

# **Abstract**

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## **Theory and performance of series connected synchronous motor**

Series Connected Synchronous Motor (SCSM) is an induction motor with stator and rotor windings connected in series. This motor runs synchronously at double nominal speed when it runs as normal induction motor (IM). This paper presents theoretical and experimental investigation for steady state performance based on a phasor diagram as derived from relation between voltages, currents and fluxes of the machine.