

Protecting Battery-charging Rooms from Invisible Dangers

Electrical energy storage is now a major consideration in many industries, ranging from the need to supply permanent power to computer rooms via an uninterruptible power supply (UPS) to large-scale power generation and storage from renewable resources such as wind energy. Rechargeable batteries all use an electrochemical reaction to convert available electrical current into stored chemical energy. This chemical reaction can produce quantities of hydrogen gas (sometimes known as off-gassing), which is highly flammable and has led to some catastrophic explosions when not managed properly or due to lack of proper ventilation.

Therefore, very early smoke detection and reliable monitoring for hydrogen gas is an essential part of the safety infrastructure for a battery-charging room.

Introducing VESDA ECO by Xtralis

Extending its world-renowned VESDA Air-sampling Smoke Detection (ASD) technology, Xtralis is pleased to introduce the industry's first system to combine ASD with gas detection and environmental monitoring.

The VESDA ASD module delivers the superior benefits of very early warning smoke detection while the VESDA ECO module can detect flammable hydrogen gas. This unique and cost-effective dual-monitoring concept delivers significant cost savings when compared to installing and maintaining separate, conventional cabled smoke and gas detectors.

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 detection with lower installation costs through the use of the existing ASD pipe network
- Multiple gas-sampling points for better area coverage
- Integrated with variable-speed fans, enabling demand-controlled ventilation for energy and cost savings
- Full integration with Xtralis VSC and VSM software to simplify installation, configuration and management
- Direct interface to FACP, HVAC and BMS using relays, 4-20 mA or Modbus outputs



Air-sampling Smoke Detection with Gas Detection and Environmental Monitoring

Time to Respond Because of Early Warning

- VESDA ECO enables smoke detection at the incipient stage of a fire caused by heated cables, smoldering insulation or melted plastic fittings.
- Active air sampling means reliable detection of hydrogen (H₂) through the use of the VESDA distributed sampling pipe network.
- Reliable performance even in challenging environments through the use of engineered internal and external filters.

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 with the industry's only optical clean-air bleed means that VESDA does not require drift compensation to offset the detector chamber's deterioration over time, ensuring detector performance and longevity.
- VESDA ECO is based on the world's No. 1 ASD system, which is backed by decades of successful operation in numerous applications and environments.

Flexible System Integration

- Provides real-time smoke and gas data for an appropriate and staged response, including local alarm annunciation, alarm notification to a control room, and automatic ventilation system activation.
- Smoke and gas data gathered at various control points through the use of a wide range of high- and low-level interfaces, including Fire Alarm Control Panels (FACP), BMS and PLC.
- Full compatibility with Xtralis VSC, Xtralis VSM and VESDA ASPIRE2 software provides greater value because end users do not have to learn to operate additional software packages.

Industry's Lowest Cost of Ownership

- VESDA ASDs can be located at a centralized location to enable easy access and maintenance.
- A VESDA ECO detector can be added easily to an existing VESDA ASD pipe network without complex system redesign or rewiring.
- Each VESDA ECO module can detect up to two gases, and more ECO detectors can be added to detect additional gases if required.
- VESDA detectors do not require regular recalibration and have a 10-year chamber life. VESDA ECO detectors only require calibration once every 12 months, depending on the application and gas being monitored.
- VESDA ECO can be used to actuate the ventilation system, dramatically reducing electrical energy consumption when compared with permanently powered fans.



Suitable for:

- Telecommunications and IT
- Government
- Power Generation and Utilities
- Commercial and Industrial
- Transportation
- Manufacturing

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