NX1 CiTiceL®

Nitric Oxide (NO) Gas Sensor
Part Number: AF747-B05

Key Features & Benefits:

- **Designed for Automotive Applications**
- **Fast Response**

Technical Specifications

MEASUREMENT

Operating Principle	3-electrode electrochemical
Measurement Range	0-5,000 ppm NO
Filter	To remove effect of SO_2 in gas stream
Sensitivity	0.05 ± 0.01 µA/ppm
Response Time (T_{95})	<8 Seconds at 20°C
Baseline Offset (clean air)	0 to +12 ppm equivalent
Zero Shift (0°C to +40°C)	<30 ppm equivalent
Resolution	Dependent on electronics (1 ppm when used with recommended electronics)
Repeatability	2% of signal
Linearity	Linear

ELECTRICAL

Recommended Load Resistor	10 Ω
Bias Voltage	+300 mV

MECHANICAL

Weight	32 g (nominal)
Housing Material	ABS
Orientation	Any

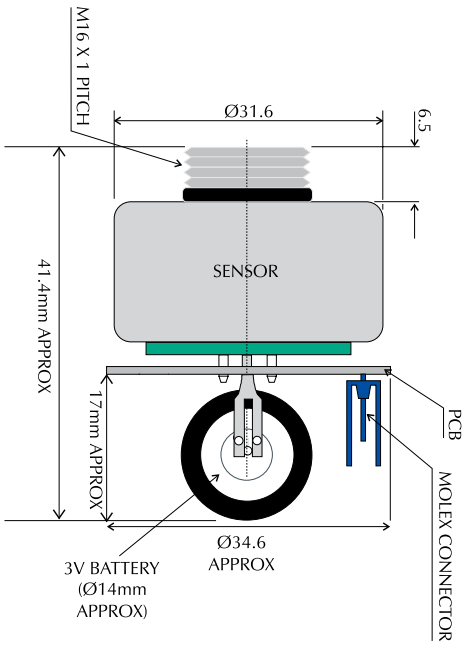
ENVIRONMENTAL

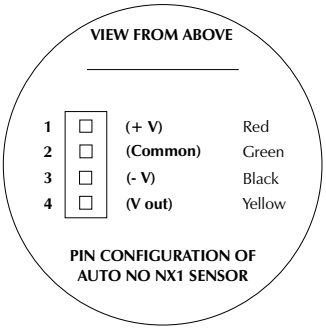
Operating Temperature Range	-20°C to +50°C
Recommended Storage Temp	0°C to 25°C in CTL packaging
Operating Pressure Range	800 to 1100 mBar
Pressure Coefficient	0.02% signal/mBar
Operating Humidity Range	15 to 90% RH non-condensing

LIFETIME

Long Term Sensitivity Drift	Typically <5% signal loss/year
Storage Life	6 months in CTL container
Standard Warranty	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® 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

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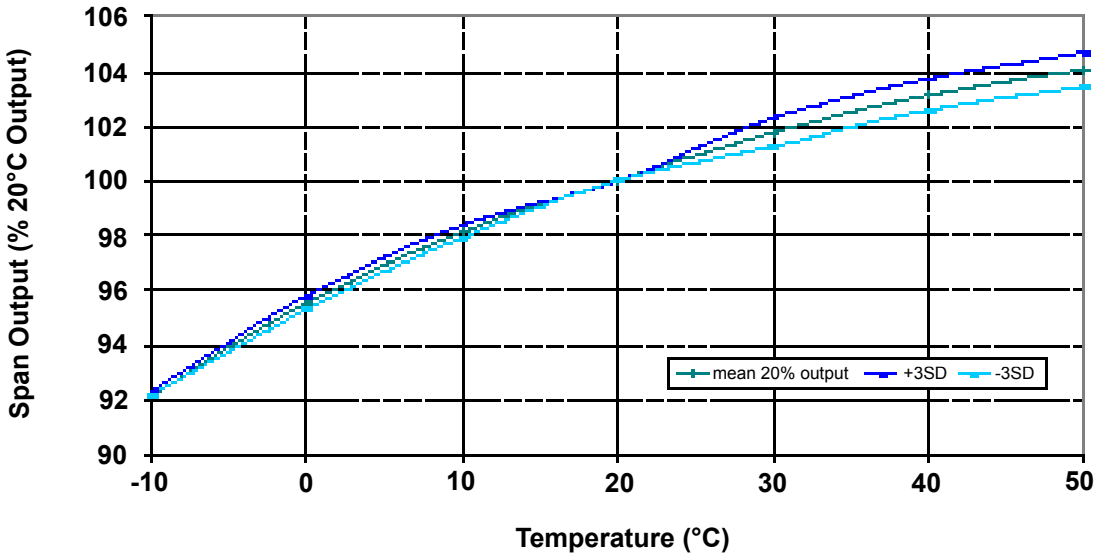
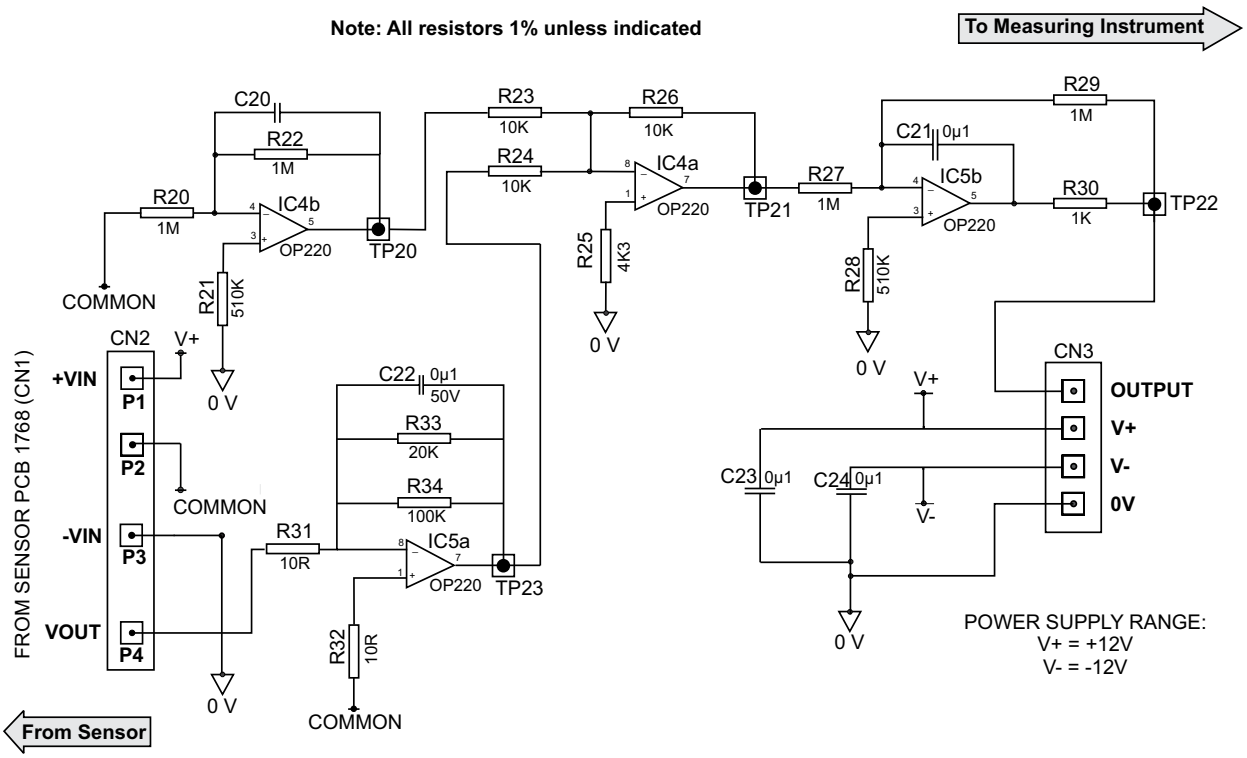
www.citytech.com

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.



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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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