

BATTERY TROLLEYBUSES ELECTRON T19102 IN IVANO-FRANKIVSK



At the turn of 2025 and 2026, the Ukrainian city of Ivano-Frankivsk introduced a total of nine new low-floor battery trolleybuses of the Electron T19102 type, manufactured by Electronmash from Lviv. These are the first trolleybuses capable of off-wire operation to be purchased for this city in western Ukraine. ENIKA was selected as the supplier of the electrical equipment for the Electron T19102 trolleybuses.

Ivano-Frankivsk announced a tender for the delivery of new trolleybuses in the summer of 2023. A total of three bids were submitted, of which the offer from the local manufacturer Electronmash was selected as the most advantageous. In August 2024, a contract worth €3.615 million was signed with the company for the delivery of nine trolleybuses co-financed by the European Investment Bank. The project was successfully completed despite the conditions of the ongoing defense of Ukraine, which represented a significant challenge for all parties involved.

The first four delivered vehicles (fleet numbers 250–253) were ceremonially handed over on 22 December 2025. Passengers were able to try the new trolleybus type for the first time on 31 December 2025, although regular operation only started gradually from 12 February 2026 after the necessary tests and driver training had been completed. The remaining five trolleybuses (fleet numbers 254–258) were delivered progressively by mid-March 2026 and entered service by 6 April 2026.

The Electron T19102 trolleybuses feature a stainless-steel body structure. Their length is 12,000 mm, width 2,550 mm and height 3,670 mm. In the version for Ivano-Frankivsk, the vehicles are equipped with traction motors rated at 160 kW. The traction batteries (LFP) have an energy capacity of 35 kWh and enable off-wire operation over distances of up to 15 km.

ENIKA was selected as the supplier of the complete electrical equipment for the Electron T19102 trolleybuses. The main part of the delivery is the integrated container ENI-ZNT200.2-600.1, which provides electrical

energy distribution to the traction motor, power supply for the onboard network (24 V DC; with an output of 10 kW) and the air-conditioning units (3 × 400 V AC; with an output of 30 kVA).

The container is designed in a conventional configuration for trolleybuses with air cooling and double insulation. Its unified design enables use both in projects equipped with traction batteries (as in Ivano-Frankivsk) and in vehicles without them (for example in projects for Ternopil or Lviv). Its maximum dimensions including mounting brackets and connectors are 2,208 mm × 1,850 mm × 475 mm, while its weight is approximately 645 kg.

In addition to the integrated container, ENIKA also supplied a number of other components, including an 8-inch display for the driver's cab used to present operational information.



Integrated container ENI-ZNT200.2-600.1