

Battery pack medium and high voltage box





Overview

What is the electrical design of a battery pack?

The electrical design of the battery pack is associated with fundamental electrical elements. These elements are: Busbars, Contactors, Fuses, pre-charge resistors, current sensors, HV (High Voltage) and LV (Low Voltage) Connectors, and wiring harnesses. This will cover: For all of these components we need to consider:.

What is a high-voltage battery pack?

Arranged in the chassis of a vehicle, the high-voltage battery pack consists of battery modules, which comprise many cell stacks, an ECU, which monitors and controls the battery condition, and functional parts, which switch on and off the power output, as well as connection parts, which connect these parts.

What is a high voltage junction box?

A high-voltage junction box is installed on the input-output of a high-voltage battery pack. It features a branching function integrating a relay, which switches on and off, a fuse, which shuts off a circuit in the event of an abnormality, and a current sensor, which detects the charging and discharging current values.

What is a HV battery junction box?

Careful consideration needs to be taken: The HV battery junction box brings together the measurement, control and connections of the battery high voltage (HV) system. Therefore, it would normally contain: By short circuit we mean an electrical short circuit, a very low resistance path between the positive and negative sides of the cell or cells.



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