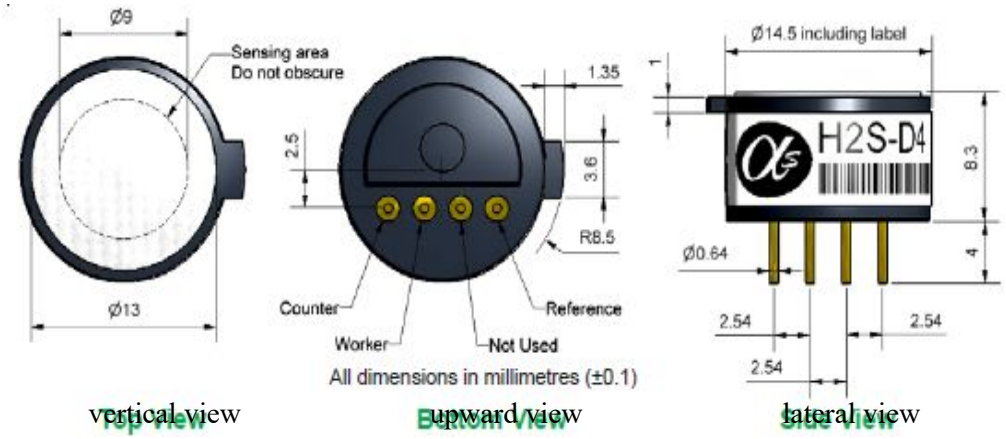
H2S-D4 Micro Hydrogen Sulfide Sensor

PATENTED

Figure 1 Schematic Diagram of H2S-D4



vertical view upward view lateral view

(Alphasense is available in a three-pin version, model H2S-D1, if required)

function	sensitivity	Sensitivity in 2 $_2$ ppm H of S (nA /ppm)	110~170
	reaction time	Time to t90 from zero to 20ppmH $_2$ S (s)	< 25
	zero current	Equivalent ppm value in zero air	< ±1
	resolution ratio	RMS noise (equivalent ppm value)	< 0.2
	range	H $_2$ S measurement limit (ppm) that guarantees product performance	100
	degree of linearity	The ppm value of the full scale error is linear between 0 and 20ppm	< ±6
	overload	Maximum ppm value of gas pulse stabilized reaction	200
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	< 0.2
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	< 3
	working life	Number of months to which the output falls to 80% of the original signal (24 months guaranteed)	> 18
environment	-20°C sensitivity	At 20ppm H $_2$ S, (output at-20°C/ output at 20°C)%	75~90
	Sensitivity at 50°C	At 20ppm H $_2$ S, (output at 50°C/ output at 20°C)%	103~112
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	< -0.3~0.2
	50°C at the zero point	Change in equivalent ppm values with reference to 20°C zero	< ±1
cross sensitivity	NO_2	Gas sensitivity percentage $_2$ measured at 10ppmNO	< -25
	Cl_2	Gas sensitivity percentage measured $_2$ at 10ppmCl	< -25
	NO	Gas sensitivity percentage measured at 50ppmNO	< 12
	SO_2	Gas sensitivity percentage $_2$ at 20ppmSO	< 20
	CO	Gas sensitivity percentage measured at 400ppmCO	< 2.5
	H_2	Gas sensitivity percentage $_2$ at 400ppmH	< 0.5
	C_2H_4	Gas sensitivity percentage measured at 400ppmC $_2$ H $_4$	< 0.15
	NH_3	Gas sensitivity percentage $_3$ at 20ppmNH	< 0.1
Critical temperature range		℃	-30~50
Parameter pressure range		kPa	80~120
	Humidity range	Percentage of continuous relative humidity (see below)	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	< 2

Note: If the sensor is used in an environment with humidity above 85%rh and temperature above 40℃, the product performance can only be guaranteed for 10 days. If the above environment exists, please place the sensor in a low humidity and low temperature environment for several days, and then use it when the electrolyte quantity returns to normal state.

