VESDA ECO™
by xtralis™

Aspirating Smoke Detection Combined with Gas Monitoring

Leverages the existing ASD pipe network to detect smoke and gases

Wide variety of gas-detection options

Easy to install and maintain

From the leader and pioneer in early warning fire detection solutions

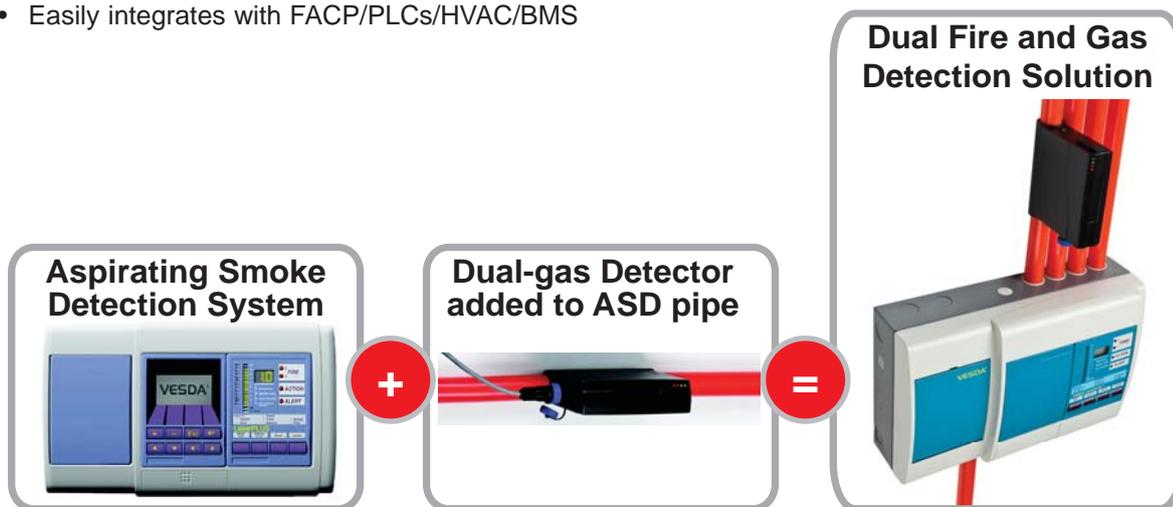# Detecting Invisible Dangers

A fire can have catastrophic consequences and cost millions of dollars in business disruption and result in the tragic loss of lives and assets. The key to fire protection is the mitigation of risk through early warning. By detecting a fire before it escalates, an effective response can be staged.

The same principle applies to gas detection. This invisible hazard can originate from the release of toxic gases, oxygen deficiency, or the presence of combustible gases and vapors. When detected at an early stage, countermeasures can be initiated to protect personnel and property.

ASD with Gas Detection and Environmental Monitoring

As the world's leading manufacturer of aspirating smoke detection (ASD) solutions, Xtralis is pleased to introduce VESDA ECO, the industry's first system to combine ASD with gas detection and environmental monitoring. VESDA ECO:

- Leverages existing VESDA ASD pipe networks to cost effectively detect both smoke and gas in addition to providing environmental monitoring
- Provides detection for multiple gases through simple expansion without major construction or retrofitting
- Conditions the air to remove dirt, particulates, moisture, poisonous agents, and cross-interference gases
- Suitable for harsh environments
- Provides non-intrusive detection for aesthetics or to prevent vandalism
- Enables centralized monitoring and communication with building systems for real-time awareness
- Easily integrates with FACP/PLCs/HVAC/BMS

Dual Fire and Gas Detection Solution

Aspirating Smoke Detection System

+

Dual-gas Detector added to ASD pipe

=

Benefits of ASD Combined with Gas Detection and Environmental Monitoring

- 24/7 protection with active air sampling for the earliest warning of smoke and reliable gas detection
- Simplified gas detection with lower installation costs through the use of the existing VESDA ASD pipe network
- Multiple gas-sampling points for better area coverage
- Full integration with Xtralis VSC and VSM4 software simplifies configuration and management
- Direct interface to FACP, HVAC and BMS using relays, 4-20 mA or Modbus outputs
- Reliable detection even in harsh environments

Built for Cost-effective Gas Monitoring Applications

In many facilities, unseen dangers exist from gases and other hazardous substances that can cause enormous damage and loss of life. VESDA ECO was developed to provide cost-effective gas detection and environmental monitoring in numerous applications and environments.

UPS and Battery-charging Rooms

Hydrogen gas is given off during battery charging. Explosions can occur due to inadequate ventilation and/or the absence of fireproof equipment.

