



Future Trends and Safe Vehicle Energy Supply Systems

Current market trends indicate two main streams. On one hand, there is an increase in both the number and the level of automation of vehicles in the market. On the other hand, more and more Original Equipment Manufacturers (OEMs) are pushing for the implementation of new X-by-Wire systems.

These new trends pose increasing safety requirements for vehicles. The vehicle energy supply system, which forms the basis for the supply of all safety-relevant systems in vehicles, must therefore be developed according to the ISO 26262 safety standard for functional safety in the automotive sector. For this reason, the VDA working group has developed the standard VDA 450 and published it in April 2023.

Battery Diagnosis, Foundation for a Safe Vehicle Energy Supply System

The availability of the vehicle energy supply system is significantly dependent on the low-voltage battery, which must be monitored by continuous battery diagnosis. Since battery diagnosis relies on complex algorithms, the safety of the battery diagnosis cannot be fully guaranteed by ISO 26262 alone. For this reason, it is necessary to develop a new safety argument to complement ISO 26262.

New Safety Standard in the Automotive Industry

The new safety standard ISO 21448 aims to fill the existing gap in ISO 26262 and offers a framework for the Safety of Intended Functionality (SOTIF).

For this purpose, Bosch and IMA have jointly initiated a research project to explore the interactions between Functional Safety (FUSA) and SOTIF, and to investigate further applications of ISO 21448 for the vehicle energy supply system.

ADAC statistics

NEW DRIVING FUNCTIONS

- Parking Pilot
- Traffic Jam Pilot
- Highway Pilot

SAFETY FOR POWERNET

