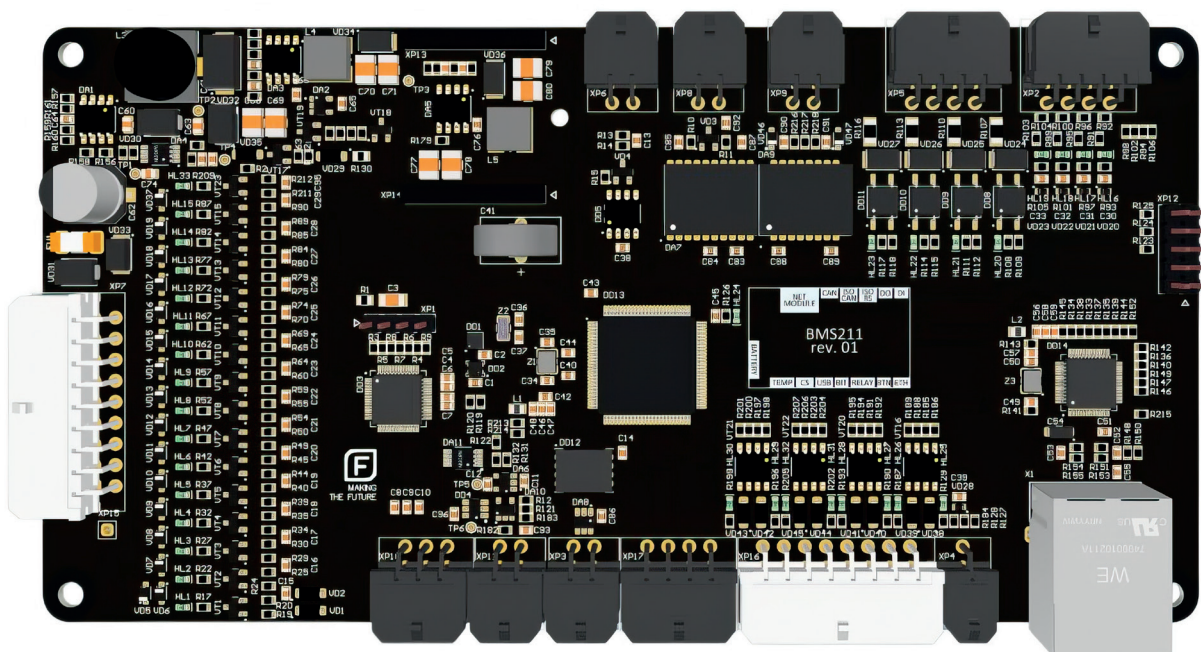




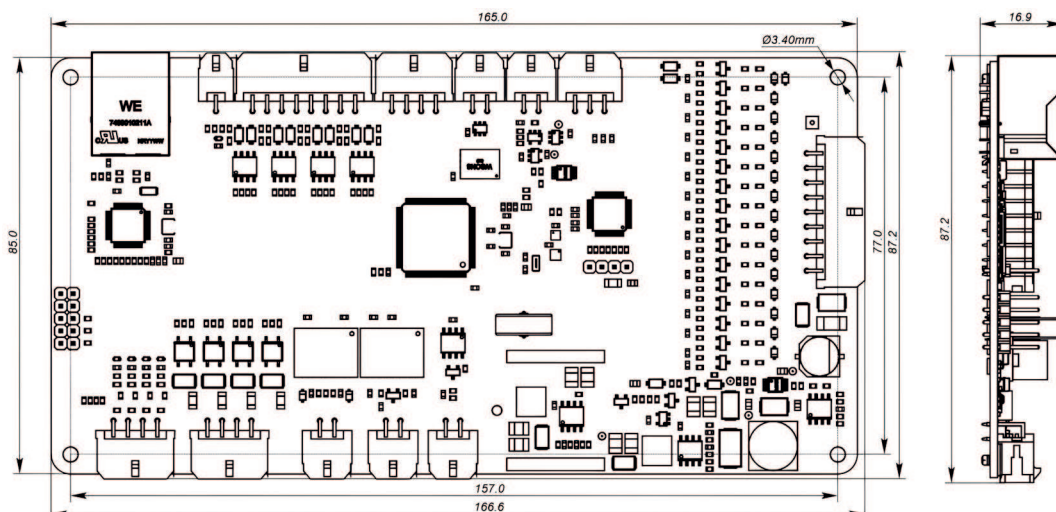
BMS211 Battery Management System

A full-featured, highly integrated centralized battery management system with high measurement accuracy and advanced algorithms for 24-80 V batteries.

