

# **T3NDH CiTiceL**

#### **Performance Characteristics**

Sensor Type Used | 3NDH

**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

T<sub>90</sub> Response Time ≤35 seconds

**Relative Humidity Range** 15 to 90% non-condensing

**Maximum Zero Shift** 0.2ppm equivalent

 $(+20^{\circ}\text{C to } +40^{\circ}\text{C})$ 

<2% signal loss/month **Long Term Output Drift** 

> 2% of signal Repeatability

Output Linearity | Linear

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

## **Electrical Properties**

Output 4-20mA d.c.

**Power Supply Required** 10 to 35V d.c. single-ended

> Via built-in span and zero **Calibration**

potentiometers

Output Impedance

## **Physical Characteristics**

	58g (incl. mounting accessory)
<b>Position Sensitivity</b>	None
Storage Life	Six months in CTL container
Recommended Storage	0-20°C

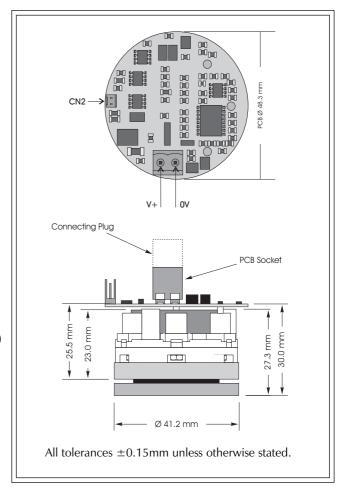
**Temperature** 

12 months from date of **Warranty Period** despatch

#### **Ranges Available**

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

Range	Order Code
0-5ppm	TG3A-1A
0-10ppm	
0-20ppm	TG3C-1A
0-30ppm	TG3D-1A
0-50ppm	TG3E-1A
0-100ppm	TG3F-1A
0-200ppm	TG3G-1A
0-300ppm	TG3H-1A



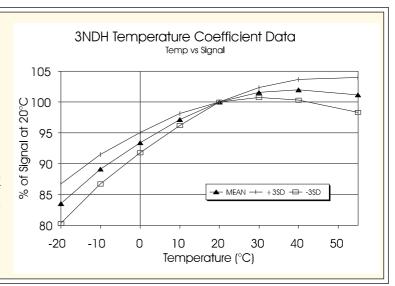
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#### **Temperature Dependence**

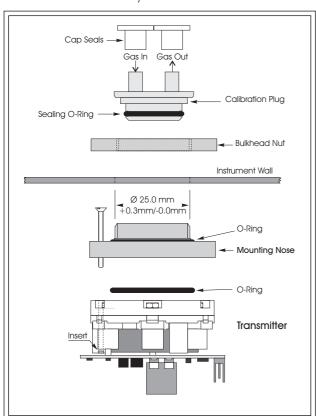
The output of a CiTiceL can vary with temperature. The graph here shows the variation in output with temperature for 3NDH CiTiceLs based on a sample of about 16 sensors. The results are shown in the graph as a mean for the batch, and expressed as a percentage of the signal at 20°C.

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 3NDH 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. 3NDH 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.	3NDH
Carbon monoxide:	300ppm	0ррт
Hydrogen sulphide:	15ppm	-1.5≤ x ≤0ppm
Sulphur dioxide:	5ppm	-0.05≤ x ≤0ppm
Nitric oxide:	35ppm	0ppm
Chlorine:	1ppm	≈1ppm
Hydrogen:	100ppm	0ppm
Hydrogen cyanide:	10ppm	0ppm
Hydrogen chloride:	5ppm	0ppm
Ethylene:	100ppm	0ppm

<sup>\*\*</sup>For details of other possible cross-interfering gases contact City Technology. \*\*

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