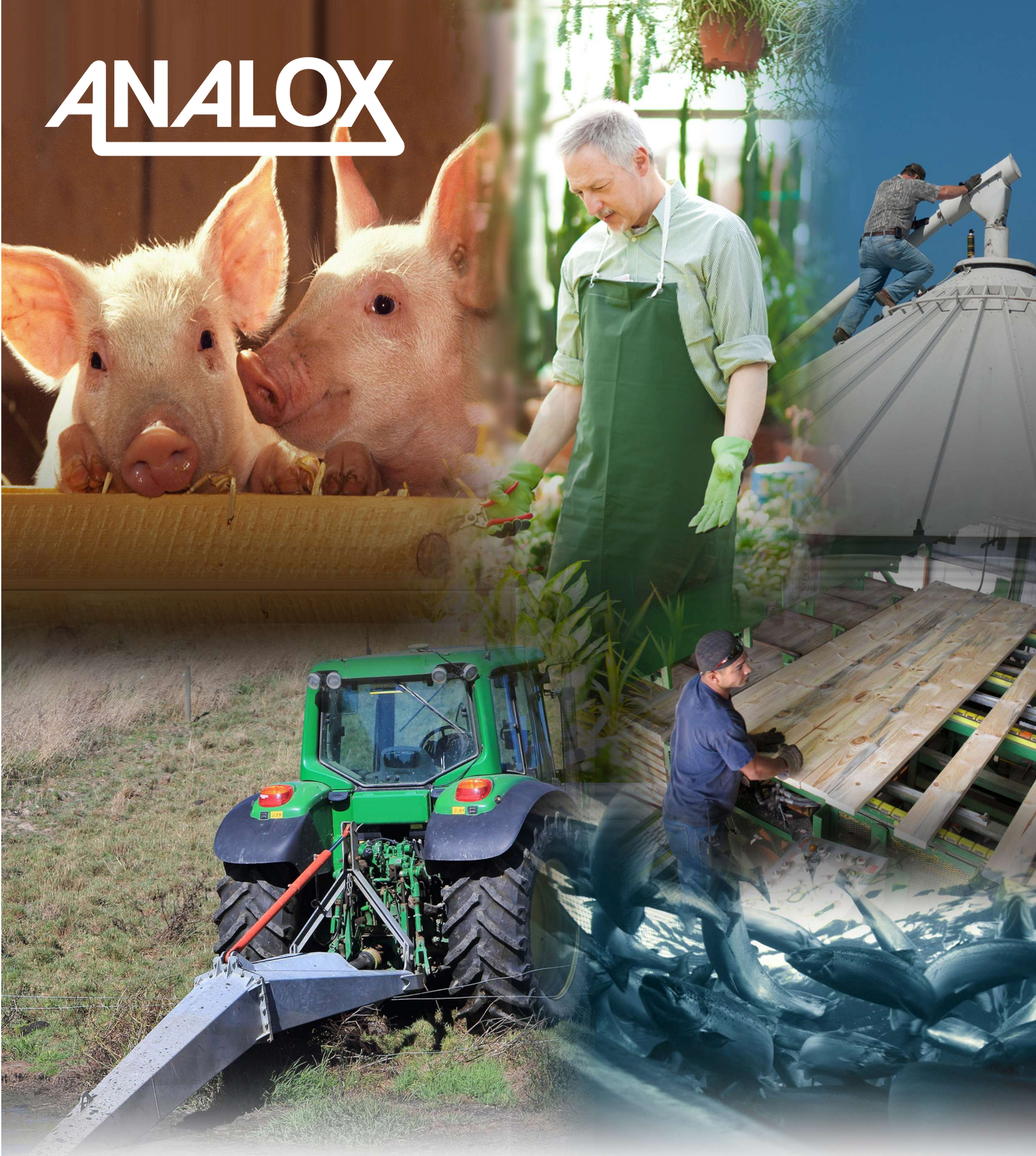
