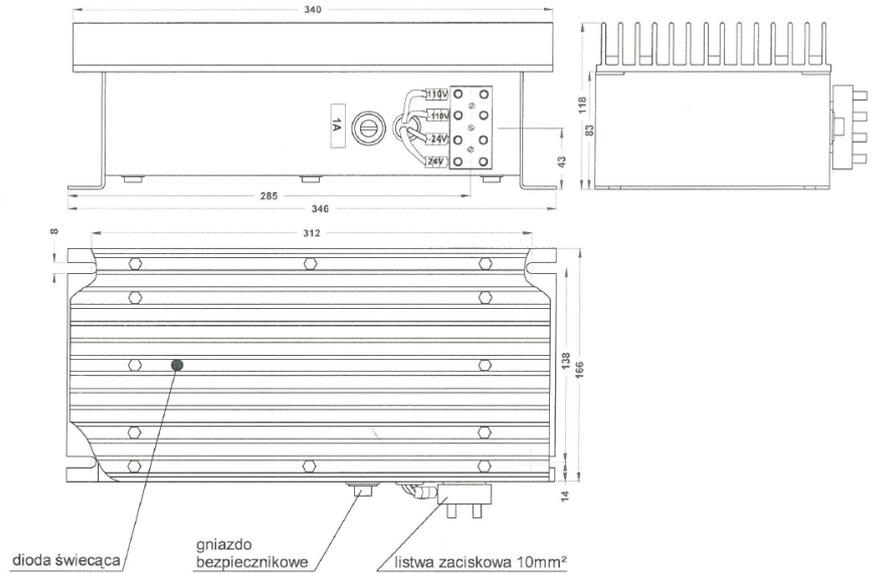


# ENI-110/24DC Converter

## Product Data Sheet



## APPLICATION

The ENI-110/24DC converter is intended as a power supply for on-board LV systems in railway cars, locomotives and electric train units.

## SPECIFICATIONS

Supply voltage	66 to 137,5 V <sub>DC</sub>
Rated output voltage	24 V <sub>DC</sub>
Output voltage variation	0,5 V
Continuous output rated current	35 A
Overload current	40 A
Maximum overload duration	10 s
Weight	ca. 5,5 kg
Output shorting resistance	
Noise-free operation	

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### DESIGN

The converter is located in a metal sheet enclosure which is isolated from the electrical system. The enclosure top part is an aluminium heat sink which cools the device with ambient air. The power input and output cables are connected to the strip LZ10 with four terminals. The enclosure houses an input filter, an IGBT module with a zero diode, a Hall effect current transducer, a ferrite core choke, a controller unit and an output filter.

### OPERATION

The converter transforms AC input voltage into stabilized 24V output voltage by PWM. The converter output voltage, when the device power source is turned on, increases smoothly from zero to the rated output value in ca. 1.5 s. The converter is completely impervious to overloading or shorting. If the rated current is exceeded, the control system will start counting down 10 s, and if the overload state persists, the converter is shut down. The device is restarted by cycling the input voltage. If the converter output is shorted, the output current is limited to 40 A by derating the output voltage. The control system counts down the shorting duration for 10 s and if the shorting state persists, the converter is shut down. If the shorting/overload ceases before the 10 s timeout, the converter resumes normal operation.

### BLOCK DIAGRAM

