



3MH mV Output CiTiceL[®]

Performance Characteristics

Sensor Type Used	3H
Expected Operating Life	Two years in air
Output Signal Standard	1mV/ppm ($\pm 5\%$)
High Output	10mV/ppm ($\pm 5\%$)
Maximum Range Standard	0-250ppm
High Output	0-200ppm
Resolution	0.25ppm
Maximum Zero Output	0 \pm 1mV
Maximum Zero Shift (+20°C to +40°C)	<2ppm equivalent
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric $\pm 10\%$
Pressure Coefficient	0.02% Signal/mBar
T₉₀ Response Time	≤ 35 seconds
Relative Humidity Range	15 to 90% non-condensing
Long Term Output Drift	<2% of full signal/month
Repeatability	1% of signal
Output Linearity	Linear

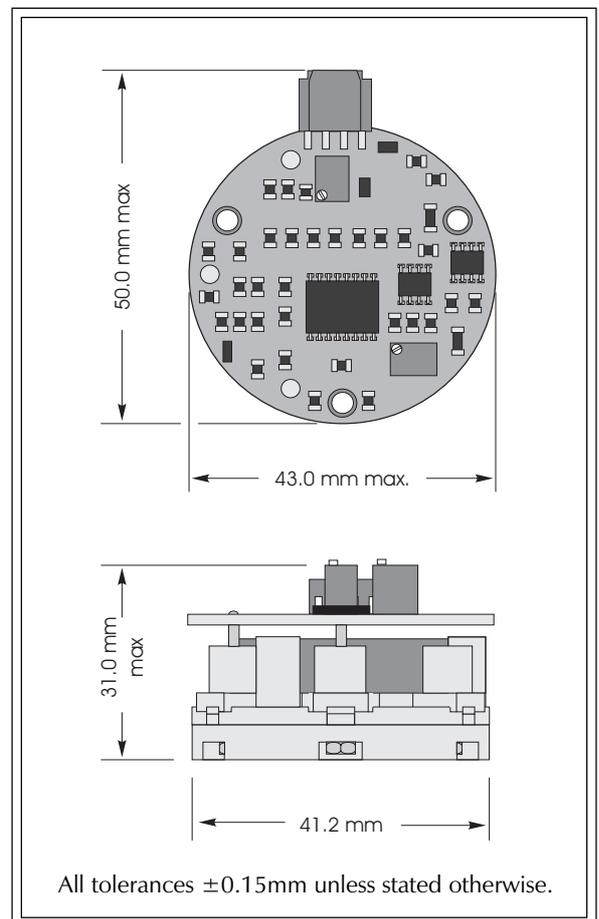
N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar

Physical Characteristics

Weight	38g (with connector)
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch

Electrical Properties

Power Supply Required	7 to 18V d.c. single ended or ± 3.5 to $\pm 9V$ d.c. dual
Power Consumption	250 μ A @ 9V d.c.
Calibration	Via built-in span and zero potentiometers



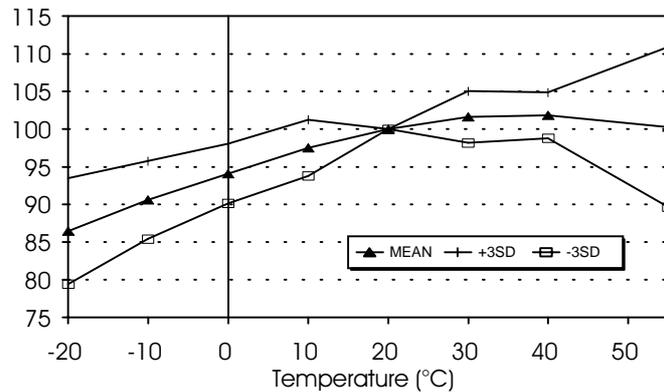


Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3H 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 3H CiTiceLs will fall in the band +3SD to -3SD.

3H Temperature Coefficient Data
Temp vs Signal



Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3H 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.	3H	Gas	Conc.	3H
Carbon monoxide:	300ppm	≤6ppm	Hydrogen:	10,000ppm	<15ppm
Sulphur dioxide:	5ppm	<1ppm	Hydrogen cyanide:	10ppm	0ppm
Nitric oxide:	35ppm	<0ppm	Hydrogen chloride:	5ppm	0ppm
Nitrogen dioxide:	5ppm	≈-1ppm	Ethylene:	100ppm	0ppm
Chlorine:	1ppm	≈-0.1ppm			

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

Ordering Information

Standard mV H₂S CiTiceL..... MCH60-014
High Output mV H₂S CiTiceL..... MCH60-024

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