CAN Newsletter Online

COLLABORATION

Battery-powered trucks with CAN gateway solution

Frigoblock announced that its all-electric refrigeration technology is used by Mercedes-Benz to cool the near-series battery-powered eActros trucks that started practical operations in Germany and the Netherlands.

The Mercedes-Benz eActros trucks featuring Frigoblock's refrigeration systems started food-logistics operations with customers in Germany and the Netherlands (Source: Mercedes/Frigoblock)

This project is a result of a collaboration between Frigoblock (manufacturer of transport refrigeration units in Europe and brand of Thermo King) and Daimler Trucks to offer customers a sustainable refrigeration technology that can seamlessly work with the Mercedes-Benz eActros vehicles.

Using integrated inverter technology, electric refrigeration units are designed to work directly with the battery-powered vehicles, minimizing the number of energy-consuming components. This allows for most optimal use the vehicles' battery capacity and contributes to maximizing the truck's range, explained Frigoblock.

To meet the electrical requirements of the eActros, Frigoblock designed a CAN gateway system for direct communication between the truck and the cooling system. The control efficiently manages the energy demand of the unit using the minimal energy needed to maintain the set-point temperature. The redesigned CAN gateway system also ensures additional electrical safety, independently shutting down the refrigeration unit in case of an electrical emergency.

"The redesigned CAN communication opens the door to further developments in sustainable, electric transport refrigeration," said Ingo Kaltwasser, Chassis OEM (original equipment manufacturer) Manager for Frigoblock in Europe, Middle East and Africa. "In the future, with the enhanced communication capabilities and smart route planning, the refrigeration unit will be able to contribute to increasing the electric vehicle's range and make this sustainable, CO_2 neutral cold chain logistics solution even more operationally efficient."

Temperature-controlled food logistics

Simon Loos in the Netherlands and Tevex Logistics in Germany are the two food transport companies that added the first battery-powered and Frigoblock refrigerated eActros trucks into their fleets.

The e-truck in Simon Loos fleet, supplies supermarket stores in various cities including Rotterdam, The Hague, and Delft, with dry goods and fresh, temperature-controlled food. The Frigoblock-refrigerated eActros will run seven days a week, covering up to 300 kilometers every day in a locally CO_2-neutral operation. The batteries will be charged overnight at their customer's distribution center in Delfgauw.

(Source: Mercedes/Frigoblock)

The German Tevex Logistics plans to use the refrigerated truck in multi-shift operation. The logistics subsidiary of the Tolˆnnies Group will each day transport its own food products to various customers in the greater local area. The company expects the truck to travel up to 600 kilometers per day and will be recharged at a charging station on the company's premises.

"It's an important achievement for us to see Frigoblock technology enabling cold chain logistics customers to operate the first battery-powered eActros trucks in Europe," said Ingo Kaltwasser. "The electric innovation from Frigoblock will continue to help our customers make their fleets more sustainable, minimize the environmental impact of transport operations and reduce CO_2 emissions in inner city areas."

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