e.SYSTEMS

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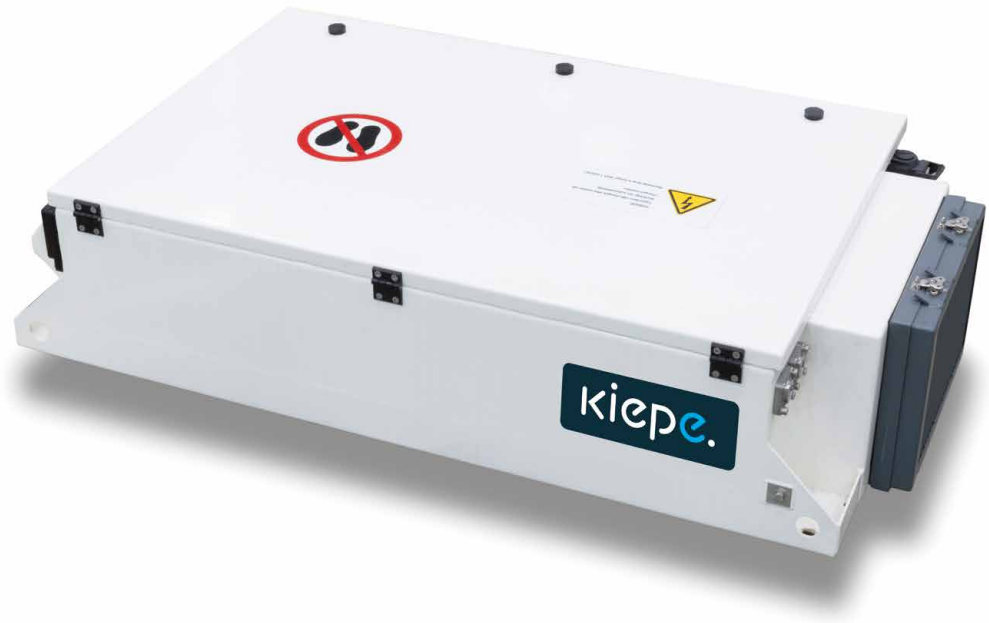
KIEPE Insulating Converter KIC 200

DC/DC CONVERTER FOR IMC®-TROLLEY BUSES



Highlights

- KIC 200 facilitates the development of a trolley bus with IMC® technology based on a common battery bus platform
- DC/DC converter is designed for a wide range of input and output voltages
- Double insulation of vehicle and battery against the overhead power supply with optional insulation monitoring
- Reverse polarity protection for any polarity of the overhead power supply
- Integrated input filter and overvoltage protection according to EN 50124-2
- Compliance with EMC requirements according to UN / ECE R10 and EN 50121-3-2
- High power density and optimized design for roof mounting installation applications

Discription

The galvanically isolating DC/DC converter KIC 200 is primarily designed for IMC® (In-Motion Charging) buses: powered by overhead line, the KIC 200 works as a battery charger, allowing an e-bus to become an IMC® bus.

When powering by overhead line, the road vehicle needs double electrical isolation. The KIC 200 meets this requirement and provides an interface to the common 800 V e-mobility equipment. With the help of our KIC 200, e-buses, e-trucks and various specialty vehicles can be upgraded for operation and battery charging from the overhead line network with little effort.

The KIC 200 is characterized by its high power density and optimized design for roof mounting.

Technical Data

Electrical Data	
Input voltage range	DC 380 ... 1000 V
Maximum input current	350 A
Output voltage range	DC 500 ... 850 V
Maximum output current	310 A
Maximum continuous power	200 kW
Control	
Control supply voltage	DC 24 V according to EN 50155
Maximum current consumption	≤ 33 A
Digital I/O	4 x DO / 4 x DI
Service interface	Ethernet
Communication interface	CANopen / J 1939
Mechanical Data	
Dimensions (L x W x H)	1643 mm x 877 mm x 378 mm
Weight	265 kg
Cooling	Forced air, -40 °C ... +45 °C
Protection class	IP54
General	
Device protection	Overvoltage protection according to EN 50124-2, OV3, Overcurrent protection, Temperature monitoring
Electromagnetic compatibility	EN 50121-3-2, UN ECE R10
Fire protection	EN 45545
Mechanical strength	UN ECE R100

Cable Connections

For electrical interfaces plug-in connectors are used: Harting connectors for DC 24 V / communication and Pfisterer connectors for HV power interface. Plug-in connectors enable pre-assembly of the cables and quick equipment installation on vehicle roof.

Mounting

To fulfill the double electrical insulation between the overhead line and the vehicle chassis, insulated installation of the KIC 200 on the vehicle roof is required (insulators can be provided optionally). Air duct / cooling air must be transverse to the direction of travel according to the figure below.