



## 3MS/F CiTiceL

### High Range mV Output CiTiceL

#### High Range Version Performance Characteristics

<b>Sensor Type Used</b>	3SF
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	1mV/ppm ( $\pm 5\%$ )
<b>Maximum Range</b>	0-5000ppm
<b>Resolution</b>	1ppm
<b>Maximum Zero Output</b>	$0 \pm 1\text{mV}$
<b>Maximum Zero Shift (+20°C to +40°C)</b>	5ppm equivalent
<b>Temperature Range</b>	-15 to +50°C
<b>Pressure Range</b>	Atmospheric $\pm 10\%$
<b>Pressure Coefficient</b>	0.004% signal/mBar
<b>T<sub>90</sub> Response Time</b>	<30 seconds
<b>Relative Humidity Range</b>	15 to 90% non-condensing
<b>Long Term Output Drift</b>	<2% of full signal/month
<b>Repeatability</b>	1% of signal
<b>Output Linearity</b>	Linear

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

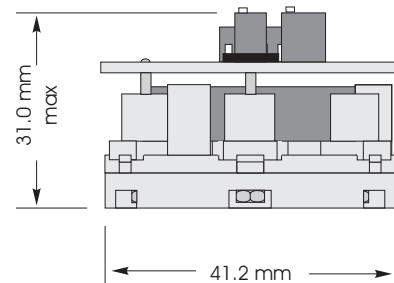
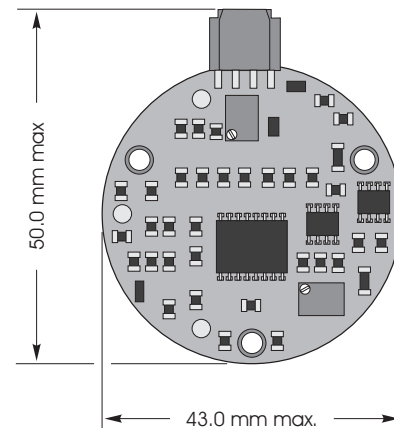
#### Physical Characteristics

<b>Weight</b>	38g (with connector)
<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

#### Electrical Properties

<b>Power Supply Required</b>	7 to 18V d.c. single ended or $\pm 3.5$ to $\pm 9\text{V}$ d.c. dual
<b>Power Consumption</b>	250 $\mu\text{A}$ @ 9V d.c.
<b>Calibration</b>	Via built-in span and zero potentiometers

#### Outline Dimensions



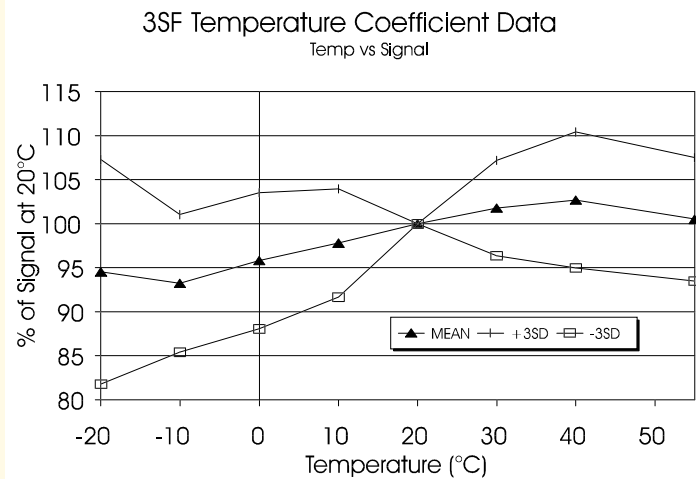
All tolerances  $\pm 0.15\text{mm}$  unless stated otherwise.



## Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3SF 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 3SF 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. The table below shows the typical response of 3SF sensors to a number of common cross-interfering gases. The figures are expressed as a percentage of the primary sensitivity (i.e. sulphur dioxide = 100%).

Gas	Response	Gas	Response
Carbon monoxide:	<3	Hydrogen:	<3
Hydrogen sulphide:	≈200	Hydrogen chloride:	≈15
Nitric oxide:	0	Ethylene:	<50
Nitrogen dioxide:	≈-125	** For details of other possible cross-interfering gases contact City Technology.**	

## Ordering Information

High Range mV SO<sub>2</sub> CiTiceL ..... MDF60-014

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