



**Model S100 Servo
Motor Controller / Amplifier**

features

- **Description** Stand-Alone, 1 Axis, Brush Type, Servo Motor Controller/Amplifier
- **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** Power PWM, 3 Amps cont. and 6 Amps Peak at 48 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** 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
- **Communications Interface** RS-232 Serial Interface, Adjustable Baud Rate, 8 Data Bits, 1 Stop Bit, No Parity, XON/XOFF Handshake
- **Supply Voltage** +11 VDC to +50 VDC
- **Motor Voltage** +12 VDC to +48 VDC
- **Analog Inputs** 4 Channels with 10-bit Resolution, 3 are User Accessible, 0 to 5V
- **Approx. Dimensions** 4.9" L. x 1.2" W. x 3.3" H. (not including mounting tabs)
- **Approx. Weight** Approx. 11 oz.
- **Enclosure** Rugged Powder Coated Aluminum Extrusion

Introduction

The S100 is a low cost, single axis, stand-alone, integrated servo motor controller / driver controlling position, velocity and torque of DC brush type motors or actuators.


The S100 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 S100 interfaces to the real world via a PWM switching amplifier, a quadrature type encoder interface and 8 channels each of HCT-TTL input and output.

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