Nitric Oxide CiTiceL® Specification

A3NFX CiTiceL®

Performance Characteristics

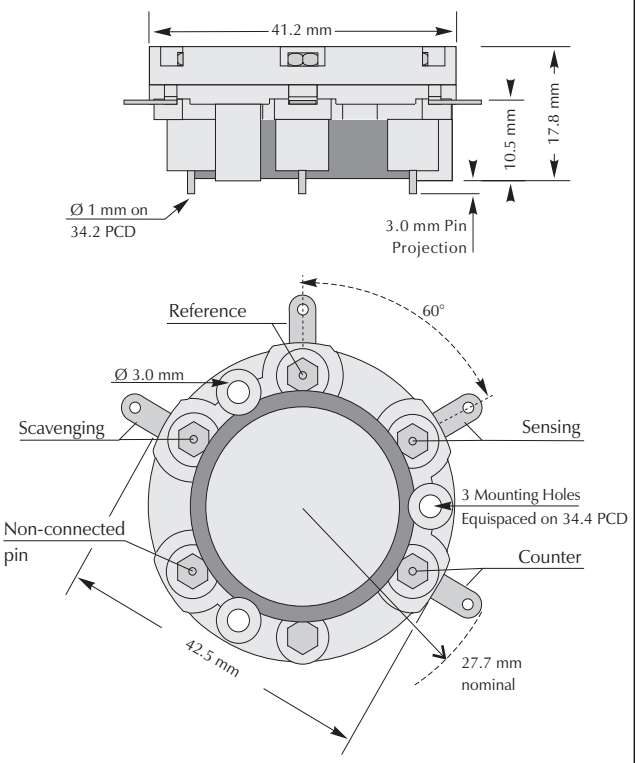
Nominal Range	0-5000ppm
Maximum Overload	10000ppm
Inboard Filter	To remove effect of SO_2 in flue stream
Expected Operating Life	Two years in air
Output Signal	0.03 ± 0.01 μA/ppm
Resolution	5ppm
Temperature Range	-20°C to +50°C
Pressure Range	Atmospheric ± 10%
Pressure Coefficient	0.01% signal/mBar
T_{90} Response Time	≤10 seconds
Relative Humidity Range	15 to 90% non-condensing
Typical Baseline Range (pure air)	0 to +50ppm equivalent
Maximum Zero Shift (+20°C to +40°C)	30ppm equivalent
Long Term Output Drift	<2% signal loss/month
Recommended Load Resistor	10 Ω
Bias Voltage	+300mV
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

Outline Dimensions



All tolerances ±0.15mm unless otherwise stated.

A3NFX shown with side tags and tin pins.
Do not solder to pin connections

Ordering Information

The A3NFX Nitric Oxide 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 A3NFX:-

With side tag and PCB pin connections - **A3NFX**
With side tag connection - **A3NFX(S)**
With gold-plated PCB pin connection - **A3NFX(G)**

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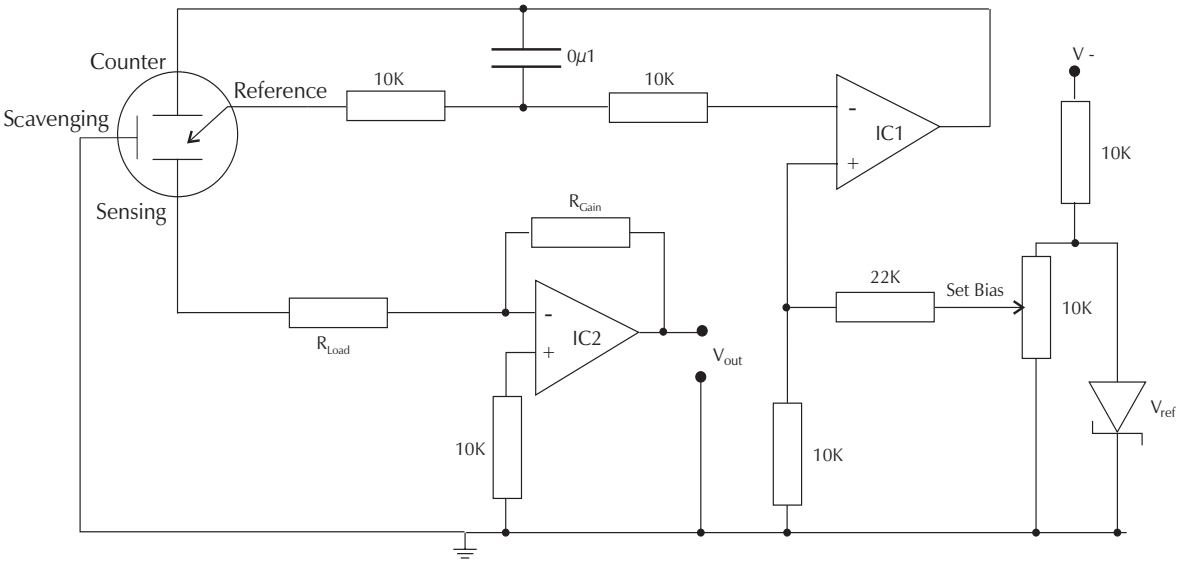
Cross-sensitivity Data

CiTiceLs may exhibit a response to certain gases in a sample other than the target gas. The table below shows the typical response of A3NFX sensors to a number of common cross-interfering gases. The figures are expressed as a percentage of the primary sensitivity (i.e. nitric oxide = 100%).

Gas	Response	Gas	Response
Carbon monoxide:	0	**Hydrogen:**	0
Hydrogen sulphide:	0	**Hydrogen chloride:**	<5
Sulphur dioxide:	0	**Ethylene:**	0
Nitrogen dioxide:	<10		

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

Recommended circuit for A3NFX



The A3NFX CiTiceL incorporates a fourth, "scavenging," electrode which may be connected to the instrument ground. In a normal 3-electrode sensor the products of NO oxidation can interfere with the potential of the sensor's reference electrode and possibly cause non-linearity of the signal and non-repeatability. This is especially the case in applications where the sensor is exposed repeatedly to high concentrations of nitric oxide. The "scavenging" electrode helps overcome this problem by chemically reacting the products of nitric oxide oxidation.