



introduction

The *SB110* is a low cost, single axis, stand-alone, integrated servo motor controller / driver controlling position, velocity and torque of DC brush type or DC brushless motors or actuators.

The *SB110* implements a mnemonic type command instruction set via a standard RS-232 serial communications interface. These commands can be executed directly or used to create command macros which are stored in the on-board NVRAM.

The *SB110* interfaces to the real world via a 3-phase PWM switching amplifier, a quadrature type encoder interface and 4 channels each of optoisolated digital inputs and outputs.

Model *SB110* Brushless Servo Motor Controller / Driver

features

- **Description** Stand-Alone, 1 Axis, Brushless Servo Motor Controller / Driver
- **Operating Modes** Position, Velocity and Torque
- **Filter Algorithm** PID
- **Max. Servo Loop Rate** 5 KHz
- **Trajectory Generator** Trapezoidal
- **Servo Position Feedback** +5V Quadrature Type Incremental Encoder with Index
- **Max. Encoder Count Rate** 2 Million Quadrature Counts per Second
- **Encoder and Index Inputs** Single-Ended or Differential
- **Output** 3-Phase Power PWM, 10 Amps cont. / 20 Amps Peak at 80 VDC
- **PWM Frequency** Approximately 19.531 KHz
- **Position Range** ±2,147,483,648 Quadrature Counts
- **Velocity Range** 0 to 1,073,741,824 Resolution of 1 part in 65,536
- **Acceleration Range** 0 to 1,073,741,824 Resolution of 1 part in 65,536
- **General Purpose Digital I/O**.... 4 Optoisolated Inputs, 4 Optoisolated Outputs
- **Expansion I/O** Optional Expansion to 60 I/Os
- **Dedicated Digital Inputs** Limit+, Limit-, Home and Fault, all Optoisolated
- **Communications Interface** RS-232 Serial Interface, Adjustable Baud Rate, 8 Data Bits, 1 Stop Bit, No Parity, XON/XOFF Handshake
- **Supply Voltage** +18 VDC to +80 VDC
- **Motor Voltage** +12 VDC to +78 VDC
- **Analog Inputs** 3 Channels with 10-bit Resolution, 0 to 5 V
- **Dimensions** 5.2" L x 2.8" W x 4.3" H (not including mounting tabs)
- **Weight**..... Approx. TBD
- **Enclosure**..... Rugged Powder Coated Aluminum Extrusion

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