

Abstract

Servo drive device

In a servo drive device, with an electrical synchronous motor (1) designed in a linear or rotary constructional manner with a moving runner and a stationary stator, wherein either the runner or the stator comprises three-phased rotary current windings and the respective other component an exciter field, and with control electronics (2) which deliver three-phased electrical currents for the rotary current windings for producing a periodic electromagnetic travelling field or rotating field of a preselectable strength and frequency, on starting up, the travelling or rotating field may be phase-matched to the exciter field, according to the invention, in a smooth manner in that a force or torque sensor (9) connected to the control electronics (2) is provided for acquiring the forces or torques occurring on the runner, and that the control electronics (2) for phase-matching the travelling or rotating field with the exciter field comprises a control circuit which on occurrence of forces or torques on the runner shifts or turns the field vector of the travelling or rotating field in the direction of a phase position with respect to the exciter field in which the force or the torque disappears.