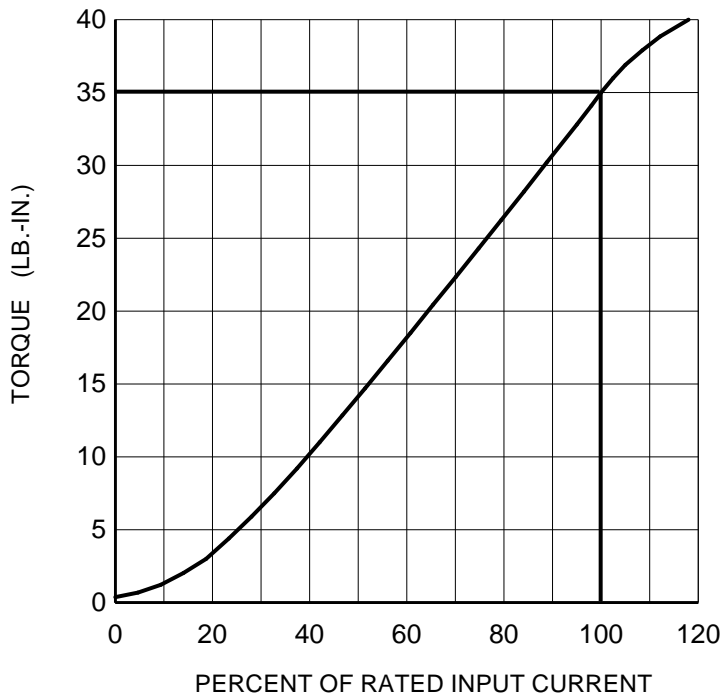


DATA SHEET



**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.

- Torque range . . . . . 0.5 to 35 lb.-in.
- Maximum RPM . . . . . 1800 RPM
- Maximum heat dissipation . . . . . 30 watts
- Maximum case temperature . . . . . 160 degrees F
- Maximum overhung load . . . . . 50 lbs.
- Shaft inertia . . . . .  $12 \times 10^{-5}$  lb.-in.-sec<sup>2</sup>
- Response (unforced) . . . . . 35 mSec.
- Response (forced) . . . . . 20 mSec.
- Weight . . . . . 4 lbs.

← 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.

	6 V	12 V	24 V	90 V
COIL RESISTANCE (ohms)	4.4	17	65	817
100% INPUT CURRENT (amps)	1.3	0.67	0.35	0.11

← Rated D.C. coil voltages available: 6 VDC (yellow leads), 12 VDC (green leads), 24 VDC (red leads), 90 VDC (blue leads).

**BRAKE PERFORMANCE**

**TORQUE:** At the rated voltage, the brake will draw 100% of the rated input current. Output torque will be 35 lb.-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 30 slip (thermal) watts continuously. For continuous slip, calculate the heat input by the formula :

$$\text{HEAT (watts)} = \text{RPM} \times \text{TORQUE (lb.-in.)} \times 0.012$$

Using the above formula: At rated torque, the maximum continuous slip RPM is 71. The brake can dissipate higher amounts of heat for short periods of time, but the average must not exceed 30 watts. The case temperature must never exceed 160 degrees 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, thru-shafts (hollow shaft models), etc. must mount as slide fits. Use a puller to remove stuck components. Never pry or hammer to install or remove components.

**Solid Shaft Models:** Center your set-screw on the flat of the brake shaft.

**Hollow Shaft Models:** Never tighten the #10 set screws of the clamp ring without the thru-shaft installed. Tighten set screws to 36 in.-lbs.

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.

Always electrically ground the brake.



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