



LITHIUM BATTERY BMS FOR DATA CENTER





CELL INTERNAL RESISTANCE MONITORING

ACTIVE EQUALIZATION

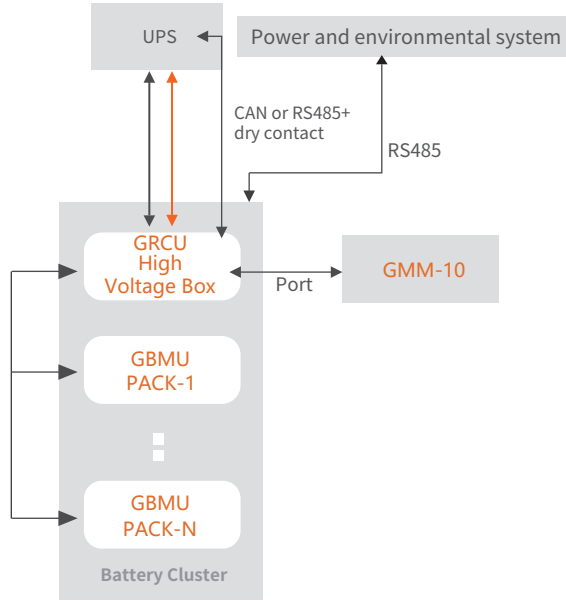
FAST DATA UPDATE

G-BP lithium battery BMS is tailor-made for green data center, the system adopts 2+1 level structure, providing data acquisition, data analysis, logic processing, data mapping integrated system solution, which can provide overcharge, overdischarge, overcurrent, overtemperature and short-circuit protection for the battery pack, real-time detection of battery safety status, fault diagnosis and early warning, and accurate estimation of SOC/SOH to ensure safe and stable operation of data center backup power system.

SYSTEM CONFIGURATION

 <p>GBMU MODULE</p> <p>Using 32-bit automotive-grade MCU chip+AFE collection + CAN communication architecture; the whole device is over 90% domestic, using 2-channel bidirectional IO ports and secondary lock terminals to realize multi-BMU loop automatic address coding;</p>	 <p>GRCU MODULE</p> <p>Using ARM-M3 chip+2-channel total voltage collection+2-channel large/small range current sensors + CAN communication architecture, the whole device is over 80% domestic, insulation collection optimal design, to avoid the influence of Y capacitors in PCS;</p>	 <p>GMM-10 MODULE</p> <p>Receive, display and set the information collected by the GSCU module; TF card data storage for data and fault analysis; Support online program upgrade or upgrade via USB; Support the local storage of system operation data; Support 10inch display, capacitive touch screen;</p>	 <p>HIGH VOLTAGE BOX</p> <p>Battery cluster voltage, battery cluster current acquisition; Battery cluster circuit relay control and protection; Supply power to GBMU module and battery fan; data status processing and charge/discharge control and management of packs in the same battery cluster; Support circuit breaker single cluster manual de-clustering;</p>
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TOPOLOGY



SPECIFICATIONS

Item	Parameter
Temperature measurement accuracy	≤1°C
Temperature sampling cycle	100ms
Cell voltage measurement range	0V~5V
SOC estimation accuracy	<5%
Cell voltage measurement accuracy	0.1%
Operating voltage range	9-32Vdc
Cell voltage measurement cycle	100ms
System voltage measurement range	-20°C~+65°C

Item	Parameter
Voltage collection range	0V~1500V
Maximum operating humidity	5%~95%RH (without condensation)
System voltage measurement accuracy	±0.3%
System voltage sampling cycle	100ms
Thermal management mode	Air cooling
System current measurement accuracy	0.1%
System current sampling cycle	50ms
Insulation state monitoring	Yes
Temperature detection range	-40°C~+125°C

