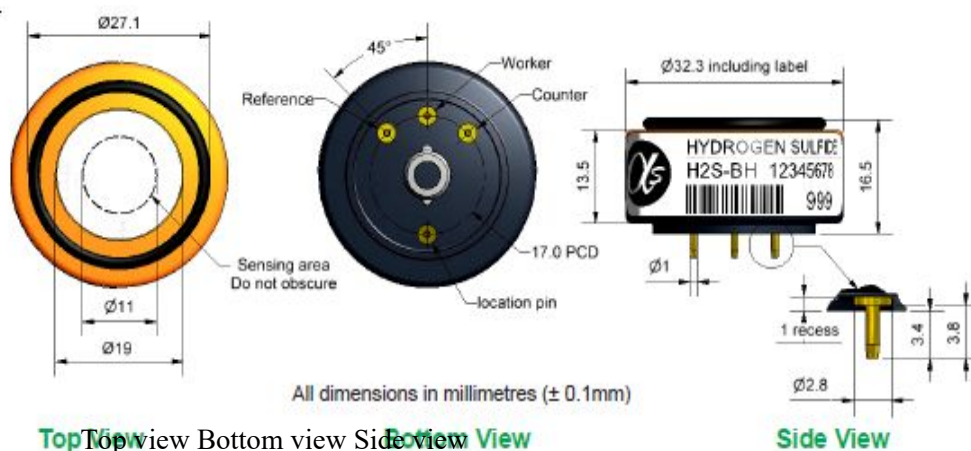


## H2S-BH Sulfur Dioxide Sensor High Sensitivity



PATENTED

Figure 1 Schematic Diagram of H2S-BH



|                          |  |  |           |
|--------------------------|--|--|-----------|
| <b>function</b>          | sensitivity  | Sensitivity in 2 <sub>2</sub> ppm H of H <sub>2</sub> S (nA /ppm)                                    | 1400~2200 |
|                          | reaction time                                      | Time to t90 from zero to 20ppmH <sub>2</sub> S (s)   | < 55      |
|                          | zero current                                       | Equivalent ppm value of zero air   | < ±0.15   |
|                          | resolution ratio                                   | RMS noise (equivalent ppm value)   | < 0.02    |
|                          | range  | Measuring limits (ppm) that guarantee product performance  | 50        |
|                          | degree of linearity                                | The ppm value of the full scale error is linear from 0 to 20ppm                                      | -1~-2     |
|                          | overload   | Maximum ppm value of gas pulse stabilization reaction  | 200       |
| <b>life span</b>         | zero drift   | Equivalent ppm values that change in the laboratory air from year to year                            | < 0.03    |
|                          | sensitivity drift                                  | Percentage change in laboratory air over the year, measured monthly                                  | < 1       |
|                          | working life                                       | Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed) | > 24      |
| <b>environment</b>       | -20°C sensitivity                                  | At 20ppmH <sub>2</sub> S, (output at -20°C/ output at 20°C)%   | 80~93     |
|                          | Sensitivity at 50°C                                | At 20ppmH <sub>2</sub> S, (output at 50°C/ output at 20°C)%  | 100~110   |
|                          | -20°C when zero point                              | Change in equivalent ppm values with reference to 20°C zero  | < ± 0.5   |
|                          | 50°C at zero point                                 | Change in equivalent ppm values with reference to 20°C zero  | < 0~1.5   |
| <b>cross sensitivity</b> | NO <sub>2</sub>                                    | Gas sensitivity percentage <sub>2</sub> measured at 10ppmNO  | < -20     |
|                          | Cl <sub>2</sub>                                    | Gas sensitivity percentage <sub>2</sub> measured at 10ppmCl  | < -25     |
|                          | NO   | Gas sensitivity percentage measured at 50ppmNO   | < 3       |
|                          | SO <sub>2</sub>                                    | Gas sensitivity percentage <sub>2</sub> at 20ppmSO   | < 15      |
|                          | CO   | Gas sensitivity percentage measured at 400ppmCO  | < 1       |
|                          | H <sub>2</sub>                                     | Gas sensitivity percentage measured at 400ppmH <sub>2</sub>  | < 0.25    |
|                          | C <sub>2</sub> H <sub>4</sub>                      | Gas sensitivity percentage measured at 400ppmC <sub>2</sub> H <sub>4</sub>                           | < 0.15    |
| NH <sub>3</sub>          | Gas sensitivity percentage <sub>3</sub> at 20ppmNH | < 0.1  |           |
| <b>key parameter</b>     | temperature range                                  | °C   | -30~50    |
|                          | pressure limit                                     | kPa  | 80~120    |
|                          | Humidity range                                     | Percentage of continuous relative humidity   | 15~90     |
|                          | Storage period                                     | Number of months for preservation from 3 to 20°C (to be kept in a sealed tank)                       | 6         |
|                          | load resistance                                    | Ω ( recommend )  | 10~47     |
|                          | weight   | g  | < 13      |

