(Four electrode dual gas sensor)

Performance Characteristics

Nominal Range | For CO: 0-500 ppm

For H₂S: 0-200 ppm

Maximum Overload For CO: 1500 ppm

For H₂S: 500 ppm

Expected Operating Life Three years in air

> **Output Signal** For CO: $80 \pm 30 \text{ nA} / \text{ppm}$

> > For H₂S: 775 ± 275 nA / ppm

For CO: ±1.0 ppm Resolution

For H₂S: ±0.5 ppm

Temperature Range -20°C to +50°C

> **Pressure Range** Atmospheric ± 10%

T_{on} Response Time For CO: ≤35 seconds

For H₂S: ≤35 seconds

Relative Humidity Range 15 to 90% non-condensing

Typical Baseline Range For CO: -2 to +3 ppm

(ppm equiv.) For H_2S : -0.4 to +0.4 ppm

Long Term Output Drift <5% signal loss/year

Recommended Load 10Ω

Resistor

Not required

Bias Voltage

Repeatability For CO: ≤3% of signal

For H₂S: ≤2% of signal

Output Linearity

N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013 mBar

Physical Characteristics

Weight | 5g approx.

Position Sensitivity

None

Storage Life

Six months in CTL container

Recommended Storage Temperature

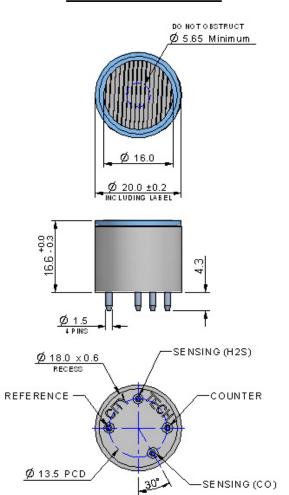
0-20°C

Warranty Period

12 months from date of

despatch

Product Dimensions



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

Dimensions are for indication purposes only. For further details, contact City Technology Ltd.

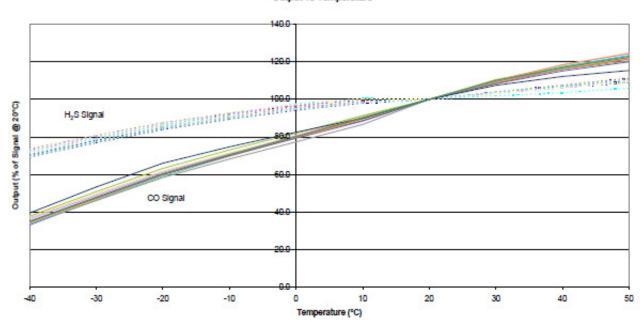
IMPORTANT NOTE: Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor.

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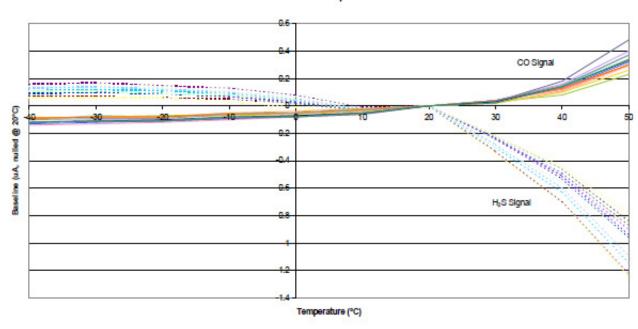
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4COSH Hydrogen Sulphide/Carbon Monoxide CiTiceL Output vs Temperature



4COSH Hydrogen Sulphide/Carbon Monoxide CiTiceL Baseline vs Temperature



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Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 4COSH 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 ₂ S channel	ppm on CO channel
Carbon Monoxide, CO	300	<6	300
Hydrogen Sulfide, H ₂ S	15	16	0 to 6
Hydrogen	100	0.03	~ 20
Nitric Oxide, NO	35	<1	<0.1
Nitrogen Dioxide, NO ₂	5	~ -1	<0.1
Chlorine, Cl ₂	1	0	0
Sulfur Dioxide, SO ₂	5	<1	0

SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.

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