Product Data Sheet

4OxLL CiTiceL®

Oxygen (O_2) Gas Sensor for Industrial Safety

Part Number: AA783-33H

Product Datasheet

4OxLL Longlife Oxygen CiTiceL®
(for industrial safety applications)

Document Purpose

The purpose of this document is to present the performance specification of the 4OxLL longlife oxygen sensor.

This document should be used in conjunction with the 4OxLL (industrial safety) Characterisation Note, the 4OxLL / 5OxLL Operating Principles (OP19) and the Product Safety Datasheet (PSDS 5).

The data provided in this document are valid at 20°C, 50% RH and 1013 mBar for 3 months from the date of sensor manufacture. For guidance on sensor performance outside of these limits, please refer to the 4OxLL (industrial safety) Characterisation Note.

Output signal can drift below the lower limit over time. For guidance on the safe use of the sensor, please refer to the Operating Principles OP19.

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Key Features and Benefits

- **Long Life**
- **Improved field reliably**
- **Superior environmental performance**
- **Enhanced response time in extreme conditions**

Technical Specifications

MEASUREMENT

Technology	Electrochemical
Measurement Range	0-25% vol. O_2
Maximum Overload	30% vol. O_2
Output Signal*	80 - 130 µA in Air
T90 Response Time*	<15 Seconds
T97 Response Time*	<35 Seconds
Zero Current (Offset)* (after 3 minutes N_2)	<0.3% vol. O_2
Warm-Up Time	Refer to Characterisation Note
Linearity	S = K $\log_e$ 1/ (1-C)

ELECTRICAL

Bias Voltage	-600 ± 10 mV
Power Rating at 20.9%O_2	0.5 mW

MECHANICAL

Casing Material	Noryl
Weight	5 ± 0.2 g
Orientation Sensitivity	<0.2%vol. O_2 equivalent

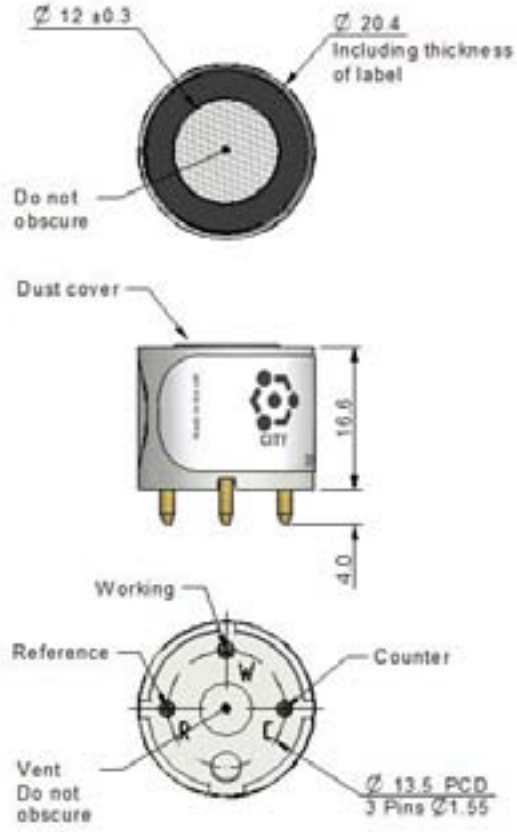
ENVIRONMENTAL

Operating Temperature Range	-40°C to 60°C
Recommended Storage Temp	0°C to 20°C in original packaging
Thermal Transient* (Temp. plunge +22°C to -20°C)	<23.5% vol. O_2
Operating Humidity Range	15%rH to 90%rH non-condensing
Operating Pressure Range	Atmospheric ± 20%
Pressure Coefficient*	<0.02% signal/mbar
Pressure Transient* (60 cm H_2O step change)	<150% signal change

LIFETIME

Long Term Output Drift*	<5% signal loss over operating life
Expected Operating Life	5 years in air

Product Dimensions



All tolerances ±0.15 mm unless otherwise stated.
DO NOT solder to pins.

IMPORTANT NOTE

When installing the sensor into instrumentation, the sensor vent hole should not be blocked. The instrument should also be adequately vented.

If the sensor vent hole is blocked or if the instrument is not adequately vented, sensor performance will be compromised.

For further details, refer to Operating Principles OP19.

*** Specifications are valid at 20°C, 50% RH and 1013 mBar, using City Technology recommended circuitry. Performance characteristics outline the performance of sensors supplied within the first 3 months. Output signal can drift below the lower limit over time.**

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