

VESDA ECO Customer Success Story

DATA CENTRE

“VESDA ECO takes ASD to a new level by providing very early warning aspirating smoke detection combined with reliable and cost-effective gas detection. This VESDA ECO deployment involves protecting three battery rooms within a data centre, a prime example of the application and environment for which our newest innovation was designed.”

– Claudio Groppetti, Vice President Business Development:
Gas Detection and Environmental Monitoring

A leading insurance company in the Midwestern United States had specified VESDA by Xtralis for its new data centre and the related control room and tape library. All together, approximately 450 m² (4,500 sq ft) was protected by VESDA very early warning smoke detection, including above ceilings and under raised floors.

The company also needed to protect three battery rooms and was in the process of evaluating options for these areas. The initial plan called for spot smoke detectors along with separate hydrogen detectors in each of the 45 m² (450-square-foot) rooms. However, when all the parties involved in this project learned about Xtralis' new gas detection solution and the fact that VESDA already was being used in other areas of the data centre, they took a hard look at a new proposal for VESDA ECO dual smoke and gas detection.

VESDA ECO is a new solution Xtralis launched in May 2010 that combines aspirating smoke detection (ASD) with gas detection and environmental monitoring. It uses a VESDA pipe network to actively sample air for the presence of smoke as well as combustible or toxic gases or for oxygen in deprived areas. Each VESDA ECO detector can house up to two gas sensors, and additional detectors can be added easily to the pipe network to monitor for more gases if required.



Data centre, including control room, tape room and three battery rooms

Location:
Midwestern United States

Industry:
Insurance

Solutions:

- VESDA ECO for hydrogen detection in battery rooms
- VESDA VLC smoke detectors for battery rooms

Benefits:

- Dual 24/7 early warning gas and smoke detection
- Better area coverage and protection through multi-hole air sampling
- 25% reduction in installation costs
- Simplified installation, maintenance and service
- Lower total cost of ownership

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VESDA ECO was chosen for the three battery rooms in the insurance company's data centre because of VESDA's reputation in very early smoke detection and because the addition of **VESDA ECO** detectors for hydrogen would be more cost effective. Rather than install six spot detectors, 12 spot hydrogen detectors, and a central gas control panel as the original plans called for, each battery room is being protected by a single VESDA VLC and a **VESDA ECO** hydrogen detector, supplying both smoke and gas detection for a total installation cost savings of 25 percent.

VESDA ECO reduces the total cost of system installation, maintenance and service because fewer detectors are required. The gas detection solution can be added to a new VESDA ASD system or easily retrofitted to an existing VESDA ASD system without major construction or the addition of electrical wiring and conduit.

In addition to dual protection, better coverage and performance through multi-hole air sampling is achieved. **VESDA ECO** provides features such as on-board data logging that is not available with most point gas detectors on the market today. It also integrates with other building management systems (FACP, PLC, HVAC and BMS) to deliver real-time situational awareness and intelligent emergency response, including the use of demand-controlled ventilation to save energy and control costs.

In this project, the **VESDA ECO** low-alarm, high-alarm and fault relays are integrated to a fire alarm control panel using I/O modules. Low alarms are used to activate visible annunciators located outside the effected battery room and turn on ventilation fans to prevent the buildup of hydrogen gas. High alarms, should they occur, would indicate a system malfunction and activate emergency battery shut-down procedures to prevent the buildup of an explosive concentration of hydrogen gas and simultaneously sound audible alarms.



A data center in the Midwestern United States is using VESDA ECO for hydrogen detection in three battery rooms.

“**VESDA ECO** demonstrated an innovative new approach to gas detection. Multi-hole aspirating gas detection delivers improved detection, greater design flexibility, and lower total cost of ownership when compared to conventional spot-type gas detectors.”

– Claudio Groppetti,
Vice President Business Development:
Gas Detection and Environmental Monitoring

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Document: 19651_01 FcS

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