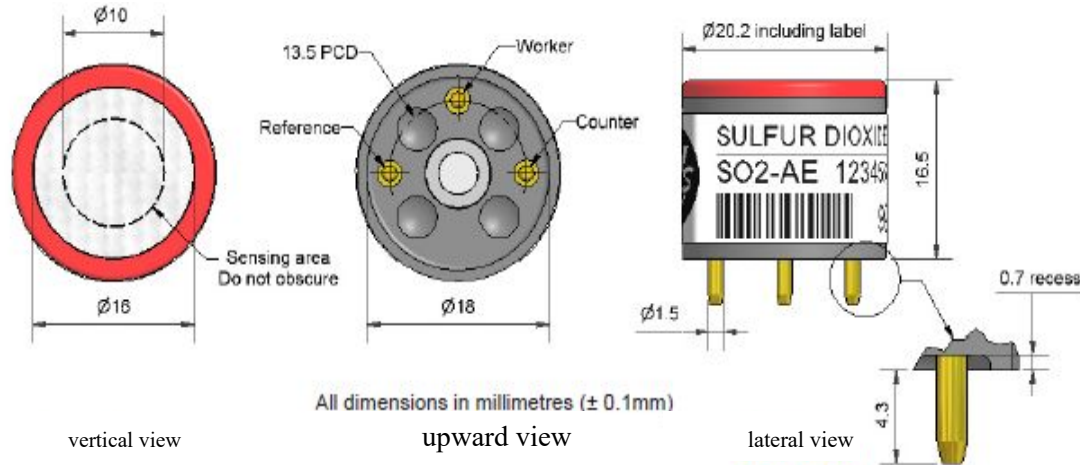


## SO2-AE Sulfur Dioxide Sensor High Concentration



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Figure 1 Schematic Diagram of SO2-AE



function	sensitivity	Sensitivity $_2$ in 400ppmSO	55~80
	reaction time	Time from zero to 400ppmSO $_2$ (s)	< 33
	zero current	Equivalent ppm value in zero air	< $\pm 5$
	resolution ratio	RMS noise (equivalent ppm value)	< 1.5
	range	Measuring limits (ppm) that guarantee product performance	2000
	degree of linearity	The ppm value of the full scale error is linear from 0 to 400ppm	20~20
	overload	Maximum ppm value of gas pulse stabilized reaction	10000
life span	zero drift	Equivalent ppm values that change in the laboratory air from year to year	< 0.2
	sensitivity drift	Percentage change in laboratory air over the year, measured monthly	< 4
	working life	Number of months to which the output is reduced to 80% of the original signal (24 months guaranteed)	> 24
environment	-20°C sensitivity	400ppmSO $_2$ at (-20°C output/20°C output)%	80~92
	Sensitivity at 50°C	400ppmSO $_2$ at (output at 50°C/ output at 20°C)%	98~108
	-20°C when zero point	Change in equivalent ppm values with reference to 20°C zero	< $\pm 3$
	50°C at zero point	Change in equivalent ppm values with reference to 0°C 20	< $\pm 4$
cross sensitivity	filter capacity	ppm · hour H $_2$ S	< 5000
	H $_2$ S	Gas sensitivity percentage at 20ppmH $_2$ S	< 2
	NO $_2$	Gas sensitivity percentage $_2$ at 10ppmNO	< -150
	Cl $_2$	Sensitivity percentage of gas measured $_2$ at 10ppmCl	< -60
	NO	Gas sensitivity percentage measured at 500ppmNO	< 30
	CO	Gas sensitivity percentage measured at 400ppmCO	< 10
	H $_2$	Gas sensitivity percentage measured at 400ppmH $_2$	< 1.5
	C $_2$ H $_4$	Sensitivity percentage of gas measured at 1000ppmC $_2$ H $_4$	< 60
NH $_3$	Percentage sensitivity of gas $_3$ at 20ppmNH	< 0.1	
key parameter	temperature range	°C	-30~50
	pressure limit	kPa	80~120
	Humidity range	Percentage of continuous relative humidity	15~90
	Storage period	Number of months for preservation from 3 to 20°C (to be kept in a sealed tank)	6
	load resistance	$\Omega$ ( recommend )	10~47
	weight	g	< 6

