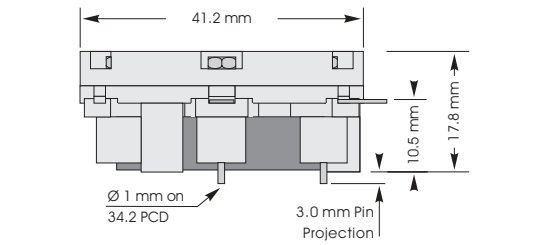
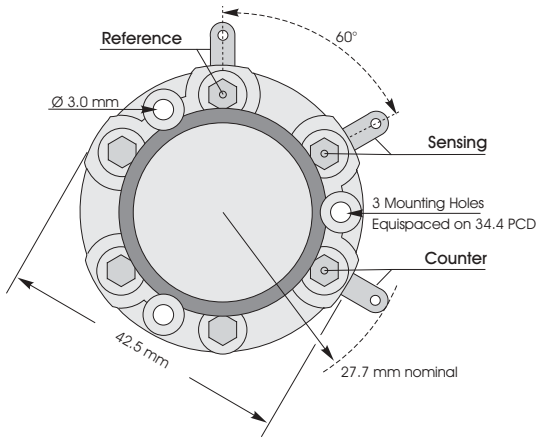
3SH CiTiceL®

Performance Characteristics

Nominal Range	0-20ppm
Maximum Overload	100ppm
Expected Operating Life	Two years in air
Output Signal	1.25 ± 0.25 µA/ppm
Resolution	0.1ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T_{90} Response Time	≤15 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-0.1 to 0.2ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	0.1ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10Ω
Bias Voltage	Not required
Repeatability	2% of signal
Output Linearity	Linear

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





All tolerances ±0.15mm unless otherwise stated.
3SH shown with side tags and gold pins.
Do not solder to pin connections

Physical Characteristics

Weight	22g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch

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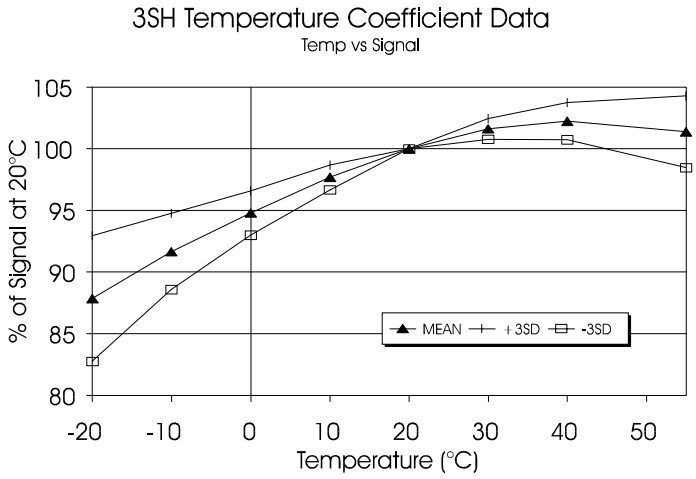
Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3SH CiTiceLs based on a sample of about 16 sensors. The results are shown in the graph as a mean for the batch, and expressed as a percentage of the signal at 20°C.

From a statistical viewpoint, for a sample of this size, the range in values observed for all sensors of this type will fall within a range three times the standard deviation above or below the mean. Assuming therefore this sample is typical, then the temperature behaviour of all 3SH CiTiceLs will fall in the band +3SD to -3SD.



Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3SH 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).

Gas	Conc.	3SH	Gas	Conc.	3SH
Carbon monoxide:	300ppm	≤3ppm	**Hydrogen:**	100ppm	0ppm
Hydrogen sulphide:	15ppm	≈20ppm	**Hydrogen cyanide:**	10ppm	≈5ppm
Nitric oxide:	35ppm	0ppm	**Hydrogen chloride:**	5ppm	≈0.5ppm
Nitrogen dioxide:	5ppm	≈-6ppm	**Ethylene:**	100ppm	0ppm
Chlorine:	1ppm	≈-0.5ppm			

For details of other possible cross-interfering gases contact City Technology.

Ordering Information

The 3SH Sulphur Dioxide CiTiceL is available with side tags, gold-plated PCB pins, or both PCB pins and side tags. To ensure the appropriate option is supplied care must be taken to provide the correct code when ordering.

Type 3SH:-	With side tag and PCB pin connections - **3SH**
	With side tag connection - **3SH(S)**
	With gold-plated PCB pin connection - **3SH(G)**

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