



CONVERTER LINE KIEPE MAINLINE PLATFORM

FLEXIBLE AND POWERFUL TRACTION AND AUXILIARY POWER SUPPLY FOR MAINLINE VEHICLES

- Universal converter modules for all applications (traction inverters, brake chopper, 4-quadrant converter for AC supply grids, buck/boost converters for traction batteries or fuel cells, auxiliary power units)
- Traction power from 200 kW up to 1400 kW per output
- Auxiliary power supply from 50 kW up to 200 kW
- Three standardized module sizes depending on power rating
- Three voltage levels in standardized mechanical design: 750 V, 1500 V, 3000 V
- Mechanical interfaces optimized for roof, underfloor and cabinet installation
- Variants for forced air and water cooling
- Development and documentation in compliance with SIL2 according to EN 50129



KIEPE ELECTRIC

Technical description

The mainline platform has been developed to offer suitable solutions for different traction and auxiliary power supply concepts, from metro applications up to mainline locomotives with a high degree of flexibility and as little need for adjustments as possible.

The traction platform consists of 2- and 3-phase converter modules which can be flexibly switched by means of standardized control interfaces to required topologies. Thus, all functions (4QS, traction inverter or battery controller) can be realized optimally.

All interfaces of the modules for auxiliary power supply are adapted to the traction platform for easy integration in one container.

Modular design coupled with high power density makes the platform particularly attractive for retrofit projects as well. Both the complete device and the individual converter modules can be replaced within the existing container.

Electrical data

Catenary voltage (nominal)	DC 750 V, 1500 V, 3000 V AC 15 kV, 25 kV
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Mechanical data

Dimensions (L x W x H)	(400/560/740) mm x 400 mm x 422 mm/356 mm (air/water cooling)
Weight	approx. 40/60/80 kg
Cooling	Forced air cooling and water cooling
Ambient temperature	-40 °C ... +70 °C, briefly 85°C (at installation site)

Standards

Electronics	EN 50155
EMC	EN 50121-3-2
Vibrations and shocks	EN 61373 Category 1, Class B
Functional safety	EN 50129



Traction modules
(water-cooled
version)

Auxiliary power
supply modules
(air-cooled version)

References

Project	Input voltage	Application
DE18 Shunting locomotive (EU)	3AC 1400 V	Traction + on-board network
Class 321 EMU (UK)	1AC 25 kV	4QS + traction + on-board network
Class 455 EMU (UK)	DC 750 V	Traction
Tram Train Saarbrücken (DE)	1AC 15 kV	4QS
Tram FEVE (ES)	1500 V	Step down chopper
DB DoSto '94 double-decker car (DE)	1AC 1kV	on-board network
DT4 Hamburg subway (DE)	DC 750 V	on-board network
DSB EA3000 Loco (DK)	1AC 1kV	on-board network
Tren Maya DEMU (MX)	3AC 1100 V	Active Front End

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