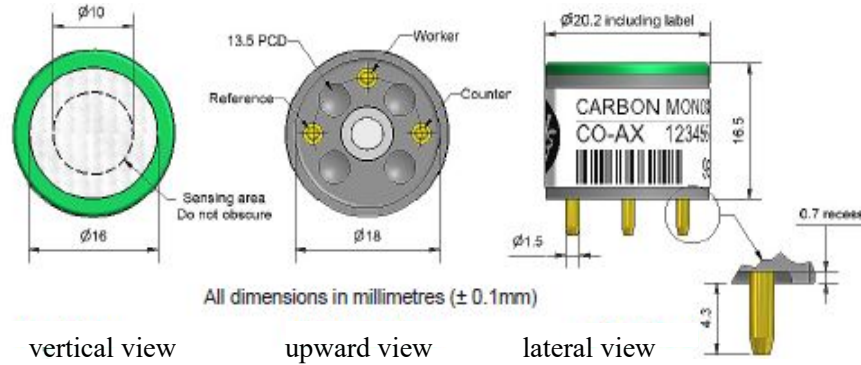


CO-AX Carbon Monoxide Sensor Complies With EN 50379 and Is Suitable for Flue Gas Detection



Figure 1 Schematic Diagram of CO-AX



function	sensitivity	Sensitivity in 400ppmCO (nA/ppm)		55~100
	reaction time	Time from zero to 400ppmCO (s)		< 30
	zero current	Equivalent ppm value in zero air		< ± 3
	resolution ratio	RMS noise (equivalent ppm value)		< 0.5
	range	CO measurement limit (ppm) that guarantees product performance		2000
	degree of linearity	The ppm value of the full scale error is linear from 0 to 800ppm		< ± 40
	overload	Maximum ppm value of gas pulse stabilized reaction		4000
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		< 6
	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	400ppm CO when, (output at -20°C/ output at 20°C)%		55~75
	Sensitivity at 0°C	400ppm CO when, (0°C output/20°C output)%		75~90
	Sensitivity at 40°C	400ppm CO when, (40°C output/20°C output)%		106~120
	-20°C when zero point	Change in equivalent ppm values with reference to 0°C 20		< 0~4
	0°C at the zero point	Change in equivalent ppm values with reference to 20°C zero		< 0~3
	50°C at the zero point	Change in equivalent ppm values with reference to 20°C zero		< 0~6
cross sensitivity	filter capacity	ppm· hour	H ₂ S	250,000
	filter capacity	ppm- hour	NO ₂	500,000
	filter capacity	ppm- hour	NO	20,000
	filter capacity	ppm- hour	SO ₂	250,000
	H ₂	10°C 900ppmCO in which sensitivity percentage was measured at 900ppmH		< 2
	H ₂	Sensitivity percentage at 900 ppm CO, 900ppmH		< 4
	H ₂	30°C 900ppmCO in which sensitivity percentage was measured at 900ppmH		< 6
	NO ₂	Gas sensitivity percentage at 10ppmNO		< -1
	Cl ₂	Sensitivity percentage of gas measured at 10ppmCl		< 0.1
	NO	Gas sensitivity percentage measured at 500ppmNO		< -2
	SO ₂	Gas sensitivity percentage at 20ppmSO		< 0.1
	C ₂ H ₄	Gas sensitivity percentage measured at 400ppmC ₂ H ₄		< 5
	NH ₃	Percentage sensitivity of gas at 20ppmNH		< 0.1
Critical temperature range	°C		-30~50	
Parameter pressure range	kPa		80~120	
Humidity range	Percentage of continuous relative humidity		15~90	
Storage period	Number of months for preservation at 0~20°C (to be preserved in a sealed tank)		6	
load resistance	Ω (recommend)		10~47	
weight	g		< 6	

Important note: CO-AX needs to ensure that there is no bias between the reference electrode and the working electrode during normal operation, otherwise the sensor will not be able to give full play to its low hydrogen cross sensitivity performance.

Figure 2 Temperature Sensitivity Characteristics of CO

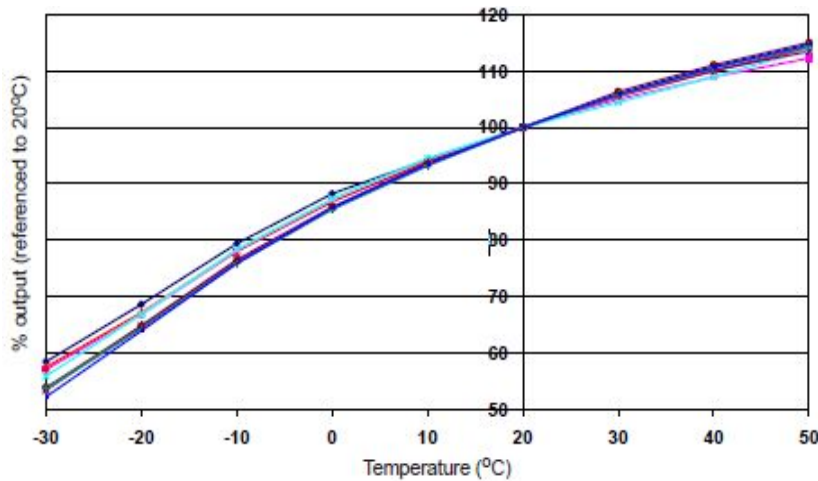


Figure 2 shows the change of sensor sensitivity caused by temperature change.

The data is collected from a classical batch sensor.

Figure 3 Hydrogen Sensitivity Temperature Characteristics

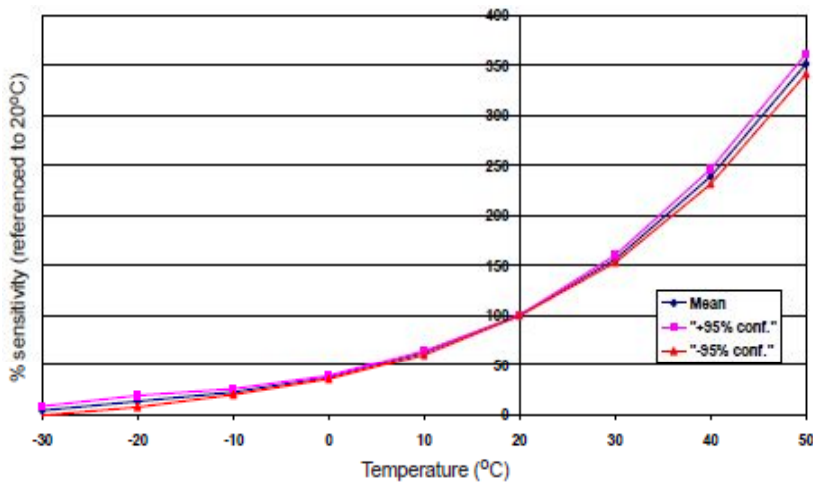


Figure 3 Shows CO-AX

The sensitivity to hydrogen is subject to Temperature has a significant effect. Since the hydrogen sensitivity of the sensor is less than 4% at 20°C, the hydrogen interference at low temperatures can be ignored. However, the hydrogen interference at 50°C is 14%.

The data are taken from a typical batch of sensors. Figure 3 shows the mean and $\pm 95\%$ confidence interval of the percentage sensitivity (reference 20 °C).

Figure 4 30°C Hydrogen Cross Sensitivity

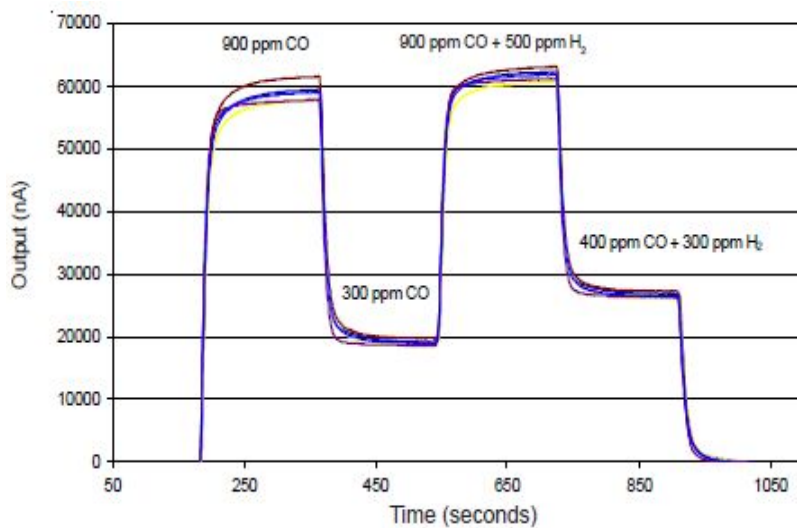


Figure 4 shows the hydrogen sensitivity of eight typical batches of CO-AX sensors at 30 °C, in compliance with EN50379. When 500 ppm hydrogen is added to 950 ppm CO, all sensors show cross-sensitivity below 5%. Meanwhile, the t_{90} time is less than 45 seconds.

深圳市杰晟兴电子有限公司 JM Components Limited

地址：深圳市福田区中航路7号鼎诚国际大厦南座2007室
 手机：13662266995 马少良 电话：0755-83951311
 官网：cn-sensor.com

邮编：518031
 传真：0755-83952401
 电邮：jackson@jmcomponents.com