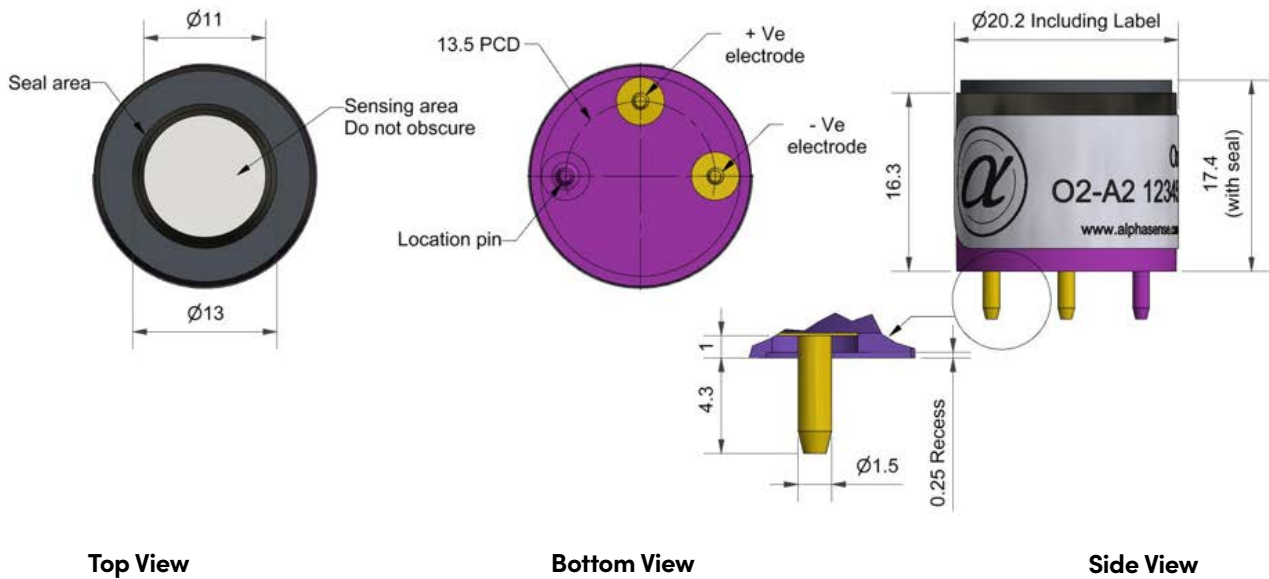


O2-A2 Oxygen Sensor



Dimensions are in millimetres (± 0.15 mm).

| Performance | Output | μA @ 20.9% O_2 | 80 to 120 |
|-------------|---------------|---|-----------|
| | Response time | t_{90} (s) from 20.9% to 0% O_2 | < 15 |
| | Zero current | μA in N_2 | < 2.5 |
| | Linearity | % O_2 deviation @ 10% O_2 | 0.6 |

| Lifetime | Output drift | % change in output @ 3 months | < 1 |
|----------|----------------|--|------|
| | Operating life | Months until 85% original output in 20.9% O_2 | > 24 |

| Environmental | Humidity sensitivity | % O_2 change: 0% to 95% rh @ 40°C | < 0.7 |
|---------------|---------------------------|---|-------|
| | CO_2 sensitivity | %(change O_2 reading)/% CO_2 @ 5% CO_2 | 0.1 |
| | Pressure sensitivity | (% change of output)/(% change of pressure) @ 20kPa | < 0.1 |

| Key Specifications | Temperature range | $^{\circ}\text{C}$ | -30 to 55 |
|--------------------|-------------------|--|-----------|
| | Pressure range | kPa | 80 to 120 |
| | Humidity range | % rh non-condensing (0 to 99% rh short term) | 5 to 95 |
| | Storage period | Months @ 3 to 20°C (store in sealed pot, open circuit) | 6 |
| | Load resistor | Ω (recommended) | 47 to 100 |
| | Diameter | mm (including label) | 20.0 |
| | Height | mm (including foam ring) | 17.4 |
| Weight | g | < 16 | |

