

CSE 2303

Electrical Drives & Instrumentation (Motor)



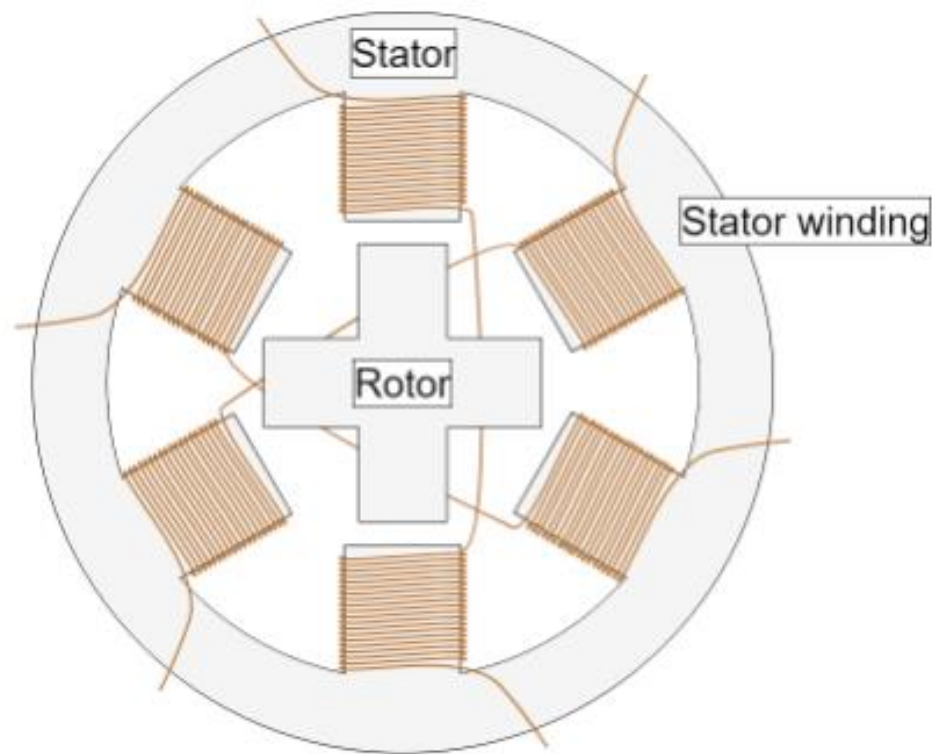
Stepper Motor

- The name stepper is used because this motor rotates through a fixed angular step in response to each input current pulse received by its controller.
- In recent years, there has been widespread demand of stepping motors because of the explosive growth of the computer industry.
- Their popularity is due to the fact that they can be controlled directly by computers, microprocessors and programmable controllers.

Stepper Motor

- As all with electric motors, stepper motors have a stationary part (the stator) and a moving part (the rotor).
- On the stator, there are teeth on which coils are wired, while the rotor is either a permanent magnet or a variable reluctance iron core.
- By energizing one or more of the stator phases, a magnetic field is generated by the current flowing in the coil and the rotor aligns with this field.
- By supplying different phases in sequence, the rotor can be rotated by a specific amount to reach the desired final position.

Stepper Motor



Advantages

Disadvantages

Applications
