

Are you an OEM and you need to define a new fault-tolerant concept for your L3/L4/L5 vehicle electric powertrain?

Do you need fault-tolerant high voltage, low voltage supply, in L3/L4/L5 vehicle?

DE0213 Safe fault-tolerant vehicle powertrain in fail-safe and fail-operational systems up to SAE Level 5

Standards like ISO 26262 provide general guidance of functional safety, but no function-specific solutions.

However, with the advent of fault-tolerant systems required for L3/L4/L5 systems, and with the advent of new functions like hydrogen fuel cells, vehicle electric functions like high voltage supply and electric powertrain need to be safe and also fault tolerant.

General approach:

The *exida* approach is to provide an overview of safety concepts for all vehicle functions related to power management and electric energy supply (including high voltage, low voltage, BMS, and others).

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Who should attend?

- ◆ System Safety Engineers
- ◆ Product Owners

Duration:

4 hours split as two 2-hour sessions

Language:

English

Location:

online

Certificate:

Each participant gets a letter of attendance.

For more information, please contact:

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Agenda and Content

- ♦ The training is organized by systems in the electric powertrain: HV battery, DC/DC converter, LV battery, inverter, and onboard charger.
- ♦ For each system, the following structure of the presentation is followed:

- Description of power-related systems, their specific functions, and hazards on the item level.
- Summary of safety goals, typical safety integrity levels, time intervals, and safe states.
- Impact of potential fail-safe reactions on fault-tolerant systems.
- Possible and recommended system architectures and functional and technical safety concepts, with example requirements and safety mechanisms.
- Summary of FMEA, including example functions, failure modes, failure effects and corresponding safety mechanisms.