KONTRAC PN6MS is a multi-system battery charger which serves as the source of electric energy for charging batteries and for supplying of all DC consumers on board the passenger coach. It is powered by any of four UIC voltages. Switching to another UIC system is performed automatically, without supervision. Modular design enables easy access and low maintenance costs.

Features

- Four input voltages i.e. supply systems
- Microprocessor control and diagnostics
- Input / output galvanic insulation
- Easy maintenance
- Modular design
- Flat-battery power supply
- Disconnecting and earthing device integrated inside the converter enclosure
- Automatic switching to another input voltage i.e. supply system

KONTRAC PN6MS consists of

- Disconnecting and earthing device
- Input contactors
- Input filter
- High-voltage converter
- Battery charger and module with reactors
- Flat battery power supply
- Control unit
Digital control unit
Digital control unit (DCU) is based on proprietary embedded control platform which has been used for years in our rail solutions (locomotives, coaches, tramways, EMUs, DMUs). DCU is responsible for all sequence control, regulation, protection, communication, supervision and diagnostics tasks.

Diagnostic and visualization
Proprietary powerful diagnostic and visualization tool (ZZT) is compatible with all our platforms through many generations of control electronic solutions. Configurable event-driven data logging and event recording is integrated in the control electronics.

Mechanical design and cooling system
The converter is designed for under-floor mounting with IP54 protection. Modular design of the converter allows an easy maintenance access enabling easy replacement of each power module. The increased power density of the power modules enables compact and light-weighted converter design. The converter is efficiently cooled by natural convection.

Application example
As a part of modernization of passenger coaches for local transport, passenger coaches series Bee 20-00 and 29-00 have been equipped with multi-system battery charger KONTRAC PN6MS. The converter is used for supplying of all DC consumers onboard the coach as well as for charging coach battery.

Block diagram of the converter

Modernized passenger coach series Bee 29-00 for local passenger transport in Croatia.