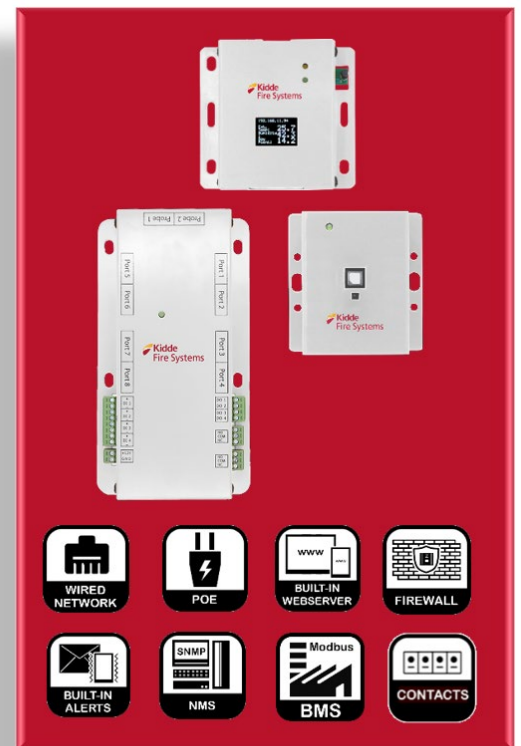
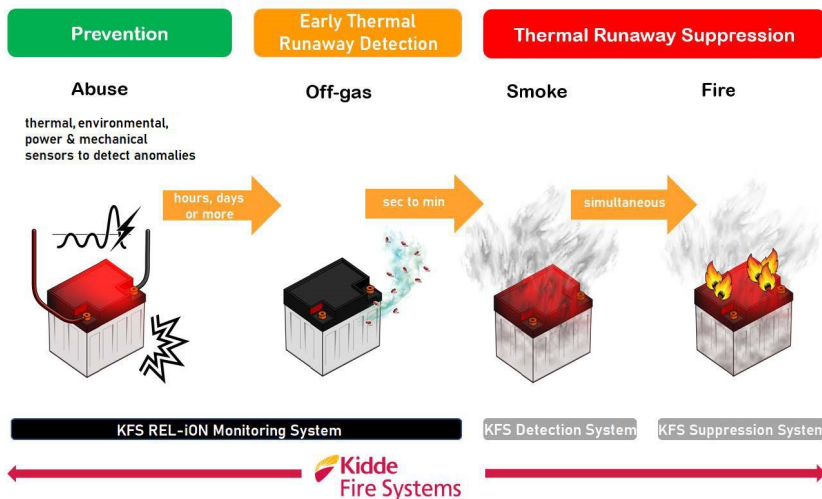




REL-iON™

Battery Monitoring System

Kidde Fire System's REL-iON™ Battery Monitoring System is a modular sensor platform designed to detect potential failures in mission critical applications, such as Battery Energy Storage Systems (BESS), Switchgears, Data & Network infrastructure, etc.



With an array of over 80 REL-iON sensors complementing a robust fire suppression portfolio, Kidde Fire Systems is uniquely situated to go beyond the ordinary with a single branded Prevention-Detection-Control-Notification-Suppression solution for Li-ion Battery applications.

Multi-Point Monitoring Architecture

To mitigate the risk of thermal runaway events, a crucial approach involves the utilization of sensors capable of detecting off-gases or initial venting occurrences. The optimal sensor for this task is one that can identify volatile organic compounds (VOCs).

Moreover, when employing liquid cooling for your batteries, it is imperative to include a Hydrogen (H2) sensor. In such cases, battery leaks can occur at typical operating temperatures, releasing H2 gas before any other gas.

REL-iON™ Key Features Include:

Stage 1 - Prevention

Stage 1 prevention involves the continuous monitoring of various factors, including environmental conditions, mechanical stress, power fluctuations, and thermal conditions. This monitoring is crucial to proactively prevent potential failures and to optimize performance and overall lifespan of mission critical assets. Several different sensors can be deployed for preventive monitoring, such as Water Leak, Temperature and Humidity, Solid Contaminants, Real-Time Corrosion, Air Flow, Vibration, etc.

Stage 2 - Detection

Just before a complete thermal runaway occurs, malfunctioning lithium-ion batteries will vent gases as a result of internal pressure build-up, leading to the rupture of the battery's enclosure. Our innovative platform extends off-gas detection beyond just volatile organic compounds (VOCs) electrolytes' vapors, seamlessly incorporating the analysis of other dangerous vented gases such as CO2 and H2.

Beyond Just Li-ion Battery Applications

Kidde Fire System's REL-iON™ platform boasts a modular and adaptable architecture, enabling seamless customization to deliver extensive preventive monitoring across various applications, such as Electrical Rooms, Wind Turbines, Datacenters, and more.

Expanded Connectivity

Designed as a seamlessly integrable platform, Kidde Fire System's REL-iON™ enables effortless data retrieval over IP via SNMP, Modbus TCP or pushed to any IoT cloud via MQTT. Moreover, select sensors are equipped with RS-485 outputs supporting Modbus RTU protocol.

Approved for the following Kidde Fire Systems

- Kidde Fire Systems Conventional and Addressable Control Units

Applications

- Battery Energy Storage Systems (BESS)
- Switchgears
- Data & Network infrastructure
- & More

Approvals & Listings:

- UL Listed*
- FCC*
- CE Certified*
- ISO*

*where applicable

The products depicted here are intended to be used as early warning sensors for information purposes and any preventative or maintenance actions as may be deemed appropriate. The products are listed to codes and standards other than UL 268, UL 521 and other fire codes.

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Sell Sheet RELiON

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