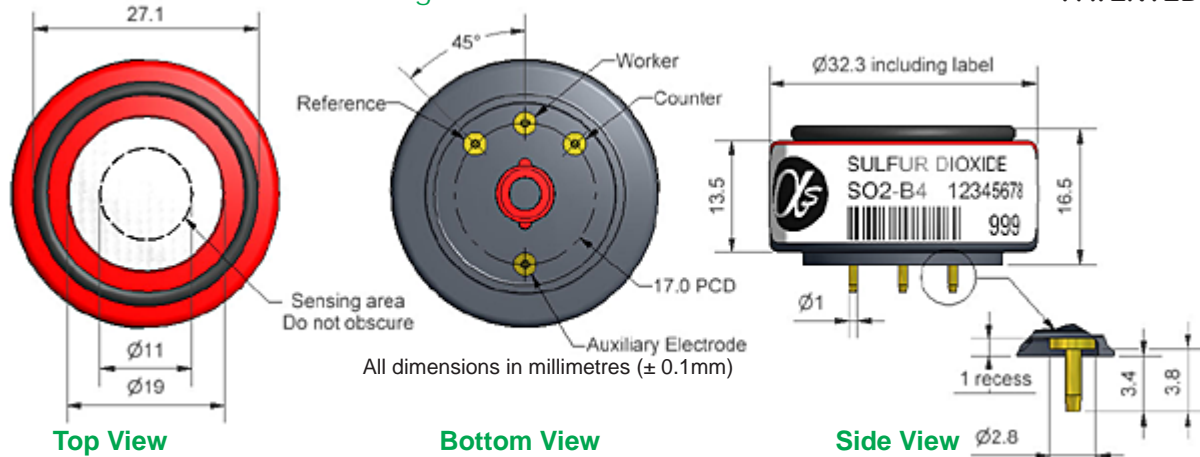


SO2-B4 Sulfur Dioxide Sensor



PATENTED

Figure 1 SO2-B4 Schematic Diagram



Technical Specification

PERFORMANCE	Sensitivity	nA/ppm in 1ppm SO ₂	250 to 550
	Response time	t ₉₀ (s) from zero to 1ppm SO ₂	< 60
	Zero current	ppm equivalent in zero air	< ± 0.03
	Resolution	RMS noise (ppm equivalent)	< 0.005
	Range	ppm limit of performance warranty	10
	Linearity	ppm error at 200ppb SO ₂ , linear at zero and 140ppb SO ₂	< ± 0.03
	Overgas limit	maximum ppm for stable response to gas pulse	200
LIFETIME	Zero drift	ppm equivalent change/year in lab air	< 0.1
	Sensitivity drift	% change/year in lab air, monthly test	< 4
	Operating life	months until 80% original signal (24 month warranted)	> 24
ENVIRONMENTAL	Sensitivity @ -20°C % (output @ -20°C/output @ 20°C) @ 20ppm		78 to 90
	Sensitivity @ 50°C % (output @ 50°C/output @ 20°C) @ 20ppm		100 to 107
	Zero @ -20°C	ppm equivalent change from 20°C	< ± 0.4
	Zero @ 50°C	ppm equivalent change from 20°C	< ± 3
CROSS SENSITIVITY	Filter capacity	ppm-hrs	450
	H ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S < 1
	NO ₂ sensitivity	% measured gas @ 10ppm	NO ₂ < -200
	Cl ₂ sensitivity	% measured gas @ 10ppm	Cl ₂ < -70
	NO sensitivity	% measured gas @ 50ppm	NO < -4
	CO sensitivity	% measured gas @ 400ppm	CO < 3
	H ₂ sensitivity	% measured gas @ 400ppm	H ₂ < 0.1
	C ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H ₄ < 70
	NH ₃ sensitivity	% measured gas @ 20ppm	NH ₃ < 0.1
CO ₂ sensitivity	% measured gas @ 5% CO ₂	< 0.1	
KEY SPECIFICATIONS	Temperature range	°C	-30 to 50
	Pressure range	kPa	80 to 120
	Humidity range	% rh continuous (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	< 13

Note: Above 85% rh and 40°C a maximum continuous exposure period of 10 days is warranted. Where such exposure occurs the sensor will recover normal electrolyte volumes when allowed to rest at lower % rh and temperature levels for several days.



