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## ANALYSIS OF MAGNETIC FIELD IN PM SERVOMOTOR

**ABSTRACT** *The paper presents design of the PM servomotor M 718, which is designed of a solid rotor with permanent magnets mounted at its surface. The applied permanent magnet material belongs to the rare earth class NdFeB. 2D model of servomotor is created using AutoCAD program and the materials added to the model are chosen from FEMM library. A comparison of magnetic flux density for both no load and nominal load is presented. The paper focuses on the effect of operation temperature on the permanent magnets properties. Changes in the magnetic flux density inside the motor according to the rotor position angle are presented using Lua Script (programming language of FEMM).*

**Keywords:** *magnetic field, permanent magnet, servomotor, design, magnetic flux density, load, operation temperature, rotor position angle*