

Bachelor-/Master-Thesis „High Current Sensor for a High-Speed Electrical Motor“

With us you can realize the electro mobility and electrification in the automotive and truck sectors and design the technology of the future. Our goal is to support the growing mobility industry with innovative high power mechatronic technologies, from concept to mass production.

CPM (Compact Power Motion GmbH), is part of the **SONCEBOZ-GROUPE (CH)** (www.sonceboz.com) and consists of a small innovative team of international specialists.

The scope of our activities ranges from the development of innovative concepts through initial preliminary studies to products, ready to be manufactured. The development is mainly focused on the electrical power train and high-speed electric motors.

Goal:

The goal of the thesis is to develop a current measurement system for a high-power high-speed motor. The phase currents up to 700Amps have to be measured with high bandwidth in a harsh environment with high EMI, temperature and vibrations.



Tasks:

- Analysis of available systems and technologies concerning
 - o Bandwidth
 - o Precision
 - o Robustness (EMI, Temperature, Vibration etc.)
 - o Price
- Development and simulation of own concepts
- Implementation of a first prototype
- Test and evaluation of the first prototype in comparison with purchasable systems

