

STANDARDIZED OPERATION

Charging e-buses with CAN control unit

In-Tech Smart Charging, a subsidiary of In-Tech, announced that the automotive control unit Charge Control L has been integrated via CAN interface into an e-bus of E-Trofit as part of an upgrade project.



The control unit is integrated into the vehicle by means of a CAN interface and handles communication with the charging station and monitoring of the charging process (Source: In-Tech)

The company has thus for the first time installed a functionally safe and real-time capable control unit for charging with direct current (DC) in one of its buses. In the future, other vehicles in the fleet will also be equipped with the controllers.

As a digital OEM (original equipment manufacturer), E-Trofit offers solutions for the electrification of used and commercial vehicles. With the company's retrofit kits, conventional diesel buses are given a second life as environmentally friendly electric vehicles - according to international standards for functional safety in the automotive industry, explained the In-Tech. With its electrification kits, E-Trofit delivers a mobility solution currently available for achieving the Clean Vehicles Directive, which will come into force in August 2021. Fleet operators thus benefit from a long-term, economical, and sustainable control tool for designing an emission-free vehicle fleet, said the company.

Control unit with charging function

In order to be able to fully recharge the batteries of its electrified vehicles as efficiently as possible and in just a few hours, E-Trofit was looking for a real-time capable control unit for charging, they said. The Charge Control L from In-Tech Smart Charging was then used for the first time in an e-bus as part of a pilot project in April 2021.

Standardized operation

The process: the control unit is integrated into the vehicle by means of a CAN interface and handles communication with the charging station and monitoring of the charging process. In addition, the control unit can be connected to an onboard charger to enable AC charging and to extend older architectures with ISO 15118 functionalities. The control unit complies with ISO 15118 or DIN 70121 charging standards for DC charging and IEC 61851 and ISO 15118 for AC charging. It was developed in accordance with the automotive standard ISO 26262 and meets the required safety standard Asil B. To this end, the control unit also monitors the temperature at the charging plug, the status LEDs, and the plug interlocks.

"With our control unit, an e-bus is fully recharged in 2,5 to 3 hours. The product met all the requirements of E-Trofit, so we started with a pre-series status. The plan is to install the control unit as standard at the beginning of 2022," explained Thomas Wagner, CEO of In-Tech Smart Charging.

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