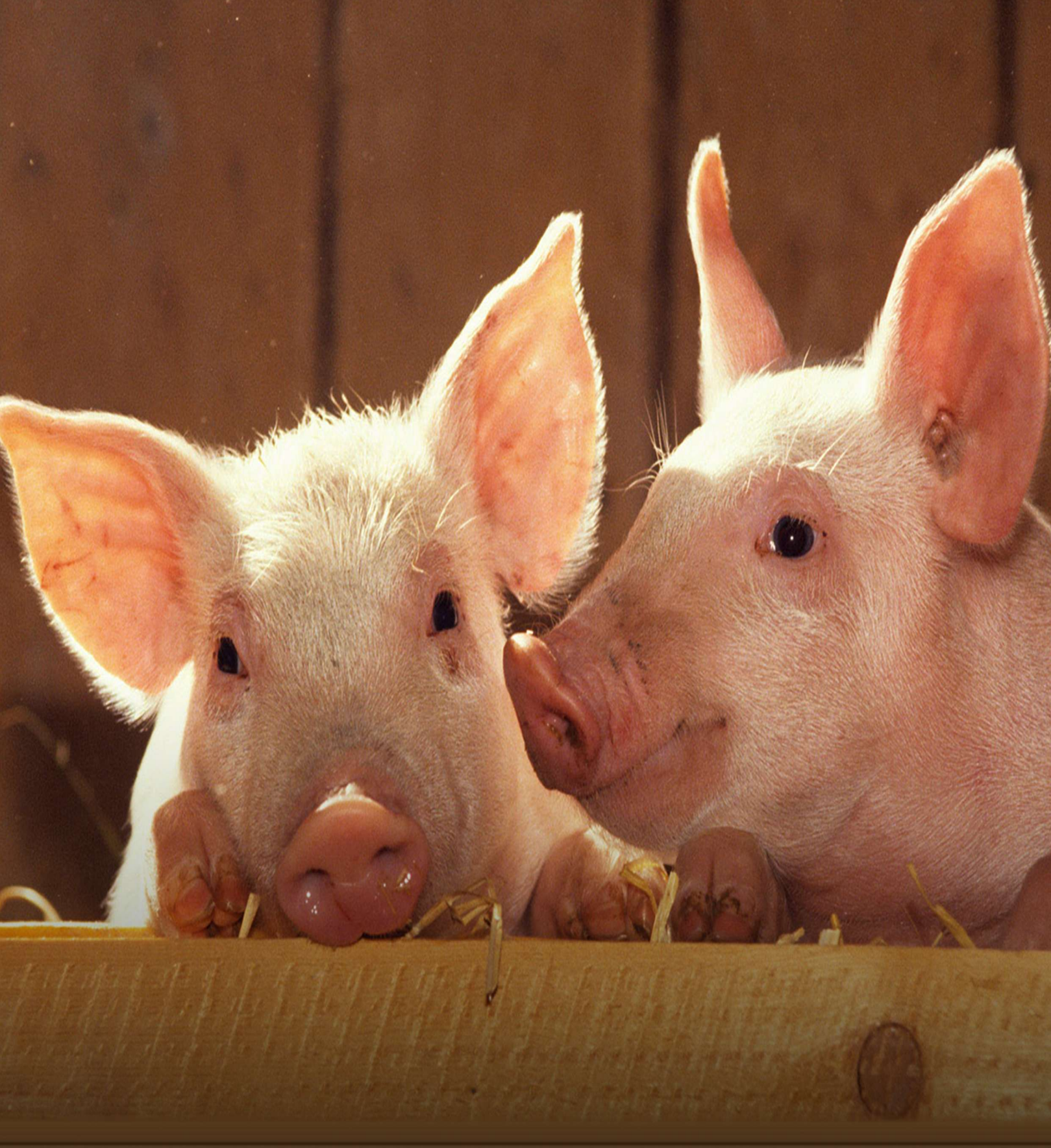
ANALOX