Figure 2 Sensitivity Temperature Characteristics

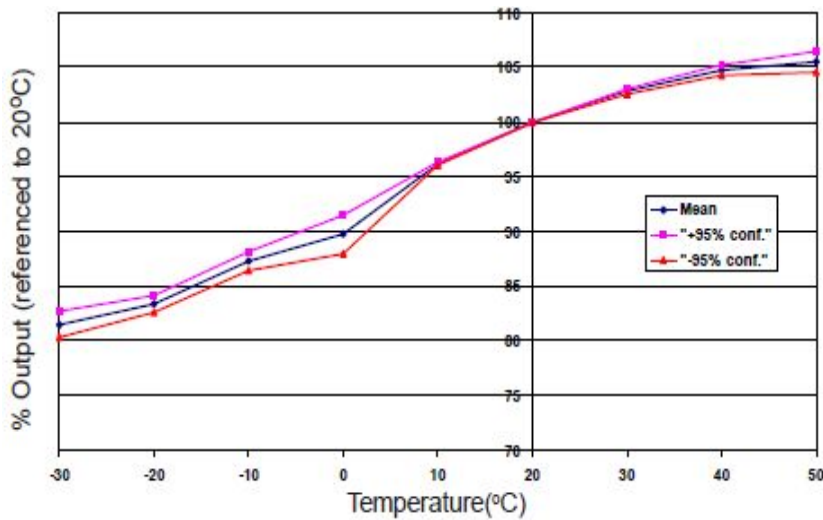


Figure 2 shows the change in sensor sensitivity caused by temperature changes.

The data were collected from typical batches of transducers. Figure 2 shows the average and  $\pm 95\%$  confidence interval of the output percentage (reference 20°C).

Figure 3 Zero Temperature Characteristics

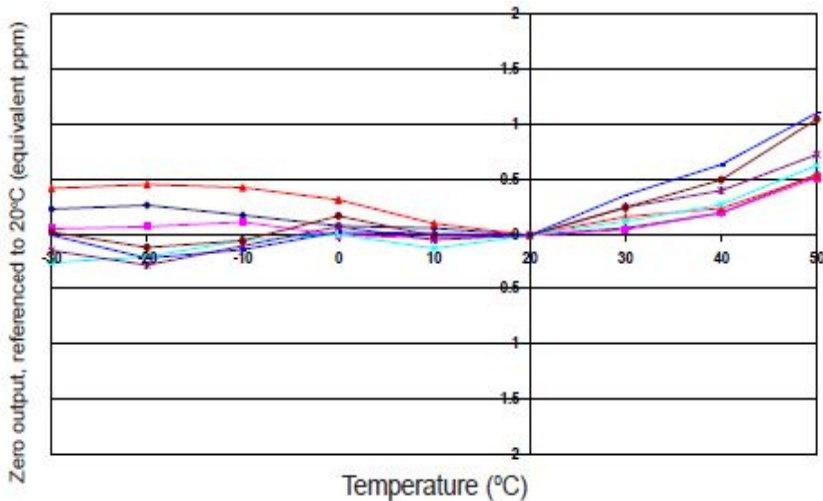


Figure 3 shows the change in zero point output caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20°C.

Data was taken from a typical batch of sensors.

Figure 4 Zero Point Long-Term Stability

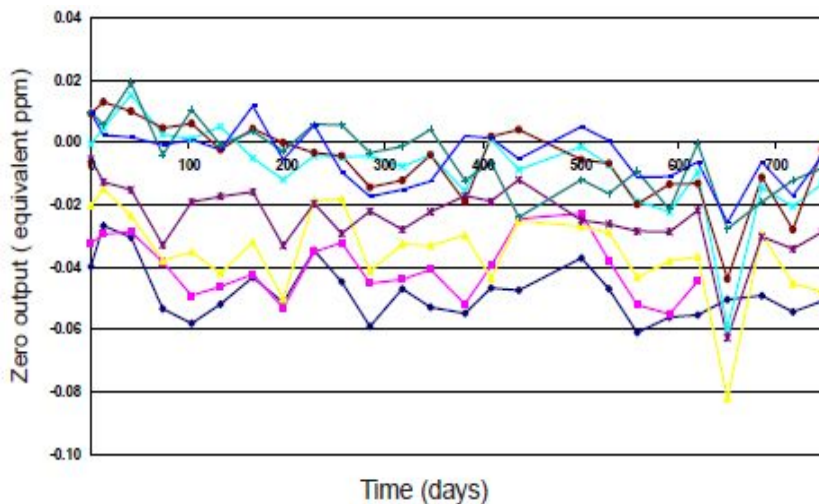


Figure 4 shows that the H2SBH transducer has excellent zero stability for more than two years, which will ensure that the low limit alarm remains in a stable state.

深圳市杰晟兴电子有限公司 JM Components Limited