Figure 1 Output Temperature Dependence

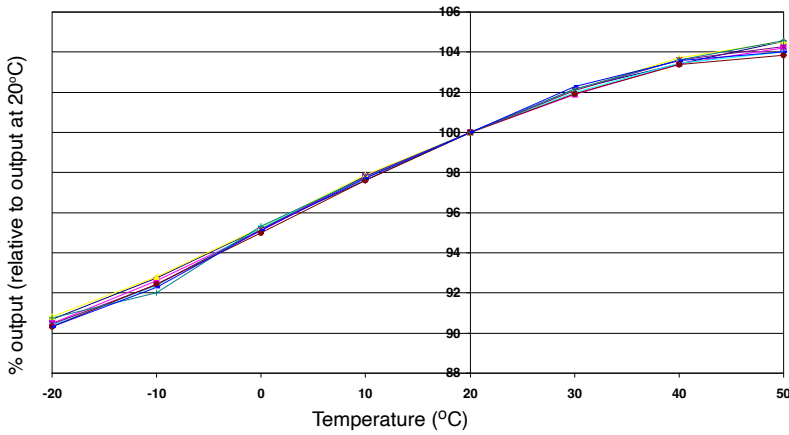
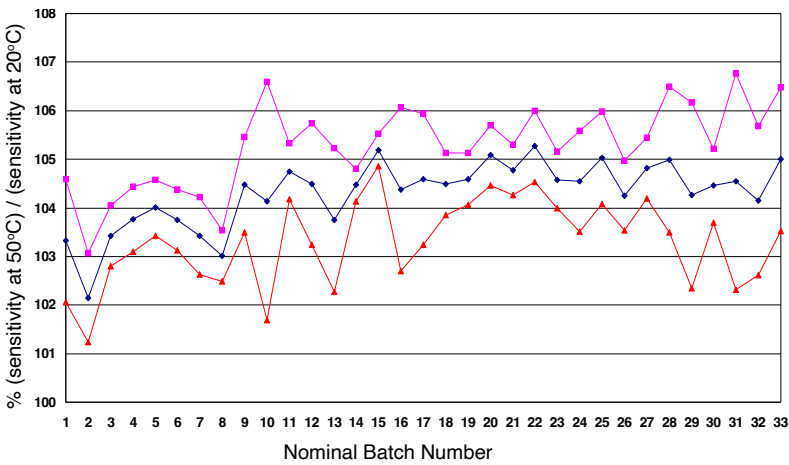


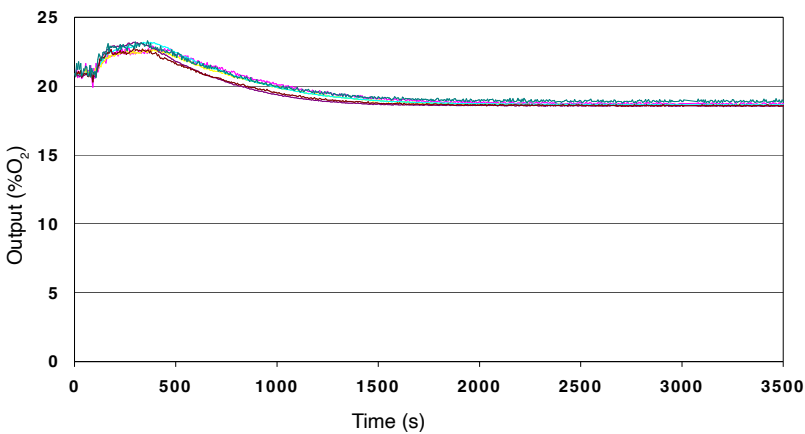
Figure 1 shows the variation in sensitivity caused by changes in temperature. Temperature dependence is very repeatable.

Figure 2 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.

Figure 3 Thermal Transient Performance



Sensors were thermally shocked from 20°C to -30°C. Consistent manufacture and good design ensure that there are no thermal spikes which can cause an alarm.