

## **Developing and implementing a power electronic modul for a Switched Reluctance Machine**

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A Power Electronic Module (PEM) is a specific system component for operating a Switched Reluctance Machine (SRM).

Within the scope of thesis, a prototype of such PEM for a reluctance machine has been developed. Moreover, it will be shown how to start running the PEM.

The principle of the Switched Reluctance Machine is based on the aspiration for the lowest magnetic resistance.

A magnetic field is created by introducing power to an electric coil. This sets the machines rotor in motion.

To reach the desired target a continuous torque must be generated. The intention behind is a smoothed vehicles movement. An implemented PEM can realize such a continuous torque.

The Bachelor thesis shows the way from development to implementation the Power Electronic Module. The focus is set on the particular components and subsystems. In addition, operating tests and test results are presented. The ability for vehicle machines can be supported by thesis results: a SRM in conjunction with a PEM is able to set vehicles into motion.