



## A3ME/F mV Output CiTiceL

The A3E/F Carbon Monoxide CiTiceL is available with a precalibrated mV/ppm output, known as the A3ME/F. This option combines a standard A3E/F CiTiceL with a low power surface mount design printed circuit board to convert the micro-amp level signal.

### Performance Characteristics

<b>Sensor Type Used</b>	A3E/F
<b>Expected Operating Life</b>	Two years in air
<b>Output Signal</b>	1mV/ppm ( $\pm 5\%$ )
<b>Maximum Range</b>	0-4000ppm
<b>Inboard Filter</b>	To remove acid gases
<b>Auxiliary Electrode</b>	To compensate for H <sub>2</sub> cross-interference
<b>Maximum Zero Output</b>	0 $\pm$ 1mV
<b>Maximum Zero Shift (+20°C to +40°C)</b>	3ppm equivalent
<b>Temperature Range</b>	-20°C to +40°C
<b>Pressure Range</b>	Atmospheric $\pm 10\%$
<b>Pressure Coefficient</b>	0.02% signal/mBar
<b>T<sub>90</sub> Response Time</b>	<40 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

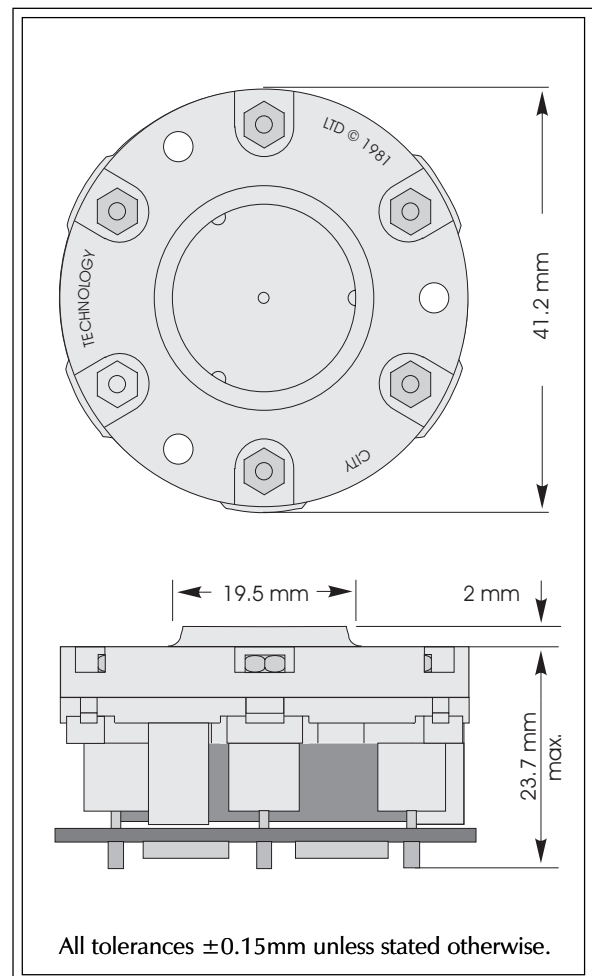
### Physical Characteristics

<b>Weight</b>	34g (incl. leads)
<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

Doc. Ref.: a3mef.p65  
Issue 3.2 Aug 26, 1999

### Electrical Properties

<b>Power Supply Required</b>	Recommended 9V d.c. Limits 3-10V d.c.
<b>Power Consumption</b>	500 $\mu$ A quiescent
<b>Calibration</b>	Via built-in span and zero potentiometers





## Temperature Dependence

The output of a CiTiceL can vary with temperature. As the operation of the A3E/F CiTiceL is different to that of standard CiTiceLs, the temperature behaviour of these sensors is very different. It cannot therefore be represented in the standard graph format, but details can be obtained from City Technology.

## 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 A3E/F sensors to a number of common cross-interfering gases. The figures are expressed as a percentage of the primary sensitivity (i.e. carbon monoxide = 100%).

Gas	Response	Gas	Response
Hydrogen sulphide:	0	Hydrogen:	<1 (see note)
Sulphur dioxide:	0	Hydrogen chloride:	0
Nitric oxide:	0	Ethylene:	≈35
Nitrogen dioxide:	0	** For details of other possible cross-interfering gases contact City Technology.**	

**Note:** Cross-sensitivity to H<sub>2</sub> <1% after compensation

## Ordering Information

mV Output A3E/F CiTiceL ..... A3ME/F