

REFLEX<sup>®</sup> MODEL 209 MULTIPLIER/DIVIDER

PART NUMBER 12M03-00114-01  
APPLICATION NOTES

1. In scaling the "Divide" Mode consider the extreme conditions.

If the denominator (Y input) is between 2.5 and 10 volts, the numerator (X input) must be 2.5 volts maximum. Since the output is  $10 X/Y$  with 2.5 volts on both X and Y inputs the output would be 10 volts (maximum available).

2. A "tachless" crossover scheme for armature and field control of a DC Shunt Motor is available utilizing the "Multiply" function (See Data Sheet DS6200-0101).
3. A constant tension centerwind control can be obtained using the "Multiply" function.

Multiply - A signal proportional to torque is multiplied by a signal proportional to winder speed. Since Torque times Speed equals Horsepower, the product is a feedback signal proportional to horsepower. The reference is taken from a Line Speed Signal, and the error signal used to control a drive in its constant torque range (see DS1200-00105).

4. The assembly can be used to obtain the square root of a signal on the X input by switching to the "Divide" Mode and connecting the Output, terminal 1, directly to the Y voltage input, terminal 2.

The X input signal must be of positive polarity only. Because of the built-in gain of the assembly (10 with voltage input and 100 with current input), the output signal will always be larger than the input signal.