AGRICULTURAL
GAS SENSOR SOLUTIONS

Contents



Gas Sensor Solutions
AnimalHusbandry

Why?

The climate in livestock facilities influences the well-being and health of humans as well as that of the livestock. Respiratory, digestive and behavioural disorders are more likely to occur in facilities in which the climatic conditions are not up to standard. Climate can be defined as the sum of environmental factors which influence the functioning of man and animal - one of the main factors is the composition of the air. There is a duty of care and legislation that dictates certain gases are maintained at and below certain levels to ensure human and animal safety and well-being and maintain optimum levels of productivity.

What?

Ammonia (NH_3)

High ammonia concentrations can lead to poor feed conversions, reduced weight gains, and increased susceptibility to disease. The ammonia content of livestock facilities depends on ventilation, temperature, relative humidity and stocking density. It results primarily from the breakdown of urea (present in urine) and by the enzyme urease (excreted in faeces). Practices such as filtration, bio filtration, landscaping, dietary manipulation and the use of impermeable barriers can be effective in reducing ammonia but can be costly, impractical and will often still not reduce ammonia levels to meet the required standards.

Carbon Dioxide (CO_2)

The main sources of carbon dioxide in a livestock facility such as a poultry house is from the exhaled breath of the livestock and the heating system. High concentrations can lead to lethargic chicks and reduced weight gains and can be potentially fatal to livestock and employees. It can be possible that the air composition of the livestock facility is acceptable, even for humans but the animals are only concerned/affected by their micro-climate i.e. the climate directly surrounding them. All farms complying with the Red Tractor Poultry Assurance scheme standards (ACP)(Standard HF2.3) or the EU Directive for a maximum stocking density of more than 33kg/m2 are required to maintain levels of CO_2 at <2500 ppm = 0.25 vol% Relatively small levels of CO_2 can be very toxic and there is a growing trend to use the gas to humanely slaughter animals. For humans to re-enter slaughter areas or to be sure of safe entry into areas where CO_2 is stored, CO_2 monitors need to be considered as part of a risk assessment.

Carbon Monoxide (CO)

It is generally recommended that CO levels should kept well below 50 ppm with some experts recommending below 10 ppm. Whilst there is a plethora of inexpensive household CO detectors, the majority are not very robust and do not provide a readout. Whilst CO levels can prove fatal for both humans and animals alike another large consideration is that for growing animals it is vital that they take as much oxygen on board as possible, particularly early in their life.

Where?

Analox understand that areas in which livestock are housed can be hostile as far as standard gas sensing solutions are concerned. Temperatures can be extreme and levels of target gases (often toxic) can widely vary. With our temperature compensated and robust range of sensors we can offer our off-the-shelf or custom designed solutions to meet your specific needs, whether it be within a broiler house, piggery or in most other facilities.

The **Solutions**

Livestock Aspida

COMING SOON

The “Livestock Aspida” can be cited at animal level and give continual readings of CO_2 & NH_3 and audio visual alarms should permissible levels be exceeded. The unit also datalogs and information easily retrieved through a USB connection. It can be used as a portable or fixed monitor.

- **Datalogging for trend analysis and compliance**
- **Continual CO_2 and NH_3 readings**
- **Easy installation**
- **Robust IP65 housing**
- **Simple to maintain and use**

5S3

This robust, highly accurate, dual beam infra-red CO_2 sensor is ideal for situating in hostile environments such as broiler houses and can provide a 4-20mA output for readouts on our LC Commercial panel or BMS systems.

- **Available in different ranges including 0 to 10000ppm, 0-2%, 0-5% & 0-100%**
- **Can be user calibrated**
- **High stability meaning prolonged maintenance frequency**

LC Commercial & 3000Si range

Our 3000SI range of (ATEX approved) sensors are ideal for multi-point monitoring of NH_3, CO and an array of other gases including O_2. Speak to us about your specific need and we can supply a tailored solution for the number of sensors and control panels to meet your needs. The LC Commercial provides displays, calibration interface and alarms and is easy to install.

- **Huge range of gas types and ranges**
- **Easy to install and maintain**
- **Sensors can be used in hostile environments**

EllCO Portable CO Monitor

This unit is ideal for spot checking levels of carbon monoxide to ensure the wellbeing of humans and animals. Raised levels of this colourless, odourless gas could be as a result of poorly maintained brooders or another source of poor combustion. This ergonomically designed unit can easily be taken “point to point” and can even be bump tested with your breath so is simple to maintain.

- **Simple to use**
- **Can be bump tested with your breath**
- **Economical and long sensor life (2 years)**

Gas Sensor Solutions
Fish Farming

Why?

The term Aqualculture encompasses many types of fish farming including: Salmon, Shrimp, Oyster, Algaculture and the cultivation of ornamental fish. The term' farming' indicates some form of intervention in the rearing process to enhance production such as: regular stocking, feeding, protection from predators and environmental controls.

Dissolved Oxygen is one of the most important parameters to control in Aquaculture as it is critical to the health and well-being of the livestock. If the Oxygen levels drop below 4mg/l fish may stop feeding, become stressed, suffer electrolyte loss and being to die, ultimately affecting your yield.

What?

Pure Oxygen can be injected into water and dissolved into tanks and sea cages using different methods such as ceramic diffusers and high velocity venture. Whilst the use of O2 offers significant benefits to the crop it also poses a threat to the site, employees and visitors.

High levels of O2 or oxygen enrichment, can create a risk of fire and hyperoxia. It is therefore important to check and monitor for leaks in the process so if a problem does arise you are notified of it immediately and can take the necessary steps to ensure it is resolved with minimal disruption and downtime to your business.

