

What are Te DC contactors used for?

TE supports the PCS industry with industry-leading connectivity solutions, including DC contactors, pre-charge and of-board resistors, EMI filters, terminal blocks, and panel-plug-in (PPI) relays. The IHV and ECK main DC contactors from TE are designed for power distribution, main switch function, and unit control in BESS applications.

What is the difference between a main contactor and open contactor?

The main contactors must keep full functionality, i.e. carry or separate the overcurrent, as long as the fuse has not tripped. The open contactors must ensure a sufficient insulation resistance between the energy storage system and the vehicle after a switch-off under fault conditions.

Should a fuse and main contactor separate the battery system?

Fuse and main contactor must securely separate the battery system from the motor in case of over currents, e.g. in the event of a crash [IV]. The main contactors must keep full functionality, i.e. carry or separate the overcurrent, as long as the fuse has not tripped.

How does a contactor work?

In accordance with the requirements of ISO 6469 and IEC 60664, the contactor ensures galvanic separation between the vehicle electrical system and the battery. During normal operation, the contactors are switched on after a 95% pre-charge of the filter capacity and they have to switch off up to 30 A at 450 V per drive cycle.

How much current can a contactor carry?

Based on the typical fuse characteristic as shown above and assuming a system response time of 200 ms, the contactor must be able to carry a current of up to 6,000 A for 5 ms or 2,000 A for 20 ms without damage and to switch off a current of 2,000 A.

## 2.2. Service conditions / ambient requirements

What is the temperature range of a battery contactor?

Compared to the conditions in vehicles with internal combustion engine, the temperature range for these contactors is reduced to  $-20^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ , as they are installed within the vicinity of the battery. The contactor's function must however not be affected by an exposure to the relatively aggressive Li-ion electrolyte.

C310 - DC bi-directional switching. 1 pole AC and DC contactor of up to 1,500 volts. Making current up to 2,500 amps; continuous current up to 500 amps; short-time current up to 3,000 amps.

Mobile and stationary energy storage solutions and battery storage units increase energy supply flexibility by de-coupling energy production from its consumption and by stabilizing the network frequency. DC contactors by Schaltbau are ...

Therefore, one of the main characteristics of the BMS controller board, referred to as the energy storage controller unit (ESCU), is that it works with multiple AFEs at the same ...

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The wiring diagram of the high-voltage DC contactor can be described as follows. The wiring diagram includes the input and output terminals. Applications. ... DC Charging Station Energy Storage System. Related products High Voltage DC ...

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