

# Sensata Technologies | Lithium Balance Debuts ASIL C Certified Battery Management System for High Voltage Applications at Battery Show North America

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- The new Lithium Balance n3-BMS from Sensata Technologies comes functional safety certified off-the-shelf, significantly reducing the time to market and costs associated with the ISO 26262 certification process.
- The battery management system is ideal for applications with power up to 1000 volts/2000 amps and features a unique software structure that allows developers to customize the BMS with their own code and algorithms while maintaining ASIL C certification.
- Sensata will debut the Lithium Balance n3-BMS in booth #2817 at the Battery Show North America from September 13 – 15 in Novi, Michigan.

SWINDON, England--(BUSINESS WIRE)-- **Sensata Technologies** (NYSE: ST), today announced it will debut a new Battery Management System (BMS), the Lithium Balance n3-BMS, for high voltage applications at the Battery Show North America from September 13 – 15 in Novi, Michigan in booth# 2817.

This press release features multimedia. View the full release here:

<https://www.businesswire.com/news/home/20220913005390/en/>

The Lithium Balance n3-BMS from Sensata Technologies provides an ISO 26262 certified solution up to ASIL C for battery makers and heavy electric vehicle OEMs to reduce time to market and certification costs and features a highly flexible software that allows developers to customize the BMS with their own code. (Photo: Business Wire)

The Lithium Balance n3-BMS is ideal for applications with power up to 1000 volts/2000 amps, especially for battery makers and manufacturers of electric trucks, buses, and other heavy commercial vehicles. The demand for ISO 26262 certified components is on the rise as battery packers and electric commercial vehicle OEMs prioritize functional safety in their platforms while striving

for faster time-to-market. However, the ISO 26262 certification process is complex, costly and can take years to complete. An off-the-shelf, Automotive Safety Integrity Level (ASIL C) certified solution like the Lithium Balance n3-BMS can reduce the development time and associated costs.

The unique layered software structure of the n3-BMS provides customers with the option to customize the battery management system with their own code and algorithms without impacting the ASIL C certification. The BMS software architecture consists of a “Base Software Layer” (BSW) and an “External Software Layer” (ESW) which are connected by an open API link layer. Since all the safety-critical functionalities of the BMS are in the BSW layer of the software, developers are free to implement their own software code and algorithms in the ESW without any risk to the ISO 26262 certification of the system.

Both the Lithium Balance n3-BMS and its previous generation, the n-BMS, are distributed systems that consist of up to 30 Cell Monitoring Units (CMUs) for monitoring individual cells and a Master Control Unit (MCU), which consolidates the information and controls the battery functions. The n-BMS’ MCU is fully compatible with the n3-BMS’ CMUs, so it is easy to upgrade from n-BMS to n3-BMS with the replacement of a single PCB board in a battery system of any size. For developers currently working on next generation, heavy electric vehicles that expect the need for an ISO 26262 certified system in the future, this provides a convenient and cost-effective pathway to achieve an ASIL C certified BMS with a simple upgrade (available early 2023).

Additional key features of the n3-BMS include:

- Up to 1000V / 2000A
- 24 – 360 cells in series
- 3 CAN ports

For a preview of Sensata Technologies new functional safety certified Lithium Balance n3-bms, which will be available in early 2023, for electric trucks, buses and material handling equipment, visit [www.sensata.com/products/battery-management-systems](http://www.sensata.com/products/battery-management-systems) .

In addition to the new Lithium Balance n3-BMS, Sensata will showcase critical solutions that make energy systems safer, cleaner, more efficient and connected, such as contactors, fuses, IVTs and IMDs, in **booth# 2817 at the Battery Show North America** from September 13 – 15 in Novi, Michigan.

## About Sensata Technologies

Sensata Technologies is a global industrial technology company striving to create a cleaner, more efficient,

electrified and connected world. Through its broad portfolio of sensors, electrical protection components and sensor-rich solutions which create valuable business insights, Sensata helps its customers address increasingly complex engineering and operating performance requirements. With more than 21,000 employees and global operations in 13 countries, Sensata serves customers in the automotive, heavy vehicle & off-road, industrial, and aerospace markets. Learn more at [www.sensata.com](http://www.sensata.com) and follow Sensata on **LinkedIn**, **Facebook** and **Twitter**.

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