Under Voltage Protection (UVP) Technology

What is Electrochem's UVP technology?

UVP technology is a control that can be added to individual cells or a battery pack to prevent over discharge. The device monitors the voltage of a cell or group of cells, and then disconnects it from the load if it senses the voltage drops below a minimum voltage limit. This protection can be applied to an entire pack, a string of cells, or each individual cell. The voltage limit can then be adjusted accordingly.

What are the benefits of Electrochem's UVP technology?

Over discharging a battery creates higher internal pressures, increasing the chance that a cell may vent. UVP technology prevents discharging when voltage drops below an acceptable limit, reducing the chance of a costly, possibly dangerous, situation.

Additionally, if the discharge of a cell in series is stopped when it reaches a minimum threshold, it will eliminate the risk of that cell being driven into voltage reversal from the other cells connected in series. This further decreases the chances that a cell may vent.

What's more, this protection does not come at the expense of performance. The majority of applications require a minimum voltage to power electrical components. Any capacity beyond that limit is often unused. Furthermore, the capacity obtained from discharging a cell beyond that limit is insignificant; meaning there's minimal capacity to be gained running to 0V. Therefore, in the majority of applications, capacity and runtime are not significantly impacted.

Why choose Electrochem?

Electrochem is a trusted leader in battery technology focused on enhancing lives worldwide by providing superior power solutions that enable the success and advancement of our customers' critical applications. Our technological expertise and heritage for superior quality, reliability, and innovation are part of our DNA; deeply rooted from our origins when Wilson Greatbatch developed the battery for the first implantable pacemaker. Whether our products are being used to monitor potential environmental catastrophes, support troops on the battle field, or explore geologic formations miles below the earth's surface, one thing is constant: failure is not an option.

To learn more about this exciting technology or other technologies we offer, please reach out to your Electrochem Sales Representative or email us directly at Marketing@ElectrochemSolutions.com.