

H2-BF hydrogen sensor



All dimensions are in mm ($\pm 0.1\text{mm}$)

function	Sensitivity response time	Sensitivity γ_2 in 400ppmH₂ (nA/ppm)	10~25
	Zero point current resolution range linearity overload	Time γ_2 to 400ppmH₂ from zero (s) Equivalent ppm value at zero altitude air RMS noise (equivalent ppm value) Measuring limits (ppm) that guarantee product performance The ppm value of the full scale error is linear from 0 to 4000ppm and shows the maximum ppm for gas pulse stabilization	< 55 < ± 15 < 0.8 5000 -200~-500 20000
life span	Zero drift sensitivity drift working life	Equivalent ppm values that change in the laboratory air from year to year Percentage change in laboratory air over the year, measured monthly Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed)	< 10 nd > 24
environment	-20°C sensitivity 50°C sensitivity -20°C is the zero point 50°C is the zero point	400ppmH₂ at (-20°C output/20°C output)% Equivalent ppm value variation at 400ppmH ₂ (% of output at 50°C/ output at 20°C), with reference to 20°C zero point Change in equivalent ppm values with reference to 20°C zero	10~40 190~220 30~40 -5~-20
cross connection	filter capacity	ppm · hour	H ₂ S 250000
sensitivity	NO ₂ Cl ₂ NO SO ₂ CO H ₂ S C ₂ H ₄ NH ₃ CO ₂	Gas sensitivity percentage γ_2 measured at 10ppmNO Gas sensitivity percentage γ_2 measured at 10 ppm Cl, 50 ppm NO, 20ppmSO₂, 400 ppm CO, 20ppmH₂ S, 400 ppm C, 20 ppm H₄, 400 ppm NH, and 5%CO₂ measured.	< 1 < 1 < 1 < 1 < 2 < 1 < 60 < 1 < 1
key parameter	temperature range pressure limit Humidity range storage life load resistance weight	°C kPa Number of months for continuous relative humidity percentage 3~20°C (to be stored in a sealed tank) Ω (recommended) g	-30~50 80~120 15~90 6 10~ < 47 13

Figure 1 Sensitivity Temperature Characteristics

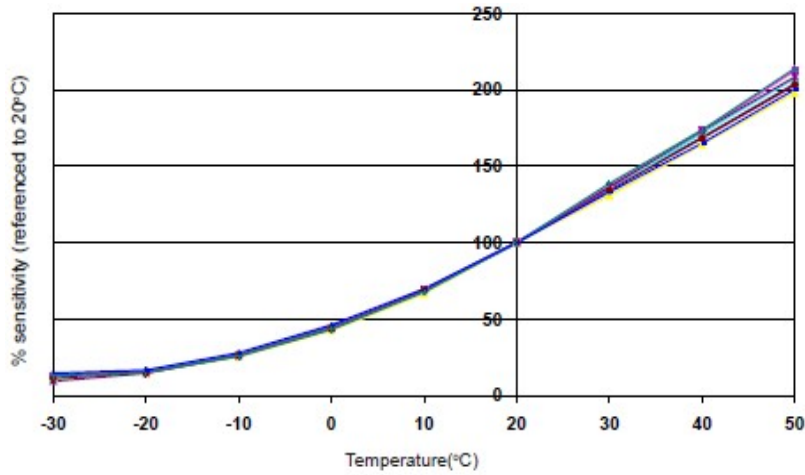


Figure 1 shows the temperature characteristics of sensitivity at 400ppm H₂.

To ensure accurate measurement, sensitivity temperature correction is required.

Figure 2 Zero Temperature Characteristics

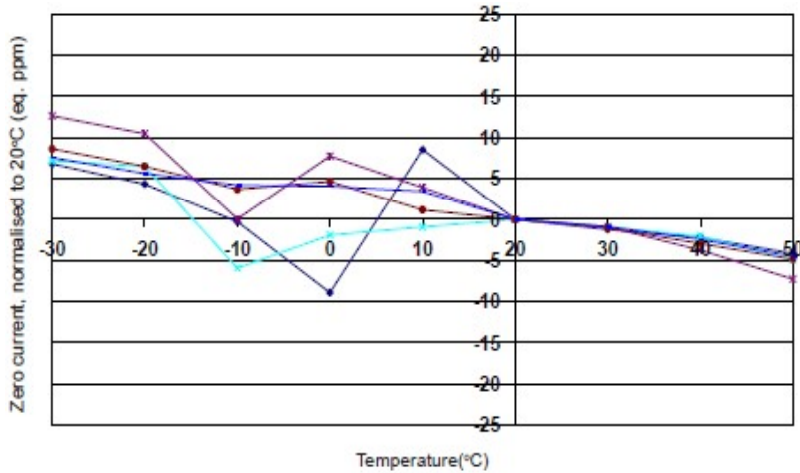
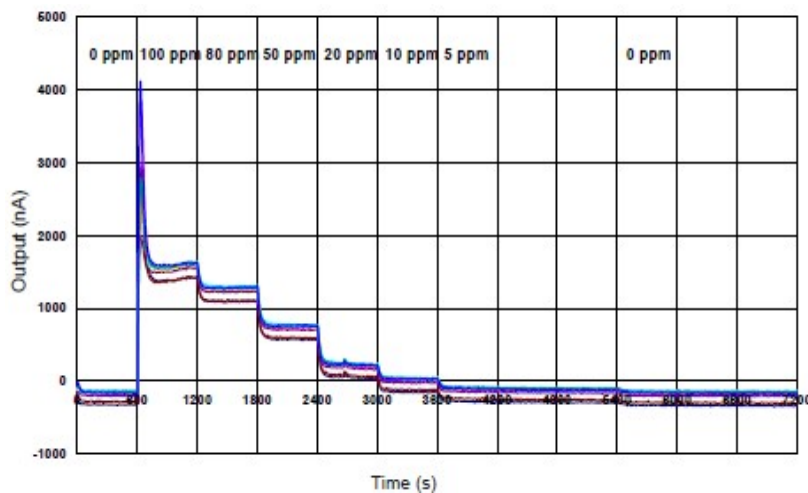


Figure 2 shows the variation of zero current with temperature, with reference to 20°C.

Figure 3 Linearity at 1000ppm



The sensor can be used for leak detection and process control due to its good response characteristics, which can detect as low as 5ppm H₂.

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