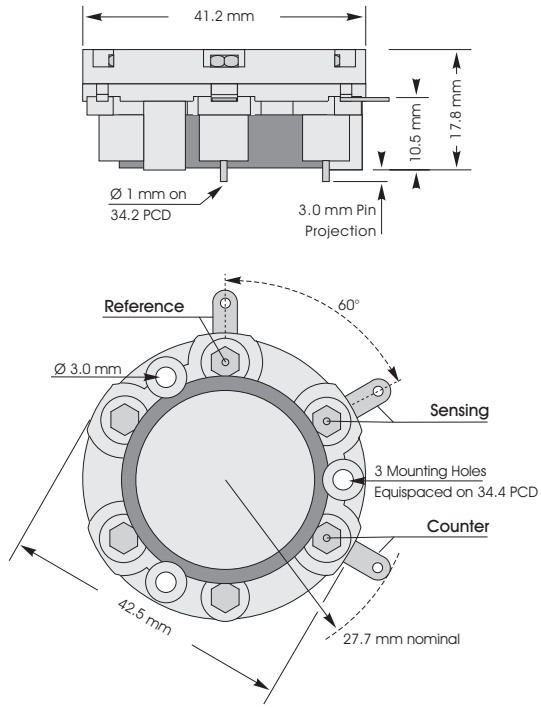
Sulphur dioxide CiTiceL® Specification

3ST/F CiTiceL®

Performance Characteristics

Nominal Range	0-100ppm
Maximum Overload	500ppm
Inboard Filter	To remove H_2S
Expected Operating Life	Two years in air
Output Signal	0.37 ± 0.07 μA/ppm
Resolution	0.5ppm
Temperature Range	-20° to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.015 % signal/mBar
T_{90} Response Time	≤20 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	-0.25 to +0.5ppm equiv.
Maximum Zero Shift (+20°C to +40°C)	1ppm 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



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

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 dtae of despatch

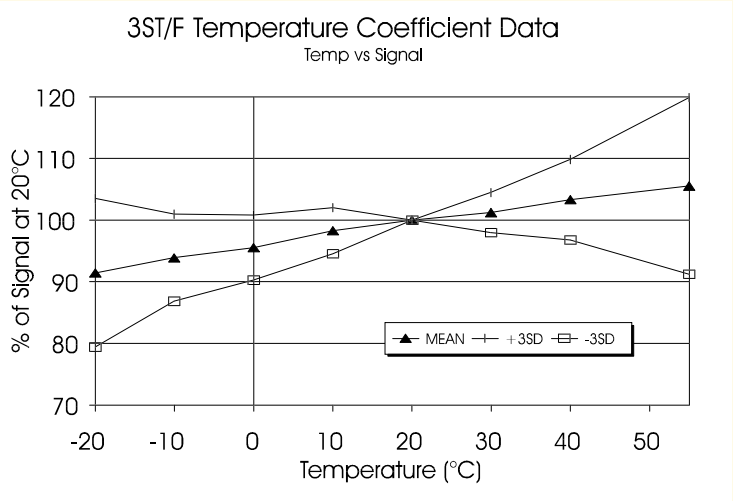
Doc. Ref.: 3STF.p65
Issue 4.3 Aug 12, 1999

City Technology Ltd, City Technology Centre, Walton Rd, Portsmouth PO6 1SZ, UK
Tel:+44 23 9232 5511, Fax:+44 23 9238 6611, sensors@citytech.co.uk, www.citytech.com

Temperature Dependence

The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3ST/F 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 3ST/F 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. 3ST/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.	3ST/F	Gas	Conc.	3ST/F
Carbon monoxide:	300ppm	<5ppm	**Hydrogen:**	100ppm	0ppm
Hydrogen sulphide:	15ppm	0ppm	**Hydrogen cyanide:**	10ppm	<5ppm
Nitric oxide:	35ppm	0ppm	**Hydrogen chloride:**	5ppm	0ppm
Nitrogen dioxide:	5ppm	≈-5ppm	**Ethylene:**	100ppm	0ppm
Chlorine:	1ppm	<-0.5ppm			

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

Ordering Information

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