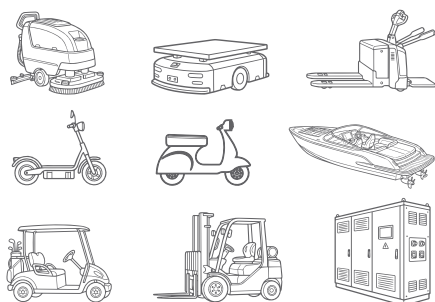
The BMS211 measures individual cell voltages in series-connected batteries and provides passive balancing. Data is transmitted and received via CAN 2.0B, RS-485, Ethernet, USB, or optional wireless interfaces.

Benefits

- 6-16 series-connected cells.
- Discrete inputs/outputs.
- Precharge and heater/cooler control.
- High-accuracy measurements.
- SOC and SOH estimation.
- USB, CAN, RS-485, and Ethernet interfaces.
- Humidity and acceleration sensors.
- Data logger.
- Optional wireless connectivity.



APPLICATIONS



- FLOOR SCRUBBERS
- ELECTRIC TUGS
- ELECTRIC FORKLIFTS
- AUTONOMOUS MOBILE ROBOTS
- ELECTRIC SCOOTERS • KICK SCOOTERS
- ELECTRIC BOATS • GOLF CARTS
- UNINTERRUPTIBLE POWER SUPPLIES
- BACKUP ENERGY STORAGE SYSTEMS



Technical Specifications

General Parameters

Input voltage range	16-70 V DC
Nominal battery voltage	24 V, 36 V, 48 V, 80 V
Battery chemistry	LFP, NMC, LTO
Number of series-connected cells	6-16

Balancing System

Balancing type	Passive
Balancing current	140 mA at 3.4 V

Primary Sensors

Cell voltage measurement accuracy	2 mV
Cell voltage measurement range	0-5 V
Current sensor type	External CAN sensor or Hall-effect sensor
Current measurement accuracy	1% (Hall-effect sensor)
Number of temperature sensors	3 external, 1 internal
Temperature measurement accuracy	2 °C
Temperature measurement range	-50 °C to +80 °C

Power Consumption

Sleep mode	100 mW (max.)
Operating	2000 mW (max.)

Interfaces

Number of contactor outputs	8
Number of digital inputs	4
Number of digital outputs	4 (dry contact, 60 V, 100 mA)
CAN 2.0B	1 (galvanically isolated) and 1 (non-isolated)
RS-485	1 (galvanically isolated)
Ethernet 10/100	1 (galvanically isolated)
USB 2.0	1 (for configuration)
Wireless connectivity	2G cellular, Wi-Fi, Bluetooth (optional)

Functions

Sensors	Current, voltage, temperature, acceleration, humidity
Event log	Internal, up to 2,000 timestamped events
Firmware update	USB, OTA via 2G/Wi-Fi (optional)
Configuration	USB, BT, Wi-Fi, Ethernet

Operating Conditions

Operating temperature	-40 °C to +75 °C
Storage temperature	-40 °C to +75 °C
Operating humidity	5% to 95%
Ingress protection	IP00

Physical Characteristics

Dimensions	166.6 x 87.2 x 16.9 mm (L x W x H)
Weight	87 g
Connectors	Molex Micro-Fit

Compatible Devices

Current sensor	CS300
Monitoring module	BMU16
Indicators	IND10, IND11, IND12, IND12-OLED
Data transmission module	NET10
Insulation monitoring module	IM101