

Xtralis Develops New Very Early Warning Smoke Detector for the Industrial Sector

VESDA VLI by Xtralis boasts new features that make it a cost-effective, “out-of-the box” ASD system specifically for harsh environments

VESDA aspirating smoke detection (ASD) provides the most trusted very early warning (VEW) smoke detection systems to protect life, assets and business continuity. Originally pioneered more than 25 years ago for the telecommunications and data center markets, VESDA’s reliable performance led to the application of ASD in more challenging applications and environments.

VESDA systems have demonstrated their adaptability as highly reliable and flexible ASD systems in a wide range of applications from clean rooms to coal bunkers, from hospitals to spacecraft launch platforms. Good design, installation and maintenance practices ensure reliable performance, longevity and reduced servicing.

Despite the successes VESDA systems have achieved in industrial applications, there is still a misconception in the market that ASD technology in general is too sensitive or unsuitable for such environments. While this misconception has been addressed in part through industry and market education – and proven operation – some still doubt the suitability of ASD in this sector. For example, some specifiers and installers still believe that ASD is built to perform primarily in clean environments (high sensitivity), so therefore it is “safer” to use other forms of detection (e.g., point, linear heat cable, multi-sensors or thermal) when conditions are less than favorable. However, in most cases these alternatives have proved to be less effective.

Drawing on more than 20 years of experience with ASD in industrial applications, and taking into account the major challenges posed by harsh environments, Xtralis has developed a new detector specifically engineered to meet the fire detection needs of these applications – the VESDA VLI. This innovation from Xtralis, the leader in ASD and the fastest-growing company in fire detection according to IMS Research, boasts new features and capabilities that make it ideal for out-of-the-box use in numerous industrial applications.

“The purpose-built VLI sets a new benchmark for fire detection in industrial applications,” explains Dr. Peter Meikle, Xtralis Vice President for Fire Products and Strategy. “As the pioneers of ASD technology, we’ve combined our technological expertise and 20 plus years of industrial field experience to add a new detector to our VESDA line that will provide very early warning smoke detection for the most challenging environments, at the same time simplifying the deployment of the technology. Simply put, the VLI represents more than 20 years of industrial environment ASD experience in a single box.”

The VLI builds on VESDA’s absolute no-drift calibration, clean air optics barriers and ultrasonic flow-sensing – critical features for any industrial smoke detector.

It boasts a ruggedized enclosure providing protection against dust and water spray. VLI also incorporates an industry-first, patented, fail-safe, “intelligent filtration” technology

designed to reduce contamination that might enter a detector, improving detector longevity and reducing service and maintenance. The detection chamber calibration is continuously monitored by another patented Xtralis innovation, automated in-service calibration confirmation using a novel periodic chamber clean air purge system.

Nuisance alarms due to dust particles are greatly reduced via the implementation of mechanical and algorithmic “particle separation” technologies without compromising smoke detection performance.

A modular design means the intelligent filter, aspirator and detection chamber are all field-replaceable significantly reducing service downtime and associated costs.

In addition VLI seamlessly integrates to existing VESDA systems with on-board VESDAnet support for backward compatibility and integration with Xtralis’ ASPIRE2, VSC and VSM4 software for system design, commissioning and monitoring. New installs will value the easy integration with fire and building management systems thanks to the VLI’s built-in BACnet interface.

VLI is suited to fire detection in many harsh environments such as:

- Mines
- Manufacturing and processing plants
- Petrochemical facilities
- Tunnels
- Grain silos
- Power generation facilities
- Timber, pulp and paper plants
- Textile plants
- Recycling facilities
- Transportation hubs
- Water treatment facilities
- Warehouses
- Fertilizer plants
- Abattoirs
- Laundries

The recently released Xtralis VESDA ECO gas detector further enhances VLI’s capability when used in industrial applications. VESDA ECO easily pairs with VLI where dual gas and smoke detection may be required.

VESDA ECO is installed along the pipe enabling sampled air to pass over the gas sensors within a replaceable, pre-calibrated sensor cartridge.

Both detectors offer a formidable combination of smoke and gas detection leveraging the same sampling pipe network for any industrial risk.

“Unlike the early years in the fire detection industry when the choice of equipment was limited and somewhat basic in performance”, says Dr. Meikle, “today a myriad of smoke detection choices exist, but ASD has always proved to be the most reliable solution for very early warning. With the introduction of VESDA VLI, ASD clearly has evolved to offer the most difficult of environments reliable and cost-effective fire detection.”