



Lifepo4 for ups

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Batteries are the lifeline of any uninterruptible power supply (UPS) system[i] supporting critical applications. Falcon has always been at the forefront of battery selection to provide maximum service life and reliability. We continue that tradition onto the next generation of battery selection with our lithium iron phosphate (LiFePO₄) batteries.

The key point that is often misunderstood is that not all lithium-ion batteries are the same. The lithium batteries used in consumer electronics and the UPS industry are lithium-ion, but different types. This short guide explains:

Lithium batteries in consumer electronics are offered in various lithium-ion chemistries which are selected based on the type of device it supports. For example, your laptop, tablet or camera may use a battery with lithium cobalt oxide (LiCoO₂) cathode material. Other devices such as smartphones, may use lithium polymer type batteries. These lithium batteries are great for everyday use in consumer electronics, however, they are insufficient for use in industrial or commercial-grade UPS battery backup applications.

A UPS provides power to equipment when utility power is not available. This requires a reliable and capable battery to provide power backup function during such critical events. Due to a UPS's safety requirements and high energy demand, the best suited lithium-ion chemistry is LiFePO₄ (lithium iron phosphate).

This guide explains the different lithium-ion battery types. LiCoO₂ and lithium polymer are appropriate for consumer electronics and have safety issues. However, LiFePO₄ is the safe and reliable choice for a UPS since it is a very stable chemistry. Maintaining our standard of technical excellence, Falcon has selected high-quality LiFePO₄ batteries for our LifePO₄ UPS product family that provide maximum safety, high reliability and a long service life.

Yes, LiFePO₄ batteries can be used for UPS (Uninterruptible Power Supply) applications. They offer advantages such as longer lifespan, faster charging times, and higher energy density compared to traditional lead-acid batteries. Their stability and safety features make them an excellent choice for ensuring reliable power backup.

LiFePO₄ batteries are increasingly becoming the preferred choice for UPS systems due to their numerous benefits. Below, we explore the key advantages that make these batteries ideal for uninterruptible power supply applications.

One of the most significant advantages of LiFePO₄ batteries is their extended lifespan. Typically, they can last up to 10 years or more, significantly outlasting traditional lead-acid batteries, which may only last around 3-5 years.

LiFePO₄ batteries can be charged much more quickly than lead-acid counterparts. This feature is crucial for UPS systems that require rapid recovery times after a power outage.

LiFePO₄ batteries provide a higher energy density, meaning they can store more energy in a smaller space. This characteristic is particularly beneficial for compact UPS systems where space is at a premium.

Safety is paramount in UPS applications. LiFePO₄ batteries are known for their thermal stability and low risk of fire or explosion compared to other lithium-ion chemistries.

Recent advancements in battery technology have highlighted the growing adoption of LiFePO₄ in various sectors, including UPS systems. Companies are increasingly investing in research and development to enhance the performance and safety of these batteries. Notably, several manufacturers have announced new product lines featuring improved charging capabilities and longer lifespans.

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