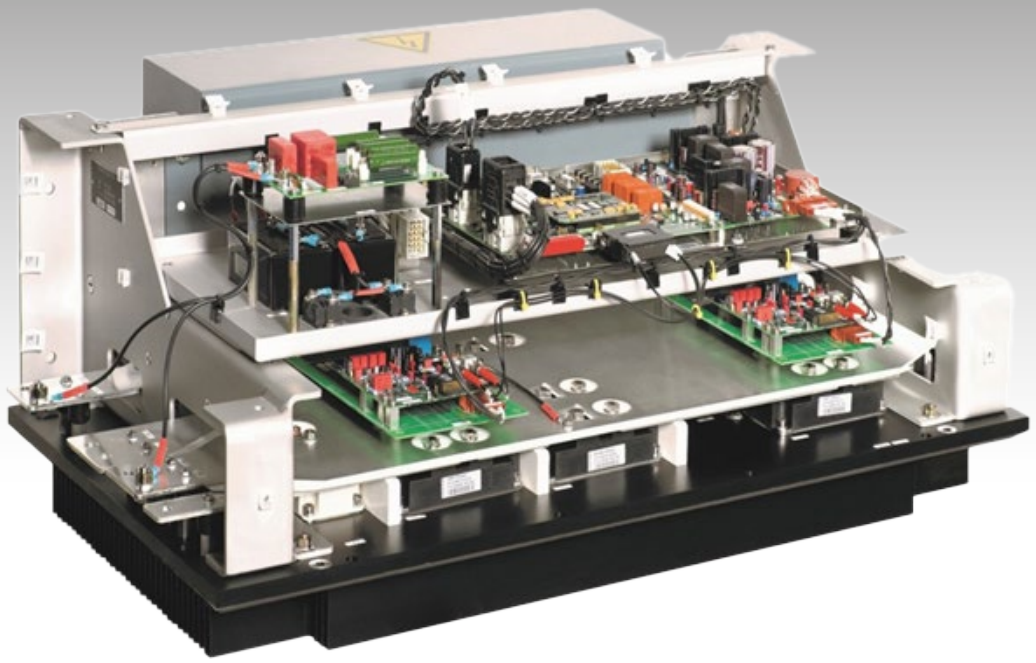


DC-CHOPPER FOR LIGHT RAIL VEHICLE

ROBUST AND WEAR-FREE RETROFIT SOLUTION FOR LIGHT RAIL VEHICLES WITH DC-MOTORS

- Significant reduction of LCC costs due to wear-free topology without contactor switching in motor circuits
- Stepless armature current control and field weakening with separate actuators
- Integrated brake actuator
- Integrated filter capacity
- Designed for typical performance of a traction bogie
- Highly dynamic skid protection
- Integrated acceleration control
- Modern service and diagnostic software

KIEPE ELECTRIC

Technical description

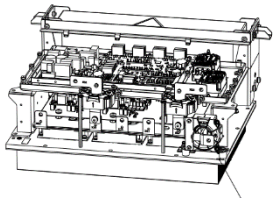
The DC-chopper was developed to offer a retrofit solution for trams and light rail vehicles with DC-motors with a high degree of flexibility and as little development effort as possible.

The developed topology allows to realize all switchovers from driving to braking as well as at the change of driving direction with a wear-free modern semiconductor technology.
The series resistor typically required for braking from high speeds is also controlled electronically.

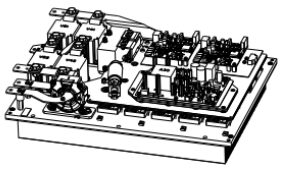
The control of the power electronics and the drive control are done by modern control hardware from three-phase drives and include all operating and service functions according to state of the art, e.g. skid protection, acceleration control, fault memory, diagnosis.

The separation into two single compact converter modules allows both modernization at device level and replacement of the individual converter modules within the existing device container.

Electrical data	
Overhead line voltage (nominal)	DC 600/750 V
Armature current, max	850 A
Field current, max	850 A
Brake adjuster	Integrated
Series resistor switch	Integrated, electronic controlled
Communication and control	
Communication	CAN
Control voltage	DC 24 V according to EN 50155
Mechanical data	
Dimensions (L x W x H)	620 mm x 600 mm x 300 mm Stator regulator 620 mm x 470 mm x 210 mm Field regulator
Weight	64 kg for Stator regulator, 46 kg Field regulator
Cooling	Forced air cooling
Ambient temperature	-40 °C ... +50 °C (vehicle environment)
Other	
Electronics	EN 50155
EMC	EN 50121-3-2
Vibrations and shocks	EN 61373 Category 1, Class B



Armature acutator



Field actuator

References

Project
Cottbus, tramway
Mühlheim an der Ruhr, tramway
Geneva, tramway (CH)
Bonn, light rail
Philadelphia, metro (US)
Lausanne, suburban railway (CH)
Dortmund, light rail (DE)

Kiepe Electric GmbH

Kiepe-Platz 1
40599 Düsseldorf
Tel: +49 211 7497-0
Fax: +49 211 7497-300
info@kiepe.knorr-bremse.com
www.kiepe.knorr-bremse.com

KNORR-BREMSE
NEW YORK AIR BRAKE
IFE
MERAK
MICROELETTRICA
KIEPE ELECTRIC
SELECTRON
ZELISKO
RAILSERVICES

11.2020