

3E & 3E/F CiTiceLs

Performance Characteristics

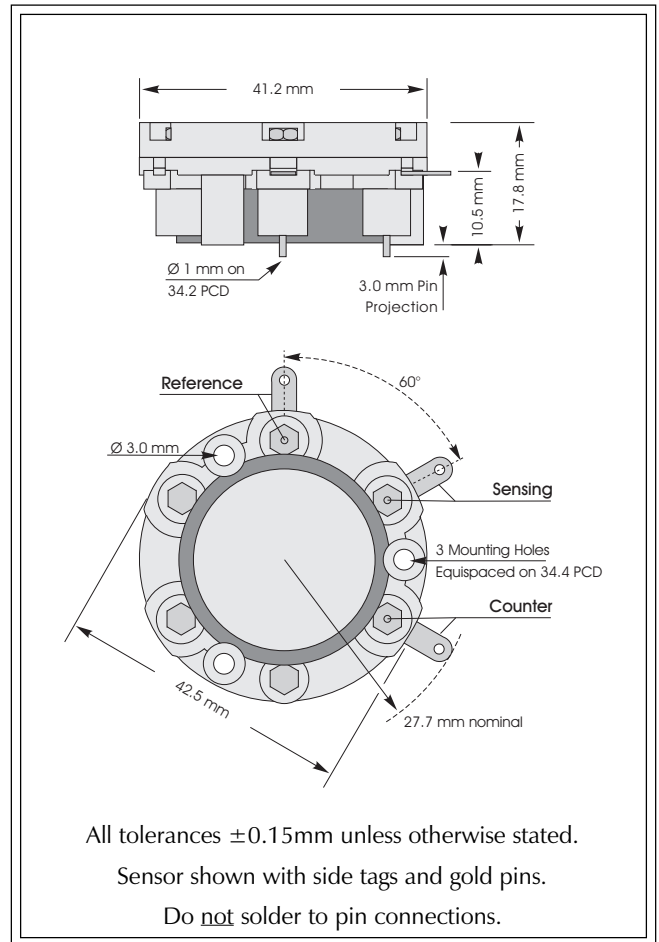
| | |
|--|---|
| Nominal Range | 0-1000ppm |
| Maximum Overload | 2000ppm |
| Expected Operating Life | Three years in air |
| Output Signal | 0.10 ± 0.02 µA/ppm |
| Inboard Filter (3E/F only) | To remove SO _x /NO _x & H ₂ S |
| Resolution | 0.5ppm |
| Temperature Range | -20°C to +50°C |
| Pressure Range | Atmospheric ± 10% |
| Pressure Coefficient | 0.020 ± 0.008 %signal/mBar |
| T₉₀ Response Time | 3E: ≤25 seconds 3E/F: ≤30 seconds |
| Relative Humidity Range | 15 to 90% non-condensing |
| Typical Baseline Range (pure air) | -1 to +3ppm equivalent |
| Maximum Zero Shift (+20°C to +40°C) | 9ppm equivalent |
| Long Term Output Drift | <5% signal loss/year |
| 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

Physical Characteristics

| | |
|--|---------------------------------|
| Weight | 22g |
| Position Sensitivity | None |
| Storage Life | Six months in CTL container |
| Recommended Storage Temperature | 0-20°C |
| Warranty Period | 12 months from date of despatch |

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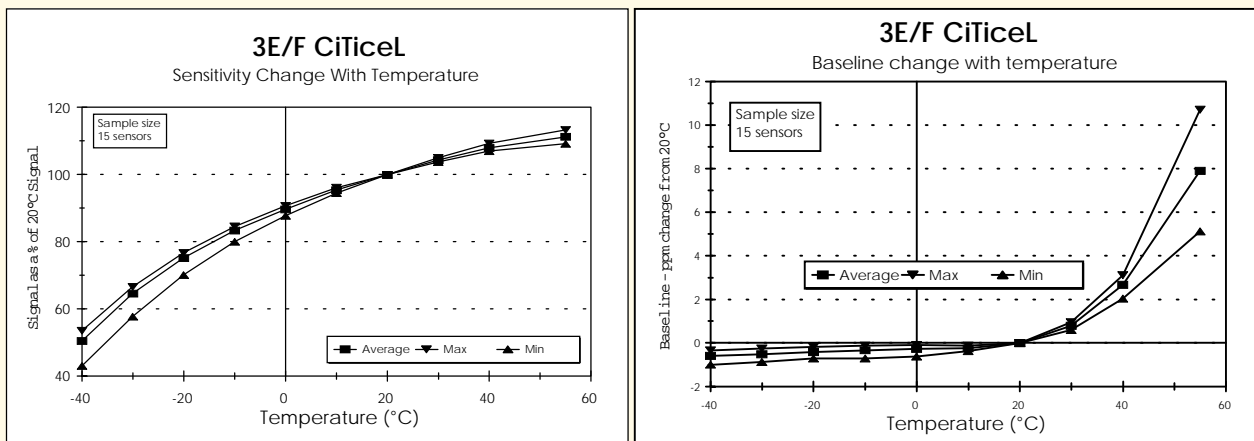
Ordering Information

The 3E and 3E/F Carbon Monoxide CiTiceLs are 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 3E | |
| With side tag and PCB pin connections | 3E |
| With side tag connection | 3E(S) |
| With gold-plated PCB pin connection | 3E(G) |
| Type 3E/F | |
| With side tag and PCB pin connections | 3E/F |
| With side tag connection | 3E/F(S) |
| With gold-plated PCB pin connection | 3E/F(G) |

Temperature Data

The temperature behaviour of 3E and 3E/F CiTiceLs can be considered to be virtually identical. The graphs below show the baseline and sensitivity changes with temperature for the 3E/F based on a sample size of about 15 sensors



Cross-sensitivity Data

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

| Gas | Conc. | 3E | Gas | Conc. | 3E/F |
|--------------------|--------|--------|--------------------|--------|---------|
| Hydrogen sulphide: | 15ppm | ≈50ppm | Hydrogen sulphide: | 15ppm | ≈1ppm |
| Sulphur dioxide: | 5ppm | ≈3ppm | Sulphur dioxide: | 5ppm | 0ppm |
| Nitric oxide: | 35ppm | ≈10ppm | Nitric oxide: | 35ppm | <3.5ppm |
| Nitrogen dioxide: | 5ppm | ≈-3ppm | Nitrogen dioxide: | 5ppm | 0ppm |
| Chlorine: | 1ppm | 0ppm | Chlorine: | 1ppm | 0ppm |
| Hydrogen: | 100ppm | <60ppm | Hydrogen: | 100ppm | <60ppm |
| Hydrogen cyanide: | 10ppm | ≈5ppm | Hydrogen cyanide: | 10ppm | 0ppm |
| Hydrogen chloride: | 5ppm | 0ppm | Hydrogen chloride: | 5ppm | 0ppm |
| Ethylene: | 100ppm | ≈90ppm | Ethylene: | 100ppm | ≤75ppm |

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.