

KONČAR

Inspired by challenge



**Rail solutions
and
infrastructure**

Born to roll

KONČAR's development, design and manufacture of rail transport equipment dates back to 1949, when the company developed the electric traction motor for trams. Since then, KONČAR has been continuously operating in the rail industry.

Today, KONČAR develops, designs, manufactures, retrofits and maintains rolling stock for railway, industrial, regional and urban-suburban transport. Our product range includes electric locomotives, electric multiple units - EMU and diesel multiple units - DMU, and trams. We also design, develop and manufacture components and subsystems for rolling stock, such as power and instrument transformers, control and communication systems, static voltage converters for main and auxiliary drives, control, switchgear, protection and signalling devices, traction and other electric motors, as well as steel structures of car bodies and bogie frames.



Our solutions include

- Rail vehicles
- Components and systems for rail vehicles
- Rail infrastructure engineering
- Components and systems for rail infrastructure
- Rolling stock maintenance

Diesel-electric train

Rail vehicles

- EMU (Electric Multiple Units)
- DMU (Diesel Multiple Units)
- Trams
- Electric locomotives
- RV modernization





Three-section low-floor tram TMK 2300LT delivered to the city of Liepāja, Latvia



Five-section low-floor tram TMK2200 delivered to the city of Zagreb, Croatia



Modernized locomotive for Croatian railways

Electronic equipment for vehicles - Control systems

- Train Control and Management Systems (TCMS)
- Energy Metering Systems (EMS) for electric rolling stock



Rolling stock converters and traction motors

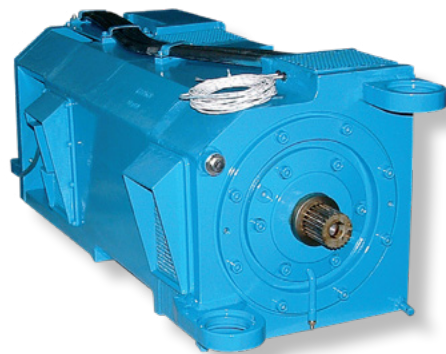
- Propulsion converters for electric and diesel-electric trains, trams and locomotives
- Self-consumption inverters and battery chargers for electric and diesel-electric trains, trams, locomotives and passenger rolling stock

Traction motors

- Asynchronous squirrel-cage motors
- Rated power from 65 to 525 kW
- Rated voltage up to 1000 V
- Rated speed up to 5280 rpm for EMU train motors and 4580 rpm for tram motors
- Insulation class index 200

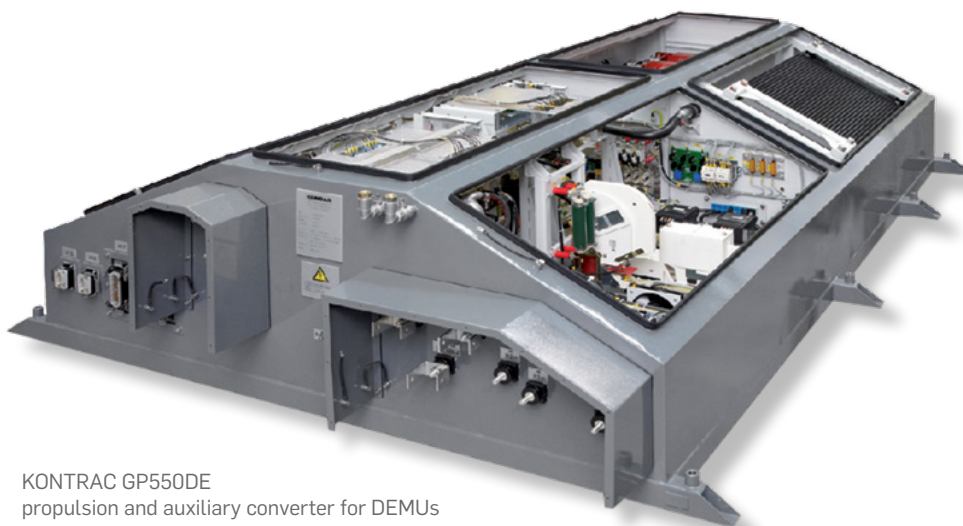


EMU train motor



Tram motor

Converters



KONTRAC GP550DE
propulsion and auxiliary converter for DEMUs



KONTRAC GP550AC
propulsion converter for EMUs



KONTRAC PN50AC
auxiliary converter for substations



KONTRAC GP170DC
propulsion converter for trams



KONTRAC PN90DC
auxiliary converter for multi-system trains

Rail infrastructure engineering

Electric traction

- Electric traction substations
- Reactive power compensation plants
- Overhead contact line sectioning plants
- Local and remote control
- Coach pre-heating and air-conditioning devices
- Rectifier stations



