VORTEX ENGINEERING WORKS

Vortex

ELECTROMAGNETIC
SPRING-APPLIED HOLDING BRAKES

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FEATURES

COMPACT DESIGN WITH HIGH TORQUE

The SNB AND RNB series brakes are approximately one-half the width of MNB style.

TWO BASIC DESIGNS AVAILABLE

The RNB series brake is designed for holding and emergency braking. The SNB Series is designed for stopping and holding.

FAST RESPONSE TIME

Both the SNB and RNB series are spring-set type brakes, providing rapid torque buildup.

LONGEVITY

The use of wear-resistant friction material provides extended operational life.

TECHNICAL INFORMATION

Electromagnetical Power Off Brake (Holding)

General Description

Power off brakes stop or hold a load when electrical power is either accidentally lost or intentionally disconnected. In the past, some companies have referred to these as “fail safe” brakes. These brakes are typically used on or near an electric motor. Typical applications include robotics, holding brakes for Z axis ball screws and holding brakes for servo motors. Many custom designs are available and can be made for use with different motor applications.

Features

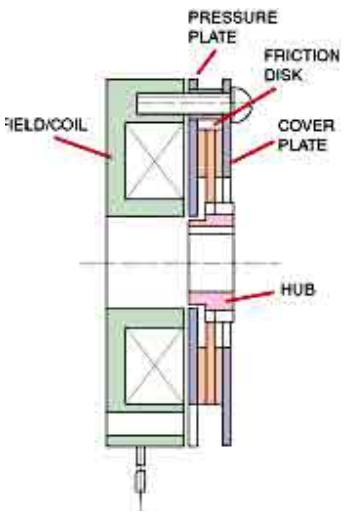
Low profile : High torque in a small space makes for a very thin brake.

Zero backlash option : Some designs contain a zero backlash hub that can be critical in registration applications.

Fast response time : In most units, a series of coil springs are used to pressure plate travel in minimized.

Multiple voltages available : Depending upon the size, 24, 45 or 90 volts are available; however, voltages can be modified to meet your special requirements.

How it works



Engagement : When no current/voltage is applied to the brake, a series of springs push against the pressure plate, squeezing the friction disk between the inner pressure plate and the outer cover plate. This frictional clamping force is transferred to the hub, which is mounted to a shaft (customer supplied).

The power off the brake is considered engaged when no power is applied to it. It is typically required to hold or stop a load in the event of a loss of power, when power is not available to run a machine.

Disengagement : When the brake is required to release, voltage/current is applied to the coil creating a magnetic field. This magnetic field pulls in the pressure plate pulling against the springs, creating an air gap between the pressure plate and the friction disk, allowing it to turn freely with the shaft.

ELECTROMAGNETIC SPRING-APPLIED HOLDING BRAKES

Electromagnetic spring-applied holding brakes

Very high safety & reliability of operation, Very low wear rate, Surface hardened armature disc. 4-class insulation, Asbestos-free dual surface, Friction elements.

Application :- For all servo-motor applications especially in such as X-ray machinery, Automatic patient table, business machines, Packaging & Medical equipment, Machine tools. Factory automation such as industrial robots, Semiconductor insertion, Test & Equipment etc.

Torque :- 1 N-m to 160 N-m for servo motors upto 400 N-m for other applications

For Further Information Contact : info@vortex-clutch.com

Vortex

Vortex Engineering Works

India's Foremost Manufacturers of full range of Long Life Clutches & Brakes

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