SOLAR PRO. New energy battery high voltage contactor

What is a high-voltage contactor?

However, it is more common to use a high-voltage contactor to represent high-power applications in EV and HEVs. As a key safety device in new energy vehicles, a high-voltage contactor needs basic functions that are resistant to high voltage, load, shock, strong arc extinguishing, and breaking capacity.

What is a battery contactor?

In a battery the contactors are a switch that can be operated by the control system. They are essentially a relay. These contactors are designed to be able to break (switch off) the circuit under full load (maximum current and at maximum system voltage). There are two main types of contactors: Normally Open (NO) and Normally Closed (NC).

Which contactor is best for high voltage lithium ion batteries?

Contactors for High-Voltage Lithium-Ion Batteries. TDK High Voltage-Contactors designed with excellent extinguishing characteristics and can be used bipolar for charging and discharging. It is further available as a dual-coil non-bipolar version for increased load-cycle performance.

How does a high voltage contactor work?

As a key safety device in new energy vehicles, a high-voltage contactor needs basic functions that are resistant to high voltage, load, shock, strong arc extinguishing, and breaking capacity. An appropriate current is applied to the coilsuch as using an IC, such as DRV3946, to ensure proper force to drive the contacts for robust operation.

What are contactors used for in EV & HEV?

Contactors are widely used in EV and HEVs to connect and break power supply lines. The required current curve generated by the coil driving the circuit is mandatory to ensure proper operation of the contactor. Attention should be paid to EMC issues due to high current and high frequency.

What is a DC fast charge contactor?

For battery EVs, another pair of DC fast charge contactors is inserted to establish a connection between the traction battery and the DC fast-charge equipment. The DC fast charging is essential for long distance driving and large battery EV fleets.

Designed to IEC specifications, our wide variety of AC and DC contactors in stock range from contactors for low-voltage devices, such as batteries, through to high-voltage power contactors up to 3,000 V and 1,100 A. We develop DC contactors for, among other uses, industrial storage systems, battery test systems, car batteries and electrical bus motors.

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and at maximum system voltage). There are two main types of contactors: Normally Open (NO) and Normally Closed (NC). A NO contactor does not allow current to flow when the actuation circuit is not powered.

The development of new batteries and more and more complex battery management systems requires exhaustive tests and validations especially regarding the safety circuit. Schaltbau's high-voltage contactors make, carry and break high currents safely and efficiently both during battery charging and discharging at battery test stations.

This epoxy-sealed contactor is designed to safely isolate high voltage systems up to 1500V and can carry 1000A continuously in ambient environments up to 85C. It is particularly suitable for heavy vehicle fast charge systems and large energy storage applications.

This very high current is at a minimum likely to age the contactors, it could permanently damage the contactors. Therefore, when we closed the contactors on the battery pack we do this in three steps: Close the main negative contactor; Close a contactor with a resistor in series; Close the main positive contactor

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HIGH VOLTAGE CONTACTORS ECK150/200/250 SERIES INDUSTRIAL / HIGH VOLTAGE CONTACTORS ECK150/200/250 SERIES TE Connectivity (TE) introduces the ECK150/200/250 high-voltage DC contactor series which is designed for control in new energy applications. The ECK product line is an innovative and reliable solution for EV charging stations, solar inverters, ...

ECK150B series high-voltage DC contactor is designed for control in new energy applications. The ECK150B product line is an innovative and reliable solution for EV charging stations, solar inverters, battery energy storage systems, automated-guided vehicles (AGV) and e-Forklifts. ECK150B is hermetically sealed with ceramic technology and enable high switching capability ...

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