

REFLEX® PART NUMBER 12M03-00123-01
APPLICATION NOTES

1. If an armature voltage higher than 250 volts is required, a 50K divider consisting of two 25K, 5 watt resistors (or one 50K wirewound resistor with center-tap slider) should be connected across the armature. A maximum 250 volt signal from the divider is then applied to terminals 5 and 6.
2. If full isolation from the armature loop is required, a Signal Isolator such as the REFLEX Part No. 12M03-00109 may be used.
3. The Crossover Assembly is connected to the Power Converter as shown in Figure 2.

The Drive Armature Regulator is normally configured for Tachometer feedback. An alternate scheme using the Function Multiplier Part No. 12M03-00114 is available if a tachometer generator cannot be used (See Data Sheet DS6200-0101).

4. To facilitate troubleshooting, it is desirable to tie in the common terminals to the Main Drive common.

This must be tied in if Test Meter 12M04-00021 is used.

AN ISOLATION TRANSFORMER MUST BE USED ON THE AC INPUT POWER (TERMINALS 3 AND 7) OF THE POWER CONVERTER IF ANY PART OF ITS CIRCUITRY OTHER THAN THE 115 VOLT AC SUPPLY POWER (TERMINALS 19 AND 20) IS CONNECTED TO ANY PART OF THE MAIN DRIVE CIRCUITRY.

DO NOT CONNECT COMMON TO EARTH GROUND UNLESS AN ISOLATION TRANSFORMER IS USED!

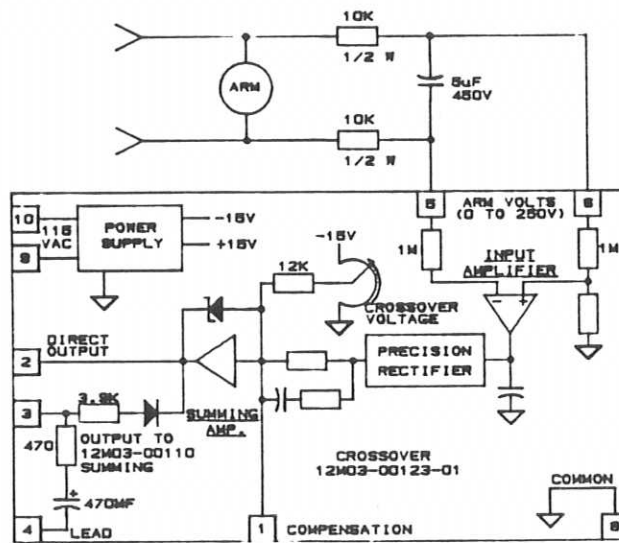
5. The basic control strategy requires tachometer feedback in the armature loop. If the motor does not have a tachometer generator or if it is difficult to add one, it might be more practical to add a toothed wheel and magnetic pickup to operate in conjunction with the REFLEX Frequency to Voltage Converter 12M03-00145.

If the armature regulator cannot be set up for tachometer feedback, it may be possible to use the REFLEX "TACHLESS CROSSOVER" scheme--see Data Sheet DS6200-0101.

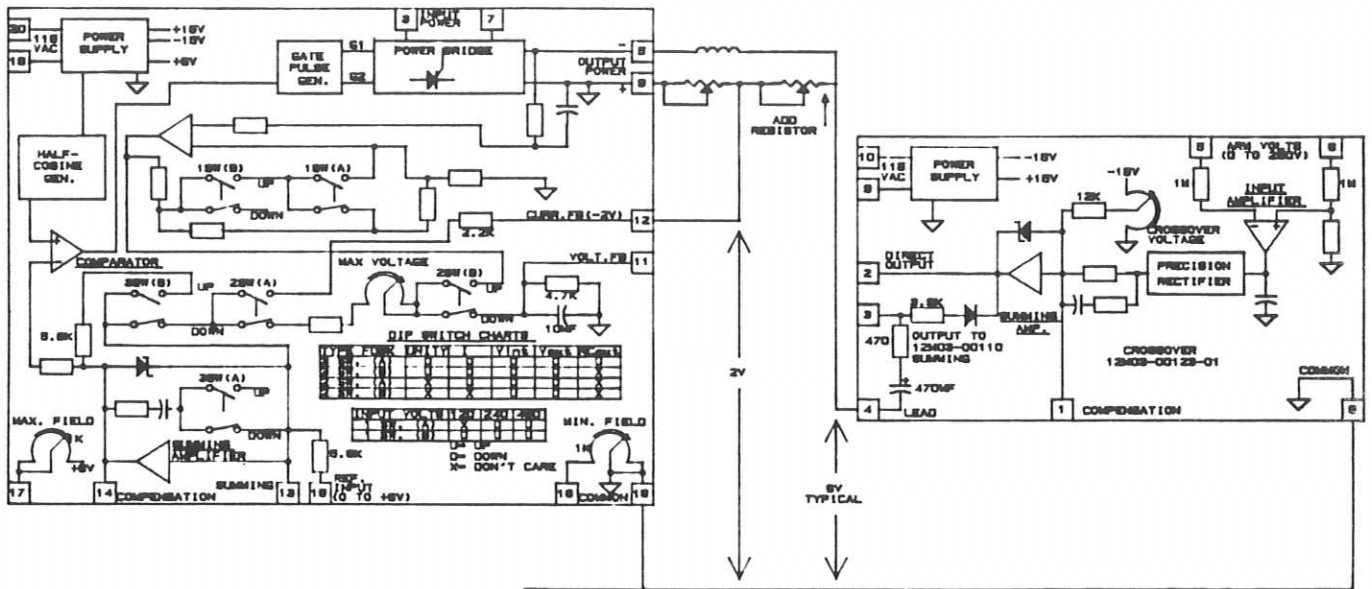
- The basic control as shown can operate in a "Tachless Mode," but it is usually necessary to reduce the gain of the crossover assembly by connecting a resistor (typically 10K) between terminals 1 and 2.

