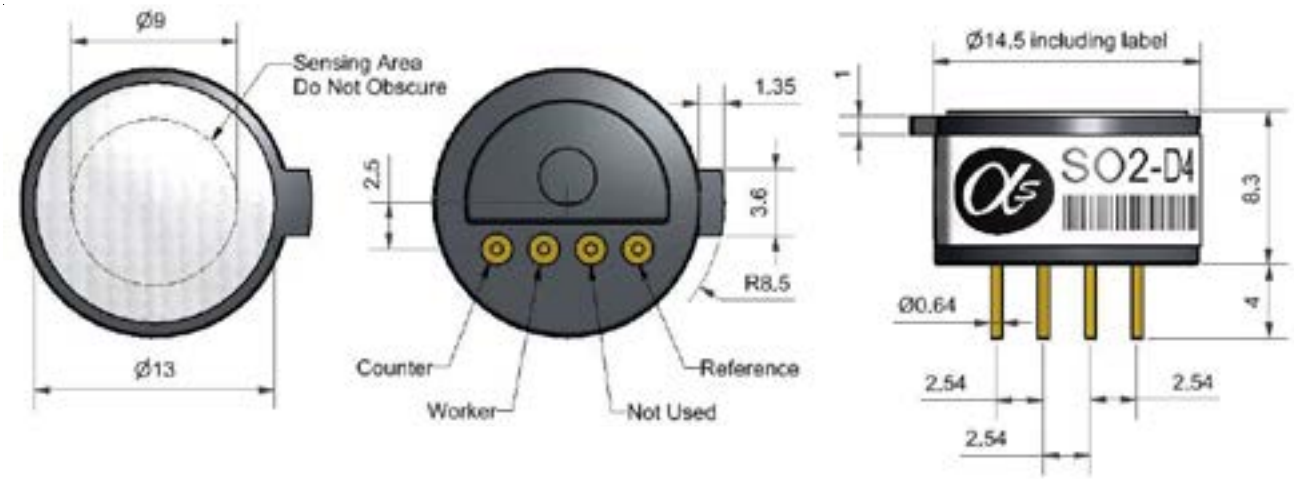
SO2-D4 Sulfur Dioxide Sensor - Miniature Size



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

Dimensions are in millimetres (± 0.15 mm).

Performance	Sensitivity	nA/ppm in 10ppm SO_2		180 to 420
	Response time	t90 (s) from zero to 10ppm SO_2		< 15
	Zero current	ppm equivalent in zero air		± 0.7
	Resolution	RMS noise (ppm equivalent)		< 0.2
	Range	ppm limit of performance warranty		20
	Linearity	ppm error at full scale, linear at zero and 10ppm		< 5
	Overgas limit	maximum ppm for stable response to gas pulse		50
Lifetime	Zero drift	ppm equivalent change/year in lab air		< 0.2
	Sensitivity drift	% change/year in lab air, monthly test		< 6
	Operating life	months until 80% original signal (24-month warranted)		> 18
Environmental	Sensitivity @ -20°C	% (output @ -20°C/output @ 20°C) 10ppm		72 to 88
	Sensitivity @ 50°C	% (output @ 50°C/output @ 20°C) 10ppm		74 to 95
	Zero @ -20°C	ppm equivalent change from 20°C		< ± 0.5
	Zero @ 50°C	ppm equivalent change from 20°C		< ± 0.5
Cross Sensitivity	H_2S sensitivity	% measured gas @ 20ppm	H_2S	< 400
	NO_2 sensitivity	% measured gas @ 10ppm	NO_2	< -120
	Cl_2 sensitivity	% measured gas @ 10ppm	Cl_2	< -60
	NO sensitivity	% measured gas @ 50ppm	NO	< 3
	CO sensitivity	% measured gas @ 400ppm	CO	< 0.5
	H_2 sensitivity	% measured gas @ 400ppm	H_2	< 0.2
	C_2H_4 sensitivity	% measured gas @ 400ppm	C_2H_4	< 15
	NH_3 sensitivity	% measured gas @ 20ppm	NH_3	< 0.1
	CO_2 sensitivity	% measured gas @ 10%	CO_2	< 0.1
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 (for optimum performance)		22
	Weight	g		< 2