Figure 2 Sensitivity Temperature Characteristics

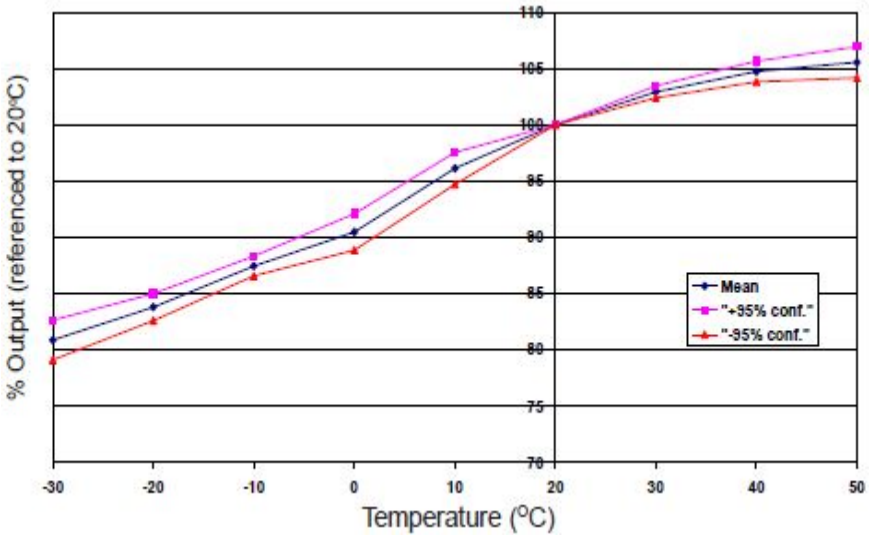


Figure 2 shows the mean and ±95% confidence interval of sensitivity changes caused by temperature changes.

The temperature is-30 to +50℃

The repeatability of temperature sensitivity characteristics of the sensor is good, and accurate temperature compensation can be made.

Figure 3 Zero Temperature Characteristics

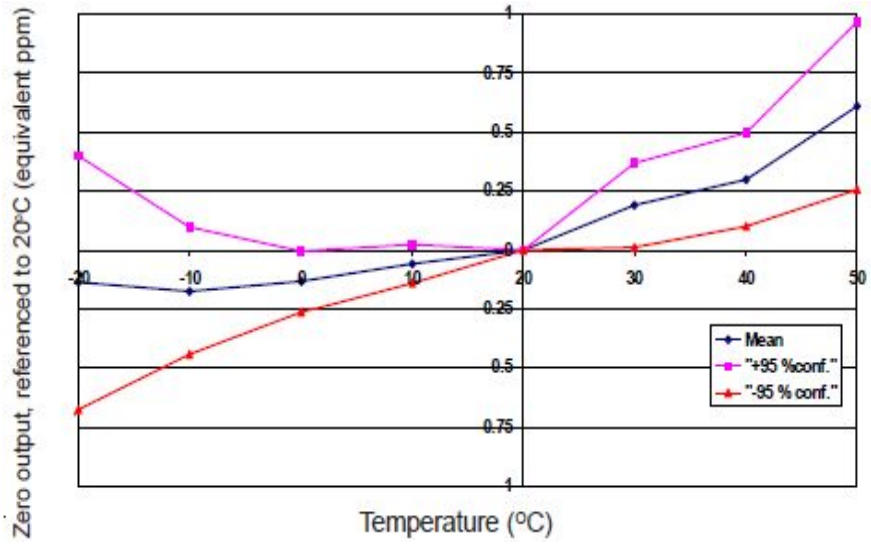


Figure 3 shows the zero point output variation caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20℃.

The data are taken from a typical batch sensor. Figure 3 shows the mean and± 95% confidence interval of the zero output percentage (reference 20℃).

Figure 4 Long-Term Stability of Sensitivity

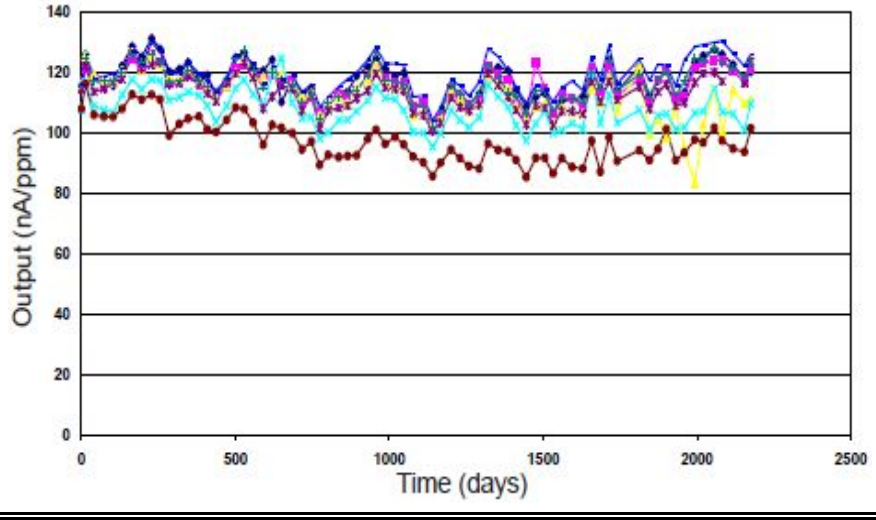


Figure 4 shows the long-term stability of H 2S-D4 transducer sensitivity in ambient air.

Continued use of transducers in low humidity environment will reduce their sensitivity.

深圳市杰晟兴电子有限公司 JM Components Limited

地址：深圳市福田区中航路7号鼎诚国际大厦南座2007室 邮编：518031
手机：13662266995 马少良 电话：0755-83951311 传真：0755-83952401
官网：cn-sensor.com 电邮：jackson@jmcomponents.com