

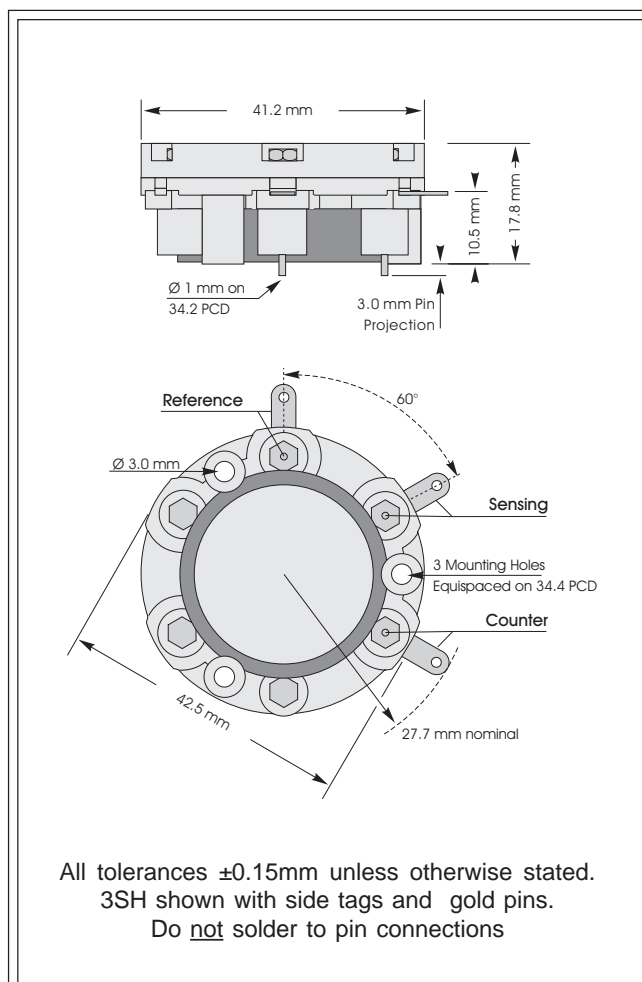


# 3SH CiTiceL<sup>®</sup>

## Performance Characteristics

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

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



## Physical Characteristics

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



**Distributed by:**

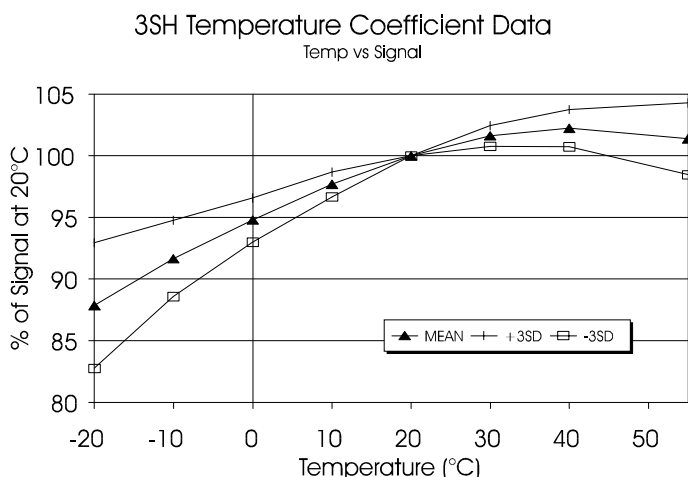
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## Temperature Dependence

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).

<u>Gas</u>	<u>Conc.</u>	<u>3SH</u>	<u>Gas</u>	<u>Conc.</u>	<u>3SH</u>
<b>Carbon monoxide:</b>	300ppm	≤3ppm	<b>Hydrogen:</b>	100ppm	0ppm
<b>Hydrogen sulphide:</b>	15ppm	≈20ppm	<b>Hydrogen cyanide:</b>	10ppm	≈5ppm
<b>Nitric oxide:</b>	35ppm	0ppm	<b>Hydrogen chloride:</b>	5ppm	≈0.5ppm
<b>Nitrogen dioxide:</b>	5ppm	≈6ppm	<b>Ethylene:</b>	100ppm	0ppm
<b>Chlorine:</b>	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.

<p><b>Type 3SH:-</b> With side tag and PCB pin connections - <b>3SH</b>                  With side tag connection - <b>3SH(S)</b>                  With gold-plated PCB pin connection - <b>3SH(G)</b></p>
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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.