

Servo Motor Vs. Induction Motor

What are the difference between Induction motor and servo motor?

1) Servo motors is used to control speed systems. It varies the field current applied to the generator, which in turn controls the speed of the motor connected. Induction motor will work on synchronous speed.

2) Servo motor is closed loop system where as induction motor is an open loop system.

3) An induction motor has high inertia and servo motor has a very low inertia.

Hence servo motors are used in applications where instant and accurate positioning of load is required.

4) Speed is constant in servo motor.

5) As in induction motor stator is formed by coils while in servo motor stator is formed with permanent magnet. So in induction motor very high inertia is there while in servo inertia is low. Due to that servo is very easy to stop at instant. So it is used in position control while in application where at instant position stop is not required induction motor is used.

6) The motors are selected according to the torque requirement and based on the application, for normal industrial application Induction motors are economical. For some application which requires high torque, positioning and braking control, we can use servo motor. Servo needs and drive package and requires lengthy program.