Carbon monoxide CiTiceL® Specification

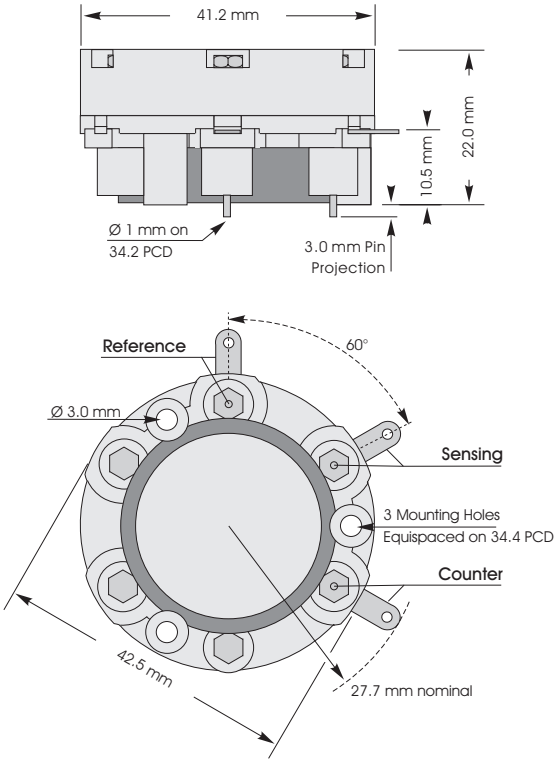
3F/D CiTiceL

Performance Characteristics

Nominal Range	0-4000ppm
Maximum Overload	20 000ppm
Inboard Filter	'Double size' filter to remove acid gases from flue stream
Expected Operating Life	Three years in air
Output Signal	0.030 ± 0.006 μA/ppm
Resolution	1ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.007 ± 0.003 %signal/mBar
T_{90} Response Time	<30 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-3 to +10ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	20ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10Ω
Bias Voltage	Not required
Repeatability	1% of signal
Output Linearity	Linear

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

Outline Dimensions



All tolerances ±0.15mm unless otherwise stated.
3F/F shown with side tags and tin pins.
Do not solder to pin connections

Physical Characteristics

Weight	29g
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of desparh

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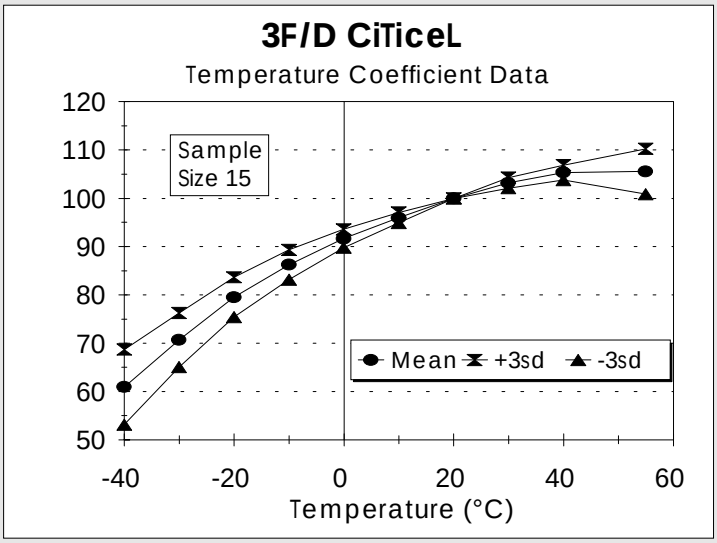
Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3F/D CiTiceLs based on a sample of about 15 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 this sample is typical of the 3F/D, then the temperature behaviour of all 3F/D 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 3F/D 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:**	<60[1]
Sulphur dioxide:	0	**Hydrogen chloride:**	0
Nitric oxide:	0	**Ethylene:**	n/d
Nitrogen dioxide:	0		

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

[1]For applications where a hydrogen compensated output is required the A3E/D CiTiceL should be used

n/d: No data, under investigation

Ordering Information

The 3F/D Carbon Monoxide 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.

Type 3F/D:-	With side tag and PCB pin connections - **3F/D**
	With side tag connection - **3F/D(S)**
	With gold-plated PCB pin connection - **3F/D(G)**