

Active Gas Detection for Gas-fired Plants

Detecting Flammable Gas and Carbon Monoxide

The use of either liquid petroleum gas (LPG, a propane/butane mix) or natural gas (primarily methane) as fuel to power many forms of commercial, domestic and manufacturing equipment is widespread. With the advantages of these cost-effective and relatively “green” fuels comes the added risk of a leak that could build quickly and result in an explosion if ignited. Water boilers, heating equipment, power generators and furnaces all benefit from the use of LPG/natural gas but are often located in unoccupied equipment rooms or basements where potentially explosive concentrations can go undetected. While ventilation systems can help reduce the consequences of a gas leak, early detection is recommended.

Added to this explosive risk is the ever present danger of carbon monoxide (CO) poisoning. CO is known as the “silent killer”* as it has no taste, odour or colour to warn of its presence. Poorly serviced/inefficient gas-fired equipment in areas with reduced airflow can lead to the build-up of this harmful gas, resulting in severe injury or in some cases death.

Introducing VESDA ECO by Xtralis

Extending its world-renowned VESDA aspirating smoke detection (ASD) technology, Xtralis has introduced the industry’s first system to combine ASD with gas detection and environmental monitoring. VESDA ECO uses a VESDA pipe network to actively sample air for the presence of smoke as well as flammable or toxic gases like CO.

In this situation, the benefits of VESDA ECO are four-fold:

1. Reliable and very early warning smoke detection with Xtralis’ proven laser-based VESDA technology
2. A flammable gas detection system for LPG or natural gas
3. A reliable CO detection system
4. A trigger for demand controlled ventilation (DCV) when gas levels reach pre-set alarm thresholds

All these benefits are delivered through the deployment of the unique VESDA ECO gas detection system.

** Leading cause of accidental poisoning deaths in America with 500 lives lost p.a. – US Center for Disease Control.*



Aspirating Smoke Detection with Gas Detection and Environmental Monitoring

Time to Respond Because of Early Warning

- Active air-sampling means earlier detection of smoke and gas through the use of the VESDA distributed sampling pipe network.
- Early detection provides time to prevent a disaster or to react to emergencies while maintaining air quality for the public and personnel.

Reliable Performance

- The delivery of an air/gas sample is guaranteed because each sampling pipe is individually monitored for air-flow fault through the VESDA smoke and VESDA ECO gas detectors.
- Absolute smoke measurement is provided with the industry's only optical clean-air bleed to ensure detector performance and longevity.
- VESDA ECO is built on the world's No. 1 ASD system, which is backed by decades of successful operation in numerous applications and environments.

Flexible System Integration

- Real-time smoke and gas data is provided for an appropriate and staged response, including local alarm annunciation, alarm notification to a control room, and DCV for energy cost savings.
- Smoke and gas data can be gathered at a number of various control points through the use of a wide range of high- and low-level interfaces, including FACP, BMS, PLCs and HVAC systems or simple audio/visual notification appliances.
- Full compatibility with Xtralis VSC and VSM4 software provides greater value because end users do not have to learn to operate additional software packages.
- Full line of toxic, flammable and oxygen detectors are available for other gas detection requirements.

Industry's Lowest Cost of Ownership

- A VESDA ECO detector can be added easily to an existing VESDA pipe network without complex system redesign or rewiring.
- A VESDA ECO detector can house up to two gas sensors, and more detectors can be added if the detection of additional gases is required.
- VESDA detectors do not require regular calibration, and VESDA ECO detectors are easily calibrated via the integral test gas port and user friendly VSC configuration software — either manually or automatically, based upon the needs of the application.



VESDA ECO Benefits

- 24/7 dual early warning gas and smoke detection
- Better area coverage and protection through multi-hole air sampling
- Simplified installation, maintenance and service
- Lower total cost of ownership
- Simplified configuration and management using Xtralis VSC and VSM software
- Direct interface to FACP, HVAC and BMS using relays, 4-20 mA or Modbus outputs



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