HCN-B1 Hydrogen Cyanide Sensor

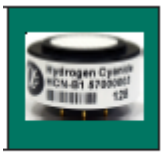
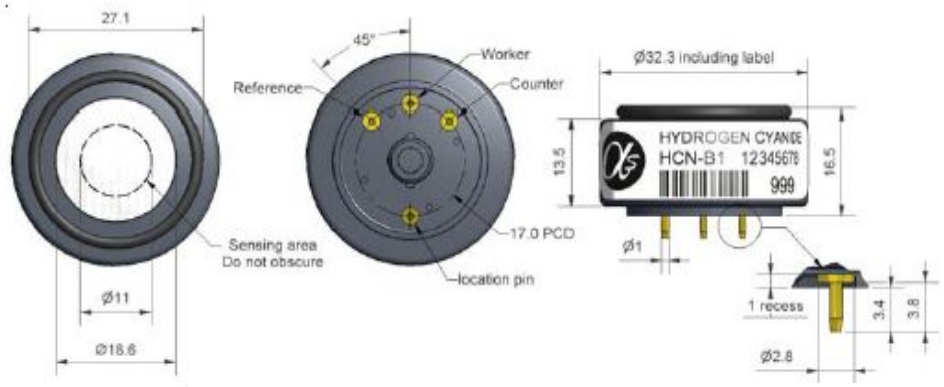


Figure 1 Schematic Diagram of HCN-B1



vertical view　　upward view　　lateral view

function	sensitivity	Sensitivity in 30ppmHCN (nA/ppm)	65~140
	reaction time	Time from zero to 30ppmHCN (s)	< 120
	zero current	Equivalent ppm value in zero air	< -2.5~10
	resolution ratio	RMS noise (equivalent ppm value)	< 0.05
	range	Measurable limit (ppm) that guarantees product performance	100
	degree of linearity	The ppm value of the full scale error is linear from 0 to 40ppm	0~4
	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	nd
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	nd
	working life	Number of months output drops to 80% of original signal (12 months guaranteed)	> 12
environment	-20°C sensitivity	30ppmHCN when, (output at-20°C/20°C output)%	75~95
	Sensitivity at 50°C	30ppmHCN when, (50°C output/20°C output)%	100~115
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	< 0~-2
	50°C at zero point	Change in equivalent ppm values with reference to 20°C zero	< 0~2
cross sensitivity	H_2S	Gas sensitivity percentage at 20ppmH_2S	< 400
	NO_2	Gas sensitivity percentage $_2$ at 10ppmNO	< -120
	Cl_2	Sensitivity percentage of gas measured $_2$ at 10ppmCl	< 25
	NO	Gas sensitivity percentage measured at 50ppmNO	< 1
	SO_2	Gas sensitivity percentage $_2$ at 20ppmSO	<3 (instantaneous)
	CO	Gas sensitivity percentage measured at 400ppmCO	< 0.1
	H_2	Gas sensitivity percentage measured at 400ppmH_2	< 0.1
	C_2H_4	Gas sensitivity percentage measured at 80ppmC_2H_4	< 0.1
	NH_3	Percentage sensitivity of gas $_3$ at 20ppmNH	< 2
	CO_2	Sensitivity percentage of gas measured at 5%Vol CO_2	< 0.1
key parameter	temperature range	℃	-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℃ (to be kept in the original container)	6
	load resistance	Ω（recommend）	10~33
	bias voltage	mV	non-essential
	weight	g	< 13

