

New reference design board from ams for 48V lithium battery monitoring systems

Board provides complete solution for monitoring of high-side current as well as cell voltages and temperatures

Hard-wired implementation with simple software eases compliance with ISO 26262 functional safety standard

Unterpremstaetten, Austria (14 September, 2015), ams AG (SIX: AMS), a leading provider of high performance sensors and analog ICs, today launched a reference board for a small, high-performance and simple 48V automotive battery monitoring system.

The board is suitable for use in the next generation of single 48V lithium battery systems, and in dual 48V/12V battery systems, such as those used in passenger and light commercial vehicles and electric scooters and motorbikes.

The ams 48V board provides a complete battery monitoring and safety system on a single, compact PCB. It measures the flow of current through the battery, and the voltage and temperature both of the entire battery and of individual lithium cells.

The board's high-side current sensor is connected to the battery's positive terminal. This has enabled ams to include a battery disconnect switch on the board which is automatically actuated when the current sensor detects an overload condition. This protects the battery's cells from damage and helps to prolong the life of the battery.

The ams board also implements an innovative method of cell balancing in hardware, without the intervention of a microcontroller or processor. The board compares the voltages of individual cells and switches the charge and discharge current between cells in order to maintain an equal voltage across all cells.

Because the entire 48V battery monitoring system operates without complex application software, it is quick and easy to implement in a vehicle's power management system. It also makes it easier for power system designers to achieve compliance with the ISO 26262 functional safety standard, because it eliminates the need to develop, test and verify the safe functioning of complex algorithms for error compensation and cell balancing.

'The new battery monitoring reference board from ams shows that 48V power systems in vehicles do not have to be complex or difficult to implement. The high performance of the ams board is due to the precision and accuracy of its analog components and on-board 48V precision attenuator. This means that it can do without the complex error compensation software and high-end microcontroller required by other 48V battery monitoring systems,' said Sabine Jud, marketing manager in the mobility sensors product line of ams.



Press Release
ams launches reference board for
48V lithium battery monitoring

The 48V battery monitoring system reference design board is available on request from ams via its ICdirect online store.

For further information on the 48V reference design board, please visit www.ams.com/Battery-Monitoring/48V-Reference-Board.

About ams

ams is a global leader in the design and manufacture of advanced sensor solutions and analog ICs. Our mission is to shape the world with sensor solutions by providing a seamless interface between humans and technology. ams' high-performance analog products drive applications requiring extreme precision, dynamic range, sensitivity, and ultra-low power consumption. Products include sensors, sensor interfaces, power management and wireless ICs for consumer, communications, industrial, medical, and automotive markets.

With headquarters in Austria, ams employs over 1,800 people globally and serves more than 8,000 customers worldwide. ams is listed on the SIX Swiss stock exchange (ticker symbol: AMS). More information about ams can be found at www.ams.com.

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