

POWER CONVERTER FOR THE AIR CONDITIONING

The upgrading of the passenger cabin including air conditioning is part of the renovation project of the railway coaches. MSc Traction power converter drives the compressor and the fans of the air-conditioning unit and.



Under frame or roof mounted power converter. Pressure and other measurements are wired with through of connectors located on the end walls of the housing. (The picture does not show exact shape of the converter)

TECHNICAL DATA

Type: 2 X(25TX1250+8TX1250)

Input Characteristics:

- ∞ Nominal input voltage 1250 Vdc

Output Characteristics:

- ∞ Output voltage $U_{AN} = 0...3 \times 400 V_{rms}$
- ∞ Output current $I_{AN1-1b} = 2 \times 25 A$
- ∞ Output frequency $f_N = 25..70 Hz$
- ∞ Output power $2 \times 17 kVA$
- ∞ Output current $I_{AN2-2b} = 2 \times 8 A$
- ∞ Output frequency $f_N = 25..70 Hz$
- ∞ Output power $2 \times 5,5 kVA$
- ∞ Overload capability
1.5x I_{AN} : at +50°C 5 s/10 min

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 Unit

Mechanical Data

Input		General	
Nominal input voltage	1250 Vdc	Efficiency	> 92 %
Operating range	837 V – 1438 Vdc, transients ...1800 Vdc	Temperature range	-25 ...50°C
AC-outputs	$I_{AN1-1b} = 2 \times 25 \text{ A}$, 25-70 Hz, 2 x 17 kVA	Humidity	Less than 95%
	$I_{AN2-2b} = 2 \times 8 \text{ A}$, 25-70 Hz, 2 x 5,5 kVA	Cooling	Forced-Air/Convection cooled
Three-phase voltage	3x400Vac, nominal	Dimensions (WxLxH) in mm	800x1000x600
		Weight	About 300 kg
		Mounting	Under frame- or roof mounting
		Housing	IP 65

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

(The block diagram shows only 1 x 25TX1250 + 8TX1250)