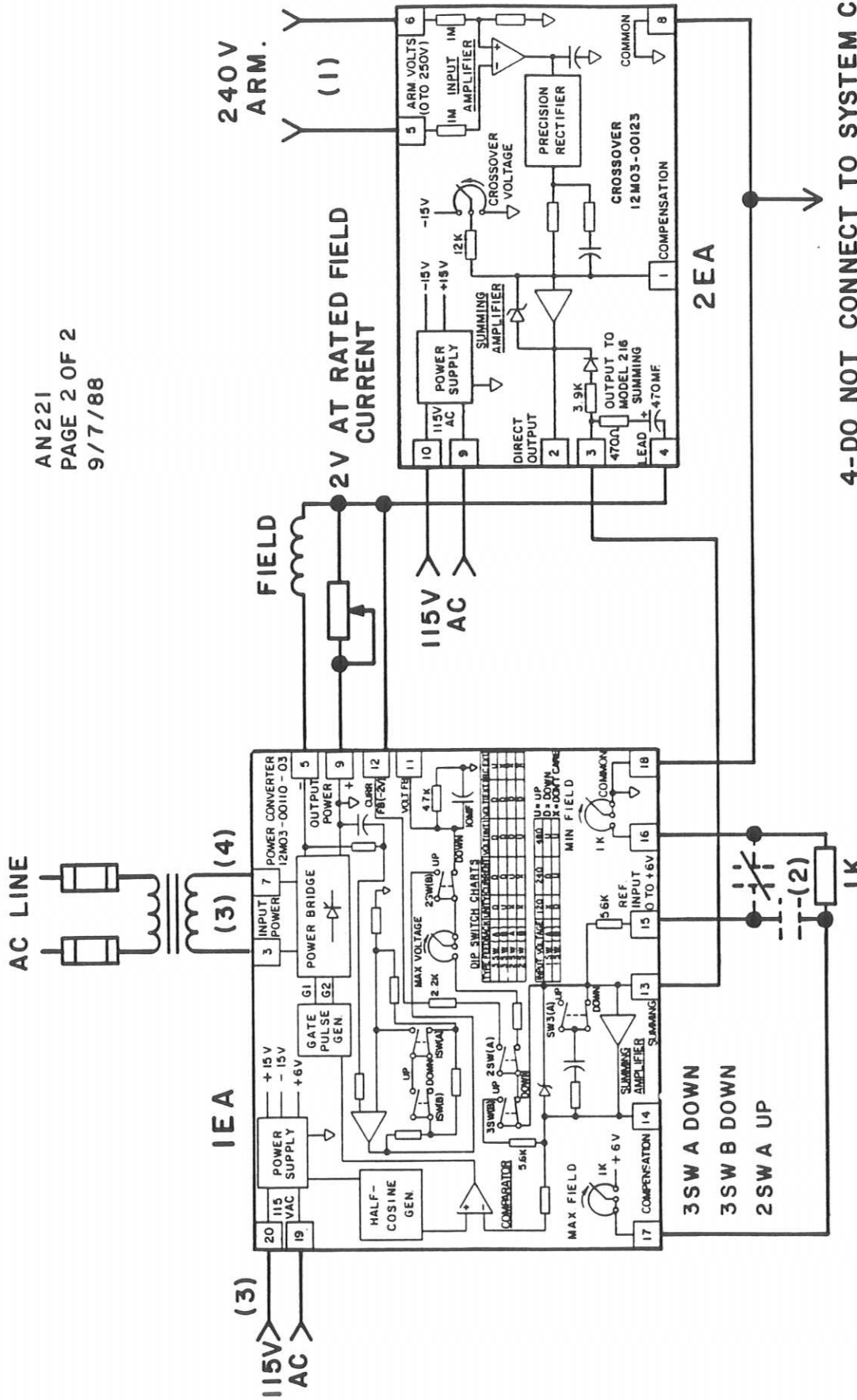
The disadvantage of this approach is that speed will not change in a linear relation to the position of the speed setting potentiometer when above base speed, and it takes a greater change in armature voltage to cause the required field change.

- If used with a single phase armature supply, additional filtering is required. Connect two 10K 1/2 watt resistors and a 5MF 450V NP capacitor as shown below:



8. When used with an MG Set armature supply or field range greater than 2 to 1, it may be necessary to increase the magnitude of the field current stability signal on terminal 4.





NOTES:

- 1 - FOR 500V ARMATURE ADD A VOLTAGE DIVIDER CONSISTING OF 2-25K, 5W RESISTORS.
- 2 - FOR FIELD ECONOMIZING.
- 3 - SAME AC PHASE.

4-DO NOT CONNECT TO SYSTEM COMMON UNLESS AN ISOLATION TRANSFORMER IS USED FOR INPUT POWER (TERMINALS 3 AND 7 OF THE MODEL 216)

ARMATURE / FIELD CROSSOVER

MODEL 221/216

FIGURE 2

JUMPER:

1EA - A-C