

# Datasheet: AlphaSense Oxygen Sensor



This electrochemical oxygen sensor by AlphaSense uses capillary flow control. Unlike partial pressure oxygen sensors, this provides good pressure and temperature independence, making it the best choice for safety applications.

## FEATURES

- 0 to 25% Oxygen Sensor
- Does Not Require Calibration
- Greater than 2 Year Lifespan
- Small and compact
- Maintenance free

## Models

- **25% O2: AP-0004**

## Specifications

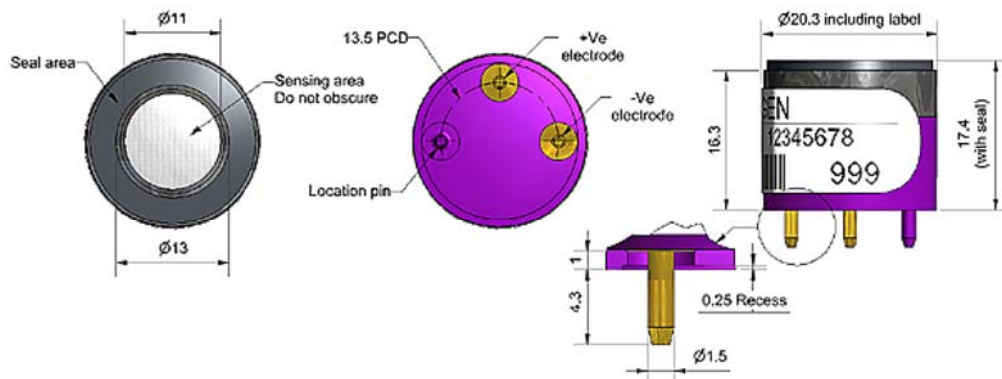
- Measurement Range: 0.1 to 25% Oxygen
- Sensing Method: Electrochemical
- Operating Life: > 2 years until 85% original output of 20.9% O2
- Output drift: < 1% change in output @ 3 months
- Response (t90): < 15 sec.
- Temperature range: -30-55°C
- Pressure range: 80-120 kPa
- Humidity range: 5-95 %RH

## Electrical

- Output @ 20.9% O2: 80-120 uA
- Zero current @ 0% O2: < 2.5 uA
- Load resistor (Ohm) recommended: 47 to 100

## Warranty

- 90 Days



All dimensions in millimetres ( $\pm 0.15\text{mm}$ )

### Output Temperature Dependence

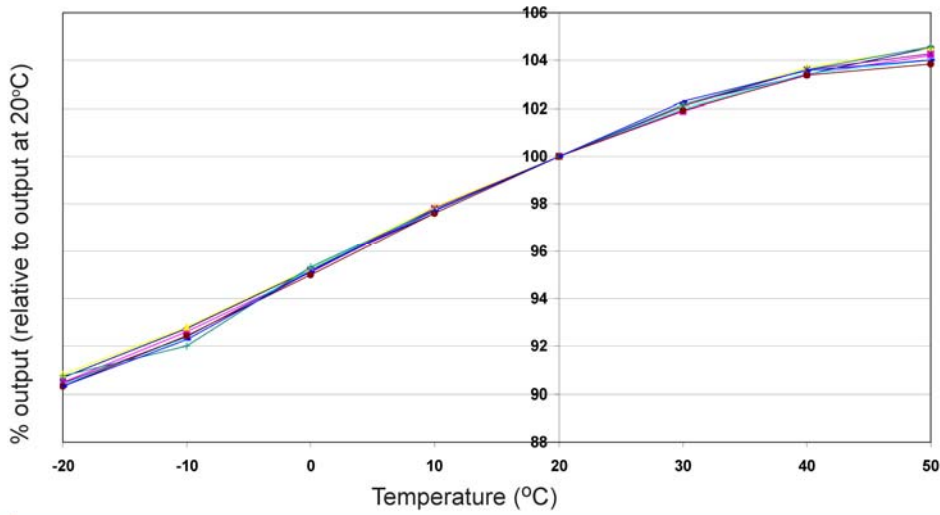
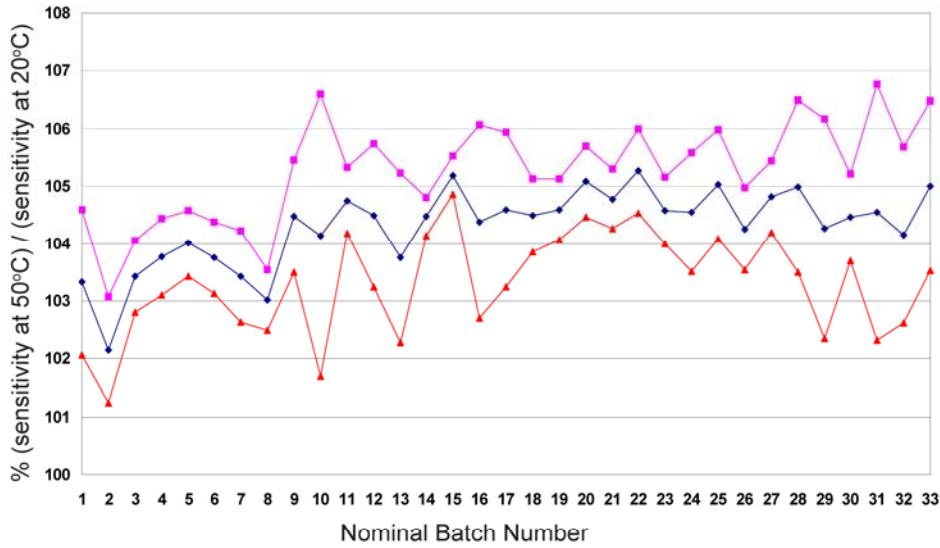


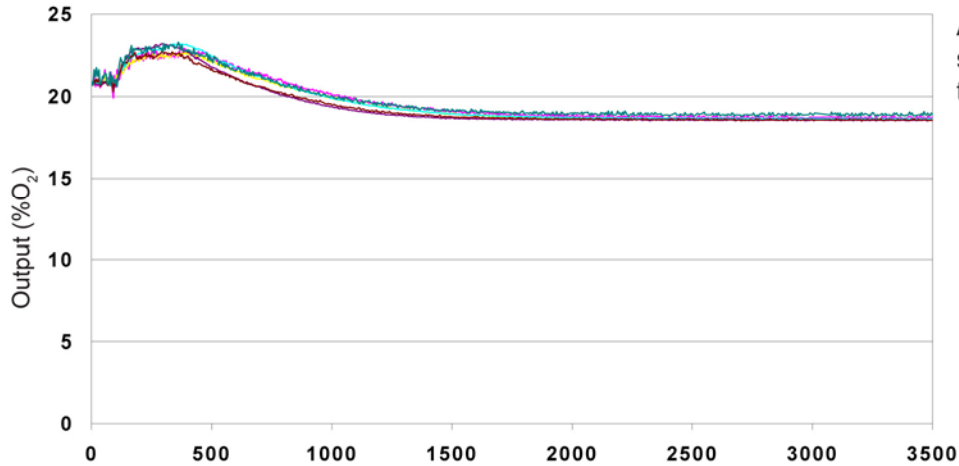
Figure 2 shows the variation in sensitivity caused by changes in temperature.

### Sensitivity at 50°C



This plot of the mean and  $\pm 95\%$  confidence intervals for 34 batches shows superior repeatability of the sensitivity dependence from batch to batch, giving confidence when setting temperature compensation in your gas detector.

### Thermal Transient Performance



Alphasense oxygen sensors show good performance throughout their lifetime.