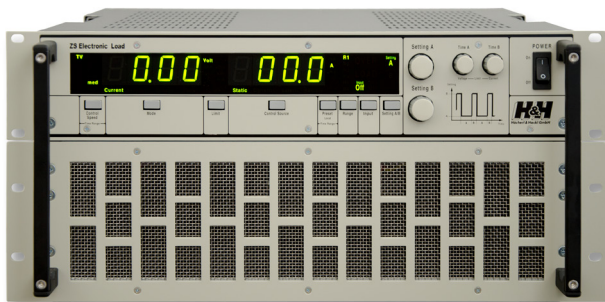


Customer Application #13

Load Tests at LiPo and LiFePO4 Cells

The „TU Darmstadt Racing Team e. V.“ – short „DART Racing“ – is a university group at the TU Darmstadt, which has participated in the international design competition „Formula Student“ since 2006.

Teams of universities from all over the world face each other in this competition. All teams, made up of students from a wide range of disciplines, work for one year to achieve the best possible results in both static and dynamic disciplines.



Electronic load ZS4806

The static disciplines serve to present technical decisions and economic aspects to jurors from the industry. The dynamic disciplines require proof of acceleration, performance, reliability and energy efficiency.

In 2011, DART Racing switched to the construction of electrically powered racing cars and also took part in the first ever Formula Student Driverless competition at Hockenheim in the 2016/17 season. The goal was to rebuild last year's car so that it could drive autonomously.

The high-voltage batteries of both cars are completely designed, manufactured and maintained by the team. For this purpose, cells are selected, a circuit concept and its own BMS (battery management system) are developed and a housing that meets the strict requirements of the specifications is designed.

The same applies to the battery which is used to supply the brake and steering actuators of the autonomously driven car.

Höcherl & Hackl supports DART Racing in the development of its own batteries by providing an electronic load of the type ZS4806. This is used for stress tests on lithium polymer and lithium-iron phosphate cells. This helps DART Racing to gain a deep understanding of the cells used and thus maximize performance.