



Auxiliary converters for double-deck cars in Israel.

The PCS Rail AU 1460 auxiliary converter system is used to generate the supply voltages for double-deck cars in Israel. There are two types of auxiliary converter: one for use in the intermediate car, and one for the control car.

The PCS Rail AU 1460 auxiliary converter system is supplied by the train busbar with 3 AC 400 V.

In accordance with the system concept, two independent frequency inverters supply the passenger fans and air conditioning in the intermediate car and in the control car. In addition, a battery charging device to charge the vehicle battery and to supply the DC consumers can be provided.

The AC consumers are controlled centrally by the air-conditioning computer. To regulate the air conditioning and to adjust the cool air, the frequency inverters are controlled (with variable frequencies) by a target value preset by the air-conditioning computer.

Properties

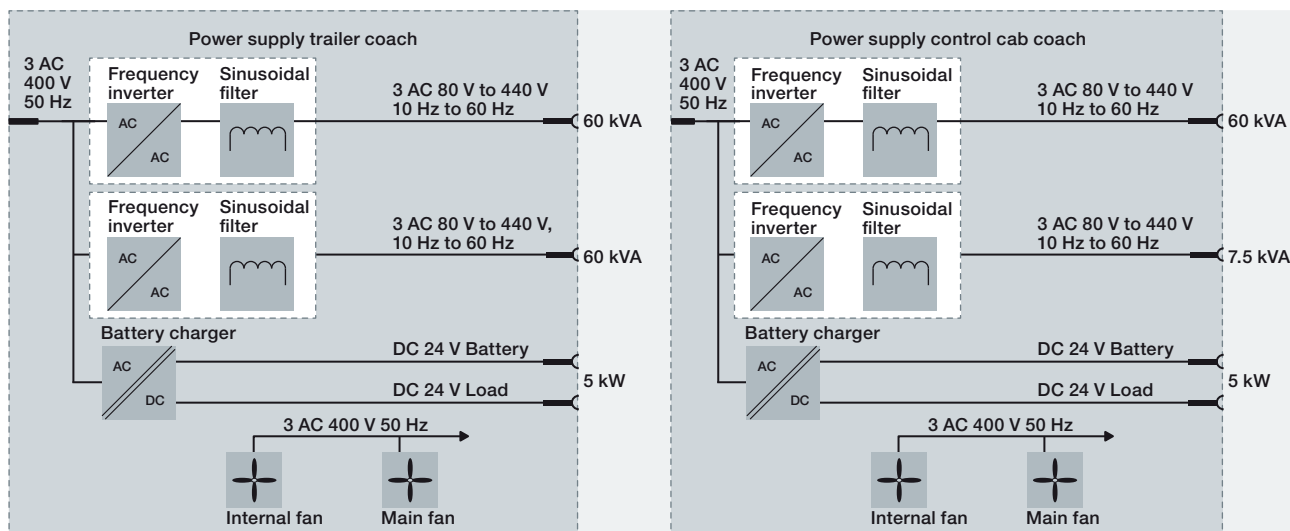
- Medium-frequency modules in the AC train busbar voltage
- Robust and compact design
- High efficiency and low weight
- Short-circuit and overvoltage monitoring



PCS Rail AU 1460 control cabinet application for the control car

PCS Rail

Block diagram of the auxiliary converter system PCS Rail AU 1460



Technical data PCS Rail AU 1460:

Technical data

| Type | PCS Rail AU 1460 |
|--------------------------|----------------------|
| Mass MW (kg) | 292 |
| Mass SW (kg) | 277 |
| Dimensions MW (L/W/H mm) | 1450/460/1080 |
| Dimensions SW (L/W/H mm) | 1450/460/1080 |
| Application | Control cabinet |
| Input nominal voltage | 400 V AC; 50 Hz |
| Input voltage range | according to UIC 550 |
| Ambient temperature | -30 °C to +45 °C |
| Storage temperature | -40 °C to +85 °C |

AC Output 1 (2 intermediate cars, 1 control car)

| | |
|-----------------------------|------------------------|
| Output voltage 3 AC | 80 V to 440 V |
| Output power | 60 kVA (cos phi = 0.8) |
| Output nominal current 3 AC | 86 A |
| Output frequency | 10 Hz to 60 Hz |

AC Output 2 (control car)

| | |
|-----------------------------|----------------|
| Output voltage 3 AC | 80 V to 440 V |
| Output power | 7.5 kVA |
| Output nominal current 3 AC | 11 A |
| Output frequency | 10 Hz to 60 Hz |

DC Output (intermediate car, control car)

| | |
|----------------------|--------------|
| Output power | 5 kW |
| Output current | 180 A |
| Output voltage range | 24 V to 30 V |

Reference projects

Double-deck cars:
Regional rail transport (Israel)

PCS has for decades developed highly reliable power converters and electrical equipment. Take advantage of state-of-the-art solutions plus project management and service.