

# 16TX750 – CABIN AIR CONDITIONING

Cabin air conditioning was included in the renovation project of METRO-cars in Helsinki. MSc Traction power converter drives the compressor unit, the fans of the air-conditioning unit and provides also auxiliary power for other the electricity needs of the metro car.

## TECHNICAL DATA

### Input Characteristics:

- ∞ Nominal input voltage 750 V<sub>DC</sub>

### Output 1 Characteristics:

- ∞ Output voltage  $U_{AN} = 3 \times 400 \text{ V}_{\text{rms}}$
- ∞ Output current  $I_{AN} = 16 \text{ A}$
- ∞ Output frequency  $f_N = 50 \text{ Hz}$
- ∞ Output power 11 kVA
- ∞ Overload capability  
1.5x  $I_{AN}$ : 5 s/10 min

### Output 2 Characteristics:

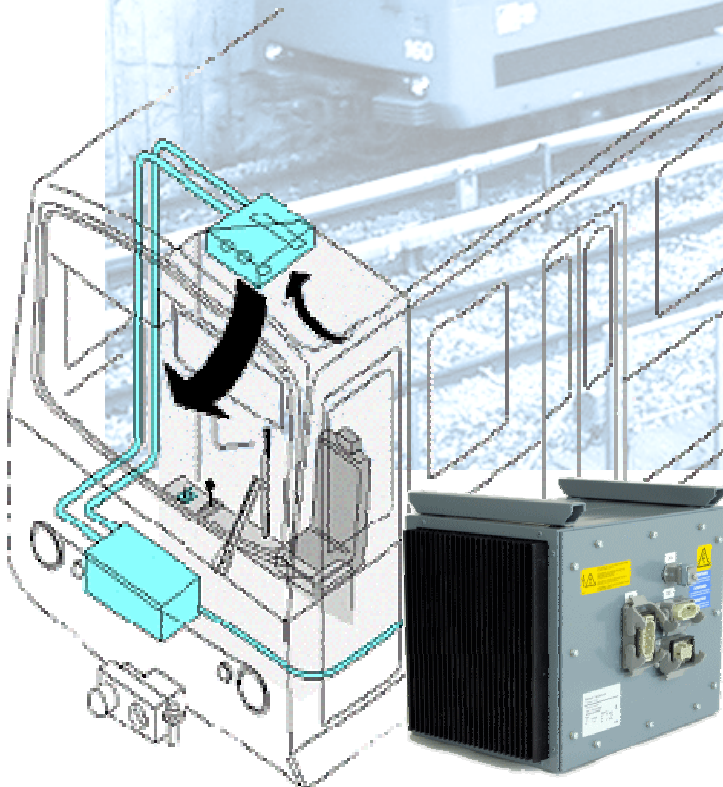
- ∞ Output voltage  $U_{AN} = 24 \text{ V}_{\text{dc}}$
- ∞ Output current  $I_{AN} = 25 \text{ A}$

### Protections

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

### Application:

- Air Conditioning of the driver's cabin



*Cabin air conditioning system.  
Power converter casing is shown low right.*

## Technical Data

### Input

Nominal input voltage	750 Vdc
Operating range	525 – 950VDC

### AC-output

Three-phase voltage	3x400Vac ±5%
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Frequency	50 Hz
Continuous power	11 kVA
Max. output power	16 kVA

### DC-output

Nominal output voltage	24 V <sub>DC</sub>
Output current	25 A

### General

Efficiency	> 95 %
Temperature range	-35 ...50°C
Humidity	15...95%
Cooling	Natural convection
Dimensions in mm	466x310x370
Weight	45 kg
Mounting	Under frame
Housing	IP 65

## Complying standards

Electrical particles	EN 61287-1, Railway applications – Electronic power converters for rolling stock
Vibration shock etc.	EN 61373, Railway applications – Shock and vibration tests
EMC	EN 50121-3-2, EMC on board rolling stock

## Block diagram

