



T3SH CiTiceL

Low Range 4-20mA Transmitter

Performance Characteristics

Sensor Type Used	3SH
Expected Operating Life	Two years in air
Resolution	0.1ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	No data
T₉₀ Response Time	≤15 seconds
Relative Humidity Range	15 to 90% non-condensing
Maximum Zero Shift (+20°C to +40°C)	0.1ppm equivalent
Long Term Output Drift	<2% signal loss/month
Repeatability	2% of signal
Output Linearity	Linear

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

Ranges Available

3SH CiTiceL 4-20mA Transmitters are available with the following precalibrated ranges, and can be recalibrated to an intermediate range:

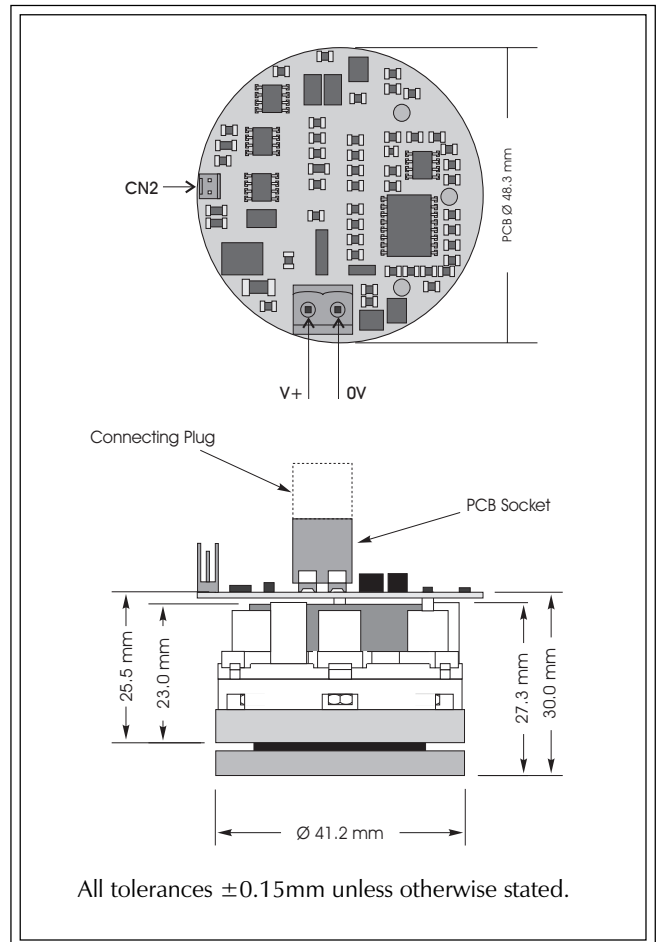
Range	Order Code
0-5ppm	TD9A-1A
0-10ppm	TD9B-1A
0-20ppm	TD9C-1A
0-30ppm	TD9D-1A
0-50ppm	TD9E-1A
0-100ppm	TD9F-1A

Electrical Properties

Output	4-20mA d.c.
Power Supply Required	10 to 35V d.c. single-ended
Calibration	Via built-in span and zero potentiometers
Output Impedance	4MΩ

Physical Characteristics

Weight	58g (incl. mounting accessory)
Position Sensitivity	None
Storage Life	Six months in CTL container
Recommended Storage Temperature	0-20°C
Warranty Period	12 months from date of despatch



