

KONTRAC PN30MS

Two-system converter for passenger coaches

KONTRAC PN30MS serves as a power supply for air conditioned passenger coaches. It can be supplied from two conventional UIC voltages (1500 V, 50 Hz or 1500 Vdc) used by European railways, contributing significantly to passengers comfort.

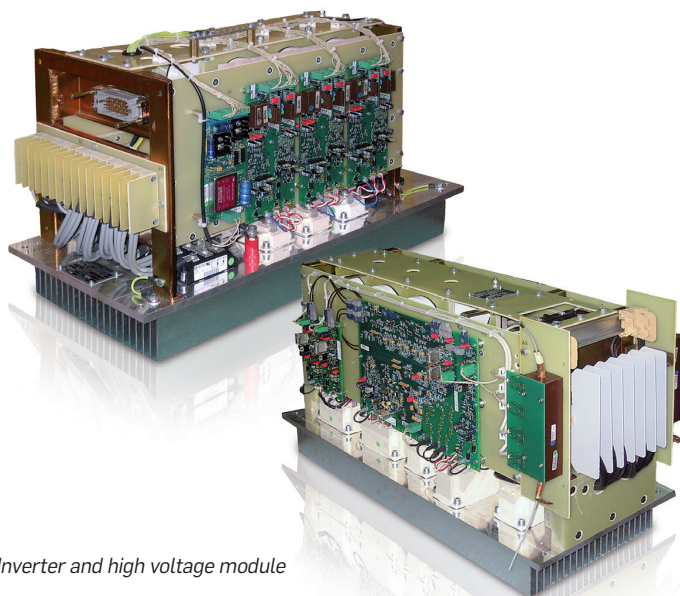


FEATURES:

- Two input voltages
- Microprocessor control and diagnostics
- Input / output galvanic insulation
- Active control of input impedance
- Easy maintenance
- Modular design
- Integrated disconnecting and earthing device
- Flat-battery power supply
- Automatic switching to another input voltage i.e. supply system

KONTRAC PN30MS CONSISTS OF:

- Disconnecting and earthing device
- Input contactor and precharging circuit
- Input filter
- High-voltage modules
- Output inverter module and a battery charger
- Flat battery power supply
- Air system ventilation
- Control unit



Inverter and high voltage module

BASIC TECHNICAL DATA

Input voltage	1500 V, 50 Hz 1500 V _{DC}
AC output	3 x 400 V, 50 Hz, 25,5 kVA 230 V, 50 Hz, 2,5 kVA
DC output	30 V _{DC} , 5 kW
Cooling	Forced air-cooling
Size (W x D x H)	1660 x 1900 x 600 mm
Weight	1020 kg
Mounting position	Under-floor
Connecting interface	CAN / MVB / Ethernet



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

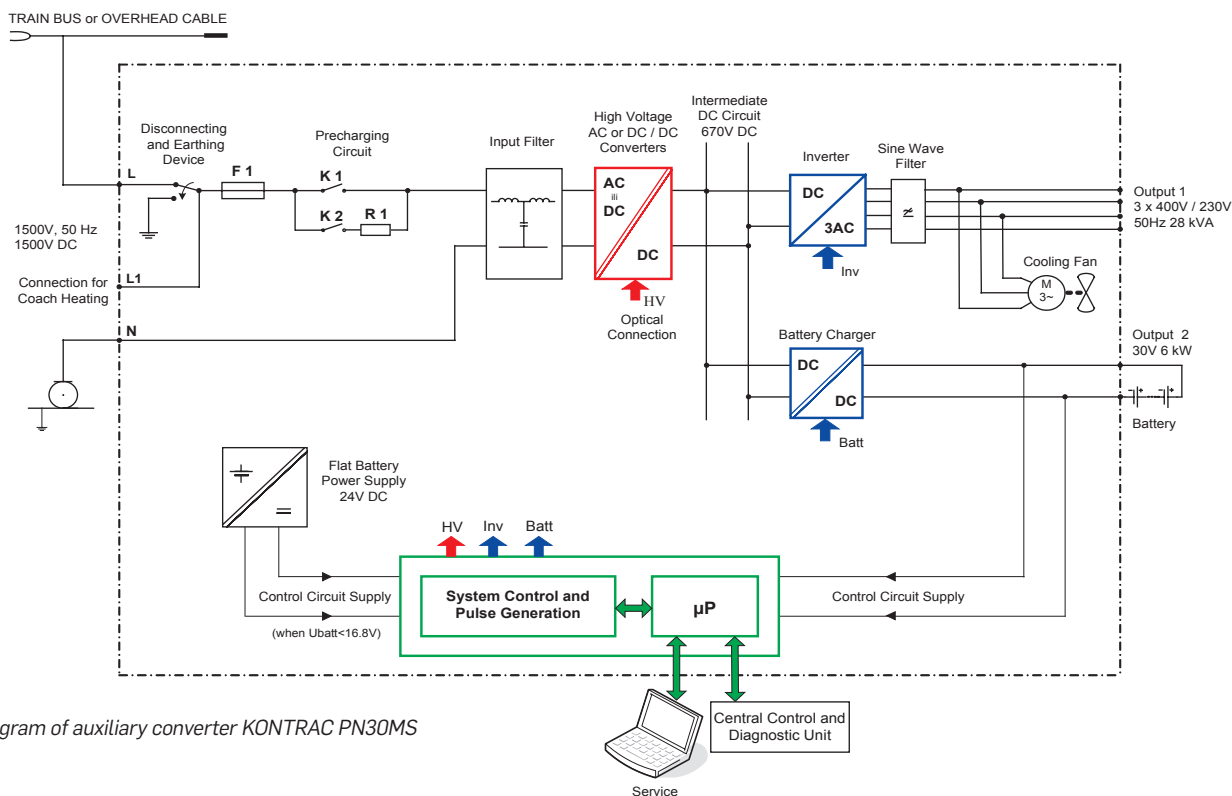
Proprietary powerful diagnostic and visualization tool (ZZT) is compatible with all our platforms through many generations of control electronic solutions. Configurable event-driven data logging and event recording is integrated in the control electronics.

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 forced air.

APPLICATION EXAMPLES

As a part of a large modernization project of passenger coaches owned by Croatian Railways, passenger coaches for local traffic have been equipped with dual system static converter KONTRAC PN30MS. The converter is used as a power supply for air conditioning unit, all single-phase and three-phase consumers, all DC consumers and for charging the coach battery. In this way it significantly contributes to pleasant and comfortable ride to different suburban destinations.



Block diagram of auxiliary converter KONTRAC PN30MS