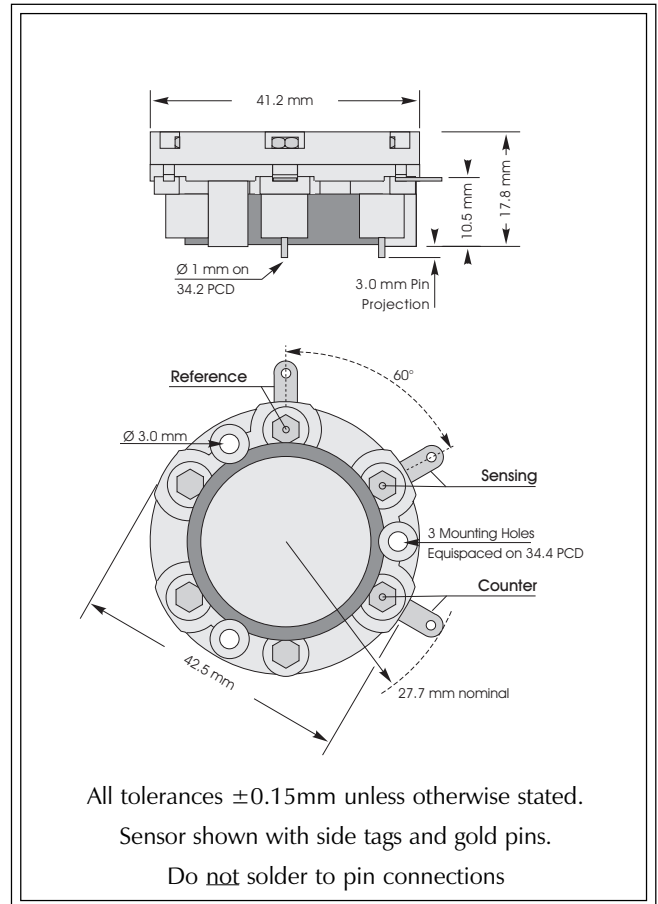


3HYE Hydrogen CiTiceL

Performance Characteristics

| | |
|--|--------------------------|
| Nominal Range | 0-10 000ppm |
| Maximum Overload | 20 000ppm |
| Expected Operating Life | Two years in air |
| Output Signal | 0.003 ± 0.001 μA/ppm |
| Resolution | 10ppm |
| Temperature Range | -20°C to +50°C |
| Pressure Range | Atmospheric ± 10% |
| Pressure Coefficient | 0.006 % signal/mBar |
| T₉₀ Response Time | <70 seconds |
| Relative Humidity Range | 15 to 90% non-condensing |
| Typical Baseline Range (pure air) | +2 to -150ppm equivalent |
| Maximum Zero Shift (+20°C to +40°C) | -150ppm equivalent |
| Long Term Output Drift | <2% signal loss/month |
| Recommended Load Resistor | 10 Ω |
| Bias Voltage | Not required |
| Repeatability | 2% of signal |
| Output Linearity | Linear |



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

Physical Characteristics

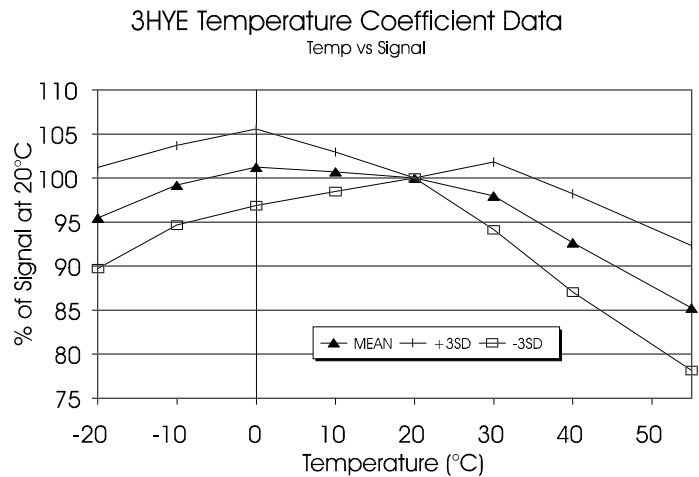
| | |
|--|---------------------------------|
| Weight | 22g |
| Position Sensitivity | None |
| Storage Life | Six months in CTL container |
| Recommended Storage Temperature | 0-20°C |
| Warranty Period | 12 months from date of despatch |



Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3HYE 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 3HYE 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. 3HYE 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. | 3HYE | Gas | Conc. | 3HYE |
|--------------------|--------|---------|--------------------|--------|--------|
| Carbon monoxide: | 300ppm | <120ppm | Chlorine: | 1ppm | 0ppm |
| Hydrogen sulphide: | 15ppm | ≈10ppm | Hydrogen cyanide: | 10ppm | ≈10ppm |
| Sulphur dioxide: | 5ppm | 0ppm | Hydrogen chloride: | 5ppm | 0ppm |
| Nitric oxide: | 35ppm | <10ppm | Ethylene: | 100ppm | ≈40ppm |
| Nitrogen dioxide: | 5ppm | 0ppm | | | |

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

Ordering Information

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

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