Figure 2 Sensitivity Temperature Characteristics

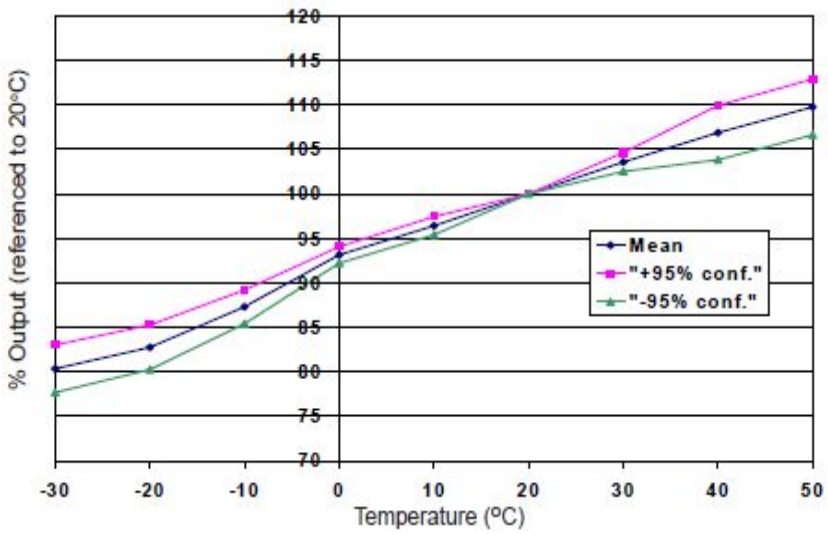


Figure 2 shows the change in sensor sensitivity caused by temperature variation.

The data are collected from a typical batch of sensors. Figure 2 shows the mean and± 95% confidence interval of the percentage output (see reference 20°C).

Figure 3 Zero Temperature Characteristics

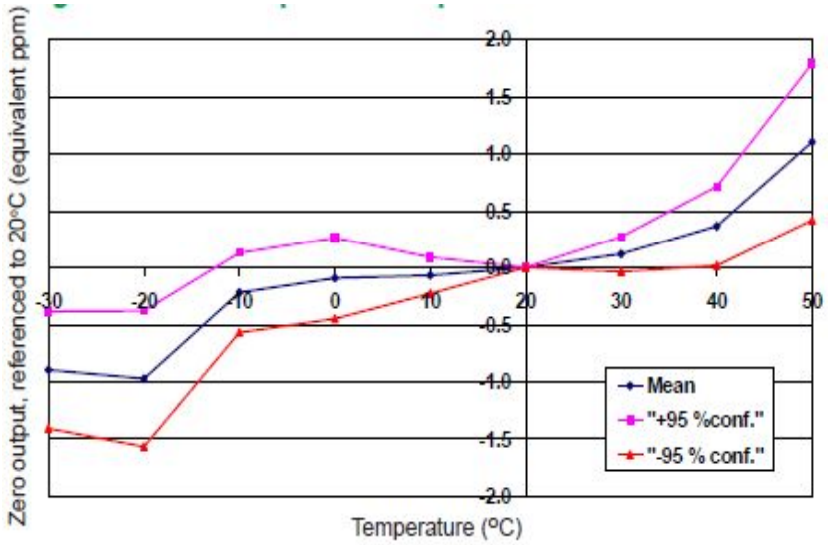
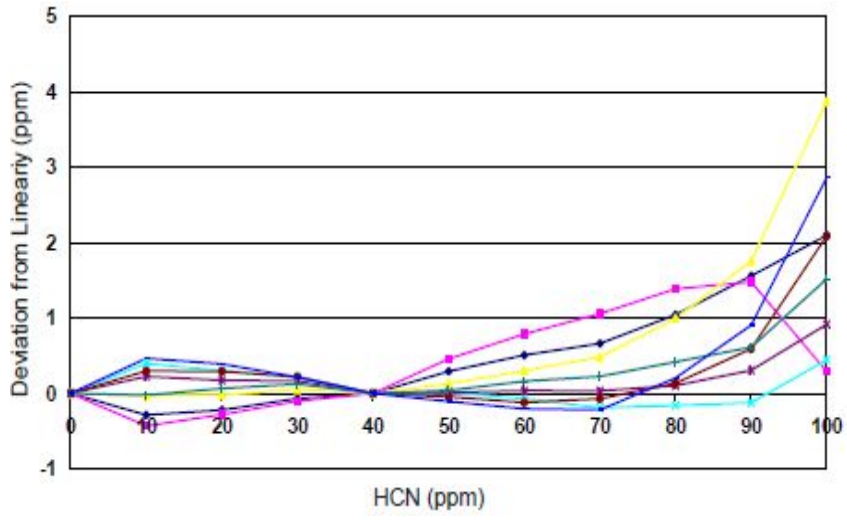


Figure 3 shows the change in zero point output caused by temperature changes, expressed as equivalent ppm values, with reference to the zero point at 20°C.

The data are taken from a typical batch of sensors. Figure 3 shows the zero mean and ±95% confidence interval.

Figure 4 Linear Deviation



HCN-B1 For HCN with 0~100ppm showed linear characteristics.

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