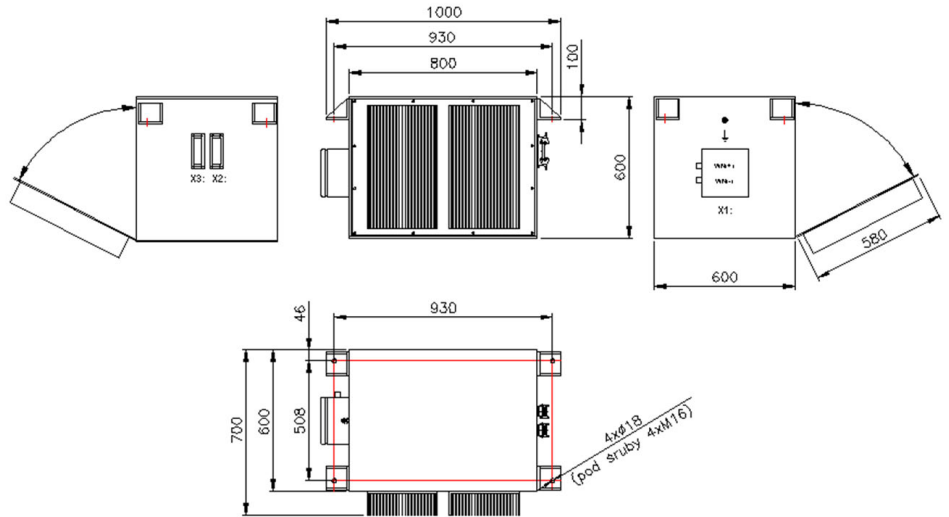
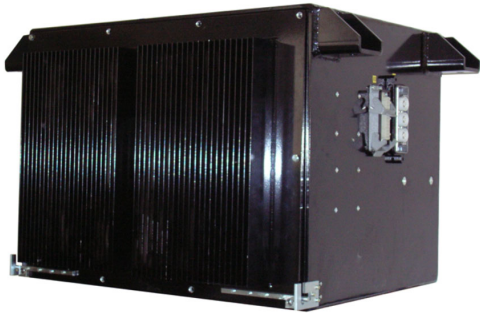


ENI-PW3000/24 Converter

Product Data Sheet



APPLICATION

The ENI-PW3000/24 is a source of 24 V_{DC} power supply for auxiliary lines aboard passenger rail cars.

SPECIFICATIONS

Supply voltage	3000 V _{DC}
Supply voltage variation	2000 to 4000 V _{DC}
Output voltage	28 V _{DC} ± 1,4 V
Rated output current	240 A
Maximum output current	265 A for 30 s
Maximum battery charging current	limited to: 75 A
Output terminal shorting protection	
Long-term overload protection	
Minimum battery voltage for converter start-up	16,5 V _{DC}
Ambient operating temperature	-30°C to +40°C
Size	1000 x 700 x 600 mm
Weight	240 ± 10 kg
Enclosure protection rating	IP54
Cooling	natural

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DESIGN

The converter is installed in a sealed and robust aluminium enclosure which houses all the electrical equipment of this device. The enclosure box is preserved with a powder-coat finish for improved protection against the operating conditions. Service access is ensured by a swing-open cover, formed by a high-performance aluminium heat sink. The electrical connection terminals are located in separate bays. The LV and control voltage circuits of the converter are connected via multi-pin connectors.

OPERATION

The converter transforms the input supply voltage from the railway contact system to a stabilised $24 V_{DC}$ output for the auxiliary lines aboard the rail car. The elevated-frequency power transformer (TR) of the device provides galvanic separation between the input and output sides. The voltage output stability, battery charging current control and overload and shorting protection are ensured by the converter control system. The diagnostic circuit monitors the performance and operating readiness of the entire device; should any component fail, the device is stopped and a failure alarm is indicated. The elevated frequency HV inverter reduces the noise level to minimum, making any sound emission virtually inaudible to the service personnel.

Converter functionalities:

- soft start after connection to the HV source,
- constant and stable $24 V_{DC}$ output, irrespective of the converter voltage input variations or the on-board loads,
- maximum output limited to $24 V_{DC}$ by derating during overload and shorting states,
- converter overload state duration monitoring for up to 30 s, followed by shutdown,
- battery bank charging current control and limiting with temperature-adjusted charging voltage,
- output of NO RECHARGE alarm signals (from the relay contacts) to the on-board controls for converter status verification.