CAPACITOR COMPETENCE since 1958

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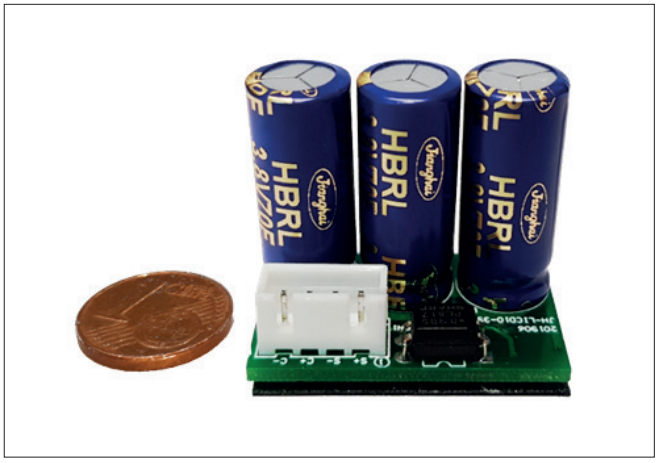
MINI-BACKUP-ENERGY STORAGE

Alexander Schedlock, Jianghai Europe Electronic Components GmbH

>> The growing market for IoT, smart metering, control technology and mobile applications (e.g., toll collect systems) is increasing the demand for compact energy storage systems. Battery solutions have found their permanent place here. Large capacity, low cost and countless manufacturers make batteries particularly attractive. For many short-lived devices, lithium-ion batteries are therefore often the first choice. Although they boast with a large capacity, reliability and the environment sometimes fall by the wayside.



A LOT OF PERFORMANCE IN A SHORT TIME

For applications with higher demands on quality, service life, number of charging cycles and safety, battery solutions often reach their limits. At this point, other technologies are increasingly appearing, such as EDLCs or LiCs, summarized in Jianghai under the terminology Energy-Cs. Although these capacitors cannot always completely replace batteries, they offer great advantages in the field of short-term storage: they provide a lot of power in a short time and offer a much higher number of operating cycles with up to 1 million charge and discharge operations.

NO DATA LOSS IN CASE OF POWER FAILURE

Many applications or subsystems are increasingly controlled by microcontrollers and take over decentralized tasks. Important measurement data or transaction data are often processed in billing systems. So that no data is lost in the event of a power failure or accidental disconnection of the power supply, these must be stored and (computing) processes terminated in a controlled manner. Depending on the application, this type of sudden interruption is not uncommon. A reliable energy storage system is essential for such applications

VARIABLE MODULAR STRUCTURE

Jianghai's energy capacitor modules meet these requirements. Consisting of one or more capacitors, the mini backup modules are used either as a supplement or as an alternative to batteries. The LiC mini-modules with 12 V or 24 V provide

enough energy for many microcontrollers for minutes. This enables a controlled shutdown or the transmission of data. Incorrect data and unfinished transactions (for example, in a payment process) are thus effectively avoided. The variable design of LiC modules makes it possible to supply both small and larger devices with energy.

It may also be important that Li capacitors do not pose any risk of damage or destruction as known from lithium batteries.

Whether in smart metering in potentially explosive areas to the emergency energy supply of control units and microcontrollers: Jianghai offers the right energy storage for many applications. ■

AUTHOR

Alexander Schedlock completed his state examination at the Heinrich Hertz Vocational College in Düsseldorf as state-certified Technician specialized in electrical engineering. After successfully completing his training as an IT system electronics technician (2010), he worked as a service technician in the field and was thus able to gain experience with end devices for various applications. As a part-time job, he studied for four years at the technical college for electrical engineering and successfully completed his state technical school exam in 2017. Since 2018 he has been working in the sales team of Jianghai Europe Electronic Components GmbH as Technical Sales Manager and looks after customers across Europe with technical designs. Mr. Schedlock is the contact person for the Energy Capacitors division.

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