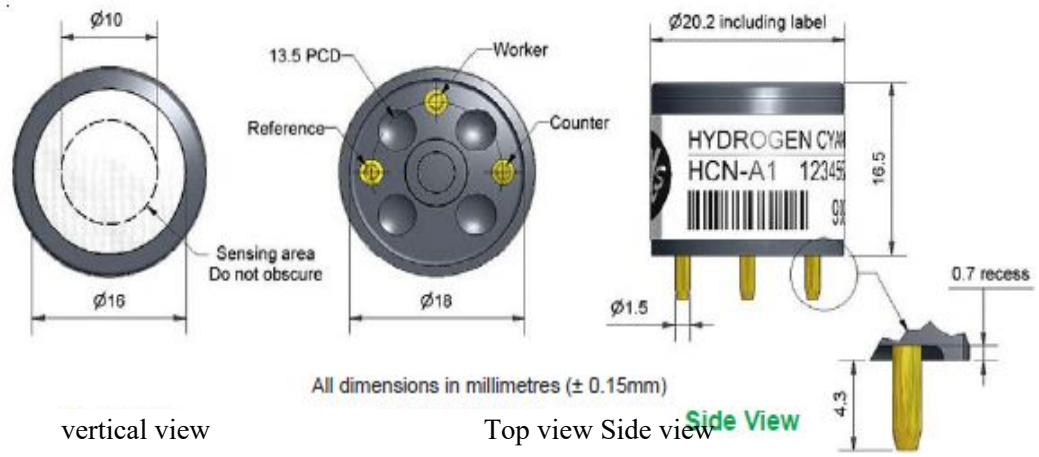
HCN-A1 Hydrogen Cyanide Sensor

Figure 1 Schematic Diagram of HCN-A1



function	sensitivity	Sensitivity in 30ppmHCN (nA/ppm)	45~85
	reaction time	Time from zero to 30ppmHCN (s)	< 70
	zero current	Equivalent ppm value in zero air	< -2~10
	resolution ratio	RMS noise (equivalent ppm value)	< 0.05
	range	Measuring limits (ppm) that guarantee product performance	100
	degree of linearity	The ppm value of the full scale error is linear from 0 to 40ppm	4~8
	overload	Maximum ppm value of gas pulse stabilized reaction	150
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 to which output has fallen to 80 per cent of the original signal (12-month guarantee)	> 12
environment	-20°C sensitivity	30ppmHCN when, (output at-20°C/20°C)%	75~95
	Sensitivity at 50°C	30ppmHCN when, (50°C output/20°C output)%	105~120
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	< 0~1
	50°C at zero point	Change in equivalent ppm values with reference to 20°C zero	< ±1
cross sensitivity	H_2S	Gas sensitivity percentage at 20ppmH_2S	< 300
	NO_2	Gas sensitivity percentage $_2$ measured at 10ppmNO	< -180
	Cl_2	Sensitivity percentage of gas measured $_2$ at 10ppmCl	< -12
	NO	Gas sensitivity percentage measured at 50ppmNO	< 1
	SO_2	Gas sensitivity percentage $_2$ at 20ppmSO	<10 (Instantaneous)
	CO	Gas sensitivity percentage measured at 400ppmCO	< 0.1
	H_2	Gas sensitivity percentage $_2$ at 400ppmH	< 0.1
	C_2H_4	Gas sensitivity percentage measured at 80 ppm $_2$ CH_4	< 0.1
	NH_3	Percentage sensitivity of gas $_3$ at 20ppmNH	< 1
	CO_2	5%Vol CO_2 when measured percentage sensitivity of gas	< 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°C (to be kept in the original container)	6
	load resistance	Ω （recommend）	10~33
	bias voltage	mV	non-essential
	weight	g	< 6

