TESAS PRODUCTS

EmbDes – BMS Solutions (LV – HV)

BMS Variants

4S BMS

Cell Support: 3 to 4S

Voltage: 11 to 16V Current: 40Amps and Customizable according to customer need.

14S BMS

Cell Support: 7 to 14S

Voltage: 24 to 48V Current: Customizable

28S BMS

Cell Support: 7 to 28S

Voltage: 24 to 96V Current: Customizable

Protection: Galvanic Isolation

HV BMS

Architecture: Master – Slave(Distributed, Central)

Cell Support: 7 to 800S

Voltage: 24 to 3000V

Current: Customizable

Protection: Galvanic Isolation

CONTACT

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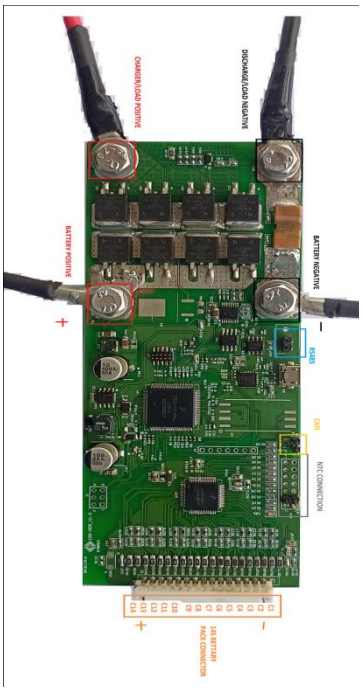
LV BMS(7-28S)



HV BMS(7-800S)

4S BMS

Current Sensor (0 to 1000Amps)-CAN

IoT HW

Main Features

- Monitors every cell voltage in series
- Intelligent cell balancing (efficient passive balancing)
- Enforces min. and max. cell voltages
- Enforces maximum current limits
- Enforces temperature limits
- Professional and robust design
- Monitors state-of-charge
- Retains lifetime data about battery history
- GUI to Monitor the state of the Battery Pack.

Battery Compatibility

- Compatible with almost all lithium cells (0 to 5V)
- Simple Setup for battery Pack
- Supports upto 800 Cells in Series

Battery Calculations

- SoC, SoH
- Open Circuit Cell Voltage
- Charge and Discharge current limits
- Internal Resistance for all Cells and Pack

Other Salient Features

- High Side MOSFET Driver Control
- Transformer Isolation (Optional)
- CAN based Data Logging and configuration
- 32 different error alerts will be generated
- Provision for storing the logs for 5 year.
- Prediction of SOC, SOH for individual cells and the battery pack
- Internal resistance of individual cells.
- Provision for handling thermal management.
  PWM based fan control
  Provision for reading the ignition status.
  Provision to read upto 12 temperature sensors(two on the BMS board and 10 for the battery pack). If needed more the boards can be customized as per customer need.

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- Have options to connect the Bluetooth / WiFi to the BMS for data monitoring.
- Intelligent Cell Balancing upto 300mA
- Field Programmable configuration through CAN bus and Cloud.
- Insulation Monitoring to protect the High Voltage Ground Failure. (Optional)

Cell Voltage Monitoring Specs

- Cell Voltage Measurement Resolution of 0.1mV
- Max Ind. Cell Voltage 0.5 to 5V
- Total Pack Voltage 42 to 54 V

Communication Interface

- CAN / UART / RS485

Protection Features

- On / Off for Controlling Charge and Discharge Sources
- Thermal Protection
- Over / Under Voltage & Over Current

Data Logging

- Tracks total number of battery cycles
- Records detailed lifetime battery usage and environment conditions internally
- BMS Parameters can be logged using PC utility Software and pushed to cloud using IOT Hardware

Protection Feautes

- Power MOSFET
- Contactor Based
- Precharge Control MOSFET / Contactor
- Galvanic isolation (Optional)

Common Applications

- 14V to 2000V – EV Automotive applications
- Industrial Energy Storage System.
- Solar Street Light
- Medical Equipment's