Battery Management System

ELINTA MOTORS BMS-V1.5 2019-01-03

Robust automotive battery management system with integrated ECE R-100 compatible leakage measurement and CCS fast charging control.

Controlled by STM32 microcontroller and LTC6811 multi-cell battery monitors. Battery management system is based on central module and daughter boards for cell modules configuration.

Key Features

- Electric/Hybrid vehicles
- Power Banks
- Industrial UPS
- Heavy Machinery
- Up to 800 V
- Up to 1000 A

Master Unit

- Typical working voltage: 12 V to 24 V
- Minimum voltage: 8 V
- Normal operation current: <600 mA
- Peak current: 5 A
- Standby current: <20 mA

Cell Module

- Cell module standby current: < 5 μA
- < 0.025 % Voltage measurement error
- Dual temperature sensors – 50 C to +150 C
- iso-SPI Daisy Chain communication.
- 160 mA passive Chain communication.

Protection Features

- Over/Under-voltage
- Over/Under temperature
- Overcurrent / Short circuit
- Battery box insulation fault
- HVIL detection
- Humidity detection

Other Features

- Dual power contactor control
- Pre-charge control
- Thermal management
- CCS Fast charge control
- CAN-bus charger control
- Smart diagnostics and logging.