

Energie-efficient, quiet and maintenance-free

SMARTconverter LIGHT

New Standard for Energy Efficiency



The SMARTconverter LIGHT is a particularly energy-efficient auxiliary power converter for tram and light rail vehicles.

With the SMARTconverter LIGHT, Dinghan SMART Railway Technology GmbH sets a new standard for energy efficiency. The lightweight and compact auxiliary power converter for tram and light rail vehicles achieves an efficiency of 96%. Due to this high efficiency the SMARTconverter LIGHT saves energy and is quiet and maintenance-free thanks to the "SMARTcooling" cooling system. It was developed with the goal of reducing operating and maintenance costs.

The new SMARTconverter LIGHT is an auxiliary power converter with an output of 75 kVA plus 16 kW. It is equipped with silicon carbide (SiC) power semiconductors as standard, which minimize switching and conduction losses and increase efficiency. In addition to the high efficiency of 96%, SiC also enables higher switching frequencies. Small winding materials can thus be used. Consequently, the SMARTconverter LIGHT is not only more energy efficient, but also lighter and more compact.

In the SMARTconverter LIGHT, one of the main cost drivers in the operation of auxiliary power converter - cooling - has been designed more efficiently. Avoiding forced cooling and thus eliminating the cooling main fan, air filter and air duct saves weight, maintenance and components. However, the decisive is the use of the "SMARTcooling" concept.

Increase efficiency, reduce costs

SMARTcooling is quickly explained: In efficiency mode, the SMARTconverter LIGHT operates naturally cooled and is thus in the optimum operating mode. Only at high temperatures and simultaneously high loads - the so-called power mode - auxiliary fans provide a slight forced overflow of the device.

This operating concept is particularly advantageous for operators of trams and light rail vehicles: Due to the low running times of the auxiliary fans, the SMARTconverter LIGHT is quiet. Preventive maintenance is not necessary.

The SMARTconverter LIGHT is available immediately in the power class 75 kVA plus 16 kW for the input voltage of 750 V DC and for DC output voltages of 110 V DC or 24 V DC. It can be mounted as a rooftop or underfloor system and can be flexibly adapted to different requirements via standard options.

Are you interested? Then get in touch with us.

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