

The extremely simple circuit in Fig 1 drives a stepper motor directly from 12V ac , 60 Hz power supply. Usually you need switched-dc voltages to drive a stepper motor. But a stepper motor will run off ac lines if you introduce a 90° phase shift between the voltages applied to the motor's two windings. In this case only one 6.8uF non polarity capacitor is needed.

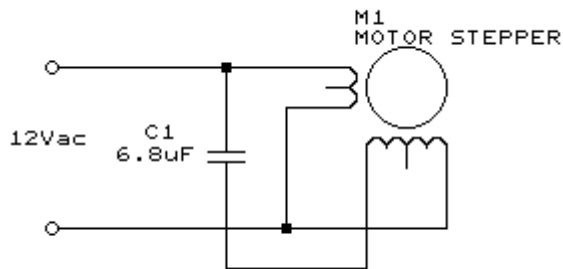


Figure 1

If the motor in Fig 1 and 2 moves 7.5° per step. Four steps equal one ac cycle, so the resulting motor speed will be 300 rpm. Using other motors that have different step angle result in different speeds.

You can run the motor off the 120Vac as shown in Fig 2 the additional resistor is needed. The resistor's specified power dissipation and the value of the capacitor limit the current that the circuit can deliver to the motor.

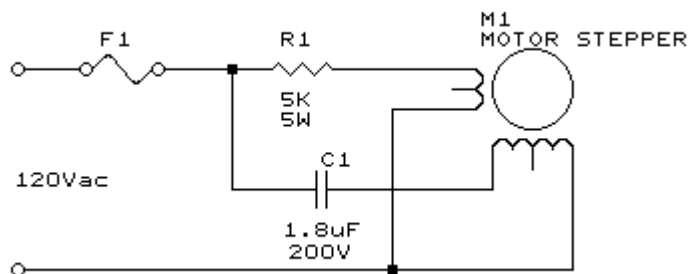


Figure 2