ENORISE
Simulate, Automate, Qualify

T-BMS
Testbench Battery Management System

ENORISE's T-BMS (Testbench Battery Management System) is a Battery Management System (BMS) designed especially for use in test bench applications. The T-BMS is designed to be used with lithium ion battery cells. The T-BMS can monitor up to 72 cells. Each CMU connected to the T-BMS can monitor up to 36 cells. The CMU is designed to measure the cell voltage and cell temperature of the connected Li-Ion cells.
The CMU is furthermore designed to balance the Li-Ion cells.

The T-BMS system consists of:

T-BMS Main Unit : Testbench Battery Management Unit ("Master")

Up to two CMU: Cell Monitoring Units ("Slave")

A comprehensive Software (T-BMS Communicator | graphical user interface "GUI") allows the user to configure the T-BMS for a wide range of applications.

T-BMS setup

- T-BMS Main Unit
- Up to two CMU (Cell Monitoring Unit)
- AuSy interface (CAN)
- Parameterization Software (T-BMS Communicator)
- External Contactors
- Current Shunt

T-BMS Hardware Functions

- Monitoring up to 72 Cell voltages
- Monitoring up to 24 Cell temperatures
- Blancing
- Current monitoring
- Communication Monitoring
- CAN interface to AuSy
- Contactor actuation
- KL30C Emergency Off

T-BMS Software Functions

- Module Temperature Calculation
- Recalibration of SOC
- Continuous SOC calculation
- Voltage Limitation to keep cells within specific SOC-Range
- Current Limitation to limit thermal impact on cells.
- Current limitation to limit impact of lithium plating during charging