

MLRV – AUXILIARY POWER SYSTEM

The MSc Auxiliary Power System provides the electrical feed for the carriage air conditioning, underfloor heating and main drive cooling assemblies, and it also charges the carriage batteries, which effectively makes MSc technology an integral part of all carriage functions.

TECHNICAL DATA

Input Characteristics:

- ∞ Nominal input voltage 600/750 V_{DC}

Output Characteristics:

- ∞ Output 1 = 20 kVA, 400V_{AC}, 35-75 Hz
- ∞ Output 1 = 8 kVA, 400V_{AC}, 50 Hz
- ∞ Output 3 and 4 = 2 x 5 kW, 28V_{DC}

Protections

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

Application:

- ∞ Auxiliar Power System for the tram



The MSc auxiliary power system has been installed in a housing on the roof of one of the tram carriages, and is specifically designed to meet the customer's requirements

Technical Data

Input		General	
Nominal input voltage	600 / 750 Vdc	Efficiency	88...96%
Operating range	450-937 Vdc	Temperature range	-40...40°C
		Humidity	15%...90%
AC-output 1 (VVVF) (U2)		Cooling	Forced air cooling
Voltage	3x250-460 Vrms	Dimensions in mm	1300 x 763 x 588
Nominal power	20 kVA	Weight	280 kg
Frequency	35-75 Hz	Mounting	On the roof
AC-output 2 (CVCF) (U1 and U2)		Housing	IP 55
Voltage	3x400 Vrms		
Frequency	50 Hz		
Nominal power	8 kVA		
DC-output (U3/U4)			
Voltage	25-29 Vdc		
Nominal power	5 kW		
/module			

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