Siemens Auxiliary Converter

Passenger comfort and information are becoming increasingly important in modern mobility. This also increases the importance of **on-board power supply**, of railroad vehicles, for example for air conditioning and ventilation or sockets for charging laptops or cell phones. MoComp auxiliary converters ensure this is safe, efficient and reliable.

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Units :

Output converter Low Voltage Unit

The Low Voltage Unit (LVU) consists of a 3 AC inverter and a battery charger. It is highly integrated and includes all the necessary filters and sensors to achieve a perfect sinusoidal output voltage. High switching frequencies and a compact design ensure an optimal power / volume ratio and minimal power losses with an easy to integrate module.

Master control unit

The master control unit performs and monitors all the essential functions of the auxiliary power supply. It’s connected to the inverter control units on the internal side via CAN and to rail communications by MVB or Ethernet. The master control unit provides a wide range of digital and analog input and output ports to meet all project requirements.

Input inverter high-voltage unit

The input inverter high-voltage unit convinces with its compact design, potential insulation between input and output as standard safety function as well as integrated sensors and magnetic components in an easy-to-integrate control module.

Precharging unit

For low-inrush current and a smooth start, the unit always starts with a precharge resistor (switched off in normal operation).

Main fan

Auxiliary power supplies are forced-air cooled, which allows for lower weight and costs. Efficient air filters enable low maintenance, and minimized noise levels are achieved through acoustic optimization and perfect fan-speed control.

Input filter

The input filter guarantees the input impedance and limits the interferent current usually generated by high-frequency switching inverters (IGBT) to prevent disturbances on the line and input side.

Local power supply (3 AC 400 V 45 kVA / 63 A)

For service and maintenance purposes, the auxiliary inverter can be supplied with a 3 AC 400 V local network supply via the train busbar. The APS picks up the voltage and feeds the 110 V DC grid and charges the vehicle’s batteries.