

introduction

The *S120* is a low cost, single axis, stand-alone servo controller with input / output (I/O) capabilities. It is designed for use with "off" the shelf power amplifiers for a variety of motor or actuator types and sizes and controls position, velocity and torque.

The *S120* 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 *S120* interfaces to the real world via a 12-bit ± 10 VDC analog output, a quadrature type encoder interface and 8 channels each of HCT-TTL input and output.



Model *S120* Single Axis Servo Controller

features

- **Description** Stand-Alone, 1 Axis, Servo Motor Controller
- **Operating Modes** Position, Velocity and Torque
- **Filter Algorithm** PID
- **Maximum Servo Loop Rate** 5 KHz
- **Trajectory Generator** Trapezoidal
- **Servo Position Feedback** +5 V. 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** 12-Bit Analog Output, ± 10 VDC into 2K Ohms Min.
- **Position Range** $\pm 2,147,483, 648$ 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** 8 HCT-TTL Inputs, 8 HCT-TTL Outputs
- **Expansion I/O** Optional Expansion to 64 I/Os
- **Dedicated Digital Inputs** Limit +, Limit -, and Home, all TTL
- **Communication Interface** RS-232 Serial Interface, Adjustable Baud Rate, 8 data Bits, 1 Stop Bit, No Parity, XON/XOFF Handshake
- **Supply Voltage** +11 To +50 VDC
- **Analog Inputs** 3 Channels with 10-bit Resolution, 0 to 5 V
- **Dimensions** 4.9" L. x 1.2" W. x 3.3" H. (not including mounting tabs)
- **Weight** Approx. 11 oz.
- **Enclosure** Rugged Powder Coated Aluminum Extrusion

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