Analox offer a complete site solution of Oxygen Enrichment monitoring. The range includes portable/personal devices, fixed single point systems and fixed multi-point monitoring with a centralised control panel.

Where?

Whether you are cultivating fish for food retail, recreational fishing or to supplement a species from overfishing, it is important to safeguard the environmental conditions of the water from O2 depletion.

O2 depletion occurs mostly during the summer months or in countries with warm climates throughout the entire year. This is because warm water holds less O2 than cool water. Higher temperatures also increase the metabolic rate of the fish resulting in the need for more Oxygen.

Analox monitors can be used in even the harshest of environments and are suitable for fresh and salt water plants, land based or sea cage facilities.

The **Solutions**

Safe Ox

The Safe Ox is a single point O_2 enrichment monitor with a O_2 sensor which can last up to a decade! The Safe Ox includes a main unit for inside the room with the danger gas and a remote repeater alarm which goes outside the main entrance to the room so staff and visitors know if its safe to enter or not. Both parts give audible and visual warnings of a potential leak and the unit can be fitted with a battery back up and outputs such as: 4-20mA and relays

- **Splashproof**
- **Low Maintenance**
- **Long Life**
- **Reduces the risk of downtime**
- **Provides safety for employees**

Aspida O_2

The Aspida is a truly unique personal monitor which can also be used as a leak detector. The unit is equipped with many features including: a mandown alarm, ideal for lone workers, datalogging, TWA (Time Weighted Average) and battery flexibility, if you don't have time to charge the Aspida simply add 2 x AA Batteries for instant power.

- **User Maintainable**
- **Splashproof**
- **Robust**
- **Maintenance Reminders**
- **Belt Clip for ease of use**

LC Commercial & 3012SI

The LC Commercial control panel and 3000si O_2 sensor combination provides complete multi point monitoring, ideal for larger sites. The LC Commercial allows users to view the readings and status of all the sensors from a single point. It also provides a 4-20mA signal for integration into BMS (Building Management Systems) and relay outputs for each sensor channel which can be used to trigger extraction systems, beacons or system shutdown.

- **ATEX Approved sensors for even the harshest environments**
- **Upto 8 points of monitoring**
- **User Maintainable**
- **Flexibility of adding sensors**
- **BMS Integration**

Gas Sensor Solutions
Forestry

Why?

Gases such as phosphine (PH_3) are commonly used to fumigate timber and other agricultural products prone to infestation. Many transport containers are not air tight and regulations demand they are fumigated to ensure that no insects remain which can damage the goods or be exported into other countries in the shipping process.

Fumigation gases will be released from the wood in both storage and transport and are potentially lethal to humans and animals, there have been various deaths and serious injuries as people are overcome by the gas.

PH_3 is also flammable so to ensure this risk is managed you need to raise the levels in the fumigation area upto 2000ppm (Parts per million) so it is over its flammability limit.

Local regulations vary but all items of 'wood' are governed by the ISPM (International Phytosanitary Measures)

What?

Analox can offer two ATEX approved PH_3 sensors (3000SI), these combined with our LC Commercial control panel can offer the user displays, alarms and digital and analogue outputs. This unique sensor is available in ranges of 0-2000ppm so can be used to ensure the flammability limit has been reached and 0-10ppm to check levels are safe for employees to enter the room again.

PH3 is also heavier than air and may cause asphyxiation in enclosed areas. It is therefore recommended that the oxygen (O_2) levels are monitored also. Analox offer various systems for fixed O_2 depletion monitoring, 3000SI, O_2NE, MEC or if you require a portable, personal monitor we offer the Aspida.

Where?

Whether you are a fumigation plant, a timber shipper, timber storage facility, conservation or research facility, a government body, or anyone else involved in forestry related activities, you need to consider the dangers of fumigation gases and oxygen depletion. Analox can offer everything you need to ensure the safety of your staff, stock and business.

Analox monitors and sensors have been developed to withstand even the harshest of environments. Our products have wide temperature ranges and some are ATEX approved meaning no matter where you are in the world Analox have a solution for you.

