Resonance

Resonance occurs when the input frequency ω equals the natural frequency or the resonant frequency ω_n , therefore: $\omega / \omega_n = 1$.

• Step Angle

The nominal angle that the motor shaft rotates for each winding polarity change.

• Synchronous Mode

The synchronous mode of a motor is when the motor is running at a constant (steady) speed. This makes these types of motor perfect for timing applications.

• Torque

The twisting force of a motor or gearmotor shaft. Torque = Force X Distance.

Holding torque

The maximum torque produced by the motor at standstill.

Pull-In Curve

The pull-in curve defines a area referred to as the start stop region. This is the maximum frequency at which the motor can start/stop instantaneously, with a load applied, without loss of synchronism.

• Maximum Start Rate

The maximum starting step frequency with no load applied.

Pull-Out Curve

The pull-out curve defines an area refered to as the slew region. It defines the maximum frequency at which the motor can operate without losing synchronism.

Maximum Slew Rate

The maximum operating frequency of the motor with no load applied.

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