NOTE: all sensors tested and stored at ambient environments 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.

SO2-B4 Performance Data



Technical Specification

Figure 2 Response to 1ppm SO₂

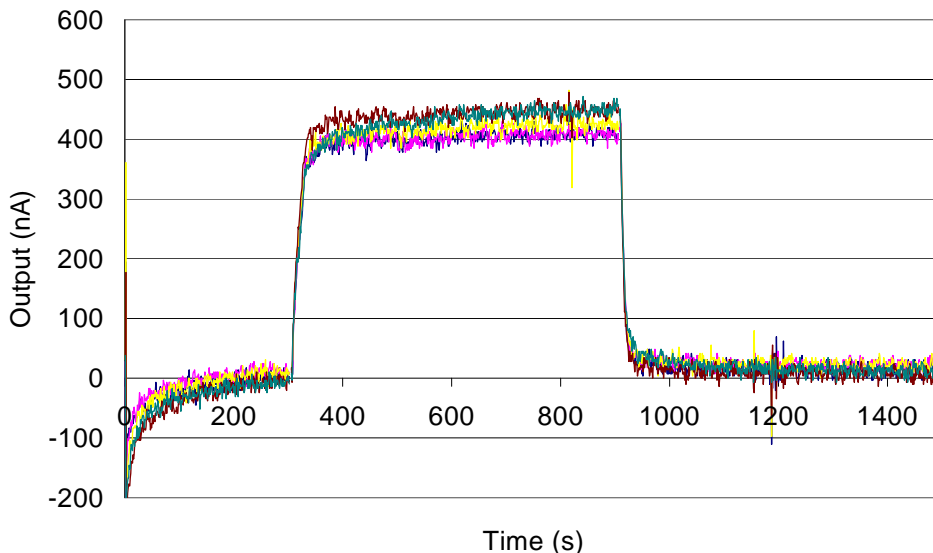


Figure 2 shows the response to 1ppm SO₂.

The t₉₀ response for the SO₂-B4 is less than 60 seconds.

Figure 3 Linearity to 200ppb SO₂

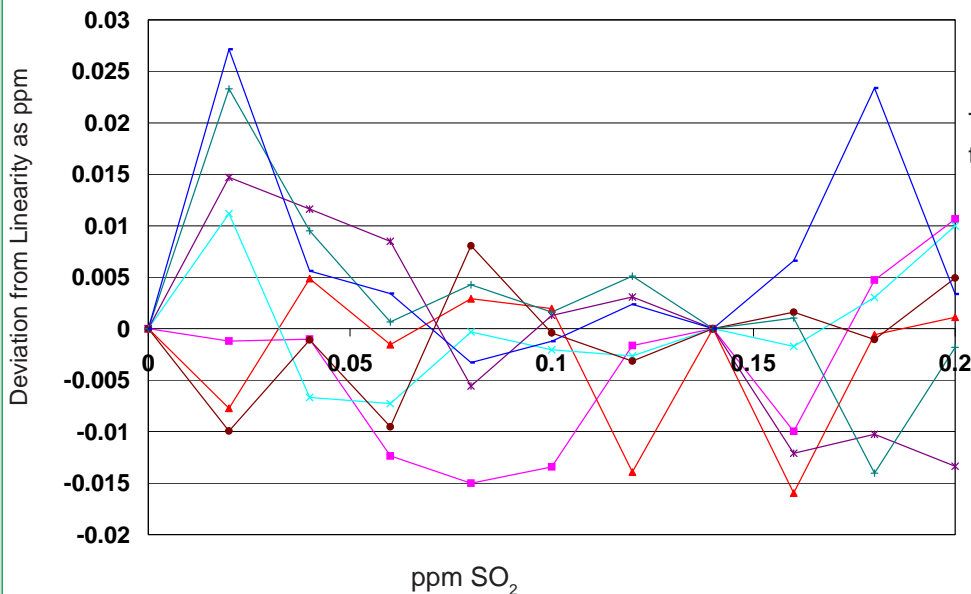


Figure 3 shows the variation in linearity.

This data is taken from a typical batch of sensors.