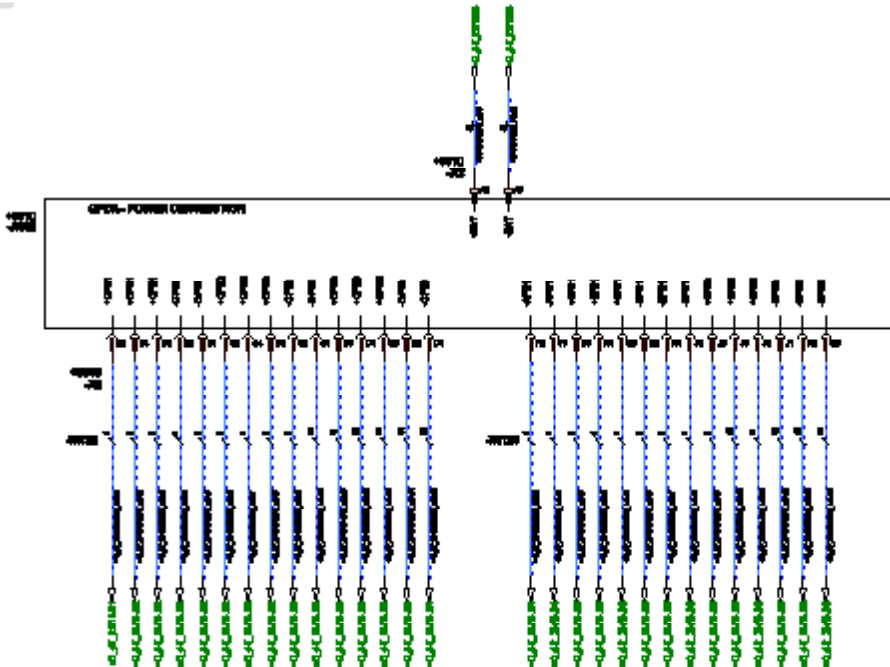


Electrical Engineering



- System analysis
- Subsystem design and integration
- Electrical diagrams (HV-MV-LV)
- Electrical cabinet design
- Mechanical design support
- Test & Commissioning

Contact us

System Analysis

By taking our customers' requirements, tender specifications and standard requirements (e.g. IEC, EN, UIC, TSI, etc.) into account, we define HV / MV / LV / TCMS architectures, train networks and function allocation. In case of non-safety-related devices, PROSE evaluates the interface system requirements directly. However, in case of safety-related subsystems, hazard analyses are conducted beforehand.

Subsystem Design and Integration

PROSE engineers take care of the integration design of all subsystems on board the train, such as electrical, network and functional interfaces. We deliver the following design documents for each subsystem: technical need specification, system / functional / interface requirements specification and validation plan. Once the design or specification document has been issued, PROSE provides support by suggesting potential suppliers and by evaluating the compliance of the proposed supplier solution to the specifications.

Electrical Diagrams (HV-MV-LV)

We design on-board electrical systems (battery dimensioning, power consumption, components definition, cable definition and dimensioning) and we also deliver design documents such as electrical functional schematics, wiring tables, and connector tables.

Electrical Cabinet Design

PROSE also delivers comprehensive designs of electrical cabinets, including the details needed for industrial production. You can trust us to define the earthing of all electrical and electronic systems and to issue the earthing guidelines for the protection of non-electrical systems. We implement the electrical integration of all on-board systems.

Mechanical Design Support

We are also able to give mechanical design support. For instance, we can deliver drawings of the mechanical interfaces between rolling stock and equipment and define how cables have to be positioned in it - with brackets or cable ducts. This way, we give overall support to car builders in the elaboration of detailed mechanical drawings for equipment installation.

Test & Commissioning

Once the train has been manufactured, PROSE implements the necessary debugging to solve potential construction and design problems and to prepare the train for the commissioning. We are able to test and commission rolling stock of any complexity according to EN 50215 and individual customer requirements.