Chlorine CiTiceL® Specification

3MCLH mV Output CiTiceL®

Performance Characteristics

Sensor Type Used	3CLH
Expected Operating Life	Two years in air
Output Signal **Standard** **High Output**	 1mV/ppm (±5%) 10mV/ppm (±5%)
Maximum Range	0-100ppm
Resolution	0.1ppm
T_{80}* Response Time	≤60 seconds
Maximum Zero Output	0 ± 1mV
Maximum Zero Shift (+20°C to +40°C)	-0.5ppm equivalent
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
Relative Humidity Range	15 to 90% non-condensing
Long Term Output Drift	<2% of full signal/month
Repeatability	2% of signal
Output Linearity	Linear

*T_{80} : Time taken for signal to reach 80% of final signal.

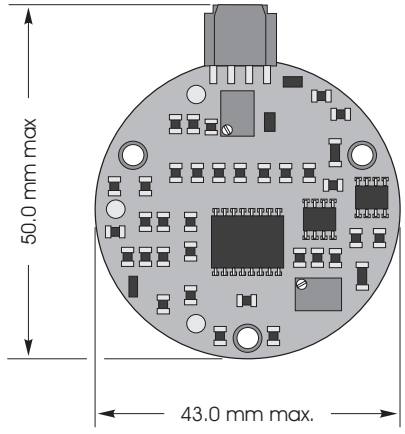
N.B. All performance data is based on conditions at 20°C, 50%RH, and 1013mBar

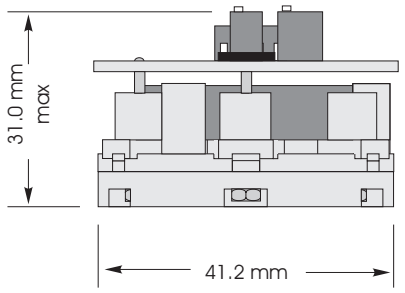
Physical Characteristics

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 ± 9V d.c. dual
Power consumption	250μA @ 9V d.c.
Calibration	Via built-in span and zero potentiometers





All tolerances ±0.15mm unless stated otherwise.

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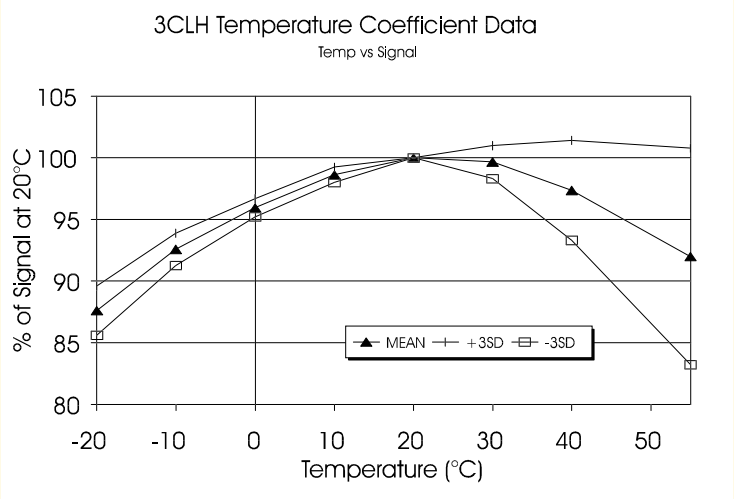
Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3CLH 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 3CLH 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. 3CLH 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.	3CLH	Gas	Conc.	3CLH
Carbon monoxide:	300ppm	0ppm	**Hydrogen:**	100ppm	0ppm
Hydrogen sulphide:	15ppm	≈-1.5ppm	**Hydrogen cyanide:**	10ppm	0ppm
Sulphur dioxide:	5ppm	0ppm	**Hydrogen chloride:**	5ppm	0ppm
Nitric oxide:	35ppm	0ppm	**Ethylene:**	100ppm	0ppm
Nitrogen dioxide:	5ppm	≈5ppm			

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

Ordering Information

Standard mV Cl_2 CiTiceL MHH60-014
High Output mV Cl_2 CiTiceL MHH60-024