



A Review of Electronic Components for Electrically Excited Synchronous Motor Drive

Department: Regional Innovation Centre for Electrical Engineering
Research report no.: 22190-038-2020
Report type: Research report
Authors: Antonín Glac, Martin Jára, Patrik Kalaj, Jan Řeboun,
Vojtěch Blahník, Luboš Streit, Jan Štěpánek,
Project leader: Karel Hruška
Pages: 33
Release date: 04.03.2021
CEP Classification: 2.2 Electrical engineering, Electronic engineering,
Information engineering - Electrical and electronic
engineering

Customer:
ZF Engineering Plzen s. r. o.
Univerzitní 1159/53
301 00 Pilsen 3

Supplier:
University of West Bohemia
Regional Innovation Centre for
Electrical Engineering
Univerzitní 8
306 14 Pilsen

Contact person:
Karel Hruska
tel. +420 377 63 4429
khruska@fel.zcu.cz

This document is confidential!

Abstract

This research report includes an overview of electronic components for drive with electrically excited machine. It includes state-of-the-art information about electrically excited synchronous motor control, power electronic devices and battery technology.

Keywords

Traction drive, EESM, WRSM, synchronous motor, optimal control, wide bandgap semiconductor, power electronics, SiC, GaN, battery