7COSH CiTiceL®

(Four-electrode dual gas sensor)

Performance Characteristics

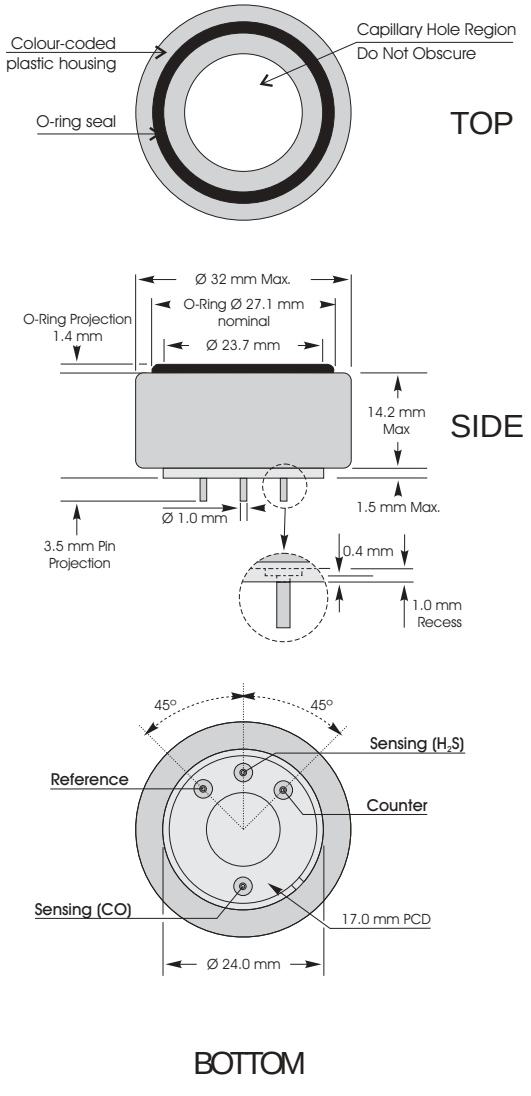
Nominal Range	For CO: 0-500ppm For H_2S: 0-200ppm
Maximum Overload	For CO: 1500ppm For H_2S: 500ppm
Expected Operating Life	Three years in air
Output Signal	For CO: 150± 50nA/ppm For H_2S: 900 ± 200nA/ppm
Resolution	For CO: ±1.0ppm For H_2S: ±0.5ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
T_{90} Response Time	For CO≤35 seconds For H_2S≤35 seconds
Relative Humidity Range	15 to 90% non-condensing
Long Term Output Drift	<5% signal loss/year
Recommended Load Resistor	10Ω
Bias Voltage	Not required
Repeatability	For CO≤3% of signal For H_2S≤2% of signal
Output Linearity	Linear across range
Cross Sensitivity, *see Note1	
To H_2S **To CO**	For CO electrode: 40-80% For H_2S electrode: ≤2%

Note1: For humidity range 15 to 90%, non-condensing
N.B. All other performance data is based on conditions at 20°C, 50%RH, and 1013mBar

Physical Characteristics

Colour of Top	Medium Blue
Weight	17g approx.
Position Sensitivity	None
Storage Life	Six months in CTL container
Recomm. Storage Temp.	0-20°C
Warranty Period	12 months from date of despatch

Outline Dimensions



All dimensions in mm
All tolerances ±0.15mm unless otherwise stated

IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

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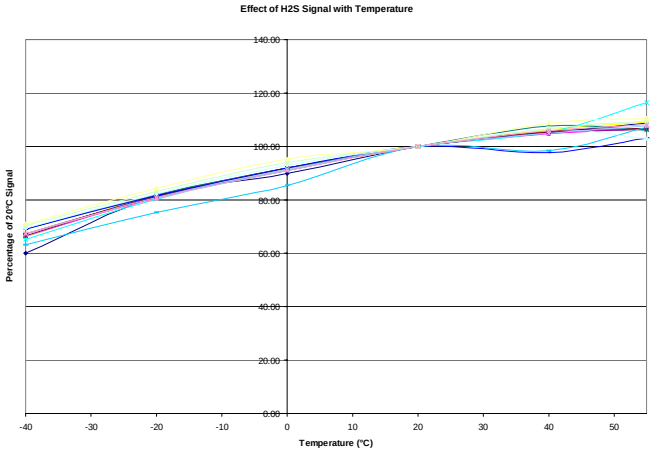
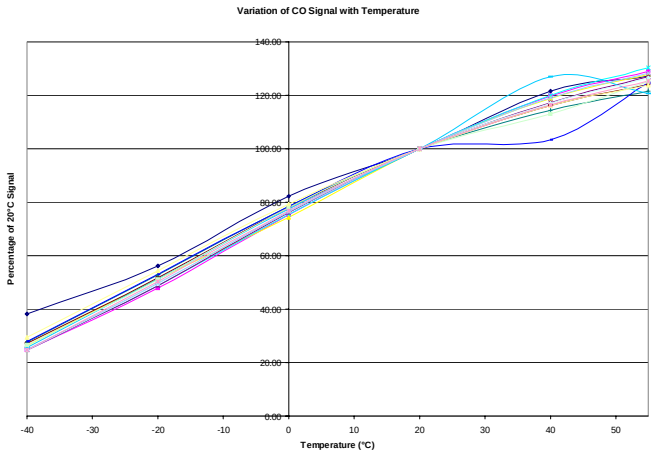
Typical Temperature Behaviour





Variation of H_2S cross-sensitivity with temperature is under investigation at City Technology

Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 7COSH CiTiceLs have been tested with a number of commonly cross-interfering gases and the results are given below. The table shows the typical response to be expected from a sensor when exposed to a given test gas concentration (relevant to safety, e.g. TLV levels):

Test Gas	Test gas conc. (ppm)	ppm on H_2S elect.	ppm on CO elect.
Carbon monoxide	300	<3	300
Hydrogen sulphide	15	15	5 to 11
Hydrogen	100	<0.2	5 to 20
Nitric oxide	35	<3.5	3.5-7
Nitrogen dioxide	5	-1.75 to -0.5	-2 to -0.75
Chlorine	1	-1 to 0	-0.05 to -0.01
Sulphur dioxide	5	0.4 to 0.75	<1

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