The Solutions

3000SI PH3 & LC Commercial

The 3000SI PH3 sensor is ATEX approved to zone 0 meaning it can be used in explosive, flammable and hostile environments. These sensors are placed in the area with the danger gas, i.e. your fumigation area, cargo hold, storage area ect, they then link to our LC Commercial control panel which allows users to view the status of each sensor simultaneously. The control panel also offers outputs such as relays which can be used to trigger extraction systems, beacons or system shutdown and 4-20mA which can be integrated into your BMS (Building Management System)

- **ATEX approved Sensors**
- **Upto 8 points of monitoring**
- **User maintainable**
- **Relay & 4-20mA outputs**
- **Ideal for multi point monitoring**

MEC Range

The MEC range is a selection of compact, accurate OEM sensors which can be easily integrated into your forestry monitoring systems for a true OEM solution. The MEC range covers over 20 different gases but the most relevant for the forestry industry are the PH3 and O2 sensors.

- **Field replaceable**
- **Long life expectancy**
- **Highly accurate**
- **Digital output**
- **Compact enclosure.**

O2NE

The O2NE is a long life fixed O2 monitor which will protect staff in fumigation or storage areas where O2 depletion is a danger. This unit gives alarms and flashing lights to indicate drops in O2 levels.

- **Sensor life of upto 10 years**
- **Plug & Play**
- **User maintainable**
- **Remote repeater alarm as standard**
- **Digital & analogue outputs available**

Aspida

The Aspida is a personal, portable alarm ideal for protecting your staff from O2 depletion dangers in fumigation or cargo areas. It is available in three different versions, O2 only, CO2 only or a dual monitor which monitors O2 and CO2. The unit is equipped with many different features including a mandown alarm which is perfect for lone workers, data logging and battery flexibility. If you don't have time to charge the Aspida, simply add 2 x AA batteries for instant power.

- **TWA Logging (Time Weighted Average)**
- **Belt clip for ease of use**
- **Vibration alarm for noisy environments**
- **Upto 2 users per unit**
- **User maintainable**

Gas Sensor Solutions
Grain Storage & Silos

Why?

Storage and handling of grain, feed and other bulk material can present fatal hazards to agricultural workers and farm animals.

Fermenting silage produces ‘silo gases’ such as CO_2 (Carbon Dioxide), NO (Nitric Oxide), NO_2 (Nitrogen Dioxide) and N_2O_4 (Nitrogen Tetroxide). Microbial decomposition also occurs in stored organic products and this process emits CH_4 (Methane), NH_3 (Ammonia) and H_2S (Hydrogen Sulphide) As well as being toxic, some of these gases can also deplete the Oxygen levels.

A build up of CO_2 can also be harmful to your yield. Grain remains wholesome at CO_2 concentrations of 400 to 500ppm (Parts Per Million) CO_2 concentrations above this level can lead to mould spoilage, development of mycotoxins and ultimately insect infestation, thus turning your profit into pig swill.

What?

CO_2 is the one of the biggest threats to silo workers and has been the cause of many deaths and injuries in the agriculture industry. This toxic gas is colourless, odourless and acts as an asphyxiant. The normal international safety limit for CO_2, as stated by the HSE and OSHA is 0.5% meaning even the smallest amount can be hazardous to health.

Analox offer a personal CO_2 and O_2 monitor, ideal for lone workers as well as a range of single and multi point fixed systems with the option of Datalogging. Our 5S3 sensor can also be used with our control panel to help prevent silo decay.

To monitor the other gases mentioned above, we offer a range of highly accurate and robust sensors which can be wall mounted or freestanding, again our control panels can be used with these sensors to offer a display, alarms, outputs and Datalogging.

Where?

Whether you are cultivating grain ‘On Farm’ or ‘Off Farm’ at a plant or you are a grain storage facility, you need to consider the dangers of the gases being emitted from the process and how to safeguard both your staff and stock.

This is a global concern but in warmer climates there is an increased risk of pest infestation which is the main cause of shrinkage.

Analox monitors and sensors can be used in even the harshest of environments, our products start at IP65 and go right upto ATEX approved to Zone 0, meaning they can be used in the most explosive and dangerous environments.

The **Solutions**

3000SI, FGD3 & LC Commercial Control Panel

The 3000si and FGD3 is a wide range of sensors which are ATEX approved. These sensors are placed in the areas with the danger gases, in this case: NO, NO_2, CH_4, NH_3 and H_2S they then link to our control panel which allows users to view the status of each sensor simultaneously. The control panel also offers outputs such as relays which can be used to trigger extraction systems, beacons or system shutdown and 4-20mA which can be integrated into your BMS (Building Management System)

- **ATEX approved Sensors**
- **Upto 8 points of monitoring**
- **User maintainable**
- **Relay & 4-20mA outputs**
- **Ideal for multi point monitoring**

5S3

The 5S3 is a dual beam IR (Infra Red) CO_2 sensor which is ideal for monitoring CO_2 levels inside the silo bins to help prevent spoilage. The 5S3 is supplied in an aluminium enclosure, has a 5 wire connection and can offer 4-20mA or 0-2V output. This sensor can be linked to our MCU control panel to provide displays, alarms and datalogging.

