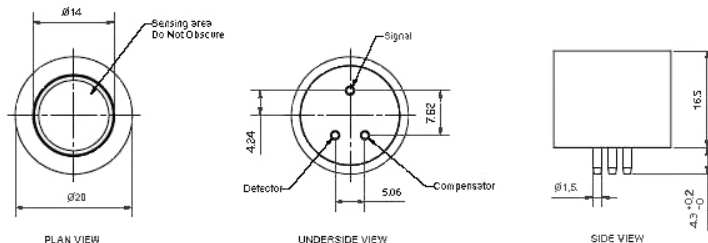




CH-A3 Combustible Gas Pellistor



Figure 1 CH-A3 Schematic Diagram



All dimensions in millimetres ($\pm 0.1\text{mm}$)

Plan View

Underside View

Side View

PERFORMANCE	Sensitivity	mV / % methane	21 to 24
	Response time	t_{90} from air to 50% LEL methane (s)	< 15
	Zero	mV in zero air	± 20
	Range	% LEL methane	0 to 100
	Linearity	% methane when 5% non-linear	5.5
ENVIRONMENTAL	Sensitivity @ -20°C	% sensitivity change, referenced to 20°C	104.5 to 106.5
	Sensitivity @ 50°C	% sensitivity change, referenced to 20°C	101.5 to 102.5
	Zero @ -20°C	% LEL change, referenced to 20°C	< ± 0.5
	Zero @ 50°C	% LEL change, referenced to 20°C	< -0.4
	Temperature Range	Certification to T5	-40° to 50°C
SENSITIVITY	n-pentane	% LEL pentane / % LEL methane	0.45
	acetylene	% LEL acetylene / % LEL methane	0.75
	HMDS	hrs until 50% activity loss @ 10ppm HMDS	9
ELECTRICAL	Voltage	V (± 0.1 V)	3.0
	Power consumption	mW	190
	Voltage sensitivity	% sensitivity change / 0.1V change	<2



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NOTE: all sensors are tested at ambient environmental conditions, with methane, 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.



CH-A3 Performance Data

Technical Specification

Figure 2 Sensitivity Temperature Dependence

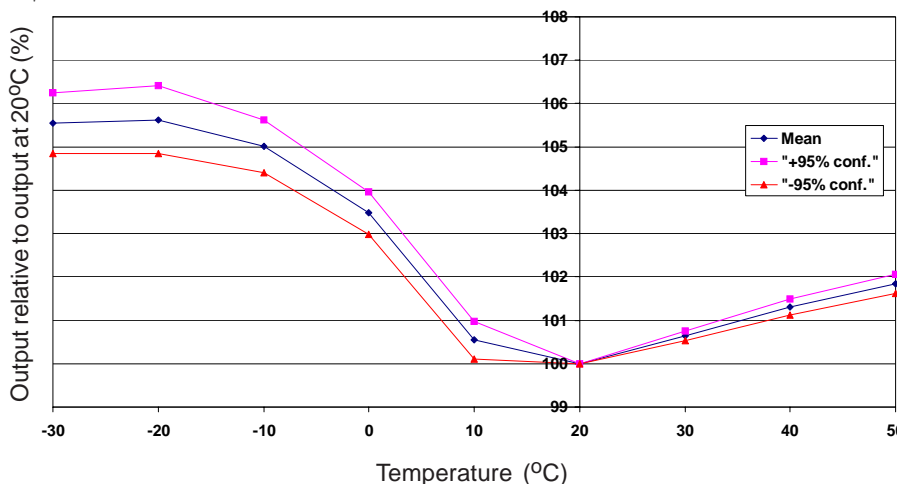


Figure 2 shows the variation in sensitivity caused by changes in temperature.

Data are taken from a typical batch of sensors and the mean and $\pm 95\%$ confidence intervals are shown.

Figure 3 Linearity

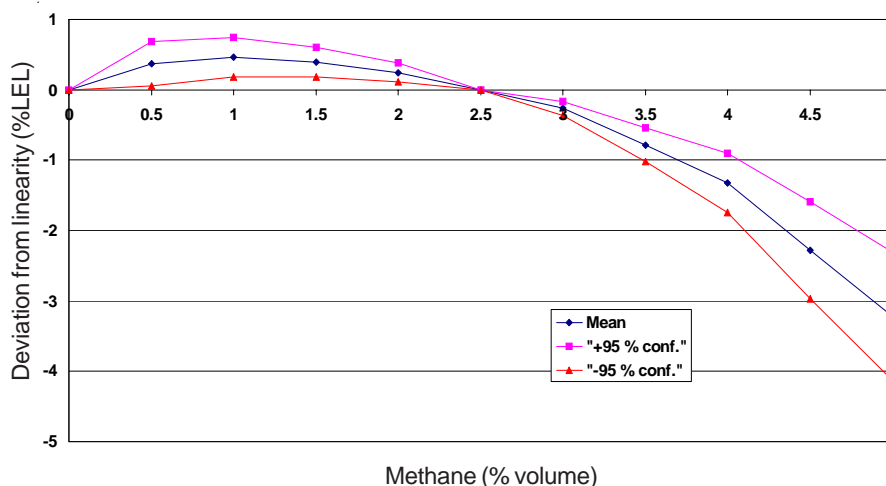
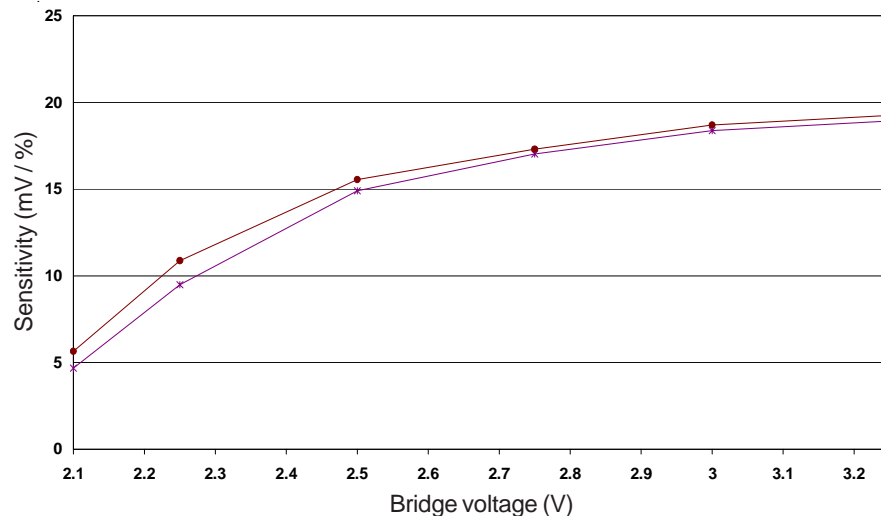


Figure 3 shows the non-linearity from 0 to 5% methane (volume). Sensor non-linearity at 100% LEL is less than 4%.

Data are taken from a typical batch of sensors and the mean and $\pm 95\%$ confidence intervals are shown.

Figure 4 Voltage Sensitivity



Sensitivity remains nearly constant over small voltage variations. Accurate setting of the pellistor voltage is not necessary.

For further information on the performance of this sensor, on other sensors in the range or any other subject, please contact Alphasense Ltd. For Application Notes visit "www.alphasense.com".