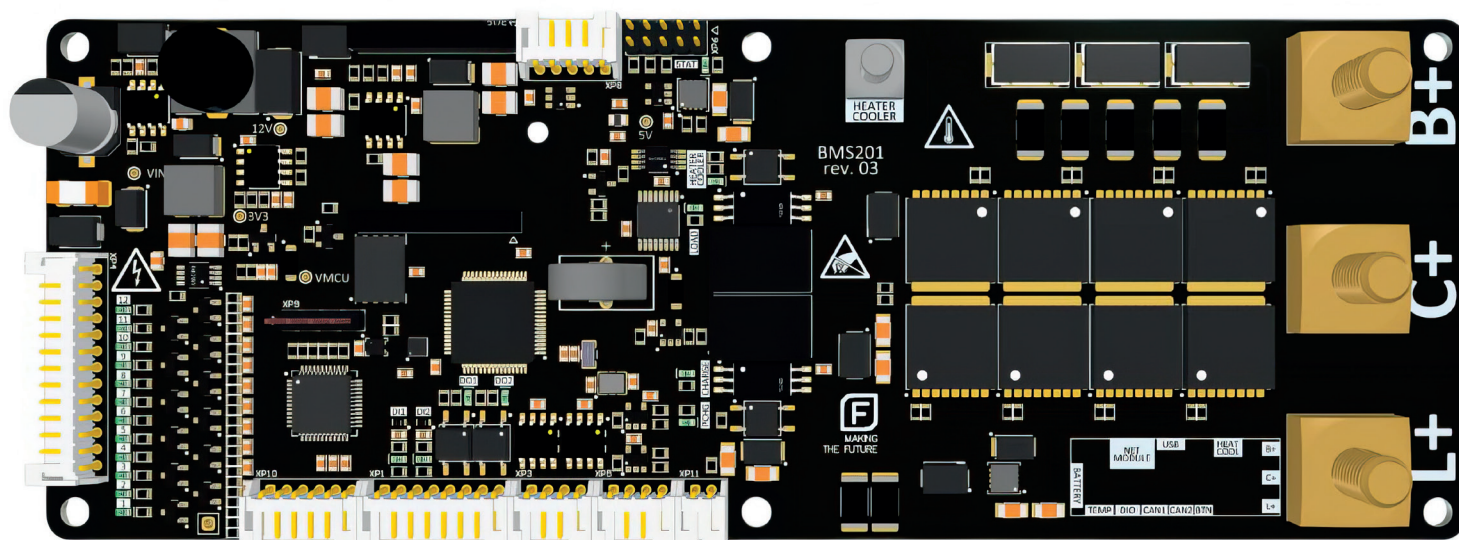




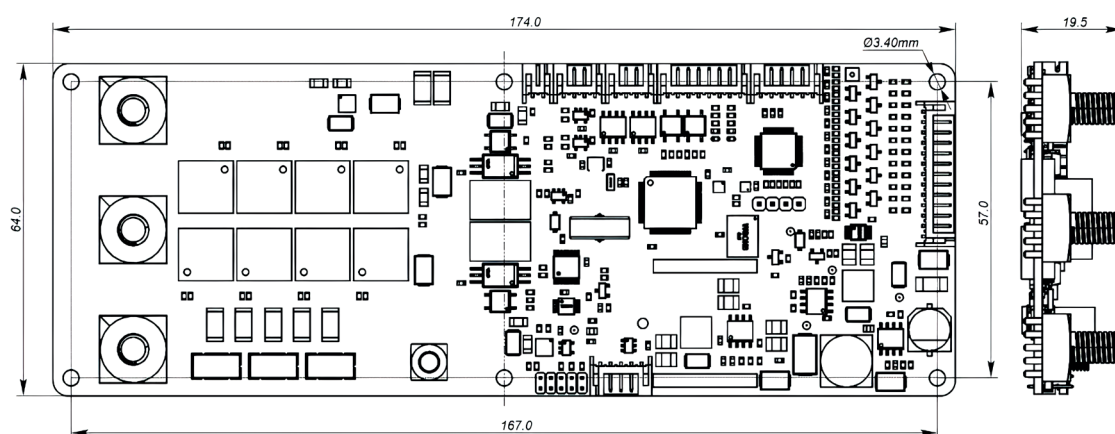
Battery Management System BMS201

BMS201 is an all-in-one single-board battery management system with 100 A MOSFET contactors and high-accuracy measurement circuitry for 24-36 V batteries with capacities up to 200 Ah. BMS status information and control commands can be sent and received via CAN, USB, or wireless interfaces.

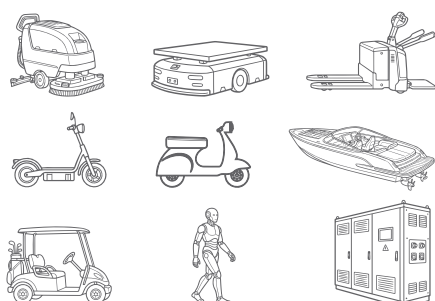
BMS201 measures the voltages of series-connected battery cells and provides passive balancing. Its integrated contactor can interrupt the circuit in fault conditions.

Advantages

- 6-12 series-connected cells.
- MOSFET contactor.
- Resistive current sensor.
- Precharge circuit.
- High-accuracy measurements.
- SOC and SOH estimation.
- USB and CAN interfaces.
- Humidity and acceleration sensors.
- Data logger.
- Optional wireless connectivity.



APPLICATIONS



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



Technical Specifications

General Parameters

Input voltage range	16-70 V
Nominal battery voltage	24 V, 36 V
Battery chemistry	LFP, NMC, LTO
Number of series-connected cells	6-12

Balancing System

Balancing type	Passive
Balancing current	100 mA at 3.4 V

Main Sensors

Cell voltage measurement accuracy	2 mV
Cell voltage measurement range	0-5 V
Current sensor type	Integrated resistive sensor
Current measurement accuracy	100 mA
Current measurement range	±250 A
Number of temperature sensors	3 external, 2 internal
Temperature measurement accuracy	2 °C
Temperature measurement range	-50 °C to +80 °C

Power Consumption

Sleep mode	100 mW (max.)
Operation	1400 mW (max.)

Contactors

Contactor type	Solid-state MOSFET
Number of contactors	2
Maximum voltage	70 V
Maximum continuous current	100 A
Maximum peak current	500 A for 1 s

Precharge Circuit

Number of precharge circuits	1
Precharge resistor resistance	40 ohms

Interfaces

General-purpose digital inputs	2
General-purpose digital outputs	2 (dry contact, 70 V, 100 mA)
Heater/cooler output	1 (70 V, 5 A)
CAN 2.0B	2
USB 2.0	1 (for configuration)
Wireless communication	2G cellular/Wi-Fi/Bluetooth (optional)

Functions

Sensors	Current, voltage, temperature, acceleration, humidity
Event log	Internal, up to 2000 timestamped events
Firmware update	USB, OTA over 2G/Wi-Fi (optional)
Configuration	USB, Bluetooth (optional)

Operating Conditions

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

Physical Characteristics

Dimensions	174 x 64 x 19.5 mm (L x W x H)
Weight	120 g
Connectors	JST PH

Compatible Devices

Indicators	IND10, IND11, IND12, IND12-OLED
Data transmission module	NET10