

## With imc and the power of the sun

Nuon Solar Team uses imc  $\mu$ -CANSAS modules in their new solar car

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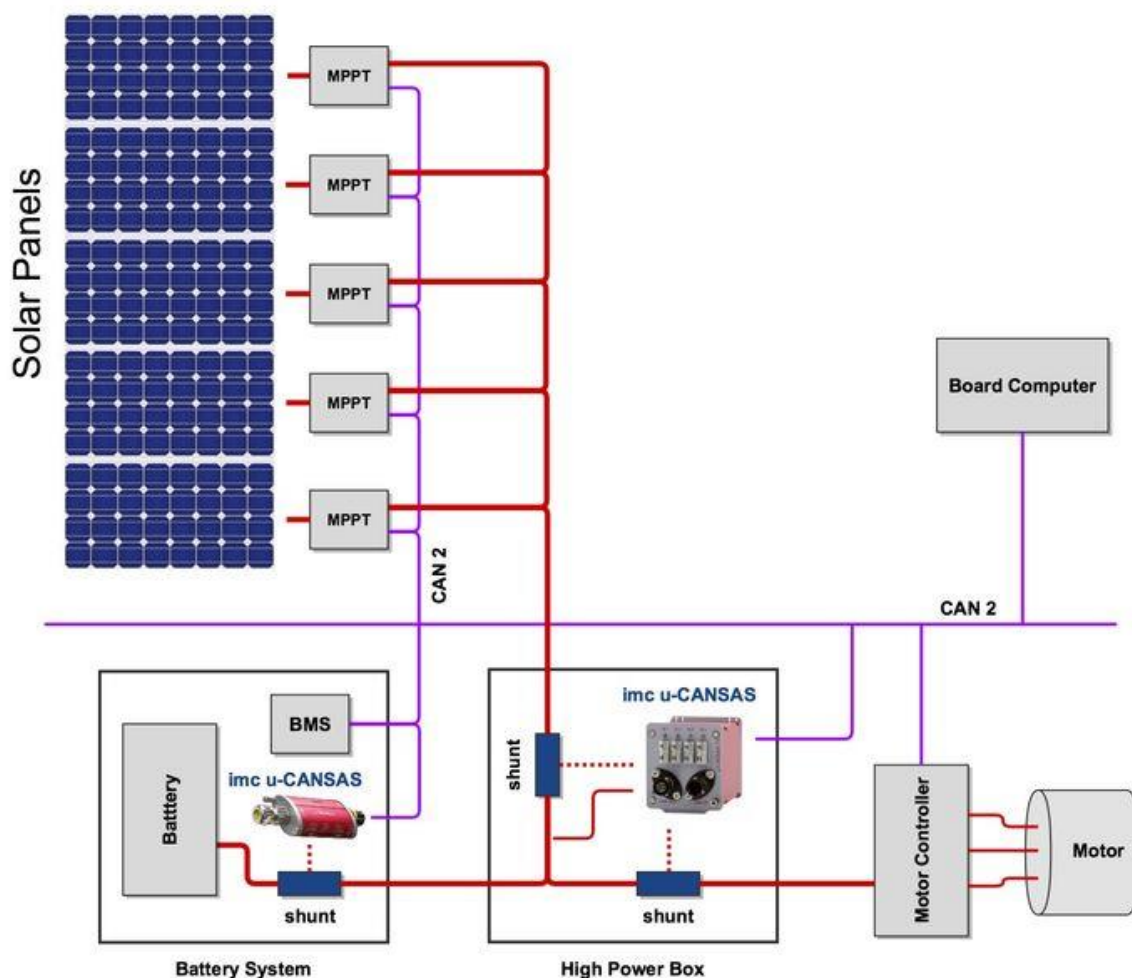
## Tough conditions in the Outback, tough imc modules

### imc $\mu$ -CANSAS modules play a crucial role in the energy management of Nuna8

A technical challenge for ambitious students: The Nuon Solar Team (Delft University of Technology, The Netherlands) is preparing their newly built Nuna8 solar car for the World Solar Challenge. The solar powered race of 3000 km, straight through the Outback of Australia, is taking place from 18 – 25 October, 2015. Every team starts from scratch, building a custom made vehicle within the constraints imposed by the organization. In little over a year, the team designs, builds, tests and races the vehicle. When it comes to testing, the Nuon Solar Team chooses imc modules.

### Solar energy streams – measured with imc modules

The imc  $\mu$ -CANSAS modules play a crucial role in the energy management of the solar car Nuna8. It is of utmost importance to accurately know the incoming and outgoing energy during the race. How much energy is delivered by the solar panels, how much energy went to the battery and how much energy went to and from the motor?



For the race strategy these are important questions to answer if you want to be as efficient as possible. In Nuna8 the energy streams are continuously measured by imc  $\mu$ -CANSAS modules.

These modules accurately convert analog voltages into digital CAN-bus data. The currents are measured by means of the small voltage drops across shunt resistors. imc  $\mu$ -CANSAS modules are available with one channel and with four channels. The single channel module is so small, it can be built into the battery module of Nuna8.



Winning vehicle from the 2013 race in Australia, © Picture Copyright: Nuon Solar Team

"The  $\mu$ -CANSAS modules simply have it all: Small mass, low energy consumption and accurate measurements." according to the NUON solar team.



imc  $\mu$ -CANSAS modules