Press Releases

# INTELLIGENT BATTERY MANAGEMENT IN ELECTRIC AND HYBRID VEHICLES

Bad Neustadt an der Saale, Germany. Preh has successfully achieved the next step in the future-oriented market for electric and hybrid vehicles. The automotive supplier's ECUs for managing lithium-ion batteries were integrated into BMW's ActiveHybrid 5. These units ensure that the high-voltage battery performs optimally. Preh know-how is also used in the BMW ActiveE, a purely electric vehicle. The high-voltage battery on the BMW ActiveHybrid 5 delivers a nominal voltage of 320V.

The battery experiences continual stress as a result of the consumption of energy when the vehicle is running under electric power, the recovery of energy when the vehicle is decelerating, and during charging. Depending on the degree of cell aging and the manufacturing tolerance, the charge level in the cells may vary. In order to be able to even out the various charge states by means of "passive balancing," the voltage and the temperature of the cells are continuously monitored by the Cell Supervising Sensor Units developed by Preh, and this data is processed by the Battery Management Unit ECU. With passive balancing, the charge state of all the cells is adjusted by systematically discharging power to the cell having the lowest charge level. In this way, the entire battery is uniformly charged, which results in optimal battery performance.

Preh Director of Engineering and Purchasing Jochen Ehrenberg: "We see ourselves as being a highly flexible engineering and manufacturing partner for battery management ECUs. This is particularly important to automobile manufacturers who do not want to turn over the entire competency for electrical drive systems as a complete package to a system supplier."