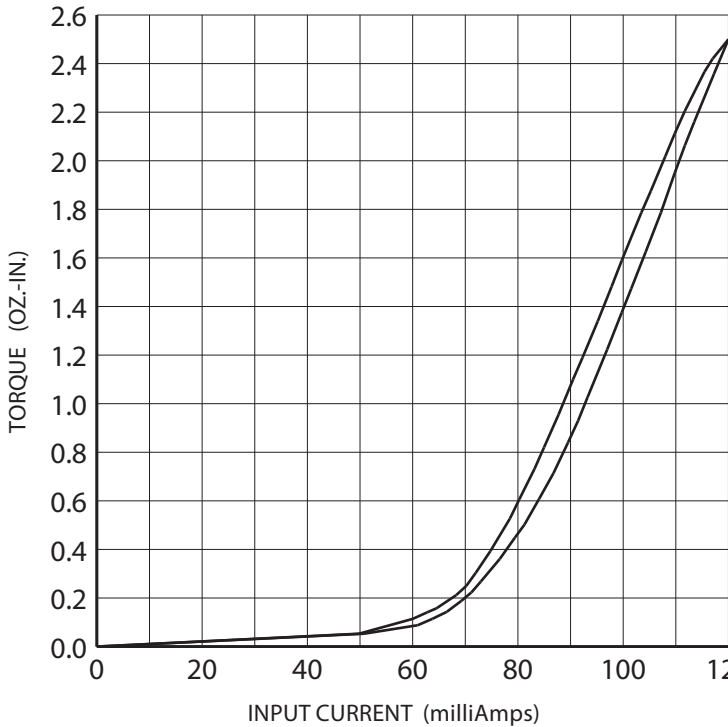


hysteresis BRAKE H3-24

0.04 to 2.5 oz.-in.

DATA SHEET



CHARACTERISTICS - With no electrical excitation, the shaft freely rotates. With electrical excitation, the shaft becomes coupled to the housing. Torque is proportional to input current (see torque graph), and independent of RPM. While the load torque is less than the output torque, the shaft won't rotate. When the load torque is increased, the brake will slip smoothly at the torque level set by the coil input current.

Tensioning torque is exceptionally smooth unless the applied voltage is substantially reduced with 0 or low RPM. Avoid (or remove) cogging by ramping down voltage while turning the shaft through at least 3/4 turn.

Torque range	0.04 to 2.5	oz.-in.
Maximum RPM	10,000	RPM
Max. heat dissipation	5	Watts
Maximum case temperature	180	°F
Maximum overhung load	16	oz.
Shaft inertia	61 x 10 ⁻⁶	oz.-in.-sec ²
Response (unforced)	10	mSec.
Weight	3.6	oz.

← 0% thru 100% of rated input current can be dialed in directly on a Placid Ind. 24 volt constant current power supply (P/N PS-24-MC). The output torque can be determined using the graph.

Use the lower curve when approaching a current value from 0 amps. Use the upper curve when approaching the current value from 100% rated current.

COILS (volts D.C.) ----- 24 V

COIL RESISTANCE (ohms)	173
100% INPUT CURRENT (amps)	0.12

BRAKE PERFORMANCE

TORQUE: At 100% input current, output torque will be 2.5 oz.-in.

POWER SUPPLY: A "constant-current" D.C. power supply is recommended for the best accuracy in open-loop control systems. This type of power supply will maintain a fixed (but adjustable) output current, regardless of the temperature of the brake, so output torque is constant (but adjustable).

HEAT DISSIPATION: The brake can dissipate 5 slip (thermal) watts continuously. For continuous slip, calculate the heat input by the formula :

$$\text{HEAT (watts)} = \text{RPM} \times \text{TORQUE (oz.-in.)} / 1356$$

Using the above formula: At rated torque, the maximum continuous slip RPM much higher than the maximum RPM limit. The case temperature must never exceed 180 °F.

INSTALLATION INFORMATION

Do not drop, or strike with a hammer. Keep away from fine metal filings and fine metal chips. Shield from liquids.

Do not attempt to remove the brake shaft or retaining rings.

All pulleys, sprockets, couplings, etc. must mount as slide fits. Use a puller to remove stuck components. Never pry or hammer to install or remove components.

Use a clamp-type coupling or pulley.

Always use a flexible coupling when connecting the shaft of a rigidly mounted brake to the shaft of another rigidly mounted device. Precisely align both shafts.

To avoid danger of electrical shock, always electrically ground the brake.