- **Long life expectancy (5+ Years)**
- **Temperature compensated**
- **Can be mounted in silo/grain bins**
- **Low power consumption**
- **Analog outputs**

Aspida

The Aspida is a personal, portable alarm ideal for protecting your silo and grain bin operatives. It is available in three different versions, CO_2 only, O_2 only or a dual monitor which monitors CO_2 and O_2. The unit is equipped with many different features including a mandown alarm which is perfect for lone workers, Datalogging and battery flexibility. If you don't have time to charge the Aspida simply add 2 x AA batteries for instant power.

- **TWA Logging (Time Weighted Average)**
- **Belt clip for ease of use**
- **Vibration alarm for noisy environments**
- **Upto 2 users per unit**
- **User maintainable**

Gas Sensor Solutions
Horticulture

Why?

Gas use and monitoring is essential in the cultivation of crops. The three main uses are: CO_2 Enrichment, Controlled Atmosphere Storage (CAS) and Fumigation.

Farmers of tomatoes, cucumbers, peppers ect use a CO_2 optimisation programme to increase photosynthesis which makes crops flourish and increases yield and profitability. Tests have shown that by increasing the CO_2 levels from 350ppm (Parts per million) to just 700ppm your yield can be increased by over 33%. Temperature and humidity is also important to the optimisation programme.

The levels of CO_2 need to be monitored to ensure an optimal environment but it is also important for horticulturists to be protected from the increased levels of this dangerous gas so personal monitoring is a must.
The CAS process requires the precise control of oxygen (O_2), nitrogen (N), carbon dioxide (CO_2) and ethylene (C_2H_4) in order to preserve fresh fruit and vegetables and to enhance ripening. These atmospheres can be flammable, explosive, toxic and O_2 deficient and pose a risk of nausea, dizziness and asphyxia.

Wooden pallets, crates and dunnages used to transport food can possibly harbour pathogens such as E Coli and Listeria, there is also a risk of infestation from pests. The ISPM 15 (International Standards for Phytosanitary Measures) legislation requires this wood packaging to be made from 'de-barked' wood which has been heat treated and fumigated. Fumigation gases, such as Phosphine, are both flammable and toxic to human health so need to be monitored carefully.

What?

CO_2 Enrichment

Levels of CO_2 inside glass houses can be monitored with our 5S3 sensor. This can be connected to our LC Commercial to provide displays, alarms and outputs so you can be sure the optimum levels of CO_2 are being achieved. The A50 fixed CO_2 monitor or the Aspida personal monitor will also guarantee worker safety. Our HAT (Humidity & Temperature) sensor will also help you ensure the best environment for a great yield.

CAS

Analox have a range of sensors (3000SI, 5S3 & FGD3) and monitors (LC Commercial, MCU, A50, Aspida) which can be used to ensure the correct levels of the CAS gases to produce premium stock but also to protect your workforce and business. It is also important to monitor for depleted O_2 levels in these processes, the Analox O2NE can offer early warning of potential O_2 deficiency.

Fumigation

The LC Commercial and the 3000SI Phosphine sensor can be used to ensure all wood packaging is fumigated in line with current legislation. The phosphine sensor has a range of 0-2000ppm which means you can increase the levels to a point where the gas is no longer flammable. This same system will also tell the user when levels become low enough for staff to enter the fumigation area again, offering you full peace of mind.

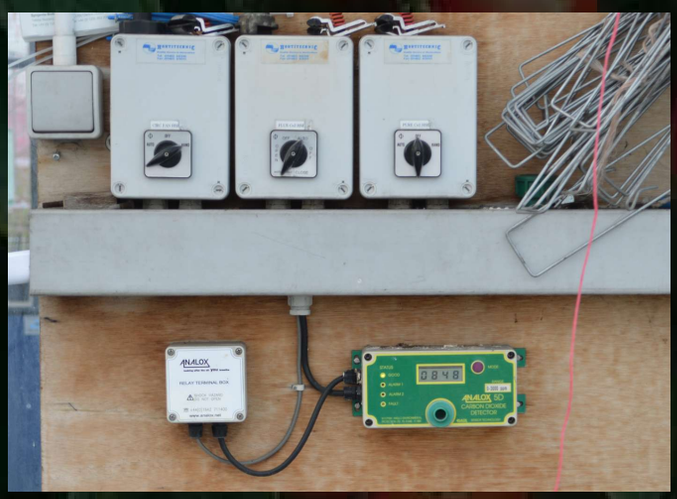
Where?

