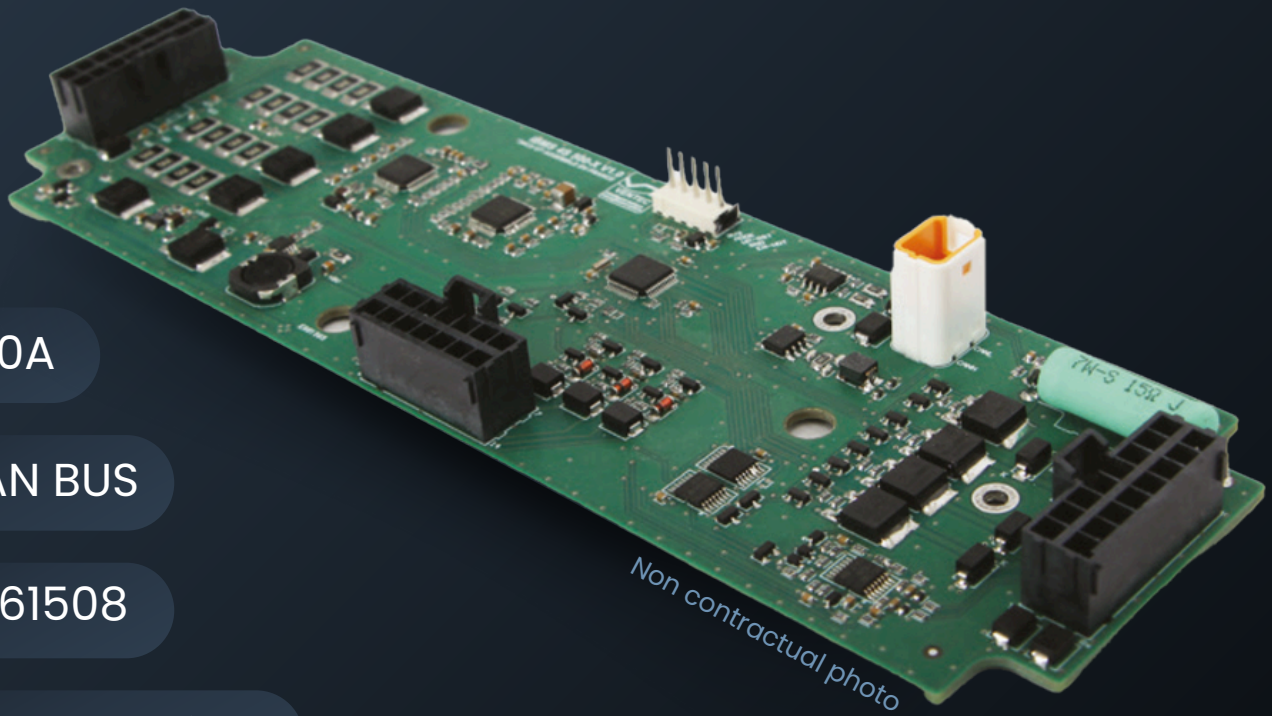
Product Sheet

4S BMS PowerSafe



- 750A
- CAN BUS
- EN61508
- SIL2 compliant
- External Powerbox

Automotive

Energy storage

Technical Description

4S

Cells management

- Management of 4 lithium cells in series, compatible with all cell technologies (NMC, LiFe, LiPo…)
- Management of 3 NTC temperature sensors
  - 2 digital measurements used by the software
  - 1 analog measurement used by the hardware redundancy
- Measurements accuracy :
  - Cell voltages: +/- 5 mV
  - Temperatures: +/- 1°C

Protections

- Hardware redundancy for voltage and temperature measurements in order to reach a high level of safety (SIL2 of EN61508 standard)
- Overcharge and undercharge, tunable by software
- Overtemperature and undertemperature, tunable by software
- Overcurrent : 2 levels in discharge, 1 level in charge tunable by software
- Short circuit hardware protection (resettable electronic fuse)

Balancing

- Passive balancing with a 500 mA bypass current per cell (on the BMS)

Power box

- Requires an external power box (contactors, hall effect current sensor)
- Bidirectional measurement of the battery current with an external hall effect sensor
- Power box management up to 750 A :
  - Management of up to 3 external electromechanical contactors
  - Precharge circuit included on the BMS

Production

- SOC and SOH calculation
- Advanced self-diagnostic of the board
- Communication by CAN bus 2.0B
  - Possibility to manage the motor controller and the charger
- Advanced supervision software
- Black box integrated with defaults history storage and life counters

Power supply/consumption

- Supply of the BMS directly on the battery pack
- Low consumption in sleep mode: < 500 µA

Mechanical format

- 66 mm x 213 mm x 22 mm
- Can be potted to be used in harsh environment.