

## Key Features & Benefits:

- Designed for Automotive Applications
- Fast Response

## Technical Specifications

### MEASUREMENT

<b>Operating Principle</b>	3-electrode electrochemical
<b>Measurement Range</b>	0-5,000 ppm NO
<b>Filter</b>	To remove effect of SO <sub>2</sub> in gas stream
<b>Sensitivity</b>	0.05 ± 0.01 µA/ppm
<b>Response Time (T<sub>95</sub>)</b>	<8 Seconds at 20°C
<b>Baseline Offset (clean air)</b>	0 to +12 ppm equivalent
<b>Zero Shift (0°C to +40°C)</b>	<30 ppm equivalent
<b>Resolution</b>	Dependent on electronics (1 ppm when used with recommended electronics)
<b>Repeatability</b>	2% of signal
<b>Linearity</b>	Linear

### ELECTRICAL

<b>Recommended Load Resistor</b>	10 Ω
<b>Bias Voltage</b>	+300 mV

### MECHANICAL

<b>Weight</b>	32 g (nominal)
<b>Housing Material</b>	ABS
<b>Orientation</b>	Any

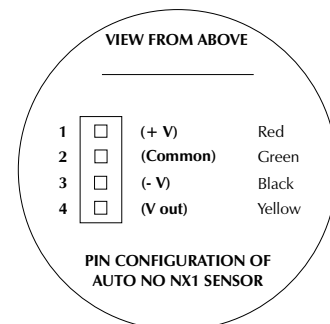
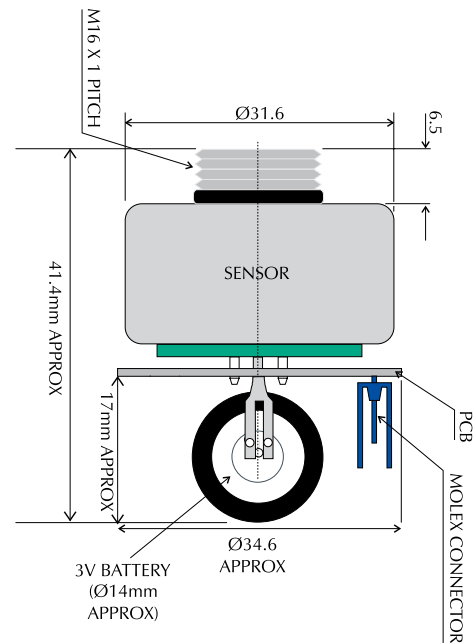
### ENVIRONMENTAL

<b>Operating Temperature Range</b>	-20°C to +50°C
<b>Recommended Storage Temp</b>	0°C to 25°C in CTL packaging
<b>Operating Pressure Range</b>	800 to 1100 mBar
<b>Pressure Coefficient</b>	0.02% signal/mBar
<b>Operating Humidity Range</b>	15 to 90% RH non-condensing

### LIFETIME

<b>Long Term Sensitivity Drift</b>	Typically <5% signal loss/year
<b>Storage Life</b>	6 months in CTL container
<b>Standard Warranty</b>	15 months from date of despatch

## Product Dimensions



All dimensions in mm  
All tolerances ±0.15 mm unless otherwise stated

## IMPORTANT NOTES:

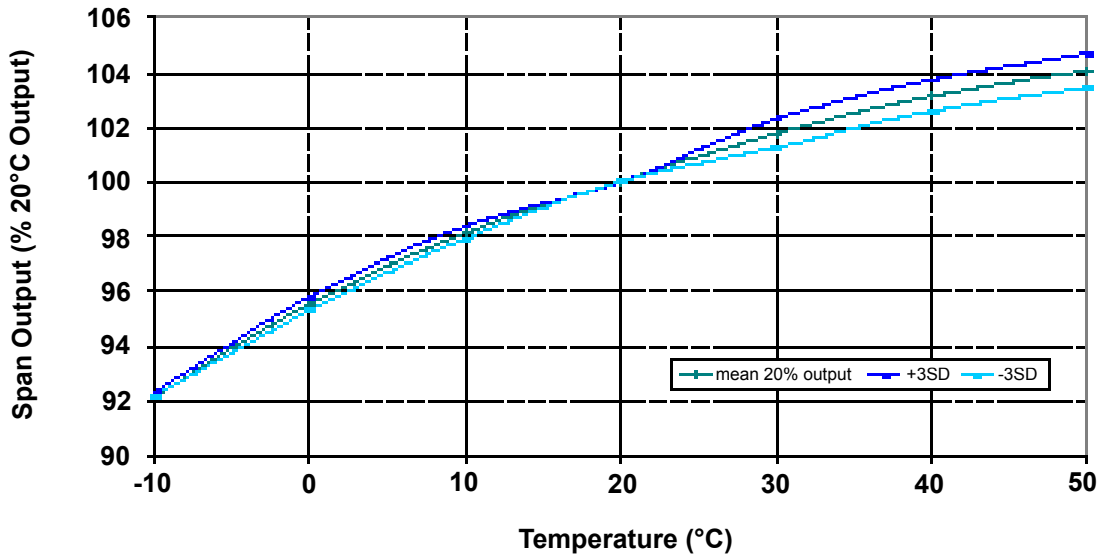
Prolonged exposure to high or low humidity may lead to an increased response time.

Connection should be made via PCB sockets only. Soldering to the pins will seriously damage your sensor and invalidate the warranty.

All performance data is based on conditions at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. For sensor performance data under other conditions, contact City Technology.

Automotive NX1 CiTiceL <sup>®</sup> Part Details	
MOLEX HEADER (0.100"/2.54mm)	Molex Part Number 22-29-2041
CRIMP TERMINAL HOUSING (MATING PART)	Molex Part Number 22-01-2045

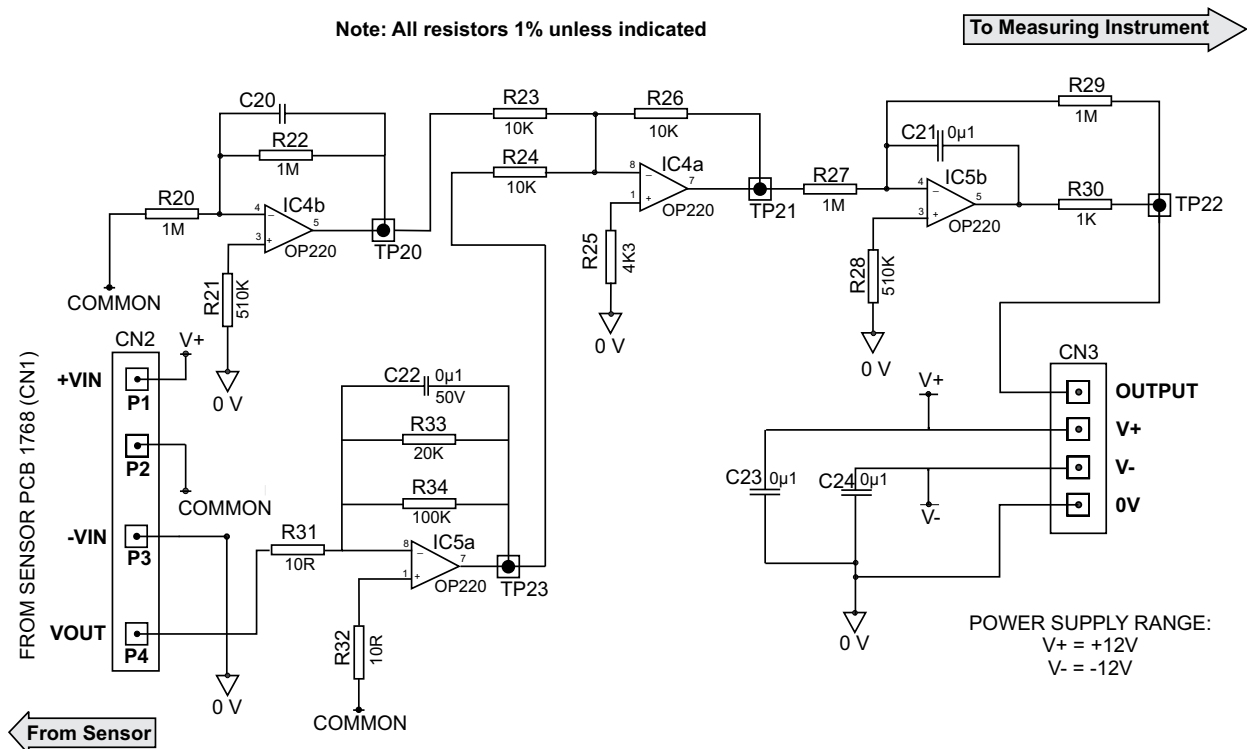
## Typical Span Output vs Temperature (°C)



## Recommended External Circuit for Sensor

This diagram shows the recommended operating circuit for the NX1 CiTiceL, designed to give an output of 0-5 V over the range 0-5000 ppm, where the sensitivity is 60 nA/ppm.

Note: All resistors 1% unless indicated



## **Poisoning**

CiTiceLs are designed for operation in a wide range of environments and harsh conditions. However, it is important that exposure to high concentrations of solvent vapours is avoided, both during storage, fitting into instruments and operation.

When using sensors with printed circuit boards (PCBs), degreasing agents should be used before the sensor is fitted. Do not glue directly on or near the CiTiceL as the solvent may cause crazing of the plastic.

### **SAFETY NOTE**

Although this product is not designed for use in life safety applications, if it is used in such applications it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument, to ensure that the sensor and/or instrument in which it is used, are operating properly. Failure to carry out such tests may jeopardize the safety of people and property.

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Performance characteristics on this data sheet outline the performance of newly supplied sensors. Output signal can drift below the lower limit over time