Whether you have a garden centre, local vegetable farm, large commercial farm, horticultural research/university facility, a storage facility, a fumigation plant or any other horticulture related business, Analox can offer everything you need for your gas monitoring requirements.

Analox monitors and sensors have been developed to withstand even the harshest of environments. Our products have wide temperature ranges and some are ATEX approved meaning no matter where you are in the world Analox have a solution for you.

Jan Bezemer & Sons - Stokesley, UK

The family run tomato company was set up in 1946 and has since grown steadily over the years to a substantial size, they now supply nationally to the top five supermarkets in the UK. With a combined heat and power system to heat the nursery, exhaust fumes from the system are cleaned and generate the CO_2 needed for CO_2 optimisation which are then filtered into the room via their injection system. The Analox A50 indicates to them when levels are at a low enough volume to safely enter the nursery again. The company also sell the additional power generated in the process to a local power station, making their entire operating procedure highly effective with nothing wasted.



Rich Bezemer (owner) " The Analox A50 has now been in operation on site for over a decade and has kept the staff at Jan Bezemer & Sons safe while carrying out their daily duties. The 9 units on site are still detecting and monitoring CO_2 levels in all of the glass houses on site. Analox have provided us with a truly reliable and safety ensuring product."

They are now about to trial the 5S3 and LC Commercial combination so they can enhance their CO_2 optimisation programme.

The **Solutions**

5S3

The 5S3 is a dual beam IR (Infra Red) CO_2 sensor which is ideal for monitoring CO_2 levels inside the glass house to ensure the best possible conditions for the yield. The 5S3 is supplied in an aluminium enclosure, has a 5 wire connection and can offer 4-20mA or 0-2V output. This sensor can be linked to our LC Commercial control panel to provide displays, alarms and outputs.

- **Long life expectancy (5+ Years)**
- **Temperature compensated**
- **Can be mounted in silo/grain bins**
- **Low power consumption**
- **Analogue outputs**

HAT

Temperature and humidity is one of the most important parameters to control in horticultural growth, for example, the best temperature for lycopene synthesis in tomato fruits is 16-21 Deg C. The Analox HAT sensor provides simultaneous temperature and humidity readings.

- **Robust & Lightlweight**
- **Analogue or digital output available for each parameter**
- **Not effected by other gases**
- **Highly accurate**
- **Will perform in an environment of -40 to 85 Deg C**

A50

The A50 is a fixed CO_2 monitor ideal for personnel safety and glass house monitoring. This long life unit is very simple to install and is very low maintenance. The A50 is equipped with a remote repeater alarm as standard which goes outside the area with the danger gas so staff and visitors know if its safe to enter or not.

- **15 Year Sensor warranty**
- **Plug & Play**
- **2 x Alarm set points in line with current legislation**
- **IP65 Rated**
- **Digital & Analogue outputs available**

Aspida

The Aspida is a personal, portable alarm ideal for protecting your staff from CO_2 enrichment or CAS dangers. It is available in three different versions, CO_2 only, O_2 only or a dual monitor which monitors CO_2 and O_2. The unit is equipped with many different features including a mandown alarm which is perfect for lone workers, data logging and battery flexibility. If you don't have time to charge the Aspida, simply add 2 x AA batteries for instant power.

- **TWA Logging (Time Weighted Average)**
- **Belt clip for ease of use**
- **Vibration alarm for noisy environments**
- **Upto 2 users per unit**
- **User maintainable**

The Solutions

3000SI, FGD3 & LC Commercial Control Panel

The 3000si and FGD3 is a wide range of sensors which are ATEX approved. These sensors are placed in the areas with the danger gases, for CAS: O_2, N, CO_2 and C_2H_4, or in terms of fumigation; Phosphine, they then link to our control panel which allows users to view the status of each sensor simultaneously. The control panel also offers outputs such as relays which can be used to trigger extraction systems, beacons or system shutdown and 4-20mA which can be integrated into your BMS (Building Management System)

- **ATEX approved Sensors**
- **Upto 8 points of monitoring**
- **User maintainable**
- **Relay & 4-20mA outputs**
- **Ideal for multi point monitoring**

O_2NE

The O_2NE is a long life fixed O_2 monitor which will protect staff in CAS areas where O_2 depletion is a danger. This unit gives alarms and flashing lights to indicate drops in O_2 levels.

