

MICROPROCESSOR DC MOTOR CONTROLS

Northern Apex designs and provides small to large production quantities of DC motor control assemblies and circuit board, which can convert a simple DC motor into a cost effective, flexible drive package. The Apex "smart boards" can be provided with specific custom functions as needed for OEM requirements and can typically be mounted directly to the motor or gearbox housing making a compact and reliable unit. These low cost circuits can range from:

- △ Simple start, stop and reverse type control boards.
- △ Variable speed with minimal torque variation.
- △ Multiple motor controls from a single board.
- △ Multi-function microprocessor boards with a range of complex control.

A 100 SERIES

The A100 Series basic motor control circuit is designed for OEM's application to convert a single Speed C brushed motor to a variable speed motor. The significant feature of the control circuit is the ability to maintain almost 100% of the full motor torque over the variable range selected. In addition, standard features include:

- △ Variable Speed from 10 to 100 Percent
- △ Over Current Limits
- △ Short Circuit Protection
- △ Clockwise or Counterclockwise Rotation Hook-up

Available options for the A100 Series controls are:

- △ Remote or Board Mounted Potentiometers
- △ Forward or Reverse Direction Switching
- △ Remote Selectable Fixed Motor Speeds (i.e. High, Medium, Low)

A200 Series

Similar to the A100 Series, the A200 Series has all of the same features and options of an A100 with several additional features and options.

- △ Fixed or Variable Acceleration Profiles
- △ End of Travel Inputs
- △ Bi-directional Motion to Limit Switches

In the event additional flexibility is needed, Northern Apex can customize the A200 Series to include an onboard microprocessor to allow several motors to be controlled and synchronized from a single control board. Preprogramming options include sequential motor start-ups based on switching inputs or timing, as well as acceleration profiles of multi-motor control of several motor operational sequences.