

# Requirements for separation of UPS and battery cabinet in power room



## Overview

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Core requirements include rack separation limits, a Hazard Mitigation Analysis to prevent thermal-runaway cascades, early-acting fire suppression and gas detection, stored-energy caps for occupied buildings, and detailed safety documentation (UL). NFPA 70E®, Standard for Electrical Safety in the Workplace®, Chapter 3 covers special electrical equipment in the workplace and modifies the general requirements of Chapter 1. UL 9540A thermal-runaway testing is the evidence. There are many critical design issues that must be taken into consideration when planning, designing and constructing a safe and reliable battery room. Please note that these two codes are not interchangeable. Section 608 applies to stationary storage battery systems. New requirements appear in the NEC for battery rooms. Look closely and you might see another electrician laying down on the job.

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### Stationary UPS Sizing Calculations - Part Six

Battery rooms shall be equipped with a centralized Emergency Power-Off (EPO) system than can disconnect power to the load centers (UPS common battery bus or individual UPS modules).

### Location and Occupancy Separation

These systems should be housed in noncombustible, locked enclosures to restrict unauthorized access, or in dedicated equipment rooms for authorized personnel only. They cannot be placed in high-risk



### [Comprehensive Guide to Battery Room Protection: NFPA Codes and](#)

This article provides a detailed overview of these requirements, referencing NFPA 855 and other relevant codes.

### NFPA 70E Battery and Battery Room Requirements , NFPA

It is a requirement to have all the documentation in place prior to authorized personnel entering a battery room to perform a specific work task on a battery system under normal operating



### 480.9 Battery Locations.



## Storage battery requirements

In assembly, educational, detention, health care, day care, etc., battery systems shall be located in a room separate from other portions of the building and be 2-hour fire-rated.

Working space shall be measured from the edge of the battery cabinet, racks, or trays. For battery racks, there shall be a minimum clearance of 25 mm (1 in.) between a cell container and any wall or



## NFPA 855 Guide: Complying with Fire Code for Batteries

Learn how to comply with NFPA 855 battery fire code requirements for energy storage systems. Key rules, spacing, UL 9540A testing, and documentation steps.

## Battery Room Safety Standards Guide , PDF , Ventilation

This document provides standards for battery room design and operation. It outlines requirements for civil construction including fire resistance of walls and floors, as well as plumbing, ventilation,



## 2018 Title Contents

This paper addresses the minimum requirements from Local, State and Federal requirements and historical trends in various areas where local AHJs have changed requirements in their jurisdictions.

## **UFC 3-520-05 Stationary Battery Areas; replaced by UFC 3-520**

When more than one battery chemistry is employed, locate each type of battery in a separate room with each room individually meeting the occupancy separation requirements and with no direct access



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