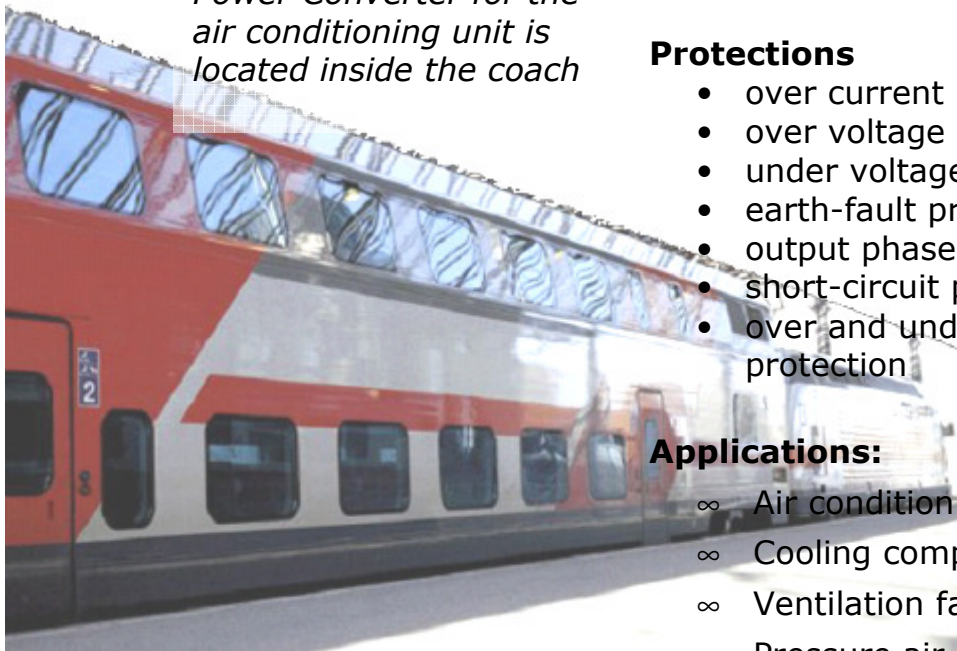


27TXL1X450 - AIR CONDITIONING

Power Converter was designed to power the air conditioning unit of the IC2 double deck coach for the Finnish railways. The Power Converter drives motors of the cooling compressor, the fans of the condenser- and the evaporator units.



Power Converter for the air conditioning unit is located inside the coach



TECHNICAL DATA

Input Characteristics:

Nominal input voltage
1-phase 450 VAC / 50Hz

Output Characteristics:

- ∞ Output voltage $U_{AN} = 3 \times 400 \text{ V}_{AC}$
- ∞ Output frequency $f_N = 0..50 \text{ Hz}$
- ∞ Output current $I_{AN} = 27 \text{ A}$
- ∞ Output power 19 kVA
- ∞ Overload capability
 - 1.5x I_{AN} : at +60°C 5s/10 min
 - 2.5x I_{AN} : at +60°C 2s/20 min

Protections

- over current protection
- over voltage protection
- under voltage protection
- earth-fault protection
- output phase supervision
- short-circuit protection
- over and under temperature protection

Applications:

- ∞ Air conditioning
- ∞ Cooling compressor
- ∞ Ventilation fans
- ∞ Pressure air compressor

Mechanical Data

Input		General	
Nominal input voltage	1x450 Vac	Efficiency	> 90 %
Operating range	350-520 Vac	Temperature range	-25 ...45°C
AC-output		Humidity	Less than 95%
Voltage	3x400Vac (± 5%)	Cooling	Forced (external)
Continuous power	19 kVA	Dimensions in mm	320 x 515 x 238
Max. output power	28,5 kVA	Weight	33 kg
		Mounting	Inside the coach
		Housing	IP 21

Complying standards

Electrical particles	EN 50207, Railway applications – Electronic power converters for rolling stock
Vibration shock etc.	EN 50155, Railway applications – Electronic equipment used on rolling stock
EMC	EN 50121-3-2, EMC on board rolling stock

Block diagram

