

ENI-FT600-2x2x55 Traction inverter

APPLICATION



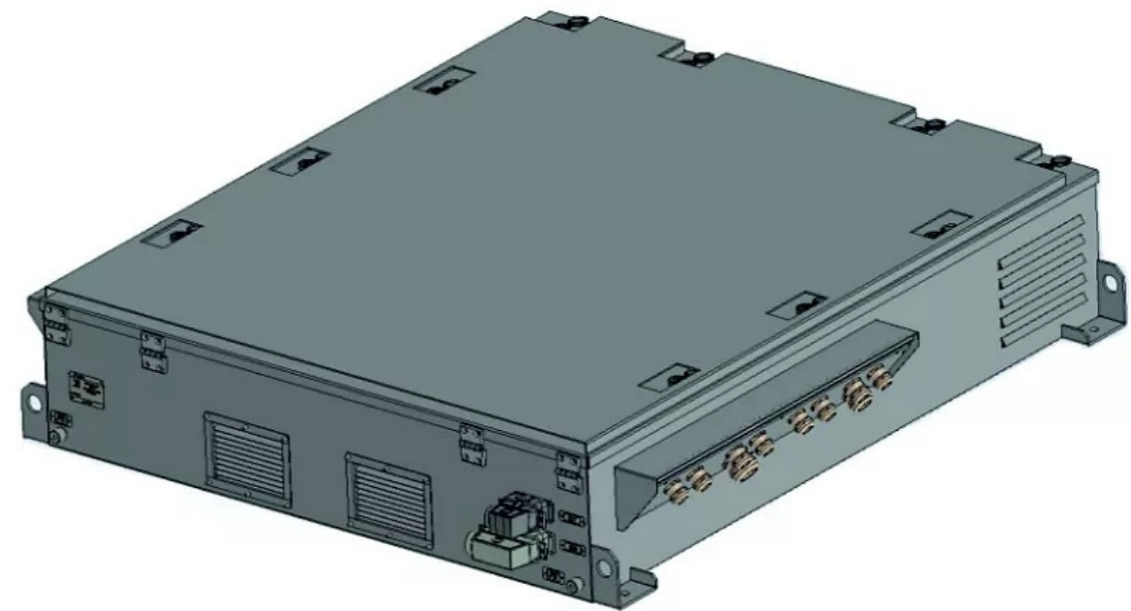
The ENI-FT600/2x2x55 traction inverter supplies four asynchronous traction motors with controlled frequency AC voltage and secures mobility of the vehicle upon HV power supply outages. The inverters convert the contact system DC voltage into regulated frequency and amplitude AC voltage. The inverters permit traction motor sense of rotation switchover (forward/reverse driving). The inverter control system is based on a vectoring algorithm, which is a simultaneous and indirect control of traction motor torque and rotor flux. The control algorithm deployment results in superior tractive performance over dynamic states and an optimised use of the inverter system.

Drive inverter advantages

- execution of all driving functions: start and braking (with priority resistive regeneration), coasting and braking in park,
- compliance with electrodynamic starting and braking parameters as defined in Regulation No. 334 of the Ministry of Infrastructure dated 02 March 2011 and concerning the technical requirements and essential outfitting of tram and trolleybus vehicles,
- electrodynamic braking action to full vehicle stop,
- current monitoring of drive status and vehicle starting parameters on a CAN-connected control panel.

The inverters convert the kinetic energy of the braking vehicle into electric power. The power recovered from braking is used according to the following priorities:

- returned to the contact system (if possible),
- discharged by the roof-mounted braking resistor when a preset recuperation voltage threshold is exceeded.



SPECIFICATION

TYPE	ENI-FT600/2x2x55
Rated input voltage	600 V _{DC}
Rated control input voltage	24 V _{DC}
Supply voltage variation	400 ÷ 800 V _{DC}
Rated output voltage	3 x 400 V _{AC}
Output frequency	0 ÷ 200 Hz
Rated power output	4 x 55 kVA
Maximum power output	250% of rated power
Drive controller communication	CAN 2.0 A, I/O contacts
Cooling	forced, air
Enclosure protection rating	IP65 - Power electronics compartment IP21 - Air ducting
Weight	approx. 340 kg