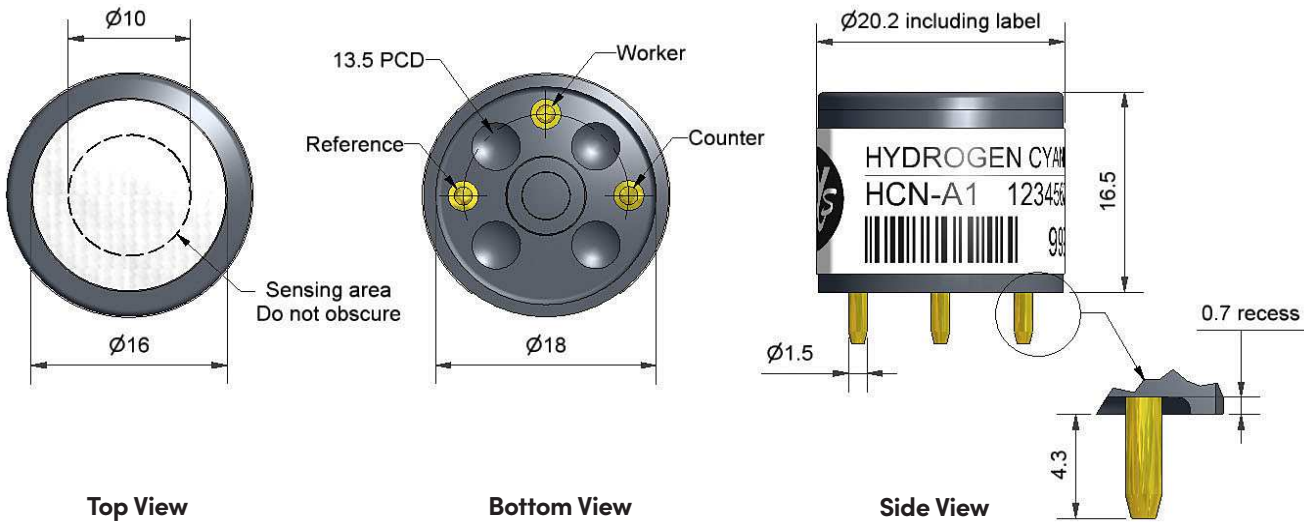


HCN-A1 Hydrogen Cyanide Sensor



Dimensions are in millimetres (± 0.15 mm).

Performance	Sensitivity	nA/ppm in 30ppm HCN	45 to 85
	Response time	t90 (s) from zero to 30ppm HCN	< 70
	Zero current	ppm equivalent in zero air	-2 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	4 to 8
	Overgas limit	maximum ppm for stable response to gas pulse	150
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 HCH	75 to 95
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 30ppm HCH	105 to 120
	Zero @ -20°C	ppm equivalent change from 20°C	< 0 to 1
	Zero @ 50°C	ppm equivalent change from 20°C	< ± 1
Cross-sensitivity	H <sub>2</sub> S sensitivity	% measured gas @ 20ppm	H <sub>2</sub> S < 300
	NO <sub>2</sub> sensitivity	% measured gas @ 10ppm	NO <sub>2</sub> < -180
	Cl <sub>2</sub> sensitivity	% measured gas @ 10ppm	Cl <sub>2</sub> < -12
	NO sensitivity	% measured gas @ 50ppm	NO < 1
	SO <sub>2</sub> sensitivity	% measured gas @ 20ppm	SO <sub>2</sub> (transient peak) < 10 (transient)
	CO sensitivity	% measured gas @ 400ppm	CO < 0.1
	H <sub>2</sub> sensitivity	% measured gas @ 400ppm	H <sub>2</sub> < 0.1
	C <sub>2</sub> H <sub>4</sub> sensitivity	% measured gas @ 400ppm	C <sub>2</sub> H <sub>4</sub> < 0.1
	NH <sub>3</sub> sensitivity	% measured gas @ 20ppm	NH <sub>3</sub> < 1
	CO <sub>2</sub> sensitivity	% measured gas @ 5% volume	CO <sub>2</sub> < 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

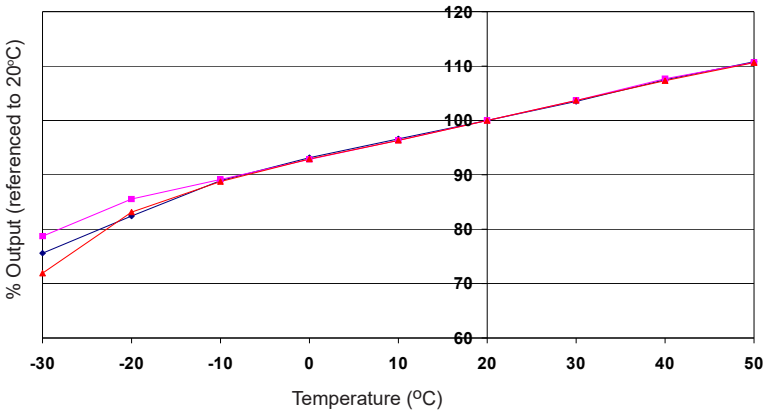


Figure 1 shows the variation in sensitivity caused by changes in temperature.  
This data is taken from a typical batch of sensors.  
The mean and  $\pm 95\%$  confidence intervals are shown.

Figure 2 Zero Temperature Dependence

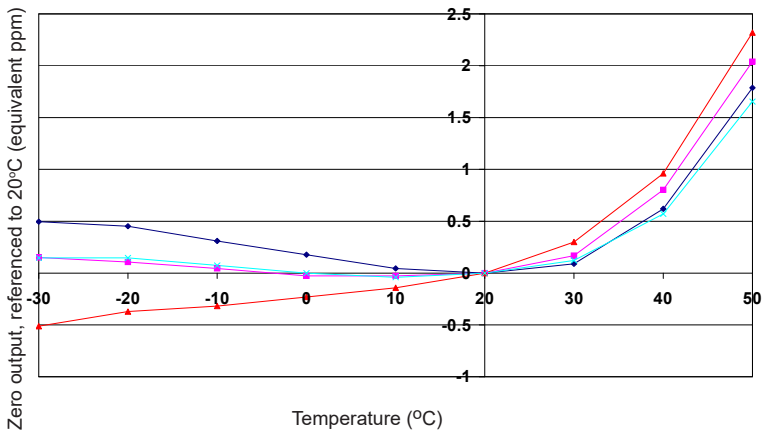
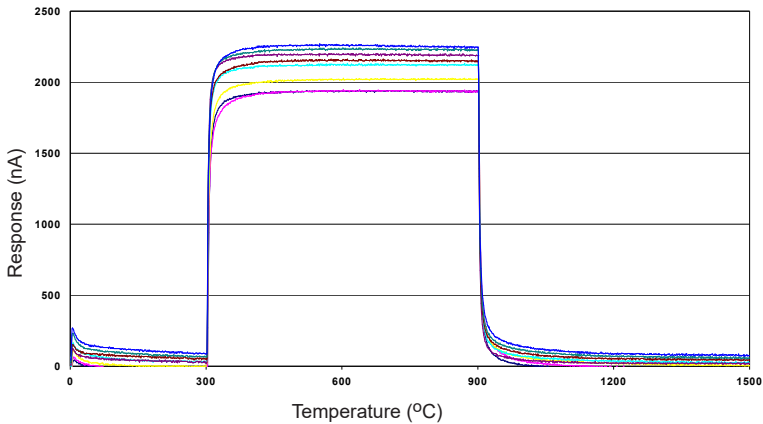


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.  
This data is taken from a typical batch of sensors.

Figure 3 Response to 30ppm HCN



The HCN-A1 shows fast response and stable output when exposed to 30ppm HCN.