



## 3F/F CiTiceL<sup>®</sup>

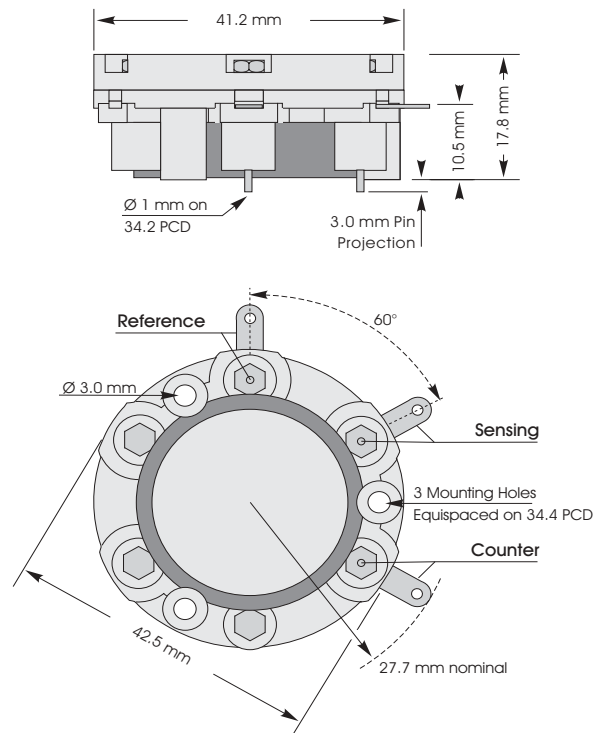
### Performance Characteristics

|  |  |
|--|--|
| <b>Nominal Range</b>                       | 0-4000ppm                              |
| <b>Maximum Overload</b>                    | 20 000ppm                              |
| <b>Inboard Filter</b>                      | To remove acid gases from flue stream. |
| <b>Filter Life</b>                         | 560,000 ppm hours *see Note            |
| <b>Expected Operating Life</b>             | Three years in air                     |
| <b>Output Signal</b>                       | 0.030 ± 0.006 µA/ppm                   |
| <b>Resolution</b>                          | 1ppm                                   |
| <b>Temperature Range</b>                   | -20°C to +50°C                         |
| <b>Pressure Range</b>                      | Atmospheric ± 10%                      |
| <b>Pressure Coefficient</b>                | 0.007 ± 0.003 %signal/mBar             |
| <b>T<sub>90</sub> Response Time</b>        | <30 seconds                            |
| <b>Relative Humidity Range</b>             | 15 to 90% non-condensing               |
| <b>Typical Baseline Rang (pure air)</b>    | -3 to +10ppm equivalent                |
| <b>Maximum Zero Shift (+20°C to +40°C)</b> | 20ppm equivalent                       |
| <b>Long Term Output Drift</b>              | <2% signal loss/month                  |
| <b>Recommended Load Resistor</b>           | 10Ω                                    |
| <b>Bias Voltage</b>                        | Not required                           |
| <b>Repeatability</b>                       | 1% of signal                           |
| <b>Output Linearity</b>                    | Linear                                 |

Note NO removal based on continuous exposure to 1000ppm and 5% breakthrough

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

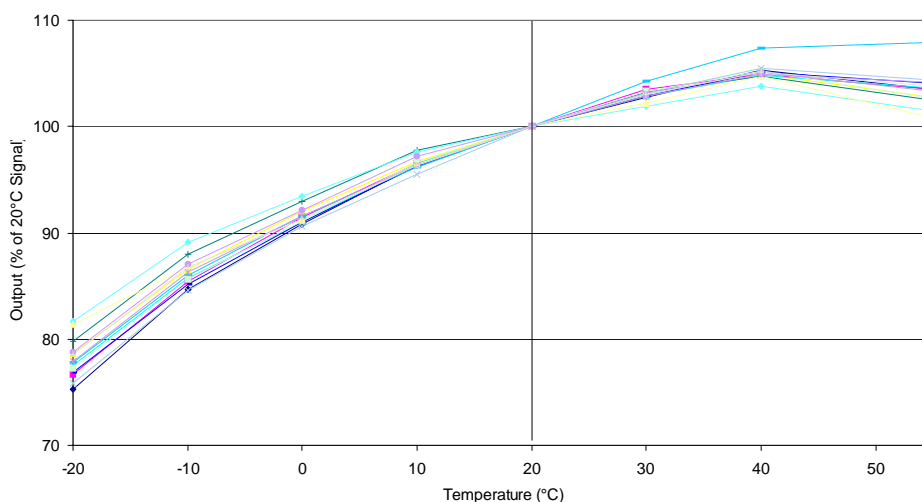
### Physical Characteristics

|  |                                 |
|--|---------------------------------|
| <b>Colour of Ring</b>                  | Red                             |
| <b>Weight</b>                          | 22g                             |
| <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 |

# Carbon monoxide CiTiceL<sup>®</sup> Specification



## 3F/F Carbon Monoxide - Output vs Temperature



## Ordering Information

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

## Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3F/F 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).

| <u>Gas</u>                | <u>Conc.</u> | <u>3F/F</u>         | <u>Gas</u>                | <u>Conc.</u> | <u>3F/F</u> |
|---------------------------|--------------|---------------------|---------------------------|--------------|-------------|
| <b>Hydrogen sulphide:</b> | 15ppm        | 0ppm                | <b>Sulphur dioxide:</b>   | 5ppm         | 0ppm        |
| <b>Nitric oxide:</b>      | 50ppm        | -1<x\$<0ppm         | <b>Nitrogen dioxide:</b>  | 50ppm        | -1<x\$<0ppm |
| <b>Hydrogen:</b>          | 100ppm       | <60ppm <sup>1</sup> | <b>Hydrogen chloride:</b> | 5ppm         | 0ppm        |
| <b>Ethylene:</b>          | 100ppm       | 0<x\$<20ppm         |                           |              |             |

<sup>1</sup>For applications where a hydrogen compensated output is required the A3E/D CiTiceL should be used

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

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.