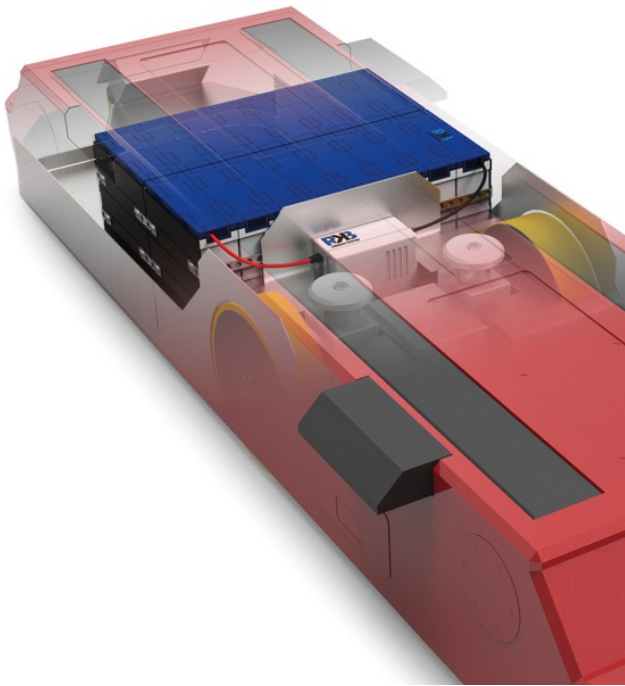


Energy supply for automated guided vehicles

The German company RKB Electronic offers battery solutions for AGVs (automated guided vehicles). The batteries are optionally equipped with a CAN interface using CANopen as a higher-layer protocol.



Automated guided vehicle with RKB batteries (Source: RKB Electronic)

The company mainly uses lithium-battery packs. In comparison to lead-acid batteries, this enables to supply the AGV with energy using smaller and lighter batteries. The operating time of the lithium batteries is about twice as high, while the charging time is only one-fifth of those for the lead-acid batteries. In addition, lithium-batteries are suitable for high currents. The manufacturer's Lifepo4 batteries are designed for sensitive areas with safety-related requirements. The availability of CANopen interfaces allows to control the charge and other features of the power supply.

The company's modular battery management systems (BMS) may be seen as an improvement of the classic protective circuit. A BMS may log the charging condition, current temperature, number of discharge cycles, and other information for further processing. These data may be retrieved via a communication network e.g. CAN.

A variety of chargers is offered for the battery systems. An input of 110 V_{AC} to 240 V_{AC} allows to use the chargers worldwide. Depending on the power range the chargers have a plastic or aluminum protection housing. The charging process is micro-processor-controlled according to the required charging method.

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