

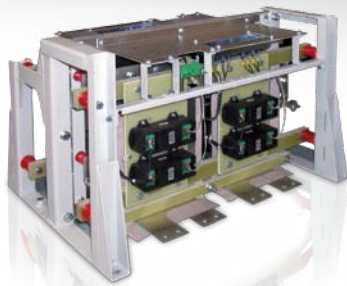
KONTRAC GP550DE Propulsion and auxiliary converter for diesel-electric multiple units

*KONTRAC GP550DE
for diesel-electric multiple units*



KONTRAC GP550DE converts the variable voltage from diesel generator into drive power for the traction motors, three-phase auxiliary power supply for the train onboard consumers and into DC auxiliary power supply for charging train batteries and supplying of all DC consumers on board the vehicle.

KONTRAC GP550DE is a robust and solid unit incorporating modern IGBT technology.



Power unit of propulsion converter

Features

- Modular design of power units
- High energy efficiency
- Roof mounting
- Easy maintenance
- Motor friendly
- Integrated auxiliary converter
- Integrated battery charger
- Latest IGBT technology
- Liquid cooling system
- Galvanic isolated output

KONTRAC GP550DE consist of

- Input contactor and precharging circuit
- Propulsion inverter
- Auxiliary converter with three-phase output and battery charger
- Liquid cooled cooling system
- Output transformer
- Traction control unit

KONTRAC GP550DE

Traction control unit

Traction control unit (TCU) is based on proprietary embedded control platform which has been used for years in our rail solutions (locomotives, coaches, tramways, EMUs, DMUs).

TCU is responsible for all sequence control, regulation, protection, communication, supervision and diagnostics tasks. Special care is put on obsolescence issues and modularity.

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. Remote diagnostic functions allow monitoring of all intelligent units from one connection point.

Mechanical design and cooling system

The converter is designed for roof mounting with IP54 protection. Modular design of the converter allows an easy maintenance access enabling that each module could be very easily replaced. The increased power density of the power modules enables compact and light-weighted converter design.

The efficient cooling system is completely integrated in converter box achieving a high degree of functional integration. It uses water to cool the converter power modules - a feature contributing to the converter's very compact design. The water itself is cooled by an internal air-to-water heat exchanger.

Application examples

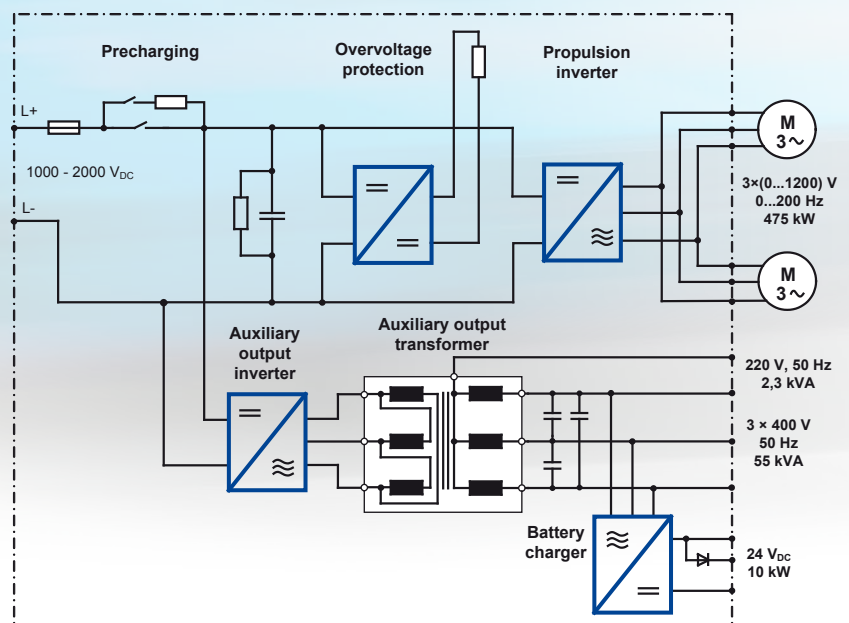
KONTRAC GP550DE is mounted on roof of the low-floor diesel-electric multiple unit built and delivered for Croatian Railways. The diesel-electric multiple unit, which is distinguished by its modern and attractive design, superior technical characteristics and comfortable ride, is intended for regional passenger transport in Croatia.

BASIC TECHNICAL DATA

Input voltage	1000 V _{DC} - 2000 V _{DC}
Propulsion output	475 kW
Braking chopper	730 kW
AC outputs	3 x 400 V, 50 Hz, 55 kVA 230 V, 50 Hz, 2,3 kVA
DC output	24 V _{DC} , 10 kW
Cooling	Liquid cooled
Size (L x W x H)	3000 x 1800 x 735 mm
Weight	1485 kg
Mounting place	Roof
Connecting interface	CAN / MVB / Ethernet



Diesel-electric multiple unit for Croatian Railways



Block diagram of the converter

KONČAR

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