Electric traction substation

Railway traffic safety

- Level crossing protection and signalling devices
 - Electronic Level Crossing Device KLC3
 - Safety human-to-machine interface - SafeHMI and safety input-output devices - Safel/O
 - Electrohydraulic drive for half-barriers
- Point heating systems
- Power supply for safety and signalling devices
- Track circuits for control of insulated and short section occupancy



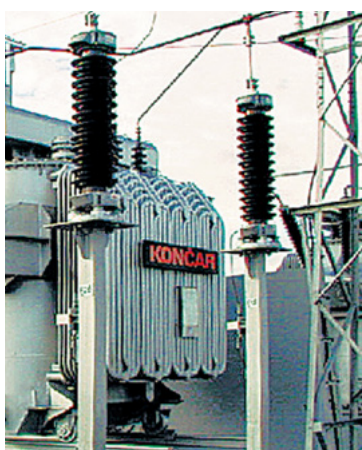
Level crossing in Croatia

Components and systems for rail infrastructure

Rail infrastructure equipment



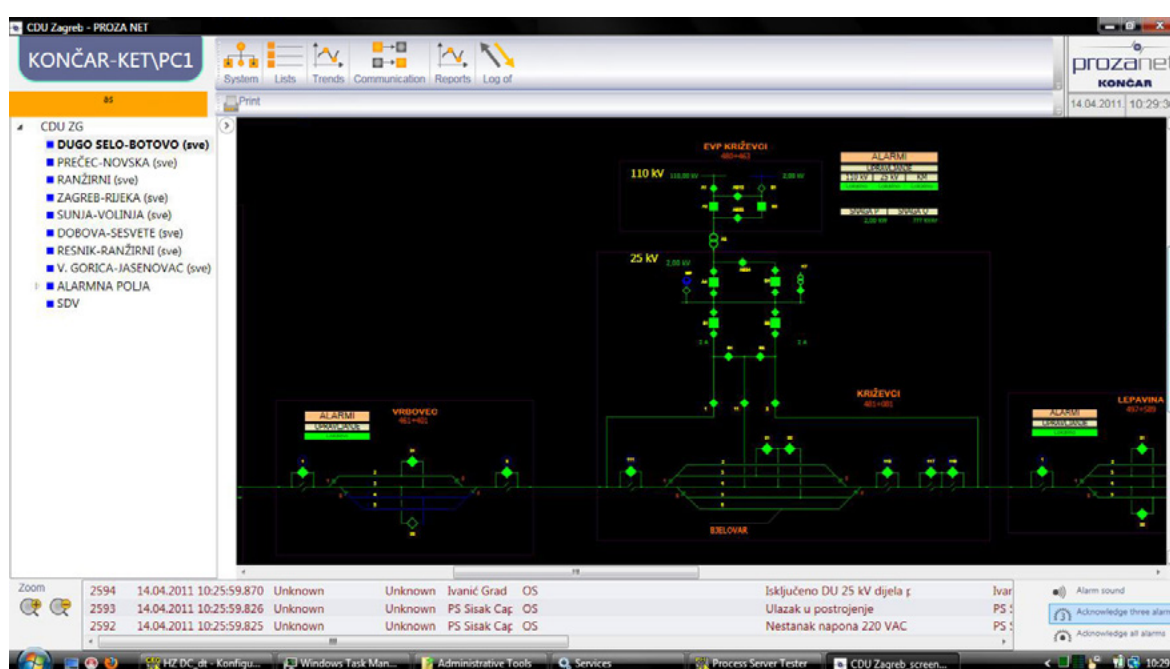
123 kV switch



Single-phase power transformer



Reactive power compensator



SCADA for remote control



KLC3 – KONČAR Level Crossing 3rd generation



Hydraulic half-barrier



Safety human-to-machine interface

Point heating system

- Power supply from overhead contact line or distributive transformer station
- IT protection system
- Manual or automatic operating mode controlled by weather station
- Local and remote control and signalization
- Event recorder



DC traction power supply systems

- Compact DC switchgear with integrated rectifier
- Nominal voltage of 750 V, nominal busbar current up to 4000 A
- Metal-enclosed withdrawable feeder 2600 A
- Twelve-pulse diode rectifier up to 3000 A



Metal-enclosed withdrawable feeder 2600 A



Low-floor tram

Contacts

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