

CHARGE CONTROLLER

AC/DC charging of electric vehicles

To control the EV (electric vehicle) charging process, the In-Tech Smart Charging provides the CAN FD connectable Charge Control L and the Charge Module S devices.

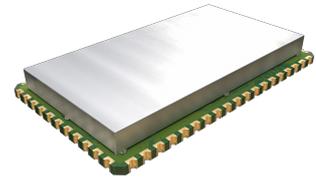


CCL is a functional safety electronic control unit supporting ISO 26262 ASIL B (Source: In-Tech Smart Charging)

Charge Control L (CCL) is a stand-alone charge controller compliant with DIN 70121 (communication interface between DC charging station and electric vehicle) and ISO 15118 (vehicle to grid communication interface). The ISO 15118 support enables to use the device for wired (AC and DC) charging and wireless charging of electric vehicles. The device is used to control the charging in commercial vehicles, heavy-duty trucks, busses, etc. After integration into the vehicle via CAN, the device performs the communication with the charging station and monitors the charging process. It can also be connected to an on-board charger to update an older architecture with ISO 15118 functionalities such as AC charging, etc.

CCL implements the ASIL B (automotive safety integrity level) according to ISO 26262. Classical CAN, CAN FD, and LIN interfaces are offered. The device features an inlet controller, a temperature monitoring function, an LED controller, and a HV-switch (high voltage). It also enables an OBC (on-board charger) connection via CAN. The controller with a 48-pin connector sizes 134,5 mm x 130,3 mm x 42,3 mm and is IP69k protected. It is dedicated for temperatures from -40 °C to + 85 °C. The required power supply may range from 9 V_{DC} to 36 V_{DC}.

The Charge Module S can be integrated inside the EV with the vehicle control unit (VCU) to control the charging procedure. It can be interfaced with the VCU via CAN or SPI (serial peripheral interface). The unit is able to communicate with the charging station via the VCU and provides the necessary parameters to the application via CAN or SPI. The module with the embedded ARM-Cortex-M4F processor supports the DIN 70121 and ISO 15118 functionality.



of Charge Module S supports charging functionality according to ISO 15118 and DIN 70121.(Source: In-Tech Smart Charging)