

CONTACTORS FOR BATTERY PACKS

Background

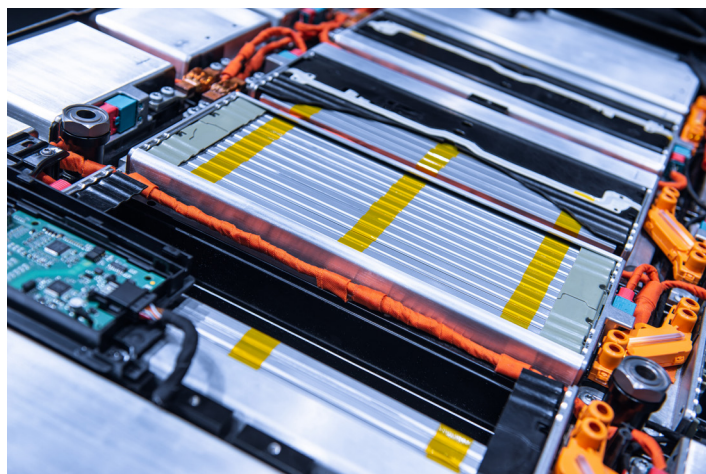
Modern battery packs for high power applications such as battery powered fork lifts and battery energy storage, require robust contactors to maintain safe operation. These packs often use lithium ion or lead acid batteries, which have become increasingly capable as technology has improved. With this increased capability, comes greater operating currents, fault currents and voltage isolation requirements, all of which drive the need for improved contactor performance.

The main contactors on the pack need to be able to carry current under all operating conditions, while being able to interrupt current in an emergency. The precharge contactor needs to be able to hot switch to charge the load's capacitors and maintain high voltage isolation once startup is complete.

Solution




High performance contactors from Sensata GIGAVAC are ideal for these applications. Sensata GIGAVAC is an innovator, with its robust hermetic sealing technology and a partner of choice, with its strong engineering support and commitment to world class operations. In particular, the new GV350 Series is ideal for high power applications, since these compact contactors are filled with an inert gas to increase switching performance and voltage isolation, while minimizing contact resistance, size and weight. The GV350 is suitable as a main contactor on both positive and negative conductors for many packs in the 12VDC to 1000VDC range at continuous operating currents up to 500A. This can be continuous power levels in the 50kW to 500kW range, including commercial forklifts, buses, trucks, hybrid ships, rail, energy storage and DC fast chargers. It's also suitable as a precharge contactor on 100kW or larger packs.

High power battery packs operate safely and efficiently by using robust contactors to carry and isolate electricity



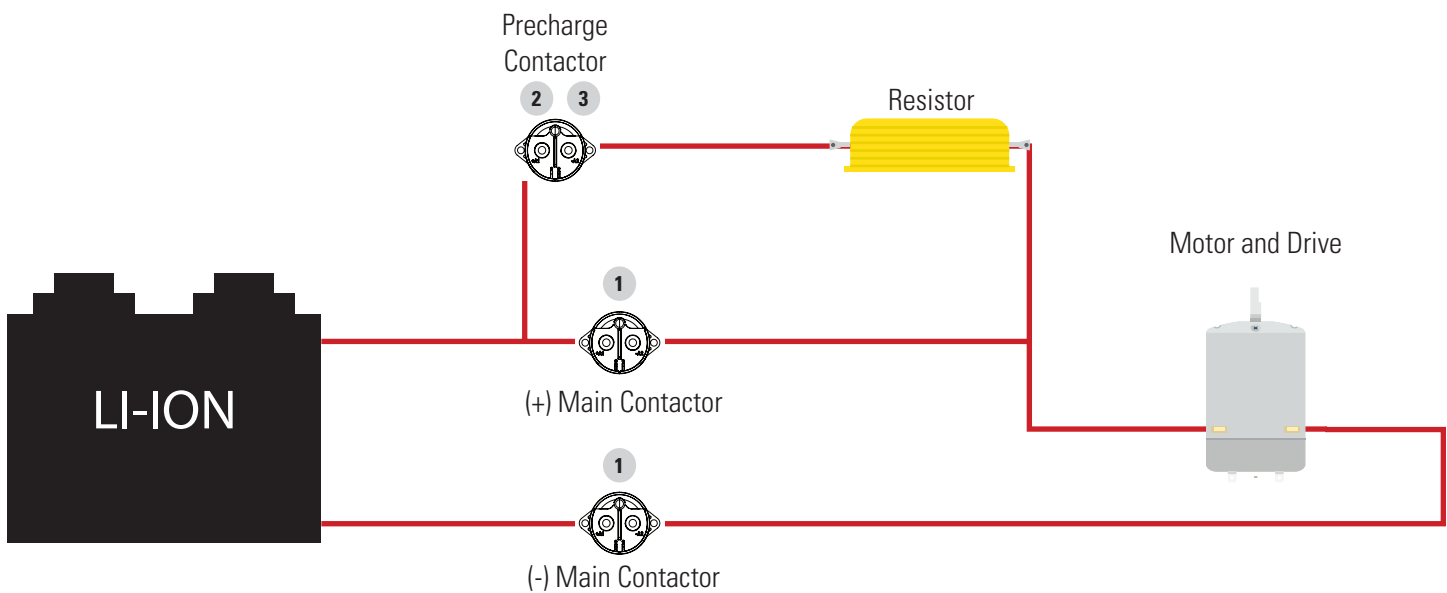


RECOMMENDED PRODUCTS

Reference on Diagram	Product	Features	Function	Brand
1	 GV350 Series	<ul style="list-style-type: none">Optimized for low contact resistanceDesigned to switch under low for make/break applications	<ul style="list-style-type: none">Electrical Isolation and Protection	GIGAVAC
2	 GV210 Series	<ul style="list-style-type: none">Hermetically sealed for improved voltage isolation and switchingOperates in explosive and harsh environments without damage to contacts	<ul style="list-style-type: none">Electrical Isolation and Protection	GIGAVAC
3	 P Series	<ul style="list-style-type: none">Hermetically sealed for performanceUp to 80 A at 1500 VDCPCB mounting option	<ul style="list-style-type: none">Electrical Isolation and Protection	GIGAVAC



BATTERY PACK WITH DC LOADS



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