- **Sensor life of upto 10 years**
- **Plug & Play**
- **User Maintainable**
- **Remote repeater alarm as standard**
- **Digital & analogue outputs available**

Jan Bezemer & Sons - Stokesley, UK

Gas Sensor Solutions
Slurry&Compost

Why?

Dangerous gases are produced by bacteria in the decomposition of slurry and compost and pose an increased level of threat during the agitation process. There have been many well documented, unfortunate instances of human and animal fatalities around the world due to asphyxiation, endotoxic shock and fires when in many cases, the use of appropriate gas detection systems would have reduced the risk and alerted employees to the potential dangers.

Owners of slurry and compost sites have a duty of care to their employees, the public and their animals and in most countries there is local legislation (such as EH40 in Europe) which gives clear guidance of short and long term exposure limits for specific gases.

What?

Ammonia (NH_3)

In most circumstances increases in ammonia levels would be detected by humans due to the pungent smell – but as such a smell is expected in slurries and compost sites due to the production from the decay process, dangerous levels are not so easy to detect without gas detection systems. Whilst ammonia emission management is underway in many countries through the use of different storage methods for manure and alternative handling/spreading methods, risks to humans and animals must be mitigated.

Methane (CH_4)

Fire is a high risk in areas where there are raised levels of CH_4 as it is a highly flammable gas. Whilst the majority of sites have very strict guidelines to reduce fire risks, the use of gas detection solutions is often advisable to further safeguard all personnel and animals from the risk of fire. High levels of methane, particularly in an enclosed or badly ventilated area can also pose a risk of asphyxiation through a lack of oxygen.

Carbon Dioxide (CO_2)

This toxic gas is produced as part of the decay process and is harmful to humans and livestock at relatively low levels. Simple stand-alone devices can be used or multi-point detectors suitable for hostile environments can be installed offering rapid detection of unacceptable, dangerous levels of CO_2.

Oxygen (O_2)

Large pockets or emissions of any of the above gases could pose a threat of asphyxiation. The use of stand-alone or multi-point O_2 detectors could be a vital addition to the safety precautions on a site with a slurry pit or compost.

Hydrogen Sulphide (H_2S)

Arguably the most dangerous threat posed to all on such sites, H_2S is not possible to detect at dangerous levels by the human nose. This highly toxic gas is potentially fatal and EH40 short term exposure levels state that humans should not be exposed to this gas for longer than 15 minutes at levels of only 10ppm. It is vitally important to consider the use of gas detection devices for H_2S and is very likely to be raised as part of your risk assessment.

Where?

Depending on your site and risk assessment it is quite likely that fixed gas detection needs to be considered. Depending on the layout of the site, multi-point monitoring with a central control panel such as the LC Commercial could be an ideal solution.

It may also be advisable for workers to consider personal gas monitors such as the Aspida O_2 which also offers a man down alarm which could be useful to alert others if a lone worker were to experience difficulties.

The **Solutions**

3000SI, FGD3 & LC Commercial Control Panel

Our 3000SI range of (ATEX approved) sensors are ideal for multi-point monitoring of NH_3, O_2, H_2S and an array of other gases. Speak to us about your specific need and we can supply a tailored solution for the number of sensors and control panels to meet your needs. The LC Commercial provides displays, calibration interface and alarms and is easy to install, whilst the FGD3 is the ideal solution for CH_4 monitoring.

- **Huge range of gas types and ranges**
- **Easy to install and maintain**
- **Sensors can be used in hostile environments**
- **Ideal for multi point monitoring**

5S3 CO_2 Detector

This robust, highly accurate, dual beam infra-red CO_2 sensor is ideal for situating in hostile environments and can provide a 4-20mA output for readouts on our LC Commercial panel or BMS systems.

- **Available in different ranges including 0-10000ppm, 0-2%, 0-5% & 0-100%**
- **Can be user calibrated**
- **High stability meaning prolonged maintenance frequency**
- **Robust enclosure**

Aspida O_2 & CO_2 portable monitor

This high specification personal monitor is an excellent way of safeguarding your employee's safety from the risk of asphyxiation or the toxic effects of CO_2. The Aspida is available in either single gas or dual O_2/CO_2 versions.

- **Simple to use and calibrate O_2 in fresh air**
- **Economical and long sensor life (2 years)**
- **Datalogging**
- **Available as single gas or dual gas versions.**

Notes

Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.

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