T: +44 (0)1376 556700 **E:** sensors@alphasense.com **W:** www.alphasense.com

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

Figure 1 Sensitivity Temperature Dependence

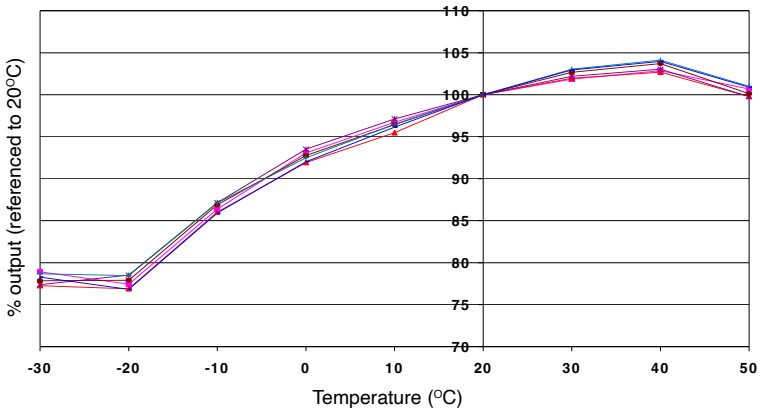


Figure 1 shows the variation in sensitivity caused by changes in temperature.

This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

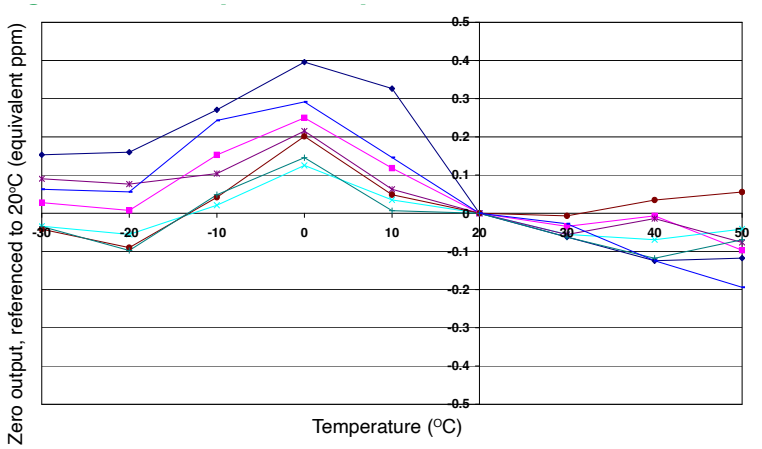
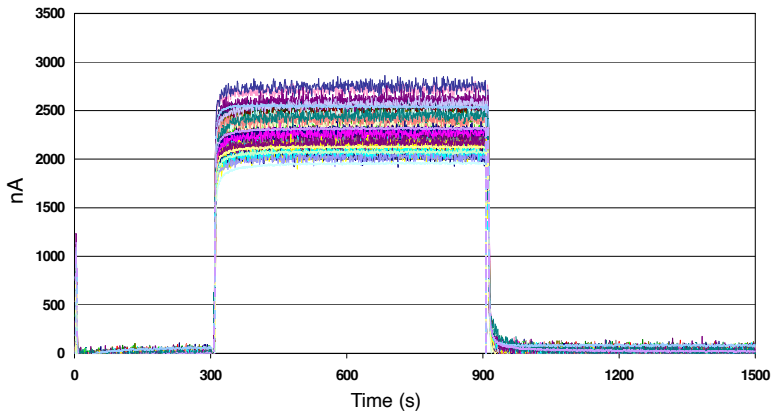


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.

This data is taken from a typical batch of sensors.

Figure 3 Response to 10ppm SO_2



Typical batch of 64 sensors all respond rapidly and repeatably to 10ppm SO_2.