Figure 2 Sensitivity Temperature Characteristics

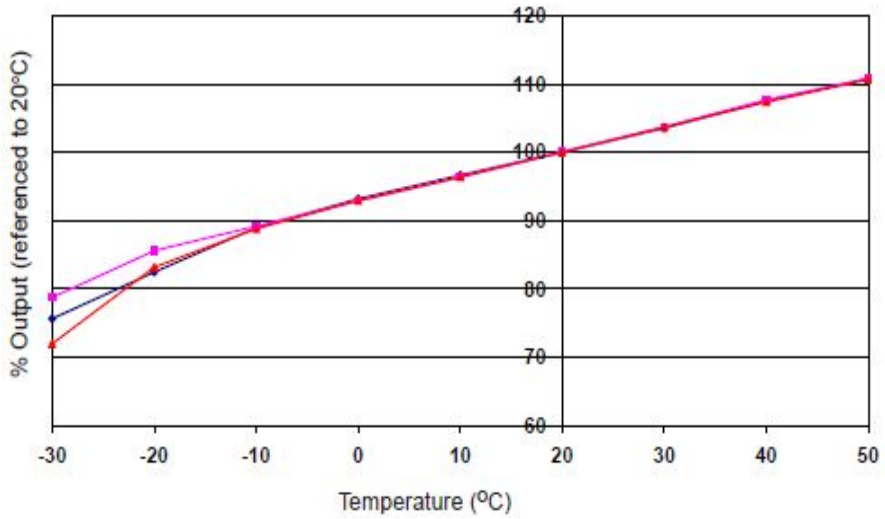


Figure 2 shows the change in sensor sensitivity caused by temperature variation.

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

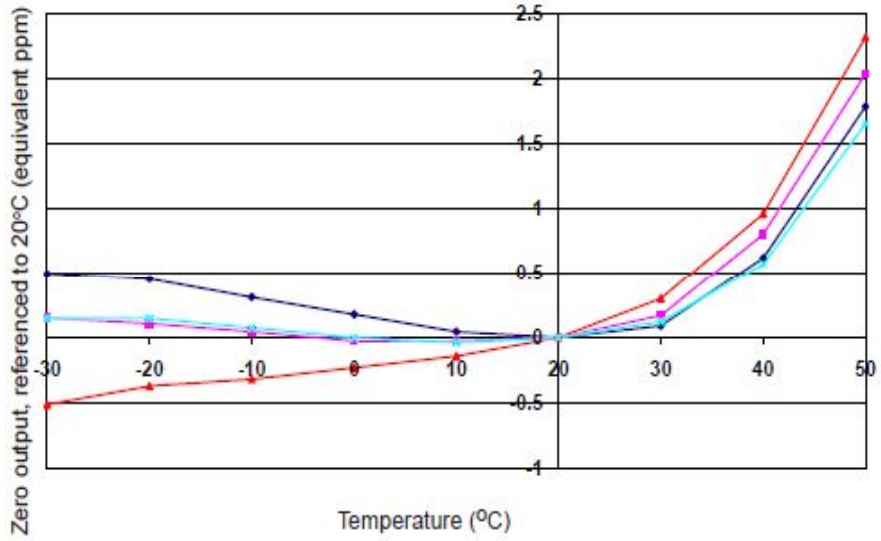
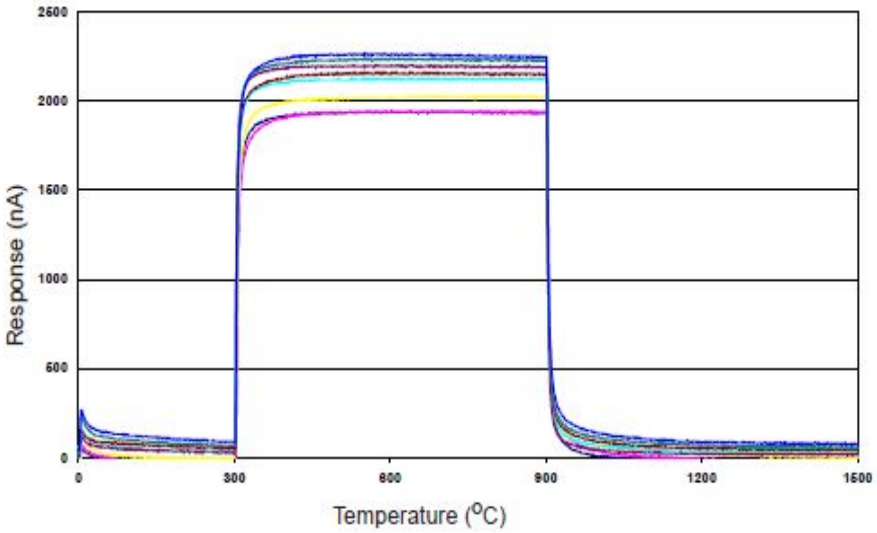


Figure 3 shows the change in zero point output caused by temperature changes, expressed as ppm values equivalent to and referencing the zero point at 20°C.

Data is taken from a typical batch of sensors.

Figure 4 Reaction at 30ppm HCN



When exposed to an environment of 30ppm HCN, the HCN-A1 sensor responds quickly and outputs steadily.

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