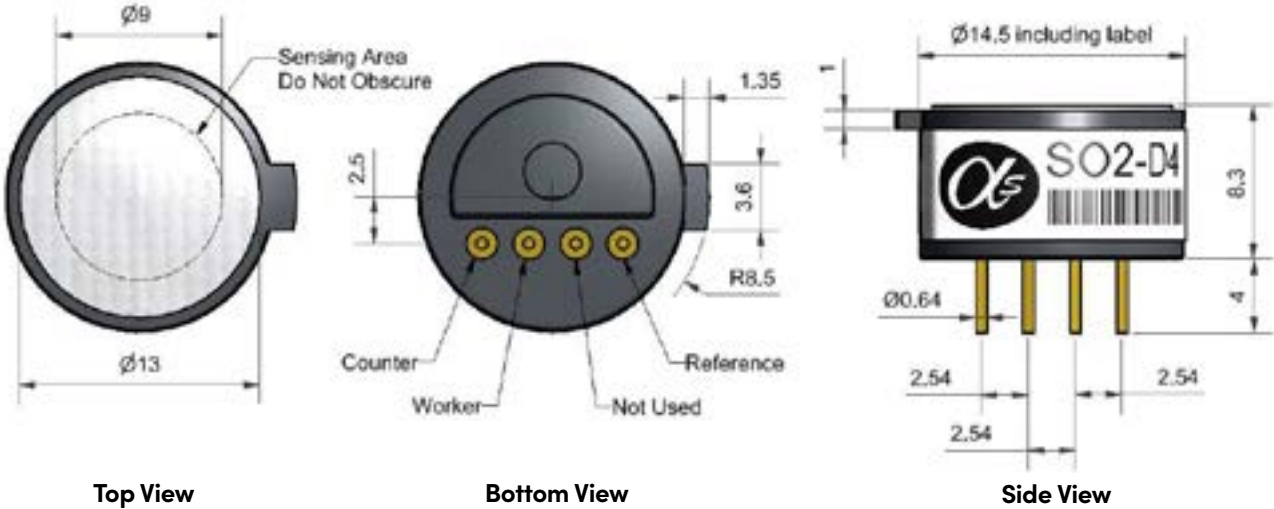


Technical specifications Version 1.0

SO2-D4 Sulfur Dioxide Sensor - Miniature Size



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 ₂ S sensitivity	% measured gas @ 20ppm	H ₂ S	< 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 ₂ H ₄ sensitivity	% measured gas @ 400ppm	C ₂ H 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	

Figure 1 Sensitivity Temperature Dependence

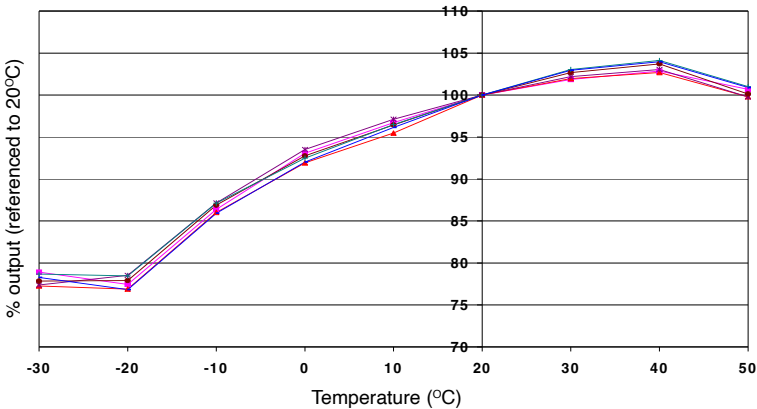


Figure 1 shows the variation in sensitivity caused by changes in temperature.
This data is taken from a typical batch of sensors.

Figure 2 Zero Temperature Dependence

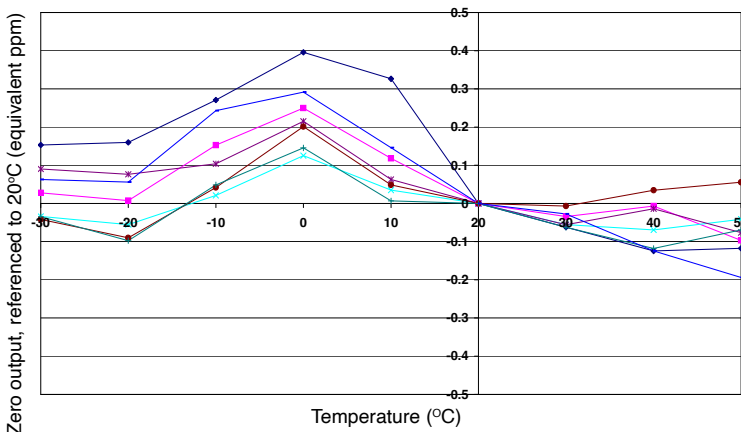
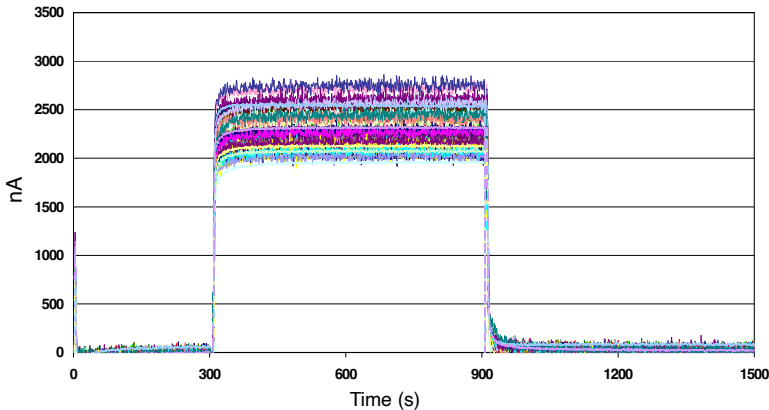


Figure 2 shows the variation in zero output caused by changes in temperature, expressed as ppm gas equivalent, referenced to zero at 20°C.
This data is taken from a typical batch of sensors.

Figure 3 Response to 10ppm SO₂



Typical batch of 64 sensors all respond rapidly and repeatedly to 10ppm SO₂.