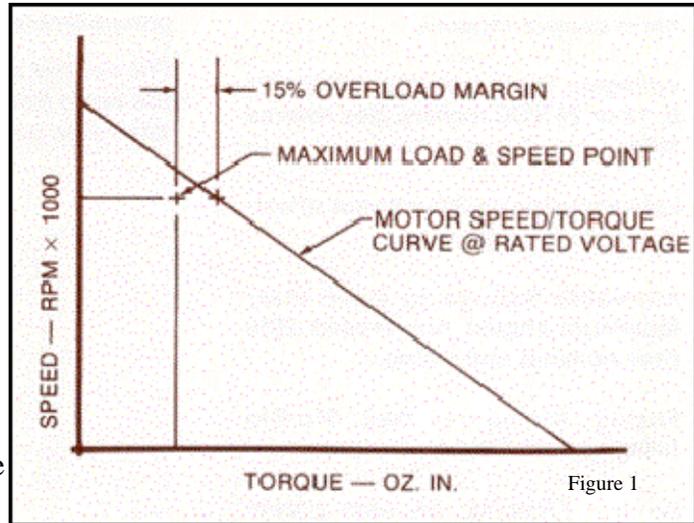


**Motor and Control Selection Process & Wiring Schematic:**

**700A100 DC Motor Speed Control**

**MOTOR SELECTION**

Choose a 6, 12 or 27 VDC motor that has a speed/torque curve beyond the maximum load and maximum speed point for desired operation. Allow a 15% overload margin (Figure 1) to ensure that some accelerating torque will be available under the most extreme operating conditions. For applications with high inertia in the system (i.e., more than 5 times the armature inertia), the overload margin may need to increase as much as 25%. When selecting a motor, the only limitation on the speed/torque combination is the 4-amp rating of the control and/or the continuous duty rating of the motor selected.



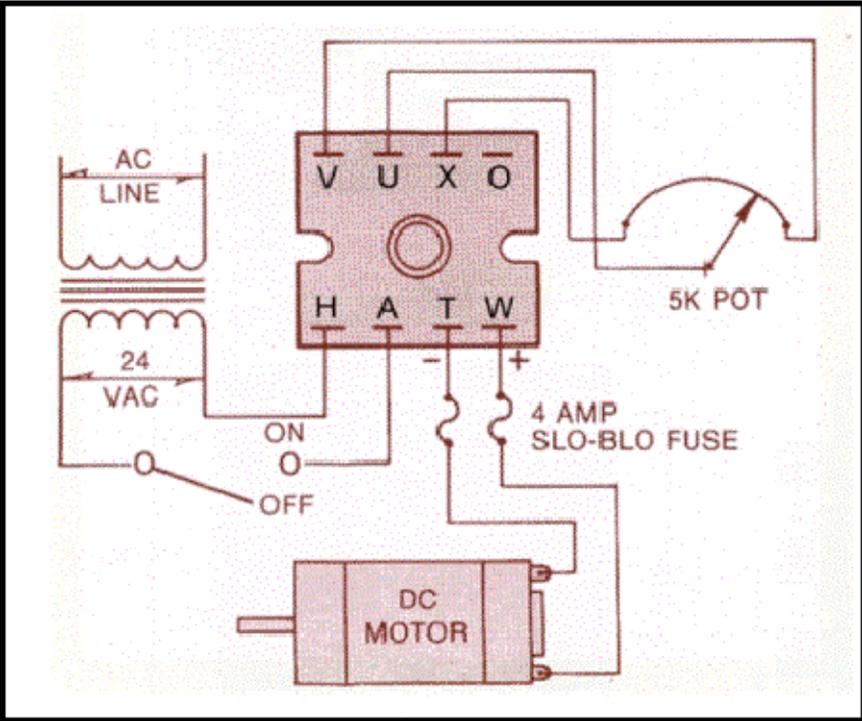
**CONTROL SELECTION**

Once the appropriate DC motor is determined, a control (based on the ratings below) can be selected and ordered:

Control Part No.	AC Input*(rms)	DC Motor Voltage (nominal rating)
700A101	6 VAC	6 to 8 VDC(6 VDC)
700A102	12 VAC	10 to 15 VDC(12 VDC)
700A103	24 VAC	20 to 30 VDC(27 VDC)

\*The AC input is the voltage transformed from the AC line voltage. Please refer to the Wiring Schematic, page 2.

**WIRING SCHEMATIC\*\***



**\*\*Customer is responsible for providing the remaining circuit components (i.e., transformer, potentiometer, fuses and switch).**

## ***GENERAL SPECIFICATIONS:***

### **DC Motor 700A100 Speed Control**

#### ***ELECTRICAL SPECIFICATIONS***

**Current:** Continuous duty DC motor current of 4 amps maximum. Higher instantaneous starting current will not harm control module.

**Voltage:** Maximum AC voltage input into control should not exceed 20% over the rated AC rms input voltage.

**Line Variation:**  $\pm 5\%$  without affecting motor speed.

**Motor Voltage:** Three different models cover motor voltages ranging from 6 vdc to 30 vdc.

**Fusing:** 4 amperes max. Slo-Blo fuses in both lines to motor (supplied by customer).

**Control Element:** 5K ohm potentiometer, 0.5 watts (supplied by customer).

**Connection Method:** Designed for standard double grip connectors or soldering to terminals.

#### ***MECHANICAL SPECIFICATIONS***

**Speed Control:** Minimum  $\pm 2\%$  for full range motor operation and minimum 1% for mid-range motor operation.

**Motor Speed:** 200 - 22,000 rpm, depending on motor model. Gearmotors can approach .005 rpm, depending on reduction ratio of the gearbox.

**Temperature Range:**  $-55^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

**Protection:** Internal components encapsulated in high-density, heat-conductive epoxy. Each control is environmentally protected and virtually impervious to shock, vibration, moisture and dust.

**Mounting Method:** Bolt-down capability through  $3/16''$  2, wide slots in the sides of the control.

**Weight:** Approximately 3 oz.