



Sulphur dioxide CiTiceL[®] Specification



3ST/F CiTiceL[®]

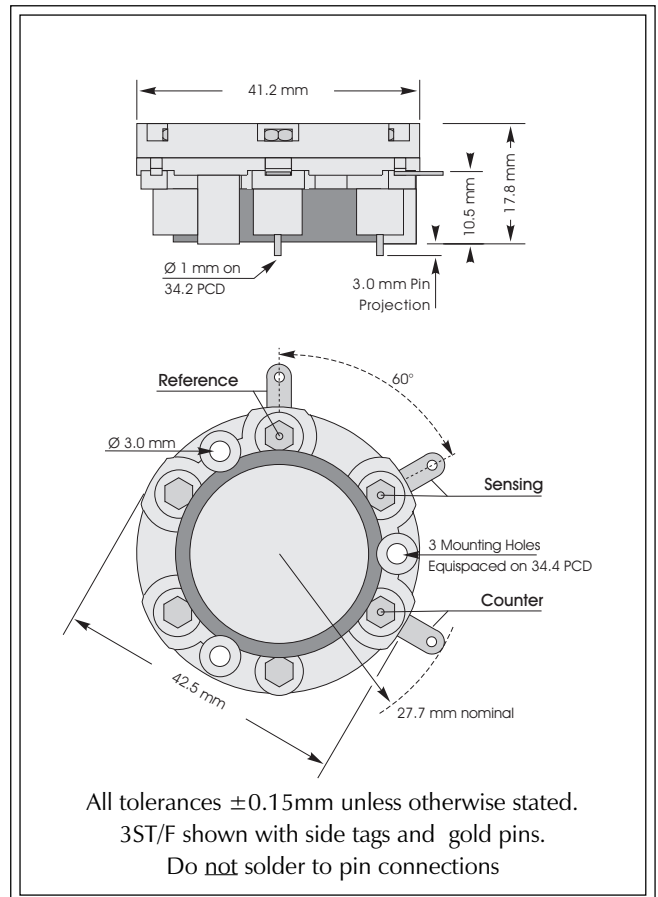
Performance Characteristics

Nominal Range	0-100ppm
Maximum Overload	500ppm
Inboard Filter	To remove H ₂ S
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
T₉₀ 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

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



Distributed by:
Shawcity Ltd

91-92 Shrivenham Hundred Business Park
Watchfield, Oxfordshire, SN6 8TY

Tel: 01793 780622

Email: sensororders@shawcity.co.uk

www.shawcity.co.uk

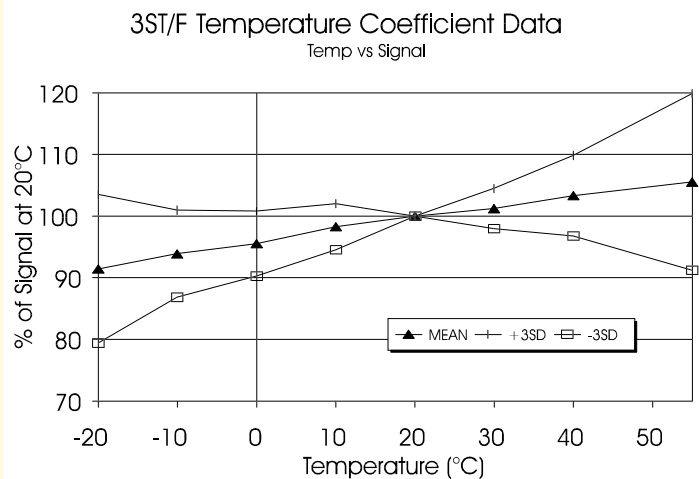
Doc. Ref.: 3STF.p65
Issue 4.3 Aug 12, 1999



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)**

Every effort has been made to ensure the accuracy of this document at the time of printing. In accordance with the company's policy of continued product improvement City Technology Limited reserves the right to make product changes without notice. No liability is accepted for any consequential losses, injury or damage resulting from the use of this document or from any omissions or errors herein. The data is given for guidance only. It does not constitute a specification or an offer for sale. The products are always subject to a programme of improvement and testing which may result in some changes in the characteristics quoted. As the products may be used by the client in circumstances beyond the knowledge and control of City Technology Limited, we cannot give any warranty as to the relevance of these particulars to an application. It is the clients' responsibility to carry out the necessary tests to determine the usefulness of the products and to ensure their safety of operation in a particular application. Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time.