

## Protecting and Handling Oxygen and Toxic Gas Sensors

### Storage

Alphasense toxic and oxygen gas sensors are shipped in multiple or single pack containers that are not airtight. Store sensors unopened in this container until use. Store at temperatures between 0 and 25°C in a clean, uncontaminated area. Do not store in areas containing solvent vapours.

Toxic sensors are shipped open-circuited, unless specifically requested to be shipped short-circuited. Alphasense does not recommend storing toxic sensors short-circuited. If sensors are shipped short-circuited, remove the spring clip just prior to installing the sensor into your circuit.

Oxygen sensors are usually shipped open-circuited. When first using the sensors, allow at least six hours before zeroing to  $\pm 0.1\%$  oxygen. Sensors may be shipped short-circuited on special request, but short-circuiting means that the sensor will consume part of the lead anode during storage, shortening sensor life.

Follow these precautions when storing oxygen sensors:

- Always store oxygen sensors unopened in the containers in which they were shipped. Single sensors can be separated from multiway containers by cutting with scissors on the lines shown.
- Total storage time must not exceed six months to maintain the warranty period. Six months is the total time from shipment from Alphasense until installation in the user's device. Six months includes distributor's storage time. If total storage time will exceed six months, consult Alphasense.

### Usage

Do not obstruct the top of gas sensor. Gas must have access to the full area of the top covered by the white water/dust filter. Although this water/dust filter offers protection from water and particulates, solvents and certain corrosive gases may still damage the sensor. If your application requires additional protection, then contact Alphasense for extra or special membrane disks. Standard water/dust filters are made from PTFE with a polypropylene backing mesh.

If the water/dust filter becomes dirty or clogged, then contact Alphasense for replacement filters.

Avoid mechanical compression on the sensor by over-tightening your sensor support: this may damage the sensor and may lead to transient performance when the sensor is subjected to shock or rapid pressure or temperature changes.

Avoid moisture condensing on the water/dust filter- this may flood the top of the sensor (which is recoverable) and will also cause gas blockage and prevent toxic sensors from alarming. Use either a water trap or Nafion tubing to remove condensing water. Sensors are specified to operate between 15% and 90% rh. See Application Note AAN 106.

Ensure that the gas stream reaches the sensor at the correct temperature. Datasheets specify the operating temperature range. Ensure adequate gas flow rate if the gas detector is aspirated.