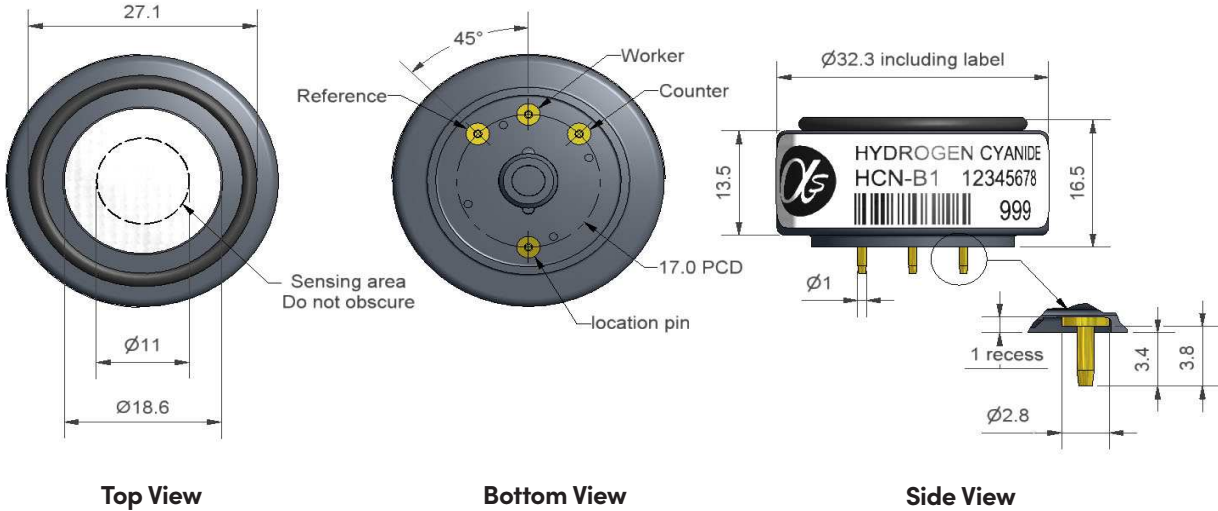


HCN-B1 Hydrogen Cyanide Sensor



Dimensions are in millimetres (± 0.1 mm).

Performance	Sensitivity	nA/ppm in 30ppm HCN		65 to 140
	Response time	t90 (s) from zero to 30ppm HCN		< 120
	Zero current	ppm equivalent in zero air		< -2.5 to 10
	Resolution	RMS noise (ppm equivalent)		< 0.05
	Range	ppm HCN limit of performance warranty		100
	Linearity	ppm error at full scale, linear at zero, 40ppm HCN		0 to 4
	Overgas limit	maximum ppm for stable response to gas pulse		200
Lifetime	Zero drift	ppm equivalent change/year in lab air		nd
	Sensitivity drift	% change/year in lab air, monthly test		nd
	Operating life	months until 80% original signal (12-month warranted)		> 12
Environmental	Sensitivity @ -10°C	% (output @ -10°C/output @ 20°C) @ 30ppm HCN		75 to 95
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 30ppm HCN		100 to 115
	Zero @ -20°C	ppm equivalent change from 20°C		< 0 to -2
	Zero @ 50°C	ppm equivalent change from 20°C		< 0 to 2
Cross-sensitivity	H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S	< 400
	NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂	< -120
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂	< 25
	NO sensitivity	% measured gas @ 50ppm	NO	< 1
	SO ₂ sensitivity	% measured gas @ 20ppm	SO ₂	< 3 (transient)
	CO sensitivity	% measured gas @ 400ppm	CO	< 0.1
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂	< 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 80ppm	C ₂ H ₄	< 0.1
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃	< 2
	CO ₂ sensitivity	% measured gas @ 5% volume	CO ₂	< 0.1
Key Specifications	Temperature range	°C	-30 to 50	
	Pressure range	kPa	80 to 120	
	Humidity range	% rh continuous	15 to 90	
	Storage period	months @ 3 to 20°C (stored in original container)	6	
	Load resistor	Ω (recommended)	10 to 33	
	Bias voltage	mV	not required	
	Weight	g	< 6	

Figure 1 Sensitivity Temperature Dependence

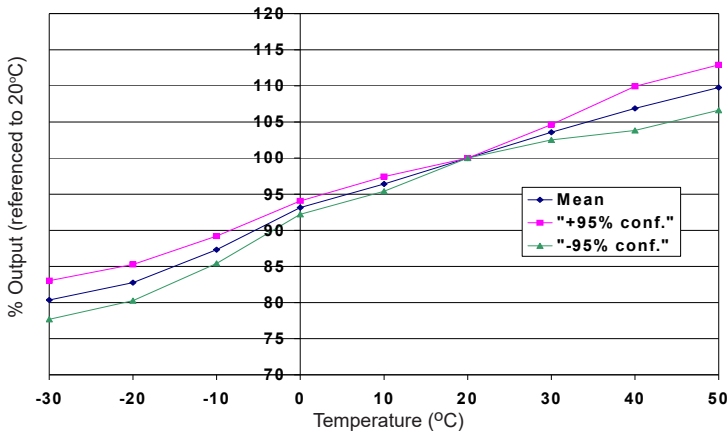


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

The mean and ±95% confidence intervals are shown.

Figure 2 Zero Temperature Dependence

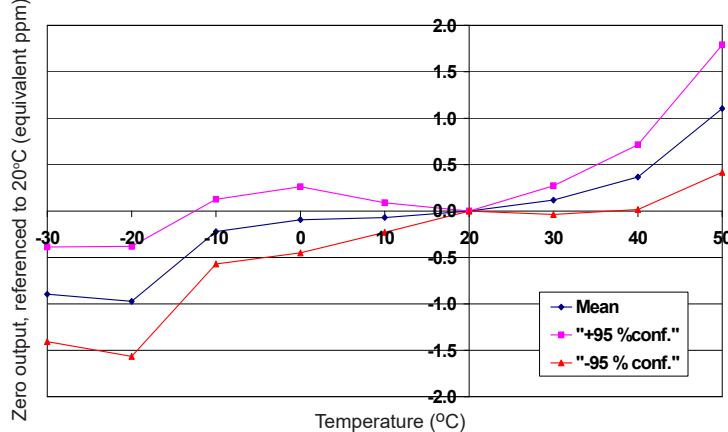
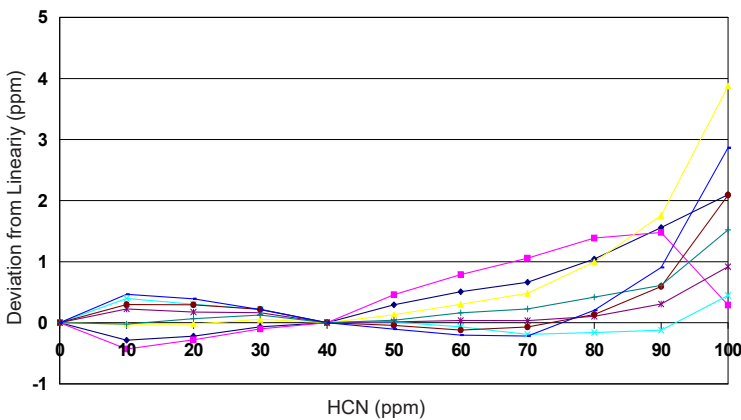


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

The mean and ±95% confidence intervals are shown.

Figure 3 Deviation from Linearity



The HCN-B1 shows linear performance to 100ppm HCN.