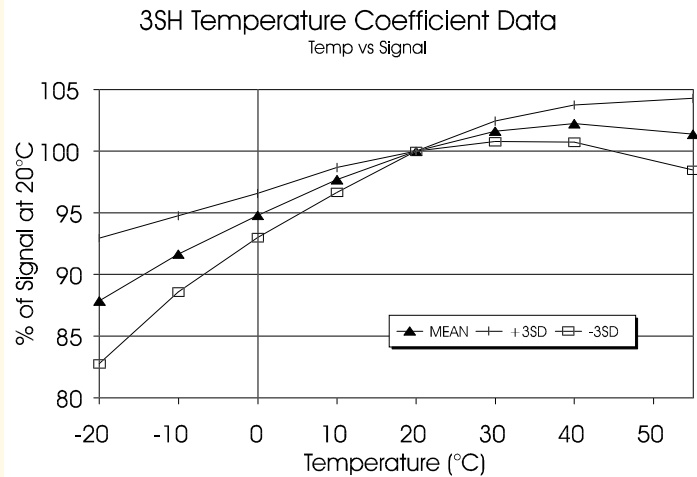


Distributed by:
 Shawcity Ltd
 91-92 Shrivenham Hundred Business Park
 Watchfield, Oxfordshire, SN6 8TY
 Tel: 01793 780622
 Email: sensororders@shawcity.co.uk
 www.shawcity.co.uk

Temperature Dependence

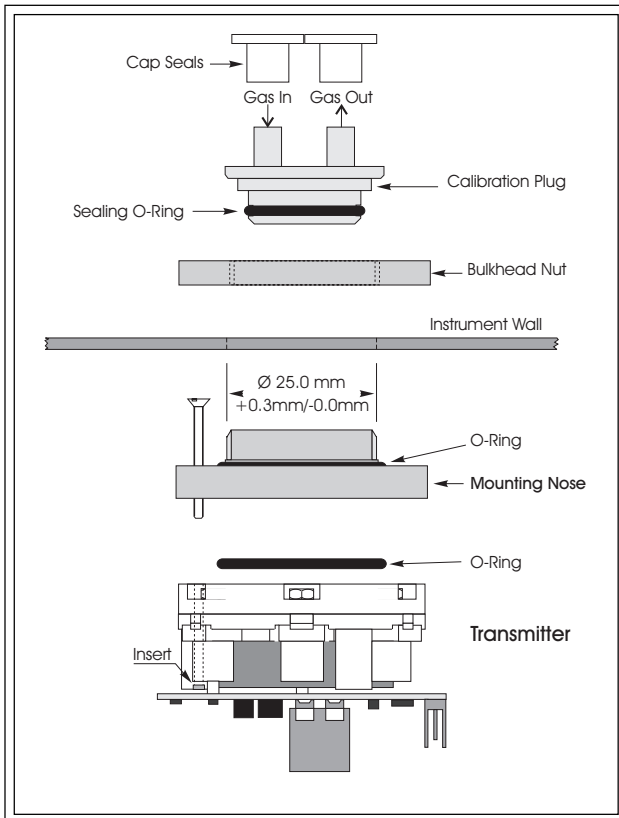
The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3SH CiTiceLs based on a sample of about 16 sensors. The results are shown in the graph as a mean for the batch, and expressed as a percentage of the signal at 20°C.

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 3SH CiTiceLs will fall in the band +3SD to -3SD.



Mounting

A diffusion mounting assembly, the "nose" adaptor, is supplied with CiTiceL transmitters for convenient mounting in a wide range of weatherproof housings. The nose adaptor requires a 25mm diameter hole in the outside wall of the housing to allow installation. The assembly is shown below.



The Mounting Nose also features a plug for easy zeroing and exposure to gas during calibration. A bonded membrane and mesh is included to prevent the ingress of dirt and dust particles to the CiTiceL.

Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. 3SH CiTiceLs have been tested with a number of commonly cross-interfering gases and the results expressed below as 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.	3SH
Carbon monoxide:	300ppm	≤3ppm
Hydrogen sulphide:	15ppm	≈20ppm
Nitric oxide:	35ppm	0ppm
Nitrogen dioxide:	5ppm	≈6ppm
Chlorine:	1ppm	≈0.5ppm
Hydrogen:	100ppm	0ppm
Hydrogen cyanide:	10ppm	≈5ppm
Hydrogen chloride:	5ppm	≈0.5ppm
Ethylene:	100ppm	0ppm

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

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.