When hydrogen is detected, VESDA ECO can automatically activate the ventilation system to prevent the build-up of explosive levels of hydrogen gas. This on-demand ventilation approach reduces electrical energy consumption by ventilating only when potentially dangerous gases are present instead of continuously ventilating the space. If hydrogen levels continue to increase, an alarm can be automatically sent to notify staff of a potential system malfunction so that measures can be taken to prevent a disaster.

Underground Utility Tunnels

Utility tunnels are the life blood of industry, supplying critical power and data for operations and service continuity. A fire or gas leak in these areas can lead to catastrophic consequences and cost millions of dollars in disruptions and lost business.

Unlike conventional smoke and gas detectors that become easily contaminated due to airborne dust, VESDA ECO overcomes harsh environmental conditions to provide reliable detection of methane (CH_4) and carbon monoxide (CO) or other hazardous gases.

Transportation Centers

Transportation centers, like car parks, depots, road tunnels and even vehicle maintenance workshops, are normally dusty and exposed to potentially dangerous levels of carbon monoxide (CO) or nitrogen dioxide (NO_2) exhaust from vehicles.

VESDA ASD has been used reliably in this harsh environment to provide early warning smoke detection. By adding VESDA ECO to an existing VESDA ASD pipe network, high concentrations of CO can be detected locally through area or zone detection as compared to a fixed CO detector that provides only point coverage.

When combined with ASD, substantial cost savings for car-park operators can be achieved due to lower installation and operating costs while providing a safe and healthy environment.

And more...

- Utility and boiler rooms
- Public spaces
- Warehouses
- Manufacturing facilities

Additional applications are available through engineering support. Please contact an Xtralis office for more information.

Gas and Range Specifications

- Carbon Monoxide (CO) 0-500 ppm
- Oxygen (O_2) 0-25% V
- Hydrogen Sulphide (H_2S) 0-100 ppm
- Nitrogen Dioxide (NO_2) 0-10 ppm
- Propane (C_3H_8) 0-100% LEL
- Ammonia (NH_3) 0-100 ppm
- Hydrogen (H_2) 0-100% LEL
- Sulphur Dioxide (SO_2) 0-10 ppm
- Methane (CH_4) 0-100% LEL

How VESDA ECO Works

VESDA ECO uses the existing VESDA air-sampling pipe network to actively monitor for gas leaks and continuously ensure air quality in occupied areas. ECO reliably detects unseen hazards by conditioning or filtering the air to remove moisture, dirt and other particulates that can cause traditional point gas detection systems to false alarm or become contaminated. The VESDA ECO detector is configured using Xtralis VSC configuration software. The detector also can be monitored using Xtralis VSM4 monitoring software. Both VSC and VSM can be used to download data from the on-board memory card for data analysis and trending of historical data.

Integration with other building systems, including fire alarm control panels (FACPs), programmable logic controllers (PLCs), heating ventilation and air conditioning (HVAC) systems, and building management systems (BMS), also is possible for real-time situational awareness and intelligent emergency response. For example, VESDA ECO can be used in a transportation hub to monitor carbon monoxide and nitrogen dioxide levels, activating variable-speed fans as part of a demand-controlled ventilation system, which controls costs and saves energy.
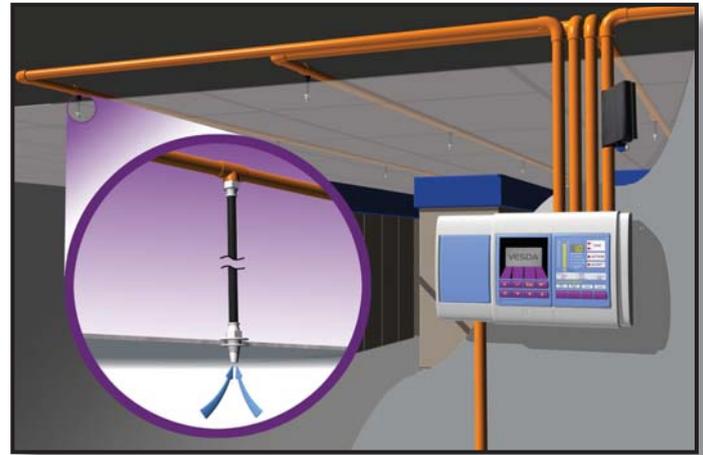
About Xtralis

Xtralis is a leading global provider of powerful, early warning fire detection and security solutions that prevent disasters by giving users time to respond before life, critical infrastructure or business continuity is compromised. We protect more than 40,000 customer sites in 100 countries, including billions in assets belonging to the world's top governments and businesses.

The Americas +1 781 740 2223

Asia +852 2916 8894

Australia and New Zealand +61 3 9936 7000

Continental Europe +32 56 24 19 51

UK and the Middle East +44 1442 242 330

www.xtralis.com