CAN-based battery management systems

For use in mobile machines and buses Refu Elektronik (Germany) offers not only electrical drives and power electronics, but also complete battery management systems (BMS). The BMS provides CANopen and J1939 connectivity.

The energy storage systems are available with a capacity of 40 Ah to 400 Ah and with a voltage range of 24 V to 800 V. The battery system consists of the thermally conditioned battery container with the corresponding cells in lithium-ion battery technology and a balancing and battery management system. The overriding battery management system handles the monitoring of individual battery cells and communicates with the electronic charging system via CANopen or SAE J1939. In addition to temperature monitoring, insulation monitoring and a separation in case of a short circuit are possible.

For traction applications the active balancing is recommended: this ensures high efficiency and enables fast charging of the batteries. Owing to the charge equalization, the lifetime of the battery cells is increased.