Figure 2 Sensitivity Temperature Characteristics

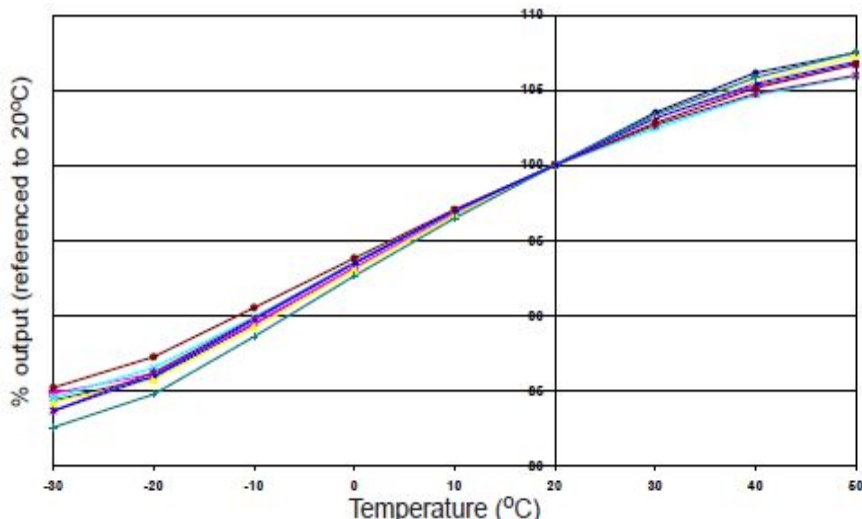


Figure 2 shows the change in sensor sensitivity caused by temperature variation.

Data is collected from typical batch sensors.

Figure 3 Zero Temperature Characteristics

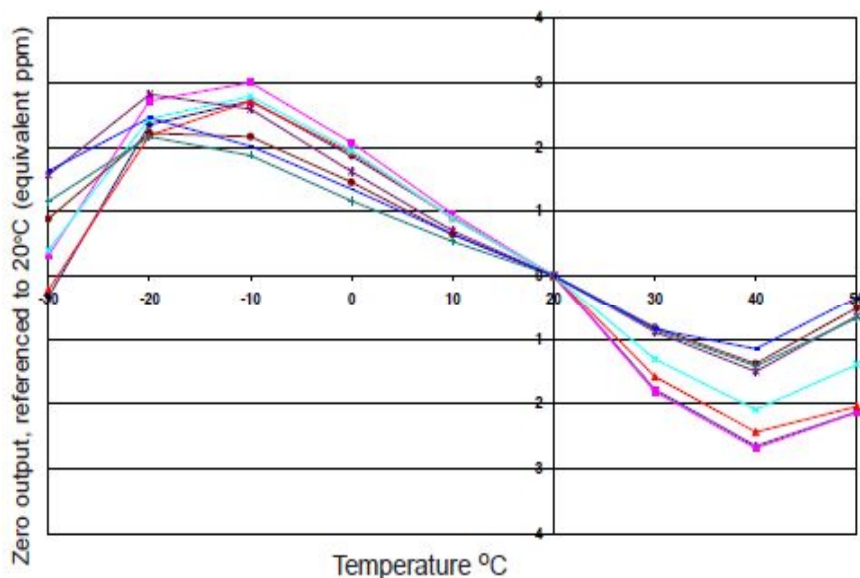


Figure 3 shows the change in zero point output caused by temperature variation, expressed as equivalent ppm values, with reference to the zero point at 20°C.

Data is taken from a typical batch of sensors.

FIG. 4 Shows the Response of the Sensor When the Gas Concentration Is Changed Stepwise in the Range of 0-10000ppmSO<sub>2</sub>

2

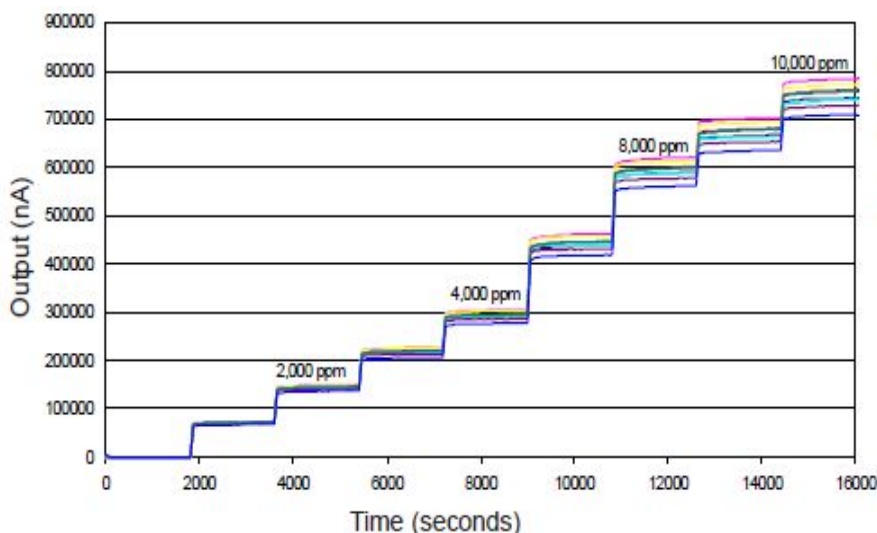


Figure 4 shows the reaction of high concentration SO<sub>2</sub> after continuous stepwise increasing concentration of a batch of transducers.

The transmitter maintains linear output throughout the range from 0 to 10000ppm.

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