

## KONTRAC PN110AC Auxiliary converter for electric multiple units

*KONTRAC PN110AC  
for electric multiple units*



KONTRAC PN110AC is used as the auxiliary power supply converter in multiple unit trains. It is fed from a dedicated winding of the main transformer and supplies stabilized voltages to electrical loads. The converter has two three-phase outputs and one DC output. Its input current is nearly sinusoidal and its fundamental harmonic is in phase with the input voltage.



*Power units of input rectifier and chopper*

### Features

- Modular design of power units
- High energy efficiency
- Machine room mounting
- Easy maintenance
- Latest IGBT technology

### KONTRAC PN110AC consists of

- Input contactor and precharging circuit
- Input rectifier and chopper power modules
- Two output inverter modules
- Two output sine filters
- Battery charger
- Cooling system
- Control unit

# KONTRAC PN110AC

## 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.

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 mounting in machine room 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 forced air.

## Application examples

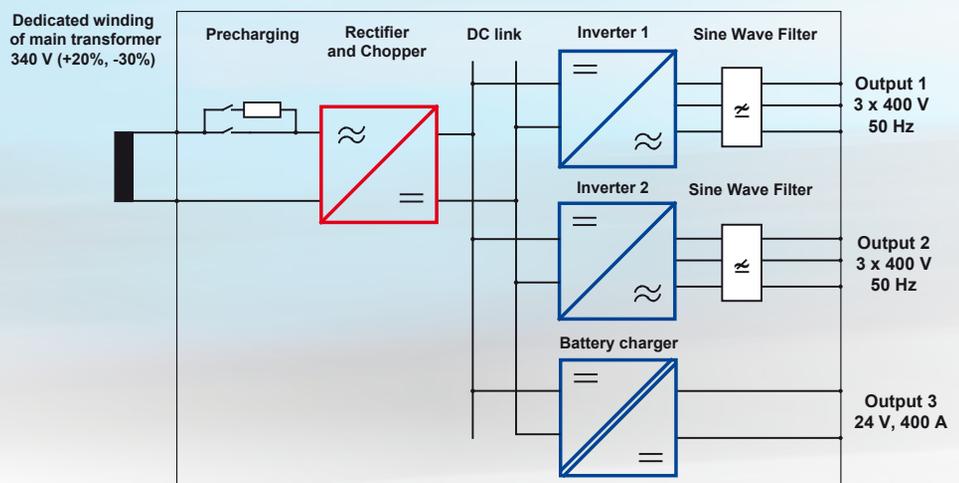
KONTRAC PN110AC is used as an auxiliary converter in a low-floor KONČAR electric multiple unit built and delivered for Croatian Railways. The electric multiple unit which is distinguished by its modern and attractive design, superior technical characteristics and comfortable ride, is intended for regional passenger transport in Croatia. These modern vehicles significantly contribute to efficient and comfortable passenger commute in urban and regional transport.

## BASIC TECHNICAL DATA

Input voltage	340 V, 50 Hz
AC outputs	3 x 400 V, 50 Hz, 2 x 60 kVA
DC output	24 VDC, 12 kW
Cooling	Forced air-cooling
Size (W x D x H)	1250 x 820 x 2085 mm
Weight	990 kg
Mounting position	Machine room
Connecting interface	CAN / MVB / Ethernet



KONČAR electric multiple unit for Croatian Railways



Block diagram of the converter

# KONČAR

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