

KONTRAC PN50DC / PN100DC Auxiliary converter for substations

*KONTRAC PN100DC
for substations*



KONTRAC PN50DC / PN100DC is a trackside auxiliary power supply converter fed by 3 kV DC overhead line. It is used in order to supply various loads inside the substation facilities (power supply for integrated lighting and information systems, railway signaling and protection systems, etc.). Overhead line might generate spikes, sags and surges caused by the current drawn from locomotives. Those are likely to damage the input stages of conventional converters.

In order to provide a trackside noise filtered power source, we use the same technology as for our rolling stock converters.

The converter is primarily intended to be used as a backup energy source (in case of power outage from the distribution network). However, in projects where poor or no distribution network is available at site, this converter can be implemented as a primary power source as well.

Features

- Rolling stock converter technology
- Robust input high-voltage inverter
- Output transformer ensures galvanic isolation
- Sine wave output filter
- EMC output filter
- Easy maintenance
- Modular design of power unit
- Flat battery power supply for initial start (optional)
- Air cooling

KONTRAC PN50DC / PN100DC consists of

- Input contactors and precharging circuit
- Input filter
- Input high-voltage inverter power module
- Output sine wave filter
- Output EMC filter
- Output transformer
- Integrated battery charger for control circuit power supply
- Air ventilation system
- Control unit

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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.

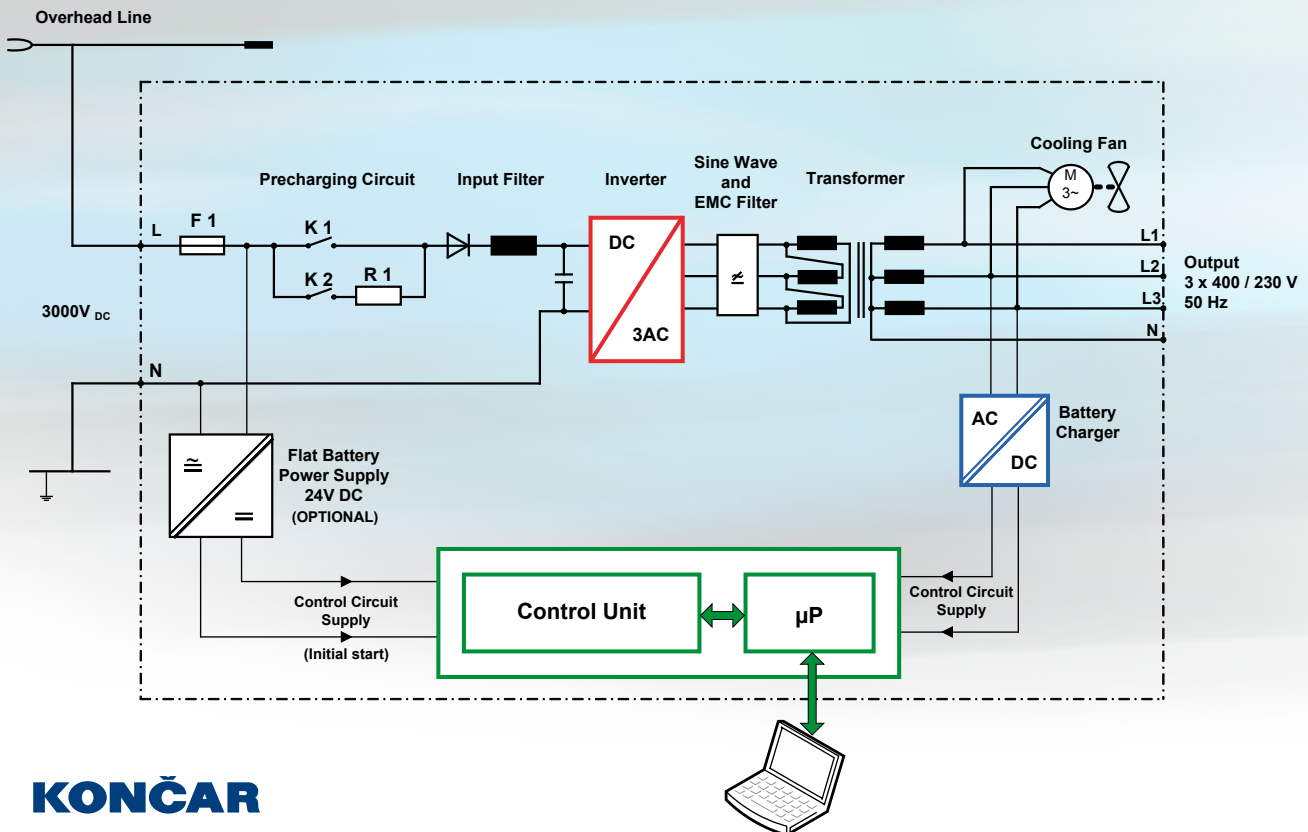
Mechanical design and cooling system

The converter is designed for 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.

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	KONTRAC PN50DC	KONTRAC PN100DC
Input voltage	3,0 kV DC	
Minimum input voltage	2,0 kV DC	
Maximum input voltage	3,6 kV DC	
AC output voltage	3 x 400 / 230 V, 50 Hz	
AC output power	50 kVA	100 kVA
Cooling	Forced air-cooling	
Size (WxDxH)	1200x1000x2200 mm	2000x1000x2200 mm
Weight	< 700 kg	< 1000 kg
Mounting place	Outdoor or substation	
Connecting interface	CAN / MVB / Ethernet	



KONČAR

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