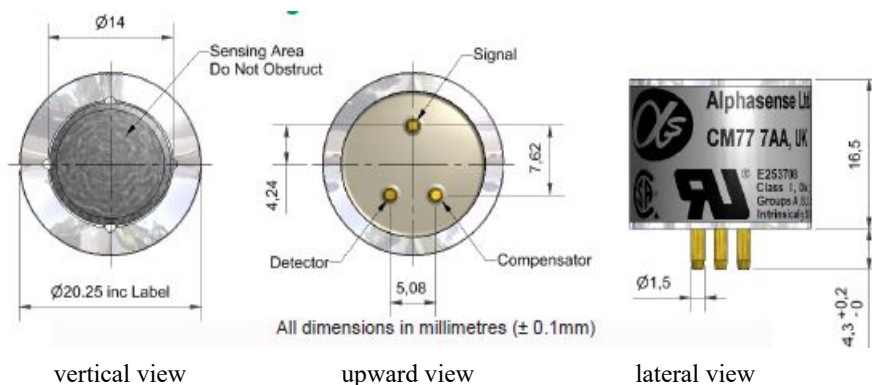


CH-A3 Catalytic Combustion Gas Sensor



Figure 1 CH-A3 Diagram



function

sensitivity	mV/% methane	15 ~ 22 <15
reaction time	Time to 50% LEL methane from air (s)	(general <7)
null point	Output mV in zero grade air	± 20
range	%LEL methane	0 ~ 100
degree of linearity	Percentage of methane at 5% nonlinearity	6

environment

-20°C sensitivity	Percentage of sensitivity change, reference 20°C	< 100.5 ~ 105.5
Sensitivity at 50°C	Percentage of sensitivity change, reference 20°C	< 100 ~ 103
-20°C when zero point	Percentage of LEL changes, reference 20°C	< +0.5 ~ -2
50°C at zero point	Percentage of LEL changes, reference 20°C	< 0 ~ -1.5
Temperature range	Complies with T4 temperature groupings	-40° ~ 55°C
humidity	From 0% to 80% rh sensitivity loss 12% (22°C)	
	From 0 to 80% RH generally zero increase in LEL percentage (22°C)	1.0
pressure	Change of sensitivity at 0~75 kPa (table pressure)	< 3%

Hindering/ poisoning

chlorine	Running for 12 hours at 20ppmCl ₂ , sensitivity loss of 50%, recovered after 2 days	Loss less than 10%
hepatic gas	12 hours of communication with 20ppmH ₂ S, 50% loss of sensitivity, 2 days to restore communication with 10ppmHMDS, 50% loss of sensitivity hours	Loss less than 50% 9
hexamethyldisilane		
H2S disposable filters can be purchased, The material number is ASF-1		

behaviour of electricity

voltage	V (± 0.2 V)	3.0
power dissipation	mW	190
voltage-sensitivity	The sensitivity change percentage can be caused by a 0.1V voltage change	3

key parameter

weight	can	< 26
working life	Number of months when sensitivity decreases to 75% of original sensitivity (24 months guaranteed)	> 24

Table 1. Sensitivity

gas	Relative methane sensitivity percentage	Relative methane sensitivity%LEL	Hydrocarbons/gases	Relative methane sensitivity percentage	Relative methane sensitivity%LEL
hydrogen	130-140	160-175	carbon monoxide	42-44	17-18
propane	150-190	350-450	ethyne	150-170	300-340
butane	150-180	420-500	ethylene	150-170	270-320
n-pentane	180-200	600-670	isobutene	180-200	450-500
nonane	150-170	800-950			

Figure 2 Sensitivity Temperature Characteristics

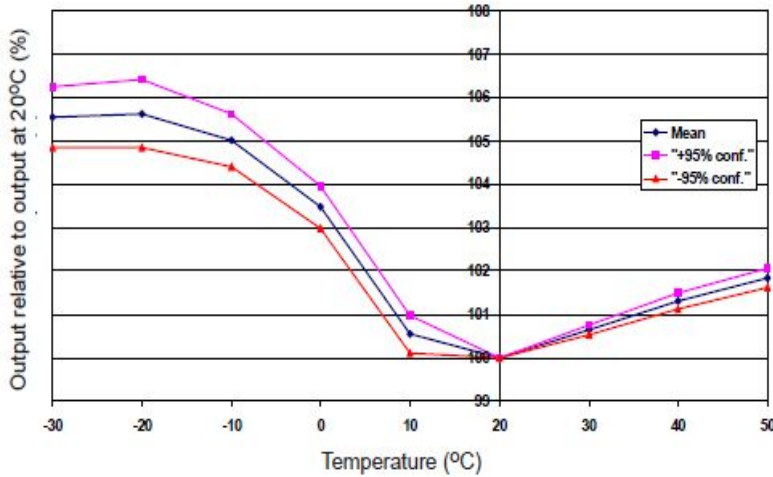


Figure 2 shows the sensitivity changes caused by temperature changes.

The data are taken from typical batches of transducers. Figure 2 shows the percentage average output relative to 20°C and the ±95% confidence interval.

Figure 3 Linearity

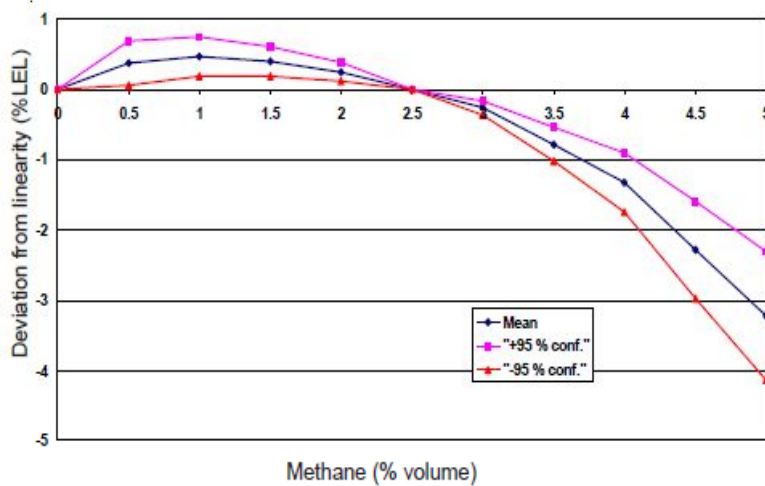


Figure 3 shows the nonlinearity of 0-5% vol of alkyl. The sensor has a nonlinearity error of less than 4% at 100% LEL.

The data were taken from typical batches of transducers. Figure 3 shows the average linear deviation and ± 95% confidence interval.

CERTIFICATION

Sira 07ATEX 1088X



II 2 G
Ex d IIC T4
-40°C to +55°C
5V, 1.4 W

IECEx SIR07.0031X

Ex d IIC T4
5Vdc, 1.4 W, T_a -40° to +55°C

UL913 091007-E253708

Class I, II and III, Division 1
10 V, 1.5 W, 10 µH

CSA 22.2 1906313

Class 4828 31

SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

The non-metallic parts of the Flameproof Sensor Housings shall only be installed in enclosures that offer protection from mechanical impact damage and shall not be exposed to ultraviolet radiation.

The final installation of the Flameproof Sensor Housings shall ensure that any likely damage from dropping the complete device has been considered.

The Flameproof Sensor Housings shall only be connected to an electrical supply that is certified as compliant with IEC 60079-11 and limited to the following: Type A - 5 Vdc, 1.4 W

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