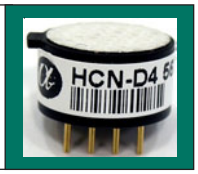
HCN-D4 Hydrogen Cyanide Sensor

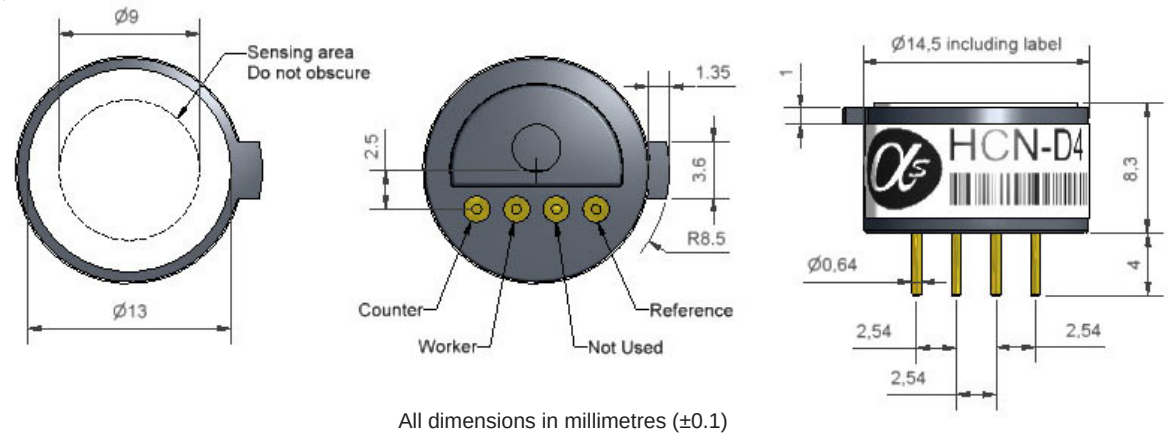
Miniature Size



PATENTED

Technical Specification

Figure 1 HCN-D4 Schematic Diagram



All dimensions in millimetres (±0.1)

Top View **Bottom View** **Side View**

PERFORMANCE	Sensitivity	nA/ppm 20ppm HCN	25 to 40
	Response time	t_{90} (s) from zero to 20ppm HCN	< 35
	Zero current	ppm equivalent in zero air	± 1.5
	Resolution	RMS noise (ppm equivalent)	< 0.3
	Range	ppm limit of performance warranty	50
	Linearity	ppm error at full scale, linear at zero, 200ppm HCN	0 to -4
	Overgas limit	maximum ppm for stable response to gas pulse	250
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 @ -20°C	% (output @ -20°C/output @ 20°C) @ 20ppm	80 to 90
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) @ 20ppm	105 to 120
	Zero @ -20°C	ppm equivalent change from20°C	-1.5 to +0.5
	Zero @ 50°C	ppm equivalent change from 20°C	-1.0 to +1.5
CROSS SENSITIVITY	H_2S	sensitivity % measured gas @ 20ppm H_2S	250
	NO_2	sensitivity % measured gas @ 10ppm NO_2	< -25
	Cl_2	sensitivity % measured gas @ 10ppm Cl_2	< 6
	NO	sensitivity % measured gas @ 50ppm NO	< -10
	SO_2	sensitivity % measured gas @ 20ppm SO_2	< 50
	CO	sensitivity % measured gas @ 400ppm CO	0
	H_2	sensitivity % measured gas @ 400ppm H_2	0.1
	C_2H_4	sensitivity % measured gas @ 400ppm C_2H_4	0
	NH_3	sensitivity % measured gas @ 20ppm NH_3	< 5
KEY SPECIFICATIONS	Temperature range	°C	-20 to 50
	Pressure range	kPa	80 to 120
	Humidity range	%rh (see note below)	15 to 90
	Storage period	months @ 3 to 20°C (stored in sealed pot)	6
	Load resistor	Ω (recommended)	10 to 47
	Weight	g	< 2

Note: Above 85% rh and 40°C a maximum continuous exposure period of 10 days is warranted. >40°C (50°C) limited exposure.

NOTE: all sensors are tested at ambient environmental conditions, with 10 ohm load resistor, unless otherwise stated. As applications of use are outside our control, the information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.

Technical Specification

HCN-D4 Performance Data

Figure 2 Sensitivity temperature dependence

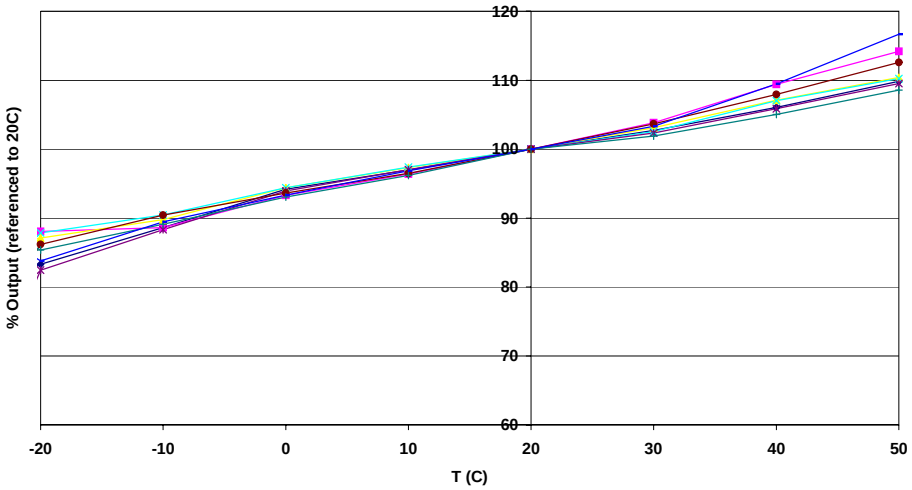


Figure 2 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of HCN-D4 sensors.

Figure 3 Linearity

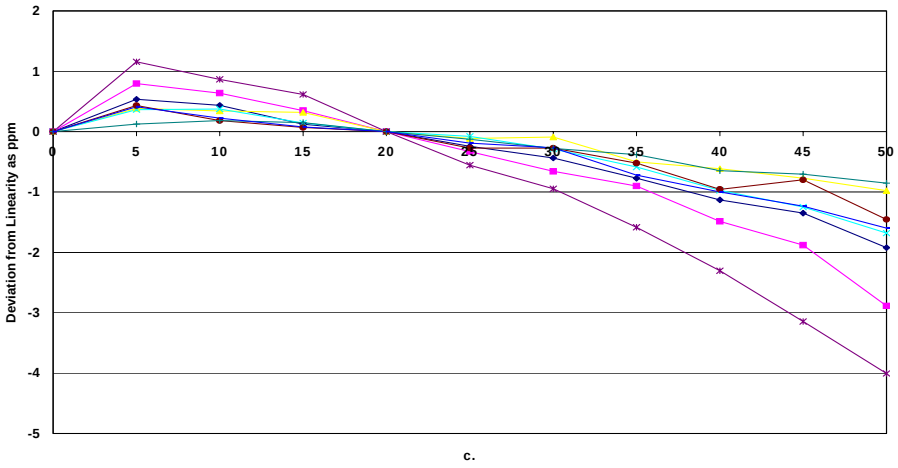


Figure 3 shows the deviation from linearity from 0 to 50 ppm HCN.

This data is taken from a typical batch of HCN-D4 sensors.

Figure 4 Response to 25ppm HCN

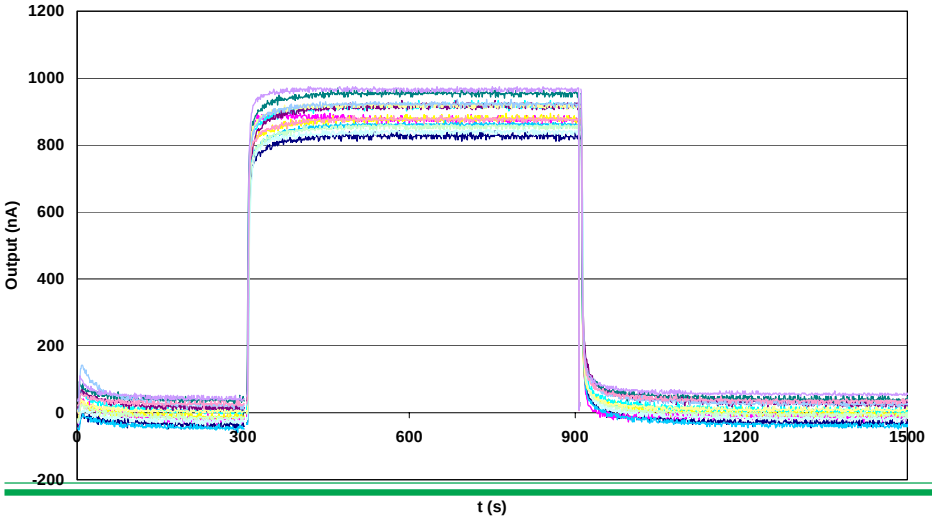


Figure 4 shows response to first zero air, then 25 ppm HCN and then zero air.

Fast response time and good zero stability give confidence that the sensor will respond rapidly and reliably to a gas emergency.