

# **Explosion-proof energy storage** device







#### **Overview**

Should deflagration venting be used as passive explosion protection?

In general, using deflagration venting as passive explosion protection in addition to an active system has multiple benefits due to the nature of the battery failure event, which involves a rapid release of flammable gases.

Does NFPA 855 require explosion protection?

The fire codes (IFC 2021 Chapter 1207, NFPA 855 ed. 2023) contain a requirement to include explosion protection for installed systems exceeding certain energy capacity thresholds.

What is a battery energy storage system?

Battery Energy Storage Systems (BESS) represent a significant component supporting the shift towards a more sustainable and green energy future for the planet. BESS units can be employed in a variety of situations, ranging from temporary, standby and off-grid applications to larger, fixed installations.

Where can I find information about Bess explosion protection?

To learn more about BESS explosion protection, or to find your local IEP sales, service, and support center, visit or contact +1 855-793-8407. Concerned about your explosion risk?

Why are explosion hazards a concern for ESS batteries?

For grid-scale and residential applications of ESS, explosion hazards are a significant concern due to the propensity of lithium-ion batteries to undergo thermal runaway, which causes a release of flammable gases composed of hydrogen, hydrocarbons (e.g. methane, ethylene, etc.), carbon monoxide, and carbon dioxide.



How does ESS design affect fire and explosion safety?

Several competing design objectives for ESS can detrimentally affect fire and explosion safety, including the hot aisle/cold aisle layout for cooling efficiency, protection against water and dust ingress into the enclosure, and the use of larger cells with increased energy density.



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### A Guide to Hazardous Location Classifications

Division II (Classes I, II & III) Explosion proof devices gases or flashes created inside the fixture. In addition, the external operating temperature (hottest extended surface) will not plosion will ...

### ATEX Rechargeable Battery in Saudi , ATEX Rechargeable Battery

An ATEX Rechargeable Battery in Saudi provides reliable and explosion-proof energy storage for critical equipment and portable devices. The ATEX External Rechargeable Battery combines ...



## Explosion-proof standards for battery energy storage cabinets

Both the exhaust ventilation requirements and the explosion control requirements in NFPA 855, Standard for Stationary Energy Storage Systems, are designed to mitigate hazards associated ...

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