

40XV CiTiceL®

Oxygen (O₂) Gas Sensor Part Number: AAY80-390

Key Features and Benefits:

- False alarm immunity
- Enhanced response time in extreme applications
- Reliably meets stated life
- Superior environmental performance

Technical Specifications

MEASUREMENT

Measurement Range | 1-25% vol. O₂ Maximum Overload Response Time (T90) <15 Seconds Zero Current (Offset) | <0.6% vol. O Linearity

Technology | Electrochemical 30% vol. O₂ Output Signal 0.10 ± 0.02 mA in Air

Can be considered linear in many cases.

See Operating Principles (OP-02) for further details.

ELECTRICAL

Recommended Load Resistor | 100Ω

MECHANICAL

Casing Material ABS Weight <16 g

Orientation Sensitivity | <0.2% vol. O₂ equivalent

ENVIRONMENTAL

Operating Temperature Range | -20°C to +50°C (up to 3 month

Recommended Storage Temp 0°C to 20°C <23.5% vol. O₂

Thermal Transient (Temp. plunge +22°C to -20°C)

Operating Pressure Range | Atmospheric ± 20% Pressure Coefficient < 0.02% signal/mbar Pressure Transient | <200% signal change

(60 cm H₂O step change) Relative Humidity Range (at 0°C to 20°C)

continuous across RH range)

Continuous 5 to 95%RH non-condensing Short Term 0 to 99%RH non-condensing

LIFETIME

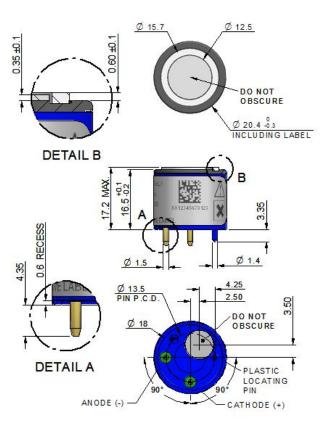
Long Term Output Drift | <2% signal/month

Typically <5% over operating life

Expected Operating Life | Minimum 24 months in air

Storage Life 6 months in original packaging Warranty Period 24 months from date of despatch

Product Dimensions



IMPORTANT NOTES

Obstruction of the vent hole will compromise performance, and must be avoided. Do not remove label.

Adequate free volume should be provided below the sensor to ensure full performance.

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

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

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Typical Applications

General purpose, portable or fixed life safety.

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.

Cross Sensitivity Data

Toxic gases at TLV levels will have no cross-sensitivity effect on Oxygen CiTiceLs. At very high levels (i.e. percent levels), highly oxidising gases (e.g. ozone, chlorine) will interfere to the extent of their oxygen equivalent, but most other commonly occurring gases will have no effect.

Acid Gases

IMPORTANT NOTE: Acid gases such as CO₂ and SO₂ will be absorbed by the electrolyte and tend to increase the flux of oxygen to the electrode. This gives an enhanced oxygen signal of approximately 0.3% of signal per 1% CO₂. Oxygen CiTiceLs are not suitable for continuous operation in concentrations of CO₂ above 25%.

SAFETY NOTE

This sensor is designed to be used